

**FEATURES AND CATEGORIES:  
Non-finite constructions in Finnish**

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FEATURES AND CATEGORIES:  
NON-FINITE CONSTRUCTIONS IN FINNISH

by

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A thesis submitted in conformity with the requirements  
for the degree of Doctor of Philosophy  
Graduate Department of Linguistics  
University of Toronto

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## Features and Categories: Non-finite Constructions in Finnish

Doctor of Philosophy, 1998

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This thesis explores the inventory of syntactic features that drives Finnish word order. It focusses on several non-finite constructions that manifest categorially inconsistent morpho-syntactic properties. The central assumption underlying this research is that such incongruities result from alternative combinations of cross-linguistically common syntactic features rather than from the presence of rare and exceptional functional categories. My main proposal is that lexical and functional syntactic features may combine to produce hybrid forms. I examine the nature of such feature complexes in different clause types in Finnish: main, finite and non-finite embedded and relative, and infinitival clauses.

This feature-based approach resolves problems in categorizing morphemes whose syntactic category affiliation has traditionally been difficult to determine. In most languages there are lexical elements that manifest morpho-syntactic properties associated with more than one lexical category as well as functional inflectional morphemes (e.g. participles, infinitives, modals). I analyze the Finnish forms as containing a hybrid category: a lexical feature ([N, V] or [N]) accounts for their nominal qualities, while a functional feature [Tense] explains their verbal and temporal characteristics. Consequently, I argue that changes in syntactic category take place not only through morphological derivation, but also within the syntactic component. This is possible under a view of morphological derivation as vocabulary insertion based on the syntactic feature matrices that surface at the end of the computational component.

The thesis is organized according to the traditional division of Finnish verb-based forms into finite, participial and infinitival. Chapter 2 sets the basis for contrasting finite and non-finite forms by providing an account of the syntactic feature content of main clause structure. This chapter also presents a structural analysis of the seemingly non-configurational word order of Finnish. Chapters 3 and 4 examine the present and past participle morphemes, and the infinitival morphemes *-ta*, *-de* and *-ma*. Each suffix occurs in several distinct constructions. My investigation identifies the syntactic features that produce the categorially incongruous properties of the forms, and provides a maximally unified account of each morpheme. Furthermore, the theoretical framework laid out in this thesis demarcates a research program for further study of similar elements in other languages.

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"Pooh knew what she meant, but, being a Bear of Very Little Brain, couldn't think of the words. When you are a Bear of Very Little Brain, and you Think of Things, you find sometimes that a Thing which seemed very Thingish inside you is quite different when it gets out into the open and has other people looking at it."

A.A. Milne, *The House at Pooh Corner*

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## Abbreviations

### A. NOMINAL

#### *NUMBER*

SG	Singular, unmarked form
PL	Plural, <i>-t/-i</i>

#### *PERSON*

1,2,3	Information contained in possessive suffixes. Third person singular and plural possessive suffixes are identical, and hence are indicated with '3Pos' only.
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#### *POSSESSION*

POS	Possessive suffixes <i>-ni</i> , 1SG, <i>-si</i> , 2SG, <i>-mme</i> , 1PL, <i>-tte</i> , 2PL, <i>-nsA</i> , 3person
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#### *CASE*

NOM	Nominative, unmarked form
GEN	Genitive <i>-n</i>
PAR	Partitive <i>-(t)A</i>
ACC	Accusative, unmarked form or <i>-n</i> (The ACC is used to refer to $\emptyset$ / <i>-n</i> -marked object cases, and <i>-t</i> accusative of pronouns. For non-pronominal DP's the case marking of objects is morphologically identical to nominative or genitive. Thus 'accusative' refers to the syntactic class of non-partitive objects.
ESS	Essive <i>-nA</i> , 'as'
TRAN	Translative <i>-ksi</i> , 'into' (change of state)
INE	Inessive <i>-ssA</i> , 'in'
ELA	Elicative <i>-stA</i> , 'from in'
ILL	Illative <i>-Vn/-hin</i> , 'to in'
ADE	Adessive <i>-llA</i> , 'on', 'at'
ABL	Ablative <i>-ltA</i> , 'from on'
ALL	Allative <i>-lle</i> , 'to on'
ABE	Abessive <i>-ttA</i> , 'without'
INS	Instrumental (in Finnish grammars labelled "instructive") <i>-n</i> 'with'

#### *COMPARISON*

COM	Comparative <i>-mpi</i>
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## B. VERBAL

### *TENSE/MOOD*

PRES	Finite present tense, orthographically unmarked (phonetically [-?])
PAST	Finite past tense <i>-i</i>
COND	Conditional <i>-isi</i>
POT	Potential <i>-ne</i>

### *AGREEMENT* (On finite verb forms)

1,2,3.SG	Singular 1SG <i>-n</i> , 2SG <i>-t</i> , 3SG <i>-V</i>
1,2,3.PL	Plural 1PL <i>-mme</i> , 2PL <i>-tte</i> , 3PL <i>-vAt</i>
AGR	Passive agreement marker <i>-Vn</i>

### *OTHER*

PASS	Passive <i>-(t)tA</i> (Active is unmarked default)
NEG	Negator <i>e-</i>
CAUS	Causative <i>-ttA</i>

### *NON-FINITE VERB MORPHOLOGY*

NUT	Past participle <i>-nUt/-nee</i>
VA	Present participle <i>-vA</i>
TA	Infinitive with <i>-tA</i>
MA	Infinitive with <i>-mA</i>
DE	Infinitive with <i>-de</i>

## C. MISCELLANEOUS

DEVN	Deverbal nominal <i>-minen</i>
IMP	Imperative <i>-kO</i> + AGR
NEG.IMP	Negative imperative verb <i>älä</i>
EMP	Emphatic clitic <i>-pA</i> , <i>-hAn</i>
Q	Question clitic <i>-kO</i>

### NOTES:

- Vowel harmony, consonant gradation and various other assimilation processes affect the phonological forms of Finnish lexical items. Vowel harmony alternates the vowel pairs a/ä, u/y and o/ö; consonant gradation weakens the geminate stops /pp/, /tt/, /kk/ to single stops, and a single stop to some more sonorant consonant, in a syllable ending in a consonant (for further details cf. e.g. Keyser and Kiparsky 1984, Cathey and Wheeler 1986, or any basic Finnish grammar such as Karlsson 1982). Beyond this acknowledgement, issues of segmental phonology will be ignored throughout the discussion.
- Intonational prominence is indicated throughout the thesis by underlining.

# CHAPTER 1

## INTRODUCTION

### 1.1. Goals

The central goal of this thesis is to examine the clause-level syntactic features in the computational system in Finnish. The ultimate objective of this undertaking is to identify the nature and constrain the number of such syntactic features cross-linguistically. The present investigation focuses on a set of non-finite constructions in Finnish. This inquiry brings to the forefront the issue of the representation of lexical categories, as well as the functional categories tense, negation, topic, focus and complementizer. Questions will be raised not only about how the morphological and syntactic levels of representation interact, but also about the interface between syntax and semantics.

#### 1.1.1. The main theoretical question

Chomsky (1981) outlined a view of X-bar theory according to which the lexical categories Noun, Adjective, Verb and Preposition are not taken as syntactic primitives, but are described as a system delineated by the features  $[\pm N]$  and  $[\pm V]$ <sup>1</sup>. Although Chomsky's idea of analyzing syntactic categories as bundles of smaller elemental components has been widely accepted, it is also possible to find instances of current research in which the category labels N, A, V and P are clearly utilized as independent atomic units. It is of course

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<sup>1</sup> The proposal that lexical categories break down to features is commonly attributed to Chomsky (1970). However, that work did not give any details of what such features should be.

reasonable to use category labels as a shorthand form to identify given feature bundles, so that lexical items of the type [+N, +V] are simply represented as A(djective). Nevertheless, once that step is taken, it is possible, and very easy, to forget the underlying assumption that the categorial specifications are not atomic. In this thesis I demonstrate that success in accounting for the syntactic structure of categorially ambivalent forms crucially relies on the identification of the exact feature content of nodes rather than on the more general category labels.

In addition to the lexical categories, syntactic structures are assumed to consist of functional categories. Bresnan (1970, 1972) posited a Comp node, to contain complementizers, and Chomsky (1981) suggested that the auxiliary category AUX should be taken as the category Infl. Functional categories are distinguished from lexical ones in that they are not defined by combinations of the feature [ $\pm$ N,  $\pm$ V], but by functional features such as [ $\pm$ wh] (Chomsky 1977, Lasnik and Saito 1984) or [ $\pm$ IMP] for Comp (Chomsky 1965, Cowper 1992, McGinnis 1993), or [ $\pm$ Tense] and/or [Agr(eement)] for Infl (Chomsky 1981). Pollock (1989) proposed, moreover, that each of the features of Infl should be taken to head its own functional projection, so that the single IP projection is analyzed as consisting of, at least, the autonomous functional heads Agr, T(ense) and Neg(ation). Rizzi (1995) similarly suggested that the Complementizer projection be divided into several distinct autonomous categories, Force, Topic and Focus. These recommendations have inspired abundant subsequent research, in which numerous other functional projections have been proposed (e.g. Aspect, Event, Mood, Subordinator, Voice).

The ideal of such clear distinctions among different types of lexical categories, and between lexical and functional projections, is marred by the existence of lexical elements whose inconsistent featural characteristics appear to defy categorization. Here the issue of whether syntactic category labels are used to classify syntactic primitives or to identify feature combinations becomes particularly pertinent. Participles and infinitivals in many languages present a quintessential example of this problem, and cross-linguistically much, if not most, research into the syntax of such non-finite elements has centred on an attempt to pin down their syntactic category.

Participles in many languages, for instance, have proven hard to analyse since they often share properties with more than one syntactic category and also confuse lexical and functional traits. Although a relatively universal definition of participles as "words derived from verbs and used as adjectives" (Crystal 1985) appears to pick out a relatively uniform class of lexical items, the derived forms become troublesome when, in many constructions, they retain some of their verbal qualities (e.g. German, in Luscher and Schäpers 1983, Latvian, in Eiche 1983, Spanish, in Turk et al. 1981). Participles may display characteristics of various syntactic categories: they are found bearing nominal, adjectival and/or verbal morphological markings, and they appear in verb, noun, adjective and/or adverbial positions. Some discrepancies become apparent when a participial morpheme is used in more than one construction; other incongruities can be observed within a single form. In addition to their elusive status with regard to lexical categorization, participles generally have semantic content of temporal or aspectual nature, suggesting a relationship with the functional category Tense. The fact that participles are categorized separately from regular tense markings, however, indicates that these elements do not necessarily share any characteristics of Tense heads, beyond the presence of temporal meaning. Participles hence pose a two-pronged puzzle: their lexical category affiliation is indeterminate, and they appear to belong simultaneously to both a lexical and a functional category.

Infinitives are generally considered more verbal than participles, and are standardly regarded as verbs with no temporal reference. Since the lack of temporal interpretation often takes part in the temporal system of a given language, infinitive markers are frequently identified as tense heads. This straightforward categorization fails in various languages, however, when infinitival forms manifest both verbal and nominal properties. Some Spanish infinitival constructions, for instance, occur with nominal determiners (e.g. Plann 1981, 1984, Yoon and Bonet-Farran 1991, Fernández Lagunilla and Anula 1994, Miguel 1996); and Finnish forms, to be examined in chapter 4 of this thesis, bear nominal inflection. Thus infinitives, like participles, can present a challenge to any attempt to pinpoint their categorial affiliation.

Because of such cross-linguistically prevalent incongruous attributes, the syntactic categorization of non-finite structures has generated much contention. A typical example of disagreement over the categorial status of a given form is the relatively recent exchange in the literature on the English *-ing* participle (Brekke 1988, Milsark 1988, Emonds 1988, Borer 1990), in which attempts were made to determine whether this participle should be classified as an adjective or as a verb. Cowper (1994, 1995a), by proposing a more fine-grained look beyond these fixed category labels at the actual syntactic features of the participle morpheme, accounted for its seemingly unpredictable behaviours in a consistent manner. Cowper (1995b) extended this approach to the Hungarian *-va/ve* participle. One central conclusion of that work was that generalized category labels such as "participle" hide behind them lexical items that may, in fact, share no common syntactic features. Cowper found that, for instance, the ostensibly similar "participle" morphemes *-en* in English and *-va/ve* in Hungarian have no matching syntactic features beyond temporal reference (they were identified as [+N] and [-V], respectively). A comparison of these analyses to the account of Finnish participles to be made here finds yet a third syntactically distinct lexical form ([+N, +V] in Cowper's system). What we can infer from this brief introduction to comparative investigation of non-finite forms is that it is not at all obvious that categories such as "participle" exist cross-linguistically. If they do, we do not currently know what syntactic features would identify a vocabulary item that should be included in this class.

The ambiguities of the combined lexical and functional behaviour of non-finite forms contrasts with one of the basic assumptions underlying the Minimalist Program, which is the general framework adopted in this study. It has been suggested in the literature (Borer 1984, Fukui 1986, 1988, Chomsky 1995) that all cross-linguistic variation might be reducible to variation in the properties of functional elements. This proposal crucially presumes that a clear division can be made between functional and lexical items. In contrast, Rowe (1994) has argued, based on an investigation of English modals, that no such clear partition exists, but rather that there is a continuum of more or less lexical/functional elements. The universally paradoxical behaviour of non-finite forms provides further empirical support for the view that there is no dichotomous lexical/functional split, but that the syntactic features

associated with either type of vocabulary item can combine to form hybrid forms. If we accept this approach, cross-linguistic variation is no longer seen as a parameterized choice of whether a given category exists in a given language, but raises the question of what syntactic features exist universally, and what combinations of such features are possible in human languages. This thesis presents an analysis of a set of seemingly very contradictory participial and infinitival structures in Finnish, identifies the syntactic features that create these categorial discrepancies, and provides a basis for the examination of their relation to superficially similar structures in other languages.

### 1.1.2. The Finnish non-finite constructions

There are five non-finite verbal suffixes in Finnish, *-de*, *-ma*, *-nut*, *-ta* and *-va*, each of which occurs in several constructions. (1) exemplifies the diversity of structures that these morphemes occur in.

- (1) a. Howard aiko-o [**maala-ta keittiö-n**].  
       H.NOM plan-3SG paint-TA kitchen-ACC  
       'Howard plans to paint the kitchen'
- b. Työ on **kestä-vä kolme vuot-ta**.  
       work.NOM be.3SG last-VA three year-PAR  
       'The work will last three years'
- c. Minä epäile-n [**Greta-n unohta-nee-n tapaamise-mme**].  
       I.NOM suspect-1SG G-GEN forget-NUT-ACC meeting-1PL.POS  
       'I suspect (that) Greta (has) forgotten our meeting'
- d. Sofia tanss-i villisti [**rymisyttä-e-n tamburiini-a-an**].  
       S.NOM dance-PAST.3SG wildly bang-DE-INS tambourine-PAR-3POS  
       'Sofia danced wildly, banging her tambourine'
- e. Elaine käv-i [**tarkista-ma-ssa sähköposti-nsa**].  
       E.NOM go-PAST.3SG check-MA-INE e-mail-3POS  
       'Elaine went and checked her e-mail'

Traditionally these suffixes have been divided into groups of two participles (the past participle *-nut* and the present participle *-va*) and three infinitives (*-de*, *-ma*, and *-ta*), based on the demarcation that the participles bear tense while the infinitives do not. Despite this separation, however, all the non-finite morphemes share a number of properties. Semantically, they all have an effect on the temporal interpretation of the sentence and so must, in fact, bear temporal content (contradicting the traditional split), which suggests a relationship with tense morphology. Morphologically, all the non-finite suffixes derive forms that are compatible with nominal inflection (case, nominal number agreement, and/or possessive suffixation), but generally not with verbal inflection (person/number agreement, finite tense or mood marking, passive voice).<sup>2</sup> In contrast, syntactically, each non-finite form retains its ability to assign a full range of object cases (accusative, partitive, quirky), and the thematic relations as well as selectional properties of the affixed verb. Yet none of the non-finite forms by itself is compatible with a nominative subject. This set of five morphemes provides a good example of the problem outlined in section 1.1.1, in that they simultaneously manifest incongruous lexical characteristics, nominal and verbal, as well as properties normally associated with the functional head Tense.

## 1.2. Theoretical assumptions

The theoretical framework adopted in this thesis is, for the most part, as outlined in the Minimalist Program of Chomsky (1995). There are, however, a number of assumptions that I make which are either in addition to or different from those adopted there.

### 1.2.1. Monosemy

One of the central premises underlying my research is the assumption that if two morphemes that occur in different constructions are identical in their phonological form,

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<sup>2</sup> Some of the non-finite constructions have passive counterparts, indicated with passive morphology. This difference will be accounted for in relevant sections.

they should be included in a single lexical entry, and consequently manifest the same morphological, syntactic and semantic properties. This concept is based on the idea formalized in Johns (1992) (cf. also Nida 1948).<sup>3</sup>

(2) *One Form/One Meaning Principle:*

Where morphemes are identical or similar in phonological properties, in the unmarked case, they are identical or similar in all lexical properties.

This assumption sets as one objective of my investigation to develop maximally unified analyses of each of the five Finnish non-finite morphemes.

### 1.2.2. Syntactic structures

I assume that the inventory and ordering of functional features is not universal, so that functional projections are to be posited (both by the language acquirer and the linguist) only based on independent language-internal evidence. In other words, not all functional notions are syntactically manifested in all languages. Moreover, even if there is evidence for the presence of a feature, it may not be represented as independent functional head, but may occur as a feature on another head (cf. also Iatridou 1990, Grimshaw 1994, Moorcroft 1995). The second part of this assumption obviously leads to my claim that syntactic features may combine to form hybrid projections.

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<sup>3</sup> Cowper's (1995a) 'Strong Monosemy Principle' institutes the concept of monosemy as an inherent part of grammar, rather than a guiding principle for research.

(i) *Strong Monosemy Principle:*

The conceptual structure of a lexical entry may contain no disjunctions and no optional elements. If the conceptual structures of two uses of a lexical item cannot be unified through underspecification, then they must be treated as distinct lexical entries.

For the purposes of this thesis, I adopt John's less constrained view, although aspects of my analysis have interesting repercussions with regard to Cowper's stronger proposal.



### 1.2.3. Lexical category features

The lexical category features that I utilize in this research are the standard [N], [V] features. Since I treat features as privative, however, nouns are simply marked as [N], verbs as [V], and adjectives as [N, V]. I do not address the feature content of prepositions, postpositions or adverbs in this work, although I assume that these elements differ in some integral feature content from nouns, adjectives and verbs. It will become clear during the analysis that the primitives [N], [V] are not sufficiently specified to explain the distinctions between the different category types. I adopt the provisional premise that verbs are defined by the features [(Assign) Object case, temporal reference]. Under current Minimalist treatment of unergative verbs as hidden transitives, the proposition is viable.<sup>4</sup> Nouns, meanwhile, can be characterized by the feature [(Accept) Theta role/case].

The feature composition of adjectives is more difficult to determine. In some positions they appear noun-like in that they bear case and a thematic relation to the verb. This might be attributed to their [N] feature. Despite their morpho-syntactic similarities, however, it is clear from distributional evidence that Finnish makes a distinction between the two category types, nouns and adjectives: I will show that adjectives cannot be subjects, cannot topicalize or transpose with other arguments. Moreover, unlike nouns, adjectives do not require case and/or a theta role, although they are compatible with that feature. In addition, although some adjectives can assign lexical case, their [V] feature does not correspond to the [(Assign) Object case] feature of verbs. All in all, then, the specification of adjectives as [N, V] does not provide an accurate reflection of their syntactic properties. However, having outlined these inconsistencies and problems inherent in this classification,

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<sup>4</sup> The existence of a class of unaccusative verbs in Finnish has not been investigated extensively, and consequently no diagnostics exist currently that would identify such a group of verbs. If unaccusative verbs can be differentiated from other intransitive verbs, they can still be encompassed under the [(Assign) Object case] feature, if Belletti's (1988) analysis of Finnish unaccusatives as partitive case assigners is correct. I will not deal with unaccusative verbs in this thesis, and leave open for future work all questions that the analysis presented here raises with regard to this verb type.

I will continue to utilize Chomsky's labelling system throughout the thesis. Although this designation does not access the deeper feature composition of the adjectival lexical category, it achieves what is relevant for the investigation undertaken here: it shows that categorial divisions exist between nouns and verbs, and verbs and adjectives.

The option of simply labelling adjectives as [A(dj)] is ruled out because the presence of the lexical feature bundle symbolized by [N] on adjectives is crucial to the analysis to be presented. I take [N] to encode [nominal reference], a feature that must be checked against a comparable abstract functional feature of some extended nominal projection such as Number or D. On the other hand, I will assume that the sole function of the [V] feature of adjectives is to distinguish adjectives from nouns, rather than to draw attention to any similarity between adjectives and verbs. A more exact identification of what features of adjectives these categorial distinctions are based on is not fundamentally relevant for this research, since the main issue investigated in this thesis addresses questions concerning functional structure.

I also want to point out one source of potential terminological confusion that arises from the indeterminacy of the adjectival features. I will use the word 'nominal' to refer to two distinct, and sometimes almost contradictory meanings, in light of the existing separation of nouns and adjectives. On the one hand, I employ 'nominal' as a synonym for 'noun-like' or 'of a noun', as in the phrase 'nominal properties'. When referring to 'nominal morphology', however, the expression includes the entire group of elements that may bear case, number and possessive suffixes: nouns, adjectives, quantifiers, numbers, etc. I have chosen to maintain these terminological conventions since there are no commonly recognized alternatives. I hope that the context disambiguates sufficiently.

#### **1.2.4. Morphology**

Like Chomsky (1995), I assume that lexical items are inserted into syntactic structures fully inflected, in terms of their functional feature content. Syntactic derivation is driven by the need to check inflectional features of these lexical elements against matching

features on abstract functional heads. Contra the view of morphology held in Chomsky's (1995) version of the Minimalist Program, however, I assume that syntactic computation deals only with feature bundles, and vocabulary insertion takes place after spell-out (in the spirit of the approach of Distributed Morphology, by Halle and Marantz 1993 and others). Furthermore, I assume that syntactic features are strictly unary, so that no minus values enter numeration. This means that only marked values are indicated (e.g. [Past] for Temporal Reference) while other values are default values (e.g. the default reading of an unmarked Temporal Reference feature is [Nonpast]).

Other aspects of Chomsky's (1995) framework will be called into question and revised during the discussion, but these issues will be outlined as they arise.

### **1.3. Outline of the thesis**

This thesis addresses two major questions. First, it provides a comprehensive account of the syntactic structure of Finnish finite and non-finite constructions. Second, it examines the syntactic features of heads, to identify and compare the types of features that occur on unquestionably lexical or functional elements, as well as on the hybrid forms. The aim of this investigation is to specify and limit the types of possible projecting features.

The rest of the thesis is organized according to the traditional division of Finnish verb-based forms into finite, participial and infinitival. Chapter 2 provides an account of Finnish main clause structure, to provide a basis for the contrastive study of finite and non-finite forms. Although there are a number of recent accounts of the extended functional verbal complex in the language, largely based on morpho-syntactic evidence (e.g. Mitchell 1991, 1994a,b, Kenesei 1991, Holmberg et al. 1993, Koskinen 1993b, Vainikka 1994), none has delved into the structure at the level of syntactic feature content. A second contribution of the discussion in this chapter is that it demonstrates that the relatively free word order of Finnish can be accounted for structurally. The full complexity of the seemingly non-configurational variation has not been previously explained in syntactic terms.

Chapter 3 examines the present and past participle morphemes *-va* and *-nut* in all the syntactic environments in which they occur. The focus of the investigation is two-fold: to identify the syntactic features that produce the categorially inconsistent properties of the forms, and to provide a unified account of each morpheme, despite the fact that some of the morpho-syntactic and semantic traits vary from construction to construction. Furthermore, the largely parallel characteristics of the present and past participles suggest that both participial morphemes may share the same feature sets, differing only in temporal meaning. The eccentric behaviour of the present participle in the main clause structure leads into a deeper exploration of the temporal semantics of these constructions. A crucial innovation underlying these analyses is the claim that category changing processes may occur not only within the morphological component, but also during syntactic derivation.

Chapter 4 discusses the infinitival morphemes *-ta*, *-de* and *-ma*. Each of these also appears in several different structures, and I present maximally consolidated accounts of them. A central question that arises from these data is the syntactic role of the CP projection in biclausal constructions, particularly in relation to control constructions. It is argued that the Finnish CP serves to license two types of complement clauses, finite ones, and questions. In non-question control structures, hence, no CP is present. This leads to an examination of the status of PRO, and the semantic and syntactic status of CP.

Chapter 5 concludes the thesis with a summary of the inconsistent characteristics of each of the Finnish non-finite morphemes and the syntactic structures that I have proposed to account for these properties, as well as a discussion of the broader theoretical implications of the outlined analysis. This includes a more general deliberation of two issues raised by the Finnish data: the status of syntactic features in morphological derivation, and the semantics of the temporal system. These topics are related to a future cross-linguistic research program on categorially ambiguous elements. Finally, the question of how to constrain the inventory and combination of features is raised.

## CHAPTER 2

### FINNISH MAIN CLAUSE STRUCTURE

#### 2.1. The functional structure of the Finnish extended Infl projection

Pollock's (1989) proposal that the Infl category be separated into several independent functional projections (Agr<sub>s</sub>P, TP, NegP, Agr<sub>o</sub>P) sparked a great deal of interest in the functional structure of Finnish finite main clauses. Finnish is an agglutinative language with verbal inflection to mark passivization, mood, tense, negation and person/number agreement. The adoption of the Articulated Infl Hypothesis, coupled with a strong interpretation of Baker's (1985, 1988) Mirror Principle, according to which morphological derivation directly reflects syntactic derivations, was seen by many researchers to imply that the inflectional morphology of Finnish would provide transparent access to the syntactic structure of the language. This approach has produced several proposals for the articulated functional structure of a maximal verbal complex of Finnish (cf. e.g. Holmberg 1989, Holmberg et al. 1993, Kenesei 1991, Koskinen 1993b, Mitchell 1991, 1992, 1994a, 1994b, Vainikka 1994). These works are based on the assumption that each inflectional morpheme projects its own functional category.<sup>5</sup>

(1) illustrates the maximal morphological marking of a Finnish verbal predicate. The morphologically most complex predicate occurs in a passivized clause, as in (1a); however, the portmanteau morphemes third person singular negative and passive past participle

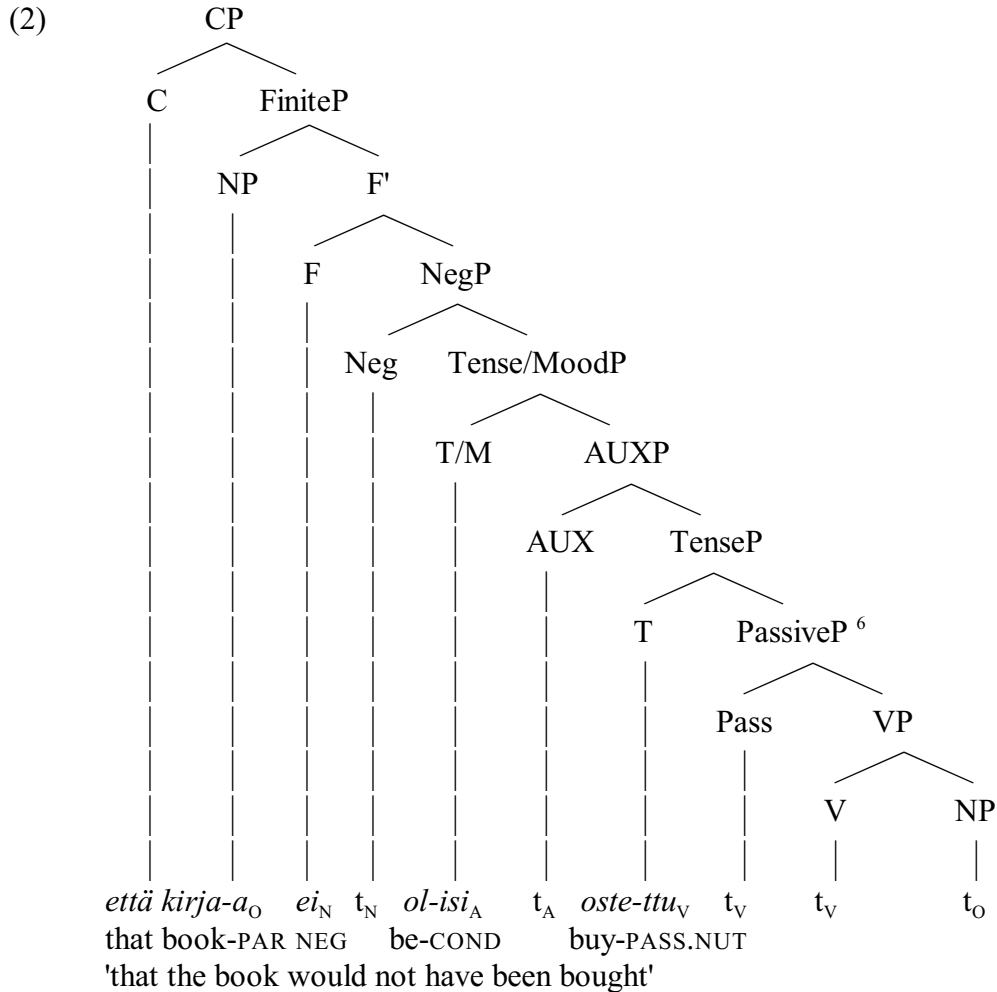
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<sup>5</sup> Note, however, that some work on the Finnish extended Infl argues against taking all inflectional elements as functional heads, for instance due to the fact that they lack independent meaning (cf. among others, the discussion of AgrP in Koskinen 1993b, Mitchell 1992, 1994a, 1994b).

obscure the example somewhat. In (1b), the active counterpart of (1a), all verbal morphology other than voice marking is represented distinctly. These utterances show that in Finnish the negator *e-* is always inflected for agreement in person and number features. When present, the auxiliary verb *olla*, 'be', bears tense or mood marking, exemplified here with the conditional mood marker *-isi*. The main verb *ostaa*, 'buy', may be marked for passive voice (in (1a) only) and past tense.

- (1) a. *että kirja-a ei ol-isi oste-ttu*  
       that book-PAR NEG.3SG be-COND buy-PASS.NUT  
       'that the book would not have been bought'
- b. *että minä e-n ol-isi osta-nut kirja-a*  
       that I.NOM NEG-1SG be-COND buy-NUT book-PAR  
       'that I would not have bought the book'

The structure in (2), from Holmberg et al. (1993), is representative of the extended Infl structures that have been proposed for Finnish sentences like (1). Each functional position is labelled based on the most salient semantic or syntactic feature of its morphological head. Even portmanteau forms such as the passive past participle morpheme *-ttu* project each feature (e.g. [passive/voice], [past/tense]) independently. An uninflected main verb stem is inserted in the V position, and moves through the functional head positions in order to pick up bound inflectional morphemes along the way. Movement continues until it is blocked by a free morpheme (here the auxiliary head *olla*, 'be', and the negator *e-*). That free morpheme in turn raises until all bound morphemes have been affixed.



This approach led to a strong concentration on assigning functional head positions to verbal morphemes, with less concern for the syntactic or semantic motivation for any given head position, or for the increase in possible specifier positions. Although some questions regarding possible word order configurations have arisen in this literature, the evidence from Finnish word order has not been used extensively or thoroughly to argue for or against proposed clause structures.

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<sup>6</sup> I do not address the syntactic status of the Finnish impersonal passive morpheme in this thesis. Koskinen (1992) provides a thorough analysis of this construction within the Government and Binding framework. An update of this topic within the Minimalist framework will form a future research project. However, the subject of the impersonal passive, which I claim is a null pronoun *pro*, with the features [third person, plural, human], will be used as a crucial diagnostic in various constructions in this thesis.

Two recent works have examined the clause structure of Finnish in light of its relatively flexible word order. Vainikka (1989) provided an account of some aspects of the basic order of clausal constituents within a CP-IP structure. This work left many questions unanswered, however. Moreover, in her more recent work Vainikka has not further updated the original word order analysis; rather, her research has centred on accounting for the morphological structure of the verbal complex. Vilkuna (1989) presented an extensive and illuminating investigation of the free word order of Finnish, but her research was conducted from a discourse interpretative point of view, and hence did not provide a deeper analysis of the syntactic structures involved.

This chapter aims to fill two gaps in the existing literature on Finnish main clauses. My first goal is to provide an account of matrix clause structure within the Minimalist framework, to establish what functional features are active in the derivation. In contrast with existing analyses, I posit a functional projection only when there is clear syntactic evidence, either for a syntactic head or for a specifier position. I take purely morphological justifications to be insufficient. Thus I seek to reduce unnecessary structure, and to provide strong evidence for the positions that are retained. My second objective is to present a syntactic analysis of word order variation in Finnish. The relatively unrestricted movement of constituents in Finnish sentences has convinced many researchers that changes in word order in the language are controlled only by discourse factors and thus cannot be accounted for structurally. I demonstrate that word order variation in Finnish main clauses has fully predictable syntactic and/or semantic consequences, and I develop a syntactic account of word order permutations available in the language within the Minimalist framework outlined in chapter 1.

## **2.2. Finnish as a free word order language**

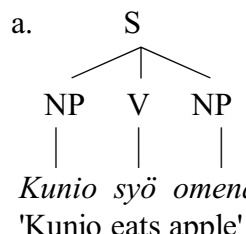
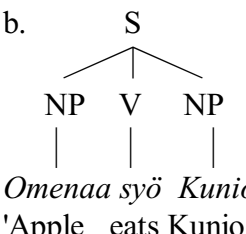
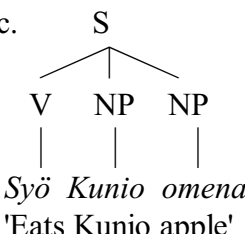
Since clause-level word order in Finnish is very flexible, the language has traditionally been thought to have "free" word order. For example, a simple three-word



tensed Finnish sentence with a subject, a verb and an object allows all six logically possible word-order combinations (contrastive stress is indicated by underlining):

- (3) a. Kunio syö omena-a.  
K.NOM eat.3SG apple-PAR  
'Kunio eats an/the apple'
- b. Kunio omena-a syö.  
K.NOM apple-PAR eat.3SG  
'It is Kunio who eats the apple'
- c. Omena-a Kunio syö.  
apple-PAR K.NOM eat.3SG  
'It is an/the apple that Kunio eats'
- d. Omena-a syö Kunio.  
apple-PAR eat.3SG K.NOM  
'It is Kunio who eats the apple (and not Ingo)'
- e. Syö Kunio omena-a.  
eat.3SG K.NOM apple-PAR  
'Kunio eats an/the apple'
- f. Syö omena-a Kunio.  
eat.3SG apple-PAR K.NOM  
'Kunio (in fact) eats the apple'

Languages with such word order flexibility have often been labelled non-configurational. Hale (1980a, 1980b, 1982a, 1982b, 1983) proposed that the phrase structure of these languages consists of a flat base into which lexical items are freely inserted. Such non-configurational structures for the sentences in (3a,d,e) are given in (4).

- (4) a.   
NP V NP  
| | |  
Kunio syö omenaa  
'Kunio eats apple'
- b.   
NP V NP  
| | |  
Omena-a syö Kunio  
'Apple eats Kunio'
- c.   
V NP NP  
| | |  
Syö Kunio omenaa  
'Eats Kunio apple'

A keen discussion of many languages with free word order arose from this proposal (see, for example, den Besten (1985), Haider (1981), Scherpenisse (1985), Thiersch (1982), Webelhuth (1984/1985, 1990) for German; Horvath (1981), Kiss (1987), Szabolcsi (1981, 1984) for Hungarian; Hasegawa (1980), Hoji (1985), Saito (1985), Saito and Hoji (1983) for Japanese; and Hale (1980b, 1982b, 1983, 1992, 1993), Jelinek (1984), Laughren (1989), Nash (1980), Simpson (1983, 1991) for Warlpiri). Much of the research focussed on whether subject and object arguments are treated identically by various syntactic processes,

as would be predicted by the structures shown in (4), or whether subject-object asymmetries can be found. For Finnish, Hakulinen and Karlsson (1979:224-229; based on Hakulinen 1976), and Vilkkuna (1989:30) observe that diagnostics of VP constituency support at least superficially a flat structure analysis for Finnish. First, verbs are easily separated from their complements by adverbs (5a), floating quantifiers (5b), or even the subject (5c).

- (5) a. Eeva **hankk-i** ilmeisesti yllättäen **uude-n auto-n**.  
 E.NOM procure-PAST.3SG apparently all.of.a.sudden new-ACC car-ACC  
 'Apparently, all of a sudden, Eeva procured (herself) a new car'
- b. Lapse-t **halua-vat** kaikki **lisä-ä jäätelö-ä**.  
 child-PL.NOM want-3SG all.NOM more-PAR ice.cream-PAR  
 'The children all want more ice cream'
- c. Siellä on **voitta-nut** joku ihminen **itselleen miljoon-i-a**  
 there be.3SG win-NUT some.NOM person.NOM self-ALL-3POS million-PL-PAR  
 'Some person has won millions for him/herself there'

Moreover, movement processes such as VP-fronting and VP-ellipsis appear not to target the Finnish VP as a whole. A fronted VP, such as the participial verb with its complement in (6a), is re-interpreted as an adjectival modifier phrase. A contrastively focussed VP which in English is expressed by a fronting, as in (7), appears in Finnish with only the verb fronted, as in (8a). If the verb and its complements are fronted as a unit, the sentence is ungrammatical, as shown in (8b).

- (6) a. **Kirjo-j-a luke-nut** hän on.  
 book-PL-PAR read-NUT 3SG.NOM be.3SG  
 'She is a well read person', 'She is a person who has read many books',  
 \*'Read many books, she has'
- b. Hän on **luke-nut kirjo-j-a**.  
 3SG.NOM be.3SG read-NUT book-PL-PAR  
 'She has read books'
- (7) He won't read books, but **buy them by the dozen** he will.

- (8) a. Hän ei lue kirja-a-kaan, mutta **osta-a** hän **niitä**  
 3SG.NOM NEG.3SG read book-PAR-EMP but buy-3SG 3SG.NOM 3PL.PAR  
**tusinakaupa-lla.**  
 dozens-ADE  
 'He won't read any books, but **buy them by the dozen** he will'
- b. \*Hän ei lue kirja-a-kaan, mutta **osta-a** **niitä** **tusinakaupa-lla**  
 3SG.NOM NEG.3SG read book-PAR-EMP but buy-3SG 3PL.PAR dozens-ADE  
 hän.  
 3SG.NOM  
 'He won't read any books, but **buy them by the dozen** he will'

Finnish lacks an auxiliary corresponding to the English *do*. *Do* makes VP-preposing and VP-ellipsis possible in English, but these constructions do not appear in Finnish, as shown in (9) (Vilkuna 1989). The Finnish construction corresponding to ellipsis in English fronts only the object DP to a pre-sentential focus position. Finnish elliptic constructions, such as the one with *niin -kin*, 'so also', illustrated in (10), fail to differentiate between V+subject, V+complement or V+adjunct as possible constituents.

- (9) a. \*Ja **puhu-a politiikka-a** hän ?.  
 and talk-TA politics-PAR 3SG.NOM ?  
 'And talk about politics she did!' (Vilkuna 1989:251, fn.3, (iii))
- b. Ja **politiikka-a** hän **puhu-i!**  
 and politics-PAR 3SG.NOM talk-PAST.3SG  
 'And talk about politics she did!'
- (10) a. Sofia halus-i omenatortu-n, ja **niin** Zoe-**kin**.  
 S.NOM want-PAST.3SG apple.tart-ACC and so Z.NOM-also  
 'Sofia wanted an apple tart and so did Zoe'
- b. Omenatortu-n Sofia halus-i, ja **niin** suklaalevy-n-**kin**.  
 apple.tart-ACC S.NOM want-PAST.3SG and so chocolate.bar-ACC-also  
 'It was an apple tart that Sofia wanted, and also a chocolate bar'
- c. Kokoukse-ssa hän puhu-u paljon vaikka **niin** kotona-**kin**.  
 meeting-INE 3SG.NOM speak-3SG much although so home-also  
 'He talks a lot at the meeting, although so also at home'

The diagnostics just outlined, however, only pertain to the surface separation of the main verb and its nominal arguments (subject, object, oblique arguments). These tests do not assess whether there are restrictions on the possible target position for each movable element, nor do they investigate the availability of word order variation among elements other than the verb and its complements. In fact, there are strict restrictions on word order variation for the verbal and other agreement-bearing elements, shown in (11) (main verb, auxiliary verb, negator), and the complementizers and question elements illustrated in (12). The existence of any constraints on the order of constituents supports a configurational, structural account of at least some of the word order variants of Finnish.

- (11) a. Auni **ei** **ole** vielä **oppi-nut** ui-ma-an.  
 A.NOM NEG.3SG be still learn-NUT swim-MA-ILL  
 'Auni has not learned to swim yet'
- b. \*Auni **ole ei** vielä **oppi-nut** ui-ma-an.  
 A.NOM be NEG.3SG still learn-NUT swim-MA-ILL  
 'Auni has not learned to swim yet'
- c. \*Auni **ei** **oppi-nut ole** vielä ui-ma-an.  
 A.NOM NEG.3SG learn-NUT be still swim-MA-ILL  
 'Auni has not learned to swim yet'
- d. \*Auni **oppi-nut ei** **ole** vielä ui-ma-an.  
 A.NOM learn-NUT NEG.3SG be still swim-MA-ILL  
 'Auni has not learned to swim yet'
- (12) a. Auli ihmettele-e **että mitä** Solmu taas mutusta-a.  
 A.NOM wonder-3SG that what.PAR S.NOM again munch-3SG  
 'Auli wonders what Solmu is munching (on) again'
- b. \*Auli ihmettele-e **mitä** **että** Solmu taas mutusta-a.  
 A.NOM wonder-3SG what.PAR that S.NOM again munch-3SG  
 'Auli wonders what Solmu is munching (on) again'

Furthermore, even within the traditional VP, consisting of the verb and its complements, hierarchical structure can be motivated. There are operations that treat

Finnish subjects and objects (or possibly non-subjects) DP's asymmetrically. These differences support the claim that structural hierarchy exists even in sentences exhibiting free word order. The first distinction is based on a well-known property of Finnish, namely the uniquely close relationship between the verb and its object. It is often pointed out that in Finnish the aspectual interpretation of the clause is indicated by object case marking, which is, in turn, determined by the verb. The idiosyncratic aspectual character of some verbs constrains the number of available object cases. Heinämäki (1984) provides a comprehensive overview of the aspectual significance of the verb-object relationship. It suffices here to show that whereas for many verbs the telicity of the event is determined by the partitive/accusative case alternation on the object, as illustrated in (13), some verbs, in contrast, allow only one object case. This restriction is shown in (14) with two inherently irresultative verbs. There is no such clearly grammaticalized relationship between the verb and the subject, or any other element besides the object.

- (13) a. Eeva luk-i sanomalehte-ä.  
 E.NOM read-PAST.3SG newspaper-PAR  
 'Eeva was reading a newspaper'  
 (atelic interpretation)
- b. Eeva luk-i sanomalehde-n.  
 E.NOM read-PAST.3SG newspaper-ACC  
 'Eeva read (all of) the newspaper'  
 (telic interpretation)
- (14) a. Lapsi pelkä-ä ukkost-a /\*ukkose-n.  
 child.NOM fear-3SG thunder-PAR/ thunder-ACC  
 'The child is afraid of thunder'
- b. Lapsi odott-i joulu-a /\*joulu-n.  
 child.NOM wait-PAST.3SG Christmas-PAR/ Christmas-ACC  
 'The child was waiting for Christmas'

A second asymmetry can be found, this time in the anaphoric system. Three types of anaphors, *itse*, 'self', *hän itse*, 's/he self', and a set of possessive anaphors (e.g. third person

-*nsA*), distinguish between the subject and other complements of the verb. *Itse*, 'self', and the possessive anaphors can be bound only by the subject, not by a complement of the verb. This is demonstrated in (15). *Hän itse*, 's/he self', on the other hand, makes a two-way distinction between subjects and other DP's: it can be long-distance bound only by a subject, never by a non-subject, as shown in (16a), whereas in the local domain it can only be bound by a non-subject (illustrated in (16b,c)). (Steenbergen (1987, 1991) provides a thorough discussion of binding in Finnish. The possessive anaphors are also addressed in Kanerva (1987), Nevis (1984), Pierrehumbert (1980), Toivonen (1997) and Trosterud (1993).)

Moreover, these binding properties are not linked to case-marking. (15c) shows that subjects bearing quirky case, such as the adessive-marked *Katilla*, can serve as antecedents for these anaphors. Regardless of surface word order, in (15d) the quirky-cased logical subject *Katilla* is the only acceptable antecedent, over the sentence-initial, morphologically unmarked (i.e. the so-called 'nominative-like accusative') logical object *uusi sohva*, 'new sofa'. Clearly the interpretation of binding relations is not based on either surface word order or morphological case-marking, but is sensitive to the distinction between subjects and non-subjects.

- (15) a. Jusu<sub>i</sub> ylist-i Kati-lle<sub>j</sub> itse-ä-än<sub>i/\*j</sub>.  
 J.NOM praise-PAST.3SG K-ALL self-PAR-3POS  
 'Jusu praised himself/\*herself to Kati'
- b. Jusu<sub>i</sub> ylist-i Kati-a<sub>j</sub> itse-lle-en<sub>i/\*j</sub>.  
 J.NOM praise-PAST.3SG K-PAR self-ALL-3POS  
 'Jusu praised Kati to himself/\*herself'
- c. Kati-lla<sub>i</sub> on aikomus osta-a itse-lle-en<sub>i</sub> uusi sohva.  
 K-ADE be.3SG plan buy-TA self-ALL-3POS new.ACC sofa.ACC  
 'Kati plans to buy herself a new sofa'
- d. Uusi sohva<sub>j</sub> on aikomus osta-a itse-lle-en<sub>i/\*j</sub> Kati-lla<sub>i</sub>.  
 new.ACC sofa.ACC be.3SG plan buy-TA self-ALL-3POS K-ADE  
 'Kati plans to buy herself a new sofa'

- (16) a. Anu<sub>i</sub> kerto-o Mari-lle<sub>j</sub> [Epu-n<sub>k</sub> ihaile-va-n **hän-tä itse-ä-än**<sub>i/\*j/\*k</sub>].  
 A.NOM tell-3SG M-ALL E-GEN admire-VA-ACC 3SG-PAR self-PAR-3POS  
 'Anu tells Mari that Eppu admires himself'
- b. \*Kaarina<sub>i</sub> ihail-i **hän-tä itse-ä-än**<sub>i</sub>.  
 K.NOM admire-PAST.3SG 3SG-PAR self-PAR-3POS  
 'Kaarina admired herself'
- c. Antti<sub>i</sub> puhu-i Kaarina-lle<sub>j</sub> **häne-stä itse-stä-än**<sub>\*i/j</sub>.  
 A.NOM speak-PAST.3SG K-ALL 3SG-ELA self-ELA-3POS  
 'Antti spoke to Kaarina about herself/\*himself'

These diagnostics of object case marking and possessive suffixation show that even in Finnish a structural distinction between subjects and objects (or non-subjects) must be made, and thus I conclude that the different word orders shown in (4) cannot be base-generated. Once base-generation of various word orders is ruled out, the possibility of scrambling arises as an account of word-order flexibility in Finnish. Scrambling as a strictly optional movement operation has been proposed for other free word order languages such as Japanese (Fukui 1993, Hoji 1985, Saito 1985, 1992, Tada 1989, 1993). If word order alternation as scrambling is considered as an entirely optional process, as it has by many researchers, this predicts that the changes in word order are without consequences for semantic interpretation. This prediction is not consistent with Finnish facts. As discussed by Vilkkuna (1989), the term "free" when used with regard to Finnish word order denotes "discourse-conditioned". The order of words in a given sentence is not random, but strictly determined by the availability of a discourse context for the particular choice of word order and intonation pattern. This is clearly demonstrated by the distinctive translations of the word-order variations in (17), which is a repetition of (3).

