Deriving Syntactic Representations in Finnish

A Dissertation Presented

by

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ABSTRACT

DERIVING SYNTACTIC REPRESENTATIONS IN FINNISH

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A comprehensive, coordinated analysis of Finnish
syntax is attempted in this dissertation. The following
areas receive special attention: word order, grammatical
case marking, null subjects, binding, and non-finite
constructions. The basic framework used is the Government-
Binding Theory, but a number of revisions are introduced in
order to account for the Finnish data.

The theory of levels of representation is enriched by
allowing for postcyclic operations in syntax. A theory of
structural default case is developed which includes a level
of postcyclic genitive case percolation. The current
theory of movement is modified so as to allow for a
postcyclic movement operation (following WH-movement and
Topicalization); this modification also involves revising
Trace Theory.

It is argued that Finnish has fixed syntactic positions which need to be licensed at specific points during the derivation. This requirement has the effect of producing instances of obligatory movement in order to fill a syntactic position, giving rise to word order variation. A strong form of the notion of Structure Preservation is supported by the data.

The theory of default case that is developed in this dissertation provides a way of studying the interaction between morphological case assignment, subcategorization, syntactic positions, and movement. Developing this theory involves reducing the theory of Abstract Case into aspects of the other components of the grammar.

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CHAPTER 1

INTRODUCTION

1.1 General background

The goal of this dissertation is to provide a
detailed and coordinated analysis of various central
phenomena in Finnish syntax. It is the first attempt at
providing an analysis from the generative point of view.
As is usual in generative linguistics, there is a larger
goal behind the subgoal concerning a particular language--
namely, to shed light on the general theory of syntax.

Finnish is a member of the Finno-Ugric language
family, which also contains Estonian, Saami (=Lappish), and
Hungarian. An additional number of distantly related
languages are found in the Soviet Union (e.g. Cheremis,
Mordvin, and the Samoyed languages; cf. Austerlitz's survey
in Comrie (1987:569-576)). Estonian is closely related
to Finnish, especially to the Southwestern Turku (=Åbo)
dialect; Finnish and Estonian are close to being mutually
intelligible.[1] Saami and Finnish, on the other hand, are
mutually unintelligible, although even non-trained speakers
can spot common words in the two languages. Hungarian and
Finnish are even more remotely related; their relationship

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is perhaps comparable to the relationship between (the Indo-European languages of) English and Russian.

The genetic relationship between Finnish and the above-named languages has been firmly established based on the common Proto-Finno-Ugric vocabulary. In addition, these languages share many morpho-syntactic, morphological, and phonological features. They all have extensive oblique case systems (cf. Appendix II on the Finnish case system). Most (or all) of the morphological operations consist of suffixation; these languages are highly agglutinative. In phonology, vowel harmony is a prominent feature.[2]

Although interesting generative work in Hungarian syntax has been pursued by e.g. Kiss (1981), (1987) and Horvath (1985), a syntactic comparison between the Finno-Ugric languages has not been possible due to the scarcity of (even descriptive) work in Finnish, Estonian, and Saami syntax. I hope that this work can serve as a partial basis for such a comparison.

Traditional work (and much of the recent work) on Finnish has concentrated on morphosyntax and phonology. For an important example of traditional work on Finnish see L.Hakulinen (the first edition of which was published 1941-1946; L.Hakulinen (1979) refers to the fourth Finnish-

language edition that I use; an English translation was published in 1961).

Within syntax the only existing comprehensive work is A.Hakulinen & F.Karlsson's (1979; Finnish-language) grammar of Finnish, in which modern and traditional ideas from various theories are discussed with respect to Finnish syntax. This book has been an unending source of information and ideas for me throughout my career. An important recent work covering a number of issues is Vilkuna's (1989; English-language) dissertation on word order, in which a discourse approach oriented towards generative syntax is used. Comparing Vilkuna's ideas to my own has been very exciting.

Finnish differs (at least superficially) from the well-known European languages in the following ways (each of which will be discussed in the chapter indicated in parentheses): lack of personal passive, and the odd behavior of the impersonal passive (Ch.2); two objective cases (Ch.3); the existence of anaphoric suffixes (Ch.4); the possibility of omitting the subject in the 1st and 2nd person, but not in the 3rd person (Ch.4); the rich system of non-finite constructions (Ch.5); and the word order possibilities of the object, which appear to depend on the position of the subject (Ch.2).

The approach used in this thesis reveals similarities between Finnish and other languages that run deeper than the differences just listed. On the other hand, the Finnish data provide the theoretical linguist with new material to be taken into account in developing and modifying a universal theory of syntax.

1.2 The theoretical framework

1.2.1 Movement and the levels of representation

1.2.1.1 Introducing M-Structure

In this dissertation, the basic methodology of the generative approach to syntax is presupposed. Chomsky (1975[1955]) and (1957) argued that syntactic theory is greatly simplified if, rather than having just one level of representation consisting of constituent structures (i.e. phrase structure trees), we are allowed to have more than one level of representation for a given sentence. Two levels were originally proposed, the levels of "deep structure" (later "D-structure") and "surface structure" (later "S-Structure").

The levels of representation are ordered, and the mapping between the levels involves a component of syntactic movement ("transformations", later "Move-Alpha"). The mapping from a more basic level (D-Structure) to a more

complex level (S-Structure) is referred to as (a part of) a "derivation".

In more recent work, Chomsky (1981:90-91) discusses the possibility of not having the level of D-Structure in the grammar. He points out that all of the information conveyed by the two original syntactic levels--D-Structure and S-Structure--can be read off S-Structure. This is a consequence of the introduction of "Trace Theory" (e.g. Chomsky (1977)), according to which any movement taking place before S-Structure leaves a trace which is present at S-Structure. That is, the trace at S-Structure tells us where the moved element was at D-Structure (and, by means of an indexing procecure, which positions it may have moved through).

Chomsky concludes that distinguishing the "representational" approach (having only one level, SS) from the "derivational" approach (having both DS and SS, connected via movement) may be impossible, since they may be notational variants of each other.[3] He continues to maintain the derivational point of view, which is also adopted in this thesis. Thus, the two levels originally argued for by Chomsky will be used here (D-Structure and S-Structure).

Van Riemsdijk and Williams (1981) and (1986:337-342)
argue for the existence of an additional level of
representation between D-Structure and S-Structure, what
they call "NP-Structure". They argue that NP-movement
(i.e. movement into argument positions, or A-positions)
occurs before this level, and that WH-movement (i.e.
movement into non-argument positions) occurs after this
level. Following van Riemsdijk and Williams, I will be
advocating the idea of such an intermediate level in this
thesis. Rather than NP-Structure, however, I will call it
"Middle Structure" or "M-Structure".

We shall see that movement that is related to
affixation occurs between D-Structure and the intermediate
level of M-Structure. This includes the affixation of case
suffixes, verb agreement suffixes and possessive suffixes,
as well as movement of NPs motivated by affixation (such as
the nominative subject).[4] Affix-based movement will be the
topic of Ch.3.

Movement occurring between M-Structure and S-
Structure includes the traditional kind of long-distance
movement (i.e. non-argument or "A-Bar" movement): WH-
movement, Focus, and Topicalization. In addition, it will
be argued in Chapter 2 that there is a late movement
process in Finnish that involves movement into argument
positions,[5] and that this process has to occur after S-

Structure, since it is "fed" by WH-movement and
Topicalization.

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The "derivational path" from the lexicon to the S-
Structure level is given in (1):[6]

1)   LEXICON
                | [base-generation of trees]
                ↓
           D-STRUCTURE
                | [affix-based movement]
                ↓
           M-STRUCTURE
                | [phrase-based movement]
                ↓
           S-STRUCTURE
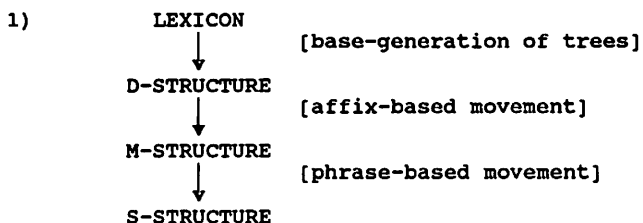
Trees are base-generated (with lexical insertion) at D-
Structure. Move-Alpha maps D-Structure onto M-Structure,
and M-Structure onto S-Structure.

1.2.1.2 Base-generation of phrases and sentences

The grammar needs to include specifications of how
syntactic trees are base-generated. In the earlier forms
of transformational grammar, this was accomplished with
category-specific "Phrase Structure" (PS) rules which
produced D-Structure trees (e.g. VP -> V (NP) (PP); or, a
VP consists of a verb optionally followed by an NP and a
PP). Since Stowell (1981), who argued that PS rules were
redundant and could be reduced to other components of the

grammar (using "X-Bar Theory", or the theory of how lexical heads are projected into phrases), the role of PS rules has diminished.

Given X-Bar Theory, let us consider how phrases with lexical heads (i.e., not sentences) are base-generated. I will assume the following formulation of X-Bar Theory (based on Chomsky (1986); cf. also Jackendoff (1977)):

2) X-Bar Theory:

(i) $X' = X\ XP^{*}$

(ii) $XP\ [=X''] = XP^{*}\ X'$

According to (i) a head X can take any number (including zero) of XP complements to its right, to form an X' (e.g. in the case of a V head, the complements may consist of an NP object and a PP locative complement). As stated in (ii), an X' can take any number (although only one in English and Finnish) to its left, to form an XP (e.g. X'').

Assuming that the lexicon specifies what <u>kind</u> of complements and specifiers each lexical category can take (and that often only one of the two is possible), the two "rules" in (2) produce at least the following types of phrases:

3a) a VP with an NP-complement, and with an NP in the Spec(VP) position (the subject);

 b) an NP with a specifier;

 c) an AP with a specifier;

 d) a PP with an object NP (also, for the Finnish postpositions, a PP with a specifier).

We will shortly return to the question of base-generating sentences.

There is an interesting relationship between the three syntactic levels (D-Structure, M-Structure, and S-Structure) and the phrase structure trees. Consider the basic tree that will be adopted for Finnish (cf. e.g. Pesetsky (1982) and Chomsky (1986)):

4)
```
                     CP
                    /  \
               Spec     C'
                       /  \
                   COMP    IP
                          /  \
                      Spec    I'
                             /  \
                         INFL    VP
                                /  \
                            Spec    V'
                                   /  \
                                  V    NP
```
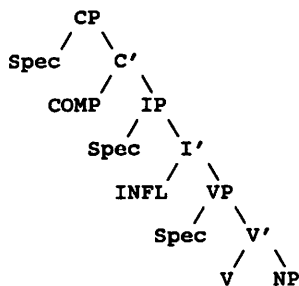
This tree has three "layers" that are very similar to each other: VP^7, IP and CP. Each of these nodes consists of a head (V, INFL, and COMP), a specifier position, and a complement (NP, VP, and IP, respectively).

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Each of the three layers (VP, IP, and CP) corresponds to one of the three levels of representation as follows ("VP-material" refers to material base-generated in VP):

5a) at D-Structure only the VP may contain VP-material;

 b) at M-Structure, VP and IP may contain VP-material;

 c) at S-Structure, VP, IP, and CP may contain VP-material.

That is, the verb and its arguments and adjuncts (including the subject) are generated in the VP at D-Structure; the positions in the VP are the only positions in which "lexical" or "open class" elements can be base-generated (as opposed to "functional" or "closed class" elements, some of which can be base-generated in the positions of IP and CP, such as auxiliaries and complementizers).

During affix-based movement (before M-Structure), elements from the VP may raise to the two IP positions (INFL and Spec(IP)), as stated in (5b). During phrase-based movement (before S-Structure), elements that have been base-generated in the VP may raise to the two CP positions (COMP and Spec(CP))--(5c).

This correspondence between layers in the basic tree and the levels of representation supports the idea of M-Structure.

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Let us now return to the question of PS-rules for sentences. Chomsky (1981:52) assumes the following sentence-producing PS rules:

6a) S -> NP INFL VP

 b) S' -> COMP S

The corresponding PS rules for the tree in (4) look as follows (cf. Chomsky (1986)):

7a) IP -> Spec(IP) INFL VP

 b) CP -> Spec(CP) COMP IP

Much of the information in these PS rules follows from X-Bar Theory, as stated in (2) above. As with the lexical heads, the functional heads INFL and COMP take a complement on the right (giving I' or C') and a specifier to the left (giving I''/IP or C''/CP).

The only non-redundant information that the PS-rules in (7) bear concerns the nature of the complements. Although the lexicon may specify the kinds of complements and specifiers that each lexical head may have, it is not so obvious that the lexicon specifies that INFL takes a VP and that COMP takes an IP. It may be that something corresponding to the PS-rules in (7) is required outside of the lexicon in order for this information to be specified.

1.2.1.3 Syntactic positions need to be licensed

The Finnish data suggests that in order for a position to be syntactically realized, base-generation of a position is not sufficient. We can account for some interesting word order patterns in Finnish (and, it appears, in other languages) if we assume that positions need to be "licensed" at some level. "Licensing" consists of a syntactic position being "filled" at an appropriate level of representation.

The Spec(VP) position and the NP object position in the VP (and possibly other postverbal positions) are licensed at D-Structure, if a phrase is base-generated in these positions.

The two positions in IP--Spec(IP) and INFL--can be licensed in one of two ways.

First, material can be base-generated in one of these positions at D-Structure (e.g. an auxiliary verb in INFL). Secondly, an IP position (unoccupied at D-Structure) can be licensed at M-Structure by having VP-material move into the position in IP (e.g. the nominative subject raises from the Spec(VP) to the Spec(IP), or a verb raises to INFL).

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The requirement for licensing the Spec(IP) position gives us the fact that in Finnish (and in English) the Spec(IP) (or "subject") position has to be filled.[8] The requirement for licensing the INFL position gives us verb raising. That is, Chomsky's (1986) "Extended Projection Principle" (which requires the subject position to be filled) turns out to be an instance of a more general requirement of licensing positions.

In addition to the tensed sentence domain, we find a process in the non-finite domain that is parallel to licensing the IP positions by movement from the VP (at M-Structure). It will be argued in Chapter 5 that some of the Finnish infinitival constructions consist of a VP (licensed at D-Structure by base-generation, just as in the finite type) embedded under an NP.[9] This NP is exactly parallel to a tensed IP, and its positions are licensed via affix-based movement (at M-Structure).

As with IP, the two positions in CP can be licensed in one of two ways: either by base-generation at D-Structure (e.g. a complementizer in COMP), or by movement at S-Structure (e.g. WH-movement into COMP)[10]. The requirement for licensing the COMP position may account for the obligatoriness of WH-movement in true questions (for languages such as English and Finnish that have "obligatory" WH-movement).

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The requirement of licensing all syntactic positions at some level of representation has the effect of producing obligatory movement, since a tree with a base-generated position that has not been licensed by the end of the derivation is not a well-formed tree.

In addition to the type of obligatory movement due to the licensing requirement, Finnish has a word order phenomenon that involves optional movement. In addition to being optional, this type of movement has the following properties: it does not respect strict cyclicity (according to which rules operate in smaller domains before more inclusive domains, and a rule cannot "return" to a smaller domain); it is fed by phrase-based movement (e.g. WH-movement); and it does not register the presence of a trace (left by e.g. a WH-moved phrase). In short, this type of movement seems to be a late (possibly postcyclic) process that is blind to certain features of the syntax--comparable, say, to liaison in phonology. I will refer to this type of movement as "secondary movement" (as opposed the obligatory, "primary" movement).

I would like to suggest that this optional process of movement may be a language-specific feature of Finnish, and that it consists of a tendency to not only license positions at the levels corresponding to those positions

(as described above), but also to "re-license" positions at
S-Structure. This process will be discussed in Chapter 2.

1.2.2 The other components of the grammar

       Chomsky (1981:5) lists the following subsystems of
the grammar:

        8)   (i) bounding theory
            (ii) government theory
           (iii) theta-theory
            (iv) binding theory
             (v) Case theory
            (vi) control theory

Of these, the forms of theta-theory and binding theory as
defined there will be assumed in this dissertation, largely
without modification.

       Theta-theory is concerned with semantic roles
("theta-roles") being assigned to the arguments of a head.
This process serves to create a relationship between a head
(typically V) and its arguments, and it licenses the
positions in the VP, as suggested in the previous section.
It will be assumed that each argument in a sentence is only
assigned one theta-role, and that each theta-role has to be
assigned to an argument ("Theta-Criterion", Chomsky
(1981:36))--that is, there is a one-to-one relationship
between arguments and theta-roles.

The binding theory defines the distribution of pronominal elements, stating whether an element needs to be "bound" (i.e. have an antecedent within a local domain) or "free" (the opposite of "bound"). According to Condition A, "anaphors" (reflexives and reciprocals) have to be locally bound. Conversely, "pronouns" (personal pronouns) have to be free in the local domain (Condition B). It will be argued that the local domain for Finnish is IP. We will also see that in Finnish at least binding of anaphors (Condition A) is accomplished at D-Structure.

For several reasons, Case Theory (in the form proposed in the GB theory for English and other languages) will specifically not be adopted.[11] First, Case Theory does not account for the distribution of morphological cases in Finnish. Secondly, Abstract Case assignment and Theta-role assignment appear not to diverge in Finnish; i.e. Finnish has no ECM ("Exceptional Case Marking") constructions. Thirdly, whenever in English it has been suggested that an NP moves in order to get Case (in Passive and Raising), the comparable Finnish NP clearly has case (or Case), yet its movement pattern is quite similar to the "Case-seeking" NP in English; that is, a theory of Passive and Raising is required for Finnish that is not based on any notion of case/Case.

A theory of morphological case will be developed in Chapter 3. The remainder of the functions of the Case Theory will be covered by Theta-Theory and the theory of movement outlined above and further developed in Chapter 2.

Of the subsystems, the bounding theory will be assumed in some form. This component of the system poses locality constraints on movement, and possibly binding (although Chomsky argues in (1980) and (1981) that only movement is subject to the bounding theory, while binding and control are not constrained in this way). The node that defines the local domain in Finnish for the purposes of binding, case assignment, control, and WH-extraction is the IP node. That is, anaphors have to be bound (and pronouns free) within the tensed sentence; a verb has no effect on case assignment or control relationships beyond its tensed sentence; and extraction out of a tensed sentence seems to be impossible.[12]

Control Theory has to do with the interpretation of the abstract element PRO, typically posited as the subject of an infinitive (or a gerund). The existence of PRO in Finnish will be challenged by the data in Chapter 5. The data clearly pose a problem for the theory of PRO, since the Finnish infinitives can have subjects (alternating with not having a subject). The subject position of the infinitives has to be a "governed, Case-marked" position,

since a lexical NP with genitive case can occur in that position; a PRO would not be expected. Furthermore, Finnish only appears to have constructions corresponding to "Obligatory Control" in English (i.e. infinitival complements), while there are very few, if any, examples of "Non-Obligatory Control" (where there may be more arguments for the presence of PRO than with obligatory control). Thus, it appears that it is more fruitful to analyze the Finnish infinitival complements as not having a PRO, but rather being comparable to nominal complements (NPs and PPs).

As already mentioned, there is a problem with Trace Theory with respect to the optional (secondary) movement process, in that this process appears to ignore traces. A modification of Trace Theory will be proposed in Chapter 2.

Given the fact that the notions of Abstract Case and of PRO seem not to be relevant for Finnish the notion of "government" does not remain very substantial. It basically reduces to the relationship between a head and its arguments, i.e. Theta-Role assignment (which we might say corresponds to "theta-government" (Chomsky 1986)). As we shall see, government (more specifically, "antecedent-government") is not needed for the definition of binding (or other local) domains, since the only relevant opacity

domain appears to be IP. On the other hand, the structural notion of "c-command" (to be defined) is sufficient in this work.

1.3   Generative grammar and Finnish

Using the general approach just outlined, Finnish turns out not to be very "exotic". The following familiar points emerge (to be discussed in the chapter in parentheses): the VP-IP-CP tree works very well as representing the basic structure of Finnish (Ch.2); verbs raise to INFL (Ch.2); COMP and Spec(CP) are the usual positions for WH-phrases (Ch.2); word order is more fixed than commonly believed (Ch.2); despite the large number of morphological cases, the grammatical case system of Finnish is not very different from e.g. English (Ch.3); anaphors and pronouns behave in predictable ways (Ch.4); and, Finnish has strict locality conditions on movement and binding (all chapters).

In the following I will outline some of the questions about Finnish that have not yet received satisfactory answers (some of the questions have not even been formulated before), and that I will attempt to provide answers for in this dissertation (in the chapter indicated in paretheses).

Although the object normally follows the V, why does the object sometimes precede the V? What is the connection of this phenomenon to WH-movement and Topicalization? (Ch.2)

Why do the word order possibilities differ between 'that'-clauses and 'if/when'-clauses? Why can the object precede the verb in 'if/when'-clauses, but not in 'that'- clauses? Why can the subject precede the complementizer in 'if/when'-clauses, but not in 'that'-clauses? (Ch.2)

Why does an accusative object have a genitive suffix if and only if the verb agrees with the subject? (Ch.3)

Why do negative sentences typically have a partitive object? Why do prepositions typically take a partitive NP? (Ch.3)

Why does Finnish omit subject pronouns ("pro-drop" property) only in the 1st and 2nd persons, but not in the 3rd person? (Ch.4)

What are the binding domains in Finnish? (Ch.4)

What is the distribution of the different non-finite constructions? Why do non-finite verbal forms behave as if

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they were verbs with respect to their complements, but otherwise as if they were nouns? (Ch.5)

Why is the form of the accusative object dependent on the matrix verb for some non-finite constructions, but not for others? (Ch.5)

NOTES

1) Estonian speakers tend to find Finnish fairly intelligible, probably due to exposure to Finnish radio and television. Finnish speakers have more difficulty with Estonian, unless the Estonian speaker deliberately uses words and constructions also found in Finnish. The situation is roughly analogous to that holding between Swedish and Danish.

2) Turkish (and other Turkic languages) also have these properties. However, since Turkish and the Finno-Ugric languages do not "share" enough basic vocabulary, a relationship between the Finno-Ugric languages and Turkish has not been firmly established.

3) Lebeaux (1989) points out that if we can show that some information is available at one syntactic level and not available at another syntactic level, then we can distinguish between the representational and the derivational approaches. For example, if information present at S-Structure were not available at D-Structure, we would have an argument for keeping the two levels, and the derivational approach would be supported. Lebeaux argues that data from relative clauses in English show that the relative clauses are not present at D-Structure, but are inserted during the derivation--in the spirit of Chomsky's early idea of a 'generalized transformation' (Chomsky 1975[1955]) and (1957)) (cf. the revision of the idea as a 'generalized Phrase-marker' in Chomsky (1965)).

The argument involves the following contrast (Anti-Reconstruction facts noted by Williams & vanRiemsdijk (1981); cf. also Lakoff (1968)):

    a) *[Which pictures of John-i] does he-i like?
    b) [Which pictures that John-i took] does he-i like?

The D-Structure forms of these sentences would look as follows:

    a') he-i like(s) [which pictures of John-i]
    b') he-i like(s) [which pictures that John-i took]

Question (a) above violates the Binding Theory (Condition C is violated, since (in (a')) <u>John</u> is c-commanded by <u>he</u>). However, exactly the same violation is expected in (b) (since <u>he</u> again c-commands <u>John</u> in (b')). Yet, (b) is fine.

Lebeaux suggests that the reason (b') is not ruled out at D-Structure is that the relative clause is not present yet (the relative clause is base-generated as a separate sub-tree); that is, the D-Structure representation of (b) is (b''):

    b'') he-i like(s) [which pictures]

The Binding Theory is not violated, since the NP <u>John</u> is not present at D-Structure. This gives us the distinction between (a) and (b), and provides an argument for relative clauses being inserted into the structure after D-Structure, which in turn supports the derivational view (since a level of representation is needed for the Binding Theory, where relative clauses do not occur).

4) There is no "Affix-Hopping" taking place at the level of Phonetic Form (PF) in this analysis.

5) Following the spirit of Emonds (1970), I will assume that phrase-based movement is "structure-preserving": landing sites of movement have a particular syntactic category, and only constituents of that category (although possibly with different bar levels) can move into such a position.

6) The two other levels assumed in Chomsky (1981), PF (Phonetic Form) and LF (Logical Form) will also be assumed in this work, but not crucially. I will not have anything to contribute to the theory of these levels.

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7)   VP at D-Structure (and IP at S-Structure) is very
similar to the earlier notion of S (while CP corresponds to
S').

8)   Where a null subject ("pro-drop" subject) counts as
filling a position (cf. Ch.4).

9)   The idea of non-finite constructions consisting of a VP
embedded under an NP goes back to (at least) Chomsky
(1975[1955]:237)--although his NP at this time did not have
an N head. In Chomsky (1965:185) the NP has an N head,
which in effect converts the V into an N.

10)   Moving a WH-phrase to COMP violates Chomsky's (1986)
proposal that only heads can move into head-positions;
given this constraint, we expect WH-phrases to move to
Spec(CP) rather than COMP. Bayer (1989) argues that WH-
movement in German moves a WH-phrase into COMP. In order
to avoid violating the head movement constraint, he
suggests that the feature [+WH] is treated as a head, and
therefore a WH-phrase can move into COMP.

       In Chapter 2 an analysis of WH-movement and
Topicalization will be presented according to which WH-
phrases and topicalized elements move into COMP in Finnish.
I will not attempt to determine whether these elements can
be treated as heads, or whether the head movement
constraint needs to be modified.

11)   Although I am not assuming Case Theory, I will use the
traditional notion of "abstract case", i.e. an NP that may
not bear any overt case can still be said to bear a case
(e.g. full NP accusative objects in English).

12)   I will not discuss long-distance WH-extraction in this
thesis. It is my superficial impression that in my dialect
extraction out of a tensed sentence is impossible, except
perhaps for some cases with bridge verbs.

CHAPTER 2

WORD ORDER VARIATION AS A RESULT OF FILLING POSITIONS

2.1   Introduction

     In this chapter, a movement-based analysis of Finnish
word order will be developed. It will be argued that the
Spec(IP) position (i.e. the "subject"[1] position) and the
INFL position are "licensed" (i.e. obligatorily filled; cf.
Ch.1) at M-Structure. Similarly, it will be argued that
COMP is obligatorily filled under certain circumstances
(when a COMP position has been base-generated), at S-
Structure. In addition, we will see that Spec(IP), COMP,
and other syntactic positions tend to be filled at S-
Structure (due to optional, "secondary" movement), if the
element that licenses the position has been moved out.

     In Section 2.2, an analysis of "pro-drop" (i.e. null
subjects) as anaphoric binding will be introduced (to be
expanded in Chapter 4); this analysis will be needed for
the discussion in the remainder of the chapter.

     In Section 2.3, the analysis of word order in tensed
clauses will be developed, with reference to specific
syntactic positions. Section 2.3.1 will cover the Spec(IP)

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and the COMP positions, and Section 2.3.2 the INFL position
--with some general discussion on the VP, and on the
distribution of adverbs. In Section 2.3.3 we will briefly
look at embedded clauses, drawing a distinction between two
types of conjunctions depending on whether they occur in
COMP or Spec(CP).

Section 2.4 argues for the existence of optional,
"secondary" movement--that is, movement of an element to a
position vacated due to obligatory, "primary" movement
(e.g. WH-movement). In Section 2.4.1 we find that if the
subject is moved out of the Spec(IP) position, then some
other argument of the verb optionally moves into the
Spec(IP) position. Section 2.4.3 shows that non-subject
positions in the VP are also filled if the original
occupant is moved out, and section 2.4.4 covers instances
where COMP seems to be filled due to secondary movement.

2.2 Introducing "pro-drop" as anaphoric binding

As a background for the word order discussion, I will
briefly go over some anaphoric binding data, and then
sketch an analysis of the pro-drop facts using a version of
the Binding Theory (e.g. Chomsky (1981)). The pro-drop
data will be more thoroughly covered and the analysis will

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be argued for in Chapter 4, where the binding facts will
·also be elaborated on.

Consider the following examples of reflexive binding
constructions:

    1a) Minä näin   itseni   peilistä.
        I-NOM saw-1SG self-1SGPx mirror-ELA

        'I saw myself in (lit. 'from') the mirror'

    b) Hän   näki   itsensä peilistä.
       he/she-NOM saw-3SG self-3Px mirror-ELA

       'He/she saw himself/herself in the mirror'

    c) Te   näitte itsenne   peilistä.
       you(pl)-NOM saw-2PL self-2PLPx mirror-ELA

       'You(pl.) saw yourselves in the mirror'

    d) He   näkivät itsensä peilistä.
       They saw-3PL self-3Px mirror-ELA

       'They saw themselves in the mirror'

The anaphoric element in these examples is _itse-_ 'self',
which occurs with a suffix. This suffix is traditionally
called the "possessive suffix"; I will follow Kanerva's
(1987) terminology and refer to this suffix as "Px". The
Px agrees in person and in number (in the 1st and 2nd
person) with the binder: in (1a), we get the 1st person
singular suffix _-ni_, which agrees with the 1st person
singular binder _minä_. Similarly, in (1c), we get the 2nd
person plural suffix _-nne_, agreeing with the binder _te_.

In (1b) and (d), we have a 3rd person singular and a
third person plural subject, respectively; the suffix for
all 3rd person binders is -nsa, which is what we get in (b)
and (d).[2]

Now consider some examples of the reciprocal ('each
other') construction:

> 2a) Me näimme toinen toisemme peilistä.
>   we saw-1PL each-other-1PLPx mirror-ELA
>
>   'We saw each other in the mirror'
>
> b) Te   näitte toinen toisenne peilistä.
>   you(pl) saw-2PL each-other-2PLPx
>
>   'You(pl.) saw each other in the mirror'
>
> c) He   näkivät toinen toisensa peilistä.
>   they saw-3PL each-other-3Px
>
>   'They saw each other in the mirror'

In these examples we again find the Px's: in (2a), the 1st
person plural Px -mme agrees with the 1st person plural
subject binder. Similarly, in (2b) and (c), we get a
different Px depending on the person/number of the binder.
The stem toinen toise- 'each other' is impossible without
one of these suffixes.

The elements itse+Px '-self' and toinen toise-+Px
'each other' are clearly anaphoric in the sense of
Condition A of the Binding Theory. I would like to suggest

that the stems _itse-_ and _toinen toise-_ are _not_ anaphoric by
themselves, but it is precisely the Px required by each
that makes them anaphors. I will henceforth pursue the
idea that the Px's are anaphors, and their distribution is
subject to Condition A of the Binding Theory.

Let us now turn to the pro-drop data. Finnish is
pro-drop in the first and second persons, but not in the
third person; this is true in all tenses. That is, first
and second person subjects can be omitted, but in the third
person an overt NP is required as the subject. Consider
the following present tense paradigm for the verb _juoda_ 'to
drink' (the parentheses indicate optionality):

```
3) 1SG    (minä) juon     'I drink'
   2SG    (sinä) juot     'you (sg.) drink' 3
   3SG    hän juo         'he/she drinks'
   1PL    (me) juomme     'we drink'
   2PL    (te) juotte     'you (pl.) drink'
   3PL    he juovat       'they drink'
```

The analysis (to be developed in Chapter 4) of these
data that will be assumed here is the following: the
inflectional suffixes, like the Px's, are anaphors. Due to
their syntactic location, the only position in which a
binder of the inflectional suffix anaphor can be located is
the subject position.

In this view, the 3rd person behaves as expected: an overt NP binder--the subject--is required for the anaphoric 3rd person inflectional suffix (note that this in some sense is the reverse of the Chomsky (1981) treatment of pro-drop, where "AGR" binds the subject--we will encounter problems with Chomsky's analysis, when extended to Finnish).

The 1st and 2nd persons are unexpected, since they seem not to require a binder (since 1st and 2nd person are pro-drop). We can argue, however, that in the 1st and 2nd person we have an implicit binder, corresponding to the speaker (in the 1st person) or the hearer (in the 2nd person). This abstract binder would be located in the subject position, when there is no overt 1st or 2nd person subject (cf. Chapter 4 on the exact location of the abstract binder).

Since there is no such abstract binder in the 3rd person[4], an overt binder is required--and we get non-pro-drop in the 3rd person.

Let us now return to Px's and consider their behavior in NPs. In possessive constructions we find a Px on the "possessed" N:

```
4a) (minun) kirjani
       my      book-1SGPx       'my book'

 b) hänen    kirjansa
    his/her book-3Px            'his/her book'

 c) (teidän)    kirjanne
    your(pl.) book-2PLPx        'your(pl.) book'

 d) heidän kirjansa
    their  book-3Px             'their book'
```

As these examples show, there is an exact parallel between
the pro-drop data and the possessive NP data. The
genitive-marked possessor NP is optional in 1st and 2nd
person, but not in the 3rd. However, the genitive NP is
also optional in the 3rd person under conditions determined
by the Binding Theory, as we shall see.

In order to maintain the generalization that Px's are
anaphors--whether they occur in the prototypical anaphoric
constructions, or in NPs--we need an explanation for why
the 1st and 2nd person Px's seem not to have a binder in
the following examples:

```
5a) Pekka luki kirjaani.
    NOM   read book-PAR-1SGPx

    'Pekka (was) reading my book'

 b) Kävelytitkö koiraasi?
    walk-2SG-Q  dog-PAR-2SGPx

    '(Were) you walking your dog?'
```

Given the suggestion that we can have an implicit binder
for the 1st and 2nd person inflectional suffix--resulting

in pro-drop--we can use those implicit speaker/hearer binders in these examples.[5] In (5a), we would have an implicit 1st person genitive binder (located in Spec(NP)), binding the Px -ni. In (5b), we need a 2nd person implicit binder to bind the verbal suffix, and this abstract element also binds the Px.

What do we expect to occur in the 3rd person? Since NP does not block anaphoric binding, we would expect to be able to bind the 3rd person Px from outside of an NP, if anaphora is what is at issue. This is of course what we find:

6a) Hän   kävelytti koiraansa.
    He/she walked-3SG dog-PAR-3Px

    'He/she walked his/her dog'

 b) *Minä kävelytin koiraansa.
    I   walked-1SG dog-PAR-3Px

    ('I walked his/her dog')

 c) Minä kävelytin hänen   koiraansa.
    I   walked-1SG his/her dog-PAR-3Px

    'I walked his/her dog'

In (6a), the Px is bound by the subject NP. Sentence (6b) is ungrammatical, because the Px has no binder (but compare this to the earlier grammatical example (5a) with a 1st person Px without an overt binder). Inserting a binder makes the sentence grammatical, as shown in (6c).[6]

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We now have an analysis of pro-drop which unifies
agreement suffixes on the verb and the Px's in the
possessive construction. All of these suffixes are subject
to Condition A of the Binding Theory in that they have to
be bound in their tensed sentence (in IP).

1st and 2nd person suffixes can be bound by the non-
overt binders "speaker-NP" and "hearer-NP". This results
in optional nominative subjects (=pro-drop) and optional
genitive specifiers in the 1st and 2nd person.

In the 3rd person no such abstract discourse-based
binder is available, and the 3rd person suffixes have to be
bound by an overt NP. This results in non-pro-drop in the
3rd person. In the Px domain the Px behaves as an anaphor
should: there has to be an overt binder, either in the NP
or outside of the NP (but within a tensed S).

With an analysis of the pro-drop facts, we are now
armed to deal with word order, including the behavior of
the Spec(IP) position with respect to word order.

2.3 Word order in tensed clauses

In the remainder of the chapter, the basic phrase
structure of Finnish will be explored. The existence of

fixed syntactic positions will be justified by the fact
that if a position exists, some element will occur in it,
if at all possible. Since in a typical S-Structure tree
there are more syntactic positions than there are lexical
phrases, not all positions can be filled. It appears that
in Finnish empty positions are filled from left to right;
this results in movement to the left.

2.3.1 Two sentence-initial positions: Spec(IP) and COMP

        Vilkuna (1989) argues for the existence of two
positions at the beginning of the Finnish tensed sentence.
Her analysis is motivated by discourse considerations
(based on L.Carlson's work, e.g. Carlson (1983)), but she
ends up saying that each of these positions is also a
syntactic position, since the elements in these positions
are not interpreted solely based on discourse (i.e. in
terms of notions such as "thematic" and "rhematic").

        The first position is one in which contrasted
elements occur (she calls it "K" for "Contrast"); this
corresponds to the COMP position in syntax, which is what I
will call it (cf. tree in Chapter 1). In addition to
contrasted (or topicalized) elements, this position houses
interrogative phrases and relative pronouns, adverbs,
certain conjunctions, and the "hosts" of the sentential

clitics -ko (question particle), -han and -pa (emphatic
sentential particles).

The second position is one for the "Theme" or "Topic"
of the sentence--"T" in Vilkuna's terminology. This is the
location for nominative subjects; this position corresponds
to my Spec(IP) position. If there is no nominative subject
in the sentence (or, in the event that the nominative
subject has been dislocated), the Spec(IP) position is
preferably filled by another argument of the verb: a non-
nominative logical subject, an object, or a locative
phrase. Especially in colloquial speech, the Spec(IP)
position can also be filled with the pleonastic sita.[7]

Thus, Vilkuna's "K" corresponds to be the COMP
position and her "T" to be the Spec(IP) position in the
following tree (cf. Ch.1):

```
7)            CP
            /   \
         Spec    C'
               /   \
           COMP     IP
                  /   \
               Spec    I'
                      /   \
                  INFL     VP
                         /   \
                      Spec    V'
                            /   \
                           V     NP
```
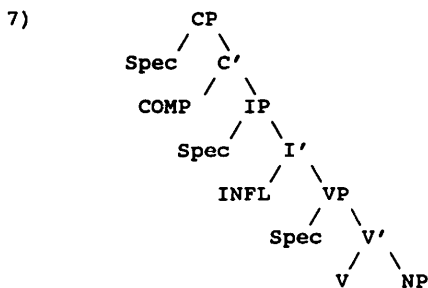
Using this tree I will now attempt to account for certain
word order facts in Finnish.

2.3.1.1 The six logical possibilities of a three-word
        sentence

    Tensed sentences containing a transitive V, a subject

and an object allow all of the six logically possible word

orders (underlining indicates special stress) (cf.

L.Hakulinen (1979:497-499) for a comparable exercise in the

Finnish word order possibilities):

    8a) Seija tapasi Mervin.
        NOM   met   ACC

        'Seija met Mervi'

     b) Tapasi Seija Mervin.
        met   NOM   ACC

        'Seija did meet Mervi'

     c) Mervin Seija tapasi.
        ACC   NOM   met

        'It was Mervi that Seija met'

     d) Seija Mervin tapasi.
        NOM   ACC   met

        'It was Seija that met Mervi'

     e) Mervin tapasi Seija.
        ACC   met   NOM

        'Mervi was met by Seija'

     f) Tapasi Mervin Seija.
        met   ACC   NOM

        'Mervi was indeed met by Seija'

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Table 2.1 provides the (M-Structure) representation for each of these sentences.

TABLE 2.1. Structure of the six word order possibilities.

COMP	Spec(IP) ("subject")	INFL	Spec(VP)	V	NP ("object")
a) (Seija)	(Seija)	tapasi	[]	[]	Mervin
b) tapasi	Seija	[]	[]	[]	Mervin
c) Mervin	Seija	tapasi	[]	[]	[]
d) Seija	Mervin	tapasi	[]	[]	[]
e) (Mervin)	(Mervin)	tapasi	Seija	[]	[]
f) tapasi	Mervin	[]	Seija	[]	[]

Line (a) in the table (corresponding to sentence (8a) above) gives the basic word order; the subject NP may occur in the Spec(IP) position, or it can be topicalized to COMP (as indicated by the parentheses), in which case the NP bears special stress.

I would like to suggest that all of the other five orders are derived via movement from the D-Structure of sentence (a). I will argue in Chapter 3 that the nominative subjects in Finnish originate in Spec(VP), and in the next section that the verb originates in V and is raised to INFL. Thus, the D-Structure representation for all of the six sentences would look as follows (with the CP

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"layer" suppressed):

```
9)        IP
        /  \
    Spec    I'
          /  \
      INFL    VP
            /  \
         Spec   V'
          |   /  \
       Seija  V    NP
              |     |
           tapasi Mervin
```
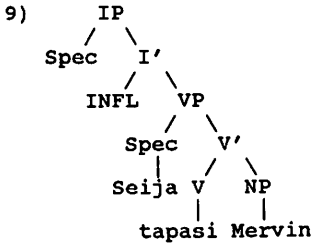
(8a), then, is derived from this tree by moving _Seija_ to Spec(IP) and _tapasi_ to INFL. As suggested in Chapter 1, both of these instances of movement are motivated by the requirement of licensing the positions in IP (at M-Structure).

In (8b), the subject has again moved from Spec(VP) to Spec(IP). The focused verb has been fronted to COMP. In (8c), rather than the verb, the object NP _Mervin_ has been topicalized.

In (8d) we find an example of a phenomenon that I have called "object fronting" (Vainikka 1989): the object (and other complements) precede the verb under certain conditions. In (8d) the subject NP has been topicalized and moved to COMP. Apparently as a consequence of the subject occurring in COMP the object may precede the verb. Object fronting data will be discussed in more detail in

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Section 2.4, where it will be argued that in cases such as
(8d) the object has moved to the Spec(IP) position via
secondary movement, in order to fill that position at S-
Structure.

In general, the Spec(IP) position in Finnish has to
be filled. This is of course what has often been observed
for English and other languages, and what Chomsky (1981:41)
considers to be a universal requirement (resulting in
positing an abstract subject whenever there is no overt
one). The reason for this requirement, be it universal or
not, is not obvious. In my analysis, this requirement is
one instance of filling positions due to the licensing
requirement. The Spec(IP) position is not unique in this
respect, but the INFL position--and under certain
conditions the COMP position--also need to be filled.

What is unusual about Finnish is that although the
Spec(IP) position is licensed and filled at M-Structure, if
the "licensing" NP later moves out of the Spec(IP)
position, there is a strong tendency to fill the Spec(IP)
position also at S-Structure (apparently ignoring the trace
left by the earlier occupant). Again, this tendency is not
unique to the Spec(IP) position, but seems to hold for all
positions.

In (8e) and (f), the subject is displaced, and it
follows the verb. The exact location of these subjects is
difficult to determine, since the data is not very clear;
this construction is not comparable to postposed subject
constructions in e.g. Italian, where postposed subjects are
quite unmarked. See Vilkuna (1989:178-187) for a more
detailed discussion of this construction.

Vilkuna (1989:261 fn.8) reports that there are 117
instances of these OVS sentences in the "HKV" corpus (cf.
A.Hakulinen et.al.(1980)). All but 9 of the 117 consist
only of an object, a verb, and a subject. The remaining 9
examples contain either of a complex, idiomatic verb (verb
and idiomatic locative phrase) or a verb followed by a
predicative adverbial (presumably preceding the postposed
subject). Given these data, I would like to suggest that
the "postposed" subject in this construction remains in its
base-generated Spec(VP) position[8], and no lowering rule is
required.

Since the subject does not occupy the Spec(IP)
position in (8e) and (f), the object will raise to the
Spec(IP) position instead, to license that position. In
(8f), the verb is focused, occupying the COMP position. In
(8e), the object can be topicalized (and stressed), as
indicated by the parentheses.

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There is one obvious exception to the generalization of filling the Spec(IP) position. Sentences without an overt 1st or 2nd person subject do not seem to have anything in the Spec(IP) position. Recalling the analysis of these sentences in Section 2.2, we can still maintain the generalization. Sentences with a "missing" 1st or 2nd person subject have an abstract binder in the subject position, as suggested. All we have to say is that this binder counts as actually filling and licensing the Spec(IP) position at M-Structure.[9] That is, the generalization is not one about the Spec(IP) having to be filled with lexical material, but rather syntactic material in general, including (at least some) abstract elements.

In the following, I will provide diagnostics for determining which NPs are located in COMP, and which in Spec(IP).

2.3.1.2 Determining which NP is in COMP

The elements shown in COMP in Table 1 (repeated below) behave similarly in the following ways:

    10) (i) they bear special stress
        (ii) they may not be preceded by an adverb
       (iii) they can act as hosts of sentential clitics

2.3.1.2.1 Special stress

Each of the elements in COMP is stressed--the verb
tapasi in (8b) and (f), the object-NP in (8c) and the
subject-NP in (8d). The parentheses in (8a) and (e)
indicate that the NP can occur either in COMP or in the
Spec(IP) position: if the NP is in COMP, it is stressed; if
it is in the Spec(IP) position, it bears no special stress.
Table 2.1 is repeated here:

TABLE 2.1. Structure of the six word order possibilities.