- (17) a. Kunio syö omena-a.  
 K.NOM eat.3SG apple-PAR  
 'Kunio eats an/the apple'
- b. Kunio omena-a syö.  
 K.NOM apple-PAR eat.3SG  
 'It is Kunio who eats the apple'

- |   |  |
|---|--|
| c. <u>Omena</u> -a Kunio syö.<br>apple-PAR K.NOM eat.3SG<br>'It is an/the <u>apple</u> that Kunio eats' | d. Omena-a syö <u>Kunio</u> .<br>apple-PAR eat.3SG K.NOM<br>'It is <u>Kunio</u> who eats the apple (not Ingo)' |
| e. <u>Syö</u> Kunio omena-a.<br>eat.3SG K.NOM apple-PAR<br>'Kunio <u>eats</u> an/the apple'             | f. <u>Syö</u> omena-a Kunio.<br>eat.3SG apple-PAR K.NOM<br>'Kunio (in fact) <u>eats</u> the apple'             |

(17) demonstrates that all six sentences differ in meaning, as well as in intonation. In a genuinely non-configurational language with free word order this should not be expected (as Kiss (1987) points out with regard to Hungarian, another language with discourse-conditioned word order alternation). The fact that the meaning differences and accentuation patterns are predictable based on the order of words, as will be illustrated in this chapter, strengthens the argument for structural hierarchy in Finnish clauses.

The rest of this chapter provides an analysis of the syntactic structure of Finnish main clauses. I demonstrate the semantic distinctiveness of each word order, showing that all movement within the main clauses is motivated by some identifiable syntactic or semantic consideration. These syntactic and semantic traits will be identified as a set of syntactically active features that trigger movement into fixed structural positions.

### 2.3. Clause-level functional categories in Finnish

Following the theoretical assumptions and principles laid out in chapter 1, this section examines word order variation in Finnish to determine which syntactic features project syntactically. Arguments will be based on two basic assumptions: first, that a set of temporal adverbs can be used to identify the left-most edge of the base vP position; and second, that a consistent semantic interpretation linked with the occurrence of an X(P) in a fixed position relative to these adverbs confirms an autonomous functional projection. Occurrence of further X(P)s in the pre-adverbial vP-adjunct position, if correlated with a fixed meaning and possibly with morphological inflection, will be taken as evidence for further functional positions.



### 2.3.1. Topic position

Holmberg (1989) observed that in Finnish, adverbs of time, frequency and degree occur in a lower position than sentential adverbs. He identified the groupings in (18) as examples of each adverb type.

(18)	<u>ADV 1: sentential adverbs</u>	<u>ADV 2: time, frequency, degree adverbs</u>
	<i>varmaan</i> (surely, probably)	<i>aina</i> (always)
	<i>ehkä</i> (maybe)	<i>pian</i> (soon)
	<i>näköjään</i> (evidently)	<i>usein</i> (often)
	<i>kai</i> (probably)	<i>koskaan</i> (ever)
	<i>ilmeisesti</i> (apparently)	<i>kokonaan</i> (completely)

The order of the two types of adverbs is strictly constrained in periphrastic constructions such as (19), so that sentential adverbs from the ADV1 group always precede the ADV2 adverbs of time, frequency and degree.<sup>7</sup>

- (19) a. Jussi **ilmeisesti** on **aina** pitä-nyt Tuija-sta.  
 J.NOM apparently be.3SG always like-NUT T-ELA  
 'Jussi has apparently always liked Tuija'

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<sup>7</sup> The two types of adverbs can permute when they are adjacent to each other. I will show that these alternative word orders are produced by the ADV2 adverbs moving to adjoin to higher functional projections. However, in addition to structural restrictions, I assume that semantic factors play an important part in adverb positioning. For detailed discussion on the issue of adverb ordering, see, for instance, Alexiadou (1994, to appear), Cinque (in prep.), Ernst (1984, 1991, 1997) and Shaer (1996, 1997, in press). For the purpose of this thesis, only the structural status of the ADV2 group will be relevant.

- (i) a. Riitta vuokra-a **pian ehkä** /**ehkä pian** uude-n asunno-n.  
 R.NOM rent-3SG soon maybe /maybe soon new-ACC apartment-ACC  
 'Riitta will perhaps rent a new apartment soon'
- b. Jaakko ei **koskaan varmaan** /**varmaan koskaan** osta auto-a.  
 J.NOM NEG.3SG never probably /probably never buy car-PAR  
 'Jaakko will probably never buy a car'

- b. \*Jussi **aina** on **ilmeisesti** pitä-nyt Tuija-sta.  
 J.NOM always is apparently like-NUT T-ELA  
 'Jussi has apparently always liked Tuija'
- c. Jaakko **varmaan** ei **koskaan** osta uut-ta paita-a.  
 J.NOM probably NEG.3SG never buy new-PAR shirt-PAR  
 'Jaakko will probably never buy a new shirt.'
- d. \*Jaakko **koskaan** ei **varmaan** osta uut-ta paita-a.  
 J.NOM never NEG.3SG probably buy new-PAR shirt-PAR  
 'Jaakko will probably never buy a new shirt.'

Holmberg et al. (1993) proposed that because of this occurrence restriction, and because type 1 adverbs have wider scope than type 2 adverbs, the former reside in a structurally higher position. Nevertheless, the exact position of these adverbs proved elusive in the original investigation.

(20-22) show that non-focussed (i.e. non-contrastive) time adverbs must always occur in a position lower than the finite element. A sentence-initial time adverb is focussed, as indicated by the fact that it obligatorily bears heavy stress, as in (20a), (21a) (contrastive stress is indicated by underlining), and that it cannot be preceded by another adjunct, as shown in (22b). Sentential adverbs in sentence-initial position are not subject to these constraints, as shown in (22d). (20b, 21b) illustrate the sentence-internal positions in which the temporal adverb can occur.

- (20) a. **Koskaan**/\***Koskaan** Elina ei ol-isi viheltä-nyt.  
 never / never E.NOM NEG.3SG be-COND whistle-NUT  
 'Elina would never have whistled'  
 (✓emphatic reading, \*neutral reading)
- b. Elina (\***koskaan**) ei (**koskaan**) ol-isi (**koskaan**) viheltä-nyt (**koskaan**)  
 E.NOM never NEG.3SG never be-COND never whistle-NUT never  
 Marseljeesi-a.  
 Marseillaise-PAR  
 'Elina would never have whistled the Marseillaise'  
 (✓neutral reading)

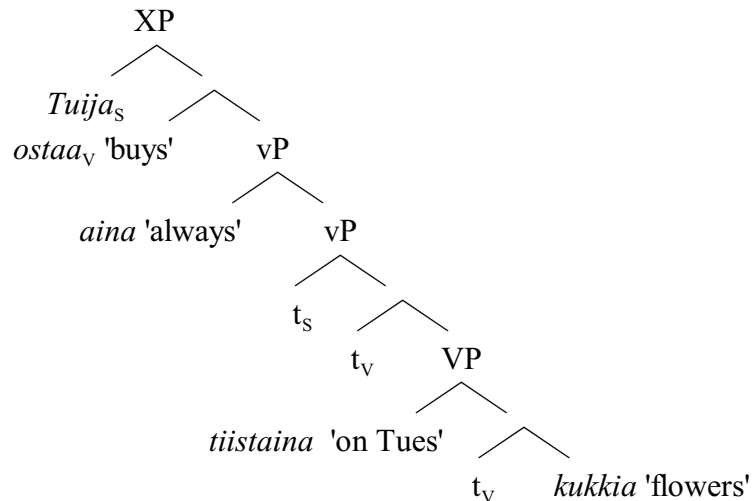
- (21) a. **Aina** /\***Aina** Elina viheltä-isi jotakin laulu-a.  
 always/ always E.NOM whistle-COND some.PAR song-PAR  
 'Elina would always whistle some song'  
 (✓emphatic reading, \*neutral reading)
- b. Elina (\***aina**) viheltä-isi (**aina**) jotakin laulu-a..  
 E.NOM always complain-COND always some.PAR song-PAR  
 'Elina would always (be) whistl(ing) some song'  
 (✓neutral reading)
- (22) a. **Aina** sinä ole-t myöhä-ssä.  
 always you.NOM be-2SG late-INE  
 'You are always late'
- b. \***Nykyään aina** sinä ole-t myöhä-ssä.  
 these.days always you.NOM be-2SG late-INE  
 'These days you are always late'
- c. **Nykyään** sinä ole-t **aina** myöhä-ssä.  
 these.days you.NOM be-2SG always late-INE  
 'These days you are always late'
- d. **Siinä tapauksessa ehkä** Elina ei ol-isi viheltä-nyt.  
 in.that.case maybe E.NOM NEG.3SG be-COND whistle-NUT  
 'In that case Elina maybe would not have whistled'

Based on their narrower scope and on the restrictions on their positions, I assume that adverbs of type 2 appear relatively low in the structure. Since they have scope over the entire nuclear proposition, including the subject, I assume that they are adjoined to vP rather than, for instance, to VP or v'. This assumption provides a diagnostic for the movement of elements out of the vP projection. If time adverbials mark the left edge of the vP, the data in (23) suggest that there is a functional position above vP, with strong features that attract both the finite verb and some nominal element (either the subject or another DP). The relevant structure and movements for (23a) are shown in (24).

- (23) a. Tuija osta-a **aina** tiistai-na kukk-i-a.  
 T.NOM buy-3SG always Tuesday-ESS flower-PL-PAR  
 'Tuija always buys flowers on Tuesday'

- b. Kuk*k*-i-a      osta-a    **aina**    tiistai-na    Tuija.  
 flower-PL-PAR buy-3SG always Tuesday-ESS T.NOM  
 'It is Tuija who always buys flowers on Tuesday'
- c. Tiistai-na      osta-a    **aina**    Tuija    kuk*k*-i-a.  
 Tuesday-ESS buy-3SG always T.NOM flower-PL-PAR  
 'It is flowers that Tuija always buys on Tuesday'
- d. Liisa-lle osta-a    **aina**    Tuija    kuk*k*-i-a      tiistai-na.  
 L-ALL    buy-3SG always T.NOM flower-PL-PAR Tuesday-ESS  
 'It is Tuija who always buys flowers for Liisa on Tuesday'
- e. Noi-sta      laps-i-sta      tule-e      **pian**    kuuluis-i-a.  
 those-ELA child-PL-ELA come-3SG soon    famous-PL-PAR  
 'Those children are going to become famous soon'

(24)



What are the attracting syntactic features at work in XP? According to Chomsky (1995:232) only categorial features of functional heads may be strong, and induce movement. This stipulation does not account for the different types of movement in the Finnish main clause, however. For instance, as will be discussed further in section 2.3.2.2, the attracting syntactic feature in yes/no questions in Finnish can be checked by movement of either a nominal DP element or a verbal element (verb, auxiliary verb or the negator), which

suggests that the attracting feature cannot be categorial.<sup>8</sup> Furthermore, the movement to a preverbal DP position that was identified in (23-24) cannot be motivated by a purely categorial [D] feature without violating the principle of Shortest Move, since a subject, an object, an oblique DP or any adjunct nominal can check the pertinent feature. Since Chomsky stipulates, and does not argue for, the claim that attracting features must be categorial, I will abandon it in the face of clear empirical evidence, and allow for the possibility that other types of features can act as triggers for movement. Similar conclusions have been drawn by Massam and Smallwood (1996) for predication in English and Niuean; Taraldsen (1996) for Icelandic multiple subject constructions; Legate and Smallwood (1996, 1997) for English small clauses, Icelandic multiple subject constructions and subjectless clauses in Irish; and Zhang (1997) for question formation in English.

Let us first examine the movement of the verb. At first glance, a strong [V] feature of X would seem to correctly force the movement of the highest verbal element (a main verb or an auxiliary verb) to X. A [V] feature of X cannot account for the entire movement pattern, however, since in negated clauses it is not the verb, but the negator that moves to X. As will be demonstrated in section 2.3.3, the Finnish negator is not a verb. To account for raising to X in both affirmative and negative clauses, another non-categorial attracting feature must be identified. In affirmative sentences, the finite verb always bears person/number agreement marking (here the third person singular, *-a*), and either tense or mood morphology (the past tense *-i*, conditional *-isi*, potential *-ne*). This gives [Phi] and [Temporal/Modal Reference] as two potential strong attractors.

The feature [Temporal/Modal Reference] does not provide a satisfactory solution for a unified treatment of all movement to X. In negated utterances, while the negator moves to X and bears agreement features, tense/mood is marked on the main verb, as illustrated in (25). Although the main verb also raises out of vP, as indicated by its position to the left of the temporal adverb *koskaan*, 'never', in (25a), it nonetheless appears below the projection that houses the raised subject and the agreement-marked negator.

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8 Zhang (1997) points out the same problem with English yes/no questions.

- (25) a. Kipling ei vapaaehtoisesti sö-isi koskaan kesäkurpitsa-a.  
 K.NOM NEG.3SG voluntarily eat-COND never zucchini-PAR  
 'Kipling would never voluntarily eat zucchini'
- b. Minä e-n takuulla rikko-nut sinun tietokonet-ta-si!  
 I.NOM NEG-1PL for.sure break-NUT you.GEN computer-PAR-2SG.POS  
 'I didn't break your computer, for sure!'

The interplay between negation and tense/mood marking will be discussed further in section 2.3.3.1. It is clear from example (25), however, that the main verb does not raise all the way to X if some other element can satisfy the feature checking needs of X. Obviously then, [Temporal/Modal Reference] cannot be the attracting feature of the head of XP.

The one morphological marker which all the elements that raise to X have in common is person/number agreement, suggesting that [Phi] might be the attracting feature of X. Since both the element bearing finite agreement and a DP move to X(P), we might expect that their movement is related in some way. With regard to [Phi] being a potential attractor, a logical hypothesis would be that the subject and the finite element move to X(P) to check their agreement features in a specifier-head relationship. However, some well-known facts about Finnish word order appear inconsistent with such a proposal. First, the verb agrees with the subject even when a non-subject DP raises to the specifier of XP, that is, when there is no specifier-head relation between the subject and the finite verb within XP. Conversely, the agreement features on the verb are always determined by the logical subject, not by any other DP. Furthermore, both verb movement and DP-movement occur in clauses with quirky subjects. There is no overt agreement with quirky subjects, as shown in (23e). It is clear, then, that the relation between the DP in [Spec, XP] and the verb in X is not one of agreement feature checking. Since the movement of a verb and a DP into X(P) does not result in subject-verb agreement between the two moved elements, [Phi] appears to be ruled out as the strong feature that attracts the verbal element to X.

I propose, however, that the checking of the [phi] features of the raising verbal element against the agreement features of the subject DP should be separated from the checking of the [phi] features of the raising element against the strong abstract [Phi] feature

of the functional X head. Since overt subject raising is not obligatory in Finnish, I argue that the checking of the subject's agreement features (as well as its [case] feature) takes place covertly at LF. On the other hand, it is true that in every Finnish finite clause person/number agreement features are overtly expressed on either a verb or the negator. I argue that the [Phi] feature<sup>9</sup> of X is the syntactic feature that uniquely defines a finite clause in Finnish. This conclusion is supported by the fact that even functional elements such as the negator and the finite past tense morpheme *-i* are always obligatorily associated with agreement features. Hence, constituent negation in Finnish bears person/number agreement marking, and past tense in negated utterances is indicated with the past participle morpheme rather than the regular past tense marker, since only one set of [phi] features can be checked within a single clause. I claim that the strong feature that attracts the main verb, auxiliary verb or negator to raise out of vP to the functional XP position is the non-categorial feature [Phi].<sup>10</sup> The morphological realization of the lexical [phi] features will be discussed in detail in section 2.3.5, along with subject case assignment.

The conclusion that agreement features attract the verb to X appears to contradict directly the findings of some recent accounts of Finnish main clause structure which have concluded that there is no independent agreement projection in the language (Koskinen 1993b, Mitchell 1992, 1994a, 1994b). Let us briefly examine the significance of this discrepancy. Analyses of Finnish matrix clause structure that determined functional projections based entirely on morphological evidence proposed an Agr<sub>s</sub>P projection, since subject-verb agreement is overtly indicated by a verbal suffix in most finite clauses (e.g. Mitchell 1991, Holmberg et al. 1993, Vainikka 1994). Moreover, Agr<sub>s</sub>P was one of the projections included in the presumably universal functional representations put forth in Pollock (1989) and Chomsky (1991). The universal existence of Agr<sub>s</sub>P as an autonomous category was soon called into question, however. Iatridou (1990) gave French word order

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<sup>9</sup> Possibly this feature should be labelled [Finite].

<sup>10</sup> A strong [Phi] feature is also proposed for English small clauses in Legate and Smallwood (1996).

data that contradicted Pollock's original justification for the existence of the Agr<sub>S</sub> projection in that language; Speas (1991), studying the order of agreement morphemes in Navajo, showed that the attested order of subject and object agreement markers is the opposite of what the expanded Infl structure of Pollock would predict; and Bahloul and Harbert's (1991) investigation of Arabic as well as Carstens and Kinyalolo's (1989) examination of Swahili demonstrated that multiple occurrences of subject agreement features in periphrastic constructions in these languages would require apparently redundant multiple Agr<sub>S</sub> projections.

Agr<sub>S</sub> was also called into question for Finnish. Mitchell (1992, 1994a, 1994b) and Koskinen (1993b), presented evidence from comparative research into several Finno-Ugric languages to show that subject-verb agreement in these languages should not be treated as movement to a separate fixed functional position, but should rather be expressed as a specifier-head relationship within some other projection. Mitchell's (1992, 1994a, 1994b) conclusions were based on five Finno-Ugric languages, Hungarian, Khanty, Mansi<sup>11</sup>, Erza and Moksha. In these languages, morphological evidence suggests that two agreement phrases, Agr<sub>S</sub> and Agr<sub>O</sub>, must be generated adjacent to each other, while word order indicates that AgrPs cannot be adjacent to Agr<sub>O</sub>. In order to retain the advances provided by the Mirror Principle (Baker 1985, 1988) for the study of numerous languages, Mitchell abandoned the AgrP structure rather than the Mirror Principle in her account of the paradox. Koskinen (1993) gave evidence from the ordering of negation, tense and agreement marking in Finnish and three Estonian dialects that tense and negation head their own functional projections. The somewhat unexpected absence of agreement morphology in negated clauses in two of the Estonian dialects was accounted for by treating agreement as a feature checking relation within some independently motivated projection, rather than in an Agreement Projection.

These two analyses seem at first to contradict my conclusion that [Phi] is the strong feature attracting the highest element bearing agreement to the head of XP. These earlier

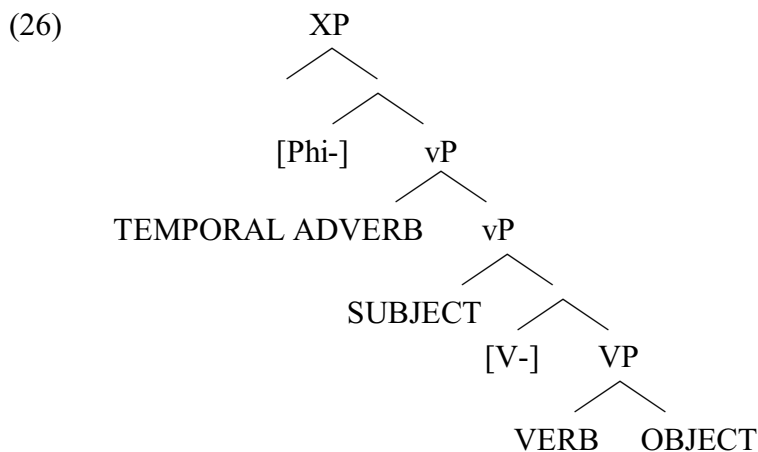
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11 'Khanty' is also known as 'Ostyak', 'Mansi' as 'Vogul'.



studies that rejected Agr<sub>S</sub>P as a functional category, however, did so under different assumptions from the ones utilized here. In those works the function of Agr<sub>S</sub>P was to check the agreement between the subject and the verb by having the two elements move to their respective positions precisely for the purpose of this checking process. The appearance of any other elements in either the specifier or the head of Agr<sub>S</sub>P would thus be ruled out. Under this approach, the fact that in Finnish, as well as in the other Finno-Ugric languages reported on, the specifier position of XP may be occupied by a DP other than the subject means that agreement cannot be checked within the XP projection. In the current work, however, this conclusion is not necessary. As explained above, agreement features of the verb and the subject are checked separately. The highest element that bears morphological agreement marking raises overtly to X to check its [phi] features, but the [phi] features of the subject are checked through covert feature movement. Under the assumptions being made here, it is also possible to raise a non-subject DP to the specifier of XP to check some strong feature other than [Phi], since overt subject raising is not required. In conclusion, there is no significant contradiction between the earlier accounts and the analysis provided here; rather, my current account has further refined the analysis of subject-verb agreement in Finnish.

The representation in (26) illustrates the syntactic features that have been identified as occupying the matrix clause tree to this point.



I now consider the movement of a DP into the specifier position of XP. Chomsky's stipulation that only categorial features are attractors is too restrictive to account for DP-movement to X. It seems at first that a strong D-feature of X might be triggering the movement of a nominal element into the [Spec, XP] position, since it is generally true that only DPs appear here.<sup>12</sup> DP-movement into [Spec, XP], however, cannot be driven by a strong [D] feature of X, since this movement would frequently violate the principle of Shortest Move. In any Finnish clause containing a subject, the subject is always the closest element to X that bears a [D] feature. Yet it was shown in (23b-d) that any DP in the clause, not only the subject, may raise to [Spec, XP]. In addressing the problem of identifying the feature triggering DP-movement, I take the principle of Shortest Move to be more essential to the Minimalist Program than the stipulation that only categorial features may be strong. This stipulation has been challenged not only with respect to these Finnish data, but cross-linguistically. I therefore surmise that a non-categorial syntactic feature must be triggering DP-movement to [Spec, XP].

Two features that might motivate obligatory DP-movement in main clauses are [Case] and [Phi], given the morphological markings of nominals. [Case] has been proposed as an attracting feature in other languages, for example for Icelandic and Irish by Legate and Smallwood (1996), and for Japanese by Miyagawa (1997). Nevertheless, the data in (23b-d) again show that DP movement to [Spec, XP] is not required for case checking. In those examples, the subject occurs in a position below XP, indicated by its location to the right of the time adverb, which is adjoined to vP. The subject apparently remains in vP, yet it bears

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<sup>12</sup> Most lexical elements that have traditionally been categorized as adverbs, based on their semantic function, are arguably syntactic nominals (=DP's). The relevant "adverbial" elements are morphologically noun-like in that they always bear nominal inflectional marking for one of the fifteen Finnish cases, as well as number. Their categorization as adverbs appears to have been based on semantic criteria drawn from comparative work between Finnish and languages such as English (cf. e.g. Hakulinen and Karlsson 1979:200-221) rather than on any language-internal justification. If we assume that syntactic categorization is based solely on syntactic and possibly morphological behaviour, most of the lexical items traditionally labelled as adverbs in Finnish are properly treated as nominals. This allows us to retain the generalization that all elements that occur in the specifier position of XP are of the category DP. Other elements traditionally labelled as adverbs, such as manner adverbs, should continue to be classified as non-nominal, presumably adverbial, since they differ from the DP elements in not being able to move into the [Spec, XP] position. They do not occur in the [Spec, XP] position, as will be shown shortly.

nominative case. Moreover, the case of the moved DP is not determined by its appearing in the [Spec, XP] position. In the examples in (23) we saw partitive, essive and allative non-subject DPs in [Spec, XP]. (27) shows that quirky subjects may appear in the specifier position of XP as well.

- (27) a. **Jarko-n** täyty-y aina luke-a sanomalehti ensimmäisenä.  
 J-GEN must-3SG always read-TA newspaper.NOM first  
 'Jarkko always has to be the first to read the newspaper'
- b. **Minulla** särke-e usein pää-tä.  
 I.ADE ache-3SG often head-PAR  
 'I often have a headache'
- c. **Minusta** tule-e vielä kuuluisa tutkimusmatkailija  
 I.ELA come-3SG yet famous.NOM explorer.NOM  
 'I will yet become a famous explorer'
- d. **Minua** laula-tta-a aina aamu-lla.  
 I.PAR sing-CAUS-3SG always morning-ABL  
 'I always feel like singing in the morning'

The raised DP is not necessarily the syntactic subject of the clause. Although the exact definition of "subject" in Finnish remains unresolved, it is generally agreed that any nominative DP with which the main verb agrees is a subject. Using subject agreement in raising constructions as a diagnostic, (28) shows that it is always the logical subject of the embedded clause that triggers agreement with the matrix verb.<sup>13</sup> This is true despite the fact that the logical object, for instance *kukat*, 'flowers', in (28.a), may occur in pre-verbal position and bear nominative-like morphological marking.<sup>14</sup>

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13 The forms in (28) look like, and have often been treated as, control structures. In section 2.3.5 I demonstrate, however, that this is not a correct analysis of these constructions. Rather, there is strong evidence that the logical subject of the embedded clause, in fact, originates in the subject position of the embedded vP, and agrees with the matrix verb because some of its features raise to the matrix Infl for checking purposes.

14 The morphological realization of object case is a complex matter. In this instance, we see a plural non-pronominal lexical object, which always occurs in a form unmarked for case, although it occurs

- (28) a. Kuka-t                    voi-n   /\*voi-vat aina tiistai-na    osta-a minä.  
          flower-PL.ACC can-1SG/ can-3PL always Tuesday-ESS buy-TA I.NOM  
          'I can buy the flowers always on Tuesday'
- b. Tiistai-na            voi-n   /\*voi        aina    osta-a kuka-t            minä.  
          Tuesday-ESS can-1SG/ can-3SG always buy-TA flower-PL.ACC I.NOM  
          'On Tuesday, I can always buy the flowers'
- c. Liisa-lle voi-n   /\*voi        aina    kuka-t                    osta-a minä.  
          L-ALL    can-1SG/ can-3SG always flower-PL.ACC buy-TA I.NOM  
          'I can always buy the flowers for Liisa'

A second diagnostic showing that the raised DP is not the subject is found in the behaviour of anaphors, which were introduced in section 2.2 above. Steenbergen (1987, 1991) identified the anaphor *itse*, 'self', and the possessive anaphors (e.g. 3SG *-nsa*), as subject-bound. (29) shows that the nominative-marked logical subject *Kati* binds the anaphors *itselleen*, 'for herself', and *itseään*, 'herself', even when it occurs after the anaphor, and the [Spec, XP] position is filled by another argument. The DP in the [Spec, XP] position cannot bind the anaphor, if it is not the logical subject.

- (29) a. Uude-n    sohva-n<sub>i</sub>    ost-i                    itse-lle-en<sub>\*i/j</sub>    Kati<sub>j</sub>    (eikä Pirkko).  
          new-ACC sofa-ACC buy-PAST.3SG self-ALL-3POS K.NOM (not P.NOM)  
          'It was Kati (not Pirkko) who bought herself a new sofa'
- b. Mari-lle<sub>j</sub>    kerto-o    Epu-n<sub>k</sub>    ihaile-va-n            hän-tä    itse-ä-än<sub>i/\*j/\*k</sub>    Kati<sub>i</sub>.<sup>15</sup>  
          M-ALL    tell-3SG E-GEN    admire-VA-ACC 3SG-PAR self-PAR-3POS K.NOM  
          'It is Kati<sub>i</sub> who tells Mari that Eppu admires her(self)<sub>i</sub>'

Legate and Smallwood (1996), in their analysis of subject raising in Icelandic, proposed a strong generalized [Case] feature which can be checked by any case-bearing

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in an object position and would be expected to bear accusative case.

<sup>15</sup> The embedded subject *Epun*, 'Eppu-GEN', cannot serve as the antecedent of the anaphor *hän-tä itseään*, 'himself', here because in the local domain only a non-subject may bind an anaphor of this type. (This was outlined in section 2.2, based on Steenbergen (1987, 1991).)

element (in Icelandic either a nominative or a quirky subject). Such a feature does not help to explain the Finnish facts, since it would predict that only the closest case-marked DP should move to [Spec, XP]. The movement of any non-subject DP would violate Shortest Move. The only possible conclusion, based on Finnish case assignment data, is that case cannot play any role in DP-movement to the [Spec, XP] position in Finnish.

Miyagawa (1997), investigating Japanese word order, has analyzed DP-movement in that language as Case agreement. Again, however, the analysis cannot be applied to Finnish. In Finnish, non-subject DP-movement is not supported by any agreement marking on the verbal complex (cf. (23b-d)), and when the subject has quirky case, as in (27), the finite verb bears default third person singular agreement marking rather than agreeing with the subject. Moreover, subject and non-subject DP's can move to the matrix [Spec, XP] even from non-finite embedded clauses. In Chapter 3 I will argue that in non-finite clauses the genitive case of the lower subject is checked in a DP projection that occupies the complement position of the higher verb. According to this analysis, the embedded subject *Karin*, 'Kari's', in (30a) can check its [case] feature within the lower clause, and its subsequent movement to the XP position of the main clause therefore cannot be motivated by case checking requirements.

- (30) a. Kari-*n<sub>i</sub>* luul-i                    [*t<sub>i</sub>* lähte-nee-n]    Panu.  
          K-GEN think-PAST.3SG    leave-NUT-ACC P.NOM  
          'It was Panu who thought that Kari had left'
- b. Pirko-lle<sub>i</sub> väittä-ä    [Mati-n soitta-nee-n    viulu-a    *t<sub>i</sub>*] Kalle.  
          P-ILL        claim-3SG   M-GEN play-NUT-ACC violin-PAR    K.NOM  
          'It is Kalle who claims that Matti played the violin for Pirkko'

The data in (31) show again that DP-movement in main clauses cannot be brought about by [Phi] features, since there is no necessary agreement in [Phi] features between the moved DP and the finite verbal element. The plural pre-verbal non-subject DP's in (31a-c) do not induce plural agreement. This is true even of the plural object DP in (31a) whose morphologically unaffixed case form resembles the unmarked nominative subject marking. Similarly, the plural non-nominative logical subjects in (31f-g) do not trigger subject-verb

agreement, even in the pre-verbal position. The verb agrees only with a nominative logical subject, as in (31d-e). Since, however, the nominative subject may remain in a surface position lower than the finite verb, while another DP raises to the pre-verbal position, as in (31a,b,c,e), I conclude that the strong feature attracting the DP to [Spec, XP] cannot be [ $\Phi$ ].

- (31) a. Kuka-**t** osta-**a** tänään Tuija.  
 flower-PL.ACC buy-3SG today T.NOM  
 'Tuija will buy the flowers today'
- b. Tiistais-**i-n** osta-**a** kuka-**t** aina Tuija.  
 Tuesday-PL-INS buy-3SG flower-PL.ACC always T.NOM  
 'On Tuesdays it is always Tuija who buys the flowers'
- c. Orkesterilais-**i-lle** osta-**a** kuka-**t** tänään Tuija.  
 orchestra.member-PL-ILL buy-3SG flower-PL.ACC today T.NOM  
 'Tuija will buy the flowers for the orchestra members today'
- d. Tyttö-**t** osta-**vat** tänään kaku-**n** orkesterilais-**i-lle**.  
 girl-PL.NOM buy-3PL today cake-ACC orchestra.member-PL-ILL  
 'The girls will buy a cake for the orchestra members today'
- e. Orkesterinjohtaja-**lle** osta-**vat** tänään kaku-**n** tyttö-t.  
 orchestra.conductor-ILL buy-3PL today cake-ACC girl-PL.NOM  
 'The girls will buy a cake for the orchestra conductor today'
- f. Namuhiir-**i-llä** särke-**e** usein hampa-**i-ta**.  
 candy.mouse-PL-ADE ache-3SG often tooth-PL-PAR  
 'Candy eaters often have tooth aches'
- g. **Meistä** tule-**e** iso-**i-na** kuuluis-**i-a** kielitieteilijö-**i-tä**.  
 we.ELA come-3SG big-PL-ESS famous-PL-PAR linguist-PL-PAR  
 'We're going to become famous linguists, when we grow up'

I have now shown that none of the morphologically overt features of the raised DP, [D], [Case] or [ $\Phi$ ], can be triggering the movement. The DP-movement appears to be motivated by an EPP feature of sorts: a need to fill the preverbal position with a nominal maximal projection, in order to avoid generating a verb-initial sentence. Ordinary Finnish main clauses do not have the verb in initial position. A sentence-initial finite verb in a main

clause that also contains a nominal element is interpreted as focussed, with a stressed, contrastive reading, as indicated in (32). Moreover, the position of the temporal adverb *usein*, 'often', to the right of the nominal element *täällä*, 'there', in (32) confirms that both the verb and *täällä* have raised out of vP. Assuming that *täällä* occupies the [Spec, XP] position, we must conclude that the sentence-initial verb is in a position higher than X. I assume, then, that Finnish allows sentence-initial verbs only in special focus constructions, and that in normal, neutral utterances the preverbal position is filled precisely to avoid a verb-initial structure.<sup>16</sup>

- (32) Tanssi-ta-an-han täällä usein tiistai-na-kin.  
 dance-PASS-AGR here often Tuesday-ESS-EMP  
 'Even on Tuesday, (people) often dance here (but on Sundays this hall serves as a soup kitchen)'

[Spec, XP] must be occupied by a nominal (DP) element. Manner adverbs (33), non-finite verbs, whether participles or infinitives, (34-35), and adjectives (36) cannot check the relevant attracting feature of XP, as indicated by the unacceptability of sentences in which they occupy the pre-verbal position without bearing contrastive focus. The utterances in

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<sup>16</sup> First and second person null pronouns appear to count as phonologically overt DPs for the purposes of checking the attracting feature, as in (i.a-c). In fact, a DP fronted to a preverbal position in a null first or second person-subject clause is obligatorily interpreted as focussed, i.e. must bear contrastive stress, as shown in (i.c). Subjectless clauses with default third person singular agreement do not manifest this requirement, as illustrated in (ii). I will not, however, explore the reason for this distinction between null pronouns further here.

- (i) a. Lähde-tään huomenna sinne Turku-un.  
 go-1PL tomorrow there T-ILL  
 'Let's go to Turku tomorrow'

- b. Lähde-n kauppa-an.  
 go-1SG store-ILL  
 'I'll go to the store'

- c. Kauppa-an/\*kauppa-an lähde-n.  
 store-ILL / store-ILL leave-1SG  
 'I'll go to the store/\*store'

- (ii) a. \*Sato-i tiistai-na.  
 rain-PAST.3SG Tuesday-ESS  
 'It rained on Tuesday'

- b. Tiistai-na sato-i.  
 Tuesday-ESS rain-PAST.3SG  
 'It rained on Tuesday'

(33b,c), (34a), (35) and (36a,b) are acceptable if contrastive stress is placed on the sentence-initial non-nominal word. This finding supports my claim, initially based on the data in (23), that the attracting feature is a sub-type of a [D] feature. The contrast is especially clear in (34), which compares the behaviour of the *ta*-marked infinitive with the deverbal *minen*-nominal form of the same verb. The nominal form is attracted to [Spec, XP], as in (34c), while the infinitival form cannot move to [Spec, XP], as in (34a).

- (33) a. **Täällä** sata-a.  
           here   rain-3SG  
           'It's raining here'
- b. \***Rankasti** sata-a.  
           hard     rain-3SG  
           'It's raining hard'
- c. \***Iloisesti** osta-a   kukk-i-a     Tuija.  
           happily buy-3SG flower-PL-PAR T.NOM  
           'Tuija is happily buying flowers'
- (34) a. \***Ui-da**   on   kiva-a.  
           swim-TA be.3SG fun-PAR  
           'To swim is fun'
- b. On   kiva-a   **ui-da**.  
           be.3SG fun-PAR swim-TA  
           'To swim is fun'
- c. **Ui-minen**   on   kiva-a.  
           swim-DEVN be.3SG fun-PAR  
           'Swimming is fun'
- d. \*On   kiva-a   **ui-minen**.  
           be.3SG fun-PAR swim-DEVN  
           'Swimming is fun'
- (35) Ei       hän       ole saa-nut   paljoa aikaan, \*mutta **matkustel-lut** on   hän.  
       NEG.3SG 3SG.NOM be get-NUT much time-ILL but travel-NUT be.3SG 3SG.NOM  
       'She hasn't accomplished much, but she has travelled' (Vilkuna 1989:26, (9.c))
- (36) a. \***Vihainen** on   Jussi.  
           angry   be.3SG J.NOM  
           'Jussi is angry'
- b. \***Keltaise-ksi** maala-a   talo-nsa   Kari.  
           yellow-TRAN paint-3SG house-3POS K.NOM  
           'Kari painted his house yellow'



As with verbs, manner adverbs, non-finite verbs and adjectives can appear sentence-initially, but only with a focussed interpretation. (37) shows that when a verb-initial sentence contains at least one DP, the reading is obligatorily contrastive (the examples are from Vilkuna 1989:40, (37)). (37a) contains no lexical DP that could occupy [Spec, XP], and hence the position is not overtly identifiable. Consequently, both the neutral and contrastive readings of the utterance are available, based on the pattern of intonation. In (37b), the nominal *täällä*, 'here', the only DP in the clause, must be located in [Spec, XP]. Since it occurs to the right of the verb *on*, 'is', the verb is obligatorily interpreted as focussed.

- (37) a. On/On sata-nut.  
           be.3SG rain-NUT  
           'It has rained', 'It has rained'  
           (neutral or contrastive reading, based on intonation)
- b. On/\*On *täällä* sata-nut.  
           be.3SG here.ALL rain-NUT  
           'It has rained here'  
           (contrastive reading only)
- c. *Täällä* on/on sata-nut.  
           here.ALL be.3SG rain-NUT  
           'It has rained here', 'It has rained here'  
           (neutral or contrastive reading, based on intonation)

The examples in (38) also illuminate the focussed status of the pre-verbal non-nominal elements. Here an overt nominal element occupies the XP specifier position to the left of the finite verb.

- (38) a. Rankasti(-pa) **täällä** sata-a.  
           hard(-EMP) here rain-3SG  
           'It's certainly raining hard here'
- b. Ui-da **minusta** on kiva-a (mutta ei sukelta-a).  
           swim-TA I.LINE be.3SG fun-PAR but NEG dive-TA  
           'To swim is fun for me, but not to dive'

- c. Ei hän ole paljoa teh-nyt, mutta matkustel-lut **hän** on.  
 NEG.3SG 3SG.NOM be much do-NUT but travel-NUT 3SG.NOM be.3SG  
 'She hasn't done much, but she has travelled'
- c. Vihainen **Juuso** on.  
 angry J.NOM be.3SG  
 'Juuso is angry'

Further evidence for the nominal XP position comes from the emergence of expletives in colloquial Finnish. While there are no expletives in Standard Finnish, in colloquial use expletives are increasingly common in subjectless clause types like impersonal passives, the missing person construction and clauses containing weather verbs. It is worth noting again that the expletive is not required by case considerations, since the expletives here manifest various cases (nominative, partitive and adessive).<sup>17</sup> This data set confirms that [Case] cannot be the strong attracting nominal feature of XP.

- (39) a. Täällä-pä **sitä** tanssi-ta-an tango-a!  
 here-EMP it.PAR dance-PASS-AGR tango-PAR  
 'What a lot of tango dancing there is going on here!'
- b. Oli **se** hauska näh-dä sinu-a taas.  
 be.PAST.3SG it.NOM fun see-TA you-PAR again  
 'It was indeed nice to see you'
- c. Nykyään **sitä** väsy-y niin helposti.  
 nowadays it.PAR tires-3SG so easily  
 'Nowadays, one gets tired so easily'
- d. Kovat ajat **sillä** on Miko-lla ede-ssä.  
 hard times it-ADE be.3SG M-ADE ahead-INE  
 'Mikko sure has hard times ahead of him'
- e. Rankasti-pa **se** /**si-tä** sata-a-kin!  
 hard-EMP it.NOM/it-PAR rain-3SG-EMP  
 'Is it ever raining hard!'

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<sup>17</sup>These Finnish expletives argue against Chomsky's (1995) assumption that expletives lack [Case] and [Phi] features. For discussion of the case marking of expletives in colloquial Finnish, see Holmberg and Nikanne (1994), and subsequent exchanges in *Finnsyntax*.

What, more exactly, is the nature of the feature that attracts DP-movement? An essential semantic feature shared by all the nominal elements that occur in XP position is that each is the topic of the utterance, the locus of what the sentence is about. Vilkuna (1989:79) identified a functional T (topic or theme) position comparable to the structural position recognized here. According to Vilkuna, the topic of a sentence is the question to which the sentence is addressed, while Chafe (1976:50) states that "the topic sets the ... framework within which the main predication holds." Topic projections have been previously proposed for, at least, Basque (Laka 1990), Danish (Moorcroft 1995), English (Brunson 1992, Branigan 1992), and Icelandic (Moorcroft 1995).

To account for the presence in Finnish clauses of a Topic projection, I propose that it is a grammaticalized semantic feature that is obligatorily present in at least every Finnish clause predicated of a verb. I assume that the reason for its existence is the fact that Finnish word order is so strongly discourse-driven. In terms of obligatoriness in the language, I compare it to the mandatory presence of the feature [Tense] in all English clauses. Irrefutably, features such as [Tense] and [Topic] need not mandatorily be grammaticalized in every language. For instance, in Mandarin Chinese there is no tense inflection, and no evidence of a temporal projection acting in syntactic derivation (Cheng and Tang 1996). Gold (in progress) also argues that in Yiddish the syntactic feature [tense] plays no part in the computational system. This does not mean that temporal relations cannot be expressed in Mandarin or Yiddish, only that the feature is not syntactically active. I assume that Universal Grammar provides an inventory of possible syntactic features such as [Tense] and [Topic]. It is the task of language acquirers and linguists to determine which features are active in each language. Furthermore, when a language grammaticalizes such a feature, it may also establish that a given feature must obligatorily occur in every clause. This is the case with [Topic] in Finnish. The mechanism for ensuring that such a feature is selected at numeration for every derivation is not currently in place, so for the time being I must simply stipulate the condition that a Finnish clause receives no interpretation unless a [Topic] feature has been checked.

According to my hypothesis that every clause must contain a topic, I assume that, at numeration, for every [Temporal Reference] feature, a [Topic] feature must also be chosen. Based on the data discussed above, I propose that this feature is located at X, the functional head that also bears strong [Phi] features. The abstract [Topic] feature is strong and, thus, must be checked overtly before spellout. In addition to the functional [Topic] feature, some DP may pick up an optional [topic] feature at numeration. The strong [Topic] feature then attracts the DP that carries [topic] into the [Spec, TopicP] position. Since only elements of the category D can select [topic], only DP's undergo this movement.<sup>18</sup> If no [topic] feature

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<sup>18</sup> The unacceptability of parts of idiom chunks as topics presents one restriction on main clause DP movement. Although the raised elements in (i) are nominal, and, as such, suitable fillers for the [Spec, TopicP] position, the utterances are ungrammatical. This topic-raising of nominal idiom segments is not ruled out by adjacency restrictions: (ii) shows that idiom chunks can be separated under focus movement. Idiom fragment topics cannot be eliminated under a specificity condition on topics, either, since the nominal element can be clearly specified with proper modification, as in (iii.a). Even under these conditions, however, they cannot act as topics (cf. (iii.b)). I have no explanation for these facts at the moment, and leave the question for further research.

- (i) a. \*Aikomus on minu-lla lähte-ä Kuuba-an hiihtoloma-ksi.  
 plan.NOM be.3SG 1SG-ADE leave-TA Cuba-ILL spring.break-TRAN  
 'I plan to go to Cuba for the spring break'
- b. \*Pakko on minun ratkais-ta tämä ongelma nyt.  
 necessity.NOM be.3SG 1SG-GEN solve-TA this.NOM problem.NOM now  
 'I must solve this problem now'
- c. \*Lupa on minu-lla lähte-ä tänään aikaisin.  
 permission.NOM be.3SG 1SG-ADE leave-TA today early  
 'I have permission to leave early today'
- (ii) a. Aikomus-han minu-lla on lähte-ä Kuuba-an mutta....  
 plan.NOM-EMP I-ADE be-3SG leave-TA Cuba-ILL but  
 'I did plan to go to Cuba, but (I suspect I'll not have enough money)'
- b. Pakko-ko sinun ol-i kerto-a kaiki-lle sii-tä.  
 necessity.NOM-Q you-GEN be-PAST.3SG tell-TA everyone-ALL it-PAR  
 'Did you have to tell everyone about it?'
- (iii) a. Nyt sinu-lla on se toivo-ma-si tilaisuus laula-a.  
 now 2SG-ALL be.3SG that.NOM wish-MA-2Pos opportunity.NOM sing-TA  
 'Now you have that opportunity to sing that you've wished for'

is added to any DP at numeration, the derivation proceeds normally until the [Topic] feature is merged to the structure. At this point, since no matching [topic] feature is present, the strong [Topic] feature cannot be checked, and the derivation is cancelled.

The subject is the most neutral choice for topic ('Default T' in Vilkuna 1989:41). When the subject is in the Topic position, the sentence answers the question "What's new?", and the intonation pattern of the sentence is neutral. If the subject is not the topic, then it is new information and can be focussed in two ways: it can move into the pre-topic focus position (which is discussed further in the following section), or it can remain *in situ* in vP. In either case the subject bears contrastive stress.

- (40) a. Mikko astia-t pes-i.  
 M.NOM dish-PL.ACC wash-PAST.3SG  
 'It was Mikko who washed the dishes'
- b. Astia-t pes-i Mikko.  
 dish-PL.ACC wash-PAST.3SG M.NOM  
 'It was Mikko who washed the dishes'

The data in (41) show that only one DP element can occur in the syntactic Topic position. Clearly only one [Topic] feature may appear in each clause. These examples also illustrate that multiple specifier positions are not available in Finnish.<sup>19</sup>

- 
- b. \*Nyt se toivo-ma-si tilaisuus on sinu-lla laula-a.  
 now that.NOM wish-MA-2Pos opportunity.NOM be.3SG 2SG-ALL sing-TA  
 'Now you have that opportunity to sing that you've wished for'

<sup>19</sup> The sentences in (41) are acceptable if the first DP bears contrastive stress, that is, under a reading where the first DP is raised into the Focus position.

- (i) Kukk-i-a Tuija ost-i Liisa-lle.  
 flower-PL-PAR T.NOM buy-PAST.3SG L-ALL  
 'It was flowers that Tuija bought for Liisa'
- (ii) Itse-lle-en Maija ost-i tuo-n puvu-n.  
 self-ALL-3Pos M.NOM buy-PAST.3SG that-ACC dress-ACC  
 'It was for herself that Maija bought that dress'

- (41) a. \*Kukk-i-a      Tuija   ost-i              Liisa-lle.  
          flower-PL-PAR T.NOM buy-PAST.3SG L-ALL  
          'Flowers, Tuija, bought for Liisa'<sup>20</sup>
- b. \*Tuija   kukk-i-a              ost-i              Liisa-lle.  
          T.NOM flower-PL-PAR buy-PAST.3SG L-ALL  
          'Tuija, flowers, bought for Liisa'
- c. \*Liisa-lle kukk-i-a              ost-i              Tuija.  
          L-ALL   flower-PL-PAR buy-PAST.3SG T.NOM  
          'For Liisa, flowers, Tuija bought'
- d. \*Itse-lle-en      Maija   ost-i              tuo-n      puvu-n.  
          self-ALL-3POS M.NOM buy-PAST.3SG that-ACC dress-ACC  
          'For herself, Maija, bought that dress'
- e. \*Maija   tuo-n      puvu-n      ost-i              itse-lle-en.  
          M.NOM that-ACC dress-ACC buy-PAST.3SG self-ALL-3POS  
          'For herself, Maija, bought that dress'

The distinction between topic and focus interpretations can be illustrated by the question/answer pairs in (42). I assume, following Rochemont and Culicover (1990:18) that "in a well-formed wh-question/answer sequence, all and only the information requested is focussed in the response." This assumption explains the grammaticality variations in (42): while the subject *monet*, 'many', which provides the information requested in the question, can be focussed in either of the two available ways, the object *Ainoa*, 'Aino', is not requested information, and hence cannot be focussed, either *in situ*, or in the sentence-initial focus position. The presupposed object *Ainoa* can act as a non-stressed topic, as in (42a,c), but it cannot occur in the stressed focus position in (42d,e). The non-presupposed subject *monet*, 'many', on the other hand, can occur only in focus positions, as shown in (42a,b,c), and not in the topic position in (42d,e).

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<sup>20</sup> It is not a trivial task to translate multiple topic sentences to English. The English glosses might suggest that the moved elements bear focus rather than topic status, but this is not the case in Finnish.

- (42) Q: Äänest-i-kö kukaan Aino-a?  
 vote-PAST.3SG-Q anyone.NOM A-PAR  
 'Did anyone vote for Aino?'
- A:
- a. Aino-a äänest-i-vät mone-t.  
 A-PAR vote-PAST-3PL many-PL.NOM  
 'Many voted for Aino'
  - b. Monet äänest-i-vät Aino-a.  
 many-PL.NOM vote-PAST-3PL A-PAR  
 'Many voted for Aino'
  - c. Mone-t Aino-a äänest-i-vät.  
 many-PL.NOM A-PAR vote-PAST-3PL  
 'Many voted for Aino'
  - d. \*Mone-t äänest-i-vät Aino-a.  
 many-PL.NOM vote-PAST-3PL A-PAR  
 'It was Aino that many voted for'
  - e. \*Aino-a mone-t äänest-i-vät.  
 A-PAR many-PL.NOM vote-PAST-3PL  
 'It was Aino that many voted for'

Finnish appears to conform to the cross-linguistic generalization, proposed by Kiss (1995) and others, that topics must always be specific. Whereas non-specific DP's are not acceptable in a topic position, as in (43b), they may occur in the pre-topic focus position, signalled by contrastive stress, shown in (43c). Interestingly, however, the structural position of focus adds specificity to the interpretation, so that the object DP which is overtly marked as non-specific by the modifier *jonkun*, 'some',<sup>21</sup> is interpreted as specific when it occurs in the focus position.

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<sup>21</sup> There are no definite/indefinite articles in Finnish corresponding to the English 'a', 'the'. To illustrate the distinctions of definiteness and specificity clearly, I use the non-specific quantifier *joku*, 'some' and the demonstrative article *se*, 'that', to force the relevant reading.

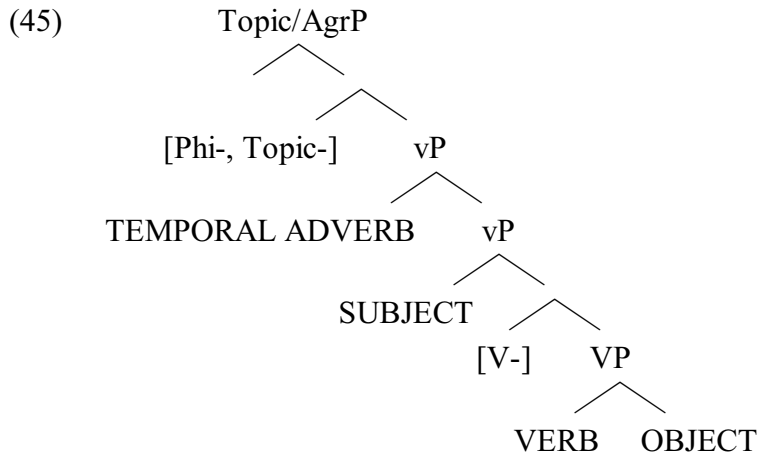
- (43) a. Minä kerro-n sinu-lle jonkun tarina-n.  
I.NOM tell-1SG you-ALL some.ACC story-ACC  
'I'll tell you a/some story'
- b. \*Jonkun tarina-n kerro-n sinu-lle minä.  
some.ACC story-ACC tell-1SG you-ALL I.NOM  
'(There's) a/some story (that) I'll tell you'
- c. Jonku-n tarina-n minä sinu-lle kerro-n.  
some-ACC story-ACC I.NOM you-ALL tell-1SG  
'(There's) some story (I have a specific one in mind) (that) I'll tell you'

The contrast is most clearly illustrated in (44). In (44a-b), the speaker knows that there will be a hockey game at Maple Leaf Gardens tomorrow night, and predicts that the hearer's parking spot, close to the arena, will become occupied in the course of tomorrow evening. In (44a), the offending car is not specific; the only thing asserted is that one of the hundreds of cars searching for a parking space will undoubtedly choose the spot in question. In (44b), however, the speaker has a particular car in mind, and is predicting that this vehicle will be stationed at the pertinent locality. In (44c) the non-specificity of the post-verbal DP is enhanced by the presence of the quantifier *joku*, 'some'. However, the meaning contributed by the preverbal position overrides the meaning contributed by the quantifier, so that in (44d) a specific reading is obtained.

- (44) a. Huomenna parkkipaika-lla-si on varmasti **auto**.  
tomorrow parking.spot-ADE-2SG.POS be.3SG definitely car.NOM  
'Tomorrow there will definitely be a car in your parking spot'
- b. Huomenna **auto** on varmasti parkkipaika-lla-si.  
tomorrow car.NOM be.3SG definitely parking.spot-ADE-2SG.POS  
'Tomorrow the/that car will definitely be in your parking spot'
- c. Puutarha-ssa on **joku mies**.  
garden-INE be.3SG some.NOM man.NOM  
'There's a man in the garden'
- d. **Joku mies** on puutarha-ssa.  
some.NOM man.NOM be.3SG garden-INE  
'There's a/some (specific to the speaker) man in the garden'



In conclusion, this section has shown that there is a functional position above vP, with the strong feature [Phi], that attracts the verb to this position, as well as a strong [Topic] feature, whose checking requirements raise either the subject or some other nominal to the specifier position of Topic/AgrP (=XP).



It was also demonstrated that there must be a Focus position distinct from the Topic position in Finnish. Let us now turn to a closer examination of the syntactic status of this Focus position.

### 2.3.2. CP versus FocusP

#### 2.3.2.1. Complementizers

The existence of a complementizer position (C) in Finnish can be motivated by overt lexical complementizers such as *että*, 'that', *jotta*, 'that', *jos*, 'if', *koska*, 'because', *kun*, 'when' and *vaikka*, 'although'.<sup>22 23</sup>

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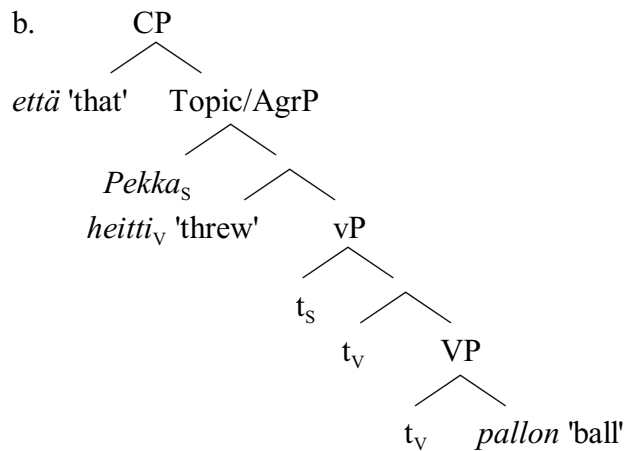
<sup>22</sup> Korhonen (1993) provides a thorough analysis of these and other conjunctions in Finnish.

<sup>23</sup> In chapter 4, I discuss in more detail the syntactic feature content of different types of C, finite, non-finite, negated, question, etc.

- (46) a. Näi-n, **että/kun** Sofia heitt-i kieppi-ä.  
 see-1SG that/when S.NOM throw-PAST.3SG cartwheel-PAR  
 'I saw that/when Sofia did a cartwheel'
- b. Sinä saa-t jälkiruoka-a, **jos/kun** syö-t lautase-si tyhjä-ksi.  
 you.NOM get-2SG dessert-PAR if /when eat-2SG plate-2POS empty-TRAN  
 'You'll get dessert, if/when you eat all of your food'
- c. Aloitta-kaa-mme-pa jo, **vaikka /koska** Sanna on-kin myöhässä.  
 start-IMP-1PL-EMP already although/because S.NOM be.3SG-EMP late  
 'Let's start already, although/because Sanna is late'

The specifier of a CP headed by *että*, 'that', *jotta*, 'that', or *koska*, 'because', as a head is never filled, presumably due to the absence of syntactic features that would attract any XP to this position. The status of the specifier of CP will be discussed further in section 2.3.2.3. The functional structure of the Finnish main clause that has been identified so far is exemplified by a sample derivation in (47).

- (47) a. (Minä nä-i-n) että Pekka heitt-i pallo-n.  
 I.NOM see-PAST-1SG that P.NOM throw-PAST.3SG ball-ACC  
 '(I saw) that Pekka threw the ball'



Before proceeding with the investigation, I would like to make the following comment about the tree representations utilized in this thesis. Although the central

conclusion of this research will be that syntactic structure is not based on the projection of syntactic category labels, but rather on the projection of syntactic features that are present in the structure due to the feature matrices of lexical items selected at numeration, it is also true that purely feature-based structures are very difficult to represent. For brevity and ease of identification, each projection will be labelled based on the most salient syntactic feature or features associated with its head. For instance, the projection of the formal features [Topic-, Phi-] will be identified as 'Topic/AgrP', and a projection headed by complementizers as CP. It is important to remember, however, that it is the syntactic features of the heads that determine the syntactic structures in which they can occur, not their membership in some specific 'TopicP', 'AgrP' or 'CP' category. Rather, I assume that the syntactic features of projections identified as TopicP's, AgrP's and CP's in different languages may vary dramatically. Much misunderstanding and confusion in recent years has resulted from attaching too much importance to syntactic category labels. Nonetheless, since the interpretation of tree structures might prove an unreasonably complex task if all features were represented at all times, I will use the shorthand forms.<sup>24</sup>

### 2.3.2.2. Focussed elements

Finnish wh-questions manifest overt question word movement to the front of the clause. Following analyses of languages such as English, this movement was previously assumed to target the specifier position of the CP projection (e.g. Holmberg 1989, Vainikka 1989). As originally observed by Kenesei (1991), however, the target position of this movement cannot be the specifier of CP, since the raised question element may co-occur with an overt Comp element such as *että*, 'that'. This is illustrated by the data in (48). The fact that the question word follows the complementizer suggests that the question word moves to a position below Comp. On the other hand, the presence of the subject DPs in

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<sup>24</sup> I note that the readability of representations is a matter of taste, since at least one other researcher, Haberli (1997), represents syntactic structures solely in terms of their feature composition.

(48a,c) and the locative DP *keittiössä*, 'in the kitchen', in (48b) suggests that the target position of question words must be above the Topic position. As for the attracting feature itself, it is plausibly a [D] feature, since all Finnish question words bear case-marking, determined by their grammatical function and theta-role. The property of being case-marked identifies them as nominals.<sup>25</sup>

- (48) a. Jaana kysy-y että **mitä** sinä halua-t syntymäpäivälahja-ksi.  
 J.NOM ask-3SG that what.PAR you.NOM want-2SG birthday.present-TRAN  
 'Jaana asks what you want for a birthday present'
- b. Hilma kummastel-i että **kuka** keittiö-ssä kolistele-e.  
 H.NOM wonder-PAST.3SG that who.NOM kitchen-INE rattle-3SG  
 'Hilma wondered who was rattling in the kitchen'
- c. Emmi ihmettel-i että **minne** Sofia katos-i.  
 E.NOM wonder-PAST.3SG that what.ILL S.NOM disappear-PAST.3SG  
 'Emmi wondered where Sofia disappeared to'

Yes/no questions in Finnish also involve movement. An X(P) that is the focus of the question is affixed with the marker *-ko/kö*, and moved to a pre-topic, post-complementizer position. Based on the identical location of the moved elements in wh- and yes/no-questions, and the fact that both movements result in the raised element becoming the focus of the question, I assume that both movements target the same position. Under this assumption, we see from the data in (49) that the syntactic feature attracting the question elements cannot be any single category feature, since in yes/no questions DP's, adverbs and verbs may move to check the feature.

- (49) a. Eerik mietti-i että kukk-i-a-ko hän Elisa-lle osta-isi.  
 E.NOM wonder-3SG that flower-PL-PAR-Q 3SG.NOM E-ALL buy-COND  
 'Eerik wonders whether he should buy Elisa flowers'

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25 The morphological structure of the adjunct question words *miten*, 'how', *milloin*, 'when' and *miksi*, 'why', is not as immediately obvious as that of the argument question words, but it is also not impossible to argue for. I will assume that they are nominal.

- b. Eerik mietti-i että Mikael-ko Elisa-lle osta-isi kukk-i-a.  
 E.NOM wonder-3SG that M.NOM-Q E-ALL buy-COND flower-PL-PAR  
 'Eerik wonders whether Mikael would buy Elisa flowers'
- c. Eerik mietti-i että osta-isi-ko hän Elisa-lle kukk-i-a.  
 E.NOM wonder-3SG that buy-COND-Q 3SG.NOM E-ALL flower-PL-PAR  
 'Eerik wonders whether he should buy Elisa flowers'
- d. Eerik mietti-i että Elisa-lle-ko hän osta-isi kukk-i-a.  
 E.NOM wonder-3SG that E-ALL-Q 3SG.NOM buy-COND flower-PL-PAR  
 'Eerik wonders whether he should buy flowers for Elisa'
- e. Johtaja sure-e että huonosti-ko meitä on palvel-tu.  
 boss.NOM worry-3SG that badly-Q we.PAR be.3SG serve-PASS.PAST  
 'The boss worries whether we have been served badly'

A third construction, mentioned in the previous section, raises a focussed (emphasized or contrasted) element into this same pre-topic, post-complement position. The moved focus-element may, but need not, bear one of the emphatic suffixes *-pa(s)/-pä(s)* or *-han/-hän*.<sup>26</sup> Again, the movement is not restricted to a specific category type; any XP or X may undergo this focus movement. All three types of movement may be signalled by a higher degree of intonational prominence; however, such intonational marking is not absolutely necessary, and is often not present, particularly in wh-questions.

- (50) a. Eerik pohti-i että kukk-i-a-han hän Elisa-lle osta-a.  
 E.NOM think-3SG that flower-PL-PAR-EMP 3SG.NOM E-ALL buy-3SG  
 'Eerik thinks that he will buy Elisa flowers'
- b. Eerik usko-o että Mikael-han Elisa-lle osta-a kukk-i-a.  
 E.NOM believe-3SG that M.NOM-EMP E-ALL buy-3SG flower-PL-PAR  
 'Eerik believes that Mikael will buy Elisa flowers'
- c. Eerik pohti-i että osta-a-han hän Elisa-lle kukk-i-a.  
 E.NOM think-3SG that buy-3SG-EMP 3SG.NOM E-ALL flower-PL-PAR  
 'Eerik thinks that he does buy Elisa flowers'

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<sup>26</sup> Hakulinen (1976), Hakulinen and Karlsson (1979) and Nevis (1988) provide closer investigations of the exact meanings of these particles.

- d. Eerik päättä-ä että Elisa-lle-pa hän osta-a kukk-i-a.  
 E.NOM decide-3SG that E-ALL-EMP 3SG.NOM buy-3SG flower-PL-PAR  
 'Eerik decides that he will buy flowers for Elisa'

Following a proposal by Kenesei (1991), I assume that the semantic feature relevant for all three moved elements is focus. I assume that the concept of 'focus' in this context relates to the distinction between "new information" and "old information". I adopt Rochemont and Culicover's (1990:20) definition of focus: "If a is not c-construable (= under discussion), then a is a focus." This definition unites all three types of focus movement, contrastive focus, wh-question focus and yes/no question focus, under one position. However, two distinct features, [Q] and [Focus], must be assumed to be at work, since two separate morphemes can occur on a single X(P) in this position: one of the emphatic clitics can be combined with either the yes/no question morpheme *-ko/-kö* or one of the question words.

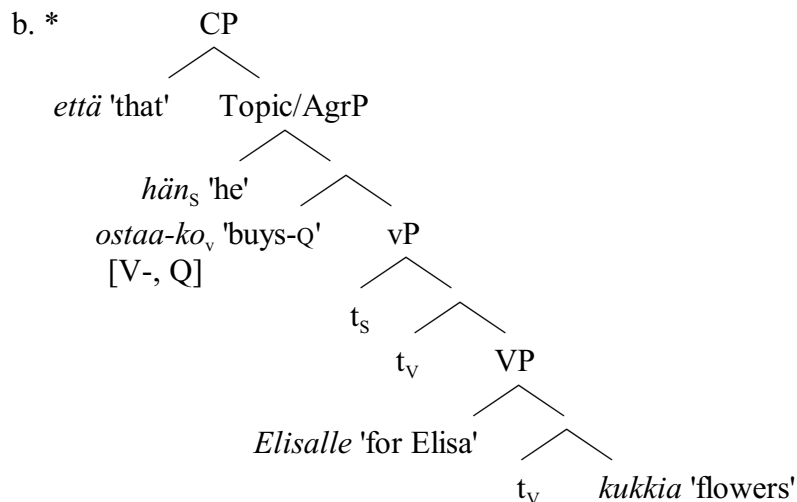
- (51) Sofia pohti-i että osaa-**ko-han** joulupukki varmasti teh-dä  
 S.NOM ponder-3SG that can-**Q-EMP** Santa.Claus.NOM certainly make-TA  
 merenneitopuvu-n.  
 mermaid.costume-ACC  
 'Sofia wonders whether Santa Claus really can make a mermaid costume'

I assume that, like [topic], [q] and [focus] are optional features available for lexical items at numeration. Unlike the [topic] feature which only attaches to nominal elements, the [q] and [focus] features are not limited to any single syntactic category. The movement of the [q]- or [focus]-bearing element to a functional position above Topic is motivated by an abstract strong [Q] or [Focus] feature which attracts the [q/focus] feature for checking. The selection of the [Q/Focus] feature contrasts with that of the [Topic] feature, in that [Q/Focus] is not an obligatory feature in Finnish. Moreover, the [Q/Focus] head does not have any other syntactic features, so no new structure is projected when the [Q/Focus] feature is not selected at numeration. In this way, no further movement is triggered in the absence of a [Q/Focus] feature. For the moment, the property of obligatoriness must simply be stipulated

for each grammaticalized feature, although ultimately, of course, it would be preferable to derive the justification from some deeper principle of grammar.

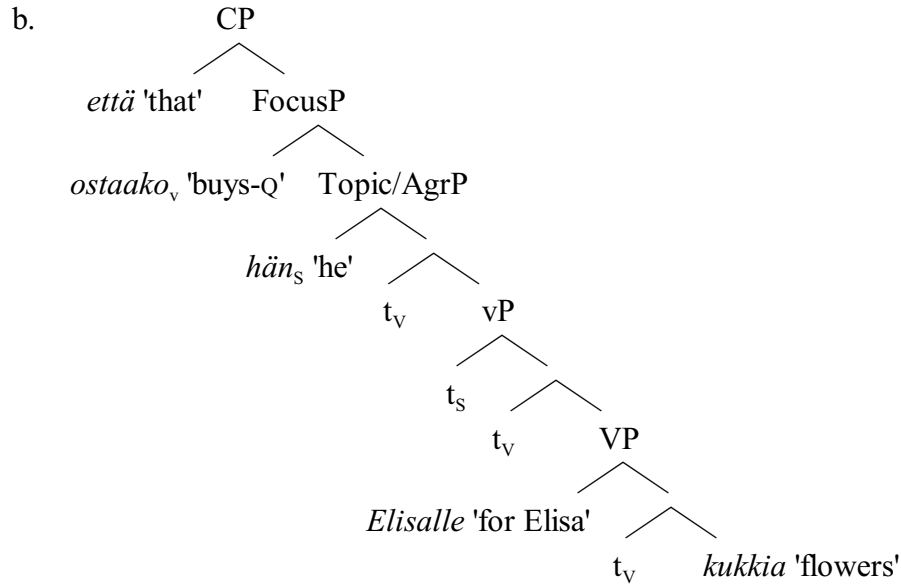
The [Q/Focus] feature must be located in an independent functional projection, rather than in Topic/AgrP. We might suggest that the focussed DP is located in a second specifier position of Topic/AgrP, but the possibility of [Q/Focus] checking by head-movement of the finite verb argues for an autonomous FocusP. If the [Q/Focus] feature were simply a secondary feature of Topic/Agr, then verb movement to Topic/Agr should be able to satisfy both the [Phi] and the [Q/Focus] feature of Topic/Agr. This predicts, wrongly, that word-order in verb-focussed clauses would be DP-Verb, as illustrated in (52).

- (52) a. \**että hän osta-a-ko Elisa-lle kukk-i-a*  
           that 3SG.NOM buy-3SG-Q E-ALL flower-PL-PAR  
           'whether he will buy flowers for Elisa'



Since a focussed verb is further fronted to the left of the Topic/Agr, as in (49c, 50c), I conclude that an autonomous Focus projection is needed. The representation adopted here is given in (53).

- (53) a. *että osta-a-ko hän Elisa-lle kukk-i-a*  
           that buy-3SG-Q 3SG.NOM E-ALL flower-PL-PAR  
           'whether he will buy flowers for Elisa'



(54) shows focus movement in main clauses. The position of the focussed elements relative to complementizers is not testable in main clauses, but there is strong evidence for a single structural position above Topic/AgrP. Since this projection is headed by a strong [Focus] feature, as indicated by it attracting focussed elements, I identify it as FocusP. In accordance with my premise that the labelling of functional nodes reflects the most salient feature(s) of the head, it would be misleading to identify the position as CP.

(54) a. question word:

- (i) [<sub>FocusP</sub>Kuka [<sub>TopicP</sub>tänään luke-e [<sub>vp</sub>se-n kirja-n ]]]?  
 who.NOM today read-3SG that-ACC book-ACC  
 'Who will read the book today?'
- (ii) [<sub>FocusP</sub>Minkä kirja-n [<sub>TopicP</sub>hän luke-e [<sub>vp</sub>lapse-lle ]]]?  
 which.ACC book-ACC 3SG.NOM read-3SG child-ALL  
 'Which book does she read to the child?'
- (iii) [<sub>FocusP</sub>Kene-lle [<sub>TopicP</sub>hän luke-e [<sub>vp</sub>se-n kirja-n ]]]?  
 who-ALL 3SG.NOM read-3SG that-ACC book-ACC  
 'Who does she read that book to?'



b. *V-focus questions/emphatics:*

- (i) [<sub>FocusP</sub>Luk-i-ko [<sub>TopicP</sub>Jussi [<sub>vp</sub>se-n kirja-n ]]]?  
 read-PAST.3SG-Q J.NOM that-ACC book-ACC  
 'Did Jussi read that book?'

- (ii) [<sub>FocusP</sub>Lu-i-n-pas [<sub>TopicP</sub>minä [<sub>vp</sub>se-n kirja-n ]]]!  
 read-PAST-1SG-EMP I.NOM that-ACC book-ACC  
 'I did so read that book!'

c. *Argument DP yes/no questions/emphatics:*

- (i) [<sub>FocusP</sub>Se-n-kö kirja-n [<sub>TopicP</sub>Jussi luk-i [<sub>vp</sub>Liisa-lle ]]]?  
 that-ACC-Q book-ACC J.NOM read-PAST.3SG L-ALL  
 'Did Jussi read that book to Liisa?'

- (ii) [<sub>FocusP</sub>Se-n kirja-n-han [<sub>TopicP</sub>Jussi luk-i [<sub>vp</sub>aamulla]]].  
 that-ACC book-ACC-EMP J.NOM read-PAST.3SG morning-ADE  
 'It was that book that Jussi read in the morning'

d. *Oblique/Adverb-focus questions/emphatics:*

- (i) [<sub>FocusP</sub>Eilen-kö [<sub>TopicP</sub>sinä lu-i-t [<sub>vp</sub>se-n kirja-n ]]]?  
 yesterday-Q you.NOM read-PAST-2SG that-ACC book-ACC  
 'Was it yesterday that you read that book?'

- (ii) [<sub>FocusP</sub>Viime vuonna-pas [<sub>TopicP</sub>minä lu-i-n [<sub>vp</sub>se-n kirja-n ]]]!  
 last year-EMP I.NOM read-PAST-1SG that-ACC book-ACC  
 'It was last year that I read that book!'

Evidence that a single position houses both questioned and focussed elements comes from a co-occurrence restriction on the appearance of two such elements in a single clause. Whereas a single element, either a head or an XP, can carry both a question feature and an emphatic feature and can check them in the same position, as demonstrated again in (55a,b), the two features cannot be checked separately, as in (55c,d). Moreover, it is impossible to fill both the specifier and head position of FocusP, as shown in (55e-f).

- (55) a. Jaana ihmettele-e että kene-lle-kö-hän Tuija osta-a kukk-i-a.  
 J.NOM wonder-3SG that who-ALL-Q-EMP T.NOM buy-3SG flower-PL-PAR  
 'Jaana wonders who it was that Tuija was buying flowers for'

- b. Jaana ihmettele-e että osta-a-ko-han Tuija kukk-i-a.  
 J.NOM wonder-3SG that buy-3SG-Q-EMP T.NOM flower-PL-PAR  
 'Jaana wonders whether Tuija was really buying flowers'
- c. \*Jaana mietti-i että kene-lle Tuija-han kukk-i-a osta-a.  
 J.NOM wonder-3SG that who-ALL T.NOM-EMP flower-PL-PAR buy-3SG  
 'Jaana wonders who Tuija buys flowers for'
- d. \*Jaana mietti-i että Liisa-lle-han Tuija-ko kukk-i-a osta-a.  
 J.NOM wonder-3SG that L-ALL-EMP T.NOM-Q flower-PL-PAR buy-3SG  
 'Jaana wonders whether it is for Liisa that Tuija buys flowers'
- e. \*Jaana mietti-i että Liisa-lle-pas osta-a-ko Tuija kukk-i-a.  
 J.NOM wonder-3SG that L-ALL-EMP buy-3SG-Q T.NOM flower-PL-PAR  
 'Jaana wonders whether it is for Liisa that Tuija buys flowers'
- f. \*Jaana mietti-i että Liisa-lle-ko osta-a-han Tuija kukk-i-a.  
 J.NOM wonder-3SG that L-ALL-Q buy-3SG-EMP T.NOM flower-PL-PAR  
 'Jaana wonders whether it is for Liisa that Tuija buys flowers'

The impossibility of focussing two elements occurring in a single clause provides further evidence that multiple specifiers are not allowed in Finnish. (56) shows that in main clause questions with multiple question words, only one may raise to FocusP.<sup>27</sup>

- (56) a. \*Jaana väitti-i että Tuija-han kukk-i-a-han Liisa-lle osta-a  
 J.NOM claim-3SG that T.NOM-EMP flower-PL-PAR-EMP L-ALL buy-3SG  
 'Jaana claims that it is Tuija , it is flowers that she buys for Liisa'
- b. \*Jaana mietti-i että Liisa-lle-ko Tuija-ko kukk-i-a osta-a.  
 J.NOM wonder-3SG that L-ALL-Q T.NOM-Q flower-PL-PAR buy-3SG  
 'Jaana wonders whether it is for Liisa, whether it is Tuija that buys flowers'

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27 In embedded contexts where the question words can be presupposed, they may scramble out of vP to adjoin to some maximal functional projection. However, no more than one question word may ever move into FocusP. This type of adjunction movement will be discussed in detail in section 2.3.4.

- (i) Minä e-n muista mikä kysymyssana minne koska missä-kin  
 I.NOM NEG-1SG remember what.NOM question.word.NOM what.ILL when what.INE-EMP  
 kiele-ssä siirty-y, mutta ...  
 language-INE move-3SG but  
 'I don't remember which question word moves where when in which language (but Norvin will)'

- (57) a. **Mikä** siirty-y **minne** **koska** **missä-kin** kiele-ssä?  
 what.NOM move-3SG what.ILL (=where) when what.INE-EMP language-INE  
 'What moves where when in which language?' (title of Richards 1997)
- b. \***Mikä** **minne** **koska** **missä-kin** kiele-ssä siirty-y?  
 what.NOM what.ILL (=where) when what.INE-EMP language-INE move-3SG  
 'What moves where when in which language?'
- c. **Kuka** vaihta-a tänään kasvitori-lla **mitä** **kenen** kanssa?  
 who.NOM exchange-3SG today plant.market-ADE what.PAR who.GEN with  
 'Who will exchange what with whom today at the plant market?'
- d. \***Kuka** **mitä** **kenen** kanssa vaihta-a tänään kasvitori-lla ?  
 who.NOM what.PAR who.GEN with exchange-3SG today plant.market-ADE  
 'Who will exchange what with whom today at the plant market?'

A restriction on extraction from complement clauses also supports the view that question elements and focussed phrases occur in a single, non-iterable position. Although focus extraction from finite complement clauses is freely available, as shown in (58a, 59a), it is blocked when the embedded clause contains a fronted element in the focus position, as in (58b,c, 59b,c). If question words and focussed elements appear in the same FocusP position, and check the same [Focus] feature, then the movement of a question word will block the further raising of the focussed element, or, conversely, the raising of a focussed phrase will prevent the movement of the question word.

- (58) a. **Mitä** **kirja-a**<sub>0</sub> Riitta sano-o että hän kirjasto-sta ets-i <sub>t<sub>0</sub>?</sub>  
 what.PAR book-PAR R.NOM say-3SG that 3SG.NOM library-ELA search-PAST.3SG  
 'What book does Riitta say that she was looking for in the library?'
- b. \***Mitä** **kirja-a**<sub>0</sub> Riitta sano-o että kirjasto-sta hän ets-i <sub>t<sub>0</sub>?</sub>  
 what.PAR book-PAR R.NOM say-3SG that library-ELA 3SG.NOM search-PAST.3SG  
 'What book does Riitta say that she was looking for in the library?'
- c. \***Mitä** **kirja-a**<sub>0</sub> Riitta sano-o että eilen hän kirjasto-sta  
 what.PAR book-PAR R.NOM say-3SG that yesterday 3SG.NOM library-ELA  
 ets-i <sub>t<sub>0</sub>?</sub>  
 search-PAST.3SG  
 'What book does Riitta say that she was looking for in the library yesterday?'

- (59) a. Vanha-a Virittäjä-ä-hän<sub>O</sub> Riitta sano-o että hän kirjasto-sta  
 old-PAR Virittäjä-PAR R.NOM say-3SG that 3SG.NOM library-ELA  
 ets-i eilen t<sub>O</sub>.  
 search-PAST.3SG yesterday  
 'It was an old *Virittäjä* that Riitta says that she looked for in the library yesterday'
- b. \*Vanha-a Virittäjä-ä-hän<sub>O</sub> Riitta sano-o että kirjasto-sta hän  
 old-PAR Virittäjä-PAR R.NOM say-3SG that library-ELA 3SG.NOM  
 ets-i eilen t<sub>O</sub>.  
 search-PAST.3SG yesterday  
 'It was an old *Virittäjä* that Riitta says that she looked for in the library yesterday'
- c. \*Vanha-a Virittäjä-ä-hän<sub>O</sub> Riitta sano-o että eilen hän kirjasto-sta  
 old-PAR Virittäjä-PAR R.NOM say-3SG that yesterday 3SG.NOM library-ELA  
 ets-i t<sub>O</sub>.  
 search-PAST.3SG  
 'It was an old *Virittäjä* that Riitta says that she looked for in the library yesterday'

The data in (60) at first appear to contradict the single-specifier restriction, in that (60a,b) contain two focussed XP's in [Spec, FocusP].<sup>28</sup> I propose, however, that in these cases the two DP's have not moved separately, but rather the entire vP has raised into the focus position. This claim is supported by the fact that both of the raised elements may bear focus stress, which contrasts with the intonation pattern of other focussed utterances. On the other hand, only one of the raised elements may bear a focus clitic, which again suggests that they have moved as a single constituent. (60c-d) demonstrate that derivations in which two elements must have moved into FocusP independently of each other are ungrammatical. In (60c), the finite verb, which must always raise overtly out of vP into Top, cannot be further fronted into the Focus position when another element is focussed. In (60d) we find that the non-constituent subject and object cannot appear together in the Focus position.

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<sup>28</sup> It should be noted that the sentences in (60b-d) are double object constructions. The translation into English might imply that the DP *itselleen*, 'for herself', is an NP-attached modifier of *tuon puvun*, 'that dress' and the two form a single DP constituent, but this is not the case in Finnish.

- (60) a. Laps-i-a koulu-un(-han) hän on vie-mä-ssä.  
 child-PL-PAR school-ILL(-EMP) 3SG.NOM be.3SG bring-MA-INE  
 'She is bringing the children to school'
- b. Puvu-n(-pas) itse-lle-en Maija ost-i.  
 dress-ACC-EMP self-ALL-3Pos M.NOM buy-PAST.3SG  
 'It is a dress for herself that Maija bought'
- c. \*Puvu-n ost-i Maija itse-lle-en.  
 dress-ACC buy-PAST.3SG M.NOM self-ALL-3Pos  
 'It is a dress, it was bought by Maija for herself' (??)
- d. \*Maija puvu-n-pas eilen ost-i itse-lle-en.  
 M.NOM dress-ACC-EMP yesterday buy-PAST.3SG self-ALL-3Pos  
 'It was Maija, it was the dress that she bought yesterday for herself' (??)

There is no semantic restriction on multiple focus-constructions in Finnish, as data from *in situ* focus constructions shows. In addition to movement of the focussed element to a pre-topic position, a second focussing process simply identifies the focussed element by special intonation *in situ*. The most neutral way of focussing new information is to stress it *in situ*. In the following exchanges, the part of the response that provides the requested new information normally bears the highest intonational prominence in the sentence, as indicated by underlining. In this pattern of focussing, a subject or a finite verb receives focus intonation within its canonical Topic/AgrP position, while all other elements are stressed within the vP projection.

- (61) a. Q: Mitä Tuija Peka-lle ost-i?  
 what.PAR T.NOM P-ALL buy-PAST.3SG  
 'What did Tuija buy for Pekka?'
- A: Tuija osti Peka-lle kirja-n.  
 T.NOM buy-PAST.3SG P-ALL book-ACC  
 'Tuija bought Pekka a book'
- b. Q: Kene-lle Tuija ost-i kirja-n?  
 who-ALL T.NOM buy-PAST.3ST book-ACC  
 'Who did Tuija buy a book for?'

A: Tuija ost-i kirja-n Peka-lle.  
 T.NOM buy-PAST.3SG book-ACC P-ALL  
 'Tuija bought a book for Pekka'

c. Q: Kuka ost-i Peka-lle kirja-n?  
 who.NOM buy-PAST.3SG P-ALL book-ACC  
 'Who bought Pekka a book?'

A: Tuija ost-i Peka-lle kirja-n.  
 T.NOM buy-PAST.3SG P-ALL book-ACC  
 'Tuija bought Pekka a book'

d. Q: Mitä Tuija tek-i Peka-n kirja-lle?  
 what.PAR T.NOM do-PAST.3SG P-GEN book-ALL  
 'What did Tuija do to Pekka's book?'

A: Tuija ost-i Peka-lle se-n kirja-n.  
 T.NOM buy-PAST.3SG P-ALL that-ACC book-ACC  
 'Tuija bought Pekka that book'

Unlike focussing movement, *in situ*-focussing allows more than one element to be focussed in the same clause. Compare the sentences in (62) to the ungrammatical equivalents in (56).

(62) a. Jaana väittää-ä että Tuija osta-a Kaisa-lle kukk-i-a.  
 J.NOM claim-3SG that T.NOM buy-3SG K-ALL flower-PL-PAR-EMP  
 'Jaana claims that Tuija buys Kaisa flowers'

b. Jaana sanoi että Kaisa-lle kukk-i-a osta-a Tuija.  
 J.NOM said that K-ALL flower-PL-PAR buy-3SG T.NOM  
 'Jaana said that it is Tuija who buys flowers for Kaisa'

c. Q: Mistä tämä kakku tähän tul-i?  
 where-ELA this.NOM cake.NOM here.ILL come-PAST.3SG  
 'Where did this cake come here from?'

A: Sirkka paisto-i se-n mei-lle.  
 S.NOM bake-PAST.3sg 3SG.ACC 3PL-ALL  
 'Sirkka baked it for us'

The contrast between the acceptability of multiple focus marking *in situ*, and the ungrammaticality of more than one moved X(P) within the FocusP projection shows that the restrictions on focus-fronting are syntactic rather than semantic, in that the movement limitations are determined by the checking needs of the strong [Focus] feature.

I now briefly examine alternative derivations with regard to the presence of [q/focus] and [Q/Focus] features. As I argued in section 2.3.1 concerning the [Topic] feature, I claim that a [Q/Focus] feature which cannot be checked because no matching [q/focus] feature was selected at numeration leads to a cancelled derivation, since no further steps can be taken until the strong feature is checked. There is a third possible derivation in which a [q/focus] feature is selected at numeration, but no abstract [Q/Focus] counterpart. This is possible with [Q/Focus] since, unlike [Topic], [Q/Focus] is not an obligatory feature of the clause. This derivation may proceed satisfactorily, with the optional [q/focus] feature attaching to some X(P) at numeration without requiring further checking. I thus propose that this feature is the interpretable member of the pair [Q/Focus], [q/focus]. The evidence for this claim comes from *in situ* focussing and echo questions. These question/focus structures of Finnish provide input to the question of feature interpretability.

Chomsky (1995) distinguishes between interpretable and uninterpretable syntactic features. He suggests, moreover, that the motivation for checking is to eliminate uninterpretable features. This raises the question of which element, the abstract functional target or the feature undergoing movement, should be considered interpretable. Initially Chomsky claimed that the abstract target features of functional heads are interpretable, and movement is driven by the need of the uninterpretable attracted features to be checked. Much discussion has concentrated on this issue, and in some recent work, such as Chomsky (1996), among others, opposite accounts of feature interpretability have been proposed. The behaviour of Finnish focussing constructions brings interesting empirical data to bear on the issue.

It was shown in (61) above that, in lieu of movement to FocusP, focus may be indicated *in situ* by higher intonational prominence. Question words may similarly be left *in situ* and contrastively stressed, giving an echo question interpretation. Even a yes/no type

echo question may be formed with the use of *in situ* contrastive stress, although in such a case the question morpheme *-ko* cannot appear in the clause. On the other hand, the sentence intonation pattern of both types of echo questions differs from regular Finnish question intonation, in that these echo questions obligatorily have rising intonation at the end of the clause. Finnish questions do not normally have sentence-final rising intonation.

- (63) a. Sinä halua-t syntymäpäivälahja-kse-si mitä?  
 you.NOM want-2SG birthday.present-TRAN-2SG.POS what.PAR  
 'You want what for a birthday present?'  
 b. Sofia katos-i minne kaksi tuntia sitten?  
 S.NOM disappear-PAST.3SG what.ILL two hours ago  
 'Sofia disappeared where two hours ago?'  
 (64) a. Sinä ost-i-t Paavo-lle kukk-i-a?  
 you.NOM buy-PAST-2SG P-ALL flower-PL-PAR  
 'Did you buy Paavo flowers?'  
 b. Sinä ost-i-t Paavo-lle kukk-i-a?  
 you.NOM buy-PAST-2SG P-ALL flower-PL-PAR  
 'Did you buy Paavo flowers?'

I propose that in all these cases the relevant interpretable focus feature, [q] or [focus], has been selected at numeration, but no matching strong abstract feature is present. Consequently, no movement is forced, and the element bearing the [q/focus] feature remains *in situ*. Since the [q/focus] feature must be interpreted, at PF its effect is indicated by higher intonational prominence. These Finnish facts strongly support a view of feature interpretability that places the interpretable feature on the element undergoing movement, whereas it is the uninterpretability of the abstract functional feature that requires checking and, consequently, attracts a matching interpretable feature.



### 2.3.2.3. The specifier position of CP

I now return to the question of whether the specifier position of CP can ever be filled. A construction that has puzzled researchers for some time, illustrated in (65), shows that the complementizers *jos*, 'if', *kun*, 'when' and *vaikka*, 'although', allow a focussed XP to occur in a position preceding the complementizer. (65b-d) demonstrate that the relevant feature, again, is not category-specific, since all DPs, adverbs and vPs may raise. Nor is the movement restricted to subjects among DPs, since any DP may undergo movement.

- (65) a. Roland kun /jos kosi-i Elisabeti-ä niin hän saa kyllä rukkaset.  
 R.NOM when/if propose-3SG E-PAR then 3SG.NOM get.3SG surely mittens  
 'If/When Roland proposes to Elizabeth, he is sure to be rejected'
- b. Taylori-lle vaikka Sofia on-kin vihainen niin Kippi-n kanssa hän  
 T-ALL although S.NOM be.3SG-EMP angry then K-GEN with 3SG.NOM  
 voi silti leikki-ä.  
 can.3SG still play-TA  
 'Although Sofia is angry at Taylor, she can still play with Kip'
- c. Kiukkuisesti kun koira-a-si säti-t, niin se oppi-i.  
 angrily if dog-PAR-2Pos berate-2SG then 3SG.NOM learn-3SG  
 'If you berate your dog angrily, it'll learn'
- d. Tanssi-a jos halua-t niin mene Vähtäri-in.  
 dance-TA if want-2SG then go.IMP Vähätäri-ILL  
 'If you want to dance, go to Vähätäri'

The complementizers *että*, 'that', *jotta*, 'that', and *koska*, 'because', permit this movement much less readily, and for many speakers the forms are entirely ungrammatical. This is shown in (66).

- (66) a. ?No, Auli että/jotta lähte-e on itse-stä-än selvä-ä!  
 well A.NOM that/that leave-3SG be.3SG self-ELA-3Pos clear-PAR  
 'Well, it's self-evident that Auli will leave!'

- b. \*Spagetti-a että halua-n minä sano-i-n!  
 spaghetti-PAR that want-1SG I.NOM say-PAST-1SG  
 'I said that I want spaghetti!'
- c. \*Taylori-lle koska Sofia on vihainen niin hän murjotta-a.  
 T-ALL because S.NOM be.3SG angry then 3SG.NOM sulk-3SG  
 'Because Sofia is angry at Taylor, she's sulking'

An initial hypothesis might be that the members of the 'if/when/although' set of complementizers occur as heads of FocusP rather than of CP. Both types of complementizers, however, pattern identically in terms of their position, appearing before focussed elements: emphatics (67a-c), wh-questions (67d-e) and yes/no questions (67f). These data indisputably show that all complementizers occur in a position higher than the focussed phrases.

- (67) a. Minä e-n kyllä lähde, **vaikka Liisa-han** tuolla jo pakka-a.  
 I.NOM NEG-1SG definitely leave-Ø although L.NOM-EMP there already pack-3SG  
 'I'm not going to go, although Liisa is already busy packing over there'
- b. No, **jos Liisa-pa** vaikka lähte-e myös, niin kyllä minä-kin.  
 well if L.NOM-EMP ADV leave-3SG also then EMP I.NOM-EMP  
 'Well, if Liisa, for example, agrees to leave also, then I('ll come) too'
- c. Ol-i-n jo valmis anta-ma-an periksi **kun kuka** sieltä  
 be-PAST-1SG already ready give-MA-ILL up when who.NOM there  
 tul-la tohott-i jos ei Kaija.  
 come-TA rush-PAST.3SG if NEG.3SG K.NOM  
 'I was all ready to give up when who did I see come rushing in if not Kaija'
- d. Niin luule-n **vaikka mitä(-pä)** minä asia-sta tiedä-n.  
 so think-1SG although what.PAR(-EMP) I.NOM matter-ELA know-1SG  
 'That's what I think, although I don't know much about the matter'
- e. Hyvä että ole-t aikaisessa **vaikka piti-i-kö** sinun minut jo  
 good that be-2SG early although must-PAST.3SG-Q you.GEN I.ACC already  
 aamukuude-lta herättä-ä.  
 morning.six-ABL wake-TA  
 'It's good that you're early although did you have to wake me up already at six in the morning!'

The interpretation of the XP that occurs before the 'if/when/although' complementizers is that of contrastive focus, as indicated by the underlining in (65), (66a) and (68). This again suggests that this set of complementizers might be residing in the Focus head position rather than in C. The following examples illustrate, however, that a second focussed element in a regular focus position is perfectly acceptable even when a pre-complementizer focus element is present.

- (68) a. Sofia vaikka Kippi-lle tällä hetke-llä on-kin vihainen  
 S.NOM although Kippi-ALL this.ADE moment-ADE be.3SG-EMP angry  
 niin kyllä hän huomise-ksi leppy-y.  
 then surely 3SG tomorrow-TRAN reconcile-3SG  
 'Although Sofia is angry at Kip at this moment, she'll surely be reconciled by tomorrow'
- b. Kippi-lle vaikka Sofia aamuis-i-n on-kin vihainen niin  
 Kippi-ALL although S.NOM morning-PL-INS be.3SG-EMP angry then  
 iltapäivä-ksi hän leppy-y aina.  
 afternoon-TRAN 3SG reconcile-3SG always  
 'Although Sofia is angry at Kip in the morning, she is always reconciled by the afternoon'
- c. Kiukkuisesti kun koira-a-si joka kerran säti-t, niin kyllä se  
 angrily if dog-PAR-2POS every time berate-2SG then definitely it.NOM  
 siitä oppi-i.  
 3SG. PAR learn-3SG  
 'If you berate your dog angrily every time, it'll definitely learn'

A second possibility would be to posit that the complementizers *jos*, 'if', *kun*, 'when' and *vaikka*, 'although', may optionally bear a strong [Focus] feature that induces XP-movement to their specifier position. This sentence pattern appears to distinguish between elements with [focus] and [q] features in that only [focus] bearing emphatic or contrastive XP's, not [q] feature bearing question words or yes/no-cliticized XPs, can raise to the pre-complementizer position.

- (69) a. No, **Liisa-pa** **vaikka** lähte-e-kin, minä e-n taid-a.  
 well L.NOM-EMP although leave-3SG-EMP I.NOM NEG-1SG think-TA  
 'Well, although Liisa is leaving, I don't think I will'
- b. **Jussi kun** astio-i-ta alka-a heitel-lä, niin ole-mme pula-ssa.  
 J.NOM when dish-PL-PAR begin-3SG throw-TA then be-1PL trouble-INE  
 'When Jussi starts to throw dishes (around), then we're in trouble'
- c. Ol-i-n jo valmis anta-ma-an periksi **\*kuka kun** sieltä  
 be-PAST-1SG already ready give-MA-ILL up who.NOM when there  
 tul-la tohott-i jos ei Kaija.  
 come-TA rush-PAST.3SG if NEG.3SG K.NOM  
 'I was all ready to give up when who did I see come rushing in if not Kaija'
- d. Niin luule-n **\*mitä(-pä)** **vaikka** minä asia-sta tiedä-n.  
 so think-1SG what.PAR(-EMP) although I.NOM matter-ELA know-1SG  
 'That's what I think, although I don't know much about the matter'
- e. Hyvä että ole-t aikaisessa **\*pit-i-kö** **vaikka** sinun minut  
 good that be-2SG early must-PAST.3SG-Q although you.GEN I.ACC  
 jo aamukuude-lta herättä-ä.  
 already morning.six-ABL wake-TA  
 'It's good that you're early although did you have to wake me up already  
 at six in the morning!'

However, it can be shown that the pre-complementizer position is very different from the [Spec, FocusP] position. It is possible to have several freely ordered focussed XPs to the left of the complementizer. Such a possibility suggests that the focussed elements are adjoined, and do not occur in the specifier position of CP, since no other Finnish functional projection allows multiple specifier positions.

- (70) a. Elisabeti-ä Roland huomenna kun /jos kosi-i niin saa kyllä rukkaset.  
 E-PAR R.NOM tomorrow when/if propose-3SG then get.3SG surely mittens  
 'If/When Roland proposes to Elizabeth tomorrow, he's sure to be rejected'
- b. Sofia Taylori-lle vaikka on-kin vihainen niin Kippi-n kanssa  
 S.NOM T-ALL although be.3SG-EMP angry then K-GEN with  
 hän voi silti leikki-ä.  
 3SG.NOM can.3SG still play-TA  
 'Although Sofia is angry at Taylor, she can still play with Kip'

- c. Koira-a-si päivittäin kiukkuisesti jos/kun säti-t, niin se oppi-i  
 dog-PAR-2POS daily angrily if /when berate-2SG then 3SG.NOM learn-3SG  
 'If you berate your dog angrily every day, it'll learn'

In conclusion, I maintain the view that the [Spec, CP] position cannot be filled because the syntactic feature matrices of complementizers do not contain any feature(s) that would trigger movement of an XP to fill the specifier position. It is possible, however, to adjoin one or more XP's to the CP projection, with a resulting interpretation of emphatic focus. To differentiate specifiers from adjuncts I adopt the standard view that movement to a specifier takes place for feature checking purposes, while an adjoined element does not check any feature. This adjunction pattern appears to be part of a more common process of adjunction of presupposed DP's that will be discussed further in section 2.3.4.