COMP	Spec(IP) ("subject")	INFL	Spec(VP)	V	NP ("object")
a) (Seija)	(Seija)	tapasi	[]	[]	Mervin
b) tapasi	Seija	[]	[]	[]	Mervin
c) Mervin	Seija	tapasi	[]	[]	[]
d) Seija	Mervin	tapasi	[]	[]	[]
e) (Mervin)	(Mervin)	tapasi	Seija	[]	[]
f) tapasi	Mervin	[]	Seija	[]	[]

2.3.1.2.2 Adverbs cannot precede the element in COMP

Nothing seems to be able to precede the element in
COMP; attempting to insert an adverb at the beginning of
the sentence results in an ungrammatical sentence in each
of the cases:

8a') ??Eilen   <u>Seija</u> tapasi Mervin.
        yesterday NOM   met   ACC

        ('Yesterday Seija met Mervi')

    b') ?*Eilen <u>tapasi</u> Seija Mervin.

    c') ?*Eilen <u>Mervin</u> Seija tapasi.

    d') ?*Eilen <u>Seija</u> Mervin tapasi.

    e') ??Eilen <u>Mervin</u> tapasi <u>Seija</u>.

    f') ?*Eilen <u>tapasi</u> Mervin <u>Seija</u>.

It seems that a sentence-initial adverb has to occur in
COMP, and when COMP is filled by something else, an adverb
is not possible. When COMP is empty, an adverb is
perfectly fine at the beginning of the sentence. If we
destress the first NP in (8a') and (8e'), we get the
following grammatical sentences:

    8a'') Eilen   Seija tapasi Mervin.
          yesterday NOM   met   ACC

    e'') Eilen   Mervin tapasi Seija.
         yesterday ACC   met   NOM
                    .

Attempting to destress the first stressed element in the
other examples produces ungrammatical sentences for (8b),
(d) and (f), as expected:

    8b'') ?*Eilen   tapasi Seija Mervin.
          yesterday met   NOM   ACC

    c'') ?*Eilen Mervin Seija tapasi.

    f'') ??Eilen tapasi Mervin Seija.

Having the adverb in COMP leaves no room for the verb in

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(8b'') and (f'') or for the object NP in (8c''), between
COMP and the subject position.[10]

    A non-stressed version of (8d) with an initial adverb
is unexpectedly good, especially when the adverb is
stressed:

    8d'') <u>Eilen</u>   Seija Mervin tapasi.
           yesterday NOM   ACC   met

           'It was yesterday that Seija met Mervi'

Since the adverb is stressed, this suggests that the adverb
is located in COMP. <u>Seija</u> is located in Spec(IP) in the
unmarked case, and presumably also here. <u>Mervin</u> would have
to be located in the Spec(VP), given the available
positions. We will return to the interaction of the
Spec(VP) and the object in Chapter 3.

2.3.1.2.3 Sentential clitics

    The third property that the elements in COMP share is
that they can act as hosts of one of the sentential
clitics--presumably this means that the sentential clitics
are located in COMP. The following provides an example
with the question particle <u>-ko</u>[11]:

11a) Seijako tapasi Mervin?
    NOM-Q   met   ACC

   'Was it Seija that met Mervi?'

 b) Tapasiko Seija Mervin?
    met-Q   NOM   ACC

   'Did Seija meet Mervi?'

 c) Mervinkö Seija tapasi?
    ACC-Q   NOM   met

   'Was it Mervi that Seija met?'

 d) Seijako Mervin tapasi?
    NOM-Q   ACC   met

   'Was it Seija that met Mervi?'

 e) Mervinkö tapasi Seija?
    ACC-Q   met   NOM

   'Was it Mervi that was met by Seija?'

 f) Tapasiko Mervin Seija?
    met-Q   ACC   NOM

   'Was Mervi met by Seija?'

(11b) and (f) are examples of typical yes/no-questions; the
verb has been fronted, and -ko suffixes on it.   In the
other examples, the fronted NP is questioned. (Note that
although (11e) and (f) have been glossed as passives, they
are active sentences.)

    Having suggested three diagnostics for the COMP
position--special stress indicating focus or
topicalization, impossibility of adverbs preceding an

element in COMP, and the distribution of the sentential

clitics--let me now turn to diagnostics for the Spec(IP)

position.

2.3.1.3 The Spec(IP) position

2.3.1.3.1 No adverbs between COMP and the Spec(IP)

        Vilkuna (1989) points out that nothing seems to be

able to intervene between COMP (her "K") and the Spec(IP)

position (her "T"). Consider the following attempt to

insert luultavasti 'probably' between the elements in COMP

and what I have proposed occurs in the Spec(IP) position

for the sentences in (8) (the judgments hold whether the

initial element is stressed or not):

        12b) ?*Tapasi luultavasti Seija Mervin.
             met   probably   NOM ACC

                ('Seija probably did meet Mervi')

          c) ?*Mervin luultavasti Seija tapasi.

                ('It was probably Mervi that Seija met')

          d) ??Seija luultavasti Mervin tapasi.

                ('It was probably Seija that met Mervi')

          f) ?*Tapasi luultavasti Mervin Seija.

                ('Mervi was indeed probably met by Seija')

In contrast with the above, inserting luultavasti between

the first two elements in (8a) and (e) is perfectly fine:

12a) <u>Seija</u> luultavasti tapasi Mervin.
     NOM   probably   met   ACC

    'Seija probably met Mervi'

e) <u>Mervin</u> luultavasti tapasi <u>Seija</u>.

    'Mervi was probably met by Seija'

(12a) and (e) are best when the initial element is
stressed. This suggests that the initial element is in
COMP if the adverb is present. This can be explained if we
assume that the adverb occupies the Spec(IP) position.[12]

It is perfectly fine to have <u>luultavasti</u> occurring in
the sentence initial position when the subject occurs in
the Spec(IP) position (i.e. the non-stressed counterpart of
(12a) and (e))--especially if the adverb is stressed,
suggesting that it is located in COMP:

12a') Luultavasti Seija tapasi Mervin.
      probably   NOM   met   ACC

    'Probably Seija met Mervi'

e') Luultavasti Mervin tapasi Seija.
    probably   ACC   met   NOM

    'Probably Mervi was met by Seija'

We have reason to think, then, that the nominative
subject in (8b) and (c) has to be located in the Spec(IP)
position, since nothing can intervene between COMP and the

nominative subjects. By the same token, we have reason to believe that the accusative object in (8d) and (f) is also located in the Spec(IP) position. In (8f), the object NP presumably licenses the Spec(IP) position at M-Structure, while in (8d) the object occupies the Spec(IP) position due to secondary movement (since the subject has been topic-alized and moved to COMP).

2.3.1.3.2 Impersonal passive

We will now look at some further data which show that the Spec(IP) position indeed has to be filled. Consider the following examples of the impersonal passive[13]:

13a) ??Annettiin Maijalle palkankorotus.
     gave-PASS Maija-ALL raise-ACC

     ('Maija was given a raise')

  b)   Maijalle annettiin palkankorotus.
       Maija-ALL gave-PASS raise-ACC

       'Maija was given a raise'

  c)   Palkankorotus annettiin Maijalle.
       raise-ACC   gave-PASS Maija-ALL

       'The raise was given to Maija'

In these examples of the impersonal passive, either the indirect object, as in (13b), or the direct object (in (13c)) can precede the passive verb. A "logical subject"

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cannot be expressed in this construction (corresponding to the English by-phrase). If neither one of the objects precedes the verb, the result is clumsy, as in (13a).[14]

Note that the Finnish impersonal passive provides a counterexample to "Burzio's Generalization" (Burzio (1981)), since the passive verb assigns objective case to its object, although no theta-role is assigned to a subject. As noted in Chapter 1, this fact also prevents us from using an explanation for the movement of the fronted NP in (13c) that is based on Case Theory: since the object NP bears accusative case[15], it should not need to move in order to get Case.

Sentences (13b) and (c) above allow the adverb luultavasti 'probably' to precede the initial element:

13b') Luultavasti Maijalle annettiin palkankorotus.
      probably   Maija-ALL gave-PASS raise-ACC

'Maija was probably given a raise'

c') Luultavasti palkankorotus annettiin Maijalle.
    probably   raise-ACC   gave-PASS Maija-ALL

'The raise was probably given to Maija'

If the preverbal NPs in these examples were located in COMP, we would expect the above examples to be ungrammatical, since elements in COMP cannot be preceded by an adverb (recall Section 2.3.1.2.2.). The grammaticality

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of these examples suggests that the preverbal NP is indeed located in the Spec(IP) position.

Sentence (13a) improves if the verb annettiin is stressed; it can then be analyzed as occurring in COMP, and Maijalle occupies the Spec(IP) position. If the passive verb is a compound verb (one consisting of an auxiliary and a main verb), we find evidence for this hypothesis:

14a) ??Oli annettu   Maijalle palkankorotus.
         was given-PASS ALL   raise-ACC

   ('Maija had been given a raise')

  b) Oli Maijalle annettu   palkankorotus.
     was ALL   given-PASS raise-ACC

    'Maija had indeed been given a raise'

  c) Oli palkankorotus annettu   Maijalle.
     was raise-ACC   given-PASS ALL

    'The raise had indeed been given to Maija'

(14b) and (c) are fine, if the initial auxiliary verb is stressed, while (14a) is not (whether the verb is stressed or not). These data follow if the preverbal NP is analyzed as being in the Spec(IP) position, and the auxiliary verb has been focused by being moved to COMP.[16]

As expected, the postverbal NP in the earlier examples (13b) and (c) can be topicalized (i.e. moved to COMP), since the preverbal NP is located in Spec(IP), and

the COMP position is empty--just as the COMP position could
be filled with the adverb luultavasti above. The
topicalized NP is stressed:

> 13b'') Palkankorotus Maijalle annettiin.
>   raise-ACC   Maija-ALL gave-PASS
>
>   'It was a raise that Maija was given'
>
>   c'') Maijalle palkankorotus annettiin.
>   Maija-ALL raise-ACC   gave-PASS
>
>   'It was to Maija that the raise was given'

The first NP in these example is stressed and topicalized,
occurring in COMP. The second NP occurs in Spec(IP).

In the impersonal passive construction, then, there
is no nominative subject that can license the Spec(IP)
position. In order for the Spec(IP) position to be
licensed, one of the complements of the verb raises to
Spec(IP) from the VP. Since this movement is obligatory, I
will assume that it takes place by M-Structure (i.e. at the
same point that a nominative subject would raise to the
Spec(IP)).

2.3.1.3.3 The missing person construction

We have seen in the impersonal passive construction
that the Spec(IP) position has to be filled, due to the
licensing requirement. A similar pattern is found in the

so-called "Missing Person" construction (Hakulinen &
Karttunen (1973)), which also has no overt subject. The
verb of this construction occurs in the 3rd person singular
form, not agreeing with any NP. This construction often
has a generic interpretation:

> 15a) ?*Voi   anoa lainaa   pankista.
>   can-3SG apply loan-PAR bank-ELA
>
>   b)   Pankista voi   anoa lainaa.
>   bank-ELA can-3SG apply loan-PAR
>
>   'One can apply to a bank for a loan'
>
>   c)   Lainaa   voi   anoa pankista.
>   loan-PAR can-3SG apply bank-ELA
>
>   '(?)A loan can be applied for from the bank'

Again, we find that the subject position has to be filled:
in (15b), it is filled by a locative phrase, and in (15c),
by the direct object. The verb-initial (15a) is quite bad
(even if the verb is stressed). If the initial verb is
stressed, we get the following grammatical possibilities:

> 16a) Voi   pankista anoa   lainaa.
>   can-3SG bank-ELA apply loan-PAR
>
>   'One can apply to a bank for a loan'
>
>   b) Voi   lainaa   anoa pankista.
>   can-3SG loan-PAR apply bank-ELA
>
>   '(?)A loan can be applied for from the bank'

If the (modal) verb is focused, it will occupy COMP (and it
could bear one of the sentential clitics). The Spec(IP)
position then needs to be filled by one of the NPs: by the

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locative phrase in (16a), and by the direct object in (16b). If the Spec(IP) position is not filled by one of these NPs (i.e., if no NP occurred between the focused modal and the main verb) the result is ungrammatical, as we saw above in (15a).

As in the impersonal passive construction, there is no nominative subject in the missing person construction. Again, the Spec(IP) has to be licensed by some other NP, one of the complements of the verb.

2.3.1.3.4 The existential construction

The third construction that behaves the same way as the impersonal passive and the missing person construction is the existential construction (cf. a comprehensive study of the Finnish existential sentences by Vähämäki (1984)). Consider these examples:

    17a) Huoneessa oli   ollut lapsia.
        room-INE had-3SG been   children-PAR

      'There had been children in the room'

    b)(?)Lapsia   oli   ollut huoneessa.
         children-PAR had-3SG been   room-INE

      'There had been children in the room'

    c) ?*Oli ollut huoneessa lapsia.

    d) ?*Oli ollut lapsia huoneessa.

Again, the Spec(IP) position can be filled either by a
locative phrase (as in (17a)), or by the non-locative NP,
as in (17b) (the locative phrase is the unmarked "filler"
of the Spec(IP) position in the existential construction).
Not having one of the these two phrases in the Spec(IP)
position results in the ungrammatical (17c) and (d).

As with the passive and the missing person
constructions, if the first verb is focused, an NP has to
immediately follow it:

18a) <u>Oli</u>   huoneessa ollut lapsia.
     had-3SG room-INE been   children-PAR

     'There had indeed some children in the room'

  b) <u>Oli</u>   lapsia   ollut huoneessa.
     had-3SG children-PAR been   room-INE

     'There had indeed been children in the room'

  c) ?*<u>Oli</u>   ollut huoneessa lapsia.
     had-3SG been   room-INE   children-PAR

  d) ?*<u>Oli</u>   ollut lapsia   huoneessa.
     had-3SG been   children-PAR room-INE

In these examples, the focused verb occupies COMP. As the
ungrammaticality of (18c) and (d) shows, the Spec(IP)
position has to be filled--just as in the other two
constructions. As before, this is a consequence of the
licensing requirement at M-Structure.

We have seen that a direct object, an indirect object, or a locative phrase can raise to the Spec(IP) position if there is no nominative subject occupying that position. It is clear in the existential construction (as in other languages) that a locative phrase is the unmarked element occurring in the Spec(IP). Interestingly, a locative phrase may be the unmarked choice in the missing person construction and the passive construction, as well; a locative phrase preceding the passive verb or the verb in the missing person construction is certainly very natural, if the sentence contains one. Compare the following to (17a) and (b):

19a) Koulussa   opetetaan   lapsia.
    school-INE teach-PASS children-PAR

  b)(?)Lapsia   opetetaan   koulussa.
       children-PAR teach-PASS school-INE

    'Children are taught at school'

20a) Yliopistolla   tapaa   opiskelijoita.
    university-ADE meet-3SG students-PAR

  b)(?)Opiskelijoita tapaa   yliopistolla.
       students-PAR   meet-3SG university-ADE

    '(One) meets students at the university'

It is not clear where in the grammar it is stated that a locative phrase is definitely preferred as the "filler" of the Spec(IP) position in the existential construction, and that there may be such a preference in the other two constructions as well.

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Let us now turn to a brief discussion of a
construction that bears some resemblance to the ones
covered so far, namely the raising verb construction.

2.3.1.3.5 Raising verbs

Finnish has (at least) the following raising verbs:
näyttää 'seem', näkyä 'seem', vaikuttaa 'appear', kuulua
'sound', and tuntua 'feel'. As in English, these verbs do
not assign a theta-role to the NP in the Spec(IP) position
(while the embedded verb does). We can say, then, that the
three constructions discussed so far and the raising
construction have in common that a theta-role is not
assigned to a subject.

In the impersonal passive, missing person, and
existential constructions an element that receives its
theta-role and its case as a complement of the verb ends up
in the Spec(IP) position. The raising construction differs
from the other three constructions in that although no
subject theta-role is assigned by the matrix verb, the
construction does have the possibility of having a
nominative NP in the Spec(IP) position, and the raising
verb agrees with the nominative subject (as is typical of
raising verbs cross-linguistically). Non-nominative
subjects may also occur in the Spec(IP), however. Consider

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the following examples:

21a) He   näyttävät syövän suklaata.
     they-NOM seem-3PL   eat-INF chocolate-PAR

'They seem to (be) eat(ing) chocolate'

b) Sinulla tuntuu   olevan monia   salaisuuksia.
   you-ADE feel-3SG be-INF many-PAR secrets-PAR

'You seem to have many secrets'

c) Pekalle näkyy   annetun   palkankorotus.
   ALL   seem-3SG give-PASS-INF raise-ACC

'Pekka seems to have been given a raise'

d) Tästä pankista vaikuttaa voivan anoa   lainaa.
   this bank-ELA appear-3SG can-INF apply loan-PAR

'This bank appears (to be one at which) one can
                                apply for a loan'

e) Yliopistolta   näyttää   tulleen postia.
   university-ABL seem-3SG come-INF mail-PAR

'There seems to be some mail from the university'

(21a) is a typical example with a nominative subject, where
the matrix (raising) verb agrees with the subject.
However, as already mentioned, the nominative NP gets its
theta-role from the embedded verb syödä 'eat'; he 'they' is
the "logical subject" of the embedded verb.

It seems that any NP that can occur in the Spec(IP)
position of a sentence can be raised to the Spec(IP)
position of a raising verb. In (21b), the "subject" of the
raising verb, sinulla is the normal subject form of the

embedded possessive sentence. In (21c), the initial NP is the indirect object of the embedded verb, i.e. the NP that would occur in the Spec(IP) position in the corresponding passive sentence (without a raising verb). Similarly, in (21d) and (e), the locative phrase of the embedded missing person construction in (d) and the existential sentence in (e) occurs in the matrix Spec(IP).

As with the impersonal passive construction, movement cannot be motivated using Case Theory in the Finnish raising construction. The examples in (21) clearly show that the raised NP does not raise because it needs to get "Case", since each of the NPs bears overt morphological case. Even in the example with nominative case, (21a), it can be argued that the nominative NP would have received genitive case if it had not raised (as we shall see in Chapter 5, in discussing the infinitival construction of these examples).

Thus, we need an analysis of movement that is not based on "Case" for the raising construction. As with the other constructions, we can invoke the requirement for licensing the Spec(IP) position. Again, since filling the Spec(IP) position in this construction is obligatory, the movement presumably takes place before M-Structure. I will

return to the question of nominative case assignment in Chapter 3.

In sum, then, the Spec(IP) position is one which has to be filled by syntactic material (either lexical or abstract, as in the pro-drop sentences), due to the licensing requirement at M-Structure. We have seen that in the three constructions discussed (passive, missing person, and existential) that do not have a nominative subject, the Spec(IP) position is filled by some other NP, one of the complements of the verb. In the raising construction, the Spec(IP) position of the matrix verb is filled by an argument of the embedded verb.

We will now turn to the material that follows the Spec(IP) position in a sentence, namely INFL and the VP.

2.3.2   The location of verbal material in the sentence

Before discussing the syntactic positions available for verbal material, let me take a little detour into the debate on the existence of VP, and its relevance to word order.

2.3.2.1 Does Finnish have a VP?

In generative grammar, the existence of a VP has been
taken to be a characteristic of a "configurational"
language (language with a fairly fixed word order), while a
lack of a VP has signified a "non-configurational" language
(with "free" word order) (Hale (1983)). That is, having a
VP is a sign of having hierarchical structure. Not having
a VP in a language--and hence, possibly having sentences
consisting a flat tree--would presumably affect word
order.[17]

Van Steenbergen (1987) argues for the existence of a
VP in Finnish, and thus configurationality, based on
subject-object asymmetries in binding. Vilkuna (1989:25-
27) argues against the existence of a VP--and thus for non-
configurationality--using arguments from Hakulinen &
Karlsson (1979:224-229), who themselves remain agnostic
about the Finnish VP. Vilkuna follows Kiss (1987) in
dismissing the subject-object asymmetries as evidence for a
VP; Kiss provides an analysis of Hungarian with an initial
flat structure (without a VP), in which later adjunction
operations provide hierarchy--the binding asymmetries arise
from this later hierarchy.

The present work is founded on the assumption that
Finnish is configurational; I am also assuming the

existence of a VP, whether it is a diagnostic for configurationality or not. I will briefly go over the Hakulinen & Karlsson arguments, showing that they do not argue against a VP.

There are basically three arguments: first, the best position for an adverb with a simple (=non-compound) V is between the V and its complement; second, Finnish does not have pronominal elements referring to a VP; third, there is no VP-fronting.

If there is a VP-constituent, we might not expect that an adverb could intervene in the constituent formed by the V and its object, at least assuming that adverbs that are located in the VP are VP-initial[18]:

    22a) ?Pekka aina   syö suklaata.
          NOM   always eats chocolate

      b) Pekka syö aina   suklaata.
          NOM   eats always chocolate

          'Pekka always eats chocolate'

We find that the sentence is better if the adverb inter-venes between the tensed V and the object, as in (22b). Holmberg (1989) (following much work on Germanic V-raising, e.g. Platzack (1986)) has suggested that (22b) is an instance of V-to-I raising: the adverb precedes the V at an early level, and the V is raised to a position in front of the adverb--to INFL. The V-raising analysis makes sense of

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the data with compound verbs (cf. Platzack (1986:211ff)):

```
23a) ?Pekka aina    on   syönyt suklaata.
      NOM    always has  eaten  chocolate

  b)   Pekka on   aina   syönyt suklaata.
       NOM   has  always eaten  chocolate

  c) ?Pekka on   syönyt aina   suklaata.
      NOM   has  eaten  always chocolate

     'Pekka has always eaten chocolate'
```

The best position for the adverb in this example is between
the tensed verb form <u>on</u> and the past participle <u>syönyt</u>.
This can be accounted for by saying that the tensed V is
raised to the INFL position preceding the adverb, just as
in the example with a simple V. If, on the other hand, the
best position for an adverb were really between a V and its
complement, we would expect (23c) to be the best alterna-
tive here.

We see, then, that the argument against a VP based on
adverb placement does not hold; rather, the facts suggest
that V-raising is taking place in Finnish. I will return
to the details of V-to-I raising in Section 2.3.2.2.

As for the second argument against a VP--that Finnish
does not have a pronominal form of a VP--I think Finnish
<u>does</u> have such a form, as exemplified in (24). Hakulinen &
Karlsson (1979:225) consider this construction as a
possible instance of VP-deletion. However, they dismiss

it, considering it to be an instance of "substitution of a psychological predicate", due to the fact that in this construction the "subject" does not need to be a nominative NP. This, of course, is not a sufficient reason for ruling out this construction as a candidate of VP-deletion, since we have seen that the Spec(IP) position is not restricted to nominative subjects.

24a) A: Pekka syö aina pinaattinsa.
        NOM eats always spinach-3Px

     'Pekka always eats his spinach'

     B: Niin minäkin.
        so I(NOM)-also 'So do I'

  b) A: Mervi on yhtäkkiä ruvennut näkemään näkyjä.
        NOM has suddenly started see-INF sights

     'Mervi has suddenly started to see things'

     B: Niin (olen) minäkin. /Niin (on) Pekkakin.
        So have I(NOM)-also/So has Pekka-also

     'So have I./So has Pekka'

  c) A: Seija ei ole koskaan uskonut kummituksiin.
        NOM not has never believed ghosts-ILL

     'Seija has never believed in ghosts'

     B: En minäkään.
        not I(NOM)-also 'Neither have I'

In (24a), we have niin 'so' followed by the subject NP with the clitic -kin 'also'. In (24b), there is also an optional auxiliary verb. In negative sentences, such as in

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(24c), we have the negative verb followed by the subject NP

with the negative polarity form of -kin, -kaan.[19]

In B's replies, it seems that niin 'so' and en (the
1st person singular form of the negative verb) are
referring to the VP in the previous sentences uttered by A.
The optional auxiliary elements in (24b) would be located
in INFL. A more detailed analysis will be provided in
Section 2.3.2.2.

The third argument against a VP is that there is no
VP-fronting (or other types of VP-movement). The status of
this argument is unclear. The restrictions on movement
might have to do with the positions into which movement is
attempted: only a single V--and not a VP--can be moved into
the COMP position. This may well be a restriction in the
part of COMP. On the other hand, certain types of VPs may
be able to move; I will return to this in Chapter 5.

Thus, none of these are clear arguments against the
existence of VP, while the first one (adverb placement)
turns out to be an argument for V-raising. I will now turn
to a more detailed discussion of V-raising.

2.3.2.2 The structure of INFL

2.3.2.2.1 A survey of adverbs

Before attempting to analyze the verbal material in a
tensed sentence, let us consider the word order possibili-
ties of different adverbs (in the manner of Jackendoff
(1972); cf. also recent work on verb raising and adverbial
placement by Pollock (1989) and Chomsky (1988)). The
distribution of certain adverbs sheds some light on the
structure of INFL, as we have already seen (in the argument
for V-to-I raising).

Manner adverbs, such as <u>nopeasti</u> 'quickly', <u>hyvin</u>
'well' and <u>huonosti</u> 'poorly' have the least varied
distribution--they appear to occur only postverbally:

> 25a) ?*Nopeasti/hyvin Pekka on lukenut kirjaa.
>   fast   well NOM   has read   book-PAR
>
> ('Pekka has been reading the book quicly/well')
>
> b) ?*Pekka nopeasti/hyvin on lukenut kirjaa.
>
> c) ??Pekka on nopeasti/hyvin lukenut kirjaa.
>
> d) ??Pekka on lukenut nopeasti/hyvin kirjaa.
>
> e)   Pekka on lukenut kirjaa   nopeasti/hyvin.
>   NOM   has read   book-PAR quickly /well
>
> 'Pekka has been reading the book quickly/well'

Without special stress, only (25e) is grammatical, where
the manner adverbial follows the object (its exact location
in the VP is not relevant for our purposes here).

Sentence (25a) is grammatical if the adverb is
stressed and/or bears a sentential clitic, i.e. the adverb
occurs in COMP:

25a') Nopeastiko/hyvinkö Pekka on lukenut kirjaa?
      fast-Q   well-Q NOM   has read   book-PAR

      'Was it fast/well that Pekka has been reading
                                            a book?'

Similarly, sentence (25b) is grammatical if the
initial phrase is in COMP, in which case the manner adverb
occurs in the Spec(IP) position[20]:

25b') Pekkako nopeasti/hyvin on lukenut kirjaa?
      NOM-Q   fast   well has read   book-PAR

      'Was it Pekka that has been reading the book
                                            fast/well?

For the purposes of finding out about the structure of
INFL, the manner adverbs are not useful, since they only
occur at the end of the VP.

The two categories of adverbs that turn out to be
useful for deciphering the structure of INFL are sentential
adverbs and time adverbs. We have already seen that
sentential adverbs such as luultavasti 'probably' may occur
either in COMP or in the Spec(IP) (if e.g. the subject is
in COMP). In addition to these two possibilities,
sentential adverbs can follow some verbal material.
Consider the following examples:

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26a) Jukka on luultavasti/varmaan lukenut sen kirjan.
     NOM has probably   surely   read   that book

   'Jukka has probably/surely read that book'

 b) Jukka ei   luultavasti/varmaankaan ole...
     NOM   not-3SG probably   surely-CLIT have

              ...lukenut sita kirjaa.
                 read   that book-PAR

   'Jukka has probably/surely not read that book'

In (26a), the adverb follows the auxiliary verb _olla_ 'be',
and in (26b), the adverb follows the negative verb (unlike
in English) and precedes the auxiliary _olla_. The structure
of INFL needs to be such that we can define a position in
which these adverbs occur. This position may be the
position in which sentential adverbs originate, since it
seems to be the unmarked position.[21]

    If sentential adverbs are base-generated in/near
INFL, then the two other possible locations would be the
result of the usual kind of movement, namely raising (to an
empty Spec(IP) or COMP position). These three positions--
COMP, Spec(IP) and the as-of-yet undefined position in or
near INFL--seem to be the only possible locations for
sentential adverbs.

    Before we attempt to determine the exact location for
the sentential adverbs, let us consider time adverbials:[22]

```
27a) ?*Usein Pekka on  tavannut Jukan.
     often NOM   has met      ACC

   ('Pekka has often met Jukka')

 b) ?*Pekka usein on tavannut Jukan.

 c)   Pekka on usein tavannut Jukan.

 d) ??Pekka on tavannut usein Jukan.

 e)   Pekka on tavannut Jukan usein.
```

As with the manner adverbs, these time adverbs occur VP-
finally, as in (27e). Having the adverb intervening
between the verb and the object is not very good, also as
with the manner adverbs--(27d). And as with manner
adverbs, (27a) and (b) are improved if the initial element
is in COMP.

However, unlike manner adverbs, and as sentential
adverbs, time adverbs easily occur in/near INFL; cf.
example (27c) above. This may be the unmarked position for
time adverbials, although the VP-final position might be
equally unmarked.[23]

Sentential adverbs and time adverbs differ with
respect to negative sentences. We saw that a sentential
adverb preferred to follow the negative verb and precede
the auxiliary olla. However, a time adverbial prefers to
follow the auxiliary olla:

```
28a) Pekka ei      ole  koskaan tavannut Jukkaa.
     NOM   not-3SG have ever    met      PAR

     'Pekka has never met Jukka'

  b)?*Pekka ei      koskaan ole  tavannut Jukkaa.
     NOM   not-3SG ever    have met      PAR
```

Sentence (28a) gives what is probably the unmarked order
for the time adverb <u>koskaan</u> '(n)ever'. Recall that the
order exhibited in (28b) was the preferred order for
sentential adverbs.

In an affirmative sentence (even with a compound
verb), the two adverb positions are not distinguished, and
we might think that a sentential adverb and a time adverb
occur in the same position (although their mutual word
order is fairly fixed: the sentential adverb prefers to
precede the time adverb). In a negative sentence, however,
where we can have up to three verbal elements, the two
adverb types are distinguished:

```
29a) Pekka on  varmaan joskus    tavannut Jukan.
     NOM   has surely  sometimes met      ACC

     'Pekka has surely sometimes met Jukka'

  b) Pekka ei      varmaan ole koskaan tavannut Jukkaa.
     NOM   not-3SG surely  have never   met      PAR

     'Pekka has surely never met Jukka'
```

In (29b), the sentential adverb occurs between the negative
verb and the auxiliary verb, while the time adverb occurs
between the auxiliary verb and the main verb.

The generalization concerning the occurrence of sentential adverbs seems to be the following: the sentential adverb follows the verbal element that bears the agreement morphology. Consider the following exhaustive set of examples, for the four tenses in Finnish:[24]

30a) Maija ostaa/osti   varmaan väärää lajia.
     NOM   buys bought surely wrong   kind-PAR

     'Maija (will) surely buy/bought the wrong kind'

  b) Maija on/oli   varmaan ostanut väärää lajia.
     NOM   has/had surely   bought wrong   kind-PAR

     'Maija has/had surely bought the wrong kind'

  c) Maija ei   varmaan osta/ostanut väärää lajia.
     NOM   not-3SG surely buy bought   wrong   kind

     'Maija surely (will) not/did not buy the wrong
                                                 kind'

  d) Maija ei varmaan ole/ollut ostanut väärää lajia.
     NOM   not-3SG surely has/had bought wrong   kind

     'Maija surely has/had not bought the wrong kind'

In (30c) and (d), the sentential adverb follows the negative verb, which agrees with the subject. In (30b), the adverb follows the auxiliary <u>olla</u> 'be/have', which also agrees with the subject. In (30a), the adverb follows the main verb <u>ostaa</u> 'buy', which agrees with the subject.

The generalization for the time adverb (at least of the type discussed) seems to be the following: these adverbs follow the verbal element that bears the tense

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information. In affirmative sentences, the agreement and
tense information are contained in the same element
(auxiliary olla for compound verbs, main verb for simple
verbs); thus, a sentential adverb and a time adverb would
appear to occur in the same position, as we saw in example
(29a). Consider the following set of examples:

31a) Pekka lukee   /luki   usein matkakertomuksia.
     NOM   read-PRES/PAST-3SG often travel-stories

     'Pekka often reads/read travel stories'

  b) Pekka on /oli   usein lukenut Faulkneria.
     NOM   has/had-3SG often read   PAR

     'Pekka has/had often read Faulkner'

  c) Pekka ei lue/lukenut koskaan matkakertomuksia.
     NOM   not read-PRES/PAST never travel-stories

     'Pekka never reads/read travel stories'

  d) Pekka ei ole/ollut koskaan lukenut Faulkneria.
     NOM   not have-PRES/PAST never read PAR

     'Pekka has/had never read Faulkner'

Sentences (31a) and (b) behave superficially identically
with respect to the two types of adverb. (31c) and (d),
however, reveal the difference: the time adverb koskaan
'(n)ever' follows the second verbal element, while a
sentential adverb would precede this element.

    The Finnish negative verb e- has a defective verbal
paradigm: it only has a present tense form (although it has

a complete agreement paradigm). The element that follows the negative verb indicates the tense in question in the following manner:

32a) no suffix[25] on a non-auxiliary -> present tense

   b) suffix -nut on a non-auxiliary -> past tense

   c) no suffix[25] on auxiliary -> present perfect

   d) suffix -nut on auxiliary -> past perfect

Sentences (31c) and (d) above give an example of each of these possibilities.

At least on the surface, then, a sentential adverb follows an element bearing an agreement suffix, and a time adverb follows an element bearing tense information. Let us now consider the implications of these generalizations for the structure of INFL, and its relationship to VP.

2.3.2.2.2 INFL and VP

I would first like to suggest that the negative verb e- is base-generated in INFL. This suggestion is consistent with the fact that the negative verb has no forms other than the six person/number forms of verb agreement.

Similarly, the assumption that the only auxiliary element in Finnish, olla 'be', is also base-generated in INFL will get us some interesting results. Unlike the negative verb, however, this auxiliary has a full verbal paradigm. I will return to the exact structure of INFL with respect to the auxiliary verb and the negative verb.

Before looking at the adverb data presented in the previous section, we might have thought that all adverbs occurring somewhere in the vicinity of INFL were located in the VP--say, in the Spec(VP). We might still hold this view of the time adverbs, but it seems clear that we need to allow for the sentential adverbs to actually occur in INFL itself (since the auxiliary olla follows the sentential adverb in the negative sentences).

If this is correct, we have strong evidence for verbs raising to INFL. Assuming that the sentential adverbs occur in INFL (or at least no lower than INFL), anything preceding such an adverb would also have to occur in INFL (or higher). That is, the main verb in (33a) would have raised to INFL, while it has remained in the VP in (33b) (some of our earlier examples are repeated here):

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33a) Maija osti   varmaankin väärää lajia.
     NOM   bought surely   wrong   kind-PAR

   'Maija surely bought the wrong kind'

   b) Maija on varmaankin ostanut väärää lajia.
      NOM   has surely   bought wrong   kind-PAR

   'Maija has surely bought the wrong kind'

The examples with time adverbs used by Holmberg (that we
saw in Section 2.3.2.1.) show that the verb has raised
somewhere from the VP, but they do not provide as clear
evidence for raising to INFL as the sentential adverb
examples.

   In order to be able to state the generalizations
concerning the distribution of the sentential adverbs and
some time adverbs, I would like to suggest the following.
In an affirmative sentence in Finnish INFL has just one
branch, and the tense features are base-generated in INFL.
In a negative sentence, INFL consists of two branches, NEG
and TNS. The negative verb is base-generated in the NEG
node, and the tense features are base-generated in TNS. We
might say that INFL is forced to have two branches in a
negative sentence due to the deficient paradigm of the
negative verb. Since the tense features cannot be realized
on the negative verb, a separate node is base-generated for
the tense features.

                    .

It will be argued in Chapters 3 and 4 that agreement
features are base-generated in the Spec(IP) position.
During affix-based movement (before M-Structure; cf. Ch.1)
the features move to the head of the phrase, INFL. They
end up attaching to whatever is in INFL in an affirmative
sentence (either an auxiliary verb or the raised main
verb), and whatever is in NEG in a negative sentence (the
negative verb). (34a) provides the D-Structure tree for
the IP of an affirmative sentence, and (34b) of a negative
sentence:

```
34a)                IP
                   /  \
               Spec    I'
                |     /  \
              [AGR] INFL  VP
                      |
                   [tense
                  features]

   b)               IP
                   /  \
               Spec    I'
                |     /  \
              [AGR] INFL VP
                        /  \
                     NEG    TNS
                      |      |
                  [neg.V] [tense features]
```
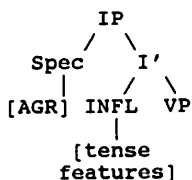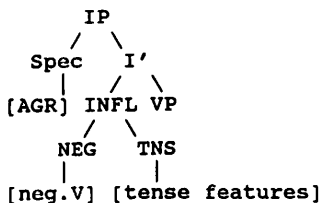
At M-Structure, then, the agreement features occur in INFL,
attached to the first element in INFL.

    Thus, the generalizations concerning adverbs in the
negative sentences can be stated as follows: the sentential
adverbs are adjoined to the end of NEG, while time adverbs

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are adjoined to the end of TNS. In order to extend the generalizations to the affirmative sentences, we would need something like the following: sentential adverbs are adjoined to the end of the first branch of INFL (or, possibly, the head of INFL; that is, NEG in negative sentences and INFL in affirmative sentences); and, time adverbs are adjoined at the end of INFL.

In negative sentences, then, the negative verb is base-generated in NEG, where it ends up getting the agreement features from the Spec(IP). If no negative verb (and no NEG) is base-generated in INFL, then the auxiliary verb (base-generated in INFL) will end up with the agreement features. If there is neither a negative verb nor an auxiliary verb, then the (main) verb from the VP will raise to INFL, getting the agreement features.

As was the case with the Spec(IP) position, we see that the INFL position has to be filled. If it is not filled either by a negative verb or by an auxiliary verb, then something needs to raise to INFL in order to license the position at M-Structure.

In a negative sentence, the negative verb is followed by a verbal element that bears the tense information: either the auxiliary _olla_ (if we have a compound tense) or

the matrix verb. This element is located in the TNS branch
of INFL, and precedes certain time adverbs (as we saw in
the previous section). Consider the following version of
the tree in (34b) above:

```
35)                    IP
                      /  \
                  Spec    I'
                    |    /  \
                 [AGR] INFL  VP
                       /  \
                    NEG    TNS
                     |      |
                     e-    olla
```
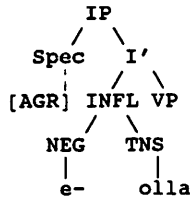
The auxiliary olla is base-generated in the TNS node. If
there is no auxiliary verb in the sentence (i.e. if the
tense is simple present or simple past), then the main verb
from VP raises to TNS. The time adverbs discussed would
then follow the element in TNS, whether base-generated or
raised.

Thus, in an affirmative sentence, INFL has just one
branch which is licensed by one of two ways: (i) the
auxiliary olla is base-generated in INFL; or, (ii) the main
verb raises to INFL. In negative sentences, the NEG branch
is always occupied by the negative verb (and thereby
licensed). The TNS branch of a negative INFL behaves the
same way as the single branch of an affirmative INFL: both
need to be licensed. Again, the TNS position can be
licensed either by base-generating the auxiliary verb in

this position (as in the tree in (35) above), or by having the main verb raise to it.

The tense features in INFL for an affirmative sentence consist of the following (for the four tenses):

36a) no suffix[25] on a non-auxiliary verb -> present tense

b) suffix $\underline{-i}$ on a non-auxiliary verb -> past tense

c) no suffix[25] on an auxiliary verb -> present perfect

d) suffix $\underline{-i}$ on an auxiliary verb -> past perfect

The comparable "tense chart" for the negative INFL (the TNS node) is repeated here:

32a) no suffix[25] on a non-auxiliary -> present tense

b) suffix $\underline{-nut}$ on a non-auxiliary -> past tense

c) no suffix[25] on auxiliary -> present perfect

d) suffix $\underline{-nut}$ on auxiliary -> past perfect

We see that the tense information is identical regardless of the exact position of the tense information, except for the difference in the past tense suffix.

To summarize what we have discovered about the structure of INFL: in affirmative sentences, INFL consists of one branch. This branch is either filled by the auxiliary $\underline{olla}$ (which is base-generated in this position) or with the raised main verb. In negative sentences, INFL

is split into two: NEG and TNS. NEG is filled by the
negative verb (which is base-generated in this position).
Just like INFL in affirmative sentences, TNS in negative
sentences is either filled by the base-generated auxiliary,
or by a raised main verb.

Sentential adverbs and certain time adverbs can be
adjoined to INFL. Time adverbs are adjoined to the end of
INFL, and sentential adverbs are adjoined to the first (or
only) branch of INFL (possibly, to the head of INFL; the
position that agreement features end up in). Since in
affirmative sentences, the two locations happen to be the
same, the two types of adverbs appear to occur in the same
position (except for their mutual order, since the
sentential adverbs prefer to precede the time adverbs).
The distinction in position shows up clearly in the
negative sentences.

2.3.2.2.3   INFL and VP-deletion

We are now in a position to attempt an analysis of
the VP-ellipsis data (or, more accurately for the present
model, V'-ellipsis), repeated below as (37):

37a)   A: Pekka syö aina   pinaattinsa.
          NOM   eats always spinach-3Px

       'Pekka always eats his spinach'

       B: Niin minäkin.
          so   I(NOM)-also   'So do I'

   b) A: Mervi on yhtäkkiä ruvennut näkemään näkyjä.
          NOM   has suddenly started see-INF sights

       'Mervi has suddenly started to see things'

       B: Niin (olen) minäkin.   /Niin (on) Pekkakin.
          So   have I(NOM)-also/So   has Pekka-also

       'So have I./So has Pekka'

   c) A: Seija ei ole koskaan uskonut kummituksiin.
          NOM   not has never   believed ghosts-ILL

       'Seija has never believed in ghosts'

       B: En   minäkään.
          not I(NOM)-also   'Neither have I'

In the construction used by speaker B, where is the
initial element located? Let us consider the possibility
of this element occurring in COMP (as suggested to me by
R.Higgins). If niin fills up the COMP position in (37a),
we would have an explanation for why repeating the main
verb is impossible:

37a') B: ?*Niin syön   minäkin.
             so   eat-1SG I(NOM)-also   ('So do I')

Assuming that the subject occurs in its typical position,
Spec(IP), there would be no position for the verb to occur
in--if niin occupies COMP.

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Similarly, in (37c), only the negative verb can occur
in COMP, not the auxiliary following the negative verb:

37c') B: ??En   ole   minäkään.
          not-1SG have I(NOM)-also

       ('Neither have I')

This would follow from the general restriction on having
more than one verbal element in COMP (mentioned in Section
2.3.2.1.). Independent of this construction, we need some
way of blocking the combination of the negative verb and
the auxiliary from occurring in COMP (I will return to this
in Chapter 5).

       Case (37b) is interesting. It appears that the
auxiliary olla is optional, occurring together with niin.
I would like to suggest the following: the syntactic
positions available for this elliptical construction at S-
Structure are COMP and Spec(IP). However, at D-Structure,
INFL must also be present (otherwise we would not be able
to base-generate the negative verb or the auxiliary).
Similarly, the Spec(VP) position would have to be present
at D-Structure, in order for the subject to be base-
generated in it (as will be argued for in Chapter 3).

       Since the auxiliary olla is base-generated in INFL,
it will be base-generated at D-Structure in this
construction. There is now a dilemma. Raising the

auxiliary to COMP will create a problem in that COMP will contain two elements. Not raising the element to COMP will involve deleting the auxiliary. Both options are problematic. In my judgement both having the auxiliary and not having it in (37b) is indeed slightly clumsy (although maybe better than expected).

Thus, the analysis of INFL developed in the previous section provides some insight into this elliptical construction. Furthermore, if the analysis just outlined is approximately correct, this construction would indeed exemplify VP-deletion (or, V'-deletion in the terms of this discussion), contra Hakulinen & Karlsson's (1979:225) and Vilkuna's (1989:26) assumption that Finnish has no VP-deletion.

2.3.2.2.4 INFL in different matrix sentence types

Let us now briefly consider INFL in different types of sentences. Adverb placement suggests that the structure of INFL is identical in active, impersonal passive, the missing person construction, existential sentences, and the raising construction. In the following, I give examples of these types with a sentential adverb and a time adverb (material in INFL indicated by brackets):

38) ACTIVE:

a) Pekka [on onneksi   usein] käynyt Ranskassa.
   NOM   has fortunately often visited INE

   'Pekka has fortunately often been to France'

b) Pekka [ei onneksi ole koskaan] käynyt Ranskassa.
   NOM   not fortunately has never visited INE

   'Pekka has fortunately never been to France'

39) IMPERSONAL PASSIVE:

a) Maijalle [on varmaankin jo] annettu palkankorotus.
   ALL   has surely already give-PASS raise-ACC

   'Maija has surely already been given a raise'

b) Maijalle [ei varmaankaan ole vielä] annettu...
   ALL   not-3SG surely be   yet   give-PASS
                                  ...palkankorotusta.
                                     raise-PAR

   'Maija has surely not yet been given a raise'

40) MISSING PERSON CONSTRUCTION:

a) Pankista [voi kai   aina]   anoa lainaa.
   bank-ELA can surely always apply loan-PAR

   'One can surely always apply to a bank for a loan'

b) Pankista [ei kai   voi yleensä] anoa   lainaa.
   bank-ELA not surely can generally apply loan-PAR

   'One surely cannot generally apply to a bank
                                           for a loan'

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41) EXISTENTIAL CONSTRUCTION:

a) Kalliolta [putosi varmaan yhtäkkiä] kivia.
   rock-ABL dropped probably suddenly rocks-PAR

   'Probably there suddenly fell rocks from the
                                            mountain'

b) Kalliolta [ei varmaan pudonnut koskaan] kivia.
   rock-ABL not probably dropped never rocks-PAR

   'Probably there never fell rocks from the mountain'

42) RAISING CONSTRUCTION:

a) Jukalla [näyttää kai   aina] olevan   rahaa.
   ADE   seems   surely always have-INF money

   'Surely Jukka always seems to have money'

b) Jukalla [ei kai näytä milloinkaan] olevan rahaa.
   ADE   not surely seem never   have   money

   'Surely Jukka never seems to have money'

As expected, INFL in all of these sentences behaves the
same way. A sentential adverb may follow the (first)
element in INFL, and a time adverb may follow the (last)
element in INFL. Since the negative (b) sentences have two
elements in INFL, the sentential adverb follows the first
one, and the time adverb follows the second one.