I assume that the impossibility of focus adjunction to a Comp position that is occupied by *että*, 'that', *jotta*, 'that', or *koska*, 'because', hinges on semantic factors. As (66a) illustrates, the structure is not entirely ruled out. The three complementizers in this subgroup introduce factive clauses, whereas those in the other group introduce non-presupposed clauses. Since the movement is discourse-conditioned, I expect that it is sensitive to sentence semantics, and that whatever the exact interpretation of the elements adjoined to the complementizer position is, it is more difficult to attain in factive clauses.

### 2.3.3. The syntactic status of the Finnish negator

The negative morpheme *e-* in Finnish exhibits verbal characteristics in that it carries the finite person/number agreement marking which in affirmative sentences is attached to the main verb. Unlike the main verb, however, the negator never bears voice or finite tense or mood morphology, all of which always appear on the main verb. The distinctions are illustrated in (71).

- (71)
- |   |   |
|---|---|
| a. Minä lue-n.<br>I.NOM read- <b>1SG</b><br>'I('m) read(ing)'       | b. Minä e-n lue.<br>I.NOM NEG- <b>1SG</b> read<br>'I'm not reading/I don't read'          |
| c. Minä lu-i-n.<br>I.NOM read- <b>PAST-1SG</b><br>'I read (past)'   | d. Minä e-n luke-nut.<br>I.NOM NEG- <b>1SG</b> read- <b>NUT(=PAST)</b><br>'I didn't read' |
| e. Minä luk-isi-n.<br>I.NOM read- <b>COND-1SG</b><br>'I would read' | f. Minä e-n luk-isi.<br>I.NOM NEG- <b>1SG</b> read- <b>COND</b><br>'I wouldn't read'      |

These data demonstrate that the negator behaves like a head: it bears morphological inflection, and it blocks the checking of agreement features by a lower verbal head, namely the main verb. Based on its verb-like characteristics, in the Finnish linguistic tradition of the twentieth century the negation marker has consistently been categorized as a paradigmatically defective verb (e.g. in traditional grammars by Setälä 1939, 1951, Hakulinen 1961, Penttilä 1963, as well as more recent works by Hakulinen and Karlsson 1979, Karlsson 1982, Vainikka 1989). If this is the correct analysis, the negative verb only takes VP complements. I claim that it is inaccurate to analyze the negator as a verb with strict selectional restrictions on its complements. The negator differs from all other Finnish auxiliary and raising verbs in several ways. Finnish auxiliary and raising verbs display a full range of tense (72-74a-b) and mood (72-74c) markings, but the negator has no such variants (75). Moreover, unlike all verbs, the negator never has an effect on the temporal interpretation of a clause, as illustrated in (76). This suggests that its syntactic features differ from those of other elements which intrinsically bear temporal features. One of the underlying assumptions of this thesis is that all syntactic elements that contain a [temporal reference] feature, that is, ones that describe a proposition, are verbs. (Further discussion of this topic in chapters 3 and 4, with regard to participial and infinitival constructions.) The fact that the negator lacks temporal features shows that it does not bear this relevant verbal lexical characteristic.

- (72) a. Piia **on** kutonut mato-n.  
 P.NOM be-3SG woven rug-ACC  
 'Piia has woven a rug'
- b. Piia **ol-i** kutonut mato-n.  
 P.NOM be-PAST.3SG. woven rug-ACC  
 'Piia had woven a rug'
- c. Piia **ol-isi** kutonut mato-n.  
 P.NOM be-COND.3SG. woven rug-ACC  
 'Piia would have woven a rug'
- (73) a. Hely-n täyty-y lähte-ä.  
 H-GEN must-3SG leave-TA  
 'Hely must (=has to) leave'
- b. Hely-n täyty-i lähte-ä.  
 H-GEN must-PAST.3SG leave-TA  
 'Hely had to leave'
- c. Hely-n täyty-ne-e lähte-ä.  
 H-GEN must-POT-3SG leave-TA  
 'Hely probably has to leave'
- (74) a. Liina osa-a sukelta-a.  
 L.NOM can-3SG dive-TA  
 'Liina can dive'
- b. Liina osas-i sukelta-a.  
 L.NOM can-PAST.3SG dive-TA  
 'Liina could dive'
- c. Liina osan-ne-e sukelta-a.  
 L.NOM can-POT-3SG dive-TA  
 'Liina can probably dive'
- (75) a. Friida **ei** puhu suome-a.  
 F.NOM NEG.3SG speak Finnish-PAR  
 'Friida doesn't speak Finnish'
- b. \*Friida **e-i** puhu suome-a.  
 F.NOM NEG-PAST.3SG speak Finnish-PAR  
 'Friida didn't speak Finnish'

- c. \*Friida **e-isi** puhu suome-a.  
 F.NOM NEG-COND.3SG speak Finnish-PAR  
 'Friida wouldn't speak Finnish'
- (76) a. Minä asu-i-n ennen Suome-ssa, ja asu-n nyt Kanada-ssa,  
 I.NOM live-PAST-1SG before Finland-INE and live-1SG now Canada-INE  
 ??[mutta **e-n** Luxemburi-ssa].  
 but NEG-1SG Luxembourg-INE  
 'I lived in Finland before, and now I live in Canada, but I ?don't /?didn't live in  
 Luxembourg' (attempted ellipsis with the sentential negator as a verb that should  
 link its clause to the time line)
- b. Minä asu-i-n ennen Suome-ssa, **e-n** Luxemburi-ssa.  
 I.NOM live-PAST-1SG before Finland-INE NEG-1SG Luxembourg-INE  
 'I lived in Finland before, not in Luxembourg' (constituent negation)
- c. Minä asu-n nyt Kanada-ssa, **e-n** Luxemburi-ssa.  
 I.NOM live-1SG now Canada-INE NEG-1SG Luxembourg-INE  
 'I live in Canada now, not in Luxembourg' (constituent negation)

Moreover, while all other auxiliary and raising verbs have participial and infinitival forms and may occur in non-finite clauses, the sentential negator has no non-finite forms, and indeed cannot appear in any of the non-finite constructions. As will be discussed in chapters 3 and 4 regarding the non-finite forms, I assume that they all enter numeration bearing the relevant syntactic feature content that is commonly associated with the lexical category designation of 'Verb'. The negator cannot appear in the non-finite constructions, and hence I conclude that it lacks some feature content inherent in the other auxiliary elements. The feature [(Assign) Object case] is not a sufficient condition for the identification of elements generally considered 'Verbs', since the copula *olla*, 'be', and some raising verbs, such as *täytyä*, 'must', do not assign object case. Another possible feature requirement is [temporal reference], so that only elements that can be situated on a time-line are associated with verbhood.

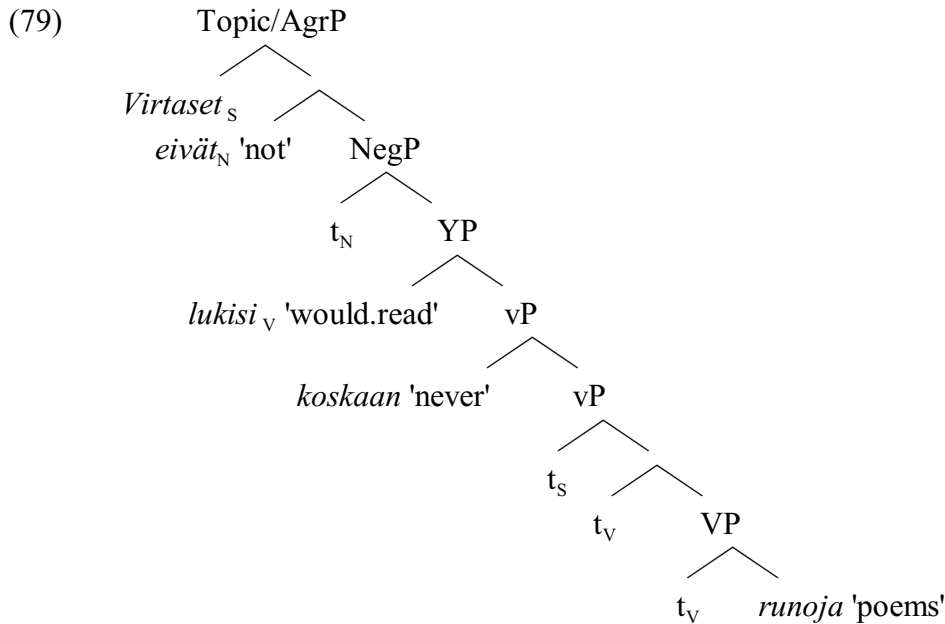
- (77) a. Minä uskon [Piia-n **ole-va-n** kuto-ma-ssa matto-a].  
 I.NOM think P-GEN be-VA-ACC weave-MA-INE rug-PAR  
 'I think (that) Piia is weaving the rug'





- c. [<sub>TopicP</sub> Virtanen **ei** [<sub>NegP</sub> t<sub>NEG</sub> [<sub>YP</sub> **lue** [<sub>vp</sub> **koskaan** runo-j-a ]]]].  
 V-NOM NEG.3SG read never poem-PL-PAR  
 'Virtanen never reads poems'
- d. [<sub>TopicP</sub> Virtase-t **ei-vät** [<sub>NegP</sub> t<sub>NEG</sub> [<sub>YP</sub> **luk-isi** [<sub>vp</sub> **koskaan** runo-j-a ]]]].  
 V-PL.NOM NEG-3PL read-COND never poem-PL-PAR  
 'The Virtanens would never read poems'

The proposed structure of the negated utterance in (78d) is given in (79).



### 2.3.3.1. Evidence for NegP and TP: interaction between negation and tense

What is the syntactic feature content of this intervening projection? Since the movement of the main verb to the head of YP is obligatory, it seems obvious that the strong attracting feature is a [V] feature. Furthermore, every verb that occurs in this position bears morphological marking for either mood or for tense. I propose that when the verb moves to Y, it also checks a [Temporal Reference] feature present in this projection. Verbs bearing either mood or tense (finite or participial) marking may check this feature. The morphological form of the mood marker is invariant (conditional *-isi*, potential *-ne*), whether

it occurs in an affirmative or a negative clause. I assume that the syntactic feature matrix of verbs that bear morphological mood affixes includes a [mood: conditional/potential] feature, which is a sub-type of the abstract [Temporal Reference] feature on the head Y.

Consequently, the features must check each other for convergence.

Tense marking in negated utterances is more complex. Present tense in affirmative utterances is morphologically unmarked, and the main verb bears only agreement morphology. Present tense morphology is not represented by an overt morpheme in negated utterances either. However, consonant gradation patterns suggest that a present tense suffix is attached to the negated main verb. According to a rule of consonant gradation in Finnish, geminated stops /kk/, /pp/ and /tt/ are weakened into simple stops and simple stops into some weaker (more sonorant) consonant if followed by a closed syllable, i.e. a syllable ending in a consonant (Reime 1992:94). Since consonant gradation affects main verbs under negation, this implies that the verb bears a null consonant suffix. The pattern is demonstrated in (80). (80a) illustrates how the third person singular suffix, which simply lengthens the final vowel of the verb stem, fails to trigger consonant gradation. In (80b), in contrast, consonant gradation is triggered by the presence of the first person singular suffix -*n*. In (80c), although no overt suffix is present on the main verb, consonant gradation applies, indicating the presence of a phonetically null consonantal suffix. In many varieties of colloquial Finnish the null suffix emerges phonetically as a glottal stop that assimilates to the consonant in the beginning of the following word (Holmberg et al. 1993). This is illustrated in (80c-d).

- (80) a. Juulia rimputta-a piano-a.  
           J.NOM pound-3SG piano-PAR  
           'Juulia is pounding the piano (keys)'
- b. Minä rimputa-n piano-a.  
           I.NOM pound-3SG piano-PAR  
           'I'm pounding the piano (keys)'
- c. Juulia ei           rimputa-? piano-a.           [colloquially [rimputap]]  
           J.NOM NEG.3SG pound-PRES piano-PAR  
           'Juulia doesn't pound the piano (keys)'

- d. Minä e-n rimputa-? piano-a. [colloquially [rimputap]]  
 I.NOM NEG-1SG pound-PRES piano-PAR  
 'I don't pound the piano (keys)'

I assume that the null (or glottal stop) suffix is the morphological realization of a present tense morpheme, and that even the present tense main verb thus bears a [mood/tense/temporal reference] feature. I propose that the [Temporal Reference] feature of the functional head Y (henceforth represented as T for Temporal Reference) may be checked by either a [Mood] or a [Tense] feature, and that the present tense main verb, like all other temporally specified verbs, checks this feature when it raises to the T position.<sup>29</sup>

- (81) a. [<sub>TopicP</sub> Virtase-t ei-vät [<sub>NegP</sub> t<sub>NEG</sub> [<sub>TP</sub> lue-? [<sub>VP</sub> koskaan runo-j-a]]]].  
 V-PL.NOM NEG-3PL read-PRES never poem-PL-PAR  
 'The Virtanens never read poems'
- b. [<sub>TopicP</sub> Kaarina ei [<sub>NegP</sub> t<sub>NEG</sub> [<sub>TP</sub> kuuntele-? [<sub>VP</sub> useinkaan jatsi-a ]]]].  
 K.NOM NEG.3SG listen-PRES often-EMP jazz-PAR  
 'Kaarina doesn't often listen to jazz'

---

29 In addition to the verb-temporal adverb order illustrated in (78b-d) and (81), the opposite adverb-verb order can also be found. In these cases the adverb obligatorily bears contrastive stress, indicating that it has moved from its merged vP-adjunct position. Some adverbs, such as *kokonaan*, 'completely', do not easily take part in this word order alternation. I propose that the adverb-verb order is derived through movement of the adverb to a higher adjunct position, probably adjoined to TP.

- (i) a. Virtase-t ei-vät koskaan lue-? runo-j-a.  
 V-PL.NOM NEG-3PL never read-PRES poem-PL-PAR  
 'The Virtanens never read poems'
- b. Kaarina ei useinkaan kuuntele-? muuta kuin jatsia.  
 K.NOM NEG.3SG often-EMP listen-PRES other-PAR than jazz-PAR  
 'Kaarina doesn't often listen to anything other than jazz'
- c. Minä e-n aina halua-? metsästä-ä kadonne-i-ta lelu-j-a.  
 I.NOM NEG-1SG always want-PRES hunt-TA lost-PL-PAR toy-PL-PAR  
 'I don't always want to be hunting for lost toys'
- d. Sinä e-t (\*kokonaan) voi-? unohta-a asia-a.  
 you.NOM NEG-2SG completely can-PRES forget-TA matter-PAR  
 'You can't completely forget the matter'

- c. [<sub>TopicP</sub>Minä e-n [<sub>NegP</sub>t<sub>NEG</sub> [<sub>TP</sub>halua-? [<sub>vP</sub>aina metsästä-ä  
 I.NOM NEG-1SG want-PRES always hunt-TA  
 kadonne-i-ta lelu-j-a ]]]].  
 lost-PL- PAR toy-PL-PAR  
 'I don't always want to be hunting for lost toys'

Past tense marking in affirmative statements is indicated by the suffix *-i*. In negated utterances past tense marking is signalled by the past participle suffix *-nut*. The regular past tense marker *-i* cannot be used under negation. On the other hand, the past participle alone, without an auxiliary or main verb, cannot occur in an affirmative main clause. I propose that the unavailability of the *-i* suffix in negated clauses is due to the fact that the verb-final *-i* suffix bears not only the feature [Tense], but also [3SG] person/number agreement features. Since only one set of agreement features can be checked within a finite clause, the [phi] features of either the negator or the main verb would remain unchecked (cf. (82b)). The past participle suffix *-nut*, on the other hand, expresses only past tense, and does not contain [phi] features. Again, the site of the temporal adverb *koskaan*, 'never', in (82c) confirms the movement of the participial main verb out of vP into a higher functional position. The past participial verb also displays nominal number agreement with the subject. The checking of this feature will not be addressed further here, since all participial constructions are examined in detail in Chapter 3. I note simply that this checking does not involve the feature [phi] within the main clause Infl.

- (82) a. Juulia rimputt-i piano-a.  
 J.NOM bash-PAST.3SG piano-PAR  
 'Juulia bashed the piano (keys)'  
 b. \*Juulia ei rimputt-i piano-a.  
 J.NOM NEG.3SG bash-PAST.3SG piano-PAR  
 'Juulia didn't bash the piano (keys)'  
 c. Juulia ei rimputta-nut (koskaan) piano-a.  
 J.NOM NEG.3SG bash-NUT never piano-PAR  
 'Juulia didn't (ever) bash the piano (keys)'

- d. \*Juulia rimputta-**nut** (koskaan) piano-a.  
 J.NOM bash-NUT never piano-PAR  
 'Juulia bashed the piano (keys)'

Although the position of tense-marked and mood-marked verbs with respect to temporal adverbs in negated clauses clearly illustrates that the verb must move out of vP to the higher TP position, it is difficult to diagnose the presence of TP in affirmative utterances. In negated utterances both the specifier position and the head position of TP can be identified between the finite negator in the head of Topic/AgrP and the temporal adverb that marks the left edge of vP. In non-negated utterances, neither position can be uniquely diagnosed. In clauses such as (83), the object DP *pianoa*, 'the piano', appears to be located in TP specifier position. However, it will be argued in section 2.3.4 that such presupposed DP's move out of VP to adjoin to either to vP or to TP, rather than to the specifier position of a unique functional object position, or of TP. Their movement, hence, is not for feature checking purposes.

- (83) [<sub>TopicP</sub>Juulia rimputta-a [<sub>VP/TP?</sub>**piano-a** aina aamu-lla ]].  
 J.NOM pound-3SG piano-ACC always morning-ADE  
 'Juulia pounds the piano (keys) always in the morning'

There is no independent way of determining whether a presupposed object DP in an affirmative clause has adjoined to vP or to TP. In both cases such a DP would occur between the finite main verb in Topic/Agr and the temporal adverb adjoined to vP. I must concede that the presence of the TP projection is at the moment syntactically untestable in affirmative clauses. Nevertheless, for the sake of uniformity, I assume that TP occurs in all finite clauses, and that the [temporal reference] feature of the verb must be checked during derivation. Since negated utterances show that the verb raises to TP in overt syntax, I assume the same to be true of affirmative clauses, so that the verb moves through T to its final Topic/Agr position. I propose that the checking of this feature is necessary in order to allow the event described by the predicate to be interpreted as a proposition.

### 2.3.3.2. The cliticization of Neg into C and Focus

Like the main verb, the negator may also raise to adjoin to the focus position. Like other focussed elements, it may also bear one of the focus markers, as shown in (84b,c).

- (84) a. E-n minä aio hankki-a uut-ta sohva-a.  
 NEG-1SG I.NOM plan-Ø get-TA new-PAR sofa-PAR  
 'I'm not planning on getting a new sofa'
- b. Ei-päs/hän tätä kirja-a usein-kaan Matti lue.  
 NEG.3SG-EMP this.PAR book-PAR often-EMP M.NOM read-Ø  
 '(It's true that) Matti doesn't often read that book'
- c. Et-kö sinä ole vielä-kään valmis?  
 NEG.3SG-Q you.NOM be-Ø still-EMP ready  
 'Are you still not ready?'

Furthermore, the negator can cliticize either to an element in FocusP or to the head of Comp, as in (85b,c), when no syntactic feature intervenes between the negator's Topic/Agr position and its host. This cliticization movement to Comp is blocked if FocusP is filled, that is, whenever the Focus position bears a [Focus] feature that does not attract the negator itself, as illustrated in (86).

- (85) a. Sano-i-ko Jaana [<sub>CP</sub>että [<sub>TopicP</sub>hän ei [<sub>NegP</sub>t<sub>NEG</sub> [<sub>TP</sub>tule tänään]]]]?  
 say-PAST.3SG-Q J.NOM that 3SG.NOM NEG.3SG come-Ø today  
 'Did Jaana say that she's not coming today?'
- b. Sano-i-ko Jaana [<sub>CP</sub>ett-ei [<sub>TopicP</sub>hän t<sub>NEG</sub> [<sub>NegP</sub>t<sub>NEG</sub> [<sub>TP</sub>tule tänään]]]]?  
 say-PAST.3SG-Q J.NOM that-NEG.3SG 3SG.NOM come-Ø today  
 'Did Jaana say that she's not coming today?'
- c. [<sub>FocusP</sub>Miks-e-t [<sub>TopicP</sub>sinä t<sub>NEG</sub> [<sub>NegP</sub>t<sub>NEG</sub> [<sub>TP</sub>vielä-kään ole valmis]]]]?  
 why-NEG-2SG you.NOM still-EMP be-Ø ready  
 'Why are you still not ready?'

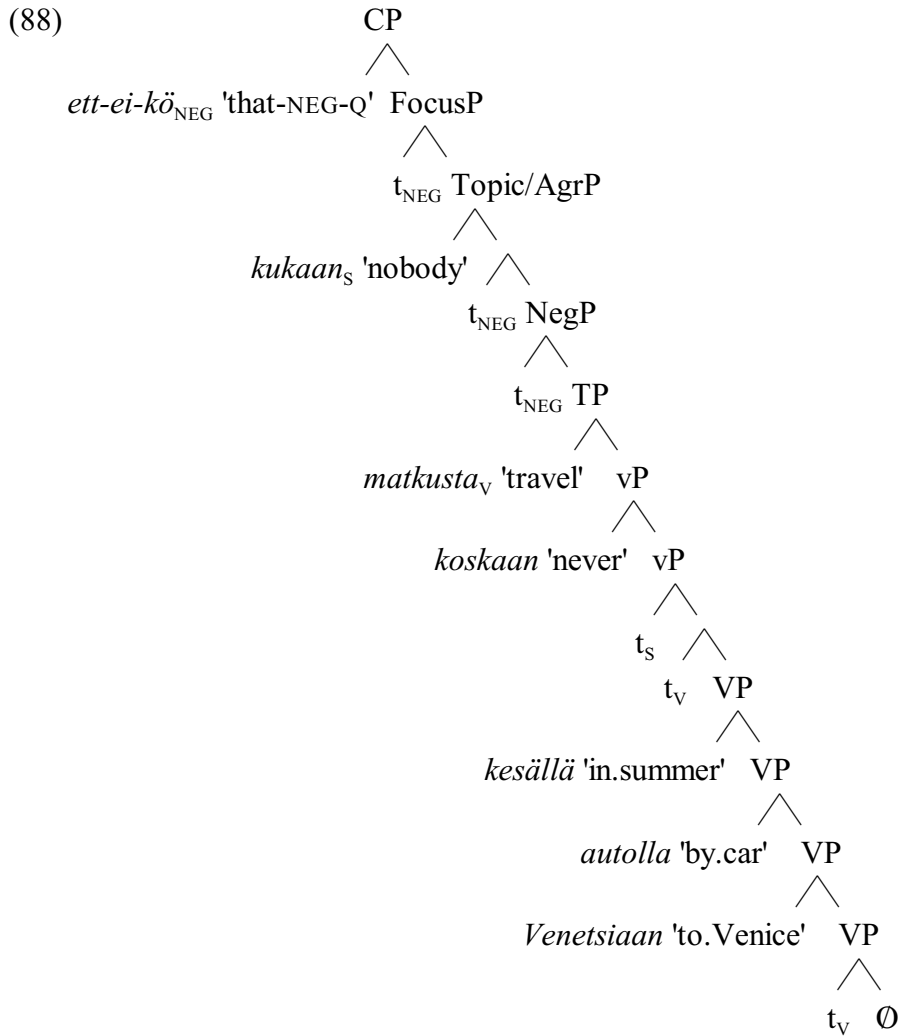
- (86) a. \*Minä luule-n [<sub>CP</sub>ett-ei [<sub>FocusP</sub>auto-lla-han [<sub>TopicP</sub>kukaan t<sub>NEG</sub> [<sub>NegP</sub>t<sub>NEG</sub> I.NOM think-1SG that-NEG.3SG car-ADE-EMP nobody.NOM [<sub>TP</sub>kesä-llä matkusta-isi [<sub>VP</sub>koskaan Venetsia-an]]]]]]...  
summer-ILL travel-COND ever Venice-ILL  
'I think that no-one would ever travel to Venice by car in the summer...'
- b. \* [<sub>CP</sub>Joss-ei [<sub>FocusP</sub>Liisa-pa [<sub>TopicP</sub>lähde t<sub>NEG</sub> [<sub>NegP</sub>t<sub>NEG</sub> [<sub>VP</sub>t<sub>S</sub> t<sub>V</sub>]]], e-n if-NEG.3SG L.NOM-EMP leave-Ø NEG-1SG minä-kään. I.NOM-EMP  
'If Liisa won't leave, then I won't either'
- c. \*Minä ihmettele-n [<sub>CP</sub>ett-ei [<sub>FocusP</sub>auto-lla-ko [<sub>TopicP</sub>kukaan I.NOM wonder-1SG that-NEG.3SG car-ADE-Q nobody.NOM t<sub>NEG</sub> [<sub>NegP</sub>t<sub>NEG</sub> [<sub>TP</sub>kesä-llä matkusta-isi [<sub>VP</sub>koskaan Venetsia-an]]]]]]]]...  
summer-ILL travel-COND ever Venice-ILL  
'I wonder whether not anyone ever travel to Venice by car in the summer'
- d. \*Älä narra-a [<sub>CP</sub>vaikk-ei [<sub>FocusP</sub>mitä(-pä) [<sub>TopicP</sub>Taru NEG.IMP lie-TA though-NEG.3SG what.PAR(-EMP) T.NOM t<sub>NEG</sub> [<sub>NegP</sub>t<sub>NEG</sub> [<sub>TP</sub>usko-isi [<sub>VP</sub>aina sinu-sta]]]]].  
believe-COND always you-ELA  
'Don't lie, although there isn't much that Taru wouldn't always believe from you'

In light of these facts, I conclude that in cliticizing to C, the negator first raises to the head of Focus, and only from there may it raise to the head of C. If the Negator bears an appropriate morphological [focus] feature, it checks the [Focus] feature of FocusP, as indicated by the presence of the question morpheme *-kö* in (87a,b). However, when some other X(P) moves to FocusP to check the [Focus] feature, the cliticization of the negator is blocked. (88) shows the structure assigned to (87a).

- (87) a. Minä ihmettele-n [<sub>CP</sub>ett-ei-kö [<sub>FocusP</sub>t<sub>NEG</sub> [<sub>TopicP</sub>kukaan t<sub>NEG</sub> [<sub>NegP</sub>t<sub>NEG</sub> I.NOM wonder-1SG that-NEG.3SG-Q nobody.NOM [<sub>TP</sub>matkusta [<sub>VP</sub>koskaan kesä-llä auto-lla Venetsia-an]]]]]]].  
travel-Ø ever summer-ILL car-ADE Venice-ILL  
'I wonder whether no-one ever travels to Venice by car in the summer'



- b. Juhli-sta ei tule mitään, [<sub>CP</sub> joss-ei [<sub>FocusP</sub> sitten [<sub>FocusP</sub> t<sub>NEG</sub>  
 party-ELA NEG.3SG come-Ø nothing if-NEG.3SG then  
 [<sub>TopicP</sub> Sirkka t<sub>NEG</sub> [<sub>NegP</sub> t<sub>NEG</sub> [<sub>TP</sub> ota [<sub>vP</sub> ohjaksi-a käs-i-i-nsä ]]]]]].  
 S.NOM take-Ø reins-PAR hand-PL-ILL-3POS  
 'The party won't get organized if Sirkka doesn't take on the arrangements'



In one sentence pattern, the negator appears to have moved past a filled [Spec,FocusP] position that contains a non-suffixed emphatic DP, as in (89a). The constructions in (89b-d) show, however, that the contrastively stressed DP must be located in a position below FocusP. In (89b) we observe that the raised DP, although it bears intonational prominence, cannot carry the emphatic clitic *-pa*. This indicates that it is not

located in [Spec, FocusP]. In (89c), the focussed DP follows a negator bearing a question suffix *-kö*, which must have moved through the Focus position to check its [q] feature.

(89c) illustrates, furthermore, that more than one stressed DP may occur in this position. Since it was shown in section 2.3.2 that Finnish does not allow either multiple FocusP specifiers or iterative FocusP projections, (89c-d) suggest that the stressed DP does not occur in FocusP, but in a lower position.

I propose that this focussing movement is another instance in which presupposed DPs adjoin to a higher functional category, and as a consequence receive stressed intonation at PF. The motivation behind this movement will be discussed in section 2.3.4. In this case, I assume that the focussed DP adjoins to Topic/AgrP.

- (89) a. Minä luule-n [<sub>CP</sub>**ett-ei** [<sub>TopicP</sub>**auto-lla** [<sub>TopicP</sub>kukaan  
 I.NOM think-1SG that-NEG.3SG car-ADE nobody.NOM  
 [<sub>TP</sub>kesäaika-an [<sub>TP</sub>matkusta-isi [<sub>VP</sub>koskaan Venetsia-an ]]]]]...  
 summer-ILL travel-COND ever Venice-ILL  
 'I think that no-one would ever travel to Venice by car in the summer time (when one can take a train)'
- b. Minä luule-n [<sub>CP</sub>**ett-ei** [<sub>TopicP</sub>**auto-lla(-\*pa)** [<sub>TopicP</sub>kukaan  
 I.NOM think-1SG that-NEG.3SG car-ADE nobody.NOM  
 [<sub>TP</sub>kesäaika-an [<sub>TP</sub>matkusta-isi [<sub>VP</sub>koskaan Venetsia-an ]]]]]...  
 summer-ILL travel-COND ever Venice-ILL  
 'I think that no-one would ever travel to Venice by car in the summer time (when one can take a train)'
- c. Minä ihmettele-n [<sub>CP</sub>**ett-ei-kö** [<sub>TopicP</sub>**auto-lla** [<sub>TopicP</sub>kukaan  
 I.NOM wonder-1SG that-NEG.3SG-Q car-ADE nobody.NOM  
 [<sub>TopicP</sub>**Venetsia-an** [<sub>TP</sub>matkusta [<sub>VP</sub>koskaan kesäaika-an]]]]].  
 Venice-ILL travel-Ø ever summer-ILL  
 'I wonder whether no-one ever travels to Venice by car in the summer'
- d. Minä luule-n [<sub>CP</sub>**ett-ei** [<sub>TopicP</sub>**kesäaika-an** [<sub>TopicP</sub>**auto-lla**  
 I.NOM think-1SG that-NEG.3SG summer-ILL car-ADE  
 [<sub>TopicP</sub>kukaan [<sub>TP</sub>matkusta-isi [<sub>VP</sub>koskaan Venetsia-an ]]]]]].  
 nobody.NOM travel-COND ever Venice-ILL  
 'I think that no-one would ever travel to Venice by car in the summer time'

- e. Minä luule-n [<sub>CP</sub>**ett-ei** [<sub>TopicP</sub>**kesäaika-an** [<sub>TopicP</sub>kukaan  
 I.NOM think-1SG that-NEG.3SG summer-ILL nobody.NOM  
 [<sub>TP</sub>**auto-lla** [<sub>TP</sub>matkusta-isi [<sub>vp</sub>koskaan Venetsia-an ]]]]]...  
 car-ADE travel-COND ever Venice-ILL  
 'I think that no-one would ever travel to Venice by car in the summer time (when  
 one can take a train)'

The semantic effect of the positioning of the presupposed DP as either a Topic/AgrP, TP or vP adjunct is negligible, as can be seen from the interchangeability of the ordering in (89a) and (89e). Furthermore, in (89d) the internal ordering of the two DP-adjuncts of Topic/AgrP can be freely altered. I propose then that these adjunction patterns, while permitted by the functioning of the computational component, are not forced by any syntactic process. The syntactic structure proposed in this chapter allows for the variation in that the adjunction sites can be clearly and easily identified. However, there is no apparent syntactic justification for the movement. Consequently, I leave further examination of the source of this variation to other subfields of linguistics, such as discourse analysis, which are better equipped to determine the sources and effects of such word order changes.

#### 2.3.4. The structural position of non-focus/non-topic DP's

This section examines the position of non-topic argument and adjunct DP's in the main clause structure. Section 2.3.1 illustrated that in every clause, a single DP must raise to the Topic position to check its [Topic] feature. In section 2.3.2.2 it was shown that another, focussed DP may raise to the [Spec, FocusP] position. The definition of focus utilized here identifies anything that is not under discussion, i.e. anything new, as a focussed element. Hence, one new non-topic DP may occur as the specifier of FocusP. With regard to all other non-presupposed DP's in a given clause, (90) demonstrates that they occur to the right of the temporal adverb, regardless of their thematic status. The examples of non-topic, non-focussed DP's in (90) include subjects, direct objects, oblique objects and adjuncts. I assume that these nominal elements remain within the vP projection because all material

contained in the vP position at spell-out is interpreted as rhematic, or new.<sup>30</sup> The focussed status of these DPs is indicated by higher intonational prominence, illustrated in (90) by underlining.

- (90) a. Q: Mitä Tuija teke-e viikonloppu-na?  
 what.PAR T.NOM do-3SG weekend-ESS  
 'What's Tuija doing on the weekend?'  
 A: Silloin Tuija osta-a aina Peka-lle kirjo-j-a.  
 then T.NOM buy-3SG always P-ALL book-PL-PAR  
 'Tuija always buys books for Pekka then'
- b. Q: Mitä Tuija Peka-lle osta-a?  
 what.PAR T.NOM P-ALL buy-3SG  
 'What will Tuija buy for Pekka?'  
 A: Tuija osta-a Peka-lle usein kirjo-j-a.  
 T.NOM buy-3SG P-ALL often book-PL-PAR  
 'Tuija often buys Pekka books'
- c. Q: Kene-lle Tuija osta-a kirja-n?  
 who-ALL T.NOM buy-3SG book-ACC  
 'Who will Tuija buy a book for?'  
 A: Tuija osta-a kirjo-j-a aina Peka-lle.  
 T.NOM buy-3SG book-PL-PAR always P-ALL  
 'Tuija always buys books for Pekka'
- d. Q: Kuka kirjo-j-a Peka-lle aina osta-a?  
 who.NOM book-PL-PAR P-ALL always buy-3SG  
 'Who's always buying books for Pekka?'  
 A: Kirjo-j-a osta-a Peka-lle aina Tuija.  
 book-PL-PAR buy-3SG P-ALL always T.NOM  
 'Tuija always buys books for Pekka'

---

30 Kotalik (1996) provides an analysis of word order variation in Czech that similarly argues for the strictly rhematic status of the VP projection in that language.



All presupposed elements, on the other hand, must move out of the vP projection, as illustrated by the question and answer pairs in (93). In the examples, the new information provided as a response to the question is indicated by italics, and old, presupposed information DP's are bolded. The examples reveal that the preferred position of presupposed DP's, whether they be subjects, objects or adjuncts, is to the left of the adverbial that marks the left edge of vP.

- (93) a. Q: *Mitä* Tuija osta-a Peka-lle tiistai-na?  
           what.PAR T.NOM buy-3SG P-ALL Tuesday-ESS  
           'What does Tuija buy for Pekka on Tuesday?'  
       A: Tuija osta-a **Peka-lle tiistai-na** aina *kirjo-j-a*.  
           T.NOM buy-3SG P-ALL Tuesday-ESS always book-PL-PAR  
           'Tuija always buys Pekka books on Tuesday'
- b. Q: *Koska* Tuija osta-a Peka-lle kirja-n?  
       when T.NOM buy-3SG P-ALL book-ACC  
       'When will Tuija buy Pekka a book?'  
       A: Tuija osta-a **Peka-lle kirjo-j-a** aina *tiistai-na*.  
           T.NOM buy-3SG P-ALL book-PL-PAR always Tuesday-ESS  
           'Tuija always buys Pekka books on Tuesday'
- c. Q: *Koska* Tuija osta-a kukk-i-a?  
       when T.NOM buy-3SG flower-PL-PAR  
       'When does Tuija buy flowers?'  
       A: **Kukk-i-a** osta-a **Tuija** aina *tiistai-na*.  
           flower-PL-PAR buy-3SG T.NOM always Tuesday-ESS  
           'It is Tuesday that Tuija always buys flowers'
- d. Q: *Mitä* Tuija Peka-lle perjantais-i-n osta-a?  
       what.PAR T.NOM P-ALL Friday-PL-INS buy-3SG  
       'What does Tuija buy for Pekka on Fridays?'  
       A1: **Perjantais-i-n** osta-a **Tuija Peka-lle** usein *uude-n kirja-n*.  
           Friday-PL-INS buy-3SG T.NOM P-ALL often new-ACC book-ACC  
           'On Friday Tuija often buys Pekka a new book'

A2: **Tuija** osta-a **perjantais-i-n** **Peka-lle** usein uude-n kirja-n.  
 T.NOM buy-3SG Friday-PL-INS P-ALL often new-ACC book-ACC  
 'Tuija often buys herself a new book on Friday'

Incidentally, this forced movement is not category specific, but applies also to non-nominal presupposed constituents such as manner adverbs, adjectives and infinitivals.

(94) a. Q: *Mitä* Hannu laula-a noin mainiosti?  
 what.PAR H.NOM sing-3SG so well  
 'What does Hannu sing so well?'

A: Hannu laula-a **mainiosti** aina iskelmäurituks-i-a, (mutta  
 H.NOM sing-3SG well always pop.tune-PL-PAR but  
 ooppera-an hän ei kykene).  
 opera-ILL 3SG.NOM NEG.3SG be.capable.of  
 'Hannu always sings pop tunes well, (but he isn't capable of opera)'

b. Q: *Miksi* Elaine on noin iloinen?  
 why E.NOM be.3SG so happy  
 'Why is Elaine so happy?'

A: Elaine on **iloinen** aina pääs-te-ssä-än luistele-ma-an.  
 E.NOM be.3SG happy always get-DE-INE-3POS skate-MA-ILL  
 'Elaine is always happy when she gets (to go) skating'

c. Q: *Kuka* täältä halua-a lähte-ä Brasilia-an?  
 who.NOM here.ABL want-3SG leave-TA Brazil-ILL  
 'From here, who wants to go to Brazil?'

A: **Täältä** halua-mme **Brasilia-an lähte-ä** heti me kaikki.  
 here.ABL want-1PL Brazil-ILL leave-TA right.away we.NOM all.NOM  
 'From here, we all want to go to Brazil right away'

There are three arguments for considering the movement of presupposed elements as adjunction to vP. First, there is no evidence that this raising is into a unique object position (such as Agr<sub>OP</sub>) or some other DP position, since various kinds of complements scramble out to this pre-vP site (e.g. the object *kirjoja*, 'books', in (93b,c), the subject *Tuija* in (93d,e), the oblique argument *itselleen*, 'for herself', in (93e), the adjuncts *tiistaina*, 'on Tuesday', in

(93a), and *mainiosti*, 'well', in (94a)). The elements in question share no syntactic or semantic features: they come from various syntactic categories, and they do not all bear case, agreement, or any other morphological marking. The only characteristic that the XP's share is that they are presupposed, and that after movement they bear intonational prominence that is otherwise normally linked with focussed constituents. Taking into account the underlying principle of the Minimalist Program that all movement is driven by morphological considerations (Chomsky 1993), we should expect this raising to take place for feature checking reasons. In order to regard the movement as feature checking, we would have to introduce a generalized PresuppositionP, with the non-categorial strong feature [presupposed]. Alternatively, following suggestions of Saito (1989) and Collins (1992), we might suggest that the presupposed XP's are attracted by a type of focus feature. However, these proposals are ruled out by the finding that more than one XP may occur in this position simultaneously. As illustrated several times above, Finnish does not permit multiple specifiers or iteration of functional maximal projections of any other kind. It would be *ad hoc* to argue that the language does so here. Moreover, when more than one XP occurs in this position, the internal ordering of the moved elements is free, as illustrated in (95). This suggests that the elements are adjoined rather than occurring in a series of specifier positions. Finally, the interpretation of the utterances in (95) does not correlate in any way with the word order variation. This implies that no semantic relation other than the discourse notion of old/new information is associated with the target position.

- (95) a. Eeva osta-a **Aimo-ile kukk-i-a** **luottokort-i-lla** aina tiistai-na.  
 E.NOM buy-3SG A-ALL flower-PL-PAR credit.card-ADE always Tues-ESS  
 'Eeva always buys Aimo flowers with a credit card on Tuesday'
- b. Eeva osta-a **Aimo-ile luottokort-i-lla** **kukk-i-a** aina tiistai-na.  
 E.NOM buy-3SG A-ALL credit.card-ADE flower-PL-PAR always Tues-ESS
- c. Eeva osta-a **kukk-i-a** **Aimo-ile luottokort-i-lla** aina tiistai-na.  
 E.NOM buy-3SG flower-PL-PAR A-ALL credit.card-ADE always Tues-ESS
- d. Eeva osta-a **kukk-i-a** **luottokort-i-lla** **Aimo-ile** aina tiistai-na.  
 E.NOM buy-3SG flower-PL-PAR credit.card-ADE A-ALL always Tues-ESS



e. Eeva osta-a **luottokortti-lla kukk-i-a** **Aimo-lle** aina tiistai-na.  
 E.NOM buy-3SG credit.card-ADE flower-PL-PAR A-ALL always Tues-ESS

f. Eeva osta-a **luottokortti-lla Aimo-lle kukk-i-a** aina tiistai-na.  
 E.NOM buy-3SG credit.card-ADE A-ALL flower-PL-PAR always Tues-ESS

It is not obligatory for all presupposed XP's to precede the temporal adverb; in some utterances a presupposed XP can be found to the right of the adverb, as in (96a).

(96) Kenelle Tuija osta-a aina **kirjo-j-a**?  
 who.ALL T.NOM buy-3SG always book-PL-PAR  
 'Who does Tuija always buy books for?'

a. Tuija osta-a aina **kirjo-j-a** Peka-lle.  
 T.NOM buy-3SG always book-PL-PAR P-ALL  
 'Tuija always buys books for Pekka'

b. Tuija osta-a **kirjo-j-a** aina Peka-lle.  
 T.NOM buy-3SG book-PL-PAR always P-ALL  
 'Tuija always buys books for Pekka'

In a group of presupposed XP's, it is possible to adjoin some to the left and others to the right of the temporal adverb. In contrast with other Finnish word order patterns described in sections 2.3.1 and 2.3.2, this possibility highlights the freedom of this particular type of word order variation.

(97) Q: Koska Eeva **Aimo-lle kukk-i-a** **luottokortti-lla** osta-a?  
 when E.NOM A-ALL flower-PL-PAR credit.card-ADE buy-3SG  
 'When does Eeva buy flowers for Aimo with a credit card?'

A1: Eeva osta-a **Aimo-lle kukk-i-a** aina **luottokortti-lla** tiistai-na  
 E.NOM buy-3SG A-ALL flower-PL-PAR always credit.card-ADE Tues-ESS  
 (ja käteise-llä perjantai-na.)  
 and cash-ADE Friday-ESS  
 'Eeva always buys Aimo flowers with a credit card on Tuesday (and with cash on Friday)'

A2: Eeva osta-a **Aimo-lla** aina **kukk-i-a** **luottokortti-lla** tiistai-na  
 E.NOM buy-3SG A-ALL always flower-PL-PAR credit.card-ADE Tues-ESS  
 (ja käteise-llä perjantai-na.)  
 and cash-ADE Friday-ESS  
 'Eeva always buys Aimo flowers with a credit card on Tuesday (and with cash  
 on Friday)'

I claim that even when the presupposed XP's follow the temporal adverb, they have, nonetheless, moved out of VP to adjoin to the vP projection. In this case, the movement of the XP has preceded the operation that merges the temporal adverb to the vP. This clause structure is derivable based on the theoretical assumptions outlined in chapter 1 (cf. also Chomsky 1995:353). Neither the adjunction of the presupposed XP nor the merger of an adverb is motivated by feature checking, and hence no distinct higher category ZP is created with either type of adjunction to vP. As a consequence, the ordering of these two operations is without syntactic consequence or constraint. This analysis assumes, then, that the adjunction of presupposed XP's to vP is not motivated by feature attraction; it is simply a structural variant available in this language for XP's. This process is an example of true scrambling in Finnish: it is entirely optional movement unmotivated by any syntactic feature active in the computational component. Presumably discourse constraints require that all presupposed XP's undergo this movement, whereas new non-subject XP's remain within VP. Such a restriction, however, is beyond the scope of the syntactic requirements for movement. On the other hand, it is clear that the movement is syntactically constrained in that it respects syntactic constituency, and targets only maximal functional projections.

The choice between the two possible word orders, for instance object DP-adverb and adverb-object DP, is not entirely without grammatical consequence: the availability of various intonation patterns is determined by the order of adjunctions. In (98a), where the DP adjunction has taken place prior to adverb adjunction, no intonational prominence can be placed on the presupposed DP *kirjoja*, 'books' (primary stress is indicated by double underlining; secondary stress by single underlining). In (98b), on the other hand, the adverb has adjoined to vP before the adjunction of the presupposed DP has taken place, and here the object DP *kirjoja*, 'books', optionally bears the highest secondary intonational prominence.

- (98) a. Tuija osta-a aina **kirjo-j-a/\*kirjo-j-a** Peka-lle.  
 T.NOM buy-3SG always book-ACC P-ALL  
 'Tuija always buys books for Pekka'
- b. Tuija osta-a **kirjo-j-a/kirjo-j-a** aina Peka-lle.  
 T.NOM buy-3SG book-ACC always P-ALL  
 'Tuija always buys books for Pekka'

This difference in accentuation does not correspond to any semantic difference between the patterns in (98a-b). Consequently, I presume that the intonation alteration does not signify that the movement of presupposed DP's in the two patterns targets distinct structural positions; rather, I take the variation to be purely prosodic, and leave the question of the exact determination of phrasal stress in Finnish main clauses for other research.

A second potential adjunction site for presupposed XP's is TP. The position of the raised DP object *runoja*, 'poems', in (99) and the analogous location of the stranded quantifier *kaikki*, 'all', in (100) at first sight suggest that there is an intermediate specifier position between Topic/AgrP and vP. These XP's appear in a position between the finite negator, which is located in the head of Topic/AgrP, and the conditional main verb, in the head of TP. If the bolded DP is in a specifier position, it might be in either [Spec, TP] or [Spec, NegP], as indicated by the distinct structures in (99a vs. b) and (100a vs. b).

- (99) a. [<sub>TopicP</sub> Virtanen ei [<sub>NegP</sub> t<sub>NEG</sub> [<sub>TP</sub> **runo-j-a** luk-isi [<sub>vP</sub> koskaan julkisesti ]]]].  
 V-NOM NEG.3SG poem-PL-PAR read-COND never publicly  
 'Virtanen would never read poems publicly'
- b. [<sub>TopicP</sub> Virtanen ei [<sub>NegP</sub> **runo-j-a** t<sub>NEG</sub> [<sub>TP</sub> luk-isi [<sub>vP</sub> koskaan julkisesti ]]]].  
 V-NOM NEG.3SG poem-PL-PAR read-COND never publicly  
 'Virtanen would never read poems publicly'
- (100) a. [<sub>TopicP</sub> Virtase-t ei-vät [<sub>NegP</sub> t<sub>NEG</sub> [<sub>TP</sub> **kaikki** luk-isi [<sub>vP</sub> koskaan runo-j-a ]]]].  
 V-PL.NOM NEG-3PL all.NOM read-COND never poem-PL-PAR  
 'The Virtanens would never all read poems'
- b. [<sub>TopicP</sub> Virtase-t ei-vät [<sub>NegP</sub> **kaikki** t<sub>NEG</sub> [<sub>TP</sub> luk-isi [<sub>vP</sub> koskaan runo-j-a ]]]].  
 V-PL.NOM NEG-3PL all.NOM read-COND never poem-PL-PAR  
 'The Virtanens would never all read poems'

Nevertheless, as with vP adjunction of presupposed XP's, several XP's may occur simultaneously in this higher position, and they may be freely ordered with respect to each other. Moreover, some of the XP's may raise to the higher position, while others move only as far as the vP-adjunct position. Based on these findings, I conclude that in both cases we are dealing with adjunction rather than movement for feature checking purposes.

- (101) a.  $[_{TopicP} \text{Virtanen ei} \quad [_{NegP} t_{NEG} [_{TP} \text{runo-j-a} \quad \text{laps-i-lle-en} \quad \text{ääne-en} \quad \text{luk-isi} \quad \text{kyllä} \quad \text{koskaan} \quad \text{julkisesti} ]]]]$ .  
           V-NOM NEG.3SG poem-PL-PAR child-PL-ALL-3POS voice-ILL read-COND certainly never publicly  
           'Virtanen would certainly never publicly read poems out loud to his children'
- b.  $[_{TopicP} \text{Virtanen ei} \quad [_{NegP} t_{NEG} [_{TP} \text{laps-i-lle-en} \quad \text{runo-j-a} \quad \text{luk-isi} \quad \text{ääne-en} \quad \text{kyllä} \quad \text{koskaan} \quad \text{julkisesti} ]]]]$ .  
           V-NOM NEG.3SG child-PL-ALL-3POS poem-PL-PAR read-COND voice-ILL certainly never publicly  
           'Virtanen would certainly never publicly read poems out loud to his children'
- c.  $[_{TopicP} \text{Virtanen ei} \quad [_{NegP} t_{NEG} [_{TP} \text{ääne-en} \quad \text{luk-isi} \quad \text{kyllä} \quad \text{runo-j-a} \quad \text{laps-i-lle-en} \quad \text{koskaan} \quad \text{julkisesti} ]]]]$ .  
           V-NOM NEG.3SG voice-ILL read-COND certainly poem-PL-PAR child-PL-ALL-3POS never publicly  
           'Virtanen would certainly never publicly read poems out loud to his children'

Stranded quantifiers take part in the adjunction movement along with full DP's, as indicated in (102).

- (102) a.  $[_{TopicP} \text{Virtase-t ei-vät} \quad [_{NegP} t_{NEG} [_{TP} \text{kaikki runo-j-a} \quad \text{tois-i-lle-en} \quad \text{ääne-en} \quad \text{luk-isi} \quad \text{kyllä} \quad \text{koskaan} ]]]]$ .  
           V-PL.NOM NEG-3PL all.NOM poem-PL-PAR each.other-PL-ALL-3POS voice-ILL read-COND certainly never  
           'Virtanens would certainly never all read poems out loud to each other'
- b.  $[_{TopicP} \text{Virtase-t ei-vät} \quad [_{NegP} t_{NEG} [_{TP} \text{runo-j-a} \quad \text{kaikki} \quad \text{tois-i-lle-en} \quad \text{ääne-en} \quad \text{luk-isi} \quad \text{kyllä} \quad \text{koskaan} ]]]]$ .  
           V-PL.NOM NEG-3PL poem-PL-PAR all.NOM each.other-PL-ALL-3POS voice-ILL read-COND certainly never  
           'Virtanens would certainly never all read poems out loud to each other'

In the representations in (101-102), the moved XP's are shown adjoined to the TP projection. We should note, however, that there is no independent way of testing the exact location of these elements at this point. Since the negator must always move out of its merged position, and leaves no phonologically overt material behind, no marker exists between the NegP and TP positions. Furthermore, since the purpose of the adjunction is unclear, and not apparently syntactic, the resulting meaning shift offers no clue as to which projection hosts the adjoined element.

The position of the presupposed XP's (or QuantifierP's) adjoined to TP or NegP corresponds with higher intonational prominence, as was also observed in the vP adjunct position. If we combine the findings of this section with the DP-adjunction patterns identified in sections 2.3.2 and 2.3.3, we find that presupposed XP's may raise to adjoin to most of the maximal projections within the main clause (vP, TP or NegP, Topic/AgrP and CP), with the phonological effect of intonational prominence that corresponds to a focussed interpretation. This type of adjunction to FocusP appears to be ruled out, however, in that no such stressed XP may precede an element in the specifier of the Focus phrase.

- (103) \*<sub>[FocusP]</sub> **Runo-j-a** <sub>[FocusP]</sub> Virtanen-ko <sub>[TopicP]</sub> *t<sub>S</sub> ei* <sub>[NegP]</sub> *t<sub>NEG</sub>* <sub>[TP]</sub> *luk-isi*  
 poem-PL-PAR V.NOM-Q NEG.3SG read-COND  
 [<sub>vP</sub> *koskaan* [<sub>vP</sub> *ääne-en julkisesti laps-i-lle-en*]]]]].  
 never voice-ILL publicly child-PL-ALL-3POS  
 'Would Virtanen never read poems out loud publicly to his children?'

A final point to be made about movement out of vP concerns a restriction that prohibits the base vP from being phonologically empty, so that utterances with no overt rhematic material are ruled out. This situation arises when all DP's from within the vP raise to positions outside vP. In such a situation the finite verb does not appear to raise to Topic/Agr, but remains below the temporal adverb, presumably within vP. This is shown in (104). For instance, in (104a), the subject DP *Eeva* which provides the new information has moved to FocusP, the oblique *meille*, 'for us', occupies the topic position, and the presupposed object DP *kukkia*, 'flowers', has scrambled out of vP. The finite verb *ostaa*,

'buys', is unexpectedly found below the temporal adverb *usein*, 'often'. The corresponding sentence in (104b), in which the verb has raised into Topic/Agr, is ungrammatical.

- (104) a. [<sub>FocusP</sub>Eeva [<sub>TopicP</sub>mei-lle [<sub>vP</sub>kukk-i-a [<sub>vP</sub>usein [<sub>vP</sub> t **osta-a** t t ]]]]].  
           E.NOM           we-ALL   flower-PL-PAR   often           buy-3SG  
           'It is Eeva who often buys us flowers'
- b. \* [<sub>FocusP</sub>Eeva [<sub>TopicP</sub>mei-lle **osta-a** [<sub>vP</sub>kukk-i-a [<sub>vP</sub>usein [<sub>vP</sub> t t t t ]]]]].  
           E.NOM           we-ALL buy-3SG   flower-PL-PAR   often  
           'It is Eeva who often buys us flowers'
- c. [<sub>FocusP</sub>Kukk-i-a [<sub>TopicP</sub>Eeva [<sub>vP</sub>usein [<sub>vP</sub> t **osta-a** t t ]]]].  
           flower-PL-PAR   E.NOM   often           buy-3SG  
           'It is flowers that Eeva often buys'
- d. \* [<sub>FocusP</sub>Kukk-i-a [<sub>TopicP</sub>Eeva **osta-a** [<sub>vP</sub>usein [<sub>vP</sub> t t t ]]]].  
           flower-PL-PAR   E.NOM buy-3SG   often  
           'It is flowers that Eeva often buys'

This word order variant surfaces only when the verb is used to phonologically signal the location of vP. Rather than propose an *ad hoc* solution such as making the [V] feature of Topic/AgrP optionally strong, I prefer to assume that the [V] feature is always strong, and that discourse factors can affect the interpretation of syntactic structures. It is an indisputable fact that Finnish word order is heavily affected by discourse considerations. Since the vP generally serves the discourse function of containing the new information, I assume that the grammar contains a mechanism to ensure that it is never phonologically null. There is no reason to assume that the restriction affects syntactic derivation. Within the theoretical framework adopted here, since movement is treated as an instance of copy-and-merge, the emergence of a structure such as (104) can be explained by assuming that at PF, the Topic/AgrP copy of the verb rather than the usual vP copy is deleted. The condition on this exceptional process is that it takes place only when the vP would otherwise be phonologically null.

### 2.3.5. Subject case assignment

As I showed in section 2.3.1 (examples (23), (27-31)), the essential requirement for subject nominative case assignment in Finnish is agreement in person and number features between the subject and the highest finite element (a finite main verb, an auxiliary verb, a raising verb or the negator), rather than, for instance, syntactic position. In the absence of such agreement, the subject never bears nominative case. In the finite sentence exemplified in (105) the subject is nominative, and the finite verb agrees with the subject's person and number features. There are several other sentence patterns in Finnish in which the subject occurs in some non-nominative case, and the verb bears third person singular default [ $\phi$ ] features. These are illustrated in (106a-e). It is worth noting that these non-nominative subjects invariably bear experiencer rather than agentive thematic roles.

- (105) a. Minä kirjoita-n väitöskirja-a.  
**I.NOM** write-1SG dissertation-PAR  
 'I'm writing a dissertation'
- (106) a. Minulla on uusi-a keltais-i-a narsisse-j-a.  
**I.ADE** be.3SG new-PAR yellow-PL-PAR daffodil-PL-PAR  
 'I have new yellow daffodils'
- b. Minulta puuttu-u kynä.  
**I.ABL** lack-3SG pencil  
 'I don't have a pencil'
- c. Minusta tule-e iso-na tutkimusmatkailija.  
**I.ELA** come-3SG big-ESS explorer.NOM  
 'I'm going to become an explorer when I grow up'
- d. Minun on kylmä / nälkä / jano.  
**I.GEN** be.3SG cold / hunger.NOM / thirst.NOM  
 'I'm cold/hungry/thirsty'
- e. Minua aivast-utta-a /pelo-tta-a /laula-tta-a.  
**I.PAR** sneeze-CAUS-3SG /fear-CAUS-3SG /sing-CAUS-3SG  
 'I feel like sneezing/ I'm frightened/ I feel like singing'

Evidence from elision, binding of reflexives and subject raising confirms that both nominative and quirky subjects are uniquely distinguished from other DP's in the clause. The analysis of Finnish main clause structure in sections 2.3.1 - 2.3.4 showed, however, that there is no unique functional subject position in Finnish; rather, subjects may either remain within their merged [Spec,vP] position (if they contribute new information) or at a vP-adjunct position (into which they must move if they are presupposed), or they may move to check the [Topic] or [Focus] features of the extended Infl. (107) and (108) repeat earlier examples from (23b) and (93c) to illustrate the possibility of the subject DP remaining within the vP projection, either as a specifier or as an adjunct.

- (107) Q: Kuka osta-a aina kukk-i-a?  
 who.NOM buy-3SG always flower-PL-PAR  
 'Who always buys flowers?'

A: [<sub>Topic</sub>P Kukk-i-a osta-a [<sub>VP</sub> aina [<sub>VP</sub> **Tuija**]] (ja ruoka-a Jussi).  
 flower-PL-PAR buy-3SG always T.NOM and food-PAR J.NOM  
 'It is Tuija who always buys flowers (and Jussi food)'

- (108) Q: Koska Tuija osta-a kukk-i-a?  
 when T.NOM buy-3SG flower-PL-PAR  
 'When does Tuija buy flowers?'

A: [<sub>Topic</sub>P Kukk-i-a osta-a [<sub>VP</sub> **Tuija** [<sub>VP</sub> aina [<sub>VP</sub> tiistai-na ]]]].  
 flower-PL-PAR buy-3SG T.NOM always Tuesday-ESS  
 'It is Tuesday that Tuija always buys flowers'

Two conclusions are to be drawn from these findings: first, that for syntactic processes that make reference to subjects, the specifier position of vP must be distinguished as the subject position in Finnish; and second, that the subject case feature in the language is checked through covert feature movement rather than overt DP movement.

The morphological realization of case in Finnish is obviously linked to the specification of the [phi] features of the finite verbal element. Thus I assume that the subject [case] feature is checked within the same Topic/Agr projection as the verbal [phi] features. Moreover, I hypothesize, following a recent suggestion by Moorcroft (1995, adopted also in



Legate and Smallwood 1997) with regard to another quirky subject language, Icelandic, that within the computational system only a single abstract [Case] feature is checked, and that the overt morphological form of this feature as nominative or otherwise is not determined structurally.

I suggest that the majority of Finnish verbs have an inherent property that forces them to check their finite [phi] features against those of the subject DP at some point during the derivation.<sup>31</sup> When these [phi] features are checked, the morphological component interprets the subject's case marking as nominative. For the small group of verbs without this property, no checking of [phi] features between the subject and the verb ever takes place. As a consequence, the morphological interpretation of their [phi] features is obligatorily the default third person singular form. I assume that the overt case form of these quirky subjects is determined based on information from thematic structure.<sup>32</sup>

Since the view of morphology adopted in this thesis assumes that lexical insertion takes place postsyntactically, without access to LF information, the fact that the morphological realization of Finnish subject case seems to be based on LF feature checking is problematic. A potential solution presents itself if we consider only the data from (106-108): we could suggest that the [phi] feature checking between the subject and the verb takes place in overt syntax. This is a feasible assumption, since the two appear in a specifier-head relation within vP prior to either of them moving into higher positions to check other features. Furthermore, since the [Case] feature that the subject checks at LF bears no information about which specific case is checked, this checking process has no direct consequence for the interpretation of morphological case. If the [Case] feature is not

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31 Since the verb does not bear finite [phi] features in non-finite constructions, this checking requirement does not hold in those environments.

32 This analysis leaves open questions about the morphological realization of case marking on objects and adjuncts in several constructions, such as the impersonal passive, imperatives and some subject raising forms. These problems constitute possibly the most debated topic in the grammar of Finnish (for recent English-language contributions, cf. e.g. Itkonen 1979, Timberlake 1975, Taraldsen 1986, Nikanne 1994, several articles in Holmberg and Nikanne's 1993 volume). The issue of assignment of morphological case within this Minimalist feature checking approach will be left for future research.

checked, the syntactic derivation will fail to converge, and no morphological realization takes place. If [Case] is checked, its morphological form is based on information from thematic structure and [phi] feature checking, information available at spellout.

Unfortunately this explanation does not account for all subjects, however. First, the sentential negator bears [phi] features that agree with the subject, and the subject of a negated main clause may occur in the nominative. Since the subject and the negator need never enter into a specifier-head relation in overt syntax, the subject-finite element [phi] feature checking cannot take place overtly.

- (109) [<sub>Topic/AgrP</sub>Maljakko-a e-n [<sub>NegP</sub>t<sub>NEG</sub> [<sub>TP</sub>rikko-nut [<sub>vP</sub>minä]]]], vaan hän.  
           vase-PAR   NEG-1SG                   break-NUT   I.NOM    but   3SG.NOM  
           'I didn't break the vase, she did!'

The analysis of subject case marking in Finnish is further complicated by the existence of two groups of subject "raising" verbs whose subject case assignment properties differ from each other. I refer to the structures as subject "raising", although the subject need not move overtly from its merged [Spec, vP] position to some higher "subject" position. As with other types of main clauses, structures with raising verbs allow the matrix [Topic] feature to be checked by any DP, not only by a subject. However, as will be shown shortly, the subject of the lower clause can be identified as the subject of the raising verb by means of the unique subject-verb agreement pattern that holds between the two elements, as well as by thematic relations that exist between the subject and the raising verbs. The term "raising" in this case applies to feature movement rather than overt raising such as takes place in, for instance, English. Again this feature movement has consequences for the morphological realization of subject case, yet it takes place at LF.

The status of the nominative DP as the subject of the matrix verb in (110) is indicated by the fact that the DP in question bears nominative case marking and the raising verb agrees with it in person/number features. This group of raising verbs consists of verbs such as

*alkaa*, 'begin', *jaksaa*, 'have energy to', *osata*, 'can, be able to', *saada*, 'be permitted to', and *voida*, 'can, may'.<sup>33</sup>

- (110) a. Minä voi-n saa-da väitöskirja-ni heti valmii-ksi.  
**I.NOM** may-**1SG** get-TA dissertation-1SG.POS at.once ready-TRAN  
 'I may finish my dissertation at once'
- b. Sofia osa-a kroola-ta selä-llä-än 25 metr-i-ä.  
**S.NOM** can-**3SG** crawl-TA back-ABL-3POS 25 meter-PL-PAR  
 'Sofia can do back crawl for 25 meters'
- c. Sinä e-t jaksanut-kaan juost-a mäke-ä ylös.  
**you.NOM** NEG-**2SG** have.energy.to-NUT-EMP run-TA hill-PAR up  
 'You didn't have the energy to run up the hill, after all'

The word order variants in (111) demonstrate that this subject-verb agreement pattern holds even when the agreeing subject is located in a position far below the matrix vP, and the object, in (111b), or some oblique, in (111c), from the embedded clause has moved to check the [Topic] feature of the main verb.

- (111) a. Me aloi-mme syö-dä illallis-ta takapiha-lla.  
**we.NOM** start-**1PL** eat-TA supper-PAR back.yard-ADE  
 'We started to eat supper in the back yard'
- b. Illallis-ta aloi-mme syö-dä takapiha-lla me.  
 supper-PAR start-**1PL** eat-TA back.yard-ADE **we.NOM**  
 'We started to eat supper in the back yard'
- c. Takapiha-lla aloi-mme syö-dä illallis-ta me.  
 back.yard-ADE start-**1PL** eat-TA supper-PAR **we.NOM**  
 'We started to eat supper in the back yard'

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<sup>33</sup> These forms look like, and have often been treated as, control structures, but I will demonstrate shortly that this is not a correct analysis of these constructions.

The matrix subject of the second group of verbs, such as *kannattaa*, 'be worthwhile', *kelvata*, 'be easy to', *onnistua*, 'succeed', *täytyä*, 'must', *tarvita*, 'need to', *in*, and *voida*, 'be able/allowed to', bears genitive case, and the verb itself does not agree with the [phi] features of the subject, but manifests default third person singular agreement marking.

- (112) a. Minun täyty-y kirjoitta-a väitöskirja-a.  
**I.GEN must-3SG write-TA dissertation-PAR**  
 'I must write a dissertation'
- b. Meidän onnistu-i löytä-ä lopulta perille.  
**we.GEN succeed-PAST.3SG find-TA finally there**  
 'We finally succeeded in finding our destination'
- c. Sinun kannatta-isi hankki-a uus-i-a astio-i-ta.  
**you.GEN be.worthwhile-COND.3SG obtain-TA new-PL-PAR dish-PL-PAR**  
 'It would be worth your while to obtain new dishes'

I suggest that these genitive subjects function as the subjects of the matrix verbs in the same way that the nominative subjects do in (110-111) above. The default agreement morphology attested in these forms is the expected pattern for a verb with a non-nominative subject, as shown in the simple quirky subject sentences in (106a-e). Moreover, the finite matrix verb in these constructions does not agree with any other DP in the utterance, so that, for instance, the plural embedded object DP *astioita*, 'dishes', in (112c), fails to trigger agreement. I propose that these structures are analogous to the ones with nominative subjects, but that the lexical entries of this small set of verbs do not include a requirement for finite subject-verb [phi] feature matching.

The embedded verb in both constructions occurs in the infinitival *-ta* form. The syntactic properties of this verb form will be discussed in detail in chapter 4. Because of the infinitival nature of this verb form, and presumably to a large part based on the parallel with the translations of these clauses to, for example, English, such constructions have generally been treated as control structures in the literature (e.g. Leino 1986, Setälä 1960, Toivonen 1995, Vainikka 1989). As pointed out by Laitinen and Vilkuna (1993), however, at least

some *-ta* constructions must be raising structures, since they take impersonal complement clauses like those in (113). Laitinen and Vilkkuna drew this conclusion based on only the genitive-subject verbs, as illustrated by their example cited in (113a); however, the same argument can be extended to a few of the nominative-subject verbs, as shown in (113b).

- (113) a. Huomenna täyty-y sata-a /ol-la kaunis-ta.  
 tomorrow must-3SG rain-TA/be-TA beautiful-PAR  
 'It has to rain/be beautiful tomorrow' (Laitinen and Vilkkuna 1993:31, (5))
- b. Pian voi /alka-a /saa sata-a.  
 soon can.3SG /begin-3SG /may.3SG rain-TA  
 'It can/begins to/may rain soon'

Furthermore, all the verbs under investigation here allow the subjects of complements that assign quirky case to retain their idiosyncratic form, which implies that such constructions are raising structures rather than control structures.

- (114) a. Minulla pitä-ä ol-la uusi-a kirjo-j-a.  
**I.ADE** must-3SG be-TA new-PAR book-PL-PAR  
 'I must have new books (necessity)'
- b. Sinusta sopi-i tul-la vaikka meribiologi.  
 you.ELA be.suitable-3SG become-TA ADV ocean.biologist  
 'You're suited for an ocean biologist, for example'
- c. Sinua kelpa-a laula-tta-a.  
**you.PAR** be.fine-3SG sing-CAUS-TA  
 'It's fine for you to feel like singing'
- (115) a. Minusta voi tul-la iso-na tutkimusmatkailija.  
**I.ELA** can.3SG come-TA big-ESS explorer  
 'I can/might become an explorer when I grow up'
- b. Minun sitten osa-a ol-la kylmä /nälkä /jano.  
**I.GEN** then can-3SG be-TA cold /hunger.NOM /thirst.NOM  
 'I sure am cold/hungry/thirsty'

- c. Minua alka-a aivast-utta-a /pelo-tta-a /laula-tta-a.  
**I.PAR** begin-3SG sneeze-CAUS-TA /fear-CAUS-TA /sing-CAUS-TA  
 'I begin to feel like sneezing/frightened/like singing'

As will be demonstrated in chapter 4, the embedded subject cannot check its [case] feature within the extended functional projection of the *-ta* infinitive. The subject must raise out of the embedded clause structure into the matrix Infl in order to check this feature. The crucial question is why the subject sometimes bears nominative case, sometimes genitive, although both structures are presumably identical in that the subject checks the [Case] feature of the Topic/Agr head.

I assume that the distinction is again based on the simple lexical quirk of the genitive-subject verbs not requiring subject-verb finite [ $\phi$ ] feature matching. Let us examine nominative case assignment further. For a matrix clause to be interpreted as finite, its formal feature content must include a set of [ $\Phi$ ] features to be checked by the highest element bearing matching features (main verb, auxiliary verb, negator). These [ $\Phi$ ] features are obligatorily tied to a [Case] feature, since subject nominative case only arises when the [ $\phi$ ] features of the finite element agrees with the subject's [ $\phi$ ] features. In the raising constructions, the embedded subject bears the closest [case] feature, which raises covertly to check the abstract [Case]. As with main verbs, I suggest that many of the raising verbs contain a lexical specification that requires them to check their [ $\phi$ ] features against those of the [ $\phi$ ] features of the "raised" subject. The occurrence of this relationship is morphologically expressed by the nominative marking of the subject and the agreement marking of the verb. However, a small group of raising verbs lacks the lexical designation. If the agreement features of a finite element are not checked against those of the subject, they are manifest phonologically as the default third person singular agreement. In such a case the raised subject bears what I assume to be a morphological default realization of checked but unspecified case, the suffix [-*n*].

The case relationship between the raised subject and the auxiliary verb can be illustrated explicitly by embedding the construction further within the raising embedded participle construction. (116a-b) show that the morphological *-n* form of the subject case

checked by a D head in the embedded participle construction is overridden by the subject-verb agreement requirement of the raising verb *näyttää*, 'seem'. The overt case form of the subject raised away from the necessity auxiliary *täytyä*, 'must', in (117), however retains its *-n* suffix. In this way the subject now seems to bear quirky case lexically assigned by the auxiliary verb. (118) demonstrates that the different case/agreement pattern is not due to the double embedding structure. When the embedded auxiliary itself requires subject-verb agreement, and takes a nominative subject, the doubly raised subject occurs as nominative.

- (116) a. Minä näe-n [<sub>DP</sub>sinun pese-vä-n auto-a].  
 I.NOM see-1SG 2SG.GEN wash-VA-ACC car-PAR  
 'I see you washing the car'

- b. Sinä näytä-t [<sub>DP</sub> t<sub>S</sub> pese-vä-n auto-a].  
 you.NOM seem-2SG wash-VA-ACC car-PAR  
 'You seem to be washing the car'

- (117) a. Sinun täyty-y pes-tä auto-a.  
 you.GEN must-3SG wash-TA car-PAR  
 'You must wash the car'

- b. Sinun<sub>S</sub> näyttä-ä [<sub>t<sub>S</sub></sub> täyty-vä-n pes-tä auto-a ].  
 You.GEN seem-3SG must-VA-ACC wash-TA car-PAR  
 'You seem to have to wash the car'

- (118) a. Sinä osaa-t pes-tä auto-a.  
 you.NOM can-2SG wash-TA car-PAR  
 'You can wash the car'

- b. Sinä<sub>S</sub> näytä-t [<sub>t<sub>S</sub></sub> osaa-va-n pes-tä auto-a ].  
 You.NOM seem-3SG can-VA-ACC wash-TA car-PAR  
 'You seem to be able to wash the car'

The existence of the finite negator as well as these "raising" verbs in Finnish rules out the possibility that [ $\phi$ i] feature checking between the subject and the finite element takes place in overt syntax. Consequently, the problem of morphology accessing LF information returns. A couple of solutions to the problem present themselves, although neither is

acceptable at this point. First, we might abandon the distinction between overt syntax and LF as distinct levels of representation, as has been proposed in recent literature (cf. e.g. Richards 1997). Since this proposal would have far-reaching consequences for the entire framework adopted in this thesis, I choose not to adopt the most radical view as a first option.

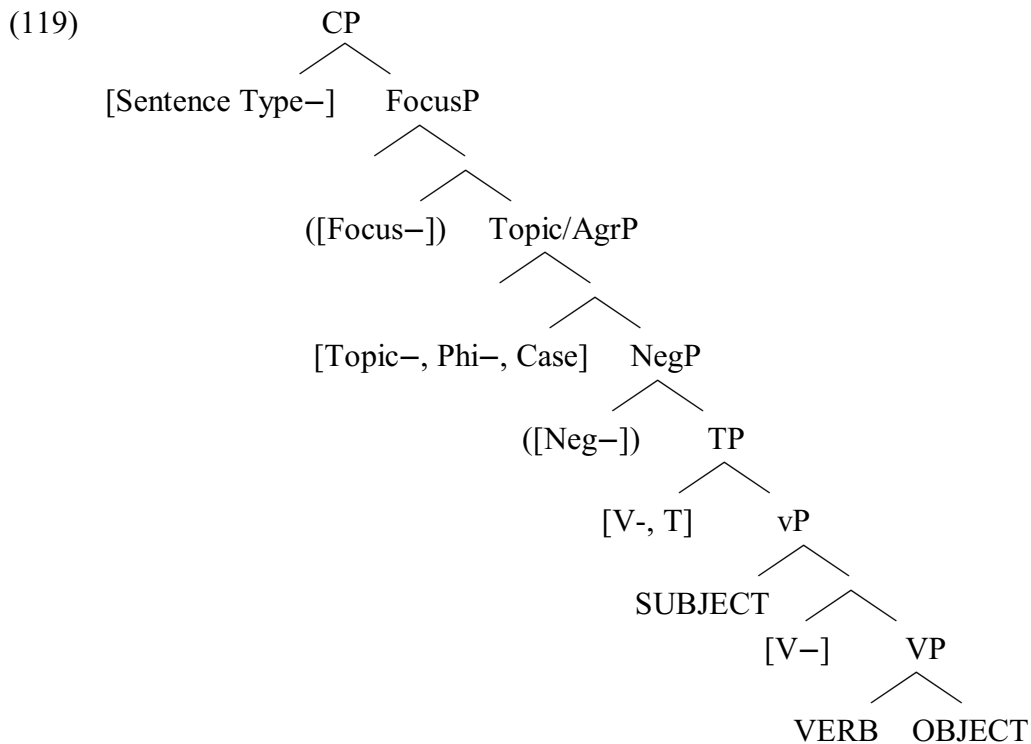
Second, it would be possible to abandon the assumption of late insertion of lexical items. If lexical items were inserted fully specified (e.g. with the subject bearing [nominative] instead of generic [case]), the entire case conflict could be eliminated. The investigation of non-finite constructions in chapters 3 and 4 will demonstrate, however, that a view of morphological derivation based on postsyntactic insertion of lexical items provides explanations for several previously unexplainable phenomena (e.g. the case form of embedded participials under certain raising verbs). This approach to morphology resolves several morphological puzzles while leaving unaccounted for the question of the realization of subject case, which, I note, has posed a problem for all analyses in any framework. Furthermore, I observe that the problem at hand is morphological rather than syntactic. There is no obstacle for the checking of the relevant syntactic features: I simply assume that both the subject [case] feature checking and the checking of [phi] features between the subject and the finite element take place covertly. I will continue to assume a model of postsyntactic lexical insertion, and leave the investigation of the morphological form of Finnish subject case for future research.

In conclusion, I have proposed that the occurrence of nominative subjects in Finnish is the result of the main verb's need to check its [phi] features against those of the subject. Nominative case marking and subject-verb agreement are the morphological expressions of this covert syntactic checking. In the absence of this checking relation between the subject and the finite element, the verb bears default agreement marking and the subject's morphological case realization is determined either through theta-marking (quirky case) or as the default form [-*n*].



## 2.4. Conclusion

This chapter has investigated the syntactic structure of Finnish main clauses. Based on some evidence from morphological inflection, but focussing mainly on attested and unavailable word order variation, the following functional projections were identified in finite clauses: CP, FocusP, Topic/AgrP, NegP, TP and vP. The representation given in (119) shows the syntactic features that were found to be active in Finnish matrix clause and the maximal structure that results if all are projected.



This structure differs from all those previously presented for Finnish, as well as from structures proposed as potentially universal in, for instance, Pollock (1989) and Chomsky (1989, 1993, 1995). As has already been pointed out in the discussion in this chapter, some of the differences have more to do with trivial matters of labelling rather than actual deeper distinctions. An example of this is the debate over the issue of whether Finnish has AgrP's

or not: an in-depth analysis of the actual syntactic features that take part in syntactic computation has shown that earlier discussion did not identify the core questions correctly, and hence to date only partial solutions have been offered. The account provided here has examined all aspects of subject-verb agreement to establish the status of this projection. Moreover, this analysis has investigated fully the status of all specifier positions, whose existence has not been addressed in earlier accounts.

The account presented here is the first attempt to bring together all available morphological and word order data to assess the functional syntactic structure of Finnish. Although questions regarding passivized and imperative sentence forms, as well as those concerning the morphological realization of subject and object case remain to be investigated, the account of finite main clause structure put forth here provides a firm starting point for the analyses of the different types of non-finite constructions that are the focus of inquiry in chapters 3 and 4.

## CHAPTER 3

### THE STRUCTURE OF FINNISH PARTICIPIAL CONSTRUCTIONS

#### 3.1. The capricious nature of Finnish (and other) participles

There are two participial verb forms in Finnish, the present participle (henceforth glossed as VA in example sentences) derived by the suffix *-va /-vä* and the past participle (glossed as NUT) affixed with *-nut /-nee*<sup>34</sup>. Both of these verb forms can be found in three seemingly unrelated constructions: as the main verb in a finite main clause, co-occurring with the negator *e-* or the auxiliary verb *olla*, 'be', as illustrated in (1a); as an adjectival modifier, shown in (1b); and as the verbal predicate in a non-finite embedded clause, exemplified in (1c).

(1) a. Main clause:

- (i) Työ on kestä-**vä** kolme vuotta.  
work.NOM be.3SG last-VA three years  
'The work will take three years'

- (ii) Lapse-t ei-vät heittä-**nee**-t pallo-a.  
child-PL.NOM NEG-3PL throw-NUT-PL ball-PAR  
'The children didn't throw the ball'

b. Prenominal modifier:

- (i) [elokuva-a katsele-**v-i-lle**] laps-i-lle  
movie-PAR watch-VA-PL-ALL child-PL-ALL  
'for/to the children who are watching the movie'

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34 The citation form of the past participle, *-nut*, changes to *-nee* when another morpheme is added.

- (ii) [pallo-n heittä-**nyt**] lapsi  
 ball-ACC throw-NUT child  
 'the child who threw the ball'

c. Embedded non-finite clause:

- (i) Minä luule-n [Eevi-n katsele-**va**-n Leijonakuningas-ta].  
 I.NOM think-1SG E-GEN watch-VA-ACC Lion.King-PAR  
 'I think (that) Eevi (is) watching the Lion King'
- (ii) Auni epäile-e [heittä-**nee**-nsä pallo-n].  
 A.NOM suspect-3SG throw-NUT-3POS ball-ACC  
 'Auni suspects (that) she threw the ball'

All occurrences of the participial forms share a set of properties. Morphologically, the participles appear to be nominal according to the inflectional marking that they bear. As can be seen in (1a.ii, 1b.i and 1c.i-ii), in all their manifestations, the participles are inflected with case morphology, possessive suffixation, and/or number marking that is otherwise added to nouns or adjectives. The participial forms never carry verbal inflection for finite tense, mood or person/number agreement. However, both the present and past participles can be marked for passive voice, which is an indication of distinctly verbal behaviour. The passive past participle marker is a single portmanteau morpheme, while in the present tense the passive and participial suffixes are distinct. (2) gives examples of the passivized participial forms in each of the three environments.

- (2) a. Vahtimestari-a on pelä-**tty** vuosikausia.  
 caretaker-PAR be.3SG fear-PASS.NUT years  
 'The caretaker has been feared for years'
- b. [hallitukse-lta saa-**ta-va**-t] selonteo-t  
 government-ABL receive-PASS-VA-PL.NOM report-PL.NOM  
 'the reports that will be received from the government'
- c. Minä huomaa-n [patsa-sta siirret-**tä-vä**-n uute-en paikka-an].  
 I.NOM notice-1SG statue-ELA move-PASS-VA-ACC new-ILL place-ILL  
 'I notice (that) the statue (is being) moved into a new place'

In contrast with their mostly nominal morphological behaviour, syntactically the participles behave like verbs in that they retain their ability to assign the full range of object cases: accusative, partitive or quirky case (here elative). The accusative/partitive case alternation affects the aspectual interpretation of the utterance in the usual way: an accusative object gives a telic reading and a partitive object implies an atelic event.

- (3) a. *pallo-n heittä-nyt lapsi*  
       ball-ACC throw-NUT child  
       'the child who threw the ball'  
       (telic interpretation)
- b. *pallo-a heittä-nyt lapsi*  
       ball-PAR throw-NUT child  
       'the child who threw ball'  
       (atelic interpretation)
- c. *pallo-i-sta pitä-vä lapsi*  
       ball-PL-ELA like-VA child  
       'the child who likes balls'

In addition, the selectional restrictions that the participial forms place on their complements are identical to the limitations set by their finite verbal counterparts. For instance, the verb *syödä*, 'eat', allows an abstract complement noun *sanansa*, 'his/her word(s)', with the idiomatic interpretation of 'to break one's promise', but it does not yield a comprehensible interpretation with any other abstract noun complement. The participial form of the verb *syödä*, 'eat', given in (4c-d), manifests the same selectional properties.

- (4) a. *Viivi sö-i taas sana-nsa.*  
       V.NOM eat-PAST.3SG again word-3Pos  
       'Viivi broke her promise (lit. ate her words) again'
- b. *Viivi sö-i taas \*ylpeyte-nsä/\*viisaute-nsa /\*rakkaute-nsa.*  
       V.NOM eat-PAST.3SG again pride-3Pos / wisdom-3Pos/ love-3Pos  
       \*'Viivi ate her pride/wisdom/love again'

- c. Minä kuule-n [Viivi-n syö-nee-n taas **sana-nsa**].  
 I.NOM hear-1SG V-GEN eat-NUT-ACC again word-3Pos  
 'I hear (that) Viivi broke her promise (lit. ate her words) again'
- d. Minä kuule-n [Viivi-n syö-nee-n taas **\*ylpeyte-nsä** / **\*viisaute-nsa**  
 I.NOM hear-1SG V-GEN eat-NUT-ACC again pride-3Pos / wisdom-3Pos  
 / **\*rakkaute-nsa**].  
 / love-3Pos  
 \*'I heard (that) Viivi ate her pride/wisdom/love again'

The participial clauses are modified by adverbs that are normally associated with verbs rather than by those that modify adjectives or nouns.<sup>35</sup>

- (5) a. Kati [<sub>VP</sub>heitt-i **uskomattoma-sti** [<sub>AdjP</sub>sen **uskomattoma-n** suure-n]  
 K.NOM throw-PAST.3SG incredible-ly that.ACC incredible-GEN large-ACC  
 pallo-n järve-en] (eikä ikkuna-an).  
 ball-ACC lake-ILL (NEG.and window-ILL)  
 'Incredibly, Kati threw that incredibly large ball into the lake (and not at the window)'
- b. Minä nä-i-n Kati-n [<sub>VP</sub>heittä-vä-n **uskomattoma-sti**  
 I.NOM see-PAST-1SG K.GEN throw-PAST.3SG incredible-ly  
 [<sub>AdjP</sub>sen **uskomattoma-n** suure-n] pallo-n järve-en]  
 that.ACC incredible-GEN large-ACC ball-ACC lake-ILL  
 'I saw Kati throw, incredibly, that incredibly large ball into the lake'
- c. sen suure-n pallo-n **uskomattoma-sti** / **\*uskomattoma-n**  
 that.ACC large-ACC ball-ACC incredible-ly / incredible-ly  
 järve-en heittä-nyt Kati  
 lake-ILL throw-NUT K.NOM  
 'Kati (who), incredibly, threw that large ball into the lake'  
 [lit. 'that-large-ball-into-the-lake-incredibly-thrown Kati']

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35 The pre-adjectival modifier form *uskomattoman* is translated into English as the adverb 'incredibly', but in Finnish the form consists of the adjective *uskomaton*, 'incredible', inflected for genitive case. The semantically comparable adverb *uskomattomasti* includes the adjective *uskomaton* with the derivational adverbial suffix *-sti*.

Semantically, the participles have temporal content in all contexts, in that the past versus present participial marking is solely responsible for a past/non-past interpretation distinction. A marker that encodes such temporal information is normally considered as tense inflection. Since the participles do not bear finite agreement marking, however, a participial form by itself, without the assistance of a finite auxiliary element, is incompatible with a nominative subject in any of the syntactic constructions in which it occurs.

All in all, it is difficult to assign a syntactic category label to the Finnish participles due to the fact that in their various manifestations the participle forms exhibit both lexical and functional characteristics, and with regard to lexical category they behave like verbs, adjectives and nouns. These perplexing behaviours of the participial morphemes have not attracted widespread attention. Although some references have been made to these forms in recent generative literature on Finnish verbal morphology, these incongruities have made extensive investigation into all the properties of any single construction difficult, and none exists currently. Consequently, and more importantly, these problems have also precluded a unified analysis of all the different uses of the participial suffixes in any framework.

In the exploration of the extended Infl structure of Finnish main clauses, the occurrence of the participle morphemes has remained an unsolved puzzle. Those few linguists who have acknowledged in print the existence of the main clause past participle use have considered it more or less accidental, a selectional quirk of the negator and the auxiliary *olla*, 'be'. The finite past tense forms and the main clause past participle are treated as variant phonological spell-outs of a single morpheme that bears the semantics of past tense but no mood. This is the view advocated in Mitchell (1991, 1994), Holmberg et al. (1993) and Vainikka (1994). The main clause present participle has not been discussed in these or other works. No current work, since a brief transformational account by Karlsson in 1972, has examined the structure of the prenominal participle construction. Two recent analyses by Vainikka (1989, 1994) were aimed at clarifying the syntactic structure of the embedded participial constructions. Both of these studies, however, leave room for improvement in that they focus solely on the morphological behaviour of the participles. The specific problems with the accounts are addressed in detail in section 3.2.1.3. These

investigations leave untouched the other constructions in which the participles are used, and in this way fail to address the puzzle presented by the Finnish participles in a fully explanatory way.

Thus, in addition to theoretical questions posed by the Finnish participial constructions, there is a notable empirical gap in that no comprehensive account of the forms has been proposed within the generative framework. This chapter provides a thorough and exhaustive analysis of the syntactic structure of all the uses of the participial suffixes. An assumption underlying this work is that since each participial morpheme has a single phonological shape<sup>36</sup>, a single meaning and mostly identical syntactic characteristics in all its manifestations, it is sensible to assume that each of the participle morphemes has a single lexical representation with a single set of syntactic features. This assumption is based on the principle of monosemy (the 'One Form, One Meaning Principle' of Johns, 1992), as outlined in chapter 1.

In this chapter I account for the previously paradoxical behaviour of the two participial suffixes within the principles of the Minimalist framework outlined in chapter 1. This chapter is organized as follows. Section 3.2 examines the three environments in which the past participle form occurs. Based on the properties of the embedded past participle clause, the syntactic features of both the overt participle morpheme and its abstract functional counterpart are identified. It is then demonstrated that the syntactic traits of the main clause and prenominal modifier functions can be analyzed in terms of the syntactic feature matrix established for the past participle from its embedded use. Section 3.3 provides a discussion of the uses of the present participle form, which are much more restricted and whose interpretations provide more unpredictable twists. The overall conclusion of this chapter is that a unified account of the complexities of the participial morphemes is possible when syntactic features are deduced from their contribution to the computation, rather than established based on *a priori* category labels. Moreover, I present

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<sup>36</sup> The morpheme does not always look the same, but rather the changes in phonological shape are not dependent on which construction the morpheme occurs in.



this approach as a potential solution to the categorization problems posed by participles in various other languages.

### **3.2. The past participle *-nut* /*-nee***

This section examines the three past participle constructions, the embedded participle clause form, the main clause use and the prenominal adjectival function. In the first subsection, 3.2.1, the positioning and behaviour of syntactic constituents in the embedded participial clause are used to identify the syntactic feature matrices of the past participle morpheme *-nut* and an abstract functional participial head counterpart, which is posited in the structure. Word order, semantic interpretation and morphological information are used to analyze the syntactic structure of the embedded participial clause. Based on the principle of monosemy that has been adopted as a null hypothesis in this thesis, I presume that the main clause and adjectival uses of the past participle morpheme encode the same syntactic feature set as the embedded clause function. The subsections 3.2.2 and 3.2.3 demonstrate the appropriateness of this premise. Thus the syntactic structures of the three constructions in which the past participle morpheme occurs will be established according to the syntactic features that are present in the derivation.

#### **3.2.1. The embedded participial clause**

##### **3.2.1.1. The morpho-syntactic properties of the embedded past participle**

The past participle can serve as the verbal predicate of an embedded non-finite clause. (6) shows a contrast between finite and non-finite embedded clausal complements. As was described in the discussion in chapter 2 on finite embedded clauses, (6a) shows that such a clause is introduced by a complementizer like *että*, 'that', and contains a nominative subject plus some finite element that bears person/number agreement, here agreeing with the subject's features. The non-finite clause in (6b), on the other hand, has no complementizer,

its subject always occurs in genitive case, and the participial verb displays no agreement markings.

- (6) a. Minä tiedä-n [että lapse-t katsel-i-vat elokuva-n].  
 I.NOM know-1SG that child-PL.NOM watch-PAST-3PL movie-ACC  
 'I know that the children watched the movie'
- b. Minä tiedä-n [las-te-n katsel-lee-n elokuva-n].  
 I.NOM know-1SG child-PL-GEN watch-NUT-ACC movie-ACC  
 'I know (that) the children (have) watched the movie'

The participle bears accusative case marking, as can be seen in (6b) above. In this way the participle resembles a regular lexical DP complement of the same matrix verb. This consistency of case marking is illustrated in (7).<sup>37</sup>

- (7) a. Minä tiedä-n tarina-n.  
 I.NOM know-1SG story-ACC  
 'I know the story'
- b. Minä tiedä-n [hänen lähte-nee-n].  
 I.NOM know-1SG 3SG.GEN leave-NUT-ACC  
 'I know (that) s/he (has) left'
- c. Minä huomas-i-n Mauri-n.  
 I.NOM notice-PAST-1SG M-ACC  
 'I noticed Mauri'
- d. Minä huomas-i-n [hänen lähte-nee-n].  
 I.NOM notice-PAST-1SG 3SG.GEN leave-NUT-ACC  
 'I noticed (that) s/he (had) left'
- e. Minä sano-i-n totuude-n.  
 I.NOM say-PAST-1SG truth-ACC  
 'I said (=told) the truth'

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<sup>37</sup> A few problematic instances exist. These are discussed in section 3.2.1.6.3.

f. Minä sano-i-n [Kati-n puhu-nee-**n** tot-ta].  
 I.NOM say-PAST-1SG K-GEN speak-NUT-ACC truth-PAR  
 'I said (that) Kati spoke the truth'

g. Minä unohd-i-n **sen**.  
 I.NOM forget-PAST-1SG 3SG.ACC  
 'I forgot it'

h. Minä unohd-i-n [sinun luvan-nee-**n** kirja-n Anna-lle].  
 I.NOM forget-PAST-1SG you.GEN promise-NUT-ACC book-ACC A-ALL  
 'I forgot (that) you (had) promised the book to Anna'

In both finite and non-finite embedded clauses, the embedded verb assigns a range of cases to its object. The participial verb's ability to assign case is unaffected by either the participial morphology or the nominal suffixation that it bears. Variation between accusative and partitive case marking on the object in an embedded participial clause affects the aspectual interpretation of the clause in exactly the same way as it does in finite embedded clauses. In both environments, an accusative object yields a telic reading, and a partitive object an atelic one. The alternation in participial clauses is illustrated in (8a-b). (8c) demonstrates that verbs that assign quirky object case (here elative) retain this property even when participial. Again, the thematic structure and selectional restrictions of the embedded past participle and the corresponding finite verb are identical.

- (8) a. Minä tiedä-n [las-te-n syö-nee-n popkorni-**n**].  
 I.NOM know-1SG child-PL-GEN eat-NUT-ACC popcorn-ACC  
 'I know (that) the children ate (all) the popcorn' [telic]
- b. Minä tiedä-n [las-te-n syö-nee-n popkorni-**a**].  
 I.NOM know-1SG child-PL-GEN eat-NUT-ACC popcorn-PAR  
 'I know (that) the children ate (some) popcorn' [atelic]
- c. Minä tiedä-n [las-te-n pitä-nee-n popkorni-**sta**].  
 I.NOM know-1SG child-PL-GEN like-NUT-ACC popcorn-ELA  
 'I know (that) the children liked the popcorn'

The embedded participle form also occurs as the complement of various raising verbs, as in (9). In these constructions, the raised subject always bears nominative case, and the raising verb agrees in person and number features with the subject. The participle does not show agreement with its logical subject, either finite person/number suffixation or nominal number marking. The participial verb, however, bears accusative case marking. As shown in section 2.3.1 of chapter 2, some DP element must raise to the specifier position of Topic/AgrP of the matrix clause. With raising verbs, the base position of such a nominal is generally in the embedded clause. In (9a) and (9b), it is the embedded subject that moves to check the matrix [Topic] feature; in (9c) it is the embedded object.

- (9) a. **Lapse-t näyttä-vät heittä-nee-n** pallo-a takapiha-lla.  
 child-PL.NOM seem-3PL throw-NUT-ACC ball-PAR back.yard-ADE  
 'The children seem (to have) been throwing ball in the back yard'
- b. **Kuoro kuulu-u esittä-nee-n** loistava-n konserti-n.  
 choir.NOM sound-3SG perform-NUT-ACC excellent-ACC concert-ACC  
 '(I) heard (that) the choir performed a great concert'
- c. Soolo-osa-n **vaikuta-t ansain-nee-n** sinä.  
 solo-part-ACC seem-2SG deserve-NUT-ACC you.NOM  
 'You seem to have deserved the solo part'

(10) shows that when the embedded subject is phonologically null, the embedded participle bears nominal possessive marking that identifies the person/number features of the subject. The fact that accusative case marking is missing in the possessive marked participial clauses will be discussed further in section 3.2.1.6.3.

- (10) a. Minä luule-n [nä<sup>h</sup>-nee-**ni** Leijonakuninkaa-n].  
 I.NOM think-1SG see-NUT-1SG.Pos Lion.King-ACC  
 'I think (that) I (have) seen the Lion King'
- b. Pekka sano-o [heittä-nee-**nsä** pallo-n sieppari-lle].  
 P.NOM say-3SG throw-NUT-3Pos ball-ACC catcher-ALL  
 'Pekka says (that) he threw the ball to the catcher'

Table 3.1 summarizes the verbal and nominal morphological and syntactic properties of the embedded past participle.