   The data on INFL in the different sentence types is
consistent with the assumption that the Spec(IP) position
and the INFL position are licensed (filled) at M-Structure
not just in active sentences with nominative subjects, but
also in the other sentences with non-nominative "subjects".

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Having studied the Spec(IP) and INFL positions (i.e.
the "IP layer" of our tree), let us now take a closer look
at COMP, and introduce the Spec(CP) node.

2.3.3 Two types of complementizers

The complementizers in Finnish seem to fall into two
categories, each characterized by a number of syntactic
phenomena. I will call them the 'etta'-type and the 'jos'-
type. The only clear example of the 'etta'-type is the
complementizer että 'that' (mutta 'but' may also be one).
The clear members of the 'jos'-class are jos 'if' and kun
'when; because' (possibly also vaikka 'although'). I will
not attempt to classify the other complementizers, but will
only deal with the clear cases here.

In general, the basic word order in subordinate
clauses in Finnish is identical to that of matrix clauses.
There are interesting subtle differences in the range of
possible word orders between matrix and subordinate
clauses.

I would like to argue the following for the two
classes of complementizers in Finnish: a complementizer of
the 'jos'-class is base-generated (and remains) in the COMP
position, but a complementizer of the 'etta'-class is base-

generated (and remains) in the Spec(CP) position. Let me
now provide some evidence.

If a complementizer of the 'että'-class occurs in the
Spec(CP) position, we would expect WH-movement and
Topicalization to be possible, which is what we find
(cf. Ch.1, fn.10 on the Head Movement Constraint):

> 43a) Jukka halusi tietää, (että) kuinka me olimme...
>   NOM   wanted know-INF that how   we had
>
>   ...korjanneet pyörän.
>   fixed   bike-ACC
>
>   'Jukka wanted to know how we had fixed the bike'
>
> b) Maija kysyi, (että) mitä Pekka oli syönyt.
>   NOM   asked   that what NOM   had eaten
>
>   'Maija asked what Pekka had eaten'
>
> c) Leena kysyi, että Jukkako hattunsa oli hukannut.
>   NOM   asked that NOM-Q   hat-ACC-3Px had lost
>
>   'Leena asked whether it was Jukka that had lost
>   his hat'

As indicated by the parentheses in (43a) and (b), having
the complementizer with an indirect question is optional.
However, since the WH-phrase presumably occurs in COMP (as
it does in matrix questions), we are forced to analyze the
complementizer as occurring in the Spec(CP) position.

In (43c), the subject NP has been raised to COMP
since it is being questioned. The NP <u>Jukkako</u> occurs in

COMP, since it bears a sentential clitic (the question clitic -ko), and since it is followed by material in the Spec(IP) position (the object--we will return to this in the next section). Why the complementizer seems to be obligatory in (43c) is unclear.

In contrast with the 'että'-type, the 'jos'-type does not allow WH-phrases following it. This can be accounted for by analyzing the 'jos'-type as occurring in COMP, thereby blocking movement of anything else to COMP.

The complementizer <u>että</u> can also precede one of the 'jos'-type complementizers, while the reverse seems impossible:

    44a) Pekka sanoi, että jos tulemme ajoissa,
         NOM   said   that if come-1PL time-INE

                                ...voimme   saunoa.
                                   can-1PL sauna-INF

         'Pekka said that if we come on time,
                                we can go to the sauna'

      b) ...*jos että...
             if   that

Again, this pattern follows if <u>että</u> occurs in Spec(CP) and <u>jos</u> occurs in COMP.

There is an interesting (although rare) word order possibility available for the 'jos'-type that is not

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possible with the 'että'-type:

```
45a) Jukka jos saisi    autonsa kuntoon,
     NOM   if  get-COND car-ACC shape-ILL

                    ...voisimme      lähteä.
                       can-COND-1PL leave-INF

     'If (only) Jukka could get his car in shape,
                                 we could leave'


   b) Liisa väsyi    katselemaan, me kun     emme...
      NOM   tire-3SG watch-INF    we because not-1PL

                   ...olleet erityisen  huvittavia.
                      were    especially funny

      'Liisa got tired of watching, since we were not
                                    very funny'


   c) Maijalle kun  antaa    lahjan, ei      saa...
      ALL      when give-3SG gift-ACC not-3SG get

                   ...kiitoksen sanaa    vastineeksi.
                      thank-GEN  word-PAR reply-TRA

      'When (one) gives a gift to Maija, (one) does not...
       ...receive (even) a word of thanks in reply'
```

If each of these examples, the element that would typically
occur in the Spec(IP) position precedes the complementizer.
In (45a), this is a regular nominative subject, while in
(45c) we have an argument of the verb of the missing person
construction.   (45b) shows that this word order is not
limited to the utterance-initial position.

We might analyze this construction as some sort of
topicalization (the fronted elements do tend to be stressed
in this construction). However, these elements seem not to

allow sentential clitics, which is unexpected if they
actually occur in the COMP position.

I would like to suggest that in this construction an
NP is indeed topicalized, but since the COMP position is
occupied, the NP raises to the Spec(CP) position.[26] This
allows us to maintain the generalization that the
sentential clitics occur on elements in COMP, but not in
Spec(CP). It also explains why this construction is not
possible with the 'etta'-type complementizers, assuming
that the fronted elements occupy the Spec(CP) position in
this construction.

Finally, the 'jos'-type complementizers allow
sentential clitics, while the 'että'-type do not:

    46a) Voimme lähteä, kunhan   Jukka tulee kotiin.
        can-1PL leave   when-CLIT NOM   comes home

        'We can leave when/as soon as Jukka gets home'

     b) Jospa   sataisi!
       If-CLIT rain-3SG-COND

       'If only it would rain!'

    47) *ettähän/ *ettäpä/   ?*ettäkö
        that-CLIT   that-CLIT   that-Q

Again, if the 'jos'-type complementizers occur in COMP, we
expect them to occur with sentential clitics, which is what

we find in (46). On the other hand, sentential clitics
seem not to be possible with the 'että'-type. Table 2.2
summarizes the two types of complementizers.

TABLE 2.2. Characteristics of the two complementizer types

characteristic feature:	'että'-type	'jos'-type
precedes WH-phrases	yes	no
can be preceded by "topicalized" NP	no	yes
precedes other complementizers	yes	no
takes sentential clitics	no	yes

unclear

        The distribution of the characteristics in Table 2.2
can be accounted for, if the 'että'-type occupies the
Spec(CP) position, and the 'jos'-type occupies the COMP
position.

        Do the two positions in CP need to be licensed? In
the case of the 'jos'-type complementizers, the
complementizer occupies and licenses the COMP position.
The Spec(CP) position presumably only exists if it is
licensed by a "topicalized" NP exemplified in (45) above,
moving into the Spec(CP) position during phrase-based
movement (before S-Structure).

With the 'että'-type complements, the situation is
not so straightforward. I have argued that the 'että'-type
complementizers occur in the Spec(CP) position. When the
Spec(CP) position is filled by a complementizer, we have an
available COMP position. We have seen that the COMP
position <u>can</u> be filled by e.g. a WH-phrase; but <u>must</u> the
position be filled? The COMP position clearly does not
have to filled, since we have common sentences of the
following type:

     48) Leena väitti, että Pekka oli syönyt suklaan.
         NOM   claimed that NOM   had eaten   chocolate-ACC

     'Leena claimed that Pekka had eaten the chocolate'

In (48) the Spec(CP) position is filled by 'että', and the
Spec(CP) position by 'Pekka'; the COMP position seems to be
empty.

On the other hand, we will see in the next section
that filling the COMP position is typical with certain WH-
phrases, where it can be argued that the WH-phrase occupies
the Spec(CP) position.

2.4 Primary and secondary movement

We saw in Section 2.3.1.3 that the Spec(IP) position
had to be filled with either (i) an overt nominative

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subject, (ii) an abstract (nominative) subject (in the 1st and 2nd person), or, if there was no nominative subject or if the nominative subject was "displaced", (iii) by a complement of the verb, such as a direct object, indirect object, or locative phrase. We will now look in more detail at how a subject can be moved from Spec(IP), and what the consequences of this movement are.

2.4.1 Moving a subject

2.4.1.1 Moving a matrix subject

    Consider the following example:

    49a) Kuka   on hukannut silmälasinsa?
         who-NOM has lost   glasses-3Px

        'Who has lost his/her glasses?'

      b) [Kuka] [silmälasinsa] on hukannut?

If the WH-phrase kuka 'who' were to stay in the Spec(IP) position in (49) only the word order in (a) should be possible (the basic word order). However, the word order in (49b) is also possible, and very natural. (49b) can be accounted for by saying that the WH-phrase has moved to COMP, and the object NP is occupying the Spec(IP) position. This is what I would like to propose.

In order to avoid violating Trace Theory, we might assume that the subject WH-phrase has moved directly from the Spec(VP) position to the COMP position. This way, there would be no trace left behind in the Spec(IP) position, and the object could move into that position. It seems, however, that there are other cases where we cannot avoid violating the standard trace theory; we will return to this.

We find the fronted object in the Spec(IP) position also with constructions that do not have a nominative subject:

50a) Missä voi   lukea   sanomalehtiä?
     where can-3SG read-INF newspapers-PAR

   'Where can one read newspapers?'

   b) [Missä] [sanomalehtiä] voi lukea?

In (50), we have an example of the Missing Person construction. Recall that the Spec(IP) position had to be filled by a complement of the verb, or by a locative phrase, since there is no nominative subject. In (50b), we see that the WH-phrase corresponding to a locative phrase can occur in COMP, and the direct object occurs in the Spec(IP) position.

The following sentences provide evidence for the fronted object occurring in the Spec(IP) position:

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51a) Missä voimme lukea   sanomalehtiä?
     where can-1PL read-INF newspapers

   'Where can we read newspapers?'

   b)?*Missä sanomalehtiä voimme lukea?

52a) Missä Jukka voi   lukea   sanomalehtiä?
     where NOM   can-3SG read-INF newspapers-PAR

   'Where can Jukka read newspapers?'

   b)*Missä sanomalehtiä Jukka voi lukea?

In (51), we have a construction with a regular, agreeing
verb and with a null subject (1st person singular verb).
The interpretation of (50a) and (51a) is very similar.
However, in (51b), unlike in (50b), the object cannot
precede the verb, with a locative WH-phrase. We can still
assume that the WH-phrase is in COMP. The ungrammaticality
of (51b) can be accounted for using the analysis of pro-
drop sentences outlined in Section 2.2. The Spec(IP)
position is filled by the abstract binder of the agreement
suffix, and the occurrence of any other element in the
Spec(IP) is blocked.

    Similarly, in (52), the overt nominative subject
prevents the object from occurring in the Spec(IP)
position, as shown by the ungrammaticality of (52b).

    Now consider a further example where fronting the
object to the Spec(IP) position seems not to be possible:

53a) Kuka   haluaa jäätelöä?
     who-NOM wants icecream-PAR

   'Who wants icecream?'

  b)??[Kuka] [jäätelöä] haluaa?

We can account for this example by supposing that the WH-
phrase stays in Spec(IP), thus preventing any other NP from
moving into that position. But why should the subject WH-
phrase move to COMP in (49), but not here?

     There is a difference in presupposition[27] between the
two examples. Example (49b) with a fronted object is
uttered in a situation where the speaker presupposes that
someone has lost his/her glasses, i.e. when the speaker
finds an unfamiliar pair of glasses. Similarly, (50b) is a
natural question in a situation where the speaker knows
that there is a place where he can read newspapers, but
he's forgotten what that place is.

     On the other hand, example (53b) without a fronted
object is naturally uttered in a situation where the
speaker does not presuppose that anyone necessarily wants
icecream; (53a) is equivalent to the question 'Would anyone
like icecream?', while the object fronted (49b) does not
have such a yes/no counterpart (#'Has anyone lost his/her
glasses?').

We can modify the icecream situation in (53) in such a way that object fronting becomes possible. If the speaker knows that someone wants icecream, but he has forgotten who that person was, he can ask the following question:

53b') Kuka   [jäätelöä]   halusikaan?[28]
      who-NOM icecream-PAR wanted-also

      'Who was it that wanted icecream?'

Here it is presupposed that someone wants icecream, and having the object precede the verb is perfect.

There is a correspondence, then, between "presupposition" (cf. fn. 27) with respect to the WH-subject, and the occurrence of object fronting (or, more precisely, "complement fronting"). It appears that moving a complement to a preverbal position is possible only if the subject is "presupposed". In the current system, this means that the WH-subject occurs in COMP (i.e. we have vacuous WH-movement) when it is "presupposed", and the WH-subject stays in the Spec(IP) when it is not "presupposed".

When the WH-subject stays in the Spec(IP) position (or when any other subject occupies the Spec(IP) position), no complement fronting can occur. When the WH-subject occurs in COMP, a complement of the V can move to Spec(IP) to fill that position (via secondary movement). Since the

Spec(IP) position has already been licensed at M-Structure
by having the nominative subject raise to the Spec(IP), it
does not have to be licensed again. However, there is a
tendency to have the position be filled at S-Structure (as
discussed in Chapter 1), and this gives rise to secondary
movement. Consider another example of the "presupposed"
type:

> 54a) Kuka   syötti eilen kissalle koiranruokaa?
>   who-NOM fed yesterday cat-ALL dogfood-PAR
>
>   'Who fed the cat dogfood yesterday?'
>
>   b) Kuka [eilen] syötti [] kissalle koiranruokaa? ·
>   c) Kuka [kissalle] syötti eilen [] koiranruokaa?
>   d) Kuka [koiranruokaa] syötti eilen kissalle []?
>   'Who was it that fed the cat dogfood yesterday?'

(54a) provides the basic word order for this question;
(54b)-(d) illustrate how different complements can fill the
Spec(IP) position (including an adverb in (54b)). (54b)-
(d) are fine without any special intonation on the fronted
element, in which case all three of them have the same
interpretation. If the fronted element is stressed, we get
a focus reading for that element (e.g. for (54b), 'Who was
it that yesterday fed the cat dogfood?').

So far we have only seen complement fronting into the
Spec(IP) position, when the nominative subject (or another
element from the Spec(IP) position) occurs in the sentence-

initial COMP position. The same phenomena can be found
with embedded subjects of infinitives.

2.4.1.2 Moving a subject of a non-finite verb

     Consider the following example of an infinitival with
the basic word order:

      55a) Jukka väitti Pekan rikkoneen minun tietokoneeni.
           NOM   claimed GEN break-INF my   computer-1SGPx

        'Jukka claimed Pekka broke my computer'

       b)??Jukka väitti Pekan [minun tietokoneeni]
                                  rikkoneen.

       c) *Jukka väitti [minun tietokoneeni] Pekan
                                  rikkoneen.

As shown in (55a), the embedded non-finite construction has
a genitive subject followed by the infinitival verb, which
is followed by the object (cf. Chapter 5 on a more detailed
discussion of this non-finite construction). (55b) and (c)
show that having both the subject and the object precede
the verb is not very good.

     However, if the subject is an extracted WH-phrase,
having the object precede the verb is perfectly fine:

56a) Kenen Jukka väitti rikkoneen minun tietokoneeni?
who-GEN NOM claimed break-INF my computer-1SGPx

'Who did Jukka claim broke my computer?'

b) Kenen Jukka väitti minun tietokoneeni rikkoneen?

I will argue in Chapter 5 that the genitive subjects of
infinitival verbs occur in the Spec(VP) position of those
verbs. In (56b), then, the genitive subject of the
embedded verb has been extracted. This makes it possible
for the embedded object to raise to the vacated Spec(VP)
position, which was impossible when the subject had not
been extracted, in (55b) and (c) above. Note that in this
example we really have a problem with the trace of the
moved subject, since the object is moving into the position
that the subject was base-generated in. I will return to
this shortly.

Examples such as (56) suggest that a movement-based
explanation of object fronting with matrix WH-subjects is
on the right track. Unlike with the matrix clause example
(49) above, where movement was vacuous, the moved element
is physically separated from its clause here in (56), and
secondary movement behaves the same way in both instances.

The following example suggests that the fronted
complement occurs within its own clause, since it is
impossible to have an adverb modifying the matrix clause

following the fronted complement:

57a) Kenen Jukka uskoi-i   vakaasti-i
     who-GEN NOM believed-i certainly

     ...[minun tietokoneeni] varastaneen?
          my   computer-1SGPx steal-INF

     'Who does Jukka certainly-i believe-i
                      to have stolen the computer?'

  b) *Kenen Jukka uskoi-i [minun tietokoneeni]
                      ...vakaasti-i varastaneen?

With the reading where the adverbial phrase vakaasti
'certainly' modifies the matrix verb 'believe' (as
indicated by the indices), sentence (57b) is not
grammatical. If it were grammatical, we would have to
assume that the fronted element has moved to the matrix
clause. This data is compatible with the analysis
according to which the embedded object raises to the
Spec(VP) position of its verb, once the embedded subject
has moved out of that position.

     As we have seen, both nominative subjects and
genitive subjects of non-finite verbs seem to block
complement-fronting. Only when the subject has moved out
of its position, does it seem to be possible for another NP
to occur in that position. Let us now turn to the
ramifications of this generalization to Trace Theory.

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2.4.2 Revising Trace Theory: Pointer Theory

The non-finite examples seem to violate Trace Theory, unless we assume that the fronted complement does not move to Spec(VP)--where the genitive subject would have left a trace--but to some other position. Otherwise, the trace of the subject should prevent a complement from fronting, just as effectively as an overt lexical NP (or the abstract null subject) does. If we say that there are two preverbal positions, one being the Spec(VP) in which the trace of the moved WH-subject occurs, and one which houses the fronted complement, we would need an explanation for why complement fronting (to some other position) is only possible if the Spec(VP) position contains a trace (rather than a lexical NP).

Consider a further example of the trace problem:

58a) Kuka   väitti Jukan syöneen meidän suklaamme?
     who-NOM claimed GEN eat-INF   our chocolate-1PLPx

    'Who claimed (that) Jukka ate our chocolate?'

   b)?Kuka [Jukan] väitti [] syöneen meidän suklaamme?

   c) Kuka [Jukan] väitti [meidän suklaamme]
                                        syöneen []?

   d)*Kuka [meidän suklaamme] väitti Jukan syöneen []?

(58a) gives the basic word order for this sentence. If we WH-move the matrix subject, we expect something to

(optionally) occur in the higher Spec(IP). Something can indeed occur there: the subject of the non-finite verb, as shown in (58b), although this example is slightly clumsy. The sentence becomes perfectly fine if the complement of the lower verb is also fronted, as in (58c). (58d) shows that these movements are subject to some locality constraints, since fronting the complement of the lower verb to the front of the matrix verb is not possible.[29]

The existence of traces guarantees that the subcategorization requirements of a verb are satisfied at S-Structure, since any moved phrase is represented as a trace in the original position. The Projection Principle requires that the subcategorization requirements of each verb are met at each syntactic level (cf. e.g. Chomsky (1981:29-30)).

The problematic data discussed has to do with the fact that a trace in a syntactic position blocks movement into that syntactic position, according to the current views on Trace Theory (cf. Freidin (1978)). However, earlier versions of Trace Theory allowed movement into a position with a trace: the object NP in passive moved into the subject position, from which the subject had been "lowered" to a by-phrase, leaving a trace into the subject position (e.g. Chomsky (1977:82)).

We might be able to restrict the problematic data to
a certain point in the derivation. In addition to a
problem with traces, sentences such as (58c) show that we
are confronting a phenomenon that does not respect strict
cyclicity; e.g. in (58c) the subject of the embedded verb
precedes the matrix verb. We might be able to treat what I
have been calling "secondary movement" as an instance of a
late movement operation such as "stylistic movement" or
"scrambling". Thus, secondary movement can be thought of
as a "postcyclic" process that is oblivious to cyclicity
(cf. discussion in Chapter 1). This operation might take
place between S-Structure (or "Shallow Structure", the
result of WH-movement) and a later level of representation,
the "surface structure", or the "surface string".

Even assuming that secondary movement is a late
process, it seems desirable to maintain a view according
to which this process pays attention to traces in some
form. I would like to propose an alternative
characterization of what traces are, which enables me to
maintain the Projection Principle, while letting elements
move into syntactic positions vacated by other elements.

We can think of the relationship between a moved NP
and its coindexed trace as follows: if we are looking at
the moved NP, its index will tell us which syntactic
position the NP moved out of (and through, in the case of

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cyclic movement). If we are looking at the trace, its
index will tell us where the element that moved out of it
is now located. Using a programming analogue of pointers,
the index on the trace points to the moved NP, and the
index on the moved NP points to the trace. That is, we
have a bi-directional pointer. If an element is moved into
a position that contains a coindexed trace, the
coindexation relationship of that trace is disturbed.

It seems to me that for the purposes of the
Projection Principle a uni-directional pointer will
suffice, namely one that points from the moved element to
the trace. The syntactic position perhaps does not need to
know which element used to occupy it, but in order to
interpret a sentence we need to know where an element used
to be. If the "trace" consisted of a uni-directional
pointer, an element would be able to move into a position
with such a "trace".

The relationship between a syntactic position and a
moved element can be then represented as an "index" on the
moved NP that refers to its original position (or, as a set
of references to positions in the case of intermediate
"traces"). This is reminiscent of Chomsky's earlier view:
"the moved phrase and the original position have the same
index" (1977:84).

From now on, then, I will assume the "Pointer
Theory", which involves the possibility of moving elements
into existing syntactic positions that have been vacated by
other elements at an earlier stage in the derivation. Note
that this analysis of secondary movement in Finnish
supports a strong form of structure preservation (Emonds
(1970)), since the process does not involve adjunction.
Rather, positions that have been base-generated at D-
Structure are being "used" as landing sites at various
points in the derivation.

In the next two sections, we will look at a number of
examples of secondary movement, including many moved non-
subjects.

2.4.3 Secondary movement into non-subject positions

So far we have basically only seen secondary movement
into subject positions--into Spec(IP) in tensed clauses,
and into Spec(VP) in infinitival clauses. It is difficult
to test whether secondary movement (i.e. complement
fronting) occurs into positions other than the two subject
positions, since it is not obvious what the basic order of
the complements of a verb is (i.e. whether an indirect
object precedes or follows a direct object, etc.). There
is one type of case where we can test a non-subject

position: extracting a non-subject out of a matrix clause, and seeing whether complements of an embedded infinitival can move into the vacated position. We need a verb which takes an NP complement and an embedded infinitival. Consider the following example:

59a) Jukka kertoi Pekalle Maijan myyneen asuntonsa.
     NOM   told   ALL   GEN sell-INF apartment-3Px

     'Jukka told Pekka (that) Maija had sold
                                     her apartment'

    b)?*Jukka kertoi Pekalle Maijan asuntonsa myyneen.

Here we have an example with the verb 'tell', which allows an indirect object and an infinitival complement. (59a) gives the basic order. (59b) shows, as we have seen before, that fronting the object of the infinitival (here asuntonsa) into the Spec(VP) position is not possible, when the Spec(VP) position is occupied by the subject of the infinitival, Maijan.

Now consider what happens when the matrix indirect object is WH-moved:

60a)Kenelle Jukka kertoi [] Maijan myyneen asuntonsa?
     who-ALL NOM   told   GEN sell-INF apartment-3Px

    'Who did Jukka tell (that) Maija had sold
                                     her apartment?'

    b)*Kenelle Jukka kertoi [asuntonsa] Maijan myyneen?

    c)?Kenelle Jukka kertoi [Maijan] [asuntonsa]
                                     myyneen?

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At first glance, (60b) suggests that secondary movement into the vacated matrix indirect object position is impossible, since (60b) is ungrammatical. However, (60c) suggests that (60b) is ruled out by some sort of a constraint on moving over a subject; I will return to locality constraints on secondary movement.

(60c) here is definitely better than (59b) above. The constrast is not expected, unless the WH-movement of the matrix indirect object makes available a position into which another element can move. (60c) can be analyzed as follows: the subject of the embedded infinitival, Maijan, moves to the matrix indirect object position; the object of the embedded infinitival moves to the vacated Spec(VP) position. The fact that (60c) is slightly odd might be due to the infinitival subject moving to a non-c-commanding[30] position.

The data is somewhat clearer when we have an infinitival form without an overt genitive subject (to be discussed in detail in Chapter 5):

    61a) Jukka kertoi Pekalle myyneensä   asuntonsa.
         NOM   told   ALL   sold-INF-3Px apartment-3Px

       'Jukka told Pekka (that) he had sold
                             his apartment'

    b)?*Jukka kertoi Pekalle [asuntonsa] myyneensä.

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In (61a), the subject of the infinitival is expressed as the 3rd person Px -nsa suffixed on the infinitival verb. Recall that we have a theory of Px's according to which they are anaphors, subject to BT(a). As expected, the Px both on the infinitival verb and on the object of the infinitive (61a) have to be bound by Jukka; Pekalle cannot bind either of the two instances of -nsa here, which suggests that the indirect object does not c-command the suffix (cf. fn.30).

I will be suggesting in Chapter 5 that the infinitival form in (61a) has a Spec(VP) position, in which the abstract binder of the Px is located. However, it is not crucial here whether the infinitival verb has a Spec(VP) position in (61a); if there is a position, it is filled by the abstract binder, and thus not available for secondary movement; if there is no position, then secondary movement cannot take place either.

(61b) shows that fronting the object of the embedded infinitival is not possible in this example without primary movement. Consider the following example with a WH-moved matrix indirect object:

    62a) Kenelle Jukka kertoi [] myyneensä   asuntonsa?
         who-ALL NOM   told   sell-INF-3Px apartment-3Px

      'Who did Jukka tell that he had sold his apartment?'

      b)?Kenelle Jukka kertoi [asuntonsa] myyneensä?

Again, complement fronting is better here in (62b) than in the example without WH-movement above in (61b). That is, primary movement is again feeding secondary movement--and a non-subject position can act as a landing site for secondary movement, although not quite as easily as a c-commanding subject position can.

Above I alluded to possible locality constraints on secondary movement. Vilkuna (1989;ch.5), in a careful study of what she calls "splitting of verb chains", discusses a number of examples of secondary movement, including examples with more than one layer of embedding. She states the following two generalizations (1989:236;80/81):

> 63) Crossing dependencies are preferred in the V-field [=INFL and VP] for old material.

> 64) Except for K [=COMP], prefer a nominal order which reflects the order of the verbs.

Vilkuna shows that the relationship between an infinitival verb and its arguments is similar to that in Dutch, in that crossing dependencies (i.e. NP1 NP2 NP3 V1 V2 V3) are preferred to intersecting dependencies (i.e. NP1 NP2 NP3 V3 V2 V1), as stated in (63) and (64).

Recall the example which suggested that some type of locality constraints are imposed on secondary movement,

repeated here:

65)*Kenelle Jukka kertoi [asuntonsa] Maijan myyneen?
   who-ALL NOM   told apartment-3Px GEN   sell-INF

('Who did Jukka tell (that) Maija had sold his
                                    apartment?')

As we saw, it appears that the presence of the infinitival

subject <u>Maijan</u> prevents the infinitival object from moving

into the vacated matrix indirect object position. We can

show, however, that this blocking effect is not unique to

subjects:

66a) Kuka kertoi Pekalle Maijan myyneen asuntonsa?
     who-NOM told ALL   GEN sell-INF apartment-3Px

     'Who told Pekka (that) Maija had sold
                                     her apartment?'

   b)*Kuka [Maijan] kertoi Pekalle [] myyneen
                                          asuntonsa?

   c) Kuka [Pekalle] kertoi Maijan myyneen asuntonsa?

When the WH-subject is presupposed, we expect to move an

element into the Spec(IP) position (since the subject is in

COMP). This is fine in this example, as shown in (66c),

where the indirect object occurs in the Spec(IP) position.

However, attempting to move the infinitival subject into

the matrix Spec(IP) is impossible, as shown in (66b) (where

<u>Pekalle</u> is interpreted as the matrix indirect object; the

sentence is fine, as expected, if <u>Pekalle</u> is the indirect

object of the embedded clause).

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Now consider the same example, but without the matrix
indirect object:

> 67a) Kuka kertoi/väitti Maijan myyneen asuntonsa?
>   who-NOM told/claimed GEN sell-INF apartment-3Px
>
>   'Who told/claimed (that) Maija had sold
>   her apartment?'

>   b) Kuka [Maijan] kertoi/väitti [] myyneen asuntonsa?

Sentence (66b) above and (67b) here are identical, except
that (66b) contains a matrix indirect object (and except
for the addition of the verb 'claim'; 'tell' without an
indirect object is slightly odd). (66b) is ungrammatical,
while (67b) is good (with the "presupposed" reading of the
WH-subject).

Thus, the constraint on secondary movement seems to
have to do with NPs in general, not just subjects. The
generalization seems to be the following: the process of
secondary movement cannot move an NP over another NP.
Recall Vilkuna's generalizations, repeated here:

> 63) Crossing dependencies are preferred in the V-
>   field [=INFL and VP] for old material.

> 64) Except for K [=COMP], prefer a nominal order
>   which reflects the order of the verbs.

These generalizations follow from the generalization that
NPs cannot move over NPs. If the verbs do not move, and if
the NPs do not cross over each other, then the order of the

NPs will reflect the order of the verbs (i.e. (64); the
exception clause for "K" involves topicalization).
Similarly, if the verbs do not move, and the NPs move far
enough from the verbs but do not cross over each other, the
result involves crossing dependencies.

Furthermore, Vilkuna's generalizations do not capture
all of the data, since they only refer to order of NPs
relative to verbs. The ungrammaticality of examples such
as (65) above is not explained, where an NP has crossed
over another NP, but both NPs are arguments of the same
verb. However, the simple constraint of not moving over
another NP captures both these type of examples and
Vilkuna's generalizations.

The constraint of not moving over NPs (during
secondary movement) provides some insight into the
mechanisms involved in secondary movement, assuming the
following tentative idea. We can build the constraint into
this process by saying that secondary movement operates
from left to right. That is, going from left to right
(after WH-movement and other instances of primary
movement), the first NP encountered is moved to the first
empty syntactic position (to the left of the NP), the
second NP to the second position etc. Running the process
in this fashion, the constraint would follow, since to
cross over an NP we would have had to skip that NP.

In the next section we will take a brief look at the behavior of different WH-words. It appears that we can use secondary movement to determine whether a WH-phrase has moved into COMP or to the Spec(CP).

2.4.4 The landing site(s) of WH-phrases

If a WH-object is moved, there is no change in the word order of the sentence:

68a) Mitä   Jukka antoi Pekalle?
     what-PAR NOM   gave ALL

   'What did Jukka give to Pekka?'

  b) Mitä   Jukka uskoi   Pekan antaneen Lasselle?
     what-PAR NOM   believed GEN   give-INF ALL

   'What did Jukka believe (that) Pekka gave Lasse?'

If we continue to assume that WH-phrases move to COMP, we do not expect any change in word order; the object _mitä_ occupies the matrix COMP, and the (matrix) subject _Jukka_ occupies the Spec(IP) position.

Similarly, as expected, moving an indirect object WH-phrase to COMP (from the embedded clause) does not affect the word order:

```
69a) Kenelle Jukka antoi syntymäpäivälahjan?
     who-ALL NOM   gave  birthday-present-ACC

    'Who did Jukka give a birthday present?'

  b) Kenelle Jukka väitti  Pekan antaneen
     who-ALL NOM   claimed GEN   give-INF

                  ...syntymäpäivälahjan?
                     birthday-present-ACC

    'Who did Jukka claim (that) Pekka gave
                            a birthday present (to)?'
```

Again, the indirect object kenelle (extracted from the lower clause in (69b)) occupies COMP, and there is no change in word order, since the Spec(IP) remains occupied by the NOM subject.

The adjunct-type WH-phrases missä (in different locative case forms) 'where', miten (and variant kuinka) 'how' and milloin (and variant koska) 'when' also behave as expected, apparently occupying the COMP position:

```
70a) Missä     Jukka säilyttää ruokailuvälineitänsä?
     where-INE NOM   stores    utensils-ACC

    'Where does Jukka keep his utensils?'

  b) Mistä Liisa väitti Seijan ostaneen sen puseron?
     where-ELA NOM claimed GEN buy-INF  that blouse

    'Where (lit.'from where') did Liisa claim (that)
                            Seija bought that blouse?'
```

71a) Miten Veijo saa   lattiansa näin puhtaaksi?
     how   NOM   gets floor-3Px so   clean-TRA

     'How does Veijo get his floor so clean?'

   b) Kuinka Maija sanoi Seijan korjanneen autonsa?
      how   NOM   said GEN   fix-INF   car-3Px

      'How did Maija say (that) Seija fixed her car?'

72a) Koska Jukka on ostanut tämän sohvan?
     when NOM has bought this sofa

     'When has Jukka bought this couch?'

   b) Milloin Pekka uskoi Maijan ottaneen kuvan?
      when   NOM   believed GEN take-INF picture-ACC

      'When did Pekka believe (that) Maija took
                                      a picture?'

If we assume that all of these WH-phrases occur in COMP, we
do not expect any effect on word order in any of the (a)
examples, since the vacated position is either not followed
by other NPs, or we cannot tell if any secondary movement
is taking place. In the (b) sentences, similarly no change
is expected if the WH-phrase is extracted out of the
embedded clause. As we have already seen, we do get an
effect on word order if a WH-phrase is extracted out of the
matrix clause, since elements from the embedded clause can
raise to the vacated position in the matrix clause.

As with the WH-subjects, if the WH-phrase is of a
special kind (such as a request for specific, forgotten
information), we do seem to get an effect on the word

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order, especially if the WH-phrase is stressed (moved elements in brackets):

73a) [Mitä][Jukka] [Pekan] uskoi [Lasselle] antaneen?
　　　what-PAR NOM　　GEN　　believed ALL　give-INF

　　　'What was it that Jukka believed (that) Pekka
　　　　　　　　　　　　　　　　　had given to Lasse?'

b) [Kenelle] [Jukka] [Pekan] väitti
　　who-ALL　　NOM　　GEN　　claimed

　　　　　...syntymäpäivälahjan　　antaneen?
　　　　　　　birthday-present-ACC give-INF

　　'Who was it that Jukka claimed (that) Pekka
　　　　　　had given a birthday present to?'

c) [Mistä][Liisa][Seijan] väitti [puseron] ostaneen?
　　where-ELA NOM GEN　　claimed blouse-ACC buy-INF

　　'Where was it that Liisa claimed (that) Seija
　　　　　　　　　had bought a blouse?'

In all of these examples (and corresponding ones for the WH-phrases milloin/koska 'when' and miten/kuinka 'how'), all of the NPs have basically moved one position to the left. This suggests that a position has somehow been made available in the beginning of the sentence.

Recall that in Section 2.3.3. it was argued that Finnish has a Spec(CP) position in which the 'että'-type ('that') complementizers occur. I would like to suggest that in the examples in (73), the WH-phrase actually occurs in the Spec(CP) position.

To draw a parallel with the subject-WH cases (while maintaining a difference), we might say that the "unmarked" position of a non-subject WH-phrase is the COMP position, but the WH-phrase can be raised to Spec(CP) for the special, "presupposed" reading. With the subject WH-phrases, the "unmarked" position is the Spec(IP) position, and they are raised to COMP for the special reading.

When the WH-phrases raise to Spec(CP) from COMP, they vacate the COMP position, which then tends to be filled with another element, due to secondary movement. This sets off a "domino effect" in the rest of the sentence, resulting in the word orders found in (73).

The WH-phrase _miksi_ 'why' behaves slightly differently from the others discussed so far. It seems to prefer the Spec(CP) position, even without being stressed (although the basic word order is also possible):

    74a) Miksi Liisa kirjansa on hukannut?
         why   NOM   book-3Px has lost

        'Why has Liisa lost her book?'

      b) Miksi Pekka Maijan uskoi hänen päiväkirjansa
         why   NOM   GEN   believed his diary-3Px

                       ...lukeneen?
                       read-INF

        'Why did Pekka think (that) Maija read his diary?'

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Interestingly, we can also get something like a 'why'-reading in 'how'-questions with a fronted complement:

75a) Miten Jukka hukkasi hattunsa?
     how   NOM   lost   hat-3Px

   'How (=in what manner) did Jukka lose his hat?'

  b) Miten Jukka hattunsa hukkasi?
     how   NOM   hat-3Px lost

   'How is it that (=why) Jukka lost his hat?'

When the WH-word miten is not stressed, and complement fronting occurs, as in (75b), the reading we get is similar in meaning to 'why' (cf. also the English gloss)[31]. If miten is stressed, and the word order is the basic one, we get the "regular" interpretation of 'how': 'In what manner was it that Jukka lost his hat?'

To account for the word order facts, both miksi 'why' and the odd reading of miten 'how' would have to be located in Spec(CP). This would give rise to secondary movement, whereby the subject would move from the Spec(IP) to COMP, and the object would move to the Spec(IP), as in (75b).

A WH-phrase then occurs in the Spec(CP) if it occurs in a "presupposed" question. This is a marked position for WH-phrases other than 'why', for which it may be the unmarked position.

2.5 Summary

In this chapter we have seen arguments for the existence of the following fixed positions in Finnish: Spec(CP), COMP, Spec(IP), and INFL.

The INFL position in affirmative sentences consists of just one branch. The auxiliary verb olla is base-generated in INFL (in which case the main verb remains in the VP). If no auxiliary verb is base-generated, then the main verb raises to INFL. In either case INFL ends up being licensed (filled) by M-Structure.

In negative sentences INFL has two branches, NEG and TNS. The negative verb is base-generated in NEG. The TNS node behaves the same way as the single node of INFL in affirmative sentences (i.e. it ends up containing either the auxiliary verb or the main verb).

The Spec(IP) position is also licensed by M-Structure. If the sentence contains a nominative subject, this NP raises from the Spec(VP) position to the Spec(IP) position--unless we have the construction discussed in Section 2.3.1.1. with the "late" subject in the Spec(VP) position. If the sentence contains no nominative subject (or if the nominative subject remains in the Spec(VP) position), one of the complements of the verb raises to the

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Spec(IP) position (or one of the complements of a complement of the verb, as with raising verbs). Especially in the existential sentences, a locative phrase is the unmarked complement in the Spec(IP) position (possibly also in the impersonal passive construction and in the missing person construction). A direct object or an indirect object may also raise to the Spec(IP) position (instead of a locative phrase).

The COMP position is licensed by S-Structure. Either a complementizer of the 'jos'-class ('if') is base-generated in COMP, or a WH-phrase or a topicalized phrase moves to COMP during phrase-based movement. If the COMP position is base-generated but not licensed, the result of the derivation is an ill-formed tree.

Like COMP, the Spec(CP) position is licensed by S-Structure. Complementizers of the 'etta'-class ('that') are base-generated in this position. If the COMP position is filled by a complementizer (of the 'jos'-class) it appears that topicalization into the Spec(CP) position can occur (presumably during phrase-based movement).

"Primary movement" refers to all of the instances of movement that involve licensing (i.e. all the types of movement just reviewed), whether at M-Structure or at S-

Structure. Since all base-generated positions need to be licensed, primary movement is obligatory. However, if no COMP or Spec(CP) is base-generated, no phrase-based movement occurs, and we have a perfectly good IP. If no INFL or Spec(IP) is base-generated (and, as a result, no affix-based movement occurs) we end up with a VP (which, as we shall see in Chapter 5, results in an infinitival structure).

Unlike primary movement, "secondary movement" is an optional movement process that does not obey cyclicity. It is fed by phrase-based movement (WH-movement or Topicalization), in that it involves movement into a position that has been vacated during phrase-based movement. It obeys a locality constraint according to which an NP cannot move "over" another NP. The properties of secondary movement can be accounted for by assuming that it is a postcyclic process (say, occurring between S-Structure and "surface structure") that operates linearly from left to right, (optionally) filling any vacated position that is encountered. In order to maintain the spirit of trace theory even at the level that secondary movement operates, a revision is required whereby traces do not block movement into a position ("Pointer Theory").

1) Throughout this thesis, I will use the terms "subject" and "object" as shorthand for the structural definitions of these terms; as is usual in the transformational approach, they are not taken here to be primitives. "Subject" refers to content of the Spec(IP) position, and "object" to the content of the (adjacent) complement position of a head.

2) A complete paradigm of Px's is provided in Appendix II.

3) Finnish has no gender distinctions; there is an human/non-human distinction in the 3rd person singular and plural.

4) The lack of an abstract binder in the 3rd person is presumably fundamentally due to the fact that a 3rd person entity is not unconditionally available in normal conversation, as opposed to "speaker" (1st person) and "hearer" (2nd person).

5) We will return in Chapter 4 to the question of exactly where the binders are located in examples such as (5a); for now, I will assume that the speaker/hearer binder is located in the Spec(NP) in a possessive NP, and it has an unspecified link to discourse.

6) Since _hänen_ 'his' in (6c) is a pronoun, it is subject to Condition B of the Binding Theory, and has to be disjoint from the subject (since NP is not a binding domain).

7) Vilkuna attributes this analysis of _sita_ to A.Hakulinen (1975).

8) There is a problem in getting nominative case to the subject in this position; I will return to this question in Chapter 3. The nominative subjects in this construction are not the only ones that seem to occur in the Spec(VP) position. Vilkuna (1989:43) mentions that indefinite quantifiers (such as _joku_ 'someone' and _kukaan_ 'anyone') tend to occur late in a sentence (later than the Spec(IP) position), whether they are nominative subjects or not. I

would like to suggest that when they are nominative
subjects, they remain in the Spec(VP) position (in which
they are base-generated).

9) The traditional GB-analysis of pro-drop as consisting
of an abstract element 'pro' in the Spec(IP) position would
also take care of filling the Spec(IP) position; however,
the 'pro'-analysis would need to be modified in order to
make the required distinction between 1st and 2nd person
vs. 3rd person.

10) To the extent that (8f'') is better than the others, I
think it can marginally be given a structure where the
adverb occupies the Spec(IP) position; more about atypical
subjects later.

11) Finnish is a vowel harmony language, and many suffixes
have a front and a back vowel variant. The reader should
not be surprised to find a suffix in an example that is
slightly different from the variant given in the text; I
will give the back vowel variants in the text.

12) The adverb need not be base-generated in the Spec(IP)
position, but it may have to move to Spec(IP) via secondary
movement in order to fill that position at S-Structure.   I
will return to the location of adverbs in Section
2.3.2.2.1.

13) "Impersonal" here refers to a verb form which does not
agree with any NP; Finnish does not have a "personal",
agreeing passive such as the English passive.

14) As we shall see in Chapter 4, the passive verb form is
also used as the 1st person plural personal form; to the
extent that pro-drop is possible with this form (impossible
in my dialect), (13a) could be interpreted as a 1st person
plural example.

15) The accusative case has three different surface forms,
as we shall see in Chapter 3. The form used in passive
happens to look identical to nominative, for full NPs--with
pronouns, it is clear that accusative case is assigned in
the passive.

16) Vilkuna points out that at most one verbal element can be focused by moving to COMP in Finnish, which is why (14a) could not be analyzed as having two verbal elements in COMP. I will return to this restriction in Chapter 5. Note that a constraint based on the idea of "head-to-head" movement would not work, since NPs can move to COMP (assuming my analysis). Furthermore, certain types of VPs seem to be able to occur in COMP, as we shall see in Ch.5.

17) Given recent developments in syntax, the question of whether a language has a VP would have to be rephrased, since it can be argued that subjects also originate in the VP (as I will argue for Finnish, in Chapter 3); the question would have to be whether the VP has internal hierarchical structure or not.

18) In Section 2.3.2.2.1., I will suggest that time adverbs occur in INFL; the argument here holds regardless of the exact position of such adverbs.

19) -kin, unlike the sentential clitics mentioned earlier, can be affixed on elements in any syntactic position.

20) Cf. fn. (12) on having adverbs in the Spec(IP) position.

21) I will argue in Chapter 5 that Finnish infinitival constructions do not have an IP. Since sentential adverbs are possible in infinitival constructions, I will need to be able to base-generate them independently of the IP.