**TABLE 3.1. The syntactic properties of the embedded past participle**

<i>Verbal behaviour</i>	<i>Nominal behaviour</i>
<ul style="list-style-type: none"> <li>• Assigns full range of object cases</li> <li>• Theta role assignment &amp; selectional restrictions identical to finite verb</li> <li>• Can form a passive counterpart</li> <li>• Bears temporal content</li> </ul>	<ul style="list-style-type: none"> <li>• Occurs in object position</li> <li>• Participial clause occurs in theta position</li> <li>• Bears accusative case marking or possessive suffix</li> </ul>

### 3.2.1.2. The mystery of the syntactic category of the Finnish past participle

The first problem in assigning a structure to the Finnish embedded past participle constructions is to select the syntactic category of the embedded participial head, since it clearly attests both verbal and nominal properties. Many researchers have taken the verbal features of the participle to be in some way more fundamental than its nominal traits, and consequently have deemed the embedded participle itself a verb (cf. e.g. Airila 1953, Hakulinen and Karlsson 1979, Itkonen 1966, Vainikka 1989, 1994). I also adopt this view. The ability to assign accusative and partitive object case is a distinctly verbal behaviour in Finnish.<sup>38</sup> No ordinary nouns, adjectives, prepositions or postpositions assign both of these object cases. I adopt the feature [(Assign) Object case] as a quintessential characteristic

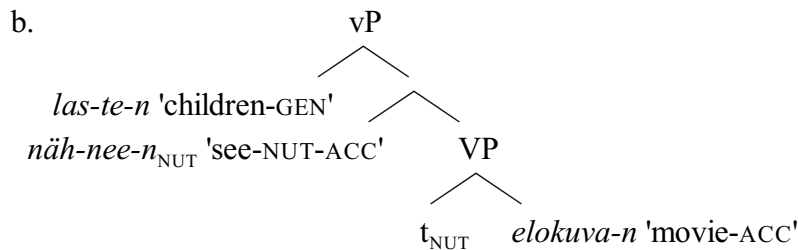
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<sup>38</sup> Either the ability to assign both accusative and partitive case, or the ability to assign accusative case in particular is the key characteristic here, since partitive case alone may also be assigned by nouns, adjectives and prepositions (cf. Vainikka 1992, 1993 for discussion).

associated with the category Verb.<sup>39</sup> Nevertheless, for brevity, in tree representations, I will mostly continue using the notation V(erb) to represent this property.

I propose that the participle morpheme is inflectional, and does not affect the syntactic features that determine the category of the verb to which it attaches. The semantic contribution of this participial morphology is to specify the temporal reference of the event described by the embedded verb. The temporal reference allows the embedded clause to be licensed as a proposition. I assume that the fully inflected participial verb, when merged with an object DP, projects a VP. Furthermore, since the same subject theta-role assignment relation exists in participial clauses as in finite clauses, I also assume that a vP is required in transitive participial clauses for the assignment of the external theta role. As proposed by Chomsky (1995) for English, I assume that the participial verb raises to the head of the vP projection to assist in the licensing of the subject position. Formally, this is achieved by positing on the abstract head of vP a strong [V] feature, which attracts the verb into v. The initial structure proposed for the non-finite embedded clause construction is given in (11).

- (11) a. Minä arvele-n [las-te-n näh-nee-n elokuva-n].  
 I.NOM think-1SG child-PL-GEN see-NUT-ACC movie-ACC  
 'I think (that) the children saw the movie'



The nominal characteristics of the embedded participle obviously require further explanation. I suggest that these characteristics are the consequence of syntactic features

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<sup>39</sup> The qualification that this is a sufficient but not necessary condition has already been mentioned, with respect to unaccusative and raising verbs, as well as the copula *olla*, 'be'.

present at the level of functional structure in the embedded clause. However, before proceeding with a discussion of the functional structure of the embedded participial clause, I will demonstrate that, despite the nominal morphological inflection and noun-like function, neither the participle itself, nor the participial clause as a whole, behave like regular lexical nouns (or DP's) and hence they cannot be considered nouns.

### 3.2.1.2.1. The participle is not a noun

The first argument against treating the past participle as a noun comes from main clause topic raising, which was first discussed in section 2.3.1 of the previous chapter. In that section I showed that a strong [Topic] feature is present in the main clause functional domain and attracts some DP that bears a matching feature to the specifier of this position. It was demonstrated that the main clause participle cannot check this strong [Topic] feature, which suggests that the main clause participle is not a D element. The participle can check the [Focus] feature of FocusP, however, since this feature has no categorial restriction. (12) repeats the relevant data from (35) and (38b) in chapter 2, showing that a participle raised to the Topic position in (12a) results in ungrammaticality, while participle movement to the Focus position in (12b) is acceptable.

- (12) a. Ei            hän            ole saa-nut paljoa aikaan, \*mutta **matkustel-lut** on            hän.  
           NEG.3SG 3SG.NOM be get-NUT much time-ILL but travel-NUT be.3SG 3SG.NOM  
           'She hasn't accomplished much, but she has travelled' (Vilkuna 1989:26, (9.c))
- b. Ei            hän            ole paljoa teh-nyt, mutta matkustel-lut **hän** on.  
           NEG.3SG 3SG.NOM be much do-NUT but travel-NUT 3SG.NOM be.3SG  
           'She hasn't done much, but she has travelled'

Like main clause participles, embedded participles are unable to check the [Topic] feature of the matrix clause. (13a-b) show that other clearly nominal elements, such as the subject or the object of the non-finite embedded clause, may raise to the main clause and successfully check the strong nominally determined [Topic] feature of Topic/Agr. Raising

the participle in (13c), however, produces an ungrammatical result, despite the participle's nominal case morphology. Neither can the participial clause as a whole front to Topic/Agr position to check the strong feature. This is shown in (13d).

- (13) a. **Emili-n<sub>s</sub>** tiedä-n [t<sub>s</sub> pelan-nee-n usein tennis-tä] minä.  
 Emil-GEN know-1SG play-NUT-ACC often tennis-PAR I.NOM  
 'I know (that) Emil (has) often played tennis'
- b. **Tennis-tä<sub>o</sub>** tiedä-n [Emili-n pelan-nee-n usein t<sub>o</sub>] minä.  
 tennis-PAR know-1SG Emil-GEN play-NUT-ACC often I.NOM  
 'I know (that) Emil (has) often played tennis'
- c. \***Pelan-nee-n<sub>NUT</sub>** tiedä-n [Emili-n t<sub>NUT</sub> usein tennis-tä] minä.  
 play-NUT-ACC know-1SG Emil-GEN often tennis-PAR I.NOM  
 'I know (that) Emil (has) ofel played tennis'
- d. \***[Emili-n pelan-nee-n usein tennis-tä]<sub>XP</sub>** tiedä-n minä t<sub>XP</sub>.  
 Emil-GEN play-NUT-ACC often tennis-PAR know-1SG I.NOM  
 'I know (that) Emil (has) often played tennis'

A second phenomenon that distinguishes the past participle and the participial clause from lexical DP's has to do with the ordering of internal arguments in a clause. (14a-b, 15a-b) demonstrate that the ordering of two lexical object DP's is free. In (14c-d, 15c-d), however, a participial complement clause that co-occurs with a lexical object DP must be placed clause-finally. (14e, 15e) demonstrate that the participle alone cannot take part in the reordering of nominals, either.<sup>40</sup> The participial clause in (14c-d) is the null subject construction, while (15c-d) illustrates the identical functioning of the full subject participle form.

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40 The restriction is not due to a heavy-NP-to-the-right requirement, since two DP's, one of which is modified by a relative clause, reorder with perfect ease.

- (i) Hän kerto-i asia-nsa, jota ol-i mietti-nyt koko pitkä-n viiko-n,  
 3SG.NOM tell-PAST.3SG concern-3POS that.PAR be-PAST.3SG ponder-NUT all long-ACC week-ACC  
 lääkäri-lle.  
 doctor-ALL

'She told her concern, which she had pondered on the whole long week, to the doctor'



- (14) a. Hän kerto-i asia-n /asia-nsa lääkäri-lle.  
3SG.NOM tell-PAST.3SG concern-ACC/concern-3POS doctor-ALL  
'She told the/her concern to the doctor'
- b. Hän kerto-i lääkäri-lle asia-n /asia-nsa.  
3SG.NOM tell-PAST.3SG doctor-ALL concern-ACC/concern-3POS  
'She told the doctor the/her concern'
- c. Hän kerto-i lääkäri-lle [ol-lee-nsa sairaa-na].  
3SG.NOM tell-PAST.3SG doctor-ALL be-NUT-3POS sick-ESS  
'She told the doctor (that) she (had) been sick'
- d. \*Hän kerto-i [ol-lee-nsa sairaa-na] lääkäri-lle.  
3SG.NOM tell-PAST.3SG be-NUT-3POS sick-ESS doctor-ALL  
'She told the doctor (that) she (had) been sick'
- e. \*Hän kerto-i ol-lee-nsa<sub>NUT</sub> lääkäri-lle [t<sub>NUT</sub> sairaa-na] .  
3SG.NOM tell-PAST.3SG be-NUT-3POS doctor-ALL sick-ESS  
'She told the doctor (that) she (had) been sick'

- (15) a. Minä kuul-i-n uutise-n Liisa-lta.  
I.NOM hear-PAST-1SG news-ACC L-ABL  
'I heard the news from Liisa'
- b. Minä kuul-i-n Liisa-lta uutise-n.  
I.NOM hear-PAST-1SG L-ABL news-ACC  
'I heard the news from Liisa'
- c. Minä kuul-i-n Liisa-lta [Maija-n ol-lee-n sairaa-na].  
I.NOM hear-PAST-1SG L-ABL M-GEN be-NUT-ACC sick-ESS  
'I heard from Liisa (that) Maija (had) been sick'
- d. \*Minä kuul-i-n [Maija-n ol-lee-n sairaa-na] Liisa-lta.  
I.NOM hear-PAST-1SG M-GEN be-NUT-ACC sick-ESS L-ABL  
'I heard from Liisa (that) Maija (had) been sick'
- e. \*Minä kuul-i-n ol-lee-n<sub>NUT</sub> Liisa-lta [Maija-n t<sub>NUT</sub> sairaa-na] .  
I.NOM hear-PAST-1SG be-NUT-ACC L-ABL M-GEN sick-ESS  
'I heard from Liisa (that) Maija (had) been sick'

Even when the information contained in the participial clause is presupposed, and that of the second DP is new, the participial clause cannot be fronted. This is in opposition

to the general requirement, discussed in section 2.3.4 of chapter 2, that presupposed XPs in Finnish must scramble out of vP to adjoin to the vP projection, and only XP's containing new information stay in vP. When the presupposed participial clause follows the non-presupposed DP, the lexical DP bears contrastive stress to mark its new information status. This is indicated by underlining in (14c) and (15c). In contrast, in (14a,b) and (15a,b), a presupposed DP must be fronted to a position to the left of the DP that contains new information. In a canonical non-focussed structure, the clause-final DP containing the new information bears highest intonational prominence.

These diagnostics show that neither the participle nor the participial clause functions syntactically as an ordinary DP. A comparison between the embedded past participle clause and a deverbal *-minen* nominal reveals four more ways in which participles differ from nominals: modification, word order, case assignment and passivization. In all cases, the *-minen* nominal displays fully noun-like behaviour, while the past participle exhibits verbal characteristics.

A *-minen* nominal can be derived from any Finnish verb by suffixing the verb stem with the morpheme *-minen*. When such a nominal is derived from a transitive verb, both a subject and an object can be expressed overtly, but both occur in a position to the left of the *-minen* form, and both are marked with genitive case. The *-minen* nominal never assigns any kind of object case. Moreover, unlike the embedded participle clauses which take adverbial modification, the *-minen* nominals are modified by adjectives. This dissimilarity can be observed by comparing the adjectival modification of the *-minen* nominal by *jatkuva*, 'continuous', in (16a) versus the adverbial modification of the participle by *jatkuvasti*, 'continuously', in (16b). Conversely, modification of the *-minen* nominal by an adverb or of the past participle clause by an adjective results in ungrammaticality.

- (16) a. Hänen **jatkuva** popkorni-n syö-**mise**-nsä suututta-a minua!  
 3SG.GEN continuous popcorn-GEN eat-DEVN-3POS anger-3SG I.PAR  
 'His continuous popcorn eating makes me angry!'
- b. Minä tiedä-n [hänen syö-**nee**-n **jatkuvasti** popkorni-a].  
 I.NOM know-1SG 3SG.GEN eat-NUT-ACC continuously popcorn-PAR  
 'I know (that) he ate popcorn continuously'

The deverbal *-minen* nominals occur in all positions where nouns may be found, as subjects (in (17a)), direct objects (17b-c), predicate nominals (17d), obliques (17e), etc. This contrasts with the strictly limited occurrence of the past participle, which only appears in the object position of certain matrix verbs (18c) or in the predicate nominal position (18d).

- (17) a. **Pallo-n heittä-minen** viihdyttä-ä laps-i-a.  
 ball-GEN throw-DEVN entertain-3SG child-PL-PAR  
 'Ball-throwing entertains children'
- b. Minä pidä-n **elokuv-ie-n katsele-mise-sta**.  
 I.NOM like-1SG movie-PL-GEN watch-DEVN-ELA  
 'I like watching movies'
- c. Lapse-t jätt-i-vät **keittiö-n siivoa-mise-n** äidi-lle.  
 child-PL.NOM leave-PAST-3PL kitchen-GEN clean-DEVN-ACC mother-ILL  
 'The children left the cleaning of the kitchen to the mother'
- d. Minun lempiharrastukse-ni on **kirjoitusvirhe-ide-n etsi-minen**.  
 I.GEN favorite.hobby-1SG.POS be.3SG typo-PL-GEN search-DEVN  
 'My favorite hobby is searching for typos'
- e. Ei minulla ole aika-a **runo-je-n luke-mise-lle!**  
 NEG.3SG I.ADE be time-PAR poem-PL-GEN read-DEVN-ILL  
 'I don't have time to read poems!'
- (18) a. \*[**Las-te-n heittä-nyt pallo-a**] suututt-i herra Grossi-n.  
 child-PL-GEN throw-NUT ball-PAR anger-PAST.3SG Mr. G-ACC  
 'Children (to have) thrown ball angered Mr. Gross' (??)
- b. \*Ei minulla ol-lut aika-a [**luke-nee(-ni)-lle runo-j-a**]!  
 NEG.3SG I.ADE be-NUT time-PAR read-NUT-1SG.POS-ILL poem-PL-PAR  
 'I didn't have time (to have) read poems!' (??)
- c. Minä sano-i-n [**katsel-lee-ni elokuva-n**].  
 I.NOM say-PAST-1SG watch-NUT-1SG.POS movie-ACC  
 'I said (that) I watched the movie'
- d. Minä o-len [**etsi-nyt kirjoitusvirhe-i-tä koko päivän**].  
 I.GEN be-1SG search-NUT typo-PL-PAR all day  
 'I've looked for typos all day'

The fact that the *-minen* nominal can co-occur with a case-marked DP that bears a thematic relation comparable to an object role suggests that the *-minen* form might be assigning the object case. However, while quirky object cases are found in this construction, as in (19e), the object can never be accusative or partitive. When non-lexically case marked objects appear in the construction, they always bear genitive case, as shown in (19a-d). The aspectually correlated object case-marking is absent in the nominal construction. This is most clearly evident with the pronominal object in (19d). The grammatical position of the *-minen* nominal in the clause has no effect on the case marking of its arguments. This behaviour contrasts with the normal verb-like case-assignment characteristics of the participle.

- (19) a. **Pallo-n** /\***Pallo-a** **heittä-minen** on kiellettyä elokuvateatteri-ssa.  
 ball-GEN/ ball-PAR throw-DEVN be.3SG forbidden-PAR movie.theatre-INE  
 'Ball-throwing is forbidden in a movie theatre'
- b. Minä pidä-n **elokuv-ie-n** /\***elokuv-i-a** **katsele-mise-sta**.  
 I.NOM like-1SG movie-PL-GEN / movie-PL-PAR watch-DEVN-ELA  
 'I like watching movies'
- c. Lapse-t jätt-i-vät **keittiö-n** /\***keittiö-tä** **siivoa-mise-n**  
 child-PL.NOM leave-PAST-3PL kitchen-GEN/ kitchen-PAR clean-DEVN-ACC  
 äidi-lle.  
 mother-ALL  
 'The children left the cleaning of the kitchen to the mother'
- d. **Hänen** /\***hänet** /\***häntä** näke-mise-nsä järkytt-i minua.  
 3SG.GEN / 3SG.ACC / 3SG.PAR see-DEVN-3POS upset-PAST.3SG I.PAR  
 'Seeing her upset me'
- e. Unohda **Anne-sta**/\***Anne-n**/\***Anne-a** **tykkää-minen**!  
 forget.IMP A-INE / A-ACC / A-PAR like-DEVN  
 'Forget (about) liking Anne!'

Finally, the *-minen* nominals do not have passive counterparts. The ungrammatical forms in (20) contrast with the grammatical passivized participial forms shown in (2).<sup>41</sup>

- (20) a. Vahtimestari-n pelkää(\*-tä)-minen on yleistä.  
 caretaker-GEN fear-PASS-DEVN be.3SG common  
 'The caretaker being feared is common'
- b. Selonteo-n saa(\*-ta)-minen ajoissa on epätodennäköis-tä.  
 report-GEN receive-PASS-DEVN on.time be.3SG unlikely-PAR  
 'The report being received on time is unlikely'
- c. Patsaa-n siirtä(\*-tä)-minen aiheutta-ne-e kohu-n.  
 statue-GEN move-PASS-DEVN cause-POT-3SG sensation-ACC  
 'The statue being moved will probably cause a sensation'

Thus, the true deverbal nominal differs from the participle constructions in that the nominal functions like any lexical noun, whereas the participle does not. (21-22) show that the *-minen* nominal can both check the strong [Topic] feature of the matrix clause, as well as take part in object DP transposition.

- (21) a. [Elokuv-ie-n katsele-mise-sta] pidä-n minä.  
 watch-DEVN-ELA movie-PL-GEN like-1SG I.NOM  
 'I like watching movies'
- b. [Johanna-n juokse-mise-sta] kerto-i minulle Lasse.  
 J-GEN run-DEVN-ELA tell-PAST.3SG I.ELA L.NOM  
 'Lasse told me about Johanna's running'
- c. [Keittiö-n siivoa-mise-n] jätti-vät lapse-t äidi-lle.  
 kitchen-GEN clean-DEVN-ACC leave-3PL child-PL.NOM mother-ILL  
 'The cleaning of the kitchen the children left to the mother'

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<sup>41</sup> In fact, the *-minen* form itself has been argued to be passive-like in that its default interpretation is that of an arbitrary agent (Hakulinen and Karlsson 1979:395), in parallel with the interpretation of the Finnish impersonal passive (Koskinen 1992a,b, 1993a).

- (22) a. Lasse kerto-i            **minulle [Johanna-n juokse-mise-sta].**  
 L.NOM tell-PAST.3SG I.ALL      J-GEN            run-DEVN-ELA  
 'Lasse told me about Johanna's running'
- b. Lasse kerto-i            **[Johanna-n juokse-mise-sta] minulle.**  
 L.NOM tell-PAST.3SG J-GEN            run-DEVN-ELA    I.ALL  
 'Lasse told me about Johanna's running in the races'
- c. Lapse-t            jätti-vät **[keittiö-n    siivoa-mise-n] äidi-lle.**  
 child-PL.NOM leave-3PL kitchen-GEN clean-DEVN-ACC mother-ILL  
 'The children left the cleaning of the kitchen to the mother'
- d. Lapse-t            jätti-vät **äidi-lle [keittiö-n    siivoa-mise-n].**  
 child-PL.NOM leave-3PL mother-ILL kitchen-GEN clean-DEVN-ACC  
 'The children left the cleaning of the kitchen to the mother'

I assume that the distinctions between the deverbal nominal and the embedded participle construction arise because the forms are derived in different levels of the grammar. I propose that the participial morphology is inflectional, and so takes part in syntactic computation, whereas the *-minen* nominal form is derived in the morphological component. Thus the *-minen* nominal enters numeration within the syntactic computation system as a noun (N), whereas the syntactic features of the participle form categorize it as a verb (V).

The fact that the participles have passive counterparts is not unexpected if the participial head is considered a verb. The contrast between the acceptability of the passive morpheme and the unavailability of all other finite verbal morphology, however, needs to be explained. Note that the position of the passive morpheme is always closest to the verb root. On a finite verb form, the passive morpheme occurs as the innermost of the verbal markings, before any other inflection such as tense, mood or person/number agreement. Although the passive past participle, as was already mentioned, is marked by a single portmanteau morpheme *-ttu*, in the present tense the passive *-tta* and present participle *-va* morphemes can be distinctly identified, and the passive morpheme is closer to the verb stem than the participial morpheme.

- |      |  |  |   |
|------|--|--|---|
| (23) | a. heite- <b>ttä</b> -isi-in<br>throw-PASS-COND-AGR <sup>42</sup><br>'would be thrown' | b. heite- <b>tty</b><br>throw-PASS.NUT<br>'thrown' | c. heite- <b>ttä</b> -vä<br>throw-PASS-VA<br>'to be thrown' |
|------|--|--|---|

Koskinen (1992a,b, 1993a) provides a detailed analysis of the impersonal passive construction in Finnish. It suffices to say here that, according to this account of the Finnish passivized structures, the passive morpheme *-tta* bears the features [Third person, Plural, Human] which must be checked against the [ $\phi$ ] features of a null *pro* subject during computation. As long as such a subject is included at numeration, nothing should rule out a passivized participial clause. Furthermore, I will show that the unacceptability of mood, tense and finite agreement marking on the participles is due to the syntactic features present at the level of the functional structure of the participial constructions. Since the formation of the impersonal passive is simply linked to feature checking between the subject and the passive marker, the derivation of impersonal passive participle constructions can succeed.

Through extensive evidence I have shown that neither the past participle form itself nor the participial clause behaves like a noun, regardless of their nominal object position and accusative case marking. I will now investigate the syntactic structure of the embedded participial clause, with the starting assumption that the participle itself enters syntactic computation with syntactic features that categorize it as a verb. The initial syntactic structure of the participial clause is vP, as shown in (11) above.

### 3.2.1.3. Previous analyses

Vainikka (1989) and Trosterud (1993) proposed that the syntactic properties of the embedded participle construction can be derived solely from the fact that it contains a VP.

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<sup>42</sup> The finite verb in affirmative impersonal passives contains, in addition to the passive marker *-tta*, a morpheme *-In*, whose function and meaning have roused much debate. Because it occurs in the slot where agreement inflection is found in finite active clauses, the suffix has often been labelled 'agreement'. Koskinen (1992a,b, 1993a) argues that the form consists of two morphemes, the default third person singular agreement marker, and genitive case *-n*. See Mitchell (1991, 1994b), Vainikka (1994), among others, for alternative views.

As assumed here also, the embedded verb is said to assign its theta roles and object case within a VP projection. According to Vainikka, the genitive subject case is a structural case assigned to the [Spec, VP] position. The VP projection, in turn, is embedded under a higher NP structure: the participial morpheme (with its accusative case marker) is base-generated in the head position of N, and, under a Government-Binding view of overt head-to-head movement, the verb moves up to N to pick up the inflectional participial suffix. Vainikka appears to be treating the participial suffix as a type of inflectional element in that she states that the NP level of structure is comparable to the IP of a finite clause.<sup>43</sup> The subject moves to [Spec, NP], parallel to the movement of nominative subjects in finite clauses<sup>44</sup>, even though the movement of the embedded subject is not motivated by case. In addition to accounting for the accusative case marking, the presence of the NP level is said to explain the appearance of possessive suffixation in null-subject participial clauses. (24b-c) show the D- and S-structures that Vainikka (1989:306) proposed for embedded participial clauses.

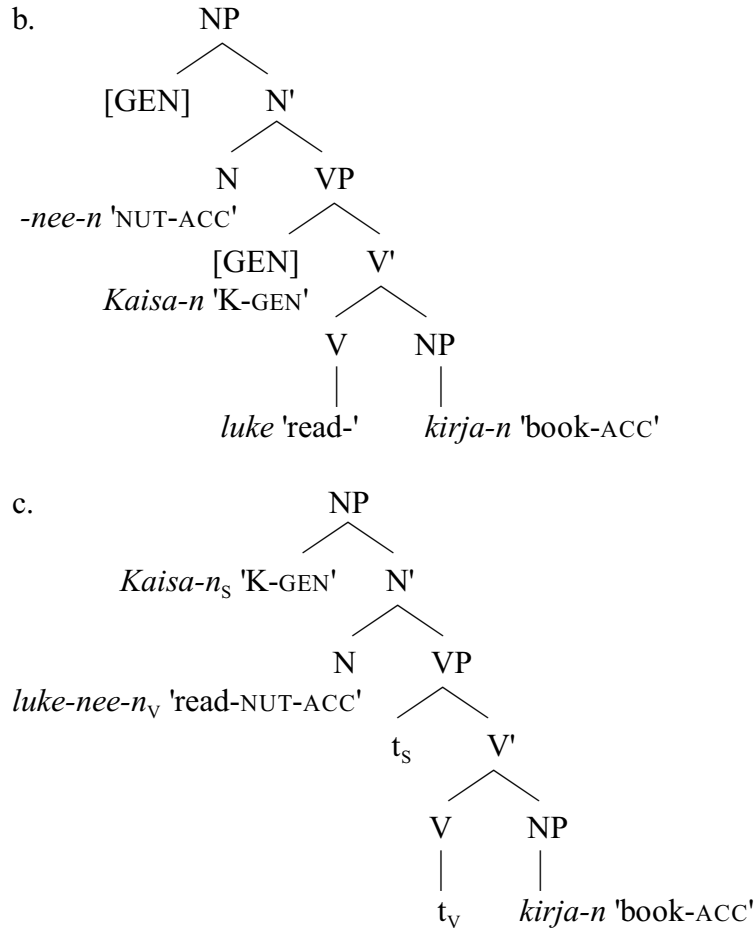
- (24) a. (Minä usko-n) [**Kaisa-n luke-nee-n kirja-n**].  
 I.NOM believe-1SG K-GEN read-NUT-ACC book-ACC  
 '(I believe) (that) Kaisa (has) read the book'

---

43 Hazout (1990, 1995) derives action nominalization in Modern Hebrew and Standard Arabic in the same way, assuming that in the nominalized forms there is a VP that is the complement of an abstract nominal head, a nominalizer, and the verb is adjoined to this nominalizing morpheme during derivation.

44 According to Vainikka (1989), nominative case suffixation in Finnish is achieved through coindexation of the subject in its base VP-specifier position with agreement features that are base-generated in [Spec, IP]. The subject may, but need not, raise to IP.





Such an analysis leaves unclear the reason for the presence of the participial morphology, and it does not provide a very clear account of the case marking of the participle. Moreover, the movement of the subject into [Spec, NP] is entirely unmotivated, potentially predicting the availability of wrong word orders. If the participle morpheme actually heads a N projection, these non-finite constructions would be the only instance in Finnish of a noun taking a VP complement. Vainikka provides no explanation for the impossibility of other N-VP constructions.

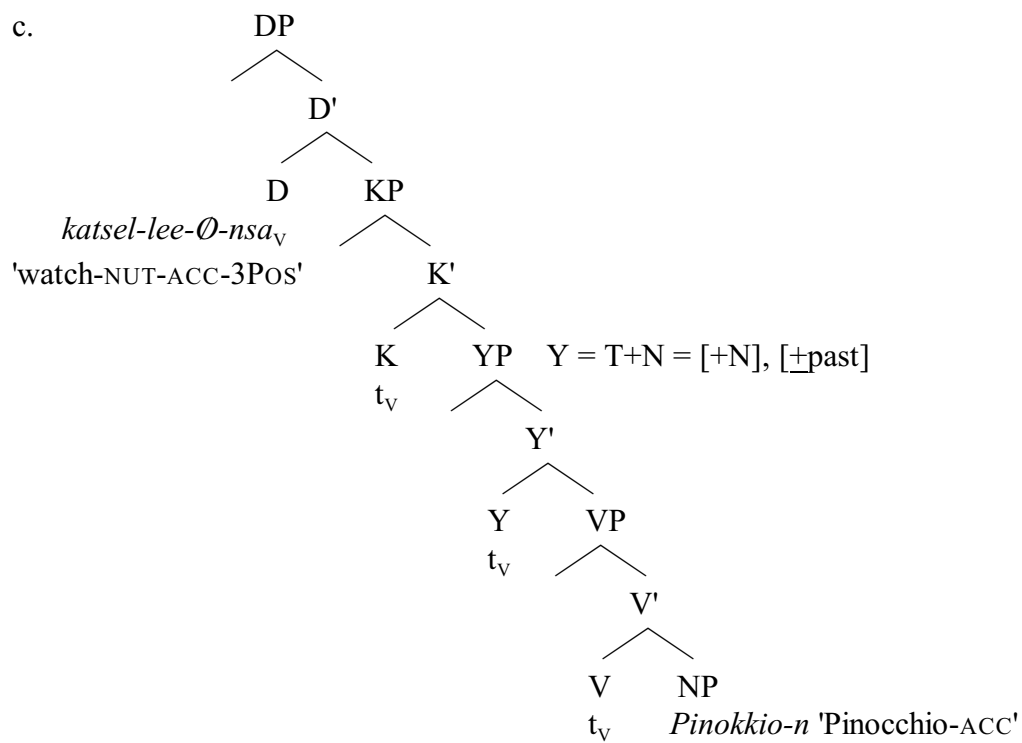
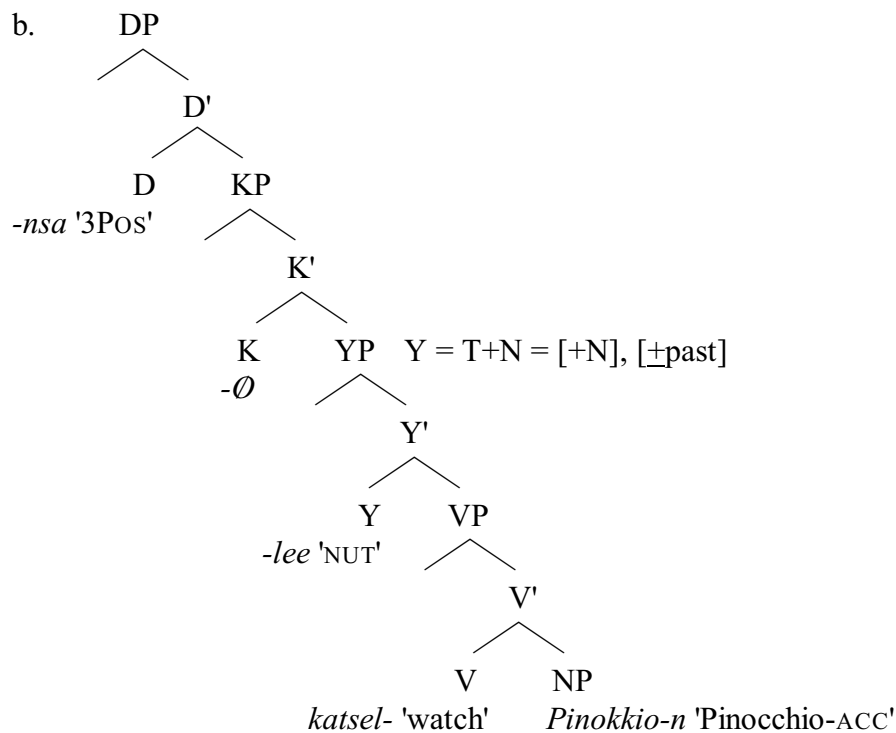
Although the structure in (24) is insufficient as an account of the embedded participial clauses, it is a good starting point for a more detailed analysis in that it identifies the participle as a verbal lexical projection embedded in some level of functional structure that has inherent nominal traits. This proposal will be investigated further in the following

sections. First, however, I examine Vainikka's more recent (1994) analysis of the structure of embedded participial clauses.

Vainikka (1994) establishes a structure for the embedded participle form based solely on the morphological structure of the participial verb, in a strong application of Baker's Mirror Principle. The consequent presence of several specifier positions is not addressed at all, and no discussion is provided of the motivation for head movement by the verb in the structure. In fairness, however, it should be noted that Vainikka's analysis assumes the Government-Binding view of actual head-to-head movement by the verb through a series of projections, with affixes attaching to the verb stem at each step, in contrast with the assumption adopted in this thesis that the participles are base-generated in fully inflected form and all movement is for feature checking purposes. This distinction might account for the lack of discussion on the motivation for movement in previous work. Under current assumptions about movement, however, it is imperative that the motivation for each syntactic operation be established.

According to Vainikka's more recent analysis, in the embedded past participle construction the verb moves from its base position to pick up the participial affix in a head of an exceptional functional category called Y (identified as a composite Tense-Noun projection), a case morpheme in K(ase), and possibly a possessive suffix in D(eterminer). Vainikka's D- and S-structures for the sentence in (25a) are shown in (25b-c). (25b) gives the position of the functional heads at D-structure; (25c) the S-structure site of the moved constituents. I have left all specifier positions empty in the representation, since Vainikka's discussion gives no indication of what the content of these positions might be, if any.

- (25) a. Hän sano-o katsel-lee-nsa Pinokkio-n  
       3SG.NOM say-3SG watch-NUT-3POS Pinocchio-ACC  
       'She says (that) she watched Pinocchio'



Vainikka calls the past participle position Y a merger of a Tense head and an N head, and assigns to it the features [+past], [+N]. As will be explained shortly in more detail, within the implicit assumptions underlying Vainikka's analysis, calling the participle morphemes Tense heads is not accurate. Although *-va* and *-nut* have temporal content, they lack other properties commonly associated with the Tense position in Finnish, such as the ability to assign nominative case. A thorough discussion of this issue is provided in section 3.2.1.6.

Although I agree with Vainikka's insight about the syntactic features of the participle, overall, her account outlined above is not very explanatory. As with much of the recent work on Finnish clause structure, functional projections are posited solely based on morphological evidence. No independent syntactic motivation is provided for any of the projections proposed. It is also noteworthy that in Vainikka's account it is not at all clear why any head moves to a given position. For instance, Vainikka claims that the past participle verb moves up to a D head position where it picks up the possessive suffix, but only when there is no overt subject. No justification is given for the restriction on this movement. At the same time, of the non-finite verb forms only the participles can ever move up to a D head. Vainikka's analysis is said to account for most of the non-finite constructions in Finnish with the single syntactic structure outlined in (25). Mysteriously, although the other infinitival constructions have otherwise identical syntactic representations, their verbal heads can never move to D.

This thesis provides an account not only of the similarities but also the differences among the non-finite structures that Vainikka also explored. In this chapter the syntactic characteristics of the participial morpheme, including the structure of the null subject embedded participle that bears a possessive suffix, are outlined and investigated, while the structure of the infinitive constructions is examined in detail in chapter 4. I show that, although Vainikka's structure is claimed to provide a unified account of a number of the non-finite constructions, her proposal fails to give a unified analysis of any single non-finite morpheme that may occur in various constructions (such as the past or present participles). At the same time, the generality of the analysis leads to vagueness cross-morphemically.

I believe that a morpheme-by-morpheme account allows for a more exact and explanatory analysis.

A final problem with Vainikka's analysis is that it does not take into account the other two uses of the past participle. Considering the fact that each of the participle forms has a single meaning, a single phonological shape and predominantly the same syntactic characteristics in all of its manifestations, it seems sensible to seek a unified account of these constructions. Thus, Vainikka's (1989) and (1994) accounts point the way to some of the morphological issues to be explored in this chapter, but they do not present a full explanation of the syntactic behaviour of the Finnish participle morphemes.

#### 3.2.1.4. Evidence for a functional projection above the participial vP

As was first implied in Vainikka (1989), there is evidence for at least one functional projection above vP in the embedded participle clauses. The following diagnostics support this view. First, and most obviously, the vP-adjoined temporal adverbs whose syntactic position was discussed in section 2.3.1 of chapter 2 show that the participle raises to some functional projection above vP. The fact that temporal adverbs like *usein*, 'often', *aina*, 'always' and *kokonaan*, 'entirely', in (26), can intervene between the participle and its object supports the idea that the participle moves out of vP.<sup>45</sup>

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45 Although the canonical word order in embedded participle clauses is participial verb-temporal adverb, the opposite order is also attested. In such sentences, illustrated in (i) below, the adverb obligatorily bears contrastive stress, which I assume to indicate that it occurs outside its normal base-position. Some temporal adverbs do not easily allow this word order variant, as revealed by the lower acceptability of (i.c) compared to (26d). As I also suggested for main clauses, discussed in section 2.3.3.1 of chapter 2, I claim that the adverb-verb order in the embedded participle clause is derived through the movement of the adverb from its merged vP-adjunct position to a higher adjunct position.

- (i) a. Minä epäilen [Howardi-n usein katsel-lee-n myöhäisleffo-j-a].  
 I.NOM suspect H-GEN often watch-NUT-ACC late.movie-PL-PAR  
 'I suspect that Howard often watched late movies'
- b. Minä tiedän [Heiki-n aina halun-nee-n käy-dä Turki-ssa].  
 I.NOM know H-GEN always want-NUT-ACC visit-TA Turkey-INE  
 'I know (that) Heikki has always wanted to visit Turkey'

- (26) a. Minä epäilen [Howardi-n katsel-lee-n **usein** myöhäisleffo-j-a].  
 I.NOM suspect H-GEN watch-NUT-ACC often late.movie-PL-PAR  
 'I suspect (that) Howard often watched late movies'
- b. Minä e-n usko [Heiki-n halun-nee-n **koskaan** käy-dä Turki-ssa].  
 I.NOM NEG-1SG believe H-GEN want-NUT-ACC ever visit-TA Turkey-INE  
 'I don't believe (that) Heikki ever wanted to visit Turkey'
- c. Minä luulen [Momo-n **laula-nee-n aina 'Tuiki, tuiki tähtös-tä'**].  
 I.NOM suspect M-GEN sing-NUT-ACC always twinkle twinkle star-PAR  
 'I suspect (that) Momo has always sung *Twinkle, Twinkle Little Star*'
- d. Minä pelkään [Greta-n **unohta-nee-n kokonaan tapaamise-mme**].  
 I.NOM fear G-GEN forget-NUT-ACC entirely meeting-1PL.POS  
 'I fear (that) Greta (has) entirely forgotten our meeting'

Second, following Ritter and Rosen (1993), I presume that the number of events in a two-verb construction can be used to test the level of syntactic structure that is present. Like Ritter and Rosen, I assume that the existence of two separate events in a sentence entails the existence of two separate Infl projections. Example (27) shows that adverbial modification of two separate events is possible in the embedded participle construction. For instance, in (27a), the temporal adverbials *joka aamu*, 'every morning', and *edellisiltana*, 'the night before', modify the events of telling and watching separately, suggesting the presence of two individual events in the sentence. The independent event status of the embedded clause implies that the clause must have its own inflectional structure within which the syntactic features relevant for eventive interpretation can be checked.

- (27) a. Emil väittää **joka aamu** [pelan-nee-nsa **edellisilta-na** tennis-tä].  
 Emil claims every morning play-NUT-3POS night.before-ESS tennis-PAR  
 'Emil claims every morning (that) he played tennis the night before'

- 
- c. Minä arvaan [Kaija-n (??**kokonaan**) unohta-nee-n tapaamise-mme].  
 I.NOM guess K-GEN completely forget-NUT-ACC meeting-1PL.POS  
 'I guess (that) Kaija forgot completely (about) our meeting'

- b. Hitay kertoi **eilen** [sammutta-nee-nsa **lauantai-na** tulipalo-n].  
 H.NOM told yesterday extinguish-NUT-3POS Saturday-ESS fire-ACC  
 'Hitay said yesterday (that) she put out the fire on Saturday'
- c. Niina muisti **puolimatka-ssa** [Päivi-n unohta-nee-n **lähti-e-ssä**  
 N.NOM remembered half.way-INE P-GEN forget-NUT-ACC leave-DE-INE  
 ostokse-t].  
 shopping-PL.ACC  
 'Niina remembered (when they were) half-way (there that) Päivi (had)  
 forgotten the shopping (when they were) leaving'

Similarly, negating the matrix clause event of, for example, telling in (28a), does not rule out the possibility that the embedded event took place, again indicating the presence of two distinct events, and, consequently, two distinct levels of functional structure. In (29a) the contradiction *mutta hän ei päässyt sinne koskaan*, 'but she never got there', refers to the event of the embedded clause rather than that of the matrix clause, which implies that the embedded event exists independently of the main clause event.

- (28) a. Emil **ei** **kertonut** minu-lle [**pelan-nee-nsa** eilen tennis-tä].  
 Emil NEG.3SG told I.ALL play-NUT-3POS yesterday tennis-PAR  
 'Emil didn't tell me (that) he played tennis yesterday (although he played)'
- b. Päivi **ei** **uskonut** [Sofia-n **hypän-nee-n** naru-a 10 kerta-a].  
 P.NOM NEG.3SG believed S-GEN jump-NUT rope-PAR 10 time-PAR  
 'Päivi didn't believe (that) Sofia jumped rope 10 times (although she did jump)'
- c. Muumipappa **ei** **muistanut** [**unohta-nee-nsa** hattu-nsa koti-in].  
 Moominpapa.NOM NEG.3SG remembered forget-NUT-3POS hat-3POS home-ILL  
 'Moominpapa didn't remember (that) he (had) forgotten his hat at home (although he had inadvertently left it there)'
- (29) a. Minä tiedä-n [Herta-n **lähte-nee-n** kauppa-an], mutta hän  
 I.NOM know-1SG H-GEN leave-NUT-ACC store-ILL but 3SG.NOM  
**ei** **pääs-syt sinne** koskaan.  
 NEG.3SG get-NUT there ever  
 'I know (that) Hertta left for the store, but she never got there'

- b. Minä kuul-i-n [sinun **men-nee-n** ui-ma-an], mutta **e-t**  
 I.NOM hear-PAST-1SG you.GEN go-NUT-ACC swim-MA-ILL but NEG-2SG  
**koskaan ilmesty-nyt** uimahalli-lle.  
 ever appear-NUT swimming.pool-ALL  
 'I heard (that) you'd gone swimming but you never appeared at the swimming pool'

The initial structure that I assign to the embedded participle clause construction, based on the diagnostics outlined above,<sup>46</sup> is given in (30).

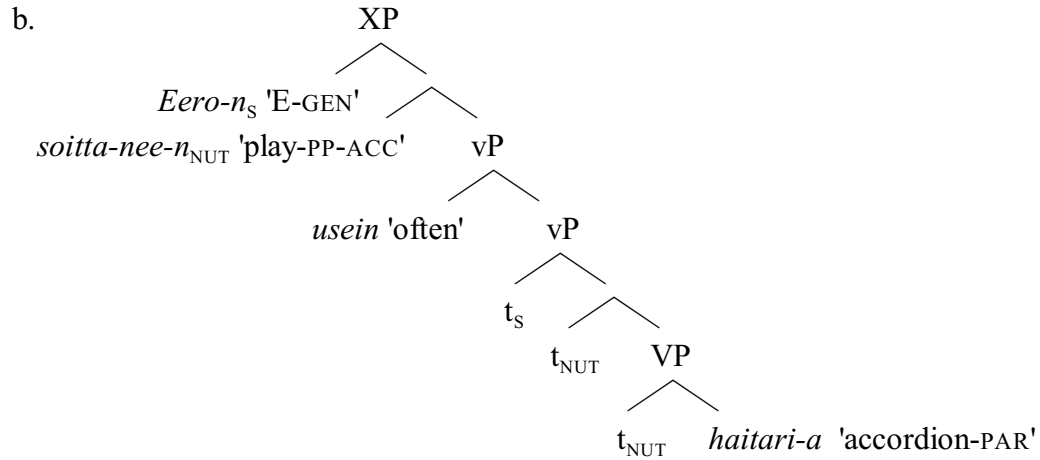
- (30) a. Minä muista-n [Eero-n **soitta-nee-n usein haitaria-a**].  
 I.NOM remember-1SG E-GEN play-NUT-ACC often accordion-PAR  
 'I remember (that) Eero often played accordion'

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46 A third argument for movement out of the embedded vP is based on Diesing's (1988) claim that subjects of individual level predicates are generated in an IP specifier position outside VP. Since individual level predicates such as *osata*, 'know', *muistuttaa*, 'resemble', and *olla*, 'be', occur as embedded participial predicates, this diagnostic also suggests the presence of an IP level of representation above the embedded vP. However, with the articulated Infl structure that has been adopted here, it is not self-evident what the base-position of such subjects would be. It is beyond the scope of this work to re-analyze Diesing's data within this expanded structure, and hence the force of this argument is left open to question.

- (i) a. Minä luul-i-n [**Emili-n osan-nee-n ranska-a**].  
 I.NOM think-PAST-1SG E-GEN know-NUT-ACC French-PAR  
 'I thought (that) Emil knew French'
- b. Minä muista-n [**Aku-serku-n muistutta-nee-n Otto-eno-a**].  
 I.NOM remember-1SG A-cousin-GEN resemble-NUT-ACC O-uncle-PAR  
 'I remember (that) Cousin Aku resembled Uncle Otto'
- c. Kati usko-o [**Petri-n ol-lee-n nuore-na komea ja hauska**].  
 K.NOM believe-3SG P-GEN be-NUT-ACC young-ESS handsome and funny  
 'Kati believes (that) Petri was handsome and funny when he was young'





### 3.2.1.4.1. The TP projection

Since the participle is the only constituent attracted from the embedded clause to the XP position, I assume that the strong attracting feature of X is a [V] feature. The projection bears other feature content, however. Vainikka (1995a) labelled the participial projection TP, since the one obviously recognizable functional property of all the participial forms is temporal reference. It is true that the participial morpheme must bear the feature [t(emporal reference)] since there are distinct past and present participles in the language whose presence in a given structure determines the temporal interpretation of that structure.<sup>47</sup> Thus the participle bears the syntactic feature that is also checked in the lowest functional head in the main clause, [temporal reference], and consequently I propose that the lowest abstract functional head in the embedded clause also bears a [Temporal Reference] feature. I suggested in chapter 2 that the checking of this feature is obligatory in order for a clause to be interpreted as propositional.

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<sup>47</sup> I assume that the overt manifestation of this feature is [Past], with a default interpretation [Nonpast] when no overt feature is indicated. However, an in depth examination of the temporal semantics of Finnish is beyond the scope of this work, and I leave this question open for later research. For the purposes of this thesis, I will utilize the designation [Temporal reference] to refer to temporal feature content.

It is important to notice that the proposed [Temporal Reference] projection of embedded non-finite clauses is distinct from the Tense projection (TP) that has been posited for Finnish main clauses in many recent works (e.g. Holmberg et al. 1993, Kenesei 1991, Koskinen 1993, Mitchell 1991, 1994, Vainikka 1994), although not in chapter 2 of this thesis. There are several characteristics that have commonly been associated with the head of this TP that are never present in the embedded participle construction. The Tense head, in both Finnish and other languages, has customarily been identified with nominative case assignment as well as finite tense and mood marking, neither of which appears in the embedded form. In chapter 2 it was shown, however, that nominative case marking in finite clauses is dependent on the [ $\phi$ ] features rather than tense marking of the finite element. This conclusion is now further supported by data from embedded non-finite clauses, where no finite [ $\phi$ ] features or nominative case is ever present, yet tense is distinctly indicated.

The evidence provided by the Finnish main clauses and embedded participial clauses is in line with conclusions of recent investigations, particularly on Irish clause structure, that have proposed a separation of nominative case assignment from the category Tense, and its affinity with the category Agreement (cf. e.g. Carnie 1997, Harley and Carnie 1997, Legate 1996). Hence I conclude that in Finnish the syntactic feature [T] (for [Temporal Reference]) is not linked to case assignment, nominative or otherwise.

### **3.2.1.5. The embedded functional complex compared to main clause structure**

I have identified one functional position above the base vP of the participial proposition, and now turn to the question of what other syntactic features are present in the structure. First I note that most of the functional projections in the main clause structure are absent from the embedded non-finite clause. As already stated above, complementizers never occur in this construction. CP, which was characterized in chapter 2 as the feature [Sentence Type], must therefore be missing from the representation of non-finite embedded clauses.

- (31) a. Minä tiedä-n [(**\*että**) las-te-n kaiverta-nee-n nuol-i-a].  
 I.NOM know-1SG that child-PL-GEN carve-NUT-ACC arrow-PL-PAR  
 'I know (that) the children (have) carved arrows'
- b. Minä nä-i-n [(**\*että/kun**) Sofia-n kaata-nee-n mehu-n].  
 I.NOM see-PAST-1SG that/when S-GEN spill-NUT-ACC juice-ACC  
 'I saw (that/when) Sofia spilled the juice'
- c. Minä toivo-n [(**\*että/koska**) hänen luvan-nee-n tul-la].  
 I.NOM hope-1SG that /because 3SG.GEN promise-NUT-ACC come-TA  
 'I hope (that/because) she promised to come'

Furthermore, negation is impossible in an embedded participle clause, indicating that the NegP projection is absent in these forms.<sup>48</sup>

- (32) a. Minä tiedä-n [las-te-n (**\*ei**) kaata-nee-n mehu-a].  
 I.NOM know-1SG child-PL-GEN NEG.3SG spill-NUT-ACC juice-PAR  
 'I know (that) the children didn't spill the juice'
- b. Minä nä-i-n [Kari-n (**\*ei**) heittä-nee-n pallo-a].  
 I.NOM see-PAST-1SG K-GEN NEG.3SG throw-NUT-ACC ball-PAR  
 'I saw (that) Kari didn't throw the ball'
- c. Minä epäile-n [(**\*e-n**) anta-nee-ni kirja-n pois].  
 I.NOM suspect-1SG NEG-1SG give-NUT-1SG.POS book-ACC away  
 'I suspect (that) I didn't give/gave the book away'

---

48 Historically the structure of the embedded participle construction was different in that literary sources up to the nineteenth century show the negator occurring freely in the embedded clause. The following examples illustrate the construction. More discussion of this historical pattern can be found in Koskinen (1991).

- (i) ne Sadduceuse-t iotca sano-vat, **Ei** ole-ua-n Ylesnousemis-ta  
 those Sadduces-PL.NOM who.PL.NOM say-3PL NEG.3SG be-NUT-ACC resurrection-PAR  
 'Those Sadduces who say there is no resurrection' (Mikael Agricola 1542)
- (ii) luetta-isi-mme Viipuri-n Seura-n ansiokse-nsa **ei** ruven-nee-n ...  
 read-COND-1PL V-GEN association-GEN achievement-3POS NEG.3SG start-NUT-ACC  
 'we would read as the Viipuri Association's achievement (its) not having started'  
 (Kaarle Aksel Gottlund 1846)

The presence of a strong [Topic] feature on either TP or some other functional projection dominating vP is suggested by the fact that a nominal element always precedes the participle. This trait is identical to the strong [Topic] feature proposed for the matrix Topic/Agr projection in chapter 2. As in finite clauses, any DP, regardless of grammatical function and theta- or case marking, can raise to check these features. This is illustrated in (33). As in main clauses, the embedded [Topic] feature cannot be checked by a manner adverb (34a-b), an infinitival (34c) or an adjective (34d).

- (33) a. Minä luulin [**Tuija-n** osta-nee-n aina tiistai-na kukk-i-a].  
 I.NOM thought T-GEN buy-NUT-ACC always Tuesday-ESS flower-PL-PAR  
 'I thought (that) Tuija always bought flowers on Tuesday'
- b. Minä luulin [**kukk-i-a** osta-nee-n aina tiistai-na Tuija-n].  
 I.NOM thought flower-PL-PAR buy-NUT-ACC always Tuesday-ESS T-GEN  
 'I thought (that) it was Tuija who always bought flowers on Tuesday'
- c. Minä luulin [**tiistai-na** osta-nee-n aina Tuija-n kukk-i-a].  
 I.NOM thought Tuesday-ESS buy-NUT-ACC always T-GEN flower-PL-PAR  
 'I thought (that) it was flowers that Tuija always bought on Tuesday'
- d. Minä pelkäsin [**siitä** tul-lee-n kokonaan käyttökeltoton-ta].  
 I.NOM feared 3SG.ELA come-NUT-ACC entirely unusable-PAR  
 'I feared (that) it had become entirely unusable'
- (34) a. Minä luulen [**täällä** / \***rankasti** sata-nee-n].  
 I.NOM think here.ADE / heavily rain-NUT-ACC  
 'I think (that) it (has) rained here/\*heavily'
- b. \*Minä uskon [**iloisesti** osta-nee-n kukk-i-a Tuija-n].  
 I.NOM believe happily buy-NUT-ACC flower-PL-PAR T-GEN  
 'I believe that Tuija happily bought flowers'
- c. \*Minä ajattele-n [**ui-da** ol-lee-n kiva-a].  
 I.NOM think-1SG swim-TA be-NUT-ACC fun-PAR  
 'I think (that) to swim was fun'
- d. \*Minä luul-i-n [**vihainen** ol-lee-n Jussi-n].  
 I.NOM think-PAST-1SG angry be-NUT-ACC J-GEN  
 'I thought (that) it was Jussi who was angry'

The full syntactic feature matrix of the embedded TopicP differs from that of the main clause Topic/AgrP, however, in that the verbal [ $\phi$ ] and related subject [case] features associated with the latter structure are not present in the embedded clause. This is evident from the lack of finite subject-verb agreement and the impossibility of nominative subjects in the participial clause.

Based on the interpretation of adverbials, it is clear that the raised nominal remains within the Topic position in the embedded functional structure and does not move to an object position within the matrix clause. (35-36) show that any adverbial that intervenes between a pre-verbal embedded topic DP and the participial verb is obligatorily interpreted as modifying the embedded clause rather than the matrix verb. An adverb modifying the matrix event must occur to the left of the DP at the front of the embedded clause. Although the exact position to which these sentential adverbials adjoin in the functional structure is somewhat unclear (cf. e.g. Holmberg (1989) and Holmberg et al. (1993) for discussions of the difficulties of determining this position), I assume that their position must be high enough to have scope over the entire proposition which they are meant to modify. Since adverbials that occur to the right of the embedded subject cannot be interpreted as having scope over the matrix proposition, I presume that the position of these adverbs must be no higher than the highest functional projection of the embedded clause, i.e. below the matrix VP. Note also, in (35c) and (36c), that in a simple clause a matrix object can be located to the left of an adverbial that modifies the main clause. Thus, the restriction on the location of the matrix clause adverb to the left of the embedded DP is not based on any requirement that the adverb be adjacent to the modified verb.

- (35) a. Minä uskoin **hölmöyde-ssä-ni** [Liisa-n kaivan-nee-n Lauri-a].  
 I.NOM believed foolishness-INE-1SG.POS L-GEN miss-NUT-ACC L-PAR  
 'I believed, in my foolishness, (that) Liisa (had) missed Lauri'
- b. Minä uskoin [Liisa-n **hölmöyde-ssä-än** /\*-ni kaivan-nee-n Lauri-a].  
 I.NOM believed L-GEN foolishness-INE-3POS/1SG.POS miss-NUT-ACC L-PAR  
 'I believed (that) Liisa, in her/\*my foolishness, (had) missed Lauri'

- c. Minä uskon Matti-in **hölmöyde-ssä-ni** aina kyllä.  
 I.NOM believe M-ILL foolishness-INE-1SG.POS always certainly  
 'In my foolishness, I certainly always believe in Matti'
- (36) a Minä pelkään **ehkä /varmasti/typerästi** [Kalle-n ol-lee-n sairaa-na].  
 I.NOM fear maybe/certainly /stupidly K.GEN be-NUT-ACC sick-ESS  
 'I maybe/certainly/stupidly fear (that) Kalle (has) been sick'  
 vs. \*I fear (that) Kalle (has) maybe/certainly/stupidly been sick'
- b. Minä pelkään [Kalle-n **ehkä /varmasti/typerästi** ol-lee-n sairaa-na].  
 I.NOM fear K.GEN maybe/certainly /stupidly be-NUT-ACC sick-ESS  
 'I fear (that) Kalle (has) maybe/certainly/stupidly been sick'  
 vs. \*I maybe/certainly/stupidly fear (that) Kalle (has) been sick'
- c. Minä pelkäsin Kalle-a **ehkä /varmasti/typerästi** joskus kauan sitten.  
 I.NOM feared K-PAR maybe/certainly /stupidly once long ago  
 'I maybe/certainly/stupidly feared Kalle once long ago'

Finally, short wh-question, yes/no-question and focus movement are unacceptable in non-finite embedded clauses. This implies that FocusP is not present in this environment. Wh-question words, yes/no questions and focussed elements move out of the embedded clause into the main clause Focus position. This lack of Focus projection distinguishes non-finite clauses from finite embedded clauses, where question fronting can take place within the embedded clause, as discussed in section 2.3.2.2 of chapter 2.

- (37) a. Jaana unohti [että **mitä**<sub>o</sub> sinä halus-i-t **t**<sub>o</sub> lahja-ksi].  
 J.NOM forgot that what.PAR you.NOM want-PAST-2SG present-TRAN  
 'Jaana forgot what you wanted for a present'
- b. \*Jaana unohti [**mitä**<sub>o</sub> sinun halun-nee-n **t**<sub>o</sub> lahja-ksi].  
 J.NOM forgot what.PAR you.GEN want-NUT-ACC present-TRAN  
 'Jaana forgot what you wanted for a present'
- c. **Mitä**<sub>o</sub> Jaana unohti [sinun halun-nee-n **t**<sub>o</sub> lahja-ksi].  
 what.PAR J.NOM forgot you.GEN want-NUT-ACC present-TRAN  
 'What did Jaana forget (that) you wanted for a present?'

- (38) a. Eerik mietti [että kukk-i-a-ko<sub>o</sub> Tuija ost-i **t<sub>o</sub>** Eija-lle].  
 E.NOM wondered that flower-PL-PAR-Q T-NOM buy-PAST.3SG E-ALL  
 'Eerik wondered whether it was flowers that Tuija bought for Eija'
- b. \*Eerik mietti [kukk-i-a-ko<sub>o</sub> Tuija-n osta-nee-n **t<sub>o</sub>** Eija-lle].  
 E.NOM wondered flower-PL-PAR-Q T-GEN buy-NUT-ACC E-ALL  
 'Eerik wondered whether it was flowers that Tuija bought for Eija'
- c. Kukk-i-a-ko<sub>o</sub> Eerik mietti [Tuija-n osta-nee-n **t<sub>o</sub>** Eija-lle].  
 flower-PL-PAR-Q E.NOM wondered T-GEN buy-NUT-ACC E-ALL  
 'Was it flowers (that) Eerik wondered whether Tuija (had) bought Eija'
- (39) a. Liisa sanoi [että kukk-i-a<sub>o</sub> Kari ost-i **t<sub>o</sub>** Taina-lle].  
 L.NOM said that flower-PL-PAR K.NOM buy-PAST.3SG T-ALL  
 'Liisa said (that) it was flowers that Kari bought for Taina'
- b. \*Liisa sanoi [kukk-i-a<sub>o</sub> Kari-n osta-nee-n **t<sub>o</sub>** Taina-lle].  
 L.NOM said flower-PL-PAR K-GEN buy-NUT-ACC T-ALL  
 'Liisa said (that) it was flowers that Kari (had) bought for Taina'
- c. Kukk-i-a<sub>o</sub> Liisa sanoi [Kari-n osta-nee-n **t<sub>o</sub>** Taina-lle].  
 flower-PL-PAR L.NOM said K-GEN buy-NUT-ACC T-ALL  
 'Liisa said (that) it was flowers that Kari (had) bought for Taina'

Summarizing the findings of this subsection, I have observed that there is at least one functional position, TP, above the embedded vP projection in a non-finite embedded clause. Of the functional projections found in main clauses, in addition to [Temporal Reference], only the [Topic] feature of the nominal Topic/Agr position appears to be present in the embedded participle clause. At the same time, it was noted that the syntactic feature content of TopicP is slightly different in the embedded clause than in the finite clause, in that no [Phi] or [Case] features are found in the embedded non-finite environment. The next section focuses on determining other syntactic features of the embedded participial clause, starting from the assumption that the functional complex above the embedded vP projection contains at least the features [Temporal Reference] and [Topic].

### 3.2.1.6. The functional features of the embedded participle clause

The embedded participial clause occurs as the complement of matrix verbs that normally take lexical DP complements and full finite CP clause complements, but never take any other kind of extended verbal complements (FocusP, TopicP, vP or VP). This forces me to conclude that the abstract functional TP head also bears some nominal feature, such as the [N] feature of Vainikka (1994), which allows the participial projection to be embedded under a DP. Nevertheless, it was shown in section 2.1.2 that the participial clause does not behave syntactically in the same way as lexical DPs do. A second syntactic category whose members carry nominal morphology such as case, number and possessive suffixation but cannot raise to check the [Topic] feature is the adjective class. The example sentences (33a,b) from the previous chapter are repeated here as (40a,c) to illustrate the restriction on movement of adjectives to Topic/AgrP in main clauses. (40b,d) have been added to show that analogous embedded participle clauses are subject to the same constraint.

- (40) a. \***Vihainen** on Jussi.<sup>49</sup>  
           angry be.3SG J.NOM  
           'Jussi is angry'
- b. \***[Jussi-n ol-lee-n vihainen]** usko-n minä.  
           J.GEN be-NUT-ACC angry believe-1SG I.NOM  
           'I believe (that) Jussi was angry'

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49 An analogous matrix clause with the main clause participle is also ungrammatical. This construction will be discussed in section 3.2.2.

- (i) \***Lähte-nyt** on Jari.  
       leave-NUT be.3SG J.NOM  
       'Jari has left'
- (ii) \***[Maalan-nut talo-nsa keltaise-ksi]** on Jaakko.  
       paint-NUT house-3POS yellow-TRAN be.3SG J.NOM  
       'Jaakko has painted his house yellow'



- c. \***Keltaise-ksi** maala-a talo-nsa Kari.  
 yellow-TRANS paint-3SG house-3POS K.NOM  
 'Kari painted his house yellow'
- d. \***[Kari-n maalan-nee-n talo-nsa keltaise-ksi]** väittä-ä Tiina.  
 K-GEN paint-NUT-ACC house-3POS yellow-TRAN claim-3SG T.NOM  
 'Tiina claims (that) Kari painted his house yellow'

Although this sub-section deals specifically with the structure of the embedded past participle clause construction, one of the central goals of this entire section is to provide a unified analysis of all occurrences of the past participle morpheme. The proposal that the embedded past participle form is adjectival is supported by evidence from other uses of the past participle: as a prenominal modifier in (41); in resultative constructions, as in (42b), and as a preadjectival modifier in (42d); and as the main clause participle, which occurs in essentially the same position as a predicate adjective, illustrated in (43).

- (41) a. **iloinen** lapsi  
 happy child  
 'a happy child'
- b. **[pallo-n heittä-nyt]** lapsi  
 ball-ACC throw-NUT child  
 'the child (who) threw the ball'  
 (lit. 'the ball-thrown child')
- (42) a. Liisa maalas-i talo-nsa **keltaise-ksi**.  
 L.NOM paint-PAST.3SG house-3POS yellow-TRAN  
 'Liisa painted her house yellow'
- b. Liisa maalas-i talo-nsa **[silmä-ä häikäise-vä-ksi]**.  
 L.NOM paint-3SG.PAST house-3POS eye-PAR dazzle-VA-TRAN  
 'Liisa painted her house (so that it became) eye-dazzling'
- c. Liisa maalas-i talo-nsa **iloise-n** keltaise-ksi.  
 L.NOM paint-PAST.3SG house-3POS happy-GEN yellow-TRAN  
 'Liisa painted her house a happy yellow'
- d. Liisa maalas-i talo-nsa **[silmä-ä häikäise-vä-n]** keltaise-ksi.  
 L.NOM paint-3SG.PAST house-3POS eye-PAR dazzle-VA-GEN yellow-TRAN  
 'Liisa painted her house eye-dazzlingly yellow'

- (43) a. Emmi on **iloinen**.  
 E.NOM be.3SG happy  
 'Emmi is happy'
- b. Emmi on **juos-sut ulos**.  
 E.NOM be.3SG run-NUT out  
 'Emmi has run out'
- c. Lapse-t o-vat **iloise-t**.  
 child-PL.NOM be-3PL happy-PL.NOM  
 'The children are happy'
- d. Lapse-t o-vat **juos-see-t ulos**.  
 child-PL.NOM be-3PL run-NUT-PL.NOM out  
 'The children have run out'

An adjectival treatment is consistent with the traditional classification of participles as deverbal adjectives. I propose that the syntactic category of the abstract past participle morpheme is that of an adjective. Specifically, I claim that whereas the actual morphological participial form functions syntactically as a verb, merging as the head of a VP, within the functional complex where its syntactic features are checked there is a functional head with the features [N, V] that gives the adjectival characteristics of the participial clause. This proposal extends to a larger claim that derivations changing syntactic category can take place not only through morphological derivation, but also within the syntactic component. The checking of all relevant functional features in the participial clause will be discussed in section 3.2.1.6.2.

### 3.2.1.6.1. The adjectival nature of the embedded participle

Before proceeding further with the examination of functional features, let us take one last look at the syntactic status of the participial verb. I have already shown that the participial head behaves like a verb, and must therefore bear a syntactic [V] feature. This feature is attracted to the head of vP to check a strong [V] feature, and further to the head of TP to check [V] and [Temporal Reference] features. The morphologically nominal traits

of the participial morpheme, bearing object case and theta-role, as well as possessive suffixation, might be taken to suggest that the participle itself should be specified for some nominal feature. It was shown in section 3.2.1.2.1 that the participle's behaviour is different from that of lexical nouns. Now that I have proposed that the nominal morphology might result from adjectival rather than nominal properties, I must consider the possibility that the lexical participle might be categorized as a pure adjective. I will show, however, that syntactically the participle does not behave like a true adjective, and that, regardless of its inflection, it must be identified as a verb.

The most distinctly verb-like characteristic of the participial element is its ability to assign a full range of object cases, as well as theta roles, and the identity of its selectional restrictions with those of finite verbs, as has been stated previously. These behaviours do not immediately rule out an analysis of the participial form as an adjective, since many adjective-verb pairs in Finnish show identical selectional and theta assignment properties. Furthermore, transitive adjectives that assign quirky lexical case can be found in the language. The examples in (44-45) show sets of sentences in which a finite verb, a past participial form corresponding to the finite verb, and a morphologically related adjective all behave identically with regard to their complement-taking properties.

- (44) a. Tuo äiti **ylpeile-e** aina tyttäre-**stä-än**.  
 that.NOM mother.NOM pride-3SG always daughter-ELA-3POS  
 'That mother always prides (herself) on her daughter'
- b. Minä tiedän [tuo-n äidi-n **ylpeil-lee-n** aina tyttäre-**stä-än**].  
 I.NOM know that-GEN mother-GEN pride-NUT-ACC always daughter-ELA-3POS  
 'I know (that) that mother (has) always prided (herself) on her daughter'
- c. Tuo äiti on aina **ylpeä** tyttäre-**stä-än**.  
 that.NOM mother.NOM be.3SG always proud daughter-ELA-3POS  
 'That mother is always proud of her daughter'
- (45) a. He **syylisty-i-vät** varkaute-**en**.  
 3PL.NOM be.guilty.of-PAST-3PL theft-ILL  
 'They were guilty of (=took part in) a theft'

- b. Minä epäilen [heidän **syllisty-nee-n** varkaute-**en**].  
 I.NOM suspect 3PL.GEN be.guilty.of-NUT-ACC theft-**ILL**  
 'I suspect (that) they were guilty of (=took part in) a theft'
- c. He ol-i-vat **syllis-i-ä** varkaute-**en**.  
 3PL.NOM be-PAST-3PL guilty-PL-PAR theft-**ILL**  
 'They were guilty of the theft'

Not all transitive adjectives have verbal counterparts, and some of the related verbs must be morphologically derived from the adjectival base. In any case, even unquestionably non-deverbal adjectives may assign lexical object case.

- (46) a. Antero on perso /nirso /allerginen työ-**lle**.  
 A.NOM be.3SG eager /choosey /allergic work-**ALL**  
 'Antero is eager to/ choosey about/ allergic to work'
- b. Rebekka on varma asia-**sta-an**.  
 R.NOM be.3SG sure point-**ELA-3Pos**  
 'Rebecca is sure of her point'
- c. Sinikka on kuuluisa voim-i-**sta-an**.  
 S.NOM be.3SG famous strength-PL-**ELA-3Pos**  
 'Sinikka is famous for her strength'

The object-case marking capacity of participles and that of regular adjectives is not parallel, however. Whereas the participles assign both quirky lexical case and regular accusative or partitive object case, adjectives assign only clearly theta-related lexical quirky case (cf. Nikanne 1989, 1993 for a discussion of Finnish semantic cases). Crucially, no Finnish adjective, deverbal or otherwise, can ever assign accusative or partitive case.

- (47) a. Minä olen kiitollinen **sinulle** /\***sinua** /\***sinun** avu-sta.  
 I.NOM be-1SG grateful you.ALL/ you.PAR / you.ACC help-INE  
 'I am grateful to you for (your) help'
- b. Minä kiitä-n **sinua** /\***sinulle** /\***sinun** avu-sta.  
 I.NOM thank-1SG you.PAR/ you.ALL / you.ACC help-INE  
 'I thank you for (your) help'

- c. Minä luulin [hänen kiittä-nee-n **sinua** /\***sinulle** /\***sinun** avu-sta].  
 I.NOM thought 3SG.GEN thank-NUT-ACC you.PAR / you.ALL / you.ACC help-INE  
 'I thought (that) he thanked you for (your) help'
- (48) a. Into on perso /nirso /allerginen työ-**lle** /\*työ-**n** /\*työ-**tä**.  
 I.NOM be.3SG eager/choosey/allergic work-ALL/ work-ACC/ work-PAR  
 'Into is eager to/ choosey about/ allergic to work'
- b. Rauha on varma asia-**sta** /\*asia-**n** /\*asia-**a**.  
 R.NOM be.3SG sure matter-ELA/ matter-ACC/ matter-PAR  
 'Rauha is sure of the matter'
- c. Sinikka on kuuluisa voim-i-**sta**-an /\*voima-**nsa**  
 S.NOM be.3SG famous strength-PL-ELA-3Pos/ strength-PL.ACC.3Pos  
 /\*voim-i-**a**-nsa.  
 / strength-PL-PAR-3Pos  
 'Sinikka is famous for her strength'

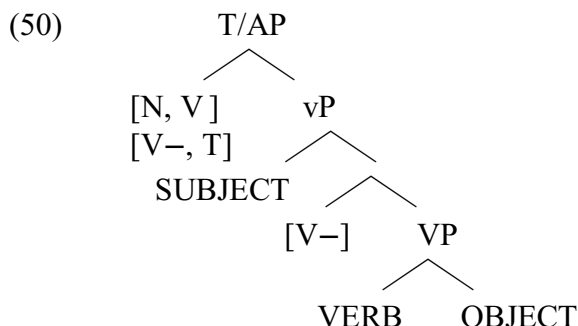
Table 3.2 summarizes the adjectival properties of the embedded past participle.

**TABLE 3.2. More syntactic properties of the embedded past participle**

<i>Adjectival behaviour</i>	<i>Non-adjectival behaviour</i>
<ul style="list-style-type: none"> <li>Occurs in some adjective positions</li> <li>Bears adjectival morphology (case, nominal number, possessive suffix)</li> <li>May assign quirky case</li> </ul>	<ul style="list-style-type: none"> <li>Assigns full range of object cases</li> </ul>

I conclude that although the participial clause as a whole occurs in adjectival positions, the participial head itself does not behave like an adjective. Again, the adjectival properties of the participial construction derive from the syntactic feature combination of the abstract functional complex that dominates the embedded vP. The verbal head of the embedded vP, however, bears only verbal syntactic features. On the other hand, since it is the participial verb on which the morphological realization of the adjectival features (nominal number agreement, case, possessive suffixation) is marked, I claim that the





### 3.2.1.6.2. The functional participial complex above T/AP

As in the main clauses, in embedded participial clauses a topic DP raises into the preverbal position. Also as in matrix clauses, the raised DP need not be the subject of the embedded clause. A clause-initial participial verb is not acceptable.<sup>50</sup>

- (51) a. Minä epäilen [**kukk-i-a** tuhon-nee-n jatkuvasti orava-n].  
 I.NOM suspect flower-PL-PAR destroy-NUT-ACC continually squirrel-GEN  
 'I suspect (that) a squirrel continually destroyed the flowers'
- b. Minä luulin [**Sofia-lle** lähettä-nee-n kortte-j-a aina mummu-n].  
 I.NOM thought S-ALL send-NUT-ACC postcard-PL-PAR always granny-GEN  
 'I thought (that) Granny (had) always sent Sofia postcards'
- c. \*Minä oletin [lähte-nee-n mukaan Inkeri-n].  
 I.NOM assumed leave-NUT-ACC along I-GEN  
 'I assumed (that) Inkeri (would have) gone along'

We now need to establish the position of these raised DPs. A logical initial proposal would be to locate the topicalized element in the specifier position of T/AP, yet further data suggest that this is incorrect. Rather, I will show that the topic position in embedded non-finite clauses must be the specifier of a higher functional projection. Another nominal or other nominals can appear in a position between the highest, non-focussed nominal and the

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<sup>50</sup> Except in the null-subject construction. This structure will be discussed in section 3.2.1.7.

participial verb. These nominals may receive both intonational prominence and a somewhat focussed interpretation, as illustrated in (52), though it is also possible to place the primary stress and focus on the highest DP, as shown in (53). When several DP's intervene between the highest DP and the participle, only one or two might be focussed. Furthermore, it is worth noting that the multiple intermediate DP's in (52d) and (53d) may be freely reordered.

- (52) a. Epäilet-kö sinä [Howardi-n myöhäisleffo-j-a katsel-lee-n koko yön]?  
 suspect-Q you.NOM H-GEN late.movie-PL-PAR watch-NUT-ACC all night  
 'Do you suspect that Howard watched late movies all night?'

- b. Minä en usko [Heiki-n Turki-ssa halun-nee-n käy-dä] vaan...  
 I.NOM NEG.1SG believe H-GEN Turkey-INE want-NUT-ACC visit-TA but  
 'I don't think (that) Heikki wanted to visit Turkey but (Albania)'

- c. Minä en usko [Turki-ssa Heiki-n halun-nee-n käy-dä] vaan...  
 I.NOM NEG.1SG believe Turkey-INE H-GEN want-NUT-ACC visit-TA but  
 'I don't think (that) Heikki wanted to visit Turkey but (Liisa did)'

- d. Minä kuulin [Lea-lle kukk-i-a puutarha-sta aamu-lla  
 I.NOM heard L-ALL flower-PL-PAR garden-INE morning-ADE  
 kerän-nee-n aina Juka-n].  
 gather-NUT-ACC always J-GEN  
 'I heard (that) Jukka always gathered flowers from the garden in the morning for Lea'

- e. Minä luulin [Lea-lle kukk-i-a puutarha-sta aamu-lla  
 I.NOM thought L-ALL flower-PL-PAR garden-INE morning-ADE  
 kerän-nee-n aina Juka-n].  
 gather-NUT-ACC always J-GEN  
 'I heard (that) Jukka always gathered flowers from the garden in the morning for Lea'

- (53) a. Epäilet-kö sinä [Howardi-n myöhäisleffo-j-a katsel-lee-n koko yön]?  
 suspect-Q you.NOM H-GEN late.movie-PL-PAR watch-NUT-ACC all night  
 'Do you suspect that Howard watched late movies all night?'

- b. Minä en usko [Heiki-n Turki-ssa halun-nee-n käy-dä] vaan...  
 I.NOM NEG.1SG believe H-GEN Turkey-INE want-NUT-ACC visit-TA but  
 'I don't think (that) Heikki wanted to visit Turkey but (Liisa)'



c. Minä en usko [Turki-ssa Heiki-n halun-nee-n käy-dä] vaan...

I.NOM NEG.1SG believe Turkey-INE H-GEN want-NUT-ACC visit-TA but

'I don't think (that) Heikki wanted to visit Turkey but (Albania)'

d. Minä kuulin [Lea-lle kukk-i-a puutarha-sta aamu-lla

I.NOM heard L-ALL flower-PL-PAR garden-INE morning-ADE

kerän-nee-n aina Juka-n].

gather-NUT-ACC always J-GEN

'I heard (that) Jukka always gathered flowers from the garden in the morning for  
Lea'

These sentences show that at least two pre-participial nominal positions are required. Neither position is a unique subject position, nor a unique case position. The possibility of multiple DP's occurring in a series that attests maximal word order flexibility suggests that at least one position is an adjunct rather than a specifier. However, one of the DP positions must be a specifier position, since movement to this position is obligatory: participle-initial clauses are ungrammatical. This specifier position cannot be the lowest position, next to the participle, since a stressed, focussed DP may occur immediately to the left of the participle. Data from main clause structures in chapter 2 showed that a non-subject DP in the [Spec,Topic/AgrP] position does not receive higher intonational prominence. If this conclusion is correct, then the sentences in (52) suggest that some adjoined DP's may intervene between the specifier position and the participle. For similar reasons, the data in (53) show that the highest DP here must be in an adjoined position. As was argued for main clauses, I propose that one of the moved DP's occurs in the specifier of a topic projection, and becomes the topic of the clause by checking the optional strong [Topic] feature of this projection. All other DP's adjoin either to the T/AP projection or to the TopicP. As in main clauses, I assume that every clause must bear a [Topic] feature.

I have already argued that the head of T/AP has the features [N, V]. I propose that the presence of these syntactic features, in particular [N], in the participial structure results in the assignment of case and a theta role to the participial clause. I submit (adapting

Longobardi 1994) that all N elements contain a feature [nominal reference]<sup>51</sup> which must be checked against a comparable functional feature that resides in some extended nominal functional projection, minimally NumberP, alternatively DP.<sup>52</sup> I assume that regular nouns bear feature sets that require checking at both levels of representation, but for adjectives the lower NumberP suffices. If, however, an adjective is selected for a case position, such as the matrix clause complement position that the embedded participial clause holds, the adjective may check its [nominal reference] at DP. I suggest that the presence of DP is relevant for case marking because the case of nominals is encoded in a [case] feature on the functional element D. In other words, following Ghomeshi (1996), I assume that only D elements bear a case feature, while [N] ones do not. Conversely, elements with a [V] feature (and AgrP) bear [(Assign) Case] features. The nominal morphology of the participial clause can be accounted for with these assumptions: the adjectival T/AP projection must check its [nominal reference] feature, and merges with either Number or D for this purpose. That projection, in turn, contains a set of syntactic features that enter into various checking relationships within the larger structure.

I propose that the functional head bearing the [Topic] feature is also the D head which checks the [nominal reference] feature of the participial T/AP. Thus, in effect, the embedded topic projection is a subtype of DP structure. The checking of the [nominal reference] feature must take place covertly, since the participle itself raises only as far as T/AP in overt syntax. As already shown, presupposed non-topic DP's may adjoin to a position between TopicP and the participle, which must therefore be located below Topic, in the T/A position. Evidence from the position of manner adverbs also suggests that overt movement of the participle to DP does not take place. Manner adverbs may intervene between the topic DP and the participial verb, as demonstrated in (54). If we assume, as

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51 This is comparable to the [temporal reference] feature of verbs.

52 The internal structure of noun phrases in Finnish is a relatively unexamined area. Reime (1992), Vainikka (1995b) and Douglas-Brown (1996) provide preliminary proposals of the nominal extended projections, but many aspects of the behaviour of relevant elements remain to be investigated and accounted for.

before, that adverbs adjoin to a full phrasal category, rather than to an X' level, then the manner adverb *mielellään*, 'gladly', must have adjoined to T/AP, with the participle remaining within that lower functional projection.

- (54) a. Minä usko-n [<sub>Topic/DP</sub>Sofia-n **mielellään** [<sub>T/AP</sub>leipo-nee-n eilen  
 I.NOM believe-1SG S-GEN gladly bake-NUT-ACC yesterday  
 riisimuroneliö-i-tä]].  
 rice.crispie.square-PL-PAR  
 'I believe (that) Sofia gladly baked rice crispie squares yesterday'
- b. Aino väittä-ä [<sub>Topic/DP</sub>Nyyti-n **tahallaan** [<sub>T/AP</sub>rikko-nee-n äsken paperinuke-n].  
 A.NOM claim-3SG N-GEN on.purpose break-NUT-ACC just paper.doll-ACC  
 'Aino claims (that) Nyytti just broke the paper doll on purpose'

The added DP character of the TopicP projection accounts for the overtly nominal properties of the participial clauses, namely the accusative case marking of the embedded participle itself, and the genitive case marking of the embedded subject. I argued above that all D projections bear a [case] feature. This case feature, then, when checked against the [(Assign) Object case] feature of the matrix verb, accounts for the accusative case marking of the participial. Although it is the participle that bears the case, it is worth noting that the case is, in effect, assigned phrasally, since it is the adjectival features of the functional T/AP projection that result in the presence of this marker.

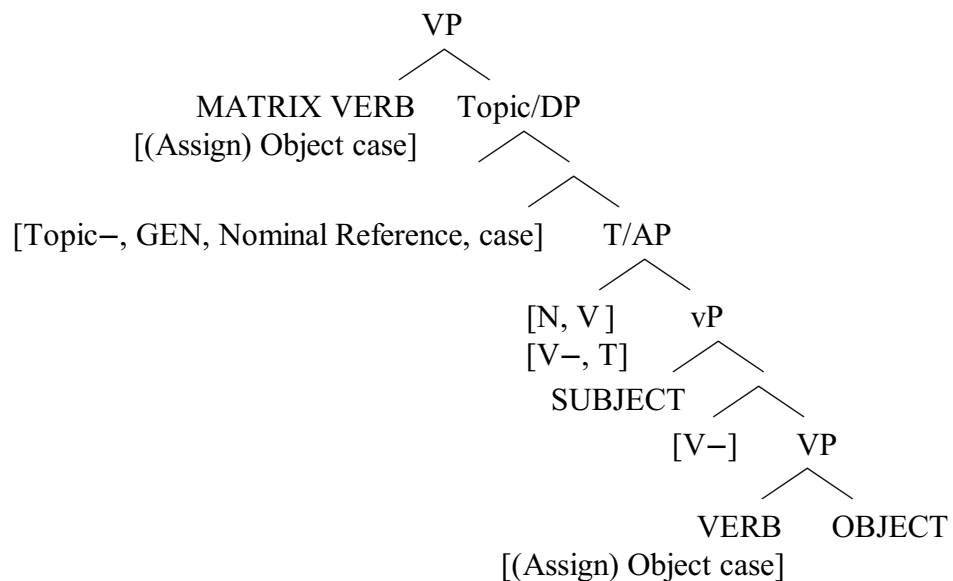
The existence of the specifier position of Topic/DP allows case to be assigned to the embedded subject DP. The subject of the embedded VP receives a theta-role from the light verb-participial verb complex within the vP, but cannot check its case feature within the VP, vP or T/AP projections. I propose that a genitive case feature [GEN] is checked by the D head, exactly as with regular possessive DP's. This accounts for the seemingly exceptional genitive case of the subject. Notably, however, as with the checking of subject case in main clauses, the genitive case feature in the embedded participial clauses is checked covertly. As was shown in (51), any DP in the clause may raise to the Topic/DP position, and thus case assignment does not require overt movement.

It has already been implied in the discussion of DP-adjunction above that, as in the main clause environment, presupposed DP's in embedded participial clauses move out of their case checking position in VP to adjoin to some higher maximal projection. This position may be the left edge of vP, of T/AP or even Topic/DP, as (55) shows. (55d) demonstrates that the discourse restriction of not leaving the vP projection empty applies in the non-finite embedded clauses as it did in the main clauses. When all phonologically overt material moves out of the vP, at PF the vP copy of the verb is retained rather than the usual Topic/DP copy.

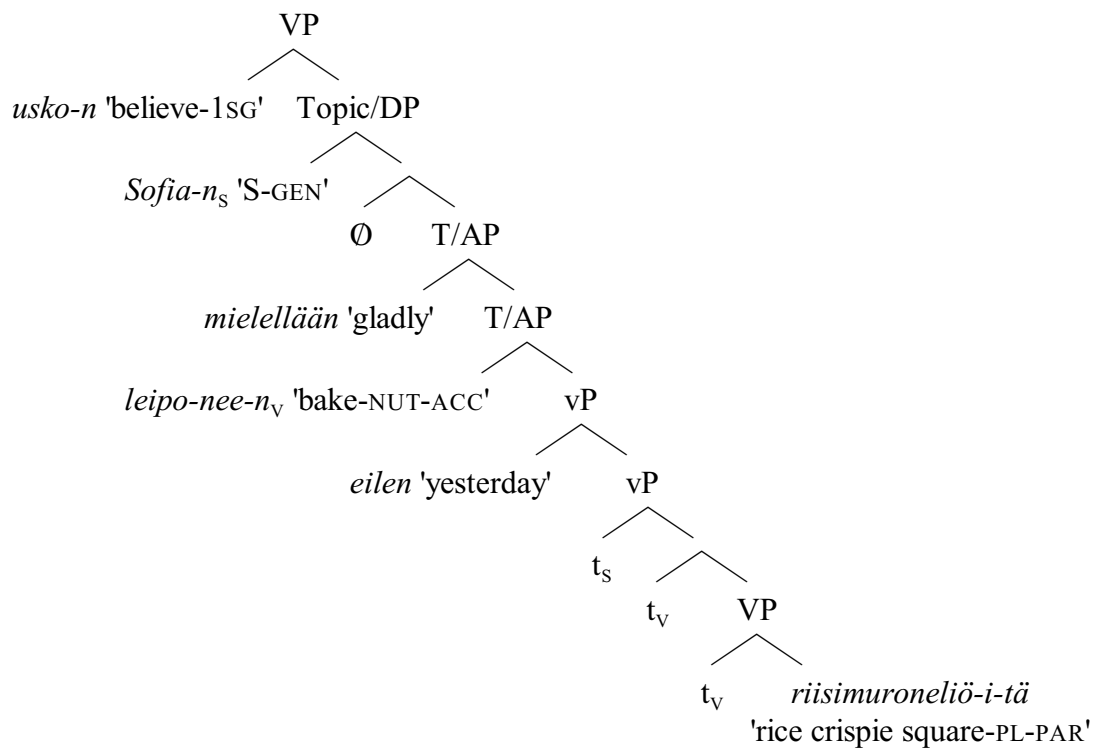
- (55) a. Minä luulin [Tuija-n osta-nee-n **kukk-i-a** usein Peka-lle].  
 I.NOM thought T-GEN buy-NUT-ACC flower-PL-PAR often P-ALL  
 'I thought (that) Tuija (had) often bought flowers for Pekka'
- b. Minä luulin [Tuija-n **kukk-i-a** osta-nee-n usein Peka-lle].  
 I.NOM thought T-GEN flower-PL-PAR buy-NUT-ACC often P-ALL  
 'I thought (that) Tuija (had) often bought flowers for Pekka'
- c. Minä luulin [**kukk-i-a** Tuija-n osta-nee-n usein Peka-lle].  
 I.NOM thought flower-PL-PAR T-GEN buy-NUT-ACC often P-ALL  
 'I thought (that) Tuija (had) often bought flowers for Pekka'
- d. Kuka väittää [minun **sinun päiväkirja-a-si** usein luke-nee-n?  
 who.NOM claims I.GEN you.GEN diary-PAR-2SG.POS often read-NUT-ACC  
 'Who claims (that) I (have) often read your diary?'

(56) gives the syntactic feature content of the embedded functional complex. To exemplify the structure derived once these features are checked, the representation of the participial clause in (54a) is given in (57), at the point in derivation where the embedded clause has merged with the main verb.

(56)



(57)



### 3.2.1.6.3. On the case marking of the past participle

It was pointed out earlier that the accusative case marking borne by the participial verb is similar to the accusative case marking of regular DP objects. (58) reproduces the data from (7) to illustrate the parallel case marking of these two different complement types.

- (58) a. Minä tiedä-n tarina-**n**.  
 I.NOM know-1SG story-ACC  
 'I know the story'
- b. Minä tiedä-n [heidän lähte-nee-**n**].  
 I.NOM know-1SG 3PL.GEN leave-NUT-ACC  
 'I know (that) they (have) left'
- c. Minä huomasi-i-n Mauri-**n**.  
 I.NOM notice-PAST-1SG M-ACC  
 'I noticed Mauri'
- d. Minä huomasi-i-n [hänen lähte-nee-**n**].  
 I.NOM notice-PAST-1SG 3SG.GEN leave-NUT-ACC  
 'I noticed (that) s/he (had) left'
- e. Minä sano-n totuude-**n**.  
 I.NOM say-1SG truth-ACC  
 'I said (=told) the truth'
- f. Minä sano-n [Kati-n puhu-nee-**n** tot-ta].  
 I.NOM say-1SG K-GEN speak-NUT-ACC truth-PAR  
 'I say (that) Kati spoke the truth'
- g. Minä unohti-i-n **sen**.  
 I.NOM forget-PAST-1SG 3SG.ACC  
 'I forgot it'
- h. Minä unohti-i-n [sinun luvun-nee-**n** kirja-n Penti-lle].  
 I.NOM forget-PAST-1SG you.GEN promise-NUT-ACC book-ACC P-ALL  
 'I forgot (that) you (had) promised the book to Pentti'

Although the presence of a DP node dominating the participial clause can explain why it needs and can receive (object) case, the question arises why these main verbs cannot take any other adjectival complements. If they select for the category DP, all DP types should be permissible. However, Bošković (1996) has argued that there might not be any c-selection at all. Suppose that the main verbs in question s-select for two types of complement, either for a Thing (Jackendoff 1983) or for a Proposition. The selectional requirement for a Thing can be satisfied by any DP that is headed by a noun. The claim that these verbs s-select for propositions can be justified by the fact that they also take finite CP clause complements. While the participial adjectival clause can fulfil the requirement for a propositional complement, a regular adjective cannot fulfill either of the two conditions, and thus is ruled out in this position on semantic grounds.

The participial head of the embedded Topic/DP complex bears object case, but the assignment of this object case differs from that of normal lexical DP object case in two ways. First, the case marking of the participle is invariant, so that no accusative-partitive alternation is found. In particular, whereas negation of the matrix verb always triggers partitive case on a lexical DP, it has no effect on the case of an embedded participle.

- (59) a. Minä e-n muista **sitä** /\***sen**.  
 I.NOM NEG-1SG remember 3SG.PAR/ 3SG.ACC  
 'I don't remember it'
- b. Minä e-n muista [sinun sano-nee-**n** /\*sano-nee-**ta** niin].  
 I.NOM NEG-1SG remember you.GEN say-NUT-ACC/ say-NUT-PAR so  
 'I don't remember you saying so'

Second, participles that occur under matrix verbs whose DP objects usually bear quirky case are still marked accusative.

- (60) a. Minä uneksi-n kesä-**stä** /\*kesä-**n**.  
 I.NOM dream-1SG summer-ELA/ summer-ACC  
 'I dream of summer'

- b. Minä uneksi-n [Heiki-n lähte-nee-**n** /\*lähte-nee-**stä** Turkki-in].  
 I.NOM dream-1SG H-GEN leave-NUT-ACC/ leave-NUT-ELA Turkey-ILL  
 'I dream (that) Heikki (has) left for Turkey'
- (61) a. Minä pelkää-n ukkos-**ta** /\*ukkose-**n**.  
 I.NOM fear-1SG thunder-PAR/ thunder-ACC  
 'I fear thunder'
- b. Minä pelkää-n [Jouko-n palan-nee-**n** /\*palan-nee-**ta**].  
 I.NOM fear-1SG J-GEN return-NUT-ACC/ return-NUT-PAR  
 'I fear (that) Jouko (has) returned'

I assume that the immunity of the participle to the effects of normal object case variation is due to its unique nominal features. In section 2.3.5 of chapter 2 I stated that Finnish provides much clear evidence of a separation between structural and morphological case marking, which was proposed in Moorcroft (1995), and I suggested that the overt morphological form of case marking that occurs on a given nominal element is not determined syntactically but rather governed by rules internal to the morphological component. As for the object case variations, I assume that the matrix verb's [(Assign) Object case] feature can be checked either by the [Case] feature of the D head dominating a normal lexical NP complex, or by one present on the Topic/D head of the participial complex. The overt realization of this object case, however, is outside the domain of syntax. In chapter 2 I proposed that the form [-n] should be considered the default realization of a case-marked element that has neither checked its [phi] features against those of a finite verbal element nor received a specific theta-linked lexical case. Since the participial head is not inherently adjectival, it is likely that the morphological component can only assign the default realization to the case marking of a participle.

Another complication regarding morphological realization of syntactic features has to do with the interaction between number and case marking on the complements of the matrix



verb. When the complement is a non-pronominal lexical NP, object case is not overtly indicated when the NP is plural. Only the plural marker *-t* is present.<sup>53</sup>

- (62) a. Kumiko luk-i kirja-**t** /\*kirjo-je-**n**.  
 K.NOM read-PAST.3SG book-**PL**/ book-**PL-ACC**  
 'Kumiko read the books'
- b. Ingo osta-a ne vanha-t lampu-**t** /\*lamppu-je-**n**.  
 I.NOM buy-3SG 3PL.NOM old-**PL** lamp-**PL**/ lamp-**PL-ACC**  
 'Ingo is buying those old lamps'

Pronominal objects, meanwhile, display distinctive accusative forms in this position, making both person and number features as well as case overtly identifiable.

- (63) Me nä-i-mme sinut /hänet /heidät.  
 we.NOM see-PAST.1PL you.**ACC** /3SG.**ACC**/3PL.**ACC**  
 'We saw you/her (or him)/them'

In an embedded past participle complement clause, on the other hand, the participial head bears only object case marking, never number marking, as illustrated in (64). The unavailability of a form marked for both number and case is not due to any phonological constraint, since in the prenominal participial clause both types of information can be overtly expressed, as shown in (65).

- (64) a. Minä tiedä-n [heidän luke-nee-**n** /\*luke-nee-**i(de)-n** kirja-t].  
 I.NOM know-1SG 3PL.GEN read-NUT-**ACC**/ read-NUT-**PL-ACC** book-**PL.ACC**  
 'I know (that) they read the books'
- b. Minä usko-n [heidän osta-nee-**n** /\*osta-nee-**i(de)-n** lampu-t].  
 I.NOM believe-1SG 3PL.GEN buy-NUT-**ACC**/ buy-NUT-**PL-ACC** lamp-**PL.ACC**  
 'I believe (that) they bought the lamps'

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<sup>53</sup> Elsewhere in the thesis I have glossed the nominal plural marker *-t* as either 'PL.NOM' or 'PL.ACC', based on the case assigned to the position in which the plural-bearing XP occurs, i.e. based on grammatical function. Here no case is indicated at all, to fully emphasize the lack of overt case marking.

- (65) [Kirja-t luke-ne-**ide-n**] oppila-ide-n anne-tt-i-in  
 book-PL.ACC read-NUT-**PL-GEN** student-PL-GEN give-PASS-PAST-AGR  
 lähte-ä aikaisin koti-in.  
 leave-TA early home-ILL  
 'Students who had read the books were allowed to leave home early'

I claim that this variation also results from constraints within the morphological rather than the syntactic component. It is worth noting again that non-pronominal nominals in the language do not have unique accusative-marked forms. I assume that, whatever condition restricts the simultaneous occurrence of number and accusative morphology on elements occupying the VP complement position, requirements for interpretability must be met. I propose that overt morphological number marking on simple lexical object DP's is necessary because information about object number is not retrievable from any syntactic encoding such as word order or subject-verb agreement.<sup>54</sup> The object function of a simple lexical NP is (mostly) distinctly identifiable by position as well as by the case marking of other DP's and the subject-verb agreement pattern of the clause. These serve to uniquely distinguish the object from all other DP's. Thus, under a conflict as to which feature is realized morphologically, number marking of object DP's must be retained while overt case suffixation need not be.