22) The time adverbs discussed here--usein 'often', joskus 'sometimes', koskaan '(n)ever', aina 'always' etc.--seem to have a different distribution from time adverbs such as eilen 'yesterday', tänään 'today' , maanantaisin 'on Mondays' etc. The latter type (not to be considered here in more detail) seems not to be able to occur easily in the vicinity of INFL, while it does occur in COMP (as in the examples with eilen 'yesterday' in Section 2.3.1.2.). The distribution of the two types of time adverbs is similar to Finnish also in English, as pointed out to me by F.R.Higgins.

23) We would need to be able to base-generate time adverbials either VP-finally or in/near INFL, so that we would not be forced to have a lowering rule (moving the

adverb from INFL to VP)--unless there are more than one
possible base-generated position for each adverb.

24)   As English, Finnish has four tenses: the simple tenses
of present and past, and the compound tenses (formed with
the auxiliary olla 'be') of present perfect and past
perfect.   Cf. Appendix II for example paradigms.

25)   The verb form that follows the agreement element in
the present tense does have some sort of suffix (as pointed
out to me by J.Cathey), although this is not obvious with
many verbs.   For example, with the verb osta- 'buy', the
present tense form is identical to the stem.   With the verb
luke- 'read', there must be some sort of an abstract suffix
which gives rise to consonant gradation, since the result
is lue.   The present tense form is identical to the
singular imperative form.

26)   We would expect that the vacated Spec(IP) position can
be filled (to be elaborated on in Section 2.4.).   This is
indeed possible, e.g. in (45a) the object autonsa 'his car'
can follow the complementizer jos (without special stress),
occurring in the Spec(IP) position at S-Structure.

27)   The term "presupposition" is used here to refer to a
vague notion that is related to the traditional notion of
presupposition.   I have not been able to precisely
characterize the relevant notion.

28)   For some reason the suffix -kaan (which is the
negative polarity form of -kin) is very natural in these
"presupposed" questions.   In isolation, -kin/-kaan means
'also'.   This suffix has an odd distribution; it also
occurs on the second WH-phrase in multiple WH-questions.

29)   We can tell that the overt genitive subject is the
culprit, since fronting the infinitival object is fine if
there is no such subject (cf. also Section 2.4.3):

        Kuka [meidän suklaamme] väitti syöneensä []?
        who   our   chocolate claimed eat-INF-3Px
        'Who-i claimed that he-i had eaten our chocolate?'

I will return to a discussion of a locality constraint that
will account for the distinction between this sentence
(which is perfectly grammatical) and the ungrammatical
(58d).

CHAPTER 3

REPRESENTATION OF DEFAULT CASE

3.1 Abstractness in case assignment

When talking about case assignment in natural

language, one is often forced to adopt some level of

abstractness in order to capture generalizations. The

Finnish objective case is a case in point. Traditionally

Finnish is taken to have two objective cases, partitive and

accusative. Accusative is used to denote completed action:

    1) Jukka söi omenan.
       NOM   ate apple-ACC

      'Jukka ate an apple'

The partitive case is used elsewhere, e.g. when

denoting imcompleted action:

    2) Jukka söi omenaa.
       NOM   ate apple-PAR

      'Jukka was eating an apple'

Both cases are assigned to objects of transitive

verbs, and we may wish to be able to refer to "objective

case" in Finnish, which would encompass both accusative and

partitive. Such an objective case would be an abstract
entity in Finnish, without any morphological reflex.

On the other hand, we may wish to refrain from
abstractness by studying the behavior of "concrete" case,
namely partitive and accusative. However, by doing this we
cannot escape abstractness: the accusative case is in
itself an abstract (syntactic) entity. There is no single
morphological form that all NPs with accusative case share.
Accusative in Finnish has three "concrete" forms:
accusative $-t$, nominative $\emptyset$, and genitive $-n$. Any time
accusative case is called for, one of these forms occurs
depending on the type of NP and the type of sentence the NP
occurs in.

In this chapter, an analysis of the concrete forms of
the Finnish accusative case is provided. Human pronouns--
the only elements that have a unique (overt) accusative
form--can be used as a diagnostic for whether an element is
really an accusative form or not; that is, an element is in
accusative case if it occurs in a syntactic position where
it could be replaced with a pronoun in accusative case.
Henceforth, the human pronoun $-t$ suffix will be called
"ACC", the objective $-n$ suffix will be called "ACC/GEN"
(i.e. an accusative element with genitive form), and
objects without a suffix will be referred to as occurring

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in "ACC/NOM" case (i.e. an accusative element with
nominative form).

Although all of the three accusative suffixes are
considered to be syntactically "accusative", the theory to
be outlined here actually accounts for the genitive suffix
in ACC/GEN using a general theory of genitive case, and for
the nominative "suffix" (actually, no suffix) in ACC/NOM
using a theory of nominative case. We will find
interesting interactions between the suffix on the
accusative object and the structure and derivation of VP
and IP.

Most of the modern work that has been done on Finnish
syntax concentrates on the accusative case. The ACC/NOM
has been taken an instance of nominative case by Timberlake
(1975), Gilligan (1984), Milsark (1984), van Nes-Felius
(1984) and Taraldsen (1986). In these works, the ACC/NOM
forms have basically been analyzed as nominative subjects,
especially in the passive. We shall see that the passive
ACC/NOM NPs are clearly objects (as well as all other
occurrences of ACC/NOM, such as objects of imperative
verbs), and there seems to be no reason to suppose that
they are subjects. A theory of nominative case which is
not strictly associated with the subject position is
needed, and will be developed in this chapter.

We can now conceptualize various degrees of
abstractness with respect to case morphology: "objective
case" is more abstract than "accusative case" (since
"objective" includes accusative and partitive), but
"accusative" is more abstract than "ACC/GEN" and "ACC/NOM".
For objective case, the syntactic position is relevant,
whereas the concrete morphology is not. For accusative
case, the morphology is relevant for distinguishing
accusative and partitive for the purposes of interpreting
the aspect of the sentence, but finer details of the
morphology are not relevant for this distinction. For
ACC/GEN and ACC/NOM, the details of the morphology are
relevant.

With these distinctions in mind, let us briefly
consider the notion of "abstract Case" used in GB (e.g.
Stowell (1981), Chomsky (1981)) and why this notion will
not be used in the present work. The relevant distinction
made with this concept is between elements that assign Case
and elements that do not assign Case. Of the basic
categories, V and P assign Case, while N and A do not. In
addition, passive verbs and raising verbs in English do not
assign Case (which is taken to motivate NP-movement in
passive and raising constructions).

At first glance, it seems that it does not matter
which case/Case is being assigned, but only that some

case/Case is assigned. Abstract Case would then involve a
degree of abstractness more abstract than any of the
examples discussed so far. We might then say that Abstract
Case does not have to do with case assignment at all, but
rather with the relationship between a head and its
arguments--that is, theta-role assignment.

There are two types of examples in which Case
assignment and theta-role assignment diverge with respect
to an NP (e.g. where an NP gets its Case and its theta-role
from different heads). First, NPs in the ECM construction
get a theta-role from the embedded verb and a Case from the
matrix verb (e.g. 'Mary believes me to be a fool').
Second, certain heads cannot assign Case although they
assign a theta-role.

Finnish does not have a construction corresponding to
the English ECM construction. However, the analysis of the
genitive suffix in the accusative NPs (ACC/GEN) to be
developed here suggests that an overt case suffix on an NP
need not be assigned by the element whose argument the NP
is. It will be suggested that the genitive suffix ends up
on the accusative NP via percolation from a higher node.
Given such a possibility, there is no need to analyze the
accusative case on the NP in the ECM construction as having
been assigned that accusative case suffix; rather, the
accusative feature could be percolating from the matrix

verb to the NP subject of the embedded infinitive. Since
Case Theory in general is not concerned with the exact
distribution of morphological case, the ECM construction in
English need not be taken as a basis for developing Case
Theory.

The notion that certain heads cannot assign "Case" to
their arguments is more substantial. In general (if not
always), such instances are ones where the head cannot
assign accusative Case. However, as we have seen in Ch.2,
motivating movement in Finnish based on lack of case/Case
does not account for the obligatory movement occurring in
passive and raising constructions. Rather, a theory of
movement is required that is not based on any notion of
case; it was suggested in Ch.2 that the Spec(IP) position
has to be filled (licensed), and this is what motivates
movement into that position. The requirement that the
Spec(IP) position has to be filled seems to account for the
obligatory movement in the English passive and raising
constructions, as well.

What about the generalization that Vs and Ps assign
(accusative) Case, while As and Ns do not (in English)?
This is a generalization that can be stated with reference
to morphological case; a theory of abstract Case is not
required for this purpose. In Finnish, a finer distinction

is required, since only Vs assign accusative case; both Vs
and Ps (and to some degree As) assign partitive case, while
Ns assign neither accusative nor partitive.

The impossibility of accusative case with certain
lexical categories is an interesting problem, comparable to
the impossibility of genitive specifiers with the English
categories A and P (while genitive is possible with the
Finnish categories A and P). These category-specific pos-
sibilities may be specified in the lexicon, and they
constrain the possible trees that can be base-generated
using X-Bar Theory (cf. Ch.1; Vainikka (1985a) discusses
the question of why lexical categories differ in their
projection possibilities). Thus, in the English nominali-
zations, the head-N does not assign accusative case to a
complement because N cannot take an object position;
rather, only a PP-position is available. "of-insertion" in
English would then signify an element occurring in a PP-
position, rather than in an object position.

In general, then, different degrees of abstractness
are relevant for talking about different processes. It is
crucial, though, that the degree of abstractness is kept
constant throughout a chain of argumentation. Belletti
(1988) argues, based on instances of "concrete" partitive
case in Finnish, for the existence of an "abstract
Partitive" in Italian, English and Finnish (in order to

account for definiteness effects); however, based on her
final description of the abstract Partitive, many non-
partitive NPs in Finnish will end up being Partitive. That
is, the definition of "partitive" with respect to
abstractness is not kept constant (cf. Vainikka (1988) for
a more detailed reply to Belletti).

In this chapter, various types of case will first be
discussed (Section 3.2.), with a concentration on
structural default cases. Section 3.3. will then present
an analysis of the two objective cases, based on the idea
of default case.

3.2 A typology of cases
3.2.1 Semantic, structural, and lexical case

Each occurrence of a case suffix can be roughly
categorized as being of one of the following types of case:
semantic, structural, or lexical. Prepositions and
postpositions (Ps) can be similarly categorized.

"Lexical case" refers to any case marking that has to
be specified in the lexicon. This notion corresponds
approximately to the notion of "inherent Case" in GB (e.g.
Chomsky (1981:170)) which is assumed to be assigned at D-
Structure (Chomsky (1981:183)). However, a case only needs

to be specified in the lexicon if its distribution cannot be determined semantically or structurally (while some instances of "inherent Case" turn out not to be "lexical case"). The following are examples of English verbs that specify in the lexicon which preposition they take ("lexical prepositions"): 'rely on', 'substitute for', and 'agree with'.

Lexical case can be thought of as lexicalized "semantic case". As opposed to lexical case, a semantic case suffix (or preposition) has a predictable meaning regardless of the verb that it occurs with. Adjuncts in general bear semantic case. Typical examples are locative phrases and 'with/without'-phrases.

The notion of "structural case" covers the traditional grammatical cases (in Finnish): nominative, partitive, accusative, and genitive. These are cases where the case suffix does not bear a one-to-one correspondence to any theta-role (cf. the English P of). I will argue that all of these are assigned based on the syntactic configuration. The remainder of the chapter will be mostly devoted to structural case.

3.2.2 The structural default cases

One type of structural case is (structural) default
case; this term refers to cases which have a one-to-one
mapping between a syntactic position and a case suffix. It
may be that all instances of structural case are instances
of such default cases; we will see that the complicated
case system of Finnish can be largely (if not completely)
accounted for with structural default cases (and of course,
semantic and lexical cases).

3.2.2.1 Structural default case of the Spec(XP) position

All occurrences of genitive case in Finnish can be
analyzed as occurring in the Specifier position of some
lexical category. The following are examples of genitive
in the Spec(NP) position:

3a) Pekan tuoli
     GEN   chair   'Pekka's chair'

b) kuninkaan pettäminen
    king-GEN betrayal   'the king's betrayal'

We have a typical possessive construction in (3a), where
the possessor occurs in genitive case. (3b) gives an
example of a nominalization, where (as in English; cf. e.g.
Jespersen (1924:170-171)) the genitive NP may be
interpreted either as the Theme of the betrayal (someone

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betrayed the king) or as the Agent of the betrayal (the kind betrayed someone).

We also find genitive in the Spec position of APs, as modifiers of the head-A:[1]

    4a) valtavan   iso
        terrible-GEN big   'terribly big'

     b) odottamattoman vaikea
        unexpected-GEN difficult

        'unexpectedly difficult'

An adjective in genitive case can modify another adjective, as shown in (4).

Certain adjectives in Finnish allow genitive NPs which presumably are arguments of the adjective. As with genitive arguments of N-heads, these arguments can be analyzed as occurring in the Spec(AP) position:

    5a) Pekan näköinen
        GEN   resembling

        'resembling Pekka; of Pekka's resemblance'

     b) kerrostalon   korkuinen
        apartment-house high

        'the height of/as high as an apartment building'

The single argument of a Finnish preposition typically occurs in PAR case (I will return to this); the

single argument of a postposition usually occurs in GEN
case:

> 6a) Pekan ohi
>   GEN   past   'past/beyond Pekka'
>
> b) Maijan takia
>   GEN   because-of   'because of Maija'

As with Ns and As, we can posit a Specifier position for P,
in which a genitive NP (an argument of the P) occurs; the
head of such a phrase is the traditional postposition. The
only distinction between a preposition and a postposition
is whether they take their NP in the Specifier position
(postposition) or in a complement position (preposition).

The remaining lexical category, V, also has forms
which occur with a genitive NP. When the verb is non-
finite, its subject shows up in genitive case (cf. Ch.5 for
a detailed discussion of genitive subjects of non-finite
verbs):

> 7a) Jukka uskoo   Pekan nähneen sinut.
>   NOM   believes GEN   INF   you-ACC
>
>   'Jukka believes (that) Pekka has seen you'
>
> b) Virpi käski   Helenan tulla   sisään.
>   NOM   ordered ACC/GEN come-INF in
>
>   'Virpi asked Helena to come in'

It is clear that the non-finite verbs in these examples are
verbs at least at some level of representation, since they

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assign objective case to their complement just like finite
verbs do (and nouns do not). It will be argued in Ch.5
that the genitive subjects of non-finite verbs are base-
generated in the Spec(VP) position.

    We also find a genitive subject in certain finite
constructions:

    8a) Pekan täytyy lähteä.
        GEN   must   to-leave   'Pekka has to leave'

     b) Lapsen   oli nälkä/jano/kuuma.
        child-GEN was hunger/thirst/heat

        'The child was hungry/thirsty/hot'

All such constructions involve a 3rd person singular verb
that does not seem to agree with anything (and the genitive
subject never seems to bear the theta-role of an Agent).
It will be argued shortly that subjects of finite verbs are
base-generated in the Spec(VP) position, and this is where
subjects of certain verbs get their genitive case marking.

    A priori, it is possible that the genitive cases for
each of the four lexical categories arise in different
fashions. However, there is evidence to suggest that the
same structure is involved with each of the categories.
The evidence comes from the distribution of possessive
suffixes (Px's): for all categories, if the genitive NP is
a human pronoun, the head of the XP shows up with a Px that

agrees with the genitive NP. Consider an example of each
category:

    9a) minun koirani
        my   dog-1SGPx   'my dog'

     b) minun näköiseni
        my   resembling-1SGPx 'resembling me'

     c) minun ohitseni
        my   past-1SGPx   'past me'

     d) minun lähdettyäni
        my   leave-INF-1SGPx   'after I left'

In (9a), we have an NP with a 1st person human possessor.
In addition to the genitive NP minun 'my', we get the
suffix -ni on the possessed noun koira 'dog'. Similarly,
in (9b)-(d), the Px suffixes on the head of the phrase: on
an adjective in (9b), on a postposition in (9c) and on a
verb in (9d).

    It is clear, then, that genitive case is associated
with the Spec(XP) position, regardless of the nature of the
head of the phrase (except for the requirement that the
head be lexical). I will try to maintain the view that
genitive case provides an unambiguous mapping to the
Spec(XP) position (for lexical categories)--that is,
genitive case only arises in a specifier position, and
whenever we have a specifier position, genitive case
arises. Crucially, it appears that the functional
categories INFL and COMP do not "assign" genitive case to
their specifier positions.

I would like to propose, then, that (at least for Finnish) genitive is the structure default case for the Spec(XP) position. Technically this means that the genitive case feature is base-generated with the Spec(XP) position (although we will find that the genitive feature is not base-generated in the Spec(XP) position).

Next we will consider two structural cases for complement positions.

3.2.2.2 Structural default cases of complement positions

We have found that genitive is the case of the Spec(XP) position for all lexical categories. Is there a comparable case for the complement position? There is not just one; with respect to the complement position, we get a two-way split: V and P have one case, N and A another. In order to maintain the idea that there is a one-to-one relationship between a syntactic position and a particular case, we would be forced to say that the complement position of N and A is a different syntactic position from the object position of V and P (cf. discussion in Section 3.1). I will return to this below.

The complements of nouns and adjectives typically show up in elative case ('from'). Consider the following examples of complements of N:

10a) kirja sodasta
     book war-ELA   'book about the war'

  b) pusero puuvillasta
     blouse cotton-ELA   'blouse (made) of cotton'

  c) sakot ylinopeudesta
     ticket speeding-ELA   'ticket for speeding'

  d) ehdotus   kokouksen   lopettamisesta
     suggestion meeting-GEN ending-ELA

     'suggestion for ending the meeting'

Complements in other oblique cases are possible with N-heads, but elative seems to be the only one that systematically does **not** have clear semantic content (cf. the fact that the English Ps in the glosses are different). Compare the following examples to (10):

11a) usko   Jumalaan
     belief God-ILL   'belief in God'

  b) kyky   opiskeluun
     aptitude studying-ILL 'aptitude for studying'

Unlike the examples in (10), the head-Ns here are derived from verbs, and their complements occur in the same lexical case as the complements of the corresponding verbs would (uskoa 'believe' and kyetä 'be able to' both take illative complements; cf. Appendix I for other examples of verbs taking lexical case).

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The complements (or adjuncts) of the nouns in the
following examples bear semantic case, as opposed to the
examples in (10) and (11); all of these nouns are also
derived from verbs that could take corresponding
complements/adjuncts with semantic case:

12a) keittäminen nuotiolla
cooking   fire-ADE   'cooking on open fire'

  b) tulo   kaupalta
arrival store-ABL   'arrival from the store'

  c) lähtö   asioille
departure errands-ALL 'departure for errands'

Thus, the elative complements in (10) seem different
from the complements of derived nouns in (11) and (12).

Complements of adjectives also bear elative case:[2]

13a) kankea kylmästä
stiff   cold-ELA   'stiff with cold'

  b) vihreä kateudesta
green   envy-ELA   'green with envy'

  c) ylpeä perheestään
proud family-ELA-3Px

    'proud of (his/her) family'

If elative were the structural default case for the
complement position, we would expect it to show up for all
lexical categories, like genitive does for the specifier

position. However, as already mentioned, V and P behave differently from N and A.

Instead of elative case, complements of P occur in partitive, and complements of V occur in accusative or partitive. Since partitive is basically the only possible case for the complement of a preposition[3], and accusative is never possible with a P, I would like to suggest that partitive is the structural default case for the complement position of P:

> 14a) ilman   sateensuojaa
>   without umbrella-PAR   'without an umbrella'
>
>   b) ennen   aamua
>   before morning-PAR   'before morning'

Since partitive is the only common case for objects of Vs and Ps, I would like to suggest that partitive is the default case for the object position of both V and P. I will return to arguments for partitive being the default case of the object position of a verb.

In order to maintain a one-to-one relationship between each structural default case and each syntactic position, I am forced to conclude that the complement position of Ns and As and the complement position of Ps and Vs are two different syntactic positions. I will not be able to pursue this topic here; whether or not the two

complement positions are the same position is not crucial
to the analysis of structural case to be presented here.

We now have the following paradigm represented in
Table 3.1.

TABLE 3.1. Default cases of basic categories.

	Spec(XP)	complement of X
N	GEN	ELA
A	GEN	ELA
V	GEN	PAR
P	GEN	PAR

In the next section, I will try to determine what the
structure of phrases with case is, and how structural case
"assignment" takes place.

3.2.3 The representation of cases

All of the Finnish case suffixes display "Across-the-
Board" behavior: modifiers of a noun (such as adjectives
and quantifiers) agree in case (and number) with the head-
N. That is, theoretically each suffix may occur in a
phrase an infinite number of times (as many times as there
are adjectives).

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Nikanne (1987) and (1989) has suggested that oblique
cases in Finnish form a PP, where the P consists of an
oblique case feature. Given such a structure, one can have
the P-head serve a multiple function, if necessary. A D-
Structure tree might look something like the following (the
adessive suffix if -lla 'on'):

15)
```
                    PP
                   /  \
                  P    NP
                  |    |
               [ADE]   N'
                      /  \
                    AP    N
                    |     |
                    A    tuoli
                    |
                 nariseva
```
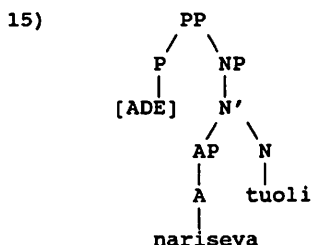
The case feature in P would be a case feature that can
"percolate" in some fashion both to the N head and its
modifier-A, giving us the desired result: narisevalla
tuolilla 'on a squeaky chair'. We might say that a case
feature differs from an actual preposition in that the case
feature represents a suffix which has to be realized on
some element. This is what gives rise to "percolation",
while true prepositions do not percolate since they are not
suffixes. I will assume (although not crucially) this
analysis of the oblique case forms in Finnish.

Similarly, with a demonstrative pronoun[4] we can posit
a Quantifier Phrase with the pronoun as its Q-head (again,
the name of this phrase is not crucial):

16)
```
              PP
            /    \
          P        QP
          |      /    \
       [ADE]    Q      NP
                |       |
               tuo      N
                        |
                      tuoli
```
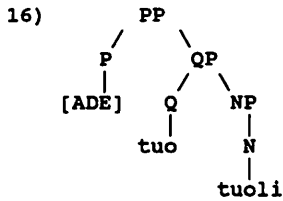
This D-Structure tree gives us <u>tuolla</u> <u>tuolilla</u> 'on that chair'. Having both a demonstrative pronoun and an adjective gives us (17):

17)
```
              PP
            /    \
          P        QP
          |      /    \
       [ADE]   Q      NP
               |       |
              tuo      N'
                      /  \
                    AP    N
                    |     |
                    A    tuoli
                    |
                 nariseva
```
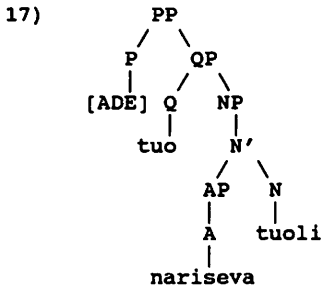
The case feature percolates to each of the heads, giving us <u>tuolla</u> <u>narisevalla</u> <u>tuolilla</u> 'on that squeaky chair'.

Nikanne assumes that the (traditionally) grammatical cases nominative, genitive, partitive, and accusative do not act as a head of a PP. Thus, phrases bearing grammatical case are NPs, while ones with oblique case are PPs. In this view, we can think of the (structural default) elative as being a "dummy" preposition, comparable to the English <u>of</u>.

If the grammatical case features do not head PPs, where are they represented? I will argue that nominative is not a case; it is not represented anywhere as a feature. "Nominative" refers to the zero-marked lexical entry form of an element.

Accusative case has a very narrow distribution in Finnish. It only occurs on objects of verbs with the feature [+COMPLETED], as we shall see in the next section. I will return to its representation.

The remaining grammatical cases, genitive and partitive, behave the same way as the oblique cases do with respect to adjectival agreement. We can accomplish this result by representing the case feature as being a feature of the maximal projection, as follows:

```
18)          NP
           [PAR]
             |
             N'
           /    \
        AP        N
         |        |
         A       tuoli
         |
      nariseva
```

The partitive feature then percolate to each of the heads, giving us narisevaa tuolia 'squeaky chair(PAR)'. The only difference in representation between the oblique phrases and the "grammatical" phrases is that the NP in (18) is

embedded under a PP in the oblique phrases, and the case
feature occupies the P position (at D-Structure).

Since partitive and genitive are structural default
cases, trees such as (18) are base-generated with the case
feature. If the phrase in (18) were an object of a
preposition[5], the NP object would get the partitive feature
as a result of being base-generated in the object position.
(19) gives the D-Structure tree of such a PP:

```
19)            PP
             /    \
           P      NP
           |      [PAR]
         ilman      |
                    N'
                  /    \
               AP       N
               |        |
               A      tuoli
               |
            nariseva
```
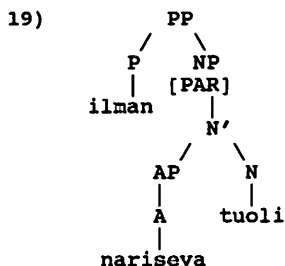
Again, the partitive feature percolates to the heads in its
phrase, resulting in the PP _ilman_ _narisevaa_ _tuolia_ 'without
a squeaky chair'.

Similarly, a postposition (or any other lexical head)
"assigns" the structural default genitive to its specifier
position, giving us the following D-Structure tree:[6]

20)
```
                    PP
                   /  \
               Spec    P
               [GEN]    |
                 |     alla
                NP
                 |
                N'
               /  \
           AP      N
            |      |
            A    tuoli
            |
         nariseva
```
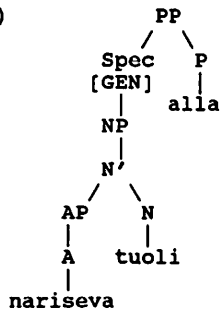
Again, the genitive feature percolates from the node that
it originates in at D-Structure (whether it is the Spec(PP)
or the NP node is not crucial) to the heads in its phrase.
The resulting PP is _narisevan_ _tuolin(GEN)_ _alla_ '(lit.)the
squeaky chair's under; under the squeaky chair'.

     Now consider a phrase with both oblique (semantic)
and structural case:

21)
```
              PP
             /  \
           P     NP
           |    /  \
        [ADE] Spec   N
              [GEN]   |
                |   tuoli
               NP
                |
              Virpi
```
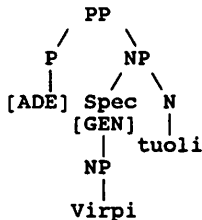
The head-N _tuoli_ 'chair' takes a specifier (a possessive
phrase) with genitive case. The maximal projection of the
N is the object of an abstract locative P. The genitive
feature percolates to the element within its phrase. The

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adessive feature percolates to the its head-N. We end up
with the phrase _Virpin(GEN)_ _tuolilla(ADE)_ 'on Virpi's
chair'.

Crucially, the adessive feature in (20) does not
percolate to the NP inside the Spec(NP). That is, the case
percolation process respects strict cyclicity. Consider a
more complex example with a quantifier and an adjective:

```
22)        PP
        /     \
      P        QP
      |       /  \
    [ADE]    Q    \
             |     NP
           tuo-   / \
               Spec   N'
              [GEN]   / \
                |    AP   N
               NP    |    |
                |    A  tuoli
                N    |
                |  nariseva
              Virpi
```
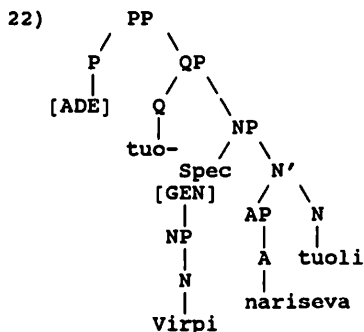
The "output" of this tree is _tuolla(ADE)_ _Virpin(GEN)_
narisevalla(ADE) _tuolilla(ADE)_ 'on that squeaky chair of
Virpi's'(lit.'on that Virpi's squeaky chair'). Again,
respecting cyclicity, the genitive feature in the Spec(NP)
position percolates to _Virpi_; the adessive feature then
percolates to all other heads in its NP. We might say that
the adessive feature percolates to the NP inside the
Spec(NP) position also, but since that NP already bears a
genitive case suffix, adessive cannot be realized.

Let us now turn to the distribution of the grammatical cases, specifically partitive, accusative, and nominative.

3.3 The two objective cases in Finnish
3.3.1 Accusative versus partitive

The object of a verb in Finnish shows up either in partitive case (with the suffix _-ta_) or in accusative case (with various suffixes). In affirmative clauses, there is a semantic distinction between the two usages. Accusative is used if the verb denotes completed action,[7] and partitive is used if the action is not completed (cf. Appendix I for examples of verbs that take either case, depending on aspect, as well as verbs that take only accusative or only partitive):

    23a) Helena kutoi   villatakkia.
         NOM   knitted sweater-PAR

        'Helena was knitting a sweater'

      b) Helena kutoi   villatakin.
         NOM   knitted sweater-ACC/GEN

        'Helena knitted a sweater'

In (23b), the object occurs in accusative case; this implies that the action was completed, and Helena finished knitting the sweater (the sweater was done when she stopped knitting). On the other hand, the partitive case in (23a)

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does not imply that the sweater was completed when Helena
finished knitting.

In negative sentences the aspectual distinction
between accusative and partitive is lost; only partitive is
possible:

    24a) Helena ei   kutonut villatakkia.
          NOM   not-3SG knitted sweater-PAR

      'Helena did not knit a sweater'

     b)*Helena ei   kutonut villatakin.
          NOM   not-3SG knitted sweater-ACC

Thus, (24b) with an accusative object is ungrammatical.[8]

The following diagram attempts to give a
comprehensive view of the different possible forms involved
in objective case marking in Finnish (this diagram was
developed in Vainikka (1985a), and also independently in
Renault (1984); cf. also Reime (1989)):

```
25)                    objective case
                      /          \
   [+COMPLETED]      /            \
               (ACC)              -ta
               /    \            (=PAR)
 [ACC exists] /      \
           -t     (ACC)
                  /    \
        [+AGR]   /      \
               -n        ∅
             (=GEN)    (=NOM)
```
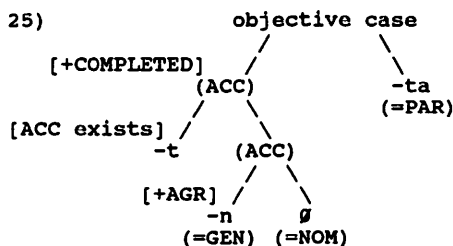
This tree represents the "choices" that need to be made in order to end up with the appropriate form for the object. At each node, the left branch represents a special condition (abbreviated in brackets) and the right branch represents an "elsewhere" situation. Going from top to bottom, the first choice involves determining whether the verb implies completed action or not. If it does, we choose the left branch. If it does not, we choose the right-hand branch, and we are done--we end up with the partitive suffix -ta.

As for the negative sentences, I would like to suggest that the reason we do not get accusative objects in negative sentences (but cf. fn.7) is that negation is incompatible with the feature [+COMPLETED] (cf. Heinamaki (1984) for a similar suggestion). That is, in order to "assign" accusative case, the verb has to have the feature [+COMPLETED]; if the verb does not have this feature, its object gets the structural default case of its position, the partitive case. The class of [-COMPLETED] verbs then includes non-completed affirmative verbs and all negative verbs.

In the traditional literature on Finnish objective case, the distinction between accusative and partitive has not typically been thought of in terms of one case being an "elsewhere" (default) case. Leino (1982) in unpublished

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work was perhaps the first to suggest an analysis in which partitive is a default case; this analysis was also independently suggested in Vainikka (1984). Heinamaki (1984) develops Leino's suggestion in interesting ways. Larjavaara (1988:497) has recently suggested that partitive is a semantically marked case, as opposed to all the other cases (basically since partitive refers to a "part" of something, while all other cases refer to "wholes").[9]

If the verb in a sentence has the feature [+COMPLETED], we have the following choices (the relevant part of the tree in (25)):

```
25')                      (ACC)
                         /    \
          [ACC exists] /       \
                     -t       (ACC)
                             /    \
                 [+AGR]     /       \
                         -n          ∅
                       (=GEN)     (=NOM)
```
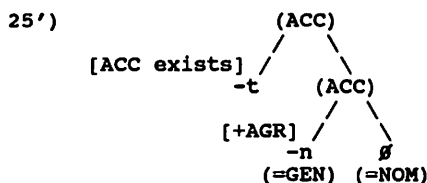
Given an NP that is being assigned accusative case, we first need to determine whether the NP has an accusative form (leftmost branch in (25')). As already mentioned, only human pronouns have a form that is only an accusative form,[10] and serves no other function (suffix -t) (cf. Appendix II for the paradigm).

If the NP is a full NP (or a non-human pronoun), we have one more "choice point" in the diagram in (25'). The

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NP will either get the genitive suffix ($-n$) or no suffix at all ("nominative"). The NP gets the genitive suffix if and only if the matrix[11] verb agrees with a subject NP.

Apart from the last branch, accusative marking in Finnish is not very different from that in e.g. English. Only certain human pronouns have a form that is uniquely an accusative form (in English: me, him, us, and them). All other NPs (full NPs and the pronouns you and it) end up in "nominative", i.e. with no suffix.

The only real difference between English and Finnish then is that in Finnish in certain syntactic configurations an NP that would otherwise end up in "nominative", actually gets a genitive suffix[12]. The analysis to be proposed in the next section attempts to explain where the genitive suffix comes from.

Given the approach that partitive is the default case for the object position (of the categories V and P), we do not need a further explanation for the distribution of partitive case. We only need to account for the distribution of accusative case, since if accusative is not assigned to an NP in the object position, partitive case "automatically" occurs. Assuming that the distribution of accusative case can be adequately described with the

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feature [+COMPLETED] on the verb whose object is receiving accusative case (but cf. fn.7), we can say that accusative is actually being assigned by the feature [+COMPLETED]. Since Ps (or any other heads) cannot have the feature [+COMPLETED], they can never assign accusative case.

Unlike partitive and genitive, the default cases for the object position and the specifier position, accusative case is literally assigned by a specific head (or feature).

The distribution of the -t marked accusative of human pronouns is straightforward, since these elements are unambiguously marked as occurring in accusative case (but cf. fn.10 on the problem with plural NPs).

The remaining problem is then the distribution of the "genitive" and "nominative" suffixes in accusative case assignment. This problem is clearly a syntactic problem, since it cannot be determined in the lexicon which suffix the NP ends up with. Since the genitive suffix only occurs if the verb agrees with a subject, it appears that agreement on the verb somehow gives rise to an "extra" genitive suffix, which somehow ends up on the object.

3.3.2 The fate of an unrealized genitive feature

The analysis of the genitive suffix on an accusative
NP (i.e. ACC/GEN) to be proposed here is the following.
Nominative subjects are base-generated in the Spec(VP)
position, with genitive case (the default case for Spec(XP)
positions). The NP raises to the Spec(IP) without the
genitive case. The subject NP ends up with no case (i.e.
"nominative"). The unrealized genitive feature percolates
to the object position. If the object position contains an
NP without overt case (i.e. "nominative"), the feature is
obligatorily realized on that NP as genitive case:

```
26) Maija luki kirjan      /*kirja
    NOM   read book-ACC/GEN   book-ACC/NOM
```

If the sentence contains no nominative subject, then
there is no unrealized genitive feature that can percolate
to the object, and the object ends up without a suffix:

```
27a) Lue  kirja!      /*kirjan
     read book-ACC/NOM   book-ACC/GEN

     'Read a book!'

  b) Koulussa   luettiin  kirja        /*kirjan.
     school-INE read-PASS book-ACC/NOM   ACC/GEN

     'A book was read at school'

  c) Minun  täytyy lukea    kirja   /*kirjan.
     my-GEN must   read-INF ACC/NOM   ACC/GEN

     'I have to read a book'
```

None of these three sentences contain a nominative subject, and the genitive suffix on the object is impossible. (27a) gives an example of an imperative sentence, (27b) a passive sentence, and (27c) a construction with the modal täytyy 'must' which does not agree with anything in person/number.

Let me now attempt to justify and clarify each part of the analysis.

3.3.2.1 Nominative case is not a case

Nominative case in Finnish has no suffix. Following R.Jakobson (1936), Andrews (1982), and Vainikka (1986) I take nominative not to be a case (in languages such as Finnish where there is no suffix, while in e.g. Japanese "nominative" refers to an actual case suffix). An "NP with nominative case" then refers to an NP in its lexical form, without a case suffix.

Thus, nominative subjects and "nominative objects" (=ACC/NOM) bear the same form, but not because they are both assigned the same case. Rather, a nominative subject is assigned no case; an ACC/NOM object is actually assigned accusative case, but since the NP does not have an accusative form in the lexicon, no case suffix is realized

on the NP. The difference between nominative subjects and
ACC/NOM objects in Finnish is that the verb never agrees
with an ACC/NOM object, while it always agrees with a
nominative subject. We shall see how this distinction is
accomplished in my analysis.

Note that since I am not assuming Case Theory, and
therefore no Case Filter (cf. Chapters 1 and 2), there is
no problem with NPs not being assigned case. However, NPs
without an overt case suffix are still assigned a theta-
role.

3.3.2.2 Subjects are base-generated in the Spec(VP)

Recently it has been suggested by various people
working within the GB-theory that subjects originate in the
VP (e.g. Kitagawa (1986) and Fukui (1986)). This allows
for a unification of theta-role assignment: all theta-roles
are assigned in the VP (at D-Structure). I will adopt this
analysis of VP-generated subjects for Finnish.

If, as it was argued in this chapter, the structural
default case for the specifier position is genitive, why do
subjects not occur in genitive case?[13]

Although nominative subjects are base-generated in the Spec(VP) position, they end up in the Spec(IP) position (due to the licensing requirement according which the Spec(IP) position has to be filled; Ch.2). Crucially, genitive is the structural default case for lexical categories only (cf. Section 3.2.2.1.). The Spec(IP) position does not have a genitive feature, so the subject will not get genitive case in that position.

Why does the NP not get genitive case in the position it was base-generated in, the Spec(VP)? Something appears to block the realization of the genitive case. I will suggest that the fact that the subject NP is coindexed with agreement features prevents genitive case from being realized.

3.3.2.3 Agreement features are base-generated in the Spec(IP) position

Recall the analysis of INFL in Chapter 2, according to which tense (and presumably mood) features are base-generated in INFL (or, in negative sentences, in TNS). I would like to suggest that agreement features (i.e. person and number features) are base-generated in Spec(IP):

28)
```
                    IP
                   /  \
               Spec    I'
                |     /  \
              [AGR] INFL  VP
                     |   /  \
                  [TNS] Spec  V'
                         |   /  \
                      [subj]  V    NP
```
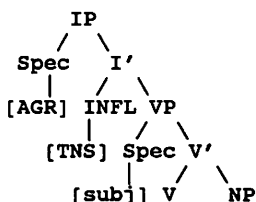
The agreement features on the Finnish verb follow the tense
(and mood) features. Given the D-Structure tree in (28),
the right order of morphemes is guaranteed. Since the verb
is either base-generated in INFL (if it is the auxiliary
verb _olla_) or it raises to INFL (main verb), the tense
features will be realized on the verb. The agreement
features will then "lower" to the INFL position, since they
cannot be realized in the Spec(IP) position (this process
is comparable to "Affix-Hopping" [cf. e.g. Chomsky (1988)],
although it probably needs to occur before PF). There is
no way for the agreement features to attach to the verb
stem before the tense features, since the verb never raises
to Spec(IP).

     In Finnish, there is a one-to-one relationship
between a nominative subject and the agreement suffix of
the verb. However, not all verbs take nominative subjects.
Finnish (as e.g. Icelandic) has non-nominative subjects (we
will return to some examples). It appears that Agentive
subjects always agree with the verb. For non-Agentive

subjects, it may be that the verb needs to specify in the lexicon whether the subject occurs in nominative or not.

In order to guarantee that nominative subjects (and only them) always agree with the verb, I would like to suggest that the verb specifies that its subject is of the "agreeing" type (either via the theta-role, or in the lexicon). To achieve the desired result technically, we can say that at D-Structure the subject in the Spec(VP) position is coindexed with the agreement features in the Spec(IP) position. In the lexicon, the verb specifies that the subject argument has to be coindexed with something (cf. Williams' (1981) notion of an "external argument").[14]

Thus, if the NP that is base-generated in the Spec(VP) position bears the information that it has to be coindexed with agreement features in the Spec(IP) position, then agreement features are base-generated in the Spec(IP) position. That is, agreement features can only be base-generated in the Spec(IP) if they are coindexed with an NP in the Spec(VP) position.

I would now like to stipulate that coindexation between the agreement features in the Spec(IP) and the NP in the Spec(VP) is what prevents the genitive case from being assigned to the NP in the Spec(VP) position (note that something like the coindexation is needed

independently of the analysis presented here, in order to indicate which verbs take nominative subjects).

If the element in the Spec(VP) position need not be coindexed with agreement features, then nothing is base-generated in the Spec(IP) position.[15] Apparently the only thing that can be base-generated in the Spec(IP) position is a bundle of agreement features, while either tense features or tense features and the auxiliary verb and/or the negative verb can be base-generated in the INFL position.

3.3.2.4 Percolation of the genitive feature

Given the stipulation that genitive case cannot be realized on an element that is coindexed with agreement features[16], we have an almost complete analysis of the ACC/GEN forms. That is, whenever the genitive case cannot be realized on the NP in the Spec(VP) position, we get a genitive suffix on an object. We only need to determine how the unrealized genitive feature gets from the Spec(VP) to the object. Before attempting this, let us see how the analysis works in a number of constructions.

3.3.2.4.1 Simple active sentences

Recall the example with an ACC/GEN object, repeated
here as (29):

29) Maija luki kirjan   /*kirja
    NOM   read book-ACC/GEN   book-ACC/NOM

    'Maija read a/the book'

The D-Structure representation of (29) is given in (30):

```
30)            IP
             /    \
          Spec     I'
           |      /  \
        [AGR-i] INFL  VP
                 |   /  \
               [TNS] Spec  V'
                    [GEN] /  \
                      |  V    NP
                     NP [+C] [ACC]
                      |   |    |
                   Maija-i luk- kirja
```
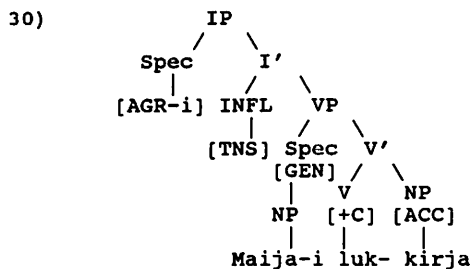
The verb <u>luk-</u> 'read' has two arguments in the VP, one in
the object position and one in the Spec(VP) position.

Since the verb has the feature [+COMPLETED],
accusative case is assigned to the object (represented here
as a feature on the object NP). However, the NP in the
object position is a full NP and does not have an
accusative form in its paradigm.

The verb indicates (either in the lexicon, or through
theta-role assignment) that its subject has to be coindexed

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with something. The subject is base-generated in the
Spec(VP) position, and it is coindexed with the agreement
features in the Spec(IP) position.

By M-Structure the subject NP has raised from the
Spec(VP) position to the Spec(IP) position, and the verb
has raised to INFL. Both movements are motivated by the
requirement to license the Spec(IP) and the INFL positions:

```
31)               IP
                /    \
            Spec      I'
             |      /    \
         Maija-i  INFL    VP
                   |    /    \
               luki-i  Spec   V'
                      [GEN]  /  \
                            V    NP
                               [ACC]
                                 |
                               kirja
```
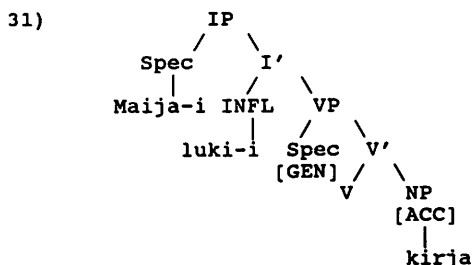
The agreement features have lowered to INFL; both tense and
agreement features are realized on the raised verb. The
subject and the agreement features presumably retain their
coindexation relationship.

The genitive feature has been "stranded" by the
nominative subject, since the realization of genitive case
was blocked (due to the fact that the NP was coindexed with
agreement features, as was stipulated). Somehow the
stranded genitive feature ends up occurring on the object
NP; we will return to the mechanism of this process.

3.3.2.4.2 Impersonal passive sentences

Consider the following examples of the (impersonal) passive construction in Finnish:

32a) Kylpyhuoneessa pestiin   vauvaa.
     bathroom-INE   wash-PASS baby-PAR

  b) Vauvaa   pestiin   kylpyhuoneessa.
     baby-PAR wash-PASS bathroom-INE

     'The baby was being washed in the bathroom'

As with active verbs, when the passive verb does not imply completion (or when the sentence is negative), the object occurs in partitive case. This suggests that the NP object of a corresponding active sentence is also an object in a passive sentence. As we saw in Chapter 2, either the locative phrase or the direct object can raise to the Spec(IP) position, in the absence of a nominative subject.

When the passive verb implies completion, an accusative object occurs, but without the genitive suffix:

33a) Kylpyhuoneessa pestiin   vauva.
     bathroom-INE   wash-PASS baby-ACC/NOM

  b) Vauva   pestiin   kylpyhuoneessa.
     baby-ACC/NOM wash-PASS bathroom-INE

     'The baby was washed in the bathroom'

We can be sure that the NP vauva in (33) bears accusative case, since if we were to replace vauva with a

human pronoun, we get overt accusative case (the nominative
form of the pronoun is hän):

    34a) Kylpyhuoneessa pestiin   hänet.
         bathroom-INE   wash-PASS him-ACC

      b) Hänet   pestiin   kylpyhuoneessa.
         him-ACC wash-PASS bathroom-INE

         'He was washed in the bathroom'

    Why do we never find a genitive suffix on an
accusative object of a passive verb?

    The solution is simple: no Spec(VP) position is base-
generated in a passive sentence. Therefore, no genitive
suffix is base-generated. Also, no subject is possible in
an impersonal passive sentence, not even as an adjunct[17]
(since a subject would need to be base-generated in the
Spec(VP) position). And, since agreement features can only
be base-generated in the Spec(IP) position if they are
coindexed with something in the Spec(VP) position, the
impersonal passive verb does not agree with any NP in the
sentence.

    An object NP that does not have an accusative form in
its paradigm ends up with no case (i.e. the NP occurs in
its lexical "nominative" form), as in example (33).

Although in Standard Finnish there are no nominative
subjects without agreement, Colloquial Finnish has one verb
form that may not agree with anything, yet we find a
nominative subject (objective case marking works the same
way in Colloquial Finnish and in Standard Finnish). This
is the passive verb form used as a first person plural verb
(it is also still used as the passive form):

35a) Me   pestiin   hänet   kylpyhuoneessa.
     we-NOM washed-PASS him-ACC bathroom-INE

     'We washed him in the bathroom'

 b) Me   pestiin   vauva   kylpyhuoneessa.
    we-NOM washed-PASS baby-ACC/NOM bathroom-INE

     'We washed the baby in the bathroom'

 c) Te   pesitte   vauvan   kylpyhuoneessa.
    you-NOM washed-2PL baby-ACC/GEN bathroom-INE

     'You (pl.) washed the baby in the bathroom'

We see in (35b) that this verb form behaves the same way as
the regular impersonal passive does: the object of a
[+COMPLETED] verb does not (and cannot) have a genitive
suffix. (35c) has the 2nd person plural verb, with a
genitive suffix on the object (both in Colloquial and
Standard Finnish).

Descriptively, then, the colloquial 1st person plural
verb treats its object as a passive verb would, yet it
takes a nominative subject. In the current analysis, this

means one of two things: either (i) the object does not get a genitive suffix because a Spec(VP) position is not base-generated and the 1st person plural subject pronoun has to be exceptionally base-generated in the Spec(IP) position; or (ii) the subject is base-generated in the Spec(VP) position, as always, but for some reason no genitive feature is base-generated in the Spec(VP) position in sentences such as (35b). The second alternative seems preferable in the sense that the analysis of subjects remains uniform, while the non-occurrence of a genitive feature in the Spec(XP) position is something we have encountered before with the functional categories INFL and COMP (although this property is exceptional with a lexical category). I will leave the analysis of these forms open.

3.3.2.4.3   Imperative sentences

The case marking of the object of an imperative verb is identical to that of a passive verb:

    36a) Lue   kirjaa!
         read-IMP book-PAR

       'Read (at least a part of) a book!'

      b) Lue   kirja!   /*kirjan
         read-IMP book-ACC/NOM   ACC/GEN

         'Read (and finish) a book!'

Again, if the verb does not imply completion (or if the verb is negative), the object occurs in the default partitive case, as in (36a). If the verb implies completion, we get the suffixless accusative form, (36b).

As with the impersonal passive, we can assume that the VP in the D-Structure of an imperative construction does not have a Spec(VP) position, since a nominative subject that agrees with the verb[18] is impossible. Thus, since no Spec(VP) is base-generated, no genitive feature is base-generated either, and one never occurs on the object of an imperative verb.

3.3.2.4.4 Sentences with täytyy 'must'

The only remaining matrix construction where we do not get objects with a genitive suffix is a class of constructions with "quirky" subjects and with 3rd person singular verbs that do not seem to agree with anything. In a typical example, it is impossible to tell whether the case of the "object" is nominative or ACC/NOM, since these constructions do not allow human pronouns (and since the NPs are 3rd person singular ones):

> 37) Minun on   nälkä /jano /kylmä.
>   my-GEN is-3SG hunger/thirst/cold-?
>
>   'I am hungry/thirsty/cold'

The logical subject (the human) of this example is in genitive case, and the postverbal NP bears no suffix. The "object" might be a displaced nominative subject, agreeing with the 3rd person sg. verb, or it is an ACC/NOM object of the verb. I will not attempt to analyze most of these constructions here, but will concentrate on one subtype of this class where we can tell what the object case is--the modal _täytyy_ 'must'. The analysis to be proposed for the modal construction will, however, carry over to the examples in (37), if the genitive NP is the subject and the postverbal NP is an ACC/NOM object.

Modal verbs in Finnish typically behave like main verbs do, except in the case of _täytyy_ 'must'. This modal only occurs in the 3rd person singular; apart from agreement morphology, it has a full verbal paradigm with compound tenses and negation. The logical subject of this modal occurs in genitive case (not ACC/GEN--human pronouns also have genitive). The objects in a _täytyy_-sentence never get ACC/GEN, but they behave like the passive and imperative objects (as we shall see in Ch.5, whether or not the object of the embedded verb gets the genitive suffix depends on the matrix verb):

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38a) Jukan täytyy lukea   kirjaa.
     GEN   must   read-INF book-PAR

    'Jukka has to (be) read(ing) a book'

  b) Jukan täytyy lukea   kirja.
     GEN   must   read-INF book-ACC/NOM

    'Jukka has to read (and finish) a book'

This construction differs from the passive and imperative
constructions in that it has an overt NP that might be a
subject--the genitive Jukan.

    I would like to suggest that the NP Jukan is base-
generated in the Spec(VP) position the same way nominative
subjects are. Since the verb täytyy 'must' does not have
any agreement features, we can assume that no agreement
features are base-generated in the Spec(IP) position. That
is, since there are no agreement features in the Spec(IP)
position, the NP in the Spec(VP) is not coindexed by
anything. Therefore, the genitive feature is not blocked,
and genitive case is realized on the element in Spec(VP):

39)   IP
                       /   \
                   Spec   I'
                          /   \
                      INFL   VP
                       | /   \
                     [TNS] Spec   V'
                            [GEN] /   \
                             | V   VP
                            NP | /   \
                             | täytyy V   NP
                           Jukka   [+C] [ACC]
                                       | |
                                     lukea kirja

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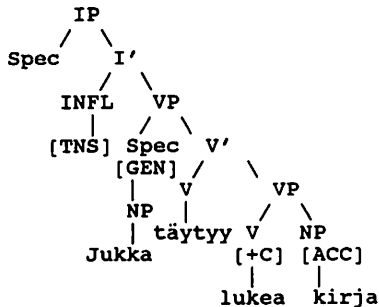
This is the D-Structure tree for example (38b) above (the internal structure of the embedded VP is not relevant here; I will return to it in Ch.5).

Since _Jukka_ is not coindexed by agreement features in the Spec(IP), it will be assigned genitive case. It will raise to the Spec(IP) position in order to license that position. The modal verb will raise to INFL to license the INFL position.

Since genitive case is realized on the subject, no genitive feature is stranded, and no genitive suffix occurs on an accusative subject in the sentence. Only ACC/NOM objects are possible.

3.3.2.5 The mechanism

We now have an analysis of the ACC/GEN objects according to which a genitive suffix occurs on an object (which otherwise would have no case) if and only if a genitive suffix has been "stranded" by a nominative subject. If there is no subject, then no Spec(VP) position is base-generated, and thus no genitive feature is base-generated (in the passive and imperative sentences). If there is a genitive subject, then the subject has been

assigned genitive case, and there is no unrealized genitive feature that could percolate to the object (in the modal construction with _täytyy_ 'must').

At what point in the derivation does case realization occur? It has to occur before M-Structure, since instance of phrase-based movement (WH-movement, Topicalization) always move a case suffix with the NP (cf. Ch.2). It has to occur at or before D-Structure, since NPs that raise to Spec(IP) during affix-based movement move with their case suffixes (except for the nominative subject), e.g. direct or indirect objects of passive and the missing person construction, when they raise to the Spec(IP) position. The fact that the nominative subject moves without its case suffix is not due to moving too "early", but rather not being able to receive a case suffix (due to blocking by coindexation).

We can say that accusative, partitive, and genitive are all realized at D-Structure. However, the percolation of genitive case to objects has to occur after it has been determined that the object NP does not have an accusative form.

Recall the process of secondary movement discussed in Chapter 2. This is a process that does not respect cyclicity, and is blind to the information that an element

has previously occupied a position. Genitive percolation
is somewhat similar to secondary movement, in that it also
does not respect cyclicity (as we shall see especially
clearly in Ch.5). Like secondary movement, genitive
percolation is blind to the information that a case has
been assigned to a particular NP (accusative case); it
appears to treat an NP as if the NP had not been assigned
case before.

I suggested in Chapter 2 that secondary movement is a
postcyclic process with respect to phrase-based movement.
Similarly, I would like to suggest that genitive
percolation is a postcyclic process with respect to case
realization; it operates after all other instances of case
realization have taken place. It still has to apply early
in the derivation, however, since ACC/GEN marked direct
objects can raise to Spec(IP), presumably before M-
Structure.

I have represented structural case as a feature on
the node which is "responsible" for the particular case:
partitive case as a feature on the object NP node, and
genitive on the Spec(XP) node. Given this representation,
we need an explanation for how the genitive feature can
"percolate" from the Spec(VP) node to the object NP. I
would like to suggest that the representation is not

appropriate (although I will continue to use it for the
sake of exposition). Rather, if we assume that the feature
is represented on the projection of the head that is
"responsible" for a particular position, we have no problem
with percolation:

```
40)              XP
              [GEN]
              /  \
         Spec    X'
                [PAR]
                /  \
               X    YP
```
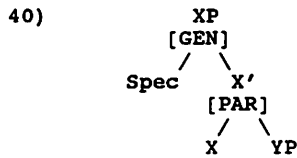
If the structural default case for the specifier position
is represented as a feature on the maximal projection, then
if the feature is not realized, it will remain on the
maximal projection, i.e. the VP. The genitive feature will
then percolate from the VP node to the NP node that is
dominated by the VP node.

3.3.2.6 Plural NPs and the genitive feature

     The analysis so far accounts for the distribution of
all partitive objects, accusative human pronouns, and
accusative singular NPs (whether they occur with a genitive
suffix or not). Plural NPs initially pose a slight problem
for the analysis, but their behavior turns out to support
the idea that genitive percolation is a late process.

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It is not obvious whether plural accusative objects
bear an overt accusative suffix, or whether they occur in
ACC/NOM case:

    41a) Maija kätki   banaanit.
         NOM   hid-3SG bananas-?

       'Maija hid the bananas'

     b) Kätke   banaanit!
        hide-2SG-IMP bananas-?

       'Hide the bananas!'

The nominative plural suffix is -t, which is also the overt
accusative suffix with the human pronouns. Accusative
plural NPs always occur in this form (with the suffix -t)
regardless of whether the sentence has a "floating"
genitive feature or not. The form of the NP is identical
in (41a) with a nominative subject, and in (41b) with an
imperative verb and no nominative subject (where in the
singular we would get a distinction in form).

    If the -t suffix on the plural NP were actually an
accusative suffix, then nothing special would need to be
said about plural NPs. They would then form a class with
human pronouns; since both have an overt accusative form,
no genitive case is ever realized on these NPs.

    There are two NPs in Finnish that tell us that this
cannot be the whole story, the two non-human pronouns. The

plural non-human pronoun ne 'they' does not have a -t
suffix, yet it does not get a genitive suffix:

```
42a) Maija kätki ne.
     NOM   hid   them-ACC/NOM

     'Maija hid them (inanimate)'

  b) Kätke         ne!
     hide-2SG-IMP them-ACC/NOM

     'Hide them!'
```

This plural pronoun behaves the same way as the plural full
NPs do, in not getting a genitive suffix. On the other
hand, the singular counterpart of this pronoun (which is
very similar morphologically) does get a genitive suffix:

```
43a) Maija kätki sen.
     NOM   hid   it-ACC/GEN     'Maija hid it'

  b) Kätke se!
     hide  it-ACC/NOM           'Hide it!'
```

Thus, the plural non-human pronoun behaves the same way as
plural full NPs do, and the singular non-human pronoun
behaves the same way as singular NPs do (showing variation
in form between (43a) and (b)).

I would like to propose the following solution to why
plural NPs do not get the genitive feature.[19] At the time
of accusative assignment (case realization proper), NPs
will either get an accusative suffix, or no suffix at all.
If the NP happens to be a plural full NP (or non-human

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pronoun), it also ends up with no suffix, in the
"nominative" case. Crucially, plural NPs in Finnish have
two forms: one form for the nominative, and one for other
cases (while singular NPs only have one form). Consider
the examples in Table 3.2.

TABLE 3.2. Singular and plural genitive suffixes.

NOM	GEN	GLOSS
se	sen	'it'
ne	niiden	'they(non-human)'
kissa	kissan	'cat'
kissat	kissojen	'cats'

For the singular NPs, occurring in a non-nominative case
involves attaching the case suffix to the nominative form.
For plural NPs, a non-nominative case suffix cannot be
attached to the nominative form. The plural marker is -t
only in the nominative case, while in other cases the
plural marker is -i/j-.

In order for a genitive suffix to be able to attach
to a plural accusative object during genitive percolation,
the plural marker on the NP would have to change from -t to
-i/j---assuming that genitive percolation is a late
process, and case realization has already taken place by
the time it operates.

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I would like to suggest, then, that during case realization plural accusative objects end up with the _-t_ form. By the time genitive percolation occurs, this form exists. It is impossible for the genitive suffix to attach to the _t_-form. Therefore, all plural accusative objects occur in nominative case, regardless of the agreement characteristics of the verb.

NOTES

1) Swear words that "modify" a head noun also occur in genitive case, as pointed out to me by Nikanne.

2) Comparative forms of adjectives have the option of taking their "argument" in partitive case (cf. Vainikka (1987) for a description of the two comparative constructions in Finnish and other languages). Since partitive case is otherwise impossible with the Finnish adjectives, it seems that the comparative suffix would have to take a "direct object" in partitive case (note that for some reason the partitive case marked NP has to precede the adjective). I do not have the opportunity to pursue the analysis of comparative constructions here.

3) There are a couple of preposition-like elements that take an NP in elative case:

     a) ulos ovesta
        out   door-ELA   'out the door'

     b) irti pinnasta
        loose surface-ELA 'separated from the surface'

Following Emonds' (1972) and (1985) analysis of particles as "intransitive prepositions", we might analyze these elements as prepositions that do not have an object position, but rather an adjunct position (for which elative is the default case), like Ns and As.

4) We cannot test articles, since Finnish has none.

5) Note that there is a problem in the analysis of oblique
cases as Ps, in that we have to make sure that a P that
contains an abstract case suffix does not take an NP that
has a grammatical case feature (as in (19), except having a
case feature in P). Apart from stipulating the
impossibility of such a structure (since there are never
more than one case suffix on a Finnish stem), we might
classify the "case-P" together with the functional heads
INFL and COMP, which also do not "assign" structural case.

6) The P in (20), alla 'under' has morphological structure
(this is true of some other locative Ps as well). It
consists of a stem and the allative case suffix. It is
part of a series of "under"-Ps:

    a) alla   '(being located) under' (adessive)
    b) alta   '(from) under' (ablative)
    c) alle   '(to) under' (allative)

Although this stem occurs with three locative cases, it
cannot take any of the three internal locative cases, nor
any other case suffixes. I will leave open the question of
how the internal structure of the P in (20) is represented.

7) See Heinämäki (1984) for some problems with the notion
of "completion" with respect to accusative case. I will
use the feature [+COMPLETED] to refer to the appropriate
feature, assuming that when more is understood about
aspect, a related concept can be found that is more
appropriate than "completion".

8) An accusative object is sometimes possible with the
negative verb. The descriptive generalization seems to be
that in "genuinely negative" sentences the object has to
occur in the partitive, but in e.g. rhetorical questions
with the negative verb an accusative is possible (Heinämäki
(1984:167)).

9) It is a traditional intuition that partitive NPs refer
to a "part" of something. Although I have taken accusative
to imply verbal aspect and not "nominal" aspect, it may be
that accusative is only possible if the action is completed
and if the object NP refers to a "whole". Larjavaara's
treatment, however, only considers "nominal aspect".

10)   Plural accusative NPs occur in a form that
superficially looks as if it contained an accusative
suffix.   However, we shall see in Section 3.3.2.6. that
plural NPs do not have an accusative suffix.

11)   I will discuss infinitival constructions in Ch.5.   We
shall see that the matrix verb determines the form of the
accusative object of the embedded verb for some
constructions, but not for others.

12)   Note that even in English one of the accusative forms
is the same as the genitive form, namely her.

13)   I argue in Vainikka (1985b) and in Vainikka
(to appear (b)) that the my-subjects that children produce
in the acquisition of English are actually instances of
genitive case being assigned to the subject in the Spec(VP)
position (while children at this stage do not have the
Spec(IP) position).

14)   This is not very different from what is assumed in
Chomsky (1981:259), according to which "AGR" (agreement
features in INFL) is coindexed with an NP at D-Structure
(nominative case is then assigned at S-Structure based on
this coindexation (p.264), while in my analysis no case
assignment takes place for coindexed NPs).

15)   Whether agreement features are base-generated in the
Spec(IP) position or not, it appears that the position has
to be filled by an NP (or PP).   That is, agreement features
do not constitute filling up (licensing) a position.
Similarly, for the INFL position, having tense features
base-generated in that position does not constitute
licensing the position--a verb still has to occupy INFL.

16)   Nichols (1986) argues, based on extensive
crosslinguistic evidence, that in general either a head or
an argument morphologically "registers" a relationship, but
not both.   That is, if the verb agrees with an NP, then
that NP does not bear overt case; and if the verb does not
agree with an NP, then that NP tends to bear overt case.
This suggests, then, that case and agreement are two
"poles" of the same thing, and it is not surprising that
the indication that an NP has to agree with something
blocks case assignment, as would be happening with
nominative subjects in Finnish (and other languages) in

genitive being blocked. See Vainikka (to appear (a)) and
(to appear (b)) for further discussion.

17) Standard Finnish passive does not have anything
corresponding to the English by-phrase, although some
dialects of Finnish do (my dialect does not).

18) A nominative, emphasized NP is possible in
imperatives, but it has to follow the verb:

     a) Lue sinä kirja!
        read you book   'You read the book!'

     b)*Sinä lue kirja!

I will not attempt an analysis of these "subjects". As far
as object marking is concerned, sentences such as (a)
behave as if they did not have a nominative subject.

19) Reime (1989) has an interesting analysis of ACC/GEN
objects according to which these objects get assigned
genitive case (where genitive has no connection to the
Spec(VP) position) in order to satisfy the Case Filter;
i.e., they need to be assigned abstract Case. According to
him, plural NPs do not get assigned genitive case because
the plural suffix blocks the assignment of genitive case.
Crucially, the plural suffix cannot be the blocking element
because of the non-human pronoun (which does not have the
suffix); rather, the relevant element is the plural
feature.

CHAPTER 4

PRO-DROP AS ANAPHORIC BINDING

4.1 Introduction: pro-drop and functional explanations

     This chapter is an expansion of the arguments for the
analysis briefly presented in Section 2.2--an analysis
according to which "pro-drop" (i.e. null subjects) in the
sentential domain is paralleled in the NP domain, and that
both are instances of anaphoric binding, with anaphoric
suffixes playing a crucial role. The NP domain is covered
first, in Section 4.2 (after this introductory section);
the sentential domain is covered in Section 4.3. Section
4.3.3 discusses (the logic of) the acquisition of pro-drop
in Finnish and other languages. In Section 4.4 the
relationship of abstract subjects to the Spec(VP) and the
Spec(IP) is discussed.

     Standard Finnish (SF) allows empty subjects for the
1st and 2nd persons (singular and plural), but not for the
3rd person (singular and plural); that is, SF is pro-drop
in 1st and 2nd person, and non-pro-drop in the 3rd person.[1]
Table 4.1. gives the paradigm for the verb istua 'sit'
(parentheses indicate optionality of the subject).

TABLE 4.1. Present tense paradigm of 'istua'.

PERSON/NUMBER	FINNISH	GLOSS
1SG	(minä) istun	'I sit'
2SG	(sinä) istut	'You(sg.) sit'
3SG	hän/se istuu	'He/she/it sits'
1PL	(me) istumme	'We sit'
2PL	(te) istutte	'You(pl.) sit'
3PL	he/ne istuvat	'They(human/ non-human) sit'

The 3rd person pronouns are obligatory, while in the 1st and 2nd person forms, the subject pronoun is optional. In isolation, the interpretation of a non-stressed overt pronoun and a "dropped" pronoun seems to be identical (for 1st and 2nd person).

Hyams' (1983) and (1986) original explanation for the pro-drop phenomenon does not work in Standard Finnish: according to Hyams' analysis, the existence of expletives (pleonastic elements) in the subject position tells the language learner that he is learning a non-pro-drop language (the intuition being that all subject positions need to be lexically filled, either by an expletive or by an overt subject NP). SF does not have obligatory subject expletives,[2] and we would expect the language to be completely pro-drop. It is indeed pro-drop, but only in 1st and 2nd person.

Would a functional explanation based on "rich inflection" work in Finnish? In SF, the 1st and 2nd person facts could be explained by saying that since the verb contains information about the subject in its person/number inflection, the pronoun is not needed. This explanation would also wrongly predict that the 3rd person subjects are optional (as in "regular" pro-drop languages such as Italian and Spanish), since the verb contains person/number information also in the 3rd person in Finnish.

On the other hand, the 3rd person inflection does not tell us as much about the subject NP as the 1st and 2nd person inflections do: although a distinction is made between singular and plural in the 3rd person suffixes, the suffix leaves open whether the 3rd person subject is a human or a non-human pronoun (where SF makes a distinction), or whether the subject is any one of an infinite number of full NPs. This might explain, in functional terms, why overt subjects are required in the 3rd person. Also, it might be argued that the 3rd person singular verb form does not have a suffix at all, and therefore an overt subject is needed. Unfortunately, the 3rd person plural form clearly has a unique suffix, but an overt subject is still required. I will return to the question of the 3rd person suffix.

A functional explanation of the SF pro-drop facts
based on how much information the verbal suffix carries has
a further complication, when taken literally: even in the
1st and 2nd persons there is a difference between singular
and plural verb forms. In the 1st and 2nd person singular,
the suffix tells us exactly what the subject denotes--the
speaker or the hearer. In the 1st and 2nd person plural,
however, the suffix only tells us that the set denoted by
the subject contains the speaker or the hearer--we do not
know who else is a member of that set. We would then need
to distinguish between the amount of information that the
verbal suffix carries in the 3rd person singular and plural
(not enough to warrant dropping the subject) and the
information carried by the 1st and 2nd person plural
(enough information for pro-drop). Furthermore, such an
explanation would need to distinguish between the amount of
information that the SF 3rd person plural suffix carries
and that of the Spanish 3rd person plural suffix--since the
latter allows pro-drop and SF 3rd person does not.

A functional explanation would also have difficulty
with Colloquial Finnish (CF), where all the persons are
non-pro-drop, regardless of the fact that most of the
inflectional suffixes on the verbs are identical to those
in SF. Consider Table 4.2 (I have added the locative
adverb with a CF form distinct from SF--siä--to make sure I
am getting CF judgments).

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TABLE 4.2. Paradigm of 'istua' in Colloquial Finnish.

PER/NUM	NON-PRO-DROP	PRO-DROP	GLOSS
1SG	Mä istun siä.	*Istun siä.	'I sit there'
2SG	Sä istut siä.	*Istut siä.	'You(sg.) sit...'
3SG	Se istuu siä.	*Istuu siä.	'He/she/it sits there'
1PL	Me istutaan siä.	*Istutaan siä.	'We sit there'
2PL	Te istutte siä.	*Istutte siä.	'You(pl.) sit...'
3PL	Ne istuu siä.	*Istuu siä.	'They sit there'

The singular verb forms in CF, and the 2nd person plural form, are identical to the corresponding SF forms; yet, unlike in SF, all of them are non-pro-drop.

The form of the 1st person plural is "borrowed" from the impersonal passive (recall the discussion in Section 3.3.2.4.2). With respect to the inflectional paradigm, this form is unique to the 1st person plural, yet it is also non-pro-drop.

The only place where "richness of inflection" has been reduced between SF and CF is in the 3rd person plural. The two 3rd person forms are now identical. It is not obvious how a functional explanation based on richness of inflection would result in CF being completely non-pro-drop and SF being non-pro-drop only in the 3rd person.[3]

Table 4.3 summarizes the agreement suffixes and whether pro-drop occurs with each suffix or not, for Standard Finnish and Colloquial Finnish.

TABLE 4.3. Verbal suffixes and pro-drop in SF and CF.

PER/NUM	SF SUFFIX	PRO-DROP?	CF SUFFIX	PRO-DROP?
1SG	-n	yes	-n	no
2SG	-t	yes	-t	no
3SG	(V)	no	(V)	no
1PL	-mme	yes	(PASS)	no
2PL	-tte	yes	-tte	no
3PL	-vat	no	(V)	no

In the 3rd person singular and the colloquial 3rd person plural the suffix consists of lengthening the last vowel of the stem (in present tense; in past tense there is no overt suffix). "PASS" refers to the impersonal passive verb form in the 1st person plural in CF.

We have seen that neither functional accounts based on "richness of inflection", nor the standard analysis of pro-drop assumed in GB (Hyams (1986)); Chomsky (1981:240)) can explain the pro-drop facts in SF and CF. In the remainder of the chapter, I will propose an analysis of pro-drop that treats the phenomenon as being one instance of anaphoric binding. We will start by looking at "pro-drop" in NPs.

4.2 Pro-drop in NPs

Recall the discussion in Chapter 3 where it was
argued that genitive is the structural default case for the
Spec(XP) position, for the basic categories N, A, V and P.
It was also mentioned that not only do each of these
categories take genitive specifiers/subjects, but each of
these categories also takes a possessive suffix (Px).

I will use the term "genitive construction" to refer
to all constructions that allow a genitive NP and/or a Px.
I also need a term that will single out the genitive
constructions that have a N-head; for want of a better
term, I will refer to them as "possessive constructions",
although many instances of such a construction do not
involve "possession" in any way (e.g. nominalizations).
Similarly, when using the terms "possessor" and "possessed",
I mean to include genitive NPs and head-Ns that may have
nothing to do with possession.

Something similar to pro-drop happens in possessive
constructions in Standard Finnish. In the 1st and 2nd
persons in SF, the possessor-NP is optional, and its
features are registered on the possessed-N as a Px:

1a)   (minun) kirjani
          my   book-my

    b)   (sinun) kirjasi
          your   book-your

    c)   (meidän) kirjamme
          our   book-our

    d)   (teidän) kirjanne
          your   book-your

There is just one Px form in the 3rd person, -nsa (for both

singular and plural). In the third person, a distinction

is made between full NPs and non-human pronouns vs. human

pronouns: with full NPs and non-human pronouns, Px is

impossible, as in (2a) and (c) below. With human pronouns,

Px is obligatory--(2b) and (d):

    2a) sen/Jukan   kirja/*kirjansa
         its/Jukka's book   book-3Px

    b)   hänen kirjansa/*kirja
         his   book-3Px book

    c)   niiden   kirja/*kirjansa
         their(non-human) book   book-3Px

    d)   heidän   kirjansa/*kirja
         their(human) book-3Px   book

Regardless of which type of possessor we have--one that

requires a Px, or one that prohibits a Px--an overt

genitive NP is obligatory in the 3rd person, as opposed to

the 1st and 2nd person optional possessors. There is one

exception to the genitive NP's being obligatory in the 3rd

person, and this exception provides strong evidence for

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treating the Px's as anaphors, subject to Condition (A) of the Binding Theory; we will return to it shortly.

In the SF possessive construction, then, the 3rd person is "non-pro-drop" (regardless of the occurrence of a possessive suffix), just as with the 3rd person subjects. Also, as with subjects, the 1st and 2nd persons in the possessive construction are "pro-drop".

In Colloquial Finnish the possessive domain is in general also similar to the verbal domain: all persons are non-pro-drop, just as all tensed sentences are non-pro-drop. The main difference between the two domains in CF is that the Px's have basically been lost in CF (while the agreement suffixes on the verb were lost only in the 3rd person). There is some interesting variation in CF, which I will return to. For now, we can summarize the Px's and optional possessors in NPs as in Table 4.4.

TABLE 4.4. Possessive suffixes and pro-drop in SF and CF.

PER/NUM	SF Px	PRO-DROP?	CF Px	PRO-DROP?
1SG	-ni	yes	–	no
2SG	-si	yes	–	no
3SG	-nsa	no	–	no
1PL	-mme	yes	–	no
2PL	-nne	yes	–	no
3PL	-nsa	no	–	no

As we shall see, the CF Px's have actually not disappeared completely, but their distribution is different from the SF Px's. In the Helsinki dialect of CF, Px's have basically disappeared from NPs (while in the Tampere dialect they remain in the 1st and 2nd person singular). I will return to the details of the data.

As we can see comparing Tables 3 and 4, the pro-drop data is identical in sentences and NPs. Assuming that this is not an accidental similarity, we need an analysis of "pro-drop" that covers both tensed sentences and NPs. An analysis of possessive NPs will be provided first.

4.2.1 The 3rd person possessive suffix is an anaphor

Consider the 3rd person possessive suffix -nsa. As already mentioned, a genitive NP is not always obligatory with this Px. Leaving out the genitive NP, however, is only possible if there is a c-commanding NP within the tensed sentence with which the Px agrees.[4] This, of course, sounds very much like Condition (A) of the Binding Theory.

The distribution of -nsa, then, can be captured by saying that the Px has to be bound in a tensed sentence (i.e. in an IP), and it has to be bound within its NP if

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there is a potential binder within the NP. Consider the
following examples of -nsa:

    3a) Maija-i hukkasi kasettinsa-i/*j.
        NOM   lost   tape-3Px

        'Maija-i lost her-i tape'

     b)*Minä hukkasin kasettinsa.
        I-NOM lost   tape-3Px

        ('I lost her tape')

     c)*Maija-i väitti, että minä hukkasin kasettinsa-i.
        NOM   claimed that I   lost   tape-3Px

        ('Maija claimed that I had lost her tape')

In (3a), -nsa is bound by an element outside of its NP, the
subject NP Maija; -nsa cannot be bound by anything outside
of the tensed sentence, as indicated by the index 'j'.
Sentence (3b) is ungrammatical, because -nsa does not have
a binder; BT(a) is violated. Similarly, (3c) is
ungrammatical because the Px does not have a binder,
although there is a 3rd person NP outside of the IP
(Maija).

    To see that c-command (for a defition, cf. fn.30,
ch.2) makes a difference, as we expect of a binding
phenomenon, consider the following example:

    4) Maijan-i sisar-j   hukkasi kasettinsa-*i/j
       GEN   sister-NOM lost   tape-3Px

       'Maija's sister lost her tape'

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As expected, the Px has to be coindexed with the head of the subject, sisar 'sister', and the non-c-commanding genitive specifier cannot act as an antecedent.

Even a c-commanding NP outside of the possessive NP cannot act as a binder, if the NP contains a potential binder:

5) Maija-i hukkasi hänen-*i/j kasettinsa-*i/j.
   NOM   lost   her   tape-3Px

   'Maija-i lost her-j tape'

In this example, the Px has to be bound by the overt genitive pronominal NP hänen 'his/her'. hanen is a well-behaved pronoun, and it cannot be coindexed by a c-commanding NP in the binding domain (IP), according to Condition B of the Binding Theory. Since Maija and hänen have to be disjoint, and hanen and the Px have to be coreferential, Maija and the Px end up being disjoint.[5]

The pronoun hänen 'his/her' can be coindexed by a non-c-commanding NP in an IP, as expected:

6) Maijan-i sisar-j hukkasi hänen-i/*j kasettinsa-i/*j
   GEN   sister-NOM lost her   tape-3Px

   'Maija's-i sister-j lost her-i/j tape'

Again, hänen cannot be bound by the c-commanding sisar, but it can be coindexed with Maijan, which does not c-command the pronoun. Again, the Px has to be bound by hänen.

We can see from these examples that the pronominal
hänen 'his/her' does not treat NP as a binding domain;
otherwise, being coindexed with a c-commanding NP that is
outside of the NP should be fine, and it is not (binding by
sisar is not possible in (6)). On the other hand, we
referred to NP as a binding domain for the anaphoric Px,
because a potential binder within the NP obligatorily binds
the Px (Maija cannot be (and hänen has to be) the binder in
(5)).

Ideally, the binding domain(s) for pronominals and
anaphors would be the same. We can maintain that the only
binding domain in Finnish is IP, if something else accounts
for the stricter locality of binding with the anaphors in
the possessive construction. We might say that an anaphor
has to be bound by the most local potential antecedent.
This, however, is clearly not true in Finnish; consider the
following example:

7) Maija-i kuuli Pekan-j pyytäneen Liisaa-k
   NOM   heard GEN   ask-INF   PAR

            ...kävelyttämään koiraansa-i/j/k
               walk-INF   dog-3Px

   'Maija heard that Pekka had asked Liisa
                           to walk his/her dog'

In this example, -nsa can be bound by the matrix subject
Maija or by the genitive subject of the embedded
infinitival, Pekan, or by the object of the infinitival

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(and the subject of its complement), <u>Liisaa</u>. As long as
there is no overt binder in the possessive NP (i.e. in this
example, such a binder would immediately precede
<u>koiraansa</u>), any c-commanding NP can bind the anaphor--not
just the most local one. It will be argued in Chapter 5
that infinitivals are VPs in Finnish, not IPs; since VP is
not a binding domain, anaphoric binding is not blocked in
(7).

In Section 4.2.3, I will propose an analysis of
possessive NPs according to which binding within a
possessive NP takes place "prior" to other instances of
binding. Once binding within an NP is ensured, we can
allow any c-commanding NP within an IP to bind the anaphor
in principle, but in practice mismatch of indices will
always rule this possibility out (if there is an overt
binder in the NP), as we shall see.

In addition to the possessive construction, <u>-nsa</u>
occurs with the typical anaphors in Finnish, <u>itse-</u> '-self'
and <u>toinen</u> <u>toise-</u> 'each other'--what I will call anaphoric
nouns. In fact, the anaphoric nouns have to have a
possessive suffix affixed to them in order to behave as an
anaphor:

8a) Maija-i maalasi itseänsä-i/*j.
    NOM   painted self-3Px

   'Maija painted herself'

 b) Pojat-i maalasivat toinen toisiansa-i/*j.
    boys   painted   each-other-3Px

   'The boys painted each other'

In (8a), itseänsä has to be coindexed with Maija, and in
(8b), toinen toisiansa has to be coindexed with pojat.

    I would like to propose that in (8a) and (b) what is
being bound is actually the Px -nsa, rather than the whole
anaphoric NP. Looking at the data this way, we find that
the distribution of -nsa is identical in the possessive
constructions and in the more typical anaphoric
constructions here, and the generalization can be captured
by assuming that -nsa is an anaphor, subject to BT(a).

    In Standard Finnish, then, we have the following
possible types of possessive NPs (recall that "possessive"
is used in a broad sense here):

    9a) If the possessor is a human pronoun, the
        possessed N has a Px that is obligatorily
        coindexed with the possessor.

     b) If the possessor is a full NP (or a non-human
        pronoun), a Px is impossible.

     c) If there is no overt possessor, a Px is
        obligatory; the Px has to be bound within its IP.

The status of the 3rd person -nsa as an anaphor seems straightforward. Let us now turn to the more problematic 1st and 2nd person Px's.

4.2.2 Are the 1st and 2nd person Px's also anaphors?
4.2.2.1 Binding without an overt binder

The 1st and 2nd person possessive suffixes differ from the 3rd person one in that they seem not to have to be bound in a tensed S; that is, they allow a "null" possessor. They may be bound within their NP or tensed S, but they don't have to have an overt antecedent in the tensed S:

> 10a) Taina löysi [minun rahakukkaroni].
>   NOM   found my   wallet-1SGPx
>
>   'Taina found my wallet'
>
>   b) Minä löysin rahakukkaroni.
>   I   found wallet-1SGPx
>
>   'I found my wallet'
>
>   c) Taina löysi rahakukkaroni.
>   NOM   found wallet-1SGPx
>
>   'Taina found my wallet'

In (10a), the 1st person Px -ni is bound by minun within the NP. In (10b), -ni is bound by the subject minä 'I'. In (10c), there is no binder for -ni, yet the

sentence is fine. There doesn't seem to be any difference
in meaning between (10a) and (10c).

     One attempt at distinguishing the 1st and 2nd person
Px's from the anaphoric 3rd person Px would be to say that
the 1st and 2nd person Px's are pronominal, subject to
Binding Theory (B). This was the assumption in e.g.
Kanerva's (1987) analysis of Px's. However, if the 1st and
2nd person Px's are pronominal, they should not be able to
be coindexed with a local c-commanding NP--whether within
an NP or outside of one--and they frequently are, as in
(10a) and (b) above. Thus, when there is a potential
binder for the 1st and 2nd person Px's in the IP binding
domain, these Px's behave as if they were anaphoric.

     There is a further reason to treat the 1st and 2nd
person Px's as anaphors, namely the fact that these
suffixes (just like the 3rd person Px) occur on the
elements <u>itse-</u> '-self' and <u>toinen toise-</u> 'each other, as we
saw in Section 2.2:

         11a) Sina   satutit itsesi.
              You-NOM hurt   self-2SGPx

              'You hurt yourself'

          b) Me   tapasimme toinen toisemme.
             we-NOM met   each-other-1PLPx

             'We met each other'

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Given these data, the 1st and 2nd person Px's clearly can act as anaphors, subject to Binding Theory (A). I would like to maintain that the 1st and 2nd person Px's are always anaphors, but that an abstract discourse-related binder is possible for them (but not for the 3rd person). What would the nature of this abstract binder be?

Consider the following suggestion: each (tensed) sentence (that is, IP) contains two implicit NPs: one corresponding to the speaker (1st person) and one to the hearer (2nd person). This is reminiscent of Ross's (1971) (cf. also Jacobs and Rosenbaum (1970)) Performative Hypothesis, in which a sentence is embedded under an abstract 'I tell you' clause. Having an abstract matrix clause under which overt sentences are embedded would not work here, however, since it is crucial that the abstract element can be located within the IP, in order for anaphoric binding to take place.

4.2.2.2 Syntactic position of the implicit binder

Where would these implicit NPs be located? It turns out that we cannot have them uniquely associated with a particular syntactic position; they are not automatically part of a syntactic tree, but they can be "inserted" into an empty NP position. Consider the following example:

12) Maija-i löysi [1SG-GEN]-j rahakukkaroni-*i/j
    NOM   found   wallet-1SGPx

    'Maija found (my) wallet'

The implicit binder of the 1st person Px -ni is presumably
located in the Spec(NP) genitive position, where it binds
the anaphor. In this example we cannot posit the implicit
binder in the subject position, since the subject position
is filled by Maija, although we can in the pro-drop example
(b):

13a) Minä-i löysin   [1SG-GEN]-i rahakukkaroni-i.
     I   found-1SG   wallet-1SGPx

  b) [1SG]-i löysin [1SG-GEN]-i rahakukkaroni-i.
             found-1SG   wallet-1SGPx

    'I found my wallet'

In (13a), we do not have to actually posit an implicit
binder for the Px, since the subject can bind the suffix
directly; I have included an abstract intermediate binder,
for the sake of parallelism. In (13b), the subject
corresponds to an implicit speaker-NP (as we shall see in
detail in Section 4.3), and this abstract NP binds the Px,
possibly via an abstract genitive NP, as shown above.

We might think that the implicit NPs are located
somewhere in the CP (outside of IP), where they might still
be able to bind anaphors. This does not seem plausible,
however, since lexical material in CP does not block this
possibility of binding. Consider a WH-question:

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14) Minne Maija piilotti [1SG-GEN]-i rahakukkaroni-i?
    where NOM   hid   wallet-1SGPx

    'Where did Maija hide my wallet?'

If the Px were bound by some element in C or Spec(CP), we
might expect having a WH-phrase in one of those positions
making binding more difficult--but it does not. On the
other hand, positing the implicit binder directly in the
Spec(NP) position, as in the example above, predicts that
any amount of material intervening between the "discourse"
and the suffix does not interfere with binding. This seems
to be the case. Also, binding of Px's in embedded clauses
is perfectly fine:

15) Taina väitti että Jukka oli löytänyt
    NOM   claimed that NOM   had found

                        [1SG-GEN]-i kukkaroni-i.
                                    wallet-1SGPx

    'Taina claimed that Jukka had found my wallet'

Again, if the implicit binder were not located in the
Spec(NP) position, we would have a problem in having it be
located in a syntactic position elsewhere in this example.

    I conclude, then, that the implicit speaker/hearer
NPs can be turned into syntactic antecedents of an anaphor,
by having them occupy the Spec(NP) position.

    Before getting back to empty subjects in the
sentential domain, I will attempt to determine in the next

section what the relationship between a Px and its binder
within a possessive NP is, and (in Section 4.2.4) what the
structure of an anaphoric NP is. Then we will take a brief
look at NPs in Colloquial Finnish in Section 4.2.5.

4.2.3 The structure of a possessive NP

Recall (from Section 4.2.1) the distribution of Px's
with respect to different NP-types: only human genitive
pronouns co-occur with a Px in a possessive NP, and other
genitive NPs do not allow a Px.

If the distribution of Px's is solely determined by
the Binding Theory, this distinction between NP-types is
surprising. Recall that outside of the NP no distinction
is made between a human pronoun binder vs. any other NP:
any 3rd person NP that c-commands the Px, and is located in
the same IP, can bind the Px.

I would like to propose that the co-occurrence
possibility between a human genitive pronoun and a Px stems
from the lexicon.

Recall (Chapter 3) how in accusative case assignment
human pronouns have special status--they are the only NPs
in Finnish that have an overt (unique) accusative case

suffix. This was taken to mean that in the case paradigm
for human pronouns, an accusative case suffix is given;
such a case paradigm would have to exist in the lexicon of
the language. For other NPs in Finnish, no accusative case
suffix is given in the lexicon, and we saw that this
results in no case suffix occurring on the NP when
accusative is called for (=ACC/NOM), unless a genitive
suffix percolates to the NP (=ACC/GEN).

Thus, human pronouns bear special status in the
lexicon with respect to accusative case; it is not
surprising to find that this class is also distinguished in
the lexicon from the rest of the NPs with respect to Px's.

If the relationship between a human genitive pronoun
and a Px in the lexicon is such that they are "automatical-
ly" coindexed for binding purposes, we have a solution to
the problem of binding domains discussed earlier (we will
return to how this coindexation is accomplished). Recall
that anaphoric binding had to refer to the domain of NP,
for possessive NPs, while pronominal binding (and non-
possessive anaphoric binding) only had to refer to the
domain of IP. The only actual instances of binding a Px by
an NP within the possessive NP are ones with a human
genitive pronoun as a binder (since no other genitive NPs
allow a Px). A typical example is repeated here as (16):

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16) Maija-i hukkasi hänen-*i/j kasettinsa-*i/j.
    NOM   lost   her   tape-3Px

    'Maija-i lost her-j tape'

If the Px -nsa is already bound "in the lexicon" by the
corresponding genitive pronoun, the Px will never end up
being bound by anything else--since anything that would
bind the Px, such as the subject Maija in this example,
would also bind the genitive pronoun hänen 'his/her', and
this would result in a violation of Binding Theory (B).
Thus, if the coindexation between a Px and its human
genitive binder is established in the lexicon, then the
only binding domain in Finnish is IP.

    Helke (1970) discusses idioms of the type 'lose one's
way' in English. These idioms need to be listed in the
lexicon as having an open (variable?) position that can
later be bound (corresponding to 'one' in the example).
The mechanism used to represent the anaphoric nature of
these idioms in the lexicon can perhaps be extended to the
Finnish possessive NPs. For want of more appropriate
terms, I will continue to speak of "coindexation" and
"binding" in the lexicon, although these are traditionally
phrasal notions (note, however, that the elements involved
in "binding in the lexicon" in Finnish are closed class
elements, so I do not need to refer to full (open class)
phrases in the lexicon).

Recall the three types of possessive NPs, repeated here as (17):

17a) If the possessor is a human pronoun, the possessed N has a Px that is obligatorily coindexed with the possessor.

b) If the possessor is a full NP (or a non-human pronoun), a Px is impossible.

c) If there is no overt possessor, a Px is obligatory; the Px has to be bound within its IP.

If we have a way of coindexing a human pronoun and the corresponding Px in the lexicon, then (17a) and (b) are straightforward. If only human genitive pronouns can be coindexed with a Px, then (17b) follows. In order to account for (17c), a Px needs to be able to occur in the lexicon without a binder. That is, within the NP a Px either is coindexed with nothing (i.e.(17c)) or it is coindexed with a human genitive pronoun, as stated in (17a).

What does it mean for two elements to be coindexed in the lexicon?[6] Consider the standard tree for an NP with a specifier position (with genitive as the default case for the specifier position):

18)
```
            NP
           /  \
        Spec   N
        [GEN]
```
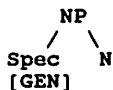
Using this tree, the D-Structure representation for a possessive NP in Finnish with a full NP possessor would be the following:

```
19)                NP
                 /    \
             Spec      N
             [GEN]     |
               |      tuoli
              NP
               |
               N
               |
             Virpi
```
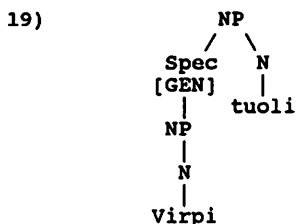
Genitive case is realized on the NP in the Spec(NP) position, giving us _Virpin_ _tuoli_ 'Virpi's chair'.

In order to represent a possessive NP with a human genitive pronoun, we need to be able to represent both the genitive pronoun and the Px (which is obligatory with the pronoun).

Recall the suggestion (Ch.3) that agreement suffixes on the verb are base-generated in the Spec(IP) position. Since sentences and NPs behave very parallelly with respect to suffixation, we might want to base-generate the agreement suffix on the NP (the Px) in a comparable syntactic position--that is, in the Spec(NP) position. On the other hand, if we wish to maintain a parallelism between different genitive possessors, we would have to say that a human genitive pronoun is base-generated in the

Spec(NP), just like the full NP is in (19). Thus, we might want a structure in which both the human genitive pronoun and the corresponding Px are base-generated in the Spec(NP) position:

20)
```
                  NP
                 /  \
             Spec    N
             [GEN]    |
                |    tuoli
               NP
              /  \
             ?    ?
             |    |
          hänen -nsa
```
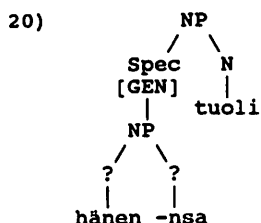
This tree gives us hänen tuolinsa 'his chair(+3Px)', assuming the same sort of Affix Hopping analysis as we needed for the verb agreement suffixes in order to lower them from the Spec(IP) position to INFL (in Section 3.3.2.3).

Let us leave the internal structure of the NP in the Spec(NP) position open, for now. With a structure such as the one in (20) all genitive possessor NPs, be they full NPs or pronouns, are base-generated in the Spec(NP) position. Px's are also base-generated in the Spec(NP) position, corresponding to verbal agreement suffixes being base-generated in the Spec(IP) position.

Furthermore, since the human genitive pronoun and the Px form a constituent at D-Structure, we can suppose that

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they are coindexed at D-Structure. This gives us not only

the result that a genitive pronoun and its Px have to agree

in person/number features, but also the fact that Px's

behave as if NP were a binding domain for them. This

follows if we can stipulate that the coindexation between

the two parts of the NP occurs before binding theory

applies. Once the coindexation between the genitive

pronoun and the Px has taken place, it is impossible to

for the Px to be bound by anything outside of the

possessive NP, since any such binder would also bind the

possessive pronoun, resulting in ungrammaticality

(violation of Condition (B) of the Binding Theory).

Note that of the two components of the NP in the

Spec(NP) position in (20), one is obligatory and one is

optional (at least on the surface): the Px is obligatory,

and the genitive pronoun is optional. Consider the

possibility that the Px is the head of the NP in the

Spec(NP) position, and that the genitive pronoun is a

specifier of the Px:

```
20')              NP
                /    \
             Spec     N
            [GEN]      |
              |      tuoli
             NP
           /    \
        Spec     N
       [GEN]      |
         |      -nsa-i
        NP
         |
      hänen-i
```

The constituent consisting of the Px and the pronoun is in
the Spec(NP) position of the possessed noun. The head of
the NP in the specifier position is the Px; the Px
presumably bears genitive case. It has a specifier
position of its own, which also contains an NP with
genitive case.

The representation in (20'), then, is the D-Structure
tree for all human genitive pronoun and Px combinations.

Recall the argument that the implicit (speaker or
hearer) binder of 1st and 2nd person Px's had to occur in
the Spec(NP) position. I would like to suggest that since
the speaker/hearer feature is not available in the 3rd
person, an abstract binder in the specifier position is not
possible. That is, the D-Structure tree of an NP without
an overt 3rd person binder is the following:

```
21)                 NP
                  /    \
             Spec       N
             [GEN]      |
               |      tuoli
        .     NP
               |
               N
               |
             -nsa
```

This tree gives us the NP _tuolinsa_ '(his/her) chair'.
Since the Px is not coindexed in this structure, it has to
be bound "in the syntax", as a regular anaphor.

To account for all the possible combinations, and to rule out all the impossible combinations, I need to stipulate the following: (i) only a human genitive pronoun or an abstract NP can occur as the specifier of a Px; (ii) a human genitive pronoun has to be the specifier of a Px.

Consider the lexical representation of pronouns and Px's. Since human genitive pronouns only occur with Px's in Standard Finnish, we can assume that human genitive pronouns are listed in the lexicon as only being able to occur in the specifier position of a Px (stipulation (ii)). This is comparable to specifying in the English lexicon that the article 'a' can only occur in the specifier position of singular (common) nouns.

With the two stipulations, the structures proposed account for the characteristics of the three types of possessive NPs.

The first stipulation prevents Px's from occurring with full NPs (or with non-human pronouns).[7] Their structure is then straightforwardly the one given in (19) above.

All other possessive NPs contain a possessive suffix. This Px either has to be coindexed with something in its specifier position (binding "in the lexicon") or it has to

be bound in the syntax. If it is coindexed by a human
pronoun, we get the tree in (20'). If the Px is a 1st or
2nd person one, it can be coindexed by an abstract NP
corresponding to the human pronoun in (20'). A Px cannot
be coindexed with by anything else. If the Px is not
coindexed with anything, we get (21).

    Let us now briefly consider the structure of
anaphoric nouns with Px's.

4.2.4 The structure of an anaphoric NP

    Although the anaphoric nouns _itse-_ '-self' and _toinen_
toise- 'each other' are similar to possessed nouns in that
they require a Px, there are some crucial differences
between the two types.

    The anaphoric nouns never allow a genitive NP in the
Spec(NP) position. If the anaphoric NPs did not have a
Spec(NP) position, we would expect exactly that. Also, if
there were no Spec(NP) position in the anaphoric NPs, we
would expect that no implicit speaker/hearer binder can be
posited in that position. This is exactly what we find:

22a) *Maija katseli itseäni.
     NOM   watched self-1SGPx

   (*'Maija watched myself')

   b) Maija katseli koiraani.
      NOM   watched dog-1SGPx

   'Maija watched my dog'

Binding by the implicit speaker-NP (located in the
Spec(NP)) is fine in (22b), while--as expected, if there is
no available Spec(NP) position--having an implicit binder
is impossible in (22a).

    There is a problem, though, with the idea of not
having a Spec(NP) position in the current analysis. The
anaphoric suffix cannot be directly base-generated on the
anaphoric noun, because case suffixes (including the
syntactic default cases) occur between the noun and the Px
(just as with regular nouns). If Px's were directly base-
generated on the noun, we would expect case suffixes to
follow the Px, and they cannot:

    23a) itseltänsä
         self-ABL-3Px   'from himself/herself'

     b) ystävältänsä
        friend-ABL-3Px   'from his/her friend'

Rather than drastically getting rid of the Spec(NP)
position, I would like to suggest that (23a) and (b) have
the same structure:

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24)
```
                    PP
                   /  \
                  P    NP
                  |   /  \
               [ABL] Spec  N
                     [GEN]  |
                      |    itse
                     NP
                      |
                    -nsa
```
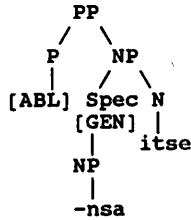
As with 3rd person possessive constructions without an
overt genitive pronoun, only a Px is base-generated in the
Spec(NP) position. As usual, the case feature from P
percolates to the head noun first, followed by affixation
of the Px (by Affix Hopping).

The only way in which anaphoric nouns then differ
from "possessed" nouns is in not allowing a Spec(NP)
position of the Px. That is, the Px of an anaphoric noun
cannot be bound "in the lexicon". Given this constraint
(regardless of how it is actually implemented in the
lexicon), we get the desired result. A human genitive
pronoun or an abstract binder cannot occur with the
anaphoric nouns, because this would involve the Px being
already coindexed and bound in the lexicon.

Having a structure for the anaphoric nouns which
involves a Spec(NP) position also enables us to have a
position in which the first part of the reciprocal _toinen_
toise- 'each other' can be base-generated (as suggested to
me by F.R.Higgins). The word _toinen_ and the anaphoric Px

would need to "share" the Spec(NP) position, and they would presumably be coindexed. _toinen_ may in fact occur in the specifier position of the Px (i.e. in the same position that human genitive pronouns occur in possessive NPs).

4.2.5 Possessive suffix pro-drop in Colloquial Finnish

Superficially, Colloquial Finnish differs from Standard Finnish in drastic ways with respect to possessive suffixes. I will consider two versions of CF: the Helsinki and the Tampere dialects.

In the Helsinki dialect, Px's have basically been lost in the possessive construction.[8] All NPs behave as full NPs do in Standard Finnish (and even human genitive pronouns would be represented as in tree (19) in Section 4.2.3, without a Px).

Possessive pronouns in the Helsinki dialect can be interpreted either as pronominals (BT(b)) or as anaphoric (BT(a))--unlike Standard Finnish, where possessive pronouns are strictly pronominal (and their anaphoric counterparts are the Px's). The change in the possessive pronouns can be seen as a consequence of the fact that possessive pronouns are now obligatory in the possessive construction.

In SF, the Px's functioned as anaphors, and possessive pronouns as pronominals, but in the Helsinki dialect, only pronouns are available, so they end up covering both the anaphoric and the pronominal functions (as may also be the case e.g. in English).

The Tampere dialect (of my generation) exhibits a cross between Standard Finnish and the Helsinki dialect: Px's exist for the singular, as in SF; in the plural, Px's have been lost, as in the Helsinki dialect. Consider an example of the paradigm:

25a) mun kissani
     my cat-1SGPx

  b) sun kissas(i)
     your cat-2SGPx

  c) sen   kissa
     his/her/its cat

  d) Jukan   kissa
     Jukka's cat

  e) meiän kissa
     our   cat

  f) teiän kissa
     your cat

  g) niitten kissa
     their   cat

So, the Px's in the plural have been lost, and the possessive pronouns are obligatory: (25e)-(g). In the singular, the Px's remain. This is not obvious in the 3rd person, since the only form of the 3rd person that takes

the suffix in SF, <u>hanen</u> (the human pronoun), has been lost (the human/non-human distiction has disappeared in favor of the non-human). The following example shows, however, that <u>-nsa</u> still exists:

26) Jukka/se kävelytti kissaansa.
    NOM   he walked   dog-3Px

    'Jukka/he walked his dog'

This example suggests that the Px's are still analyzed as anaphors (in the singular), since we find the anaphoric suffix in a binding environment (as in SF) although <u>-nsa</u> cannot co-occur with <u>Jukka</u> or <u>se</u> 'he/she/it' in the same NP (any more than it can in SF).

As in SF, the singular possessive pronouns behave as pronominals. Compare the singular (pronominal) possessive pronoun in (27a) to the plural (anaphoric?) possessive pronoun in (27b):

27a) Mä kävelytin koiraani /?mun koiraani.
     I walked   dog-1SGPx my dog-1SGPx

    'I walked my dog'

   b) Me kävelytettiin meiän koiraa.
     we walked   our   dog

    'We walked our dog'

In (27a)--as in SF--binding the possessive pronoun results in an awkward sentence for my dialect, while in (27b) this is fine (and no Px is possible in (b)).[9]

There is a difference between the existing Px's in my dialect of CF and in SF: in CF, the 1st and 2nd person suffixes are not "pro-drop". That is, for some reason the implicit speaker/hearer NPs cannot act as binders any more:

28a) Pekka kävelytti mun koiraani.
　　　walked　　my　dog-1SGPx

　'Pekka walked my dog'

　b) Mä kävelytin koiraani.
　　 I　walked　　dog-1SGPx

　　'I walked my dog'

　c)??Pekka kävelytti koiraani.
　　　walked　　dog-1SGPx

　　'Pekka walked my dog'

Sentences (28a) and (b) are fine, just as in SF, but (28c) is not very good. In (28c), the Px would need to be bound by the implicit speaker-NP in the Spec(NP) position, and this does not seem possible any more. The 1st and 2nd persons now behave identically to the 3rd person, where reference to such an implicit NP was not possible even in SF. Binding by an overt antecedent is still possible, however (as in (28b)).

In the Tampere dialect, Px's are required in all persons, even in the plural, in anaphoric NPs:

29a) Mä   satutin itteni.
     I-NOM hurt   self-1SGPx

   'I hurt myself'

  b) Te   ette   pessy   itteenne.
     you-NOM not-2PL washed self-2PLPx

   'You (pl.) didn't wash yourselves'

    Table 4.5 summarizes the data from Standard Finnish
and from the Tampere dialect of Colloquial Finnish, giving
the distribution of the Px and its (largest possible)
binding domain.

TABLE 4.5. Summarizing the distribution of Px's.

Environment of Px	Standard Finnish		Tampere Dialect	
	Px?	bound?	Px?	bound?
NP with full NP possessor	impossible	–	impossible	–
NP with sg.human GEN pronoun	obligatory	in NP	obligatory	in NP
NP with pl.human GEN pronoun	obligatory	in NP	impossible	–
NP without overt sg.possessor	obligatory	in IP	obligatory	in IP
NP without overt pl.possessor	obligatory	in IP	impossible	–
Anaphoric NP	obligatory	in IP	obligatory	in IP
No overt binder in IP(1st/2nd)	obligatory	(in IP)	impossible	–

According to the first row, Px's are impossible in
NPs that have full NP possessors (for both dialects). The
same holds for non-human pronouns for both dialects. In
the Tampere dialect, Px's are also impossible in the
possessor in a plural human pronoun (row 3).

For singular possessors, a Px is obligatory in both
dialects with a human genitive pronoun, and it has to be
bound in the NP (coindexing in the lexicon). For plural
possessors, this also holds in SF.

If the NP contains no overt possessor, then a Px is
obligatory in SF (if the NP is a possessive NP). The Px
has to be bound within its IP. Similarly, for the singular
possessors in the Tampere dialect. There is no way to
"omit" a plural possessor in this dialect (cf. English).

In anaphoric NPs, a Px is obligatory for both
dialects; as usual, it has to be bound in the IP.

Finally in the last row of Table 4.5, a Px is
obligatory in SF if the IP contains no overt binder (nor
the NP); this is only possible in the 1st and 2nd person.
In the Tampere dialect, this is not possible in any person.

How can we account for the differences between SF and
the Tampere dialect? Clearly the Tampere dialect is more

restrictive in what is allowed in the Spec(NP) position (or
actually, what is allowed in the Spec(NP) position of the
Px). The following gives the possibilities for what can
occur in the Spec(NP) position (of the head-N) in the
Tampere dialect (in addition to full NPs in genitive case):

```
30)              NP
               /  \
            Spec    N
            [GEN]    |
               |    tuoli 'chair'
            NP
             |
          meiän 'our'
          teiän 'your(pl)'
          niitten 'their'

          sen 'his/her/its'

          -nsa

          (mun) -ni
          (sun) -si
```

The Spec(NP) position can contain one of the plural
possessive pronous. It can contain the 3rd person singular
possessive pronoun sen, which now refers both to humans and
non-humans. It can contain the 3rd person Px -nsa, which
has to be bound within the IP (but there is no need to
posit an·abstract binder in the NP). It can contain the
1st or 2nd person singular Px's, with or without an overt
pronoun. If the pronoun is not overt, then an overt binder
is required in the IP.

Standard Finnish restricts the specifier position of Px's to human pronouns, for some reason (cf. fn.7). Presumably for a similar reason, the Tampere dialect restricts the specifier position of Px's to overt, singular human pronouns.

Given such a restriction in the Tampere dialect, it is impossible to have plural Px's in a possessive NP, because the possessive pronoun would have had to be base-generated in the specifier position of the Px. A Px can occur by itself, but it has to be bound within the IP.

Assuming that an abstract binder is impossible in the Spec(NP) position of a Px, we get the result that the 1st and 2nd person Px's have to have an overt binder. This follows from the analysis for speaker/hearer binders that was proposed (in Section 4.2.2.1) according to which the abstract speaker/hearer binder occupies the specifier position of a Px.

The fact that Px's are still possible in anaphoric NPs suggests that the structure proposed for these NPs (in Section 4.2.4) is correct. Since in the proposed structure the Px is bound from the outside of the anaphoric NP (without an intermediate abstract binder) restricting what can occur in the specifier position of the Px does not affect the anaphoric NPs.

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4.3 Pro-drop in tensed sentences

4.3.1 Basic analysis for Standard Finnish

Assuming that pro-drop in the possessive construction and pro-drop in tensed sentences are related, I will now extend the analysis outlined above to cover the tensed sentences.

Recall the finding discussed in Chapter 2, that although the Spec(IP) position (i.e. the subject position) normally has to be filled with lexical material, this is not the case with the 1st and 2nd person pro-drop cases. When the 1st or 2nd person subject has been omitted, nothing else occurs in the subject position, either. This led me to propose that the subject position in these cases was filled with an abstract element; this abstract element ends up binding the agreement suffix on the verb.

I would like to propose, along the lines of the analysis for the possessive construction, that agreement suffixes on the SF verb are anaphors, and they need to be bound within the IP. In the 3rd person, this anaphor has to be bound by the subject NP, which therefore cannot be omitted:

31a)   He-i lähtivät-i kotiin.
               they went-3PL   home

               'They went home'

          b)* [ ]-i lähtivät-i kotiin.
                   went-3PL   home

(31b) is ungrammatical because there is no binder for the

anaphor, -vat.

        Pro-drop is possible in 1st and 2nd person, because

the agreement suffix can be bound either by the implicit

speaker-NP or by the implicit hearer-NP. The implicit NP

is the abstract element that prevents other material from

moving into the subject position, by occupying that

position. For example:

        32a) Me-i lähdimme-i kotiin.
             we   went-1PL   home

           'We went home'

          b) [NP-SPEAKER]-i lähdimme-i kotiin
                            went-1PL   home

Unlike in the 3rd person plural example above, the 1st

person plural example in (32b) is fine (since there is no

implicit NP corresponding to the speaker or hearer in the

3rd person). The agreement suffix in (32b) is bound by the

implicit 1st person speaker NP, located in the subject

position.

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There is a slight problem with the plural anaphors.
It appears that these can be bound by the speaker/hearer
NPs as easily as singular anaphors can, although we might
expect the speaker/hearer NPs to be singular in number.
This is a problem both in the possessive constructions, and
here in tensed clauses.[10]

We now have a system for Standard Finnish in which
both agreement suffixes on a V and Px's on an N (and other
heads) are anaphors. A 1st or 2nd person suffix can be
bound by an implicit speaker/hearer NP in the subject
position (for verbal suffixes) or in the genitive position
(for Px's). This results in pro-drop for the 1st and 2nd
person, in both domains. A 3rd person suffix cannot be
bound by an implicit binder, but it needs an overt binder.
This leads to non-pro-drop in the 3rd person, both in NPs
and in IPs.

Let us now consider the sentential domain in
Colloquial Finnish.

4.3.2 Pro-drop in the Colloquial Finnish sentences

In the Colloquial Finnish possessive constructions,
we found that the possibility of being bound by an implicit
speaker/hearer NP has been lost. If the same holds for the

verb domain, we would expect all persons to become non-pro-drop (since even the 1st and 2nd person anaphors cannot be bound by the implicit NPs, overt binders are required); this is what we find. CF (both Tampere and Helsinki dialects) is non-pro-drop for all persons. The sample paradigm is repeated here:

33a) Mä istun   siä. /*Istun siä.
     I   sit-1SG there

     'I'm sitting there'

  b) Sä   istut siä./*Istut siä.
     you 2SG   2SG

  c) Se   istuu siä./*Istuu siä.
     he/she/it 3   3

  d) Me istutaan siä./*Istutaan siä.
     we 1PL/PASS   1PL/PASS

  e) Te   istutte siä./*Istutte siä.
     you 2PL   2PL

  f) Ne   istuu siä./*Istuu siä.
     they 3   3

The agreement suffixes on the verb have not been lost, unlike some of the Px's, but we do find some "reduction" in the verb agreement suffixes: the 3PL suffix has been lost (3SG and 3PL are now identical); 1PL has a new form which may or may not be analyzed as having an agreement suffix (the impersonal passive form).

    If the sentential domain and the NP domain were exactly parallel with respect to the position of the anaphoric suffix, we would have the following structure for

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the Spec(IP) after the subject has raised from Spec(VP) to
the Spec(IP) but before the agreement suffix has attached
to INFL:

```
    34)              IP
                    /  \
                 Spec   I'
                  |
                  ?P
                 /  \
            Spec     ?
              |      |
              NP   [agr.suffix]
              |
          [subject]
```
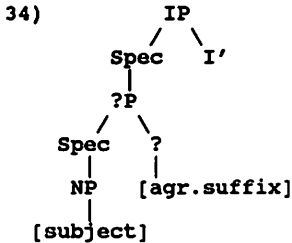
The agreement features would act as a head of a maximal
projection (name irrelevant), and would take a specifier.
The subject NP would raise (from the Spec(VP)) to this
position.

    In the NP domain in the Tampere dialect, the
specifier position of the Px was restricted to overt
singular NPs. Let us see what would follow if the Spec(?P)
position were similarly restricted.

    If the implicit speaker/hearer binder were blocked
from this position, we would not get any abstract binders
for the 1st and 2nd person agreement suffix. Therefore,
all persons would become non-pro-drop. This is a desirable
result for the Tampere dialect.

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If plural NPs were blocked from this position, we would not expect the combination of a plural subject NP and an agreement suffix. We find, indeed, that in Colloquial Finnish only one of three plural agreement suffixes remains.

As in the NP domain, the combination of a singular NP and an anaphoric suffix is possible in the CF sentence.

It seems clear that the agreement suffixes on the verb and Px's behave very similarly both in SF and CF. The differences stem from the fact that Px's have more potential binders than agreement suffixes, given the syntactic flexibility of an NP, while the suffix in the IP can only be bound by the NP in the Spec(IP).

4.3.3 Variation in pro-drop and its acquisition

If the verbal agreement suffixes (and the Px's) are anaphoric in nature in Finnish, we might expect that this holds in other languages as well. If, however, the language has no agreement suffixes--such as Chinese--no binding relationship would be posited. In such a language, there would be no requirement based on the Binding Theory that would force subjects to occur overtly, and subjects could be omitted as freely as any other arguments can.

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We can suppose that the language learner will only
posit a binding relationship, if the verbs are analyzed as
having suffixes. Until any suffixes have been discovered,
the following default "inference" would be made:

    35) no suffix on V -> no binder required
              -> subject optional

Since the learner of Chinese will get no evidence for
suffixes, this inference will be maintained. The children
learning English would also start off with this kind of
assumption, and we expect pro-drop to occur at the stage in
English before inflectional morphology has been acquired.[11]

    Clahsen (personal communication) reports that German
children stop using pro-drop sentences as soon as they
acquire the 2nd person singular inflectional suffix. Until
this point, children do not use inflectional suffixes as
agreement suffixes.

    Italian, CF, and SF all have agreement suffixes, so a
binding relationship is posited. What accounts for the
differences between the languages?

    Once the child discovers inflectional suffixes in
(either form of) Finnish, she will try to figure out what
can act as a binder of the suffix. The obvious c-
commanding binder is the nominative subject, which is then

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obligatory, in order to avoid violating BT(a). This
results in non-pro-drop in CF. In order to learn Standard
Finnish, the child would have to learn that an implicit
binder is possible in the 1st and 2nd person (this can be
learned through positive evidence).

One of the characteristic features of Italian (and
other familiar pro-drop languages) is that post-verbal
subjects are very common. The child learning Italian would
have trouble positing the nominative subject as the binder
of the anaphoric suffix, since the subject often occurs in
the postverbal position. Whether this leads into positing
an abstract discourse binder for all persons, or into
reanalyzing the agreement suffixes as non-anaphoric, is not
clear. The two options for languages with inflectional
suffixes would be the following:

     36a) subject can bind suffix
         -> overt subject required
      b) subject cannot bind suffix (since it is
         postverbal) -> ?

Italian and other "typical" pro-drop languages (with
postverbal subjects) would follow path (b), while CF (and
presumably English) would follow path (a). SF would also
initially follow path (a).

Let me now turn to a discussion of the possible positions for an abstract subject in Finnish.

4.4 Raising vs. not raising a subject
4.4.1 Spec(VP) and the missing person construction

We saw in Section 2.3.1.3.3 that the missing person construction behaved similarly to the impersonal passive construction in that one of the complements of the verbs had to raise to the Spec(IP) position. That is, unlike pro-drop sentences, the missing person construction behaves as if the subject position were empty (before something moves into the position).

Unlike in passive sentences, however, the 3rd person Px -nsa can occur in the missing person construction:

37a) *Yliopistolla   nähtiin   ystäviänsä.
     university-ADE see-PASS friends-PAR-3Px

   ('Friends were seen at the university')

b)   Yliopistolla   näkee   ystäviänsä.
     university-ADE see-3SG friends-PAR-3Px

   '(One) sees (one's) friends at the university'

As expected, (37a) is bad because -nsa is not bound (the sentence is fine without the Px). Unexpectedly, however,

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(37b) is perfectly fine, where -nsa occurs without an overt
binder.

Given that the missing person construction is the
only construction in which -nsa can occur without an overt
binder, there is most likely an abstract binder of some
sort in the missing person construction--one that does not
occur in the impersonal passive counterpart.

This abstract binder cannot be of the pro-drop
variety. First, the pro-drop variety of abstract binder is
not normally available in the 3rd person. Secondly, as we
established earlier, the Spec(IP) position is empty both in
the missing person and in the impersonal passive, until an
overt complement of the verb raises to the Spec(IP). Thus,
the missing person construction does not behave like the
pro-drop cases, where we had evidence for an abstract
binder in the Spec(IP) position.

We need an abstract binder in the missing person
construction that is not located in the Spec(IP) position,
and that is not available to any other construction.

There are three things that are unique to the missing
person construction: (i) it is the only construction
without the possibility of an overt nominative subject
whose object gets ACC/GEN case; (ii) it is difficult or

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impossible to interpret it as referring to a specific point in time; i.e. it is a generic construction; (iii) it allows binding of -nsa without an overt binder. None of these hold in the impersonal passive (or any other construc- tions).

I would like to propose that in the missing person construction an abstract 3rd person subject is base- generated in the Spec(VP) position, and that subject remains in the Spec(VP) position.

Let me first show that the analysis takes care of the data, and then attempt to further justify the analysis.

If there is an abstract 3rd person subject in the Spec(VP) position in this construction, then binding of the anaphoric suffix -nsa is straightforward; the abstract subject binds the Px.

Since the abstract binder is in the Spec(VP) position, the Spec(IP) position still needs to be filled; the construction behaves like other ones with an empty Spec(IP) position (passive, raising, existentials).

I would like to tentatively suggest that the fact that the subject does not raise to the Spec(IP) forces the

construction to be interpreted as generic, since basically
the sentence is interpreted just using the VP, without the
IP positions.

The ACC/GEN form occurs in the missing person
construction, although there is no overt nominative
subject (which was required in order to base-generate a
genitive feature; cf. Ch.3), and it is not possible in the
passive:

> 38a) Täältä   loytää   helposti kirjan   /*kirja
>   here-ABL find-3SG easily   book-ACC/GEN ACC/NOM
>
>   '(One) finds a book here easily.'
>
>   b) Täältä   löydettiin kirja   /*kirjan
>   here-ABL find-PASS   book-ACC/NOM   ACC/GEN
>
>   'A book was found here.'

The occurrence of the genitive suffix on the accusative
object in (38a) can be accounted for if the construction
has an abstract subject, base-generated in the Spec(VP)
position (I will return to why the subject is not assigned
genitive case). In the passive construction there is no
possibility of base-generating a genitive feature, and
ACC/GEN never occurs.

Thus, the stipulation that the missing person
construction has an abstract 3rd person subject in the

Spec(VP) position accounts for the properties of this
construction.

4.4.2   Remaining in the Spec(VP) position

     Let us assume, then, that the missing person
construction has a base-generated 3rd person (implicit)
subject in the Spec(VP) position. Although the subject
never raises to the Spec(IP) position, there is no problem
with case assignment.

     In order to prevent genitive case from being realized
on all subjects in the Spec(VP) position, I had to assume
that the fact that the subject is coindexed with the
agreement features in the Spec(IP) position blocks
realization of genitive case (cf. Section 3.3.2). In the
impersonal construction, then, the 3rd person subject in
the Spec(VP) position is coindexed with agreement features
in the Spec(IP) position. This prevents genitive case from
being assigned to the abstract subject, and genitive case
percolates to a "receptive" object. The agreement features
in the Spec(IP) end up in INFL; the vacated Spec(IP)
position has to be filled by one of the complements or
adjuncts of the 3rd person singular verb.

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The mechanism of having a nominative subject stay in the Spec(VP) position is needed in two other types of constructions, postverbal subjects and indefinite quantifiers (cf. fn.8 in ch.2):

        39a) Kirjan   löysi Jukka.
             ACC/GEN found NOM

            'The book was found by Jukka'

          b) Keittiössa   on joku.
             kitchen-INE is someone-NOM

            'There is someone in the kitchen'

It was suggested in Section 2.3.1.1 that the postverbal subject ("new" in discourse) in constructions such as (39a) occupies the Spec(VP) position. Similarly, quantified subjects such as joku 'someone' and kukaan 'anyone' often follow the verb. These can also be analyzed as remaining in the Spec(VP) position.[12]

In the constructions in (39), as well as in the missing person construction, the Spec(IP) position has to be filled by another element whenever the nominative subject is not raised.

Recall the täytyy 'must' construction (Section 3.3.2.4.4). In this construction, the subject occurs in genitive case (and no genitive suffix is possible on the object):

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40) Hänen täytyy syödä illallista.
    he-GEN must   eat   supper-PAR

    'He has to eat supper'

There are now three possible ways of realizing a
subject that is base-generated in the Spec(VP) position.

First, if the verb does not indicate that its subject
has to be coindexed with an agreement element in the
Spec(IP), then the subject gets genitive case, the default
case of the Spec(VP) position. This is what happens in
(37).

All other subjects (unless they bear semantic case or
lexical case) are coindexed with an agreement element in
the Spec(IP) position. This prevents genitive case from
being realized on the subject. The genitive feature can
then percolate to an object in these sentences.

Coindexation then leads to "nominative" subjects
(with no case). These subjects can then either raise to
the Spec(IP) position (which is the second way of realizing
a subject) or stay in the Spec(VP) position (third way).
Examples of subjects staying in the Spec(VP) position are
the implicit subject of the missing person construction and
the two constructions exemplified in (39) above.

The existence of the missing person construction with an abstract 3rd person subject suggests that an abstract subject with any person features[13] can be base-generated in the Spec(VP) position. The difference between 1st/2nd and the 3rd person is that the 3rd person suffix cannot raise to the Spec(IP).

Thus, only those abstract subjects that are able to bind an agreement suffix in the IP can raise to the Spec(IP) position: the 1st and 2nd person subjects. The 3rd person abstract subject cannot bind a suffix (since it does not bear appropriate discourse-related features), and it also cannot raise to the Spec(IP) position.

NOTES

1) Pro-drop facts are identical in matrix and embedded clauses; I will return to this.

2) Colloquial Finnish (CF) seems to be developing expletives; the expletives se ('it') and sitä (PAR of 'it') are fairly common in some forms of CF. As we shall see, CF is non-pro-drop in all persons. There may be a link between the occurrence of non-pro-drop and the expletives, but the CF data suggests that the expletives probably diachronically follow non-pro-drop. Thus, expletives could not act as triggers for non-pro-drop in some forms of CF (for example, my dialect (Tampere dialect of the 60's) is non-pro-drop but does not have expletives).

3) Hyams & Jaeggli (1987) suggest that languages that have a uniform inflectional paradigm are pro-drop (either no inflection at all, or an overt affix in each person & number), and languages with a mixed system are non-pro-drop (e.g. English, where only the 3rd person singular present

form bears a suffix). This analysis makes the right
prediction about CF (mixed paradigm, non-pro-drop).
However, it does not explain the SF data (uniform paradigm,
pro-drop only in 1st/2nd).

4) U. Nikanne (personal communication) has pointed out to
me that sentences in which -nsa does not have an overt c-
commanding binder are becoming more common in modern
Finnish. Especially common seem to be expression of the
following sort: a name followed by veli/vaimo/ystävä+nsa
'brother/wife/friend' (where the name presumably does not
c-command the Px):

        Pekka-i ja vaimonsa-i Raili
        NOM   and wife-3Px   NOM

      'Pekka and his wife Raili'

In my dialect, such constructions are marginal.

5) In order to render 'Maija lost her tape' (with emphatic
'her') in Finnish, we would need to use the adjective oma
'own':

        Maija hukkasi oman   kasettinsa.
        NOM   lost   own-ACC tape-3Px

        'Maija lost her own tape'

6) T.Roeper (personal communication) has pointed out that
English might have forms in which binding "in the lexicon"
takes place:

        a) self-helper
        b) self-aggrandizing

In these examples, one needs to make sure that the
reference of 'self' in these compounds is the same as that
of one of the theta-roles of the verb (say, by coindexing
'self' and the suffix).

7) F.R.Higgins has suggested to me that the restriction on
what can occur with the Px in SF might have to do with
Condition C of the Binding Theory. Full NPs might be
impossible because they would (perhaps) be c-commanded by
the Px (and the two would have the same index). This would
explain why full NPs cannot occur with Px's, which would
then not have to be stipulated. Unfortunately, this
analysis it still would not explain why non-human pronouns

cannot occur with Px's (and why in CF plural NPs are not
allowed either).

8) Nikanne (personal communication) informs me that in his
Helsinki dialect 2nd and 3rd person singular Px's are
preferred to not having a Px, when the head is P. Also,
Px's are still used with the anaphoric words _itse-_ '-self'
and _toinen_ _toise-_ 'each other'; I will return to this.

9) Binding of _mun_ by _ma_ improves under certain conditions,
as also in SF, for example as a response to a multiple WH-
question 'Who walked whose dog?'.

10) Plurals pose problems in general (cf. e.g. Lasnik &
Uriagereka (1988)). The following feature decomposition of
(unary) person/number features seems to make sense of the
Finnish data:

        1SG   [+SPEAKER]
        2SG   [+HEARER]
        3SG   [ ]

        1PL   [+SPEAKER]
              [+PL]
        2PL   [+HEARER]
              [+PL]
        3PL   [+PL]

That is, 1st person singular and 1st person plural share
the feature [+SPEAKER]. That is the only feature that the
1st person singular has. 1st person plural has [+PL] in
addition. Similarly for the feature [+HEARER] and the 2nd
person. In the 3rd person, the singular has no features.
The plural only has the feature [+PL].

        These features would be what the agreement suffix on
the verb or the Px have in Standard Finnish.

11) Presumably once the English child learns the 3rd
person singular suffix _-s_, this is enough to tell the child
that the language requires binding of inflectional
suffixes. This would involve positing an abstract suffix
in the rest of paradigm.

12) It appears that certain nominative NPs have to raise
to the Spec(IP). The criteria for having to raise involves
some combination of thematic, semantic, and discourse
information. For example, it may be that agentive subjects

that are definite and old information have to raise to the
Spec(IP). Presumably the 1st and 2nd person implicit
subjects also have to raise.

13) An abstract 3rd person plural suffix seems not to
exist in Finnish.

CHAPTER 5

INFININITAL ARGUMENTS AND ADJUNCTS

5.1 Introduction

    There are at least a dozen productively used non-
finite verb forms in Finnish (examples to be given
shortly). They all share the following features: (i) they
do not allow nominative subjects; (ii) they do not allow
the negative verb; (iii) they do not allow the auxiliary
verb olla (or any of the four tenses found in tensed
sentences).

    I have argued that nominative subjects are base-
generated in the Spec(VP) position and coindexed with the
agreement suffix in the Spec(IP) position; the coindexation
blocks case assignment to these NPs (cf. Ch.3), and they
end up with no case (i.e. "nominative"). Due to the
defective paradigm of the negative verb e- (which only has
forms with an agreement suffix), it was suggested that the
negative verb is base-generated in INFL. Similarly, the
distribution of the auxiliary olla could be accounted for
by assuming that it also is base-generated in INFL (Ch.2).

Thus, the syntactic positions relevant to the three characteristics of non-finite constructions are Spec(IP) and INFL, the two positions unique to IP.

To account for the three characteristics of the non-finite constructions, I would like to propose that these constructions in Finnish do not have an IP. Non-finite constructions consist of a projection of the verb that is identical to the VP (or V') in the D-Structure of a finite clause. Since the non-finite constructions have no IP (and therefore no Spec(IP) nor INFL) there is no position in which the agreement suffix (of the verb), the negative verb, or the auxiliary verb can be base-generated.

Not having an IP in the representation of the non-finite constructions is also consistent with the fact that it appears that these constructions do not have a CP: there is no WH-movement, topicalization, or complementizers in the non-finite constructions.

Recall also that the non-finite constructions do not act as binding domains, while finite IPs do (Chapter 4). If non-finite constructions do not have an IP, we have a generalization concerning binding domains: only IP counts as one.

Traditionally, the non-finite forms have been divided
into two classes: participles and infinitives. As noted by
Hakulinen & Karlsson (1979:341), this division is not
syntactically relevant in some cases. Some of the
participles have more than one function (with different
case forms). In the nominative case, the participles
behave as adjectives, listed in Table 5.1 for the verb
luke- 'read' (based on Hakulinen & Karlsson (1979:340).

TABLE 5.1. Participles as adjectives.

FINNISH FORM	TRADITIONAL NAME	GLOSS WITH CONTEXT
lukeva	present p. (active)	(the woman) reading
luettava	present p. (passive)	readable (material)
lukenut	past p. (active)	(a well-)read (woman)
luettu	past p. (passive)	(the book) read
lukema	agentive p.	(the book) read (by Jukka)
lukematon	negative p.	(the book) not read

In this chapter, I will not be concerned with the
adjectival usage of the participles given in Table 5.1;
some of the above forms will be found in the next table,
however, behaving as verbs. Table 5.2 gives the forms--
grouped by their syntactic distribution--that will be
discussed in this chapter, with their traditional names and
the terms I will use for them (loosely based on Hakulinen &

Karlsson (1979:341)). Approximate glosses are given where
possible.

TABLE 5.2. Five infinitival constructions.

MY TERM	FORM	TRAD.TERM	GLOSS
TA-infinitive:			
	lukea	1st inf.(short)	'to read'
MA-infinitive:			
	lukemassa	3rd inf.(INE)	
	lukemasta	3rd inf.(ELA)	
	lukemaan	3rd inf.(ILL)	
clausal complement infinitival:			
	lukevan	pres.part.(act., GEN)	
	lukeneen	past part.(act., GEN)	
	luettavan	pres.part.(pass., GEN)	
	luetun	past part.(pass., GEN)	
temporal adjunct:			
	lukiessa	2nd inf.(act., INE)	'while reading'
	luettua	past part.(act., PAR)	'having read'
	luettaessa	2nd inf.(pass., INE)	'while being read'
rationale adjunct:			
	lukeakse+Px	1st inf.(long)	'in order to read'

   The first three types of form in this table can be
considered to be argument-like: the TA-infinitive, the MA-
infinitive (with its three internal locative case

suffixes), and the clausal complement. The MA- and TA-
infinitives typically have neither an overt subject nor a
Px, while the clausal complement construction has either an
overt genitive subject or a Px (the two occur in
complementary distribution).

The last two types in Table 5.2--the temporal adjunct
and the rationale clause construction--are adjuncts. The
temporal adjunct can have both a genitive subject and a Px
(like NPs), while the rationale adjunct has an obligatory
Px (and no genitive subject).

There are a few more forms in Finnish that will not
be covered (all of which are archaic or literary): the so-
called 4th infinitive (_[on] lukeminen/[ei ole] lukemista_
'[has to be] read/[may not be] read') and 5th infinitive
(_lukemaisillaan_ 'about to read'), both of which can be
considered to be idiomatic or frozen (following Hakulinen &
Karlsson (1979)). Similarly, one of the archaic forms of
the 2nd infinitive (_lukien_ 'by reading') will not be
covered. I will also not discuss the slightly archaic
adessive and abessive case forms of the MA-infinitive
(_lukemalla_ 'by reading' and _lukematta_ 'without reading').

Of the forms in Table 5.2, all but the passive forms
are productively used in Standard Finnish. The TA- and MA-
infinitivals are common in Colloquial Finnish, as well, but

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the other forms may not be as common in CF (instead, finite
clauses are often used).

In Section 5.2, I will discuss the MA-infinitive and
the TA-infinitive--the two constructions that are "non-
clausal" (and both of them occur as arguments of matrix
verbs). These two constructions share the following
properties: they do not allow Px's; they do not have a
passive form; they do not have a tense (present-past)
distinction; and, the form of an accusative object in these
constructions necessarily depends on the matrix verb.

In attempting to account for the distribution of the
non-clausal infinitives, we find that generalizations can
be made which cover both infinitival and non-infinitival
complements.

The two constructions covered in Section 5.3 are
"clausal". They allow Px's; they have a passive form; they
have two aspectual forms; and, the marking of an accusative
object of the infinitival verb is somewhat independent of
the matrix verb.

Finally, in Section 5.4, I will discuss the rationale
clause. This construction is similar to the two clausal
constructions, but with interesting differences.

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5.2 The non-clausal infinitivals

In this section, I will discuss the MA-infinitive
and the TA-infinitive. It will be argued (following
Nikanne (1987) and (1988) that the MA-construction bears
the syntactic category of a locative PP, and has the
distribution of one, as well. Along similar lines, I will
argue that the TA-infinitive has the distribution of a
direct object.[1]

5.2.1 The MA-infinitive

There are two variants of the MA-construction: one
with (matrix) subject control and one with (matrix) object
control. We will look at the simpler subject control cases
first.

5.2.1.1 MA-infinitivals are locative PPs

The MA-infinitive (of the subject control variant)
typically occurs with verbs of physical motion or location,
such as _mennä_ 'go', _käydä_ 'go and return/visit', _olla_ 'be
(located)', and _tulla_ 'come'. Consider the following
examples with each of these verbs:

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1a) Jukka kävi ostamassa  solmion.
    NOM   went buy-MA-INE tie-ACC/GEN

    'Jukka went to buy a tie'

 b) Jukka meni ostamaan   solmion.
    NOM   went buy-MA-ILL tie-ACC/GEN

    'Jukka went to buy a tie'

 c) Jukka on ostamassa  solmiota.
    NOM    is buy-MA-INE tie-PAR

    'Jukka is buying a tie'

 d) Jukka tuli ostamasta  solmiota.
    NOM   came buy-MA-ELA tie-PAR

    'Jukka came from buying a tie'
```

For each verb in (1), the case chosen for the MA-infinitival is identical to the case that would be chosen for a locative complement of the verb. Compare the following to the examples in (1):

```
2a) Jukka kävi kaupassa.
    NOM   went store-INE

    'Jukka went to the store'
       (lit. 'visited in the store')

 b) Jukka meni kauppaan.
    NOM   went store-ILL

     'Jukka went to the store'

 c) Jukka on kaupassa.
    NOM    is store-INE

     'Jukka is in the store'

 d) Jukka tuli kaupasta.
    NOM   came store-ELA

    'Jukka came from the store'
```

The verb <u>kävi</u> 'visited' subcategorizes for a locative

complement in inessive case; both elative and illative would be ungrammatical.[2] Similarly, the MA-infinitival has to occur in inessive case with this verb; cf. (1a) above.

The verb _mennä_ 'go', on the other hand, requires an illative 'to' complement, both with a locative phrase, as in (2b), and with the MA-complement, in (1b) above. _olla_ 'be', when used to indicate location, takes an inessive 'in' complement, both for (2c) and (1c) with the MA-infinitive. Neither elative nor illative is possible with _olla_.

The verb _tulla_ 'come' can take one of two locative cases, depending on whether we are talking about 'coming from' or 'coming to'. Thus, both elative 'from' and illative 'to' are possible as a locative phrase with _tulla_:

        3a) Jukka tuli kaupasta.
            NOM   came store-ELA

          'Jukka came from the store'

         b) Jukka tuli kauppaan.
            NOM   came store-ILL

          'Jukka came to the store'

Similarly, both cases are possible with the MA-infinitive-- unlike the other verbs which only allow one locative case:

4a) Jukka tuli ostamasta solmiota.
    NOM   came buy-MA-ELA tie-PAR

   (lit.)'Jukka came from buying a tie'

 b) Jukka tuli ostamaan   solmiota.
    NOM   came buy-MA-ILL tie-PAR

   'Jukka came to buy a tie'

As with the locative phrases, both elative and illative are possible with the MA-construction (and inessive is impossible for both constructions).

Certain non-locative verbs also occur with the MA-construction. As was the case with the locative verbs, these verbs also subcategorize for a non-verbal PP, with the same locative case as their MA-infinitive. Consider the following pairs:

5a) Pekka tyytyi   jäätelöön.
    NOM   was-satisfied ice cream-ILL

   'Pekka was satisfied with ice cream'

 b) Pekka tyytyi   odottamaan jonossa.
    NOM   was-satisfied wait-MA-ILL line-INE

   'Pekka agreed to wait in line'

6a) Pekka ryhtyi/rupesi työhön.
    NOM   started   job-ILL

   'Pekka started the job'

 b) Pekka ryhtyi/rupesi tekemään   työtä.
    NOM   started   do-MA-ILL job-PAR

   'Pekka started to do (some) work'

The verb tyytyä 'be satisfied, agree with' requires an
illative 'to' complement, whether it be a locative phrase,
as in (5a) or a MA-infinitive, as in (5b). The two verbs
meaning 'start'[3] in (6) also take an illative complement,
either a "nominal" one or a MA-infinitival, as in (6b).

Facts of this nature led Nikanne (1988) to suggest
that the MA-construction bears the same syntactic category
as locative PPs do--i.e. a PP with the locative case suffix
functioning as the head of the PP. I will adopt his
suggestion.

Let us now see what object marking in the MA-
construction tells us about the internal structure of the
infinitival PP.

5.2.1.2 Objective case in the MA-construction

As several of the examples we have seen show, both
partitive and accusative are possible cases for the object
of the MA-infinitive. This suggests that the MA-infinitive
contains a verb that is responsible for the objective case
marking (since accusative case only occurs with the
category V; only Vs can have the feature [+COMPLETED]). On
the other hand, it appears that the construction does not
have a Spec(VP) position, since neither genitive (or

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nominative) subjects nor Px's are possible in this
construction. Given the analysis of ACC/GEN marking
developed in Chapter 3, the lack of a Spec(VP) position
should make a difference in objective case marking.

If there is no Spec(VP) position in the MA-
construction, we would expect that the genitive feature is
not available for accusative objects within the
construction--since if there is no Spec(VP), no genitive
feature would be base-generated. This is, in fact, the
case. Although we find ACC/GEN objects in this
construction, they are only possible if the <u>matrix</u> verb
agrees with a nominative subject--i.e. a feature is
available due to the matrix Spec(VP) position. Consider
the following pair:

> 7a) Pekka kävi ostamassa   solmion   /*solmio
>   NOM   went buy-MA-INE tie-ACC/GEN   ACC/NOM
>
>   'Pekka went to buy a tie'
>
>   b) Käy ostamassa   solmio!   /*solmion
>   go buy-MA-INE tie-ACC/NOM   ACC/GEN
>
>   'Go buy a tie!'

In both of these sentences, the verb implies completion,
and we get accusative case (as opposed to partitive).
However, we can only get the genitive suffix on the object
in (7a), not in (7b).

The ACC/GEN occurs in the MA-construction exactly
when the matrix verb form gives rise to the genitive
suffix, i.e. when the matrix verb agrees with a nominative
subject.

When the matrix verb is such that its object would
occur in ACC/NOM--i.e. passive, imperative, an certain
impersonal verbs--the object of the MA-infinitive (of such
a matrix verb) also occurs in ACC/NOM--as in (7b) with an
imperative matrix verb.

The effect of the matrix verb on the object of the
embedded verb is not restricted to one clause. Consider
the following examples with a MA-infinitival embedded under
a TA-infinitival (which behaves the same way as the MA-
infinitival does with respect to objective marking):

      8a) Pekka muisti   käydä ostamassa solmion/*solmio
          NOM   remembered go-TA buy-MA tie-ACC/GEN ACC/NOM

         'Pekka remembered to go buy a tie'

       b) Muista   käydä ostamassa solmio!   /*solmion
          remember go-TA buy-MA   tie-ACC/NOM ACC-GEN

         'Remember to go buy a tie!'

Given the analysis of genitive percolation (i.e.
ACC/GEN) developed in Chapter 3, these data follow if the
MA-construction does not have a Spec(VP) position. When a

genitive feature is base-generated in the Spec(VP) of the matrix verb which then gets "stranded", this feature can percolate to any embedded object (as long as an IP node does not intervene).

So far we seem to have evidence for the following concerning the structure of the MA-infinitive:

9) (i) the MA-infinitive bears the syntactic category of a locative PP; this explains the distribution of the infinitival and the locative case marking on the infinitival verb,

  (ii) the construction contains some projection of V, since accusative case is assigned (in addition to partitive), and

  (iii) the construction does not have a Spec(VP) position; this explain the impossibility of overt subjects or Px's, as well as the impossibility of a genitive feature occurring on an accusative object, unless one percolates from the matrix clause.

There is a constituency test that will tell us that the verb and the object form a constituent in the MA-construction, namely movement to a sentence-initial position.

5.2.1.3 Moving a MA-phrase to COMP

As we shall see when discussing the TA-construction, moving a TA-VP to COMP seems to be impossible (leading to

the generalization by Vilkuna (1989) that only Vs can raise
to COMP, not VPs; cf.Ch.2). However (as also pointed out
by Vilkuna), moving a MA-infinitival to COMP is easier.
There is a constraint in moving a MA-infinitival, though:
if the verb has a complement, the complement has to
linearly precede the verb ((10a)=(7a)):

> 10a) Pekka kävi ostamassa   solmion.
>   NOM   went buy-MA-INE tie-ACC/GEN
>
>   'Pekka went to buy a tie'
>
>   b) [Solmionko]   Pekka kävi ostamassa []?
>   tie-ACC/GEN-Q NOM   went buy-MA-INE
>
>   'Was it a tie that Pekka went to buy?'
>
>   c) [Ostamassako] Pekka kävi [] solmion?
>   buy-MA-Q   NOM   went   tie-ACC/GEN
>
>   'Did Pekka go <u>buy</u> the tie?'
>
>   d)*[Ostamassa(ko) solmion(ko)] Pekka kävi []?
>   buy-MA   Q   tie   Q   NOM   went
>
>   ('Was it to buy a tie that Pekka went?')
>
>   e)(?)[Solmionko ostamassa] Pekka kävi []?
>   tie-Q   buy-MA   NOM   went
>
>   'Was it to buy a tie that Pekka went?'

The direct object of the MA-verb can be topicalized or
questioned, as shown in (10b). Similarly, the MA-verb can
be fronted by itself, as in (10c).

Fronting the whole MA-phrase is impossible without a change in word order, as (10d) shows (regardless of which element the question particle is attached to). However, if the object precedes the verb, fronting is much better, as in (10e). The question particle may only occur on the object NP in this example (why this has to be the case is unclear).

It is not obvious whether examples such as (10e) are the result of the object moving to a pre-verbal position before or after the MA-phrase moves to COMP. In VPs, the object can precede the verb under certain conditions (cf. "complement fronting" in Ch.2):[4]

> 11) Pekkako kävi [solmion]   ostamassa []?
>   NOM-Q   went   tie-ACC/GEN buy-MA-INE
>
> 'Was it Pekka that went to buy a tie?'

Thus, (10e) could be "derived" from something like (11), rather than from (10a).

The data from PPs suggests that the head-final character of an element moved to COMP (such as in (10e)) is a consequence of something happening after (or during) movement to COMP:

12a) Pekka lähti ilman   Seijaa.
     NOM   left   without PAR

    'Pekka left without Seija'

  b)*?Pekka lähti Seijaa ilman.

  c)(?)[Ilman   Seijaako] Pekka lähti?
        without PAR-Q   NOM   left

    'Was it without Seija that Pekka left?'

  d) [Seijaako ilman] Pekka lähti?

Unlike with VPs, having the object of the preposition
precede the P is not very good, as shown in (12b).
However, this order is fine if the PP has been topicalized,
as we see in (12d).

    Thus, the head-final order in COMP may be a result of
a further movement operation in CP; say, the PP moves to
COMP, and then the complement of the PP further raises to
Spec(CP). I will not be able to pursue this problem here.

    Unlike with the MA-phrase, the topicalized PP in (12)
does not have to be head-final, since (12c) is quite good.
Also unlike in the VP-domain, the preposition or the
complement cannot be fronted alone.

    Assuming that the head-final constraint on fronted
MA-phrases is a result of something that happens in COMP,
we can conclude that MA-phrases can be topicalized. This

provides further support for the analysis of MA-phrases as
PPs.

We now have something like the following as the
structure of the MA-construction, where P is occupied by
one of the locative case features found in the MA-
construction, and the -ma suffix is represented as a
feature on the maximal projection of V:

13)   PP
               /   \
             P .   V' (=VP)
                   [MA]
                   /   \
                  V   NP
                      [PAR]
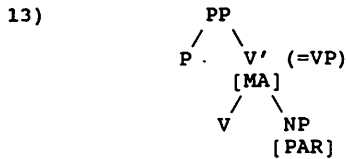
The verb projects to the V' level, at which partitive
is base-generated as the structural default case for the
object position. Since there is no Spec(VP), V' is the
maximal projection (i.e. VP) of the verb.

If the verb implies completion, accusative is
assigned, as usual (and genetive percolation occurs if the
matrix VP has a genitive feature that can percolate). As
with finite verbs, the verb assigns a theta-role to its
complement(s).

What is unusual about the structure in (13) is that
the P is taking a VP-complement. I will leave open the

problem of why this is possible here (but not with regular, non-case Ps), as well as the question of how we prevent the V from taking a Spec(VP).

Let us now turn to the more complex version of the MA-construction, in which the MA-infinitival appears to be in some sense "predicated" of the matrix object.

5.2.1.4 MA-infinitival predicated of the matrix object
5.2.1.4.1 Basic data

The simple MA-construction just discussed typically occurs with verbs of motion or location. The complex MA-construction occurs with e.g. the following matrix verbs (cf. Appendix I for more examples): pyytää 'ask', kehottaa 'urge', yllyttää 'incite', vaatia 'demand', kaskea 'order', haluta 'want', estää 'prevent', auttaa 'help', and nähdä 'see'. Consider the following examples:

    14a) Pekka näki Jukan   lukemassa   sarjakuvia.
         NOM   saw ACC/GEN read-MA-INE comics-PAR

       'Pekka saw Jukka reading comics'

      b) Jukka esti   Pekkaa putoamasta   veteen.
         NOM   prevented PAR   fall-MA-ELA water-ILL

     'Jukka prevented Pekka from falling into the water'

      c) Liisa pyysi Pekkaa tulemaan   yliopistolle.
         NOM   asked PAR   come-MA-ILL university-ADE

        'Liisa asked Pekka to come to the university'

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In each of these examples the object of the matrix verb is interpreted as the subject of the MA-infinitive.

There is some reason to think that the "subject" of the infinitival verb in these examples is indeed the object of the matrix verb. This NP (e.g. Jukan in (14a)) bears the case of an object--either partitive or accusative. As with regular verbs, the choice between the two cases has to do with aspect:

15a) Liisa ei   pyytänyt Pekkaa/*Pekan   tulemaan.
     NOM   not asked   PAR   ACC/GEN come-MA

       'Liisa did not ask Pekka to come'

  b) Liisa pyysi Pekkaa lukemaan esitelmän.
     NOM   asked PAR   read-MA presentation-ACC/GEN

  c) Liisa pyysi Pekan   lukemaan esitelmän.
     NOM   asked ACC/GEN read-MA presentation-ACC/GEN

       'Liisa asked Pekka to read the presentation'

In (15a), a partitive case is obligatory when the verb is negated.[5]

The difference between (15b) and (15c) is subtle. (15b) could be appropriately uttered in a situation where Liisa asked if Pekka would read the presentation; Pekka may have refused to do it. In (15c) it is implied that Liisa has specifically chosen Pekka for the task, and she assumes that Pekka will do it.

If this difference between (15b) and (c) has to do
with the feature [+COMPLETED] of the matrix verb, then
Pekka in (15) would really be the object of the matrix verb
(in the sense that the matrix verb assigns a theta-role to
this NP, as its object).

Apart from the presence of direct objects as
controllers, these examples behave in the same way as the
subject-control variant. The MA-infinitivals can be
"replaced" by locative phrases; compare the following to
the examples in (14):

        16a) Pekka näki Jukan   saunassa.
             NOM   saw ACC/GEN sauna-INE

           'Pekka saw Jukka in the sauna'

         b) Jukka esti   Pekkaa onnettomuudesta.
            NOM   prevented PAR   accident-ELA

            'Jukka prevented Pekka from an accident'

         c) Liisa pyysi Pekkaa eteiseen.
            NOM   asked PAR   hallway-ILL

            'Liisa asked Pekka to the hallway-ILL'

With the perception verb nähdä 'see', both a locative
phrase--(16a) here--and the MA-infinitival (in (14a) above)
have to occur in inessive 'in' case, when predicated of
the object; elative and illative are not possible.

Similarly, with the verb _estää_ 'prevent', only
elative 'from' is possible both with the MA-infinitive in
(14b) and the locative PP in (16b).[6] And, with the verb
pyytää 'ask', the only possible case of the three internal
locative cases is illative 'to', for both constructions--
(16c) and (14c).

If the accusative and partitive NPs are objects of
the matrix verb in (16), then it seems that the comparable
NPs in (14) also have to be direct objects of the matrix
verb; this is what I will assume.

Analyzing the second NP in our examples as an object
of the matrix verb allows us to maintain an identical
structure for the two MA-constructions. In the simple MA-
construction, we have a complement of the matrix verb that
has a distribution of a locative PP complement. In the
complex MA-construction, we again have a phrase that has
the distribution of a locative PP, but this time the
locative phrase is "predicated" of the matrix object. The
internal structure of the locative (MA-)PP is identical in
the two constructions.

In the simple MA-construction, the "subject" of the
 infinitival verb is the matrix subject, just as the
"subject" of a locative complement is the matrix subject.
In the complex MA-construction, the "subject" of the

infinitive is the direct object of the matrix clause, just
as the "subject" of the ("real") locative PPs in (16) is
the object of the matrix verb.

I will leave open the question of exactly how the
predication relationship is established in each of these
cases (cf. Williams (1980)). The point that can be made
here is that a "PRO" (and abstract subject of infinitives)
is not required to establish this predication relationship,
unless one is required both in the "verbal" PPs and in the
"nominal" PPs (i.e. both in (14) and (16)).

5.2.1.4.2 Two objects with four case combinations

Except for a complication, the objective case facts
are the same as with the subject control construction; a
complication arises, since we now have two objects to deal
with. It appears that the matrix verb and the infinitival
verb can disagree with respect to completion--one verb can
have a partitive object, while the other one has an
accusative object (yielding all of the four logical
combinations).

To make matters worse, although the infinitival verb
can be independent of the matrix verb with respect to the

aspect of completion, the form of the accusative object
still depends on the matrix clause. That is, even if the
matrix verb is [-COMPLETED], its agreement features
determine whether or not the object of a [+COMPLETED]
infinitival has a genitive suffix; compare the following
examples:

    17a) Maija pyysi Jukkaa lukemaan   kirjan
         NOM   asked PAR   read-MA-ILL book-ACC/GEN

       'Maija asked Jukka to read the book'

      b) Pyydä Jukkaa lukemaan   kirja!
         ask   PAR   read-MA-ILL book-ACC/NOM

         'Ask Jukka to read the book!'

      c) Jukkaa pyydettiin lukemaan   kirja.
         PAR   was-asked   read-MA-ILL book-ACC/NOM

         'Jukka was asked to read the book'

The matrix object occurs in partitive case in these
examples, suggesting that the matrix verb does not imply
completion. The infinitive does imply completion in these
examples, but we get the genitive suffix in (17a), while we
get ACC/NOM in (17b) and (c)--since the matrix verb does
not have a nominative subject, and therefore there is no
genitive feature in the matrix VP.

        Consider now a "minimal quartet" with the four
possible partitive-accusative combinations ((18d)=(17a)):

18a) Maija pyysi Jukkaa lukemaan   kirjaa.
     NOM   asked PAR   read-MA-ILL book-PAR

   'Maija asked Jukka to read a book'

  b) Maija pyysi Jukan   lukemaan   kirjan.
     NOM   asked ACC/GEN read-MA-ILL book-ACC/GEN

   'Maija asked Jukka to read the book'

  c) Maija pyysi Jukan   lukemaan   kirjaa.
     NOM   asked ACC/GEN read-MA-ILL book-PAR

   'Maija asked Jukka to read a book'

  d) Maija pyysi Jukkaa lukemaan   kirjan.
     NOM   asked PAR   read-MA-ILL book-ACC/GEN

   'Maija asked Jukka to read the book'

Sentence (18a) is straightforward: the two partitive
NPs are each in an object position, getting the structural
default case of the position. In (18c), the matrix verb
implies completion (cf. discussion above in Section
5.2.1.4.1); the object gets assigned accusative case (and
genitive percolation takes place, as usual).

As we have already seen, a genitive suffix has to
occur on an embedded accusative object in the MA-
construction, as in (18d). The presence of a matrix object
does not have any effect on percolation.

Sentence (18b) shows that both the matrix object and
the embedded object occur with a genitive suffix, if the

matrix verb agrees with a nominative suffix. Compare (19)
to (18b):

19) Pyydä Jukka   lukemaan   kirja!
    ask   ACC/NOM read-MA-ILL book-ACC/NOM

    'Ask Jukka to read the book!'

If no genitive feature is base-generated in the matrix
Spec(VP), then neither the matrix nor the embedded object
can get a genitive suffix.

The analysis of genitive percolation argued for in
Chapter 3 accounts for (18b), assuming that when a genitive
feature percolates, it percolates to any "receptive" NP
(i.e. any NP that does not have case after case realization
has taken place; recall that genitive percolation seems to
be a postcyclic process).

Again, the genitive percolation facts in the complex
MA-construction show that the embedded infinitival does not
have the "ability" to base-generate a genitive suffix.
Thus, the two MA-constructions behave similarly in this
respect, suggesting that the complex MA-construction does
not have a Spec(VP) position either.

Let us now turn to some anaphoric binding data in the
complex MA-construction.

5.2.1.4.3 Relevant binding data

Complements of a verb cannot usually bind each other in Finnish (cf. fn.30 in Ch.2):

> 20a) Jukka-i esitteli   Liisan-j opettajalleen-i/??j
>   NOM   introduced ACC/GEN   teacher-ALL-3Px
>
>   'Jukka introduced Liisa to his/her teacher'

> b) Jukka-i esitteli   Liisan-j
>   NOM   introduced ACC/GEN
>
>   ...hänen-??i/j opettajalleen-??i/j
>   his/her-GEN teacher-ALL-3Px
>
>   'Jukka-introduces Liisa to his/her teacher'

Binding of the possessive suffix in the allative phrase 'teacher' is only possible by the subject, not by the direct object Liisan in (20a)--presumably because in this structure the object does not c-command the oblique phrase. In order to achieve coreference between the object and the oblique phrase, an overt pronoun has to be used, as shown in (20b)--and, as expected, binding the pronoun by the c-commanding subject is not very good.

Although binding by the direct object is not very good in the above example, binding by an accusative or partitive matrix object in the MA-construction is perfectly fine:

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21a) **Maija-i pyysi Pekan-j tuomaan   levynsä-i/j**
     NOM   asked ACC/GEN bring-MA-ILL record-3Px

   'Maija asked Pekka to bring her/his record'

  b) **Aija-i yllytti Maijaa-j polttamaan**
     NOM   incited PAR   burn-MA-ILL

                       ...päiväkirjansa-i/j
                       diary-ACC/NOM-3Px

   'Aija incited Maija to burn her diary'

The anaphoric suffix of the object of the MA-infinitival
can be bound either by the matrix subject or by the matrix
object, for both accusative and partitive matrix objects.
Thus, although complements of the matrix verb cannot bind
each other, the matrix object can bind into the MA-phrase
predicated of the object.

       For locative phrases, we find that an object can also
only bind a locative phrase predicated of it:

     22a) **Pekka-i näki Jukan-j toimistossaan-i/j**
          NOM   saw ACC/GEN office-INE-3Px

        'Pekka saw Jukka in his office'

       b) **Pekka-i näki Jukan-j toimistostaan-i/*j**
          NOM   saw ACC/GEN office-ELA-3Px

        'Pekka saw Jukka from his office'

     23a) **Seppo-i vakoili Mattia-j huoneistossaan-i/j**
          NOM   spied   PAR   apartment-INE-3Px

        'Seppo was spying on Matti in his apartment'

       b) **Seppo-i vakoili Mattia-j huoneistostaan-i/*j**
          NOM   spied   PAR   apartment-ELA-3Px

        'Seppo was spying on Matti from his apartment'

In the (a) sentences, the locative phrase can be predicated of the accusative or partitive object—in (22a) Jukka is in the office, and in (23a) Matti is in the apartment. For this reading, the anaphoric suffix can be bound either by the matrix subject or by the matrix object.

For the reading where the locative phrase is predicated of the subject—which is the only reading available in (22b) and (23b), due to the semantics of the matrix verb—binding is possible only by the subject.[7]

If the MA-infinitival and the locative PPs have basically the same distribution, as suggested, then the above binding data is exactly what we expect. Both a MA-phrase and a regular locative phrase can be predicated of the direct object, and the direct object can bind either type of complement. Presumably the object c-commands its complement in both cases.

Where predication of this sort is not involved, we do not get c-command, and binding by an object is not possible (e.g. with the verb 'introduce' in example (20)). Regardless of which element a locative phrase is predicated of, it will always be c-commanded by the nominative subject, and binding by the subject is always possible.

5.2.1.5 Summary of the MA-construction

The lack of Spec(VP) position in the infinitival VP explains why genitive subjects and Px's are not possible in the MA-construction, and why the accusative object can only get a genitive feature from the matrix clause.

The MA-construction bears the syntactic category of a PP, and has the distribution of a locative complement. If there is no matrix object, both are predicated of the matrix subject. If there is a matrix object, the MA-phrase is predicated of the object (and a "nominal" locative PP may be predicated of the object; cf. fn.7).

If either a MA-phrase or a "nominal" PP is predicated of an NP, then that NP can bind an anaphoric suffix inside the PP. This suggests that "predication" involves c-command (as argued by Williams (1980)).

5.2.2 The TA-infinitive
5.2.2.1 The TA-infinitive without an overt subject

Typical matrix verbs that take the TA-construction include the following: yrittää 'try', haluta 'want', jaksaa 'have strength', viitsiä 'feel like', luvata 'promise',[8]

<u>uskaltaa</u> 'dare' and a number of modals (to be discussed in
Section 5.2.2.2).

In the TA-construction we get neither genitive
subjects nor Px's, just as in the MA-construction (although
we will discuss an exceptional verb class in Section
5.2.2.3). This suggests that the TA-construction does not
have a Spec(VP) position either. As with the MA-
construction, the form of the accusative object depends on
the matrix verb--which is expected, if there is no Spec(VP)
position:

     24a) Pekka yritti lukea   kirjan.
          NOM   tried   read-TA book-ACC/GEN

       'Pekka tried to read the book'

      b) Yritä lukea   kirja!
         try   read-TA book-ACC/NOM

       'Try to read the book!'

Since no genitive feature is base-generated in the
infinitival VP (due to the lack of the Spec(VP) position),
the only way to get a genitive suffix for an object would
be from the matrix Spec(VP)--and there is no genitive
feature in the matrix VP in (24b).

Since the VP in (24a) has a genitive feature, we get
the genitive suffix on the accusative object of the
infinitive.

Given the three converging pieces of data in this simple TA-variant—lack of genitive subjects, lack of Px's, and lack of infinitival-internal ACC/GEN suffix—I will assume that the TA-construction does not have a Spec(VP) position (at least in the simple variant under discussion), any more than the MA-construction does.

Not having a Spec(VP) position explains the similarities in case assignment and in the Px/genitive subject domain between the MA-construction and the TA-construction (while other infinitivals differ from these two, as we shall see). The two constructions differ in at least two ways: (i) a TA-phrase cannot be fronted to COMP (unlike a MA-phrase), and (ii) the two constructions have a different distribution.

Consider the following attempt to raise a TA-phrase to COMP:

25a) Jukka yritti varastaa suklaata.
     NOM   tried steal-TA chocolate-PAR

   'Jukka tried to steal chocolate'

  b) [Suklaatako]   Jukka yritti varastaa []?
     chocolate-PAR-Q

   'Was it chocolate that Jukka tried to steal?'

  c)?[Varastaako] Jukka yritti [] suklaata?
     steal-TA-Q

   'Did Jukka try to steal chocolate?'

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d)*[Varastaa(ko) suklaata(ko)]   Jukka yritti []?
   steal-TA-Q   chocolate-PAR-Q

e)?*[Suklaata(ko) varastaa(ko)] Jukka yritti []?

   ('Was it to steal chocolate that Jukka tried?')

Questioning the object of the embedded verb is perfectly
fine, in (25b). Raising the infinitival verb in (25c) is
not perfect, but fairly good (raising an intransitive verb
seems to be easier, so the problem (25c) may be the
stranded object).

     Fronting the whole TA-phrase is not possible, as
shown in (25d) and (e). Recall (Section 5.2.1.5) that
raising a MA-phrase without an internal word order change
was also not possible, i.e. sentences comparable to (25d)
were not very good. However, with the MA-construction
raising was possible if the object preceded the verb; even
this option is not available for the TA-construction, as
shown by (25e).

     I would like to suggest that this difference in
raising possibilities between the two constructions stems
from the MA-construction being a PP (and thus "frontable",
just as other PPs), while the TA-construction bears some
other syntactic category, presumably a non-nominal
category.[9] The TA-infinitive has one fewer morphemes than
the MA-infinitive; I would like to suggest that the TA-

infinitive differs from the MA-infinitive in lacking a P:

```
26)                 V' (=VP)
                   [TA]
                  /    \
                 V      NP
                       [PAR]
```
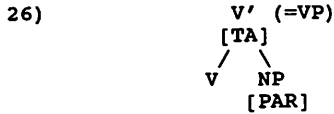
Thus, the category of a TA-phrase is the same category as what the abstract P takes as its complement in the MA-construction (and the internal structure of this phrase is identical in the two constructions):

```
27)                 PP
                   /  \
                  P    V'  (=VP)
                      [MA]
                      /   \
                     V     NP
                          [PAR]
```
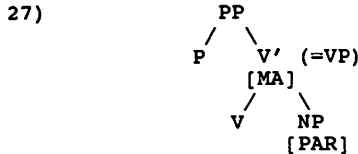
The two structures in (26) and (27) capture the similarities between the two constructions. As was suggested, the lack of a Spec(VP) node explains the lack of genitive percolation internal to the infinitival phrase, as well the lack of Px's.[10]

Assuming that of the maximal projections at least NP and PP can be fronted to COMP, but that a VP cannot be fronted, the lack of a PP "layer" in (26) is the crucial factor in preventing a TA-phrase from moving.

The second difference between the two constructions
has to do with distribution. It was suggested that the MA-
infinitival has the distribution of a locative PP. The TA-
construction clearly does not have such a distribution.
The TA-infinitival cannot be "predicated" of direct objects
the way the MA-infinitival can. It can only be
"predicated" of the subject (the same way that the simple
MA-construction was). Furthermore, if a sentence contains
both a TA-infinitive and a MA-infinitive, the TA-
infinitive has to usually precede the MA-infinitive (cf.
Vilkuna (1989:212).

I would like to suggest that the TA-infinitival
basically has the distribution of a direct object. It
cannot be "predicated" of a direct object, any more than a
nominal direct object can. It typically precedes the MA-
infinitive, because direct objects typically precede
locative phrases.

The suggestion is, then, that a TA-infinitival occurs
in the object position of a verb, but it bears the syntactic
category of a VP.

The verbs that subcategorize for a MA-complement
typically cannot take a TA-complement, nor do they regular
direct objects. Some of these verbs were käydä 'go;visit',

menn_ä 'go', _tulla_ 'come', _olla_ 'be'; also _tyytyä (ILL)_
'agree (with)', _ryhtyä/ruveta (ILL)_ 'begin'.

Unlike the matrix verbs taking a MA-complement, verbs
that take a TA-complement typically may take a direct
object instead (although possibly with a slightly different
reading of the matrix verb). Consider the following
examples:

    28a) Pekka yritti lukea   kirjan.
         NOM   tried read-TA book-ACC/GEN

        'Pekka tried to read the book'

      b) Pekka yritti uutta   tyyliä.
         NOM   tried new-PAR style-PAR

        'Pekka tried a new style'

    29a) Maija koettaa aina   ymmartää   ystäviänsä.
         NOM   tries   always understand-TA friends-3Px

        'Maija always tries to understand her friends'

      b) Seija koetti housuja   kaupassa.
         NOM   tried   pants-PAR store-INE

        'Seija tried on pants at the store'

    30a) Virpi halusi oppia   ruotsia.
         NOM   wanted learn-TA Swedish-PAR

        'Virpi wanted to learn Swedish'

      b) Anna halusi minun kirjani.
         NOM wanted my   book-1SGPx

        'Anna wanted my book'

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31a) Raija pelkää   tulla   meille.
     NOM   is-afraid come-TA we-ALL

     'Raija is afraid to come to our place'

  b) Jussi pelkää   pimeää.
     NOM   is-afraid darkness-PAR

     'Jussi is afraid of darkness'

32a) Liisa lupasi   tuoda   syntymäpäiväkakun.
     NOM   promised bring-TA birthday cake-ACC/GEN

     'Liisa promised to bring a birthday cake'

  b) Ritva lupasi   kaikenlaista juovuspäissään.
     NOM   promised all-kind-PAR while-drunk

     'Ritva promised all kinds of things while drunk'

Although many verbs that take the TA-infinitive also
take a direct object, some of the modals only take a TA-
infinitive; we will look at modals next (cf. Appendix I for
further examples of subcategorization).

5.2.2.2 Modals

Apart from the impersonal modal täytyy 'must'
(discussed in Section 3.3.2.4.4), modal verbs in Finnish
can be categorized as either taking the MA-infinitive or
the TA-infinitive, and otherwise behaving like any of the
other verbs taking one of these infinitival complements.

There are two 'modal' verbs--<u>pystyä</u> and <u>kyetä</u> (both 'to be able to')--that take the MA-infinitival with illative case ('to'); as expected, they also allow a 'real' PP in the illative case (although apparently only with abstract nouns, for some reason):

> 33a) Jukka pystyy/kykenee opettamaan /*opettaa.
>   NOM   is-able-to   teach-MA-ILL   teach-TA
>
>   'Jukka is able to teach'
>
>   b) Jukka pystyy/kykenee hyvään /*hyvää
>   NOM   is-able-to   good-ILL PAR
>
>   'Jukka is capable of good (things)'

With these verbs, the TA-infinitive is impossible, as well as a direct object (in partitive or accusative case).

Most verbs only take one or the other of the two infinitivals, not both. There is an exception: the verb <u>alkaa</u> 'begin' takes both:

> 34a) Jukka alkoi lukea   sanomalehteä.
>   NOM   started read-TA newspaper-PAR
>
>   'Jukka (sat down and) started to read a newspaper'
>
>   b) Jukka alkoi lukemaan   sanomalehteä.
>   NOM   started read-MA-ILL newspaper-PAR
>
>   'Jukka (resolved to) start reading a newspaper'

There is a semantic distinction between the two, although a subtle one. In this particular example, (34a) refers to a particular instance of reading a newspaper, while (34b)

could be more abstract--Jukka decided to start reading the
paper on a regular basis.

     We would expect that a nominal phrase is possible
with this verb, either in objective or in illative case.
However, illative case does not seem to be possible (while
partitive and accusative are):

     35a) Jukka alkoi   uuden   romaanin.
          NOM   started new-ACC/GEN novel-ACC/GEN

          'Jukka started a new novel'

        b)*Jukka alkoi opiskeluun.
           NOM   began study-ILL

          ('Jukka began studies')

With this verb the correspondence between a MA-construction
and a locative PP is not absolute.

     In addition to the two verbs referring to ability
that we have already seen, there is a third one: <u>osata</u> 'to
know, to be able to'. Unlike the two others, this one
takes a TA-infinitival, or a direct object (and the MA-
infinitive and a locative PP are impossible as
complements):

36a) Liisa osaa puhua   /*puhumaan viittomakieltä
     NOM   is-able speak-TA read-MA-ILL sign-language

   'Liisa knows how to speak sign language'

  b) Liisa osaa   viittomakieltä/*viittomakieleen.
     NOM   is-able sign language-PAR /ILL

     'Liisa knows sign language'

The two verbs of permission, _saada_ and _voida_, also take a TA-infinitive, and not MA:

   37) Pekka saa/voi syodä koko suklaan.
       NOM   may can eat-TA whole chocolate-ACC/GEN

      'Pekka can eat all of the chocolate'

saada with the TA-infinitive only means permission, while _voida_ implies either permission or ability (as English 'can').

These two verbs, with the modal reading, do not take a (non-infinitival) NP complement. _saada_ takes partitive and accusative objects, but with the different reading of 'receive'. _voida_ does not seem to allow nominal objects with any reading. In their modal interpretation these verbs would then only allow a VP complement, but not a direct object NP.

The modal-like verbs (mentioned earlier) _jaksaa_ 'have strength', _viitsiä_ 'feel like' and _uskaltaa_ 'dare' also

take the TA-infinitive, and appear not to take a non-infinitival NP object.

There is in general a striking correspondence between TA-complements and direct objects on the one hand, and MA-complements and locative PPs on the other. However, certain modal (or modal-like) verbs only take a VP-complement (or a PP with an embedded VP in the case of the verb alkaa 'begin'), but not a nominal "counterpart" of the complement (a direct object or a locative PP).

This suggests that although modal verbs (apart from täytyy) are morphologically identical to other verbs in Finnish, they nevertheless constitute a class of their own with respect to subcategorization possibilities.

5.2.2.3   The TA-infinitive with an overt subject

Although "predication of direct objects" (i.e. clear object control, as in the complex MA-construction) is not possible with the TA-construction, we have a complex variant of the TA-construction that looks very similar to the object-control MA-construction; this construction is only possible with the four verbs exemplified in (38):

```
38a) Liisa käski Jukan lukea    kirjan.
     NOM   asked GEN   read-TA book-ACC/GEN

     'Liisa asked Jukka to read the book'

  b) Matti antoi/salli/soi      hänen syodä   suklaata.
     NOM let/allowed/allowed his-GEN eat-TA chocolate

     'Matti let/allowed him/her (to) eat chocolate'
```

The only obvious difference between this variant and the simple variant of the TA-construction is that there is an overt genitive NP which appears to act as the subject of the infinitival in this varian. This NP is not obviously an object of the matrix verb, since no verb in Finnish takes a genitive NP object (where even the pronouns have a genitive suffix).

Since we have an overt genitive "subject" in the complex TA-construction and not in the simple variant, the obvious structural difference between the two would be the presence or absence of a Spec(VP) node.

However, the two other characteristics associated with the Spec(VP) position are not present in this construction: it has no Px's, and there is still no possibility of getting a genitive suffix on an accusative object within the infinitival phrase. The form of the accusative object is still dependent on the matrix verb, as it was with the simple TA-construction:

39a) Matti antoi Jukan syodä suklaan.
    NOM   let   GEN   eat   chocolate-ACC/GEN

'Matti let Jukka eat the chocolate'

b) Anna Jukan syödä suklaa   /*suklaan!
   Let   GEN   eat   chocolate-ACC/NOM   ACC/GEN

'Let Jukka eat the chocolate!'

On the other hand, as with the modal _täytyy_, having a Spec(VP) position does not guarantee getting a genitive suffix on the accusative object. With _täytyy_, although a Spec(VP) position is base-generated (with a genitive feature), the genitive feature is "used up" by the subject--which shows up in genitive case (cf. Section 3.3.2.4.4).

I would like to propose, then, that the maximal projection of the complex TA-construction contains a Spec(VP) position, as follows (note that this tree is identical to the D-Structure tree of a VP in a tensed sentence, except for the feature [MA] on the VP):

```
40)                V'' (=VP)
                  [MA]
                 /   \
             Spec     V'
             [GEN]   /  \
                    V    NP
                       [PAR]
```
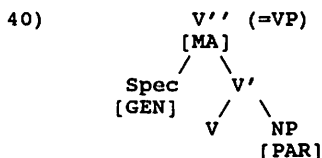
That is, compared to the simple TA-construction, the complex TA-construction has in addition a Spec(VP) position. As always, this position has the genitive

feature. Unlike in tensed sentences, however, the subject remains in the Spec(VP) position, and it ends up with genitive case. Since the subject "uses up" the genitive feature, no genitive percolation can occur--unless a genitive feature percolates from the matrix clause, as in (39a) above.

The only problem in positing a Spec(VP) position in this complex TA-construction is the lack of Px's in this construction. In the subsequent sections I will argue that the three infinitival constructions that have Px's also have an NP node. Given this, all apparent instances of a Px on a V in Finnish really involve the Px ending up on a N head, as we shall see.

To round up the picture, consider the binding data from the complex TA-construction:

    41a) Äiti-i   käski Matin-j siivota   huoneensa-i/j
         mother-NOM asked GEN   clean-PAR room-3Px

        'Mother asked Matti to clean up his/her room'

      b) Seppo-i antoi Jukan-j käyttää laskukonettaan-i/j
         NOM   let   GEN   use-PAR calculator-PAR-3Px

        'Seppo let Jukka use his calculator'

Binding either an accusative or a partitive object of the infinitive is ambiguous in these sentences: either the matrix subject or the infinitival genitive subject can bind

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the anaphoric suffix. Thus, the genitive NP of the
infinitival c-commands the infinitival object; this is
consistent with treating the genitive NP as the subject of
the infinitival.

5.2.3   Brief summary of the two non-clausal constructions

The MA-construction bears the syntactic category of a
locative PP (as suggested by the case marking), with an
embedded VP. The VP does not have a Spec(VP) position.

The "MA-PP" is predicated of a matrix object, if
there is one (complex MA-construction). If there is no
matrix object, the MA-infinitival is predicated of the
matrix subject (simple MA-construction).

The TA-construction bears the category VP, which
appears to occupy the syntactic position of a direct
object. With most verbs the VP does not have a Spec(VP)
position (simple TA-construction), but with an exceptional
class of 'let'-type verbs, the VP has a Spec(VP) position
in which a genitive subject occurs (complex TA-
construction).

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5.3 The clausal infinitivals

The two constructions to be discussed in this
section--the temporal adjunct and the clausal complement
construction--share a number of properties that the two
non-clausal infinitivals did not have. They both occur
with genitive subjects and with possessive suffixes (Px's).
They have a separate passive form. They have a separate
form for a "present tense" and another one for "past
tense". They are more independent of the matrix verb with
respect to object marking than the non-clausal infinitivals
were. In short, they are very sentence-like.

Although the clausal infinitival exhibit properties
typically found in tensed sentences, they still lack the
defining characteristics of an IP in Finnish. They do not
permit the negative verb, the auxiliary verb olla, nor a
nominative subject. They clearly do not have a CP.

According to the solution to be proposed here the
clausal infinitivals do not have an IP any more than the
non-clausal infinitivals did. This explains why the IP-
properties are not exhibited, and why a CP is not possible.

In order to capture the parallelism between these
infinitivals and tensed sentences, I would like to suggest

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that the infinitivals have an NP "layer", corresponding to the IP "layer" of tensed sentences. The Spec(NP) position will correspond to the Spec(IP) position in tensed clauses, in that in both cases the subject will raise to that position. The N position will correspond to the INFL position in tensed clauses, in that it will contain the tense/aspectual information, and the verb will raise to N (as it would to INFL). As with IP, the NP will be licenced at M-Structure, by having elements from VP move into it during affix-based movement.

5.3.1 Temporal adjunct
5.3.1.1 Basic data

Consider some examples of the temporal adjunct (with unanalyzed infinitival forms):

    42a) Pekan lukiessa kirjaa
         GEN   read(INF) book-PAR

       'while Pekka (was) reading a book'

      b) Pekan luettua   kirjaa
         GEN   read(INF) book-PAR

       'Pekka having been reading a book;
          after Pekka had been reading a book'

As already mentioned, the temporal adjunct has two tenses, past and present (although morphologically different from

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the past and present tenses in the sentential domain). The present tense form consists of the verb stem followed by the suffix -e-, followed by the inessive case suffix, e.g. in (42a). The past form consists of the verb stem with the past participial (passive) suffix -ttu-, followed by the partitive case suffix, in (42b).

The examples given here have a partitive object, but as with all verbs in Finnish, if completion is implied the object shows up in the accusative case. We will discuss the form of the accusative shortly.

Instead of a genitive subject, as in (42) above, the subject of the infinitive can be expressed as a possessive suffix on the infinitival verb. Just as in the possessive construction, if the genitive NP is a human pronoun, a Px occurs suffixed on the head (here V).[11]

```
43) hänen lukiessaan      /luettuaan        kirjaa
    his    read-E-INE-3Px  read-TTU-PAR-3Px book-PAR

    while he (was)/after he (had been) reading a book'
```

If no genitive phrase occurs, a Px is obligatory. Since Px's are anaphors (cf.Ch.4), they have to be bound within an IP:

44a) Pekka-i katseli TV:ta lukiessaan-i sanomalehteä.
NOM   watched TV-PAR read-E-INE-3Px newspaper

'Pekka watched TV while reading the newspaper'

b) *Katselin   TV:ta lukiessaan sanomalehteä.
watched-1SG

('I watched TV while he read the newspaper')

c) Katselin TV:ta hänen lukiessaan sanomalehteä.
his-GEN

'I watched TV while he was reading the newspaper'

The 3rd person Px in (44a) is bound by the matrix subject. Sentence (44b) is impossible, since the anaphoric Px does not have a binder. In (44c), a genitive binder is available, and the sentence is fine.

Thus, with respect to the behavior and co-occurrence of genitive NPs and Px's, the temporal adjunct behaves the same way as the possessive construction does. With full NPs and non-human pronouns, a Px is impossible, while a Px occurs with human pronouns. A Px can occur without a genitive NP, but it has to be bound within the IP.

Marking an accusative object within the temporal adjunct seems to be independent of the matrix verb; this suggests that there is a way of getting a genitive suffix on ·an accusative object from inside the infinitival. Consider the following examples, where the matrix Spec(VP)

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does not have a genitive feature, yet we find a genitive

suffix on the infinitival object:

> 45a) Kaske Jukan tulla ulos hänen luettuaan kirjan.
>   ask   GEN   come-TA out his read-INF-3Px ACC/GEN
>
>   'Ask Jukka to come out after he has read the book'

> b) Myytyäsi puseron sinun täytyy kirjoittaa kuitti.
>   sell-2SGPx blouse your must   write-TA   receipt
>   ACC/GEN   ACC/NOM
>
>   'After selling a blouse, you must write a receipt'

> c) Heidän tuotuansa oluen,   siellä juhlittiin.
>   their bring-3Px beer-ACC/GEN there celebrate-PAS
>
>   'After they brought the beer,
>   (people) celebrated there'

The source for the ACC/GEN objects in these examples cannot

possibly be the matrix clause, since the matrix clause in

these examples has no genitive feature (since there is no

nominative subject).

5.3.1.2 The structure of the temporal adjunct

    As outlined in the introduction, I would like to

suggest that the temporal adjunct consist of a VP embedded

in an NP. The question to be resolved is whether the

category of this construction is NP, or whether the NP is

embedded under some further category.

Both of the two tenses of the temporal adjunct have a case suffix, inessive in the present tense and partitive in the past tense. This could mean that the temporal adjunct is of the category PP, with the case suffix as the head P. However, since the two aspects have different case suffixes, and since there does not seem to be any reason to think that those suffixes reflect a syntactic (or semantic) position in which this construction occurs, I will treat the case suffixes as being part of the head-N (with the tense/aspect marker).

Now consider the following D-Structure representation for the sentence <u>Jukan</u> <u>luettua</u> <u>kirjaa(PAR)</u> 'after Jukka had been reading the book':

```
46)              NP
             /  \
          Spec   N'
          [GEN] /  \
               N     VP
               |    /  \
           -ttua Spec   V'
                 [GEN] /  \
                   |   V    NP
                  NP   |    [PAR]
                   | luke    |
                 Jukka      kirja
```
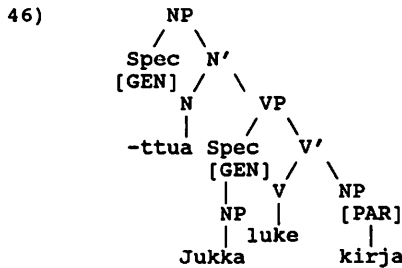
The VP is identical to the D-Structure VP of a finite clause; the V assigns its theta-roles to its arguments within the VP. This VP is embedded under an NP which corresponds to IP in a tensed clause.

The subject raises from the Spec(VP) to the Spec(NP).
It either gets genitive case in its D-Structure position,
or in the Spec(NP) where it ends up. I will leave open for
now the question of where the subject gets its genitive
case in this construction. What matters here is that one
of the genitive case features will remain unrealized.

The verb raises from V to N, corresponding to V-to-I
raising in the IP. The N here contains the tense/aspectual
information (as well as a partitive or inessive case
suffix).

If the verb implies completion, it (as always)
assigns accusative case to its object; and if the object is
a full NP (as in the tree in (46)), the NP has no
accusative suffix. Given the structure just proposed for
the temporal adjunct, the accusative object will get a
genitive suffix through genitive percolation (since there
is an "unused" genitive feature within the infinitival
phrase).

Having the NP "layer" in this construction explains
why Px's are possible. Consider the following D-Structure
tree for luettuaan kirjaa 'after (his) reading a book':

47)   NP
                   / \
                Spec   N'
                [GEN] / \
                     N   VP
                     | / \
                  -ttua Spec V'
                       [GEN] / \
                         | V   NP
                        NP | [PAR]
                         | luke |
                       [3Px]   kirja
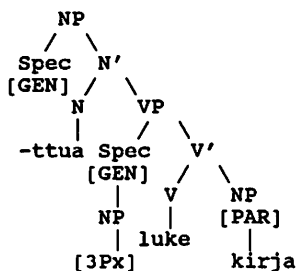
This tree only differs from the one with a full NP genitive
subject in that the subject base-generated in the Spec(VP)
is a Px.

We can now distinguish between the two genitive
features associated with the "subject" positions here.
Since Px's are in general analyzed as bearing genetive
case, I have to say that the subject in this construction
is getting its genitive case from the Spec(VP) position
(otherwise a Px could not be base-generated in that
position). This makes sense, given that there does not
seem to be a way to block the genitive from being realized
on the NP that is base-generated in the Spec(VP).

If this is correct, then the genitive case on an
accusative object within the temporal adjunct percolates
from the (highest) Spec(NP) position--regardless of whether
the matrix VP has an "unused" genitive feature or not. The
TA- and MA-infinitivals do not have such a position (nor
any other position for base-generating a genitive feature),

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and we never find an infinitive-internal genitive suffix on
an accusative object.

Let us now turn to the passive form of the temporal
adjunct.

5.3.1.3 Passive form of the temporal adjunct

The temporal adjunct has a passive counterpart,
marked with the morpheme -ta (this form is very literary):

     48a) Pekka oli koululla   Jukkaa haastateltaessa.
          NOM   was school-ADE PAR   interview-PASS(INF)

          'Pekka was at school while Jukka was being
                                            interviewed'

        b) Kirjastosta lainattaessa   kirjoja,
           library-ELA borrow-PASS(INF) books-PAR

                      ...täytyy olla lainastokortti.
                         must   have library-card-ACC/NOM

           'When books are being borrowed from the library,
            one needs to have a library card'

As in the tensed impersonal passive, one of the arguments
of the verb precedes the passive verb--the partitive object
in (48a), and the locative phrase in (48b). And, as the
tensed passive, this construction does not allow a subject
in any form (neither genitive subject nor Px).

We can give an analysis to this construction that is
exactly parallel to that of the tensed impersonal passive,
the only difference being the IP-NP difference. That is,
the passive of the temporal adjunct does not have a
Spec(VP) position. This explains the lack of subject in
any form (since it would have to be base-generated in the
Spec(VP) position). And, since there is no subject,
another argument of the verb occurs in the Spec(NP)
position, licencing this position at M-Structure--just as
one of the arguments of the tensed passive occurs in the
Spec(IP) position. Consider the following D-Structure tree
for the relevant part of sentence (48a) above:

```
49)          NP
           /    \
        Spec     N'
        [GEN]   /  \
               N    VP
               |    |
            taessa  V'
                   /  \
                  V    NP
                  |   [PAR]
           haastatel-  |
                     Jukka
```

The passive form of the temporal adjunct only has one
tense (present). In this structure, the passive morpheme
and the tense/aspectual morpheme share the N position (as
the passive morpheme and the tense morpheme presumably
share INFL in the tensed passive). As usual, the verb
raises to N.

The object in (49) gets partitive case in the usual
manner, through structural default case "assignment". The
case-marked object can then raise to the Spec(NP) position
to license this position, exactly as with sentential
passive (with respect to the Spec(IP) position).

Presumably the tree in (49) has an "extra" genitive
feature which can occur on an accusative object. However,
this construction does not seem to be able to have
accusative objects in any form, perhaps since the only
available tense is the present tense.[12] Compare the
following examples:

> 50a) Matin huomatessa Jukan oli jo liian myöhäistä.
>   GEN   notice-INF ACC/GEN was already too late
>
> 'It was already too late when Matti noticed Jukka'
>
> b)*Jukka/ *Jukan huomattaessa   oli jo ...
>   ACC/NOM ACC/GEN notice-PASS-INF was already
>
> ('It was already too late when Jukka was noticed')

The active temporal adjunct in the present tense seems to
be fine with an ACC/GEN object, in (50a). The passive
counterpart in (50b), however, is ungrammatical, regardless
of the form of the accusative object (while a partitive
object would be acceptable, subject to the interpretation
of the action as being progressive). I will leave open the
difference between the active and the passive with regard
to the feature [±COMPLETED].

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Apart from this last problem, the structures suggested for the active and passive forms of the temporal adjunct seem to work well. On the one hand, having an NP "layer" corresponding to the IP "layer" allows us to draw the parallels between the temporal adjunct and a tensed clause (the occurrence of subjects, two aspect forms, passive, and the accusative marking data). On the other hand, not having an IP explains why we do not get the typical IP behavior, including the occurrence of the negative verb, the auxiliary, and nominative subjects.

We have already seen the next construction in passing. It will be suggested that it has the same structure as the temporal adjunct.

5.3.2   The clausal complement construction
5.3.2.1   Overview of the data

The clausal complement infinitival is used with verbs of saying, knowing and believing, and perception verbs. Any verb (or almost any; cf. Appendix I) that can take a full sentence (=CP) as a complement also allows this structure. Some of the verbs that take this infinitival are sanoa 'say', väittää 'claim', valehdella 'lie', myöntää 'admit', kertoa 'tell', uskoa 'believe', arvata 'guess',

olettaa 'suppose', tietää 'know', haluta 'want' and nähdä
'see' (and other perception verbs).

    Consider the following examples (the internal
morphology of the infinitival suffix is left open for now):

    51a) Pekka uskoi   Jukan/hänen   lukevan   kirjaa.
         NOM   believed GEN   his-GEN read(INF) book-PAR

      'Pekka believed (that) Jukka/he was reading a book'

      b) Pekka uskoi   lukevansa   kirjaa.
         NOM   believed read(INF)-3Px book-PAR

      'Pekka believed (that) he (Pekka) was reading a book'

In (51a), the embedded genitive subject has to be disjoint
from the matrix subject (due to Condition (B)/(C) of the
Binding Theory). In (51b) the suffix has to be coindexed
with the matrix subject (or some other c-commanding NP
within the IP, due to Condition (A) of the Binding Theory).

    Although possessive suffixes occur in the clausal
complement construction, the distribution of the Px's
differs somewhat from that of the Px's in the possessive
NPs and in the temporal adjunct construction. In the
clausal complement infinitival, overt genitive subjects and
Px's occur in complementary distribution: either we get a
genitive NP, as in example (51a) above, or we get a Px, as
in (51b). Even in the case of human pronouns, the two

cannot co-occur. Table 5.3 provides a summary of the
distribution of Px's.

TABLE 5.3. Px's in infinitivals and in NPs.

Construction:	Px alone?	GEN NP alone?	together?
MA-infinitive	no	no	no
TA-infinitive	no	yes	no
possessive NPs	yes	yes	yes
temporal adjunct	yes	yes	yes
clausal compl.inf.	yes	yes	no

    The last column in Table 5.3 refers to a genitive NP
and an agreeing Px occurring in the same phrase. Recall
that this combination is only possible when the genitive NP
is a human pronoun.

    Like the temporal adjunct, this construction has
two tense/aspects, past and present. The above examples in
(51) are of the present variant. Consider the past
variant:

        52a) Pekka uskoi   Jukan/hänen lukeneen   kirjaa.
             NOM   believed GEN   his read-PAST(INF) book-PAR

           'Pekka believed (that) Jukka/he had been reading
                                                     a book'

        b) Pekka uskoi   lukeneensa   kirjaa.
           NOM   believed read-PAST(INF)-3Px book-PAR

           'Pekka believed (that) he (Pekka) had been
                                         reading a book'

The morphology of the infinitival verb in this construction consists of the following: STEM + va/nut + GEN (or Px). -van is the suffix for the non-past form, and -neen for the past form.[13] That is, the infinitival verb in this construction occurs in genitive case for both tenses (we shall see that this is also the case for the two passive forms of this infinitival).

The examples so far give the object in partitive case. The past "tense" forms with accusative case predictably look as follows, corresponding to the examples in (52):

```
53a) Pekka uskoi    Jukan/hänen lukeneen  kirjan.
     NOM   believed GEN    his   read(INF) ACC/GEN

   'Pekka believed (that) Jukka/he had read the book'

  b) Pekka uskoi    lukeneensa   kirjan.
     NOM   believed read-INF-3Px book-ACC/GEN

   'Pekka believed (that) he (Pekka) had read the book'
```

In these sentences, then, the infinitival verb implies completion, and--as always--the object is in accusative case. Note that we cannot tell, based on objective case, whether the matrix verb implies completion or not, since the matrix verb does not have a direct object in objective case.

As with the temporal adjunct, examples can be
constructed where the accusative object gets a genitive
suffix, although the matrix VP does not have a genitive
feature. Compare (54a) to the MA-construction in (54b) and
the TA-construction in (54c):

> 54a) (?)Meidän täytyy muistaa Pekan maksaneen aterian.
>   our   must remember-TA GEN pay(INF) meal-ACC/GEN
>
>   'We have to recall (that) Pekka paid for the meal'
>
>   b) *Meidan täytyy pyytää Pekkaa maksamaan aterian.
>   our   must ask-TA PAR pay-MA-ILL meal-ACC/GEN
>
>   ('We have to ask Pekka to pay for the meal')
>
>   c) *Meidän täytyy maksaa   aterian.
>   our   must   pay-PAR meal-ACC/GEN
>
>   ('We have to pay for the meal')

There is a clear contrast between (54a) and (54b)-(c).
What makes sentences (54b) and (c) ungrammatical is the
form of the infinitival object. _ateria_ 'meal(ACC/NOM)'
would be the grammatical form, since the matrix VP does not
have a genitive feature (since there is no nominative
subject). To the extent that (54a) is good, the genitive
suffix is possible on the accusative subject, although the
matrix Spec(VP) does not have a genitive feature. As in
the temporal adjunct, the genitive suffix would have to be
coming from inside the infinitival clause.

The judgments on the data on accusative marking in
the clausal complement construction are not very clear. We
just saw that although the matrix verb does not contain a
genitive feature, one can occur on the embedded object.
However, in such a case, <u>not</u> having a genitive suffix is
also possible:

> 55)(?)Meidän täytyy muistaa Pekan maksaneen   ateria.
>   our must remember-TA GEN pay(INF) meal-ACC/NOM
>
>   'We have to remember (that) Pekka paid for the meal'

Sentences (55) and (54a) above are identical except for the
suffix on the embedded object. Both sentences are slightly
awkward.

Thus, when the matrix VP does not contain a genitive
feature, the object of the infinitive may or may not occur
with a genitive suffix (although both options are clumsy).
However, when the matrix VP has a genitive feature, a
genitive suffix is obligatory:

> 56) Jukka muisti Pekan maksaneen aterian/*ateria.
>   NOM remembered GEN pay(INF) ACC/GEN ACC/NOM
>
>   'Jukka remembered (that) Pekka paid (for) the meal'

Thus, the clausal complement seems to be "ambiguous" with
respect to genitive percolation: it can behave the same way
as the temporal adjunct (ACC/GEN independent of matrix
verb) or it can behave the same as the non-clausal
complements (ACC/GEN only if matrix VP has genitive

feature). Table 5.4 summarizes the genitive percolation data in infinitivals.

TABLE 5.4. Genitive percolation in infinitivals.

Environment:	TA	MA	temp.	CC
GEN feature in matrix clause	yes	yes	yes	yes
no GEN feature in matrix	no	no	yes	y/n

5.3.2.2 The structure of the clausal complement

We have seen two differences between the temporal adjunct and the clausal complement: (i) the clausal complement infinitival does not allow both a Px and a (human) genitive pronoun, while the temporal adjunct does; (ii) an accusative object in the clausal complement does not have to have a genitive suffix, if the matrix clause does not contain a genitive feature (while the accusative object in the temporal adjunct always seems to have a genitive suffix).

Regardless of these differences, I would like to propose the same structure for the clausal complement construction as I did for the temporal adjunct. Consider the following D-Structure representation of <u>Jukan lukevan kirjaa</u> 'Jukka reading a book':

57)
```
              NP
             /  \
          Spec   N'
          [GEN]  / \
                N   VP
                |  /  \
             -van Spec   V'
                  [GEN]  / \
                   |    V   NP
                   NP   |  [PAR]
                   |  luke-  |
                 Jukka    kirja
```
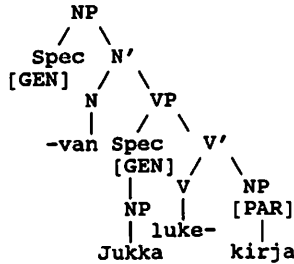
Both the tense/aspectual suffix and the genitive suffix
occur in N, as in the clausal complement, and the verb
raises to this position. The subject _Jukka_ raises to the
Spec(NP) position.

I will leave open the problem of the two differences
between the temporal adjunct and the clausal complement
construction, except to suggest that the differences may
have to do with the fact that the clausal complement can be
thought of as an argument of the matrix verb, while the
temporal adjunct is clearly an adjunct.[14]

Having the same structure for the two "clausal"
infinitival constructions captures the generalization that
both have genitive subjects and Px's, and two aspects.
Both constructions also have a passive form; we will look
at the passive counterpart of the clausal complement
infinitival next.

5.3.2.3 Passive form of the clausal complement

    Consider the following examples of the passive form
of the clausal complement infinitival (which is rarer in
spoken language than the active forms discussed so far,
just as with the passive of the temporal adjunct):

    58a) Liisa haluaa Seijan vietävän   kotiin.
         NOM   wants ACC/GEN take(INF)-PASS home

        'Liisa wants Seija to be taken home'

      b) Maija väitti opettajaa armottomasti haukutun.
      NOM claimed teacher-PAR ruthlessly curse(INF)-PAS

    'Maija claimed the teacher (had been) cursed ruthlessly'

      c) Pekka uskoo koulussa opetettavan matematiikkaa.
         NOM believes school-INE teach(INF)-PASS
                                         mathematics-PAR

      'Pekka believes mathematics is being taught at school'

As in the active, the passive form of the clausal
infinitival has a genitive suffix. Between the stem and
the genitive suffix, we find one of the two passive
participial morphemes--_-tava_ for the present aspect (cf.
_-va_ in active), in (58a) and (c); _-ttu_ for the past (_-nut_
in active), in (58b).

    Just as with the tensed passive and the passive of
the temporal adjunct, the infinitival passive cannot have
an overt subject. And, as in the sentential (tensed) and
temporal adjunct domain, one of the complements of the

verbs precedes the verb: the accusative object in (58a),
the partitive object in (58b), and the locative phrase in
(58c).

Given that the passive forms of the two clausal
infinitivals are so similar, I would like to again propose
that the structure of the passive differs from the active
in that no Spec(VP) position is base-generated (partial
tree for (58a) above):

```
59)          NP
          /     \
       Spec      N'
      [GEN]     /  \
               N    VP
               |    |
             tavan  V'
                   /  \
                  V    NP
                  |   [PAR]
                vie-   |
                      Seija
```
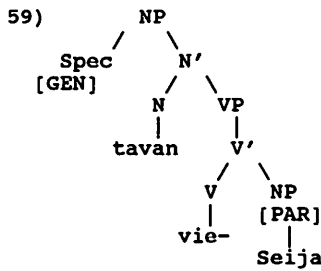
Again, the verb raises to N, and the object raises to
Spec(NP).[15]

5.3.3   Summarizing the two clausal infinitivals

    Apart from minor differencies, the temporal adjunct
and the clausal complement infinitival behave very
similarly.   Neither has an IP level.   This results in the
lack of the IP properties, including the fact that neither

construction blocks binding into the construction. Also, the negative verb, the auxiliary _olla_, and nominative subjects are impossible in both constructions.

Both constructions, however, have something very similar to an IP--an NP with the structure parallel to an IP. This structure gives rise to the clause-like properties of the two constructions: the existence of genitive subjects and Px's, the possibility of passive and the occurrence of two tense/aspect forms.

Next we will look at the rationale clause adjunct which is similar to the two clausal infinitival constructions just covered, but is also different in important ways.

5.4   The rationale clause adjunct

5.4.1 Comparing the temporal adjunct and the rationale
       clause adjunct

The main difference between the rationale clause adjunct and the temporal adjunct is that in the rationale adjunct a Px is obligatory and a genitive subject is impossible. Consider the following examples of the rationale clause construction:

60a) Menin   koululle   tavatakseni   Liisan.
    went-1SG school-ALL meet(INF)-1SGPx ACC/GEN

    'I went to school in order to meet Liisa'

  b) Jukka osti romaanin lukeakseen sen lomalla.
     NOM   bought novel read(INF)-3Px it vacation

     'Jukka bought a novel in order to read it
   on vacation'

    Table 5.5 below is a version of Table 5.3, including
the rationale adjunct.

TABLE 5.5. Px's in infinitivals and in NPs, with rationale
            adjunct.

Construction:	Px alone?	GEN NP alone?	together?
MA-infinitive	no	no	no
TA-infinitive	no	yes	no
possessive NPs	yes	yes	yes
temporal adjunct	yes	yes	yes
clausal compl.inf.	yes	yes	no
rationale adjunct	yes	no	no

    Although the rationale adjunct construction behaves
differently from the temporal adjunct and the clausal
complement construction, it is sufficiently similar as to
warrant trying to use the same tree as in the other two
clausal constructions. The following is the D-Structure

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representation of the relevant part of (60b), <u>lukeakseen</u>
<u>sen</u> 'in order for him to read it':

```
61)            NP
             /  \
          Spec  N'
         [GEN]  /  \
               N    VP
               |   /  \
            -akse Spec  V'
               [GEN]  /  \
                  |   V    NP
                 NP [+C] [ACC]
                  |   |    |
                [3Px] luke  se
```
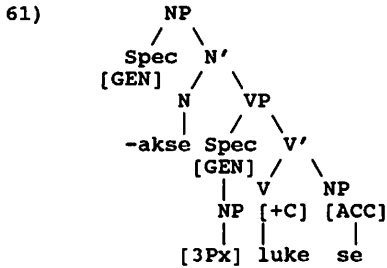
By the usual mechanisms, the subject Px (with its
genitive feature) raises from Spec(VP) to the Spec(NP).
The genitive feature base-generated in the Spec(NP)
position will percolate to the accusative object.

Between the stem and the Px in this construction
there are two morphemes: <u>(t)a</u> and <u>kse</u>. <u>(t)a</u> is the same
morpheme as occurs as the suffix of the TA-infinitive.
<u>-kse-</u> is the translative case suffix (the pre-suffix form
of it). As with the temporal adjunct, I have represented
the two suffixes together in N.[16]

The rationale clause is independent of the matrix
verb with respect to genitive marking on an accusative
object, as the following example shows:

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62) Sinun   täytyy ostaa   tämä romaani
    your-GEN must   buy-PAR this novel-ACC/NOM

        ...lukeaksesi   sen.
           read-TA-KSE-1SGPX it-ACC/GEN

    'You must buy this novel in order to read it'

As the matrix object tämä romaani shows, the matrix VP has
no genitive feature; yet, as with the temporal adjunct, the
infinitival object sen has a genitive suffix. The proposed
structure gives us this result.

    So far, the rationale adjunct behaves like the
temporal adjunct. The two constructions have the following
differences, however: the rationale adjunct does not have a
passive form; it does not have two aspectual forms; it does
not allow genitive subjects, and Px's are obligatory.

    I would like to suggest that one syntactic condition
imposed on this construction is the reason for at least the
main difference: the rationale clause is "predicated of"
the matrix subject (in the sense that e.g. the simple MA-
construction or a locative PP is). Before trying to
determine what counts as "subject", let me show how some of
the differences between the rationale clause and the
temporal adjunct follow from this constraint.

    If the rationale clause is always predicated of the
subject, then we never get overt genitive subjects of the

rationale infinitive, owing to the Binding Theory. Since
the subject would always c-command the rationale clause, an
overt pronoun in the rationale clause coindexed with the
subject would violate Condition (B) of the Binding Theory.

An overt pronoun that is not coindexed with the
subject would, on the other hand, violate the constraint of
having to be predicated of the subject imposed on this
construction. The only possible subject form in the
rationale clause is, then, the anaphoric Px, coindexed with
the subject.

In a similar vein, passive should not be possible,
since a passive construction would not have a Spec(VP)
position in which a subject could be base-generated--
assuming that this construction has to have a subject.

The lack of a tense/aspectual difference between
"past" and "present" may also have to do with the
interpretation of the construction. A rationale clause is
"future-oriented", and thus only one tense is needed (the
"present", or "non-past" tense).

So, stipulating that the rationale clause adjunct has
to be interpreted as being "predicated of" the subject
gives us at least some of the major differences between the
temporal adjunct and the rationale adjunct, allowing us to

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maintain the same structure for the two constructions (and the clausal complement construction).

5.4.2 Binding the Px in the rationale adjunct

Let us attempt to determine exactly what can act as a binder of the Px in the rationale clause. In a typical sentence with a nominative subject and an accusative or partitive object, the nominative subject can act as the antecedent, but not the object:

<pre>
63a) Maija-i auttoi Liisaa-j selviytyäkseen-i/*j
     NOM   helped PAR   pass-TA-KSE-3Px

                           ...kokeesta.
                              exam-ELA
</pre>

   'Maija helped Liisa in order to pass the exam'

<pre>
b) Tuija-i ylensi   Seijan-j pysyäkseen-i/*j
   NOM   promoted ACC/GEN stay-TA-KSE-3Px

                    ...työpaikassaan-i/*j
                       job-INE-3Px
</pre>

   'Tuija promoted Seija in order to stay in her job'

Although the pragmatics favors interpreting the matrix subject as the subject of the rationale clause in these examples, binding by the matrix object is impossible, while binding by the matrix subject is fine. Similarly, with the arguments of _esitella_ 'introduce':

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64) Tuija-i esitteli   Liisan-j Maijalle-k
    NOM   introduced ACC/GEN ALL

        ...tutustuakseen-i/*j/*k häneen
           familiarize-TA-KSE-3Px him/her-ILL

    'Tuija introduced Liisa to Maija in order to
                                get to know him/her'

Again, the pragmatically odd reading is the only possible
one, where the nominative subject binds the anaphoric Px.

    Recall the complex version of the MA-construction,
where the MA-infinitival was predicated of a matrix object.
Such a matrix object can bind the Px in a rationale clause:

65) Maija-i käski Liisaa-j auttamaan   Tuijaa-k
    NOM   ordered PAR   help-MA-ILL PAR

                ...selviytyäkseen-i/j/*k kokeesta.
                   pass-TA-KSE-3Px   exam-ELA

    'Maija ordered Liisa to help Tuija in order to
                                pass the exam'

In this example, either the subject of the matrix clause or
the partitive object of the matrix clause (of which the MA-
infinitival is predicated) can act as antecedents of the
anaphoric suffix in the rationale clause--but the object of
the MA-infinitive cannot (although it is pragmatically the
best option).

    A similar pattern can be found in the clausal
complement construction:

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66) Pekka-i väitti Jukan-j pettäneen   Seppoa-k
    NOM   claimed GEN   betray(INF) PAR

    ...ostaakseen-i/j/*k taulun.
       buy-TA-KSE-3Px   painting-ACC/GEN

    'Pekka claimed that Jukka had betrayed Seppo
                in order to buy the painting'

As above with the MA-construction, the matrix subject and
the subject of the clausal complement infinitival can be
interpreted as subjects of the rationale clause, while the
object of the infinitival cannot.

The generalization seems to be that the Px in the
rationale clause can be bound only by "subjects", where
"subject" is defined as an NP of which a VP is predicated.
For example, a partitive object of a matrix verb can act as
a binder only if an infinitival VP is predicated of the
binder (cf. the MA-construction example above).

5.5   Conclusion

In this chapter I have attempted to chart the
infinitival structures used in modern Finnish. There are
two ways of classifying the constructions that I have used:
phrasal/clausal and argument/adjunct.

The TA-infinitive and the MA-infinitive are phrasal
(or non-clausal) arguments. They do not have genitive

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percolation independent of the matrix VP (i.e. the embedded object only gets a genitive suffix if the matrix clause has an "unused" genitive feature). They do not allow Px's. They do not have tenses, and they do not have passive forms.

The temporal adjunct and the rationale adjunct are clausal adjuncts. They have genitive percolation that is independent of the matrix verb. They have Px's. The temporal adjunct has two tenses and a passive form.

The clausal complement infinitival is a clausal argument. Like the temporal adjunct, it has Px's and two tenses; it also has two passive forms. It appears to be somewhat more dependent on the matrix clause with respect to genitive percolation than the two adjunct constructions.

It was proposed that the phrasal/clausal distinction derives from the structure as follows: the clausal constructions have an NP "layer" corresponding to the IP "layer" of a tensed sentence, while the phrasal constructions consist of a VP (embedded under a PP in the case of the MA-construction).

Assuming none of the five constructions contain an IP, we can explain why the negative verb and the auxiliary verb are not possible in any of these constructions. Also,

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the fact that none of them ever have a nominative subject

follows from not having an IP. If the infinitival

constructions do not have an IP, we can also maintain that

IP is the only binding domain for Finnish (as well as being

the local domain for genitive percolation).

NOTES

1)   The distribution of locative PPs and MA-complements is
not identical, but analyzing the MA-infinitival as a
locative PP explains much of the data. Similarly, the TA-
infinitival does not have exactly the distribution of a
direct object, but of its characteristics make sense if it
is analyzed as an object.

2)   "Real" locative PPs are not restricted to "internal
locative cases" (inessive, elative, illative), but they
also occur in "external locative cases" (adessive,
ablative, allative). A verb will typically take either an
inessive PP ('in') or an adessive one ('at'), while the MA-
infinitive can only occur with the "internal" locatives.

3)   There is a third verb meaning 'begin', <u>alkaa</u>, which
also takes an illative MA-infinitive, but for some reason
does not take an illative non-verbal complement; I will
return to this verb.

4)   In Chapter 2 I discussed a complement fronting process
whereby complements moved to Spec(IP), if the subject had
been moved to COMP. The object preceding the verb in (11)
seems to be a related process, but I am not able to pursue
its properties here.

5)   There is much to be learned about the relationship
between a negative matrix verb and the object of an
embedded infinitival; I have to leave this area open.

6)   For some reason, only abstract nouns seem to be
possible in the construction in (16b) with the verb <u>estaa</u>
'prevent'.

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7) Predicating the MA-infinitival of a subject, when the matrix verb has an object seems not be possible (at least when the MA-verb has an object NP), unlike with locative PPs.

8) Unlike in English, 'promise' in Finnish seems not to allow a "double-object" construction:

    a) Lupasin   tulla.
        promise-1SG come-TA   'I promised to come'

    b)?*Lupasin Jukalle tulla.
                ALL   ('I promised Jukka to come')

    c) *Lupasin tulla Jukalle.

    d) Lupasin   Jukalle, että tulen.
        promise-1SG ALL   that come-1SG
        'I promised Jukka I would come'

A "goal" NP is not possible with the TA-complement, although it is fine in the tensed sentence in (d).

9) We can maintain the generalization that VPs do not occur in COMP if the TA-infinitive bears the category of a VP, while the MA-infinitive (which can occur in COMP) bears the category PP.

10) In the complex TA-construction we do find genitive subjects, as we shall see; it will be proposed that they have a Spec(VP) position.

11) Unlike in NPs, the Px is optional in the temporal adjunct, especially in spoken language.

     The 3rd person Px has two forms, -nsa and -Vn, which usually occur in free variation. For some reason, -Vn is preferred in the temporal construction.

12) We shall see that in the passive forms of the clausal complement infinitival (which, I will argue, has the same structure as the temporal adjunct) there is indeed an "extra" genitive feature that can occur on an accusative object (even when the matrix VP does not have one).

13)   When participles are used as adjectives (cf. Section 5.1) they occur in all nominal cases. The nominative suffix of a participle is <u>-nut</u>, and the genitive suffix is <u>-neen</u>.

14)   The fact that the head of this construction always occurs in genitive case may also have something to do with genitive percolation.

15)   The data on accusative marking in an embedded passive infinitival is murky.

16)   There does not seem any reason for positing a P node (which would take the NP as a complement) in this construction.

APPENDIX I

SUBCATEGORIZATION PATTERNS OF SELECTED VERBS

(A) Subcategorizing for nominal complements

- verbs marked with [V] also subcategorize for a verbal
complement (possibly with a different reading of the verb);
each of these verbs is also listed in (B) (the digit
following 'V' refers to one of the types of verbal
complement that this verb takes)

- case terms used:

PARtitive, ACCusative;
OBJective (refers to both partitive and accusative);
ABLative 'from', ALLative 'to' ("external locatives");
ELAtive 'from', ILLative 'to' ("internal locatives");
LOCative (one or more of the six locative cases)

- other abbreviations:

so. = someone
sg. = something

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(1) verbs that normally only take an accusative object in the affirmative singular:

(Note: In negative sentences and with a plural object, all of these verbs (can) take partitive case.)

    painaa 'weigh'
    maksaa 'cost'
    kestää 'last'
    juosta 'run'
    kävellä 'walk'
    uida 'swim'

    sanoa 'say (sg.)'   [V1]
    myöntää 'admit (sg.)   [V1]
    luvata 'promise (sg.)   [V1]
    todistaa 'prove (sg.)   [V1]

    tietää 'know (sg.)'   [V1]
    arvata 'guess'   [V1]
    uskoa 'believe (sg.)'   [V1]
    muistaa 'remember'   [V1]
    unohtaa 'forget'   [V1]
    ymmärtää 'understand'   [V1]

    nähdä 'see'   [V1]
    kuulla 'hear'   [V1]
    tuntea 'feel'   [V1]
    haistaa 'smell'   [V1]

    huomata 'notice'   [V1]
    löytää 'find'
    tavata 'meet'
    kutsua 'invite'

    tuntea 'know (so.)'
    osata 'know;be able to'   [V2]
    oppia 'learn'   [V4]
    hyväksyä 'approve (of sg.)'

    sallia 'allow'   [V3]

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(2) verbs that only take a partitive object (not accusative):

(Note: The object of most (or all?) of these verbs can occur in accusative case if something is predicated of the object, e.g. <u>Ihailit</u> <u>hänet(ACC)</u> <u>kuoliaaksi(TRAnslative)</u> 'You adored him to death' vs. *<u>Ihailit</u> <u>hänet</u> 'You adored him(ACC)'.)

```
muistuttaa 'resemble'
matkia 'imitate'

pelätä 'fear'             [V1]
ihailla 'adore'
rakastaa 'love'
vihata 'hate'

anoa 'beg'
vaatia 'demand'          [V1]
pyytää 'ask'             [V1]
toivoa 'hope for'        [V1]

katsella 'watch'
kuunnella 'listen'
tunnustella 'feel around'
koskettaa 'touch'
haistella 'sniff'

yrittää 'try on'         [V2]
kokeilla 'try'
koettaa 'try'

auttaa 'help (so.)'      [V5]
tukea 'support (so.)
kiittää 'thank (so.)'

opettaa 'teach (so. or sg.)' [V5]
tutkia 'do research (on sg.)'
opiskella 'study'

pelata 'play (a game)'
leikkiä 'play (with toys)'
soittaa 'play (an instrument'

hallita 'govern'
vartioida 'guard'

lyödä 'hit'
työntää 'push'
vetää 'pull'
raottaa 'open slightly'

jatkaa 'continue'
```

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(3) **verbs that take one NP in objective case (ACC or PAR depending on aspect):**

```
lukea 'read'
kirjoittaa 'write'          [V1]

syödä 'eat'
juoda 'drink'

avata 'open'
sulkea 'close'
sytyttää 'light up'
sammuttaa 'extinguish'

piirtää 'draw (a picture)'
maalata 'paint'

korjata 'fix'
luoda 'create'
rakentaa 'build'
kehittää 'develop'
synnyttää 'give birth to'
parantaa 'heal'

ampua 'shoot'
tappaa 'kill'
hajottaa 'scatter'
turmella 'destroy'

kertoa 'tell (sg.)'         [V1]

kuvitella 'imagine'         [V1]

alkaa 'begin'               [V2]
aloittaa 'begin'
lopettaa 'end'

haluta 'want'               [V1]

pakottaa 'draw (iron)'      [V5]
taivuttaa 'bend'            [V5]
kaivertaa 'engrave'
muotoilla 'shape'
```

(4) verbs that subcategorize for one NP in a lexical case (not objective), or possibly semantic case (case given in brackets):

(Note: I could not think of any instances where a verb subcategorizes for an NP inessive [in], adessive [at], or allative [to] case.)

```
    luottaa 'rely on'          [ILL]
    nojata 'lean on'           [ILL]
    uskoa 'believe in'         [ILL]
    turvautua 'trust'          [ILL]

    rakastua 'fall in love with' [ILL]
    tutustua 'get to know'     [ILL]
    tottua 'get used to'       [ILL]   [V4]
    suostua 'agree to'         [ILL]   [V4]

    pystyä 'be able to'        [ILL]   [V4]
    kyetä 'be able to'         [ILL]   [V4]
    ryhtyä 'begin'             [ILL]   [V4]

    osua 'hit (an aim)'        [ILL]
    tähdätä 'aim at'           [ILL]

    vastata 'answer (something)' [ILL]


    kieltäytyä 'refuse'        [ELA]   [V4]
    vetäytyä 'withdraw from'   [ELA]
    luopua 'release'           [ELA]
    irrottautua 'disengage'    [ELA]
    eristäytyä 'isolate'       [ELA]

    pitää 'like'               [ELA]
    tykätä 'like' (colloq.)    [ELA]

    haaveilla 'daydream'       [ELA]   [V1]
    uneksia 'dream about'      [ELA]   [V1]


    näyttää 'seem'             [ABL]   [V1]
    tuntua 'feel'              [ABL]   [V1]
    kuulostaa 'sound'          [ABL]
    vaikuttaa 'appear'         [ABL]   [V1]
```

(Note: the last four verbs typically have an AP complement.)

(5) verbs that subcategorize for two NPs:

(Note: The mutual word order of the ALL or ABL NP and the object NP is not clear.)

antaa 'give'	[ACC, ALL]	[V3]
lähettää 'send'	[ACC, ALL]	
ostaa 'buy for so.'	[ACC, ALL]	
esitellä 'introduce'	[ACC, ALL]	
ostaa 'buy from so.'	[ACC, ABL]	
saada 'receive'	[ACC, ABL]	[V2]
panna 'put'	[ACC, LOC]	[V5]
päästää 'release sg. from/to a place'	[ACC, LOC]	
käskeä 'order so. somewhere'	[ACC, LOC]	[V3]
korvata 'replace sg. with sg.'	[ACC, ADE]	
muistuttaa 'remind so. of sg.'	[PAR, ELA]	

(B) Subcategorizing for verbal complements

(Note: a number of important verbs in this section are extracted from Vilkuna [1989:208-209].)

-for each verb, I have tested whether it subcategorizes for the following verbal complements:

- full tensed sentence (S')

- clausal complement infinitival [abbreviated CC]
    (=NP-GEN infinitival subject + VAN/NEEN inf.)

- simple TA-inf. (matrix subject control, no inf.
    subject)

- complex TA-inf. (NP-GEN inf. subj. + simple TA-inf.)

- simple MA-inf. (matrix subject control, no inf.
    subj.)

- complex MA-inf. (NP-OBJ inf. subj. + simple MA-inf.)

- below I have only indicated the "positive" subcategorizations: if the verb is not listed as subcategorizing for one of the verbal complement types, then the verb does not subcategorize for that type

- if a verb takes more than one type of verbal complement, it is listed under each type of complement; such verbs are indicated by a number in brackets, which refers to the other possible verbal complement type (e.g. [2] referring to the simple TA-inf.).

- since any verb that takes an S' complement also takes a CC, these two are combined as type (1)

- cases used here:

ACCusative and PARtitive (the two objective cases);

INEssive 'in'; ELAtive 'from'; ILLative 'to' (the 'internal' locatives);

ADEssive 'at'; ABLative 'from'; ALLative 'to' (the 'external' locatives).

(1) verbs that subcategorize for S' and CC:

(Note: the first six verbs also allow an ALL 'to' NP
preceding the S' or CC (corresponding to 'him' in 'I told
him that she would come'); similarly, 'pyytaa' and
'vaatia' allow an ABL 'from' NP preceding the S' or CC
[corresponding to 'of him' in 'I demanded of him that she
come'].
The case in brackets refers to the typical case of a
NP complement that these verbs could take.)

    sanoa 'say'   (ACC)
    myöntää 'admit'   (ACC)
    kertoa 'tell'   (ACC)
    luvata 'promise'   (ACC)   [2]
    todistaa 'prove'   (ACC)
    kirjoittaa 'write'   (ACC)
    väittää 'claim'   (none)

    tietää 'know'   (ACC)   [2]
    arvata 'guess'   (ACC)   [2]
    uskoa 'believe'   (ACC)
    muistaa 'remember'   (ACC)   [2]
    unohtaa 'forget'   (ACC)   [2]
    ymmärtää 'understand' (ACC)   [2]
    kuvitella 'imagine' (ACC)
    olettaa 'assume'   (none)

    nähdä 'see'   (ACC)
    huomata 'notice'   (ACC)   [2]
    kuulla 'hear'   (ACC)
    tuntea 'feel'   (ACC)
    haistaa 'smell'   (ACC)

    haaveilla 'daydream' (ELA)
    uneksia 'dream'   (ELA)

    toivoa 'hope'   (PAR)
    haluta 'want'   (PAR)   [2]
    tahtoa 'want'   (?PAR)   [2]
    pelätä 'fear'   (PAR)   [2]

    pyytää 'ask'   (PAR)   [2] [5]
    vaatia 'demand'   (PAR)   [2] [5]

    näyttää 'seem'
    näkyä 'seem'
    tuntua 'feel; seem'
    kuulua 'sound; seem'
    vaikuttaa 'appear'

(Note: The last five verbs are raising verbs; the
CC does not have an overt subject with these verbs.)

(2) verbs that subcategorize for the simple TA-inf (i.e. subject control):

(Note: unlike with the S' and CC complements, the verbs 'luvata' (promise), 'pyytää' (ask) and 'vaatia' (demand) do not allow a Recipient/Source NP preceding (or following) the verbal TA-inf. complement.)

```
yrittää 'try'
jaksaa 'have strength'
viitsiä 'feel like'
uskaltaa 'dare'

osata 'be able to'
saada 'have permission to'
voida 'be allowed to'
alkaa 'begin'                    [4]
aikoa 'intend'                   [4]

luvata 'promise'                 [1]

haluta 'want'                    [1]
tahtoa 'want'                    [1]
pelätä 'fear'                    [1]

tietää 'know'                    [1]
arvata 'guess'                   [1]
muistaa 'remember'               [1]
unohtaa 'forget'                 [1]
ymmärtää 'understand'            [1]
huomata 'notice'                 [1]

pyytää 'ask'                     [1]
vaatia 'demand'                  [1]

täytyä 'must'
kannattaa 'be worthwhile'

pelottaa 'scare'
inhottaa 'hate'
kiinnostaa 'interest'
```

(Note: the last five verbs have non-nominative "subjects".)

----

(3) verbs that subcategorize for the complex TA-inf:

(Note: this is an exhaustive list.)

```
antaa 'let'
sallia 'allow'
suoda 'allow'
käskeä 'order'                   [5]
```

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(4) verbs that subcategorize for the simple MA-inf (subject control):

(Note: case of the MA-inf. indicated in brackets.)

mennä 'go'	[ILL]
olla 'be'	[INE]
tulla 'come from'	[ELA]
tulla 'come to'	[ILL]
käydä 'visit'	[INE]
lähteä 'leave'	[ILL]

pystyä 'be able to'	[ILL]
kyetä 'be able to'	[ILL]
oppia 'learn'	[ILL]

ryhtyä 'begin'	[ILL]	
alkaa 'begin'	[ILL]	[2]
aikoa 'intend'	[ILL]	[2]

suostua 'agree to'	[ILL]
tottua 'get used to'	[ILL]

kieltäytyä 'refuse'	[ELA]
lakata 'quit'	[ELA]

---

(5) verbs that subcategorize for the complex MA-inf (object control):

pakottaa 'force'	[ILL]	
taivuttaa 'persuade'	[ILL]	
kehottaa 'urge'	[ILL]	
panna 'compel'	[ILL]	
saada 'get(X to do)'	[ILL]	[2]

käskeä 'order'	[ILL]	[3]
pyytää 'ask'	[ILL]	[1]
vaatia 'demand'	[ILL]	[1]

auttaa 'help'	[ILL]
opettaa 'teach'	[ILL]

estää 'prevent'	[ELA]
kieltää 'deny'	[ELA]

NOMINAL AND VERBAL PARADIGMS

(A) Case paradigm of full NPs nouns (productive cases):

CASE	'book'	'books'	NOTES
Nominative	kirja	kirjat	basic form
Partitive	kirjaa	kirjoja	objective
Genitive	kirjan	kirjojen	
Essive	kirjana	kirjoina	'as'
Translative	kirjaksi	kirjoiksi	'(become) X'
Inessive	kirjassa	kirjoissa	'in'
Elative	kirjasta	kirjoista	'from'
Illative	kirjaan	kirjoihin	'to'
Adessive	kirjalla	kirjoilla	'at'
Ablative	kirjalta	kirjoilta	'from (surface)'
Allative	kirjalle	kirjoille	'to (surface)'

(B) Case paradigm of the human pronouns

CASE	I	you(sg)	he/she	we	you(pl)	they	who
NOM	mina	sina	han	me	te	he	kuka
PAR	minua	sinua	häntä	meitä	teitä	heitä	ketä
ACC	minut	sinut	hänet	meidät	teidät	heidät	kenet
GEN	minun	sinun	hänen	meidän	teidän	heidän	kenen
ESS	minuna	sinuna	hänenä	meinä	teinä	heinä	kenenä
TRA	minuksi	sinuksi	häneksi	meiksi	teiksi	heiksi	keneksi
INE	minussa	sinussa	hänessä	meissä	teissä	heissä	kenessä
ELA	minusta	sinusta	hänestä	meistä	teistä	heistä	kenestä
ILL	minuun	sinuun	häneen	meihin	teihin	heihin	keneen
ADE	minulla	sinulla	hänellä	meillä	teillä	heillä	kenellä
ABL	minulta	sinulta	häneltä	meiltä	teiltä	heiltä	keneltä
ALL	minulle	sinulle	hänelle	meille	teille	heille	kenelle

(C) The possessive suffix paradigm

```
----------------------------------------------------------------
(minun)  -ni        'my'
(sinun)  -si        'your(sg)'
(hanen)  -nsa/-Vn   'his/her'

(meidan) -mme       'our'
(teidan) -nne       'your'
(heidan) -nsa/-Vn   'their'
----------------------------------------------------------------
```

(D) Verbal paradigm for <u>lukea</u> 'read':

P/N	Present	Past	Present Perfect	Past Perfect
1SG	luen	luin	olen lukenut	olin lukenut
2SG	luet	luit	olet lukenut	olit lukenut
3SG	lukee	luki	on lukenut	oli lukenut
1PL	luemme	luimme	olemme lukeneet	olimme lukeneet
2PL	luette	luitte	olette lukeneet	olitte lukeneet
3PL	lukevat	lukivat	ovat lukeneet	olivat lukeneet

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