The agreement number information on the participle, meanwhile, is redundant to a great degree due to the fact that the information about intrinsic number features is recoverable from the subject's [ $\phi$ i] feature set. The somewhat marked complement status of the participial clause, on the other hand, can be argued to require overt indication. It appears that the relationship between a clausal complement and its matrix head must be explicitly indicated in Finnish. For finite complement clauses an overt complementizer signals the dependent status of the structure. With non-finite participial clauses, I assume that the object case marking unambiguously indicates the syntactic function of the embedded clause.

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<sup>54</sup> This is not, of course, a universal requirement, since DP's in many languages, for instance Mandarin Chinese, do not encode any overt morphological information about number, yet utterances can be successfully interpreted.

### 3.2.1.7. Participial clauses with null subjects

When the embedded participial construction has no overt subject, the person and number features of the null subject are identified by a possessive suffix attached to the participle. (66) demonstrates that this pattern parallels the form of regular possessive constructions: (66a) and (66b) show that the person/number features of a null pronoun are identifiable from a possessive suffix that is attached to the possessed NP and the participle, respectively; and in (66c) and (66d) a full possessor NP with fully identifiable person/number features has eliminated the need for a possessive suffix.

(66) possessive construction:

- a. Maija<sub>i</sub> luke-e pro<sub>i</sub> kirja-**nsa**<sub>i</sub>.  
 M.NOM read-3SG book-3POS  
 'Maija reads her book'

null subject embedded participial construction:

- b. Saku sano-o [pro<sub>i</sub> osta-nee-**nsa**<sub>i</sub> kirja-n].  
 S.NOM say-3SG buy-NUT-3POS book-ACC  
 'Saku says (that) he bought the book'

possessive construction:

- c. Maija<sub>i</sub> luke-e **Peka-n**<sub>j</sub> kirja-n /\*kirja-**nsa**<sub>\*i/\*j/\*k</sub>.  
 M.NOM read-3SG P-GEN book-ACC / book-3POS  
 'Maija reads Pekka's book'

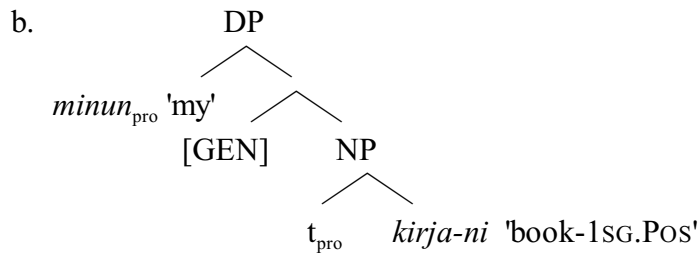
full subject embedded participial construction:

- d. Saku<sub>i</sub> sano-o **Jaana-n**<sub>j</sub> osta-nee-n /\*osta-nee-**nsa**<sub>\*i/\*j/\*k</sub> kirja-n.  
 S.NOM say-3SG J-GEN buy-NUT-ACC / buy-NUT-3POS book-ACC  
 'Saku says (that) Jaana bought the book'

Under fairly standard assumptions in the literature about the internal structure of possessive phrases (originating in Brame 1982, Abney 1987), the genitive case of the possessor nominal is assigned into the specifier position of a DP projection. The possessed element heads a NP projection embedded under the DP category. More current analyses argue that the possessor DP starts in the specifier position of the possessed NP, where it

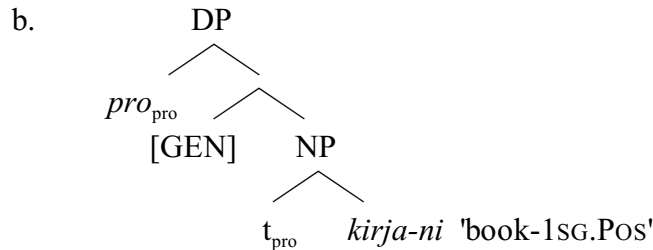
receives its thematic interpretation, and then moves to the [Spec, DP] position for case reasons (cf. e.g. Ritter 1991, 1992, Massam 1993, Ghomeshi 1996). Based on these assumptions, I adopt the structure in (67) as a representation of a regular possessive DP in Finnish. As proposed in several analyses of the Finnish possessive suffixes (e.g. Trosterud 1993, Vainikka 1995b, Douglas-Brown 1996), I will assume that the [phi] features of the possessive suffix are checked against those of the possessor in a specifier-head relationship within the NP projection. This parallels the checking of the [phi] features of a subject and a verb within the vP projection.

- (67) a. *minun kirja-ni*  
           I.GEN book-1SG.POS  
           'my book'



In the absence of an overt pronoun possessor, I propose that possessor position is occupied by a null *pro*. Furthermore, I assume that this *pro*, like its overt pronominal counterparts, bears a [case] feature that checks the [GEN] feature of D. This assumption is in accord with the analysis in Koskinen (1992) of the null subjects of Finnish impersonal passives, whose *pro* subjects were shown to bear syntactic case. Moreover, as was noted previously in footnote 8 in section 2.3.1 of chapter 2, a null first or second person *pro* subject can check the [D] feature of Topic/AgrP in main clauses, allowing for some overtly verb-initial clauses. This latter diagnostic shows that *pro* is a DP. It is assumed in this thesis that DP's bear case; hence, I claim that *pro* must bear a case feature that it checks within DP. The [phi] features of the null possessor are checked against those of the possessive suffix within the NP configuration. (68) gives the structure of a DP with a *pro* possessor.

- (68) a. Minä halua-n *pro* kirja-ni.  
 I.NOM want-1SG book-1SG.POS  
 'I want my book'



Now that I have established the syntax of possessive suffixation in regular possessive DP's, I turn to the null subject participial clause form. To account for the appearance of the possessive suffix in this construction, I adopt an analysis analogous to the null possessive pronoun form in (68). In a participial clause with a full subject, the genitive subject bears a [case] feature which it checks, through covert feature movement, against an abstract [Case] feature in the nominal Topic/D projection, exactly as the possessor DP checks its [genitive case] feature through movement to [Spec, DP]. In the null subject participial clause, the subject position is occupied by a *pro* subject which also bears a [case] feature that must move to Topic/DP for checking purposes. Thus, the structure of the embedded null subject participle form is identical to the full-subject form. Some further discussion on the position of the participle itself is still in order, however.

The embedded functional nominal projection in null subject participial clauses also contains the [Topic] feature that was seen in the full subject form. Topicalized sentences with full lexical topics are exemplified in (69a,c,e). In the least marked canonical word order of the null-subject clause, the null *pro* subject checks the strong [Topic] feature of the Topic/DP position, and on the basis of phonological evidence, the clause appears to be verb-initial. These forms are shown in (69b,d,f). Recall that seemingly verb-initial clauses are also permitted in Finnish main clauses when *pro* occupies the [Spec, TopicP] position.

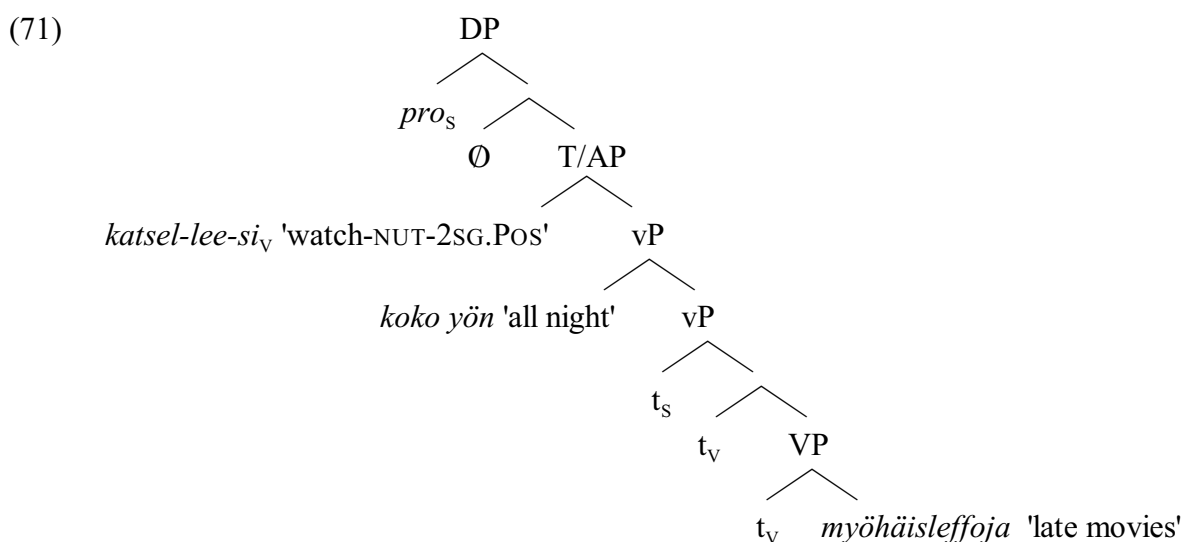
- (69) a. Väitä-t-kö sinä [**myöhäisleffo-j-a** katsel-lee-si koko yön *pro*]?  
 claim-2SG-Q you.NOM late.movie-PL-PAR watch-PP-2SG.POS all night  
 'Do you claim (that you) watched late movies all night?'  
 b. Väitä-t-kö sinä [*pro* katsel-lee-si koko yön myöhäisleffo-j-a]?  
 claim-2SG-Q you.NOM watch-PP-2SG.POS all night late.movie-PL-PAR  
 'Do you claim (that you) watched late movies all night?'  
 c. Minä e-n sanonut [**koru-j-a** osta-nee-ni Turki-sta *pro*]  
 I.NOM NEG.1SG said jewelry-PL-PAR buy-PP-1SG.POS Turkey-ELA  
 'I didn't say (that I) bought the jewelry from Turkey (but from the Bay)'  
 d. Minä e-n sanonut [*pro* osta-nee-ni koru-j-a Turki-sta].  
 I.NOM NEG.1SG said buy-PP-1SG.POS jewelry-PL-PAR Turkey-ELA  
 'I didn't say (that I) bought the jewelry from Turkey'  
 e. Minä sanoin [**puutarha-sta** kerän-nee-ni aamu-lla aina *pro*  
 I.NOM said garden-INE gather-PP-ACC morning-ADE always  
kukk-i-a Sirka-lle].  
 flower-PL-PAR S-ALL  
 'I said (that I) always gathered flowers for Sirkka from the garden in the morning'  
 f. Minä sanoin [*pro* kerän-nee-ni puutarha-sta aina aamu-lla kukk-i-a  
 I.NOM said gather-PP-ACC garden-INE always morning-ADE flower-PL-PAR  
 Sirka-lle].  
 S-ALL  
 'I said (that I) always gathered flowers for Sirkka from the garden in the morning'

The fact that other non-topicalized DP's may intervene between the topic DP and the participle shows that, as in the full subject form, the participle in the null subject construction also raises only as far as the head of T/AP, not to DP.

- (70) a. Väitä-t-kö sinä [koko yön myöhäisleffo-j-a katsel-lee-si *pro*]?  
 suspect-2SG-Q you.NOM all night late.movie-PL-PAR watch-NUT-2SG.POS  
 'Do you claim (that you) watched late movies all night?'  
 b. Minä e-n sanonut [Turki-sta koru-j-a osta-nee-ni *pro*]...  
 I.NOM NEG.1SG said Turkey-ELA jewelry-PL-PAR buy-NUT-1SG.POS  
 'I didn't say (that I) bought the jewelry from Turkey (but from the Bay)'

- c. Minä sanoin [puutarha-sta **kukk-i-a** kerän-nee-ni aina *pro*  
 I.NOM said garden-INE flower-PL-PAR gather-NUT-ACC always  
 aamu-lla Sirka-lle].  
 morning-ADE S-ALL  
 'I said (that I) always gathered flowers for Sirkka from the garden in the morning'

The structure of a null subject participial clause is exemplified in (71), which shows the representation of the sentence in (69b).



The sentences in (72) break the parallel between the regular possessive construction and the embedded past participle construction. In the possessive construction in (72a), a possessive suffix co-occurs with an overt possessor pronoun<sup>55</sup>, while in the participial construction in (72b) an overt pronoun subject that occurs with a possessive suffix gives an ungrammatical utterance.

- (72) a. Maija<sub>i</sub> luk-i **hänen<sub>j</sub>** kirja-nsa<sub>\*i/j</sub> /\*kirja-n.  
 M.NOM read-PAST.3SG 3SG.GEN book-3POS / book-ACC  
 'Maija<sub>i</sub> read his/her<sub>\*i/j</sub> book'

<sup>55</sup> The presence of both the pronoun and the possessive suffix is obligatory in third person; in first and second person, the possessive pronoun may be dropped.

- b. Emil<sub>i</sub> sano-o **hänen**<sub>\*i/j</sub> näh-nee-n /\*näh-nee-nsä Bambi-n.  
 E.NOM say-3SG 3SG.GEN see-NUT-ACC/ see-NUT-3POS B-ACC  
 'Emil<sub>i</sub> says (that) s/he<sub>\*i/j</sub> saw Bambi'

This discrepancy between the two constructions results from a basic difference in the relationship between the genitive DP and the possessive suffix in the two types of structures. In the participial construction the genitive-marked DP is theta-marked in its merge position by the v-V complex. Through this identification the subject and the participle are clearly connected. When the subject's [phi] features are retrievable from the overt expression of a subject pronoun, they need not be redundantly represented with a possessive suffix. In the possessive construction, on the other hand, the association between the possessor DP and possessed NP is the result of a very loose association based on position. Several researchers (e.g. Zubizarreta 1987, Grimshaw 1989, Massam 1993) have proposed that the relationship of the possessor to the possessed DP is one of modification rather than argumenthood. Thus, the role of the possessor DP in the possessive construction is more indeterminate than the role of the subject DP in the participial clause, and so both the possessive pronoun and the possessive suffix are required for interpretability in the possessive phrase. Markedly also, it is only in the third person, the least easily identifiable form, that the double marking is obligatory in the possessive DP. In the first and second person the possessive pronoun can be dropped, as it always is in the participial construction. The distinction between the two forms in (72), then, results from the idiosyncratic interpretation process of the possessive form rather than from the structure of the participle construction. Although the exact functioning of the possessive suffixes in the possessive form in (72a) remains to be explained, the behaviour of the participle forms with regard to the possessive suffixes in overt subject and null subject constructions is straightforward and predictable.

Finally, a comment should be made about the interaction between case marking and possessive suffixation in the null subject construction. When the participial form bears a possessive suffix, the accusative marker *-n* is not visible on the verb.



- (73) a. Minä huomasi-n [Howardi-n maalan-nee-**n** keittiö-n].  
 I.NOM notice-PAST-1SG H-GEN paint-NUT-ACC kitchen-ACC  
 'I noticed (that) Howard (had) painted the kitchen'
- b. Howard sano-i [maalan-nee(-\***n**)-**nsa** keittiö-n].  
 H.NOM say-PAST.3SG paint-NUT-ACC-3Pos kitchen-ACC  
 'Howard said (that he had) painted the kitchen'

This is not an unexpected quirk of the participial clause only, since accusative (and genitive) case markings also disappear from regular nouns when they bear possessive morphology, as illustrated in (74).

- (74) a. Minä lu-i-n kirja-**n**.  
 I.NOM read-PAST-1SG book-ACC  
 'I read a/the book'
- b. Minä lu-i-n kirja(-\***n**)-**ni**.  
 I.NOM read-PAST-1SG book-ACC-1SG.Pos  
 'I read my book'
- c. kirja-**n** kansi  
 book-GEN cover.NOM  
 '(the) cover of (the) book'
- d. minun kirja(-\***n**)-**ni** kansi  
 I.GEN book-ACC-1SG.Pos cover  
 '(the) cover of my book'

The explanation cannot be phonological, since the resulting consonant clusters are perfectly acceptable elsewhere in the language. This is shown in (75).

- (75) a. Minä lu-i-n \*kirja-**n-ni**.  
 I.NOM read-PAST-1SG book-ACC-1SG.Pos  
 'I read my book'
- b. Minä lu-i-n kirja-**nne**.  
 I.NOM read-PAST-1SG book-2PL.Pos  
 'I read your(pl) book'

- c. sinun    \*kirja-**n-si**                    kansi  
       you.GEN book-ACC-2SG.Pos cover  
       '(the) cover of your book'
- d. hänen    kirja-**nsa**                    kansi  
       3SG.GEN book-3Pos cover  
       '(the) cover of her book'

Consonant gradation facts suggest, however, that the possessed noun still bears a null consonant suffix between the noun stem and the possessive affix. As mentioned previously, the rule of consonant gradation in Finnish weakens, for instance, geminate stops such as /kk/, /tt/ and /pp/ to simple stops when followed by a syllable ending in a consonant (Reime 1992:94).

- |      |   |  |                               |
|------|---|--|-------------------------------|
| (76) | a. hattu- $\emptyset$<br>hat-NOM<br>'a/the hat' | b. hatu-n<br>hat-GEN<br>'of a/the hat' | c. hatu-t<br>hat-PL<br>'hats' |
|------|---|--|-------------------------------|

Possessive suffixes, however, do not trigger this phonological process in DP's that occur in positions where they would bear nominative or accusative case marking. In addition, overt number marking of the DP disappears, in complete contradiction to the situation where accusative marking in object position is overridden by the number suffix. These constraints on morphological realization result in words whose interpretations are multiply ambiguous.

- (77) (meidän) hattu-mme  
       we.GEN hat-1PL.Pos  
       'our hat' (NOM/ACC), 'our hats' (NOM/ACC), 'of our hat' (GEN)

When the possessive suffix attaches to a case with anything other than a mono-consonantal form (i.e. it consists of more than one segment, or of a single vowel), the consonant gradation process is unaffected.

- (78) a. *hatu-ssa-mme*  
           *hat-INE-1PL.POS*  
           'in our hat'
- b. *hattu-a-mme*  
               *hat-PAR-1PL.POS*  
               'our hat'

Reime (1992) accounts for this exceptional phonological behaviour by positing a null suffix between the stem and the possessive suffix.

- (79) *hattu-Ø-mme*  
        *hat-?-1PL.POS*

According to Reime, the phonologically null form here corresponds to one of three other realizations of the morpheme: the plural *-t*, the accusative (or genitive) *-n*, and the phonetically empty nominative marking. I assume that this problem also has to do with the morphological realization of syntactic features, and since the restriction applies equally to all elements that carry possessive suffixation, not only to participle constructions, I will leave further investigation of the issue to later study, noting only that the unexpressed morpheme once again corresponds to the accusative/genitive suffix *-n*, which I claimed is the default form of overt morphological case. The fact that this marking fails to appear under certain conditions, such as the presence of further inflection, seems to support the view that it is a somewhat redundant and hence easily eliminable default morpheme.

### 3.2.1.8. Participial clauses under raising verbs

The embedded participial clause also occurs under raising verbs of observation and perception, such as *näyttää*, 'seem', *näkyä*, 'seem', *tuntua*, 'feel', *kuulua*, 'sound, seem', *vaikuttaa*, 'appear'.

- (80) a. *Kipling näyttä-ä* [*kadotta-nee-n taas yhde-n hampaa-n lisää*].  
           K.NOM seem-3SG lose-NUT-ACC again one-ACC tooth-ACC more  
           'Kipling seems (to have) lost yet another tooth'

- b. Tämä valkosipulileipä tuntu-u [ol-lee-n uuni-ssa liian kauan].  
 this.NOM garlic.bread.NOM feel-3SG be-NUT-ACC oven-INE too long  
 '(It) feels (like) this garlic bread (has) been in the oven too long'
- c. Jila kuulu-u [saa-nee-n uude-n työpaika-n].  
 J.NOM sound-3SG get-NUT-ACC new-ACC job-ACC  
 '(One) hears (that) Jila (has) got a new job'
- d. Sarah vaikutta-a [nautti-nee-n matka-sta-an Grand Canyoni-in].  
 S.NOM seem enjoy-NUT-ACC trip-INE-3Pos G. C-ILL  
 'Sarah seems (to have) enjoyed her trip to the Grand Canyon'

The possibility of quirky and idiomatic subjects occurring in these forms, as well as the availability of impersonal complement clauses, identify these sentences as raising constructions rather than control structures. Since quirky (81) and idiomatic (82) subjects as well as no subjects at all (83) are admissible in this construction, I conclude that the main clause subject must have originated in the embedded participial clause.

- (81) a. **Väke-ä** näyttä-ä [tul-lee-n sali-n täydeltä].  
 people-PAR seem-3SG come-NUT-ACC hall-GEN full  
 'A hall-full of people seem (to have) arrived'
- b. **Venla-a** kuulu-u [aivastutta-nee-n koko konserti-n ajan].  
 V-PAR sound-3SG sneeze-CAUS-NUT-ACC whole concert-GEN time  
 '(One) hears (that) Venla sneezed through the whole concert'
- c. **Heiltä** vaikutta-a [puuttu-nee-n kaikki tarpeellise-t apuvälinee-t].  
 3PL.ABL seem-3SG lack-NUT-ACC all necessary-PL.NOM aid-PL.NOM  
 'They seem to have lacked all necessary aids'
- d. **Reeta-sta** kuulu-u [tul-lee-n astronautti].  
 R-ELA sound-3SG come-NUT-ACC astronaut.NOM  
 '(One) hears (that) Reeta (has) become an astronaut'
- (82) a. **Päree-t** näyttä-vät [pala-nee-n vihdoin Elviira-lta-kin].  
 wood.chip-PL seem-3PL burn-NUT-ACC finally E-ALL-EMP  
 'Elvira seems to have finally lost her temper'

- b. **Jauho-t** kuulu-vat [men-nee-n Iita-lla suu-hun] (kun Tilda kysy-i tuota).  
 flour-PL sound-3PL go-NUT-ACC I-ABL mouth-ILL when T.NOM asked that  
 'Tita seems to have gone speechless (when Tilda asked her that)'
- c. **Rima** tuntu-u [ol-lee-n Lempi-llä liian korkea-lla].  
 bar.NOM feel-3SG be-NUT-ACC L-ADE too high-ADE  
 'Lempi's standards seem to have been too high'
- (83) a. **Täällä /Yö-llä** näyttä-ä [sata-nee-n].  
 here.ADE /night-ADE seem-3SG rain-NUT-ACC  
 'It seems (to have) rained here/at night'
- b. **Sitä** näyttä-ä [sata-nee-n].  
 3SG.PAR seem-3SG rain-NUT-ACC  
 'It seems (to have) rained'

I propose that participial clauses embedded under raising verbs have a structure identical to that of other embedded participial clauses, except that this small set of raising verbs markedly require their [ $\phi$ ] features to be checked against those of a subject DP during derivation. This lexically marked group of Finnish verbs was discussed in section 2.3.5 of chapter 2. (84) shows that a [ $\phi$ ] feature mismatch between the plural subject and the singular raising verb causes ungrammaticality.<sup>56</sup>

- (84) \***Lapse-t** näyttä-ä [heittä-nee-n pallo-a takapiha-lla].  
 child-PL.NOM seem-3SG throw-NUT-ACC ball-PAR back.yard-ALL  
 'The children seem (to have) been throwing ball in the back yard'

The [ $\phi$ ] feature checking must take place covertly, as (85) illustrates. The subject need not be pied-piped to the [Spec, Topic/AgrP] position of the matrix clause in overt syntax, but may remain in the embedded domain when some other DP moves to check the [Topic] feature. As a consequence, these "raising" verbs involve "raising" only in the sense

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<sup>56</sup> It should be noted that in colloquial Finnish this and other subject-verb agreement patterns are distinct from the standard language forms described here, so that (84) is grammatical in most colloquial varieties.

that they trigger subject-verb agreement with the embedded subject via covert feature movement, not in the sense of requiring overt movement, as raising verbs in, for instance, English do.

- (85) Elviira-lta-kin **näyttä-vät** [pala-nee-n vihdoin **päree-t**].  
 E-ALL-EMP seem-3PL burn-NUT-ACC finally wood.chip-PL  
 'Elvira seems to have finally lost her temper'

Although I continue to assume that the syntactic [case] feature of the embedded subject is checked by the [Case] feature of the embedded Topic/D head even in this "raising" structure, observably the morphological form of the case marking is realized as nominative. This is so because the subject checks its [phi] feature matrix against that of some verbal element during derivation, and it is this [phi] feature checking that crucially determines the morphological form of a case marked DP. (86) demonstrates that even when the [phi] features of the raised subject and those of the raising verb match, as the third person singular features of both elements here do, the utterance is unacceptable if the subject bears some non-nominative but non-quirky (i.e. not lexically assigned) case, such as the default *-n*.

- (86) \***Lapse-n** näyttä-ä [heittä-nee-n pallo-a takapiha-lla].  
 child-GEN seem-3SG throw-NUT-ACC ball-PAR back.yard-ALL  
 'The childr seems (to have) been throwing ball in the back yard'

In the presence of quirky subjects, such as those given in (81), and with impersonal complement clauses, such as the passivized clause in (87), the raising verb occurs with default third person singular agreement marking. Since no [phi] feature checking takes place here, the [phi] features of the finite verb are realized as the default form.

- (87) Takapihalla näyttä-ä [heite-ty-n pallo-a].  
 back.yard.in seem-3SG throw-PASS.NUT-ACC ball-PAR  
 '(It) seems (that) ball (has been) thrown in the back yard'

A final point to be made about participial structures under raising verbs has to do with the object case assigned to the participle itself. Unlike English raising verbs like *seem* and *appear*, Finnish raising verbs take not only propositional clausal complements, but also simple DP or AP complements. Moreover, they assign quirky ablative case to their complements. (88a,b) show that lexical adjective and noun complements of the verb *näyttää*, 'seem', obligatorily bear ablative case. In (88c) the extraposition of a finite sentential complement forces the presence of an expletive third person pronoun, which also occurs bearing ablative case.

- (88) a. Lapse-t        näyttä-vät ilois-i-**lta**        /\*iloise-t.  
          child-PL.NOM seem-3PL happy-PL-**ABL** / happy-PL.NOM  
          'The children seem happy'
- b. Tuo        mies        näyttä-ä aivan Hitchcocki-**lta**/\*Hitchcock.  
          that.NOM man.NOM seem-3SG exactly H-**ABL**        / H.NOM  
          'That man looks exactly like Hitchcock'
- c. Näyttä-ä    **siltä**        että pian sataa.  
          seem-3SG 3SG.**ABL** that soon rains  
          'It seems like it'll rain soon'

In all three instances it is clear that the verb *näyttää*, 'seem', assigns quirky object case to its nominal complement. Thus I assume that these raising verbs also assign case to their participial clause complements, just as non-raising matrix verbs do. The morphological realization of the quirky syntactic case feature as the default form *-n* was discussed in section 3.2.1.6.3.

### 3.2.1.9. Summary

In this section I have provided a detailed analysis of the syntactic behaviour of the Finnish embedded past participle construction. I have proposed that the past participle morpheme *-nut* bears the syntactic features [v, temporal reference]. The participle is simply

a syntactic verb with a grammaticalized temporal denotation. I have shown that the participial verb occurs in a vP-VP shell, since it assigns the usual object case and theta roles and exhibits the normal selectional properties of its finite verb counterpart. Diagnostics from the positioning of vP-adjoined temporal adverbials and from the independence of the event structure in the embedded participle clause were used to argue for a level of inflectional structure above the embedded vP. The structure of this functional domain was shown to differ drastically from the functional projections identified in chapter 2 for finite main clauses.

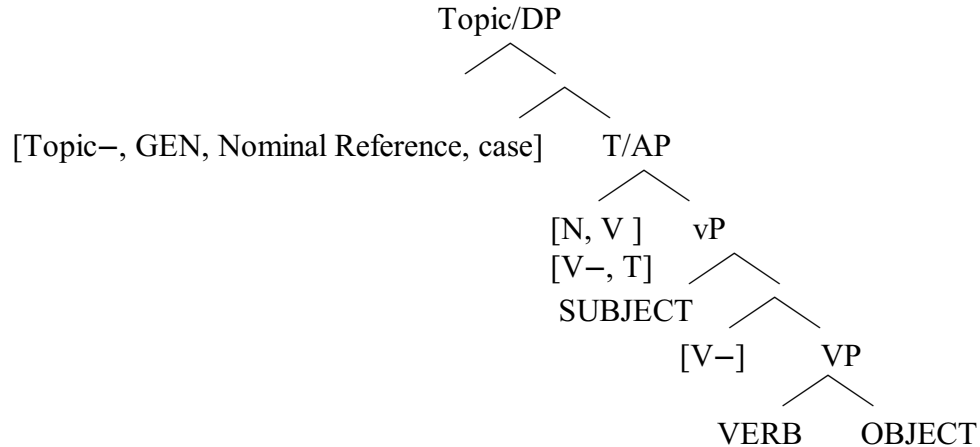
The syntactic features of the projection immediately dominating the vP projection, labelled T/AP, were identified as  $[[N, V], V-, \text{Temporal Reference}]$ . This inflectional head was claimed to be the source of the non-verbal nominal characteristics of the participial form. The participle moves to the head of T/AP to check a strong  $[V]$  feature, and, as a free rider, it can check its temporal feature against the  $[T]$  feature of T/A.

The adjectival T/AP projection merges as the complement of a higher nominal functional head. The nominal reference of the T/AP projection is licensed through the checking of a  $[\text{nominal reference}]$  feature by the higher head. Furthermore, a strong  $[\text{Topic}]$  feature present on this head attracts some DP, the subject (either overt or a null *pro*), to the specifier position of what I have called Topic/DP. This projection was also argued to check the subject's  $[\text{case}]$  feature. Finally, this nominal, DP-like projection carries its own  $[\text{case}]$  feature whose checking allows the entire participial structure to become the complement of a matrix verb. It was determined that the assignment of case to both the embedded subject DP and the participle head itself can be explained when syntactic case checking is divorced from the idiosyncratic patterning of the overt morphological form of case marking, and both processes were discussed.

In conclusion, the account provided in this section has shown that each peculiarity of the embedded past participle construction can be strictly motivated by explicitly identifying all the syntactic features that are present in the syntactic structure throughout the syntactic derivation. (89) repeats the structure from (56) that was proposed for the embedded past participle construction.



(89)



### 3.2.2. The main clause construction

In main clauses the past participle form replaces the regular past tense verb form in the presence of some auxiliary elements, namely the negator *ei* and *olla*, 'be'. (90) contrasts the affirmative and negated past tense main verb forms: in the affirmative (90a), the main verb bears both the finite past tense marker *-i* and person/number agreement suffix; in (90b), the person/number agreement affix is attached to the negator, and past tense is marked with a participial morpheme on the main verb. (91a,b) demonstrate that the participial main verb redundantly agrees in number with the subject, since in (91b) the plural subject triggers nominal number marking on the participle. In contrast with the behaviour of the participle in the embedded clause construction, the main clause participle bears neither case marking nor possessive suffixation, as illustrated in (91c).

- (90) a. Lapse-t katsel-**i**-vat Leijonakuningas-ta.  
 child-PL.NOM watch-PAST-3PL Lion.King-PAR  
 'The children watched Lion King'

- b. Lapse-t ei-vät katsel-**lee**-t /\*katsel-**lee**-vat Leijonakuningas-ta.  
 child-PL.NOM NEG-3PL watch-NUT-PL / watch-NUT-3PL Lion.King-PAR  
 'The children didn't watch Lion King'

- (91) a. Lapsi ei katsel-**lut** Leijonakuningas-ta.  
 child.NOM NEG.3SG watch-NUT Lion.King-PAR  
 'The child didn't watch Lion King'

b. Lapse-t ei-vät katsel-**lee**-t Leijonakuningas-ta.  
 child-PL.NOM NEG-3PL watch-NUT-PL Lion.King-PAR  
 'The children didn't watch Lion King'

c. Lapsi ei \*katsel-lee-**n** /\*katsel-lee-**nsa** Leijonakuningas-ta.  
 child.NOM NEG.3SG watch-NUT-ACC/ watch-NUT-**3Pos** Lion.King-PAR  
 'The child didn't watch Lion King'

The past participle form is also used in the periphrastic perfect, as in (92). Here the auxiliary verb *olla*, 'be', bears both finite tense and person/number agreement, and the main verb is in the participial form. Again, the participle agrees redundantly in number with the subject, and this number morphology is nominal. Neither case nor possessive marking is permitted.

(92) a. Lapse-t o-vat katsel-**lee**-t /\*katsel-**lee**-vat Leijonakuningas-ta.  
 child-PL.NOM be-3PL watch-NUT-PL / watch-NUT-3PL Lion.King-PAR  
 'The children have watched Lion King'

b. Lapse-t o-vat \*katsel-lee-**n** /\*katsel-lee-**nsa** Leijonakuningas-ta.  
 child-PL.NOM be-3PL watch-NUT-ACC/ watch-NUT-**3Pos** Lion.King-PAR  
 'The children have watched Lion King'

A negated perfective form involves two past participles, a past participial form of the auxiliary *olla*, and a past participial form of the main verb.

(93) Lapse-t ei-vät ol-**lee**-t katsel-**lee**-t Leijonakuningas-ta.  
 child-PL.NOM NEG-3PL be-NUT-PL watch-NUT-PL Lion.King-PAR  
 'The children hadn't watched Lion King'

According to the principle of monosemy, which is one of the central working assumptions of this thesis, the syntactic features identified for the abstract and overt participle morphemes on the basis of their behaviour in the embedded participle construction should also be the features of the main clause participle form. In other words, we would expect the main clause participial form to exhibit characteristics of an adjective that also

contains a temporal specification. As was pointed out in section 3.2.1.6, the structure of the main clause past participle is in fact clearly linked to the structure of copula constructions, which include predicate adjectives. (94a-d) illustrate Finnish copula forms with regular nouns and adjectives, to portray the clear parallel with the main clause participles in (94e-f).

- (94) a. Emmi on iloinen.  
E.NOM be.3SG happy  
'Emmi is happy'
- b. Lapse-t o-vat iloise-t.  
child-PL.NOM be-3PL happy-PL  
'The children are happy'
- c. Auli on lääkäri.  
A.NOM be.3SG doctor.NOM  
'Auli is a doctor'
- d. Auli ja Reiska o-vat lääkäri-t.  
A. and R.NOM be-3PL doctor-PL.NOM  
'Auli and Reiska are doctors'
- e. Jasso on juos-sut ulos.  
J.NOM be.3SG run-NUT out  
'Jasso has run out'
- f. He o-vat juos-see-t ulos.  
3PL.NOM be-3PL run-NUT-PL out  
'They have run out'

Despite its adjectival position and nominal/adjectival morphological marking, the main clause participle retains the one syntactic property that was identified as crucial for the classification of the participial head in the embedded clause as a verb, namely the ability to assign a full range of object cases. The object of the main clause past participle exhibits the expected accusative-partitive-quirky case variation when the construction is embedded under the auxiliary *olla*, 'be'. Non-quirky objects of participles that occur under negation are obligatorily partitive, but this fact accords with the general "partitive of negation" of Finnish.<sup>57</sup>

- (95) a. Minna on maalan-nut autotalli-a.  
M.NOM be.3SG paint-NUT garage-PAR  
'Minna has been painting the garage (but isn't finished yet)'
- b. Minna on maalan-nut autotalli-n.  
M.NOM be.3SG paint-NUT garage-ACC  
'Minna has painted the garage (so that it's finished)'

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<sup>57</sup> The effect of negation on the object of a participial verb cannot be tested in embedded participle constructions, since embedded non-finite clauses cannot be negated.

- c. Minna on ihastu-nut maalaa-mise-**en**.  
 M.NOM be.3SG take.a.fancy.to-NUT paint-DEVN-**ILL**  
 'Minna has taken a fancy to painting'
- (96) a. Anssi ei maalan-nut autotalli-**a** /\*autotalli-**n**.  
 A.NOM NEG.3SG paint-NUT garage-**PAR**/ garage-**ACC**  
 'Anssi didn't paint the garage'
- b. Anssi ei ihastu-nut maalaa-mise-**en**.  
 A.NOM NEG.3SG take.a.fancy.to-NUT paint-DEVN-**ILL**  
 'Anssi didn't take a fancy to painting'

The main clause participle is similar to the embedded participle in that both assign the regular range of object cases to their complements, both bear the same temporally back-shifting semantics, and both are inflected with nominal morphology. The two forms differ in the nominal morphology that is present on the participial verb. Table 3.3 summarizes the properties of the main clause past participle that require investigation. The next two subsections account for the structure of the main clause participle forms under the copula and the negator.

**TABLE 3.3. The syntactic properties of the main clause past participle**

<i>Adjectival behaviour</i>	<i>Non-adjectival behaviour</i>
<ul style="list-style-type: none"> <li>• Occurs in an adjective position</li> <li>• Bears adjectival morphology (nominal number agreement)</li> <li>• May assign quirky case</li> </ul>	<ul style="list-style-type: none"> <li>• Bears temporal meaning</li> <li>• Is never marked for partitive case</li> <li>• Assigns full range of object cases</li> </ul>

### 3.2.2.1. The periphrastic perfect form

For the copula constructions shown above in (94), I adopt a small clause analysis. Several researchers have argued that small clause structures are embedded under a functional

projection, although the exact nature of this projection remains under dispute. Suggested labels range from PredP (Bowers 1993) to AgrP (Pollock 1989, Chomsky 1993), IP (Kreps 1994) and CP (Starke 1994) to vP (Rapoport 1995). Hence, I assume that the copula *olla*<sup>58</sup> takes nominal small clause complements, which can be extended projections of either nouns or adjectives. The copula may assign some sort of a theta role to its complement, but it crucially differs from the raising verbs discussed in section 3.2.1.8 in that it does not assign object case. Each nominal (N or A) complement is embedded under some functional projection(s), such as NumberP, within which the [nominal reference] and any other relevant features of the complement head may be checked. I assume that the checking of this feature is crucial for the referentiality of the interpretation of all nominals.

Since no case is available for the small clause complement, its [nominal reference] feature must be checked at some functional level lower than DP, which I have argued to bear the feature [case] (cf. also Ghomeshi 1996). Following Longobardi (1994), I adopt the view that the presence of number features is the minimal requirement for nominal reference. Hence, I propose that in the copula constructions of (94), the feature [nominal reference] of the noun, adjective and participle is checked against the relevant feature on an abstract NumberP head.<sup>59</sup> I propose that the appearance of overt nominal number marking on the participle is the default morphological realization of the checked [nominal reference] feature. Since Finnish does not have a "nominal reference" morpheme, and since every syntactic operation must have an effect on output (by the Economy Principle of Chomsky 1995:294), I claim that the checking of the [nominal reference] feature is signalled through the presence of nominal morphology, which is minimally number agreement. It is because

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58 Based on the principle of monosemy, I take as my working hypothesis that in Finnish there is only one lexical entry for the verb *olla*, 'be', regardless of its use.

59 The overt realization of the case of copula complements is more complex than indicated in (94). In particular, noun and adjective complements exhibit a pattern of nominative-partitive case variation which is not available on the participles. I assume, as before, that case restrictions on the participles are due to morphological constraints on which case markings can be expressed on fully propositional elements. Hence the distinction between the lexical NP and AP complements and the clausal participial complement is again due to morphological, not syntactic, processes.

the nominal reference is checked in NumberP rather than DP that neither case nor possessive suffixation can be present in the main clause participle construction: the pertinent [case] and [phi] features cannot be checked in NumberP.

The occurrence of an independent process of number agreement checking by the participle, separate from the checking of the main verb's [phi] features against those of the subject agreement features, is supported by the agreement pattern in the formal second person singular. Mitchell (1994:27, who attributes the original observation to Wayles Browne, but with no citation reference) noted that this agreement pattern cannot be considered a matter of simple concord. In (97) we see that in the second person, the form of the finite agreement suffix (as well as the pronoun) in the formal singular is identical to the form of the plural.

- (97)    a. **te**            **puhu-tte**  
              2PL.NOM speak-2PL  
              'you (pl) speak'
- b. **Te**            **puhu-tte**  
              2SG(formal).NOM speak-2PL  
              'you(sg.formal) speak'

(98) shows, however, that in the periphrastic perfect form the agreement pattern of the past participle is not determined by the number features of the main verb agreement form, but is based on the intrinsic number of the subject. The participial agreement in the second person singular forms is always singular, in contrast with the plural form of the main verb agreement morpheme. If the redundant number marking of the participle were analyzed as concord with a subset of the [phi] features of the main verb agreement, we would not expect to find discord between the participial and the finite number agreement forms in (98b).

- (98)    a. **sinä**            **ole-t**    **puhu-nut**  
              2SG.NOM be-2SG speak-NUT(.SG)  
              'you(sg) have spoken'
- b. **Te**            **ole-tte** **puhu-nut**  
              2SG(formal).NOM be-2PL speak-NUT(.SG)  
              'you(sg.formal) have spoken'

- c. *te*            *ole-tte* *puhu-nee-t*  
**2PL.NOM** *be-2PL* *speak-NUT-PL*  
 'you(pl) have spoken'

I assume that this independence of features is based on the structure of the periphrastic perfect construction: the [nominal reference] feature that the participle checks within the NumberP projection is realized as number inflection, and the copula *olla*, 'be', checks its verbal [phi] features within the Topic/AgrP projection.

As has also been observed by others, a subject's agreement feature checking is different from the checking of the verbal [phi] or adjectival [nominal reference] features against some abstract functional feature. When a participle's [nominal reference] feature or a finite element's [phi] features is checked against a functional feature, the features of both the lexical and functional head are erased in the sense that they cease to exist within the syntactic component (although some information of the content of the interpretable variant within the pair must, of course, remain available for the morphological component). However, the agreement features of the subject, in particular its number content, must not be erased in this manner, since the subject may check its agreement features a number of times within a single derivation. This is clearly observable in the negated periphrastic perfect forms in (99), where three verbal elements bear number agreement that matches the subject's number. In the second person singular formal, shown in (99b), both of the participials are marked for singular agreement, independently of the finite plural agreement features of the negator.

- (99) a. *Lapse-t*        *ei-vät*    *ol-lee-t*    *katsel-lee-t*    *Nalle Puhi-a.*  
          child-**PL.NOM** NEG-**3PL** *be-NUT-PL* *watch-NUT-PL* Bear    Pooh-PAR  
          'The children hadn't watched Winnie the Pooh'
- b. *Te*                    *e-tte*    *ol-lut*        *ilmoitta-nut* *meille*  
      **2SG(formal).NOM** NEG-**2PL** *be-PP(.SG)* *notify-PP(.SG)* we.ALL  
    *tulo-sta-nne*                    *ajo-i-ssa.*  
    arrival-ELA-2PL.POS time-PL-INE  
      'You hadn't notified us of your arrival in time'

As in the embedded participle clause construction, I assume that the main clause participle assigns the regular theta roles and object case within VP and vP. It then moves to the head of T/AP to check a strong [V] feature, as well as its [temporal reference] feature. The [nominal reference] feature of the T/A head is checked by the matching feature of NumberP. However, the participle only raises as far as T/A in overt syntax. Thus the checking of the [nominal reference] feature must be covert feature movement which need not take place before LF.

There is no evidence for a strong [Topic] feature within the extended functional structure of the participle, distinct from the Topic position of the Topic/AgrP into which the copula moves. (100) illustrates that the participle can occur adjacent to the copula, even when the embedded vP contains any number of DP's that might raise to check a strong [Topic] feature of T/AP or NumberP.

- (100) a. Eeva **on** **osta-nut** kukk-i-a Aimo-lle joka päivä tällä viiko-lla.  
 E.NOM be.3SG buy-PP flower-PL-PAR A-ALL every day this.ADE week-ADE  
 'Eeva has bought flowers for Aimo every day this week'
- b. Petteri **on** **kuul-lut** Airi-lta Kati-sta todella mehukkaa-n juoru-n.  
 P.NOM be.3SG hear-PP A-ABL K-ELA really juicy-ACC gossip-ACC  
 'Petteri has heard a really juicy piece of gossip about Kati from Airi'

Although in (101) one or more DP's intervene between the copula *olla*, 'be', and the participle, their intonational prominence and interchangeability demonstrate that they are presupposed DP's adjoined to the lower vP, rather than lower topics.

- (101) a. Eeva-ko Aimo-lle on **kukk-i-a** **niin anteliaasti** osta-nut taas?  
 E.NOM-Q A-ALL be.3SG flower-PL-PAR so givingly buy-PP again  
 'Is it Eeva who has so givingly bought flowers for Aimo again?'
- b. Kati-sta-pa Petteri on **Airi-lta vallon** **mehukkaa-n juoru-n**  
 K-ELA-EMP P.NOM be.3SG A-ABL tremendously juicy-ACC gossip-ACC  
 kuul-lut taas!  
 hear-PP again  
 'Petteri has heard a tremendously juicy rumour about Kati again!'



- c. Tiistais-i-n-ko se Maija on **niitä** **joululaulu-j-a**  
 Tuesday-PL-INS-Q that M.NOM be-3SG those.PAR Xmas.carol-PL-PAR  
**nuotin viere-stä** kailotta-nut aina siellä kirkkokuoro-ssa?  
 note-GEN side-ELA belt-NUT always there.ALL church.choir-INE  
 'Is it on Tuesdays that that Maija has belted those Christmas carols off  
 key in the church choir?'

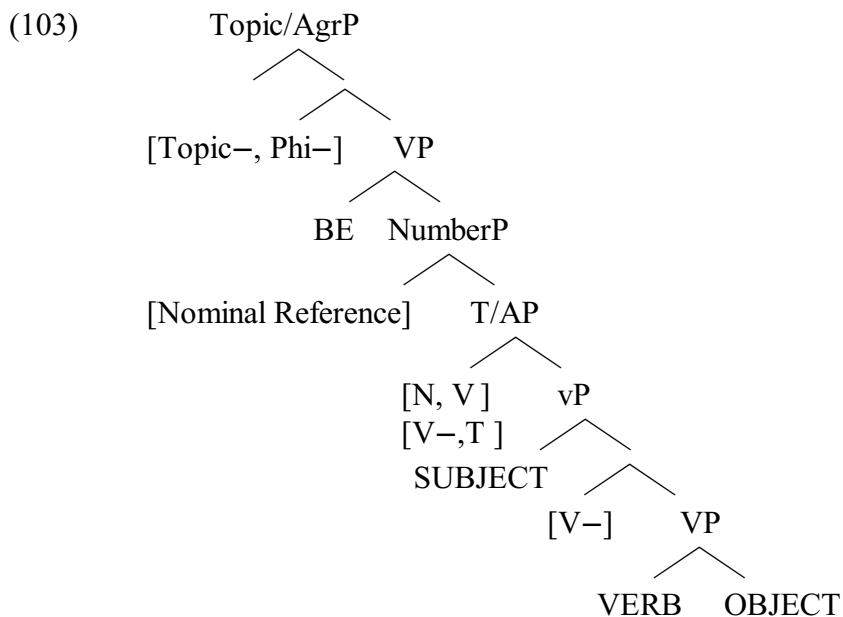
If the periphrastic perfect form only contains a single [Topic] feature, this suggests that the number of [Topic] features in a construction is not determined by the number of [Temporal Reference] features, as I have assumed up to this point, but by the number of events in the construction. Although the copula *olla*, 'be', bears its own temporal specification, it does not express an autonomous event. Unfortunately, it is not possible to determine at this point which syntactic feature encodes "eventiveness", and hence requires the presence of [Topic], since it has not been established where in the syntactic structure of Finnish an event specification resides, i.e. whether it is a property of lexical items, or of some grammaticalized functional position (cf. Cowper 1997 for a discussion of the role and position of events in English). The investigation of this issue would take us far beyond the scope of this thesis. I will continue operating under the premise that the appearance of a topic position in a clause is connected to the temporal specification of the clause, with the understanding that this generalization is too broad, and that some more detailed temporal or aspectual factor actually determines the number of topics. Within the approach adopted here for the identification of Topic nodes, the exact relationship is not important, since Topic positions are posited only with strong evidence for a specifier position.

The subject of the participial adjectival small clause cannot check its [case] feature within either vP, T/AP or NumberP. Thus its features must be checked within the extended Infl structure of the auxiliary verb *olla*, 'be', where it can check its [case] feature. Since the copula *olla*, 'be', induces subject-verb agreement in its finite manifestations in the language, I assume that it bears a specification that requires this [phi] feature checking to take place. As a consequence, the subject's morphological case is interpreted as nominative.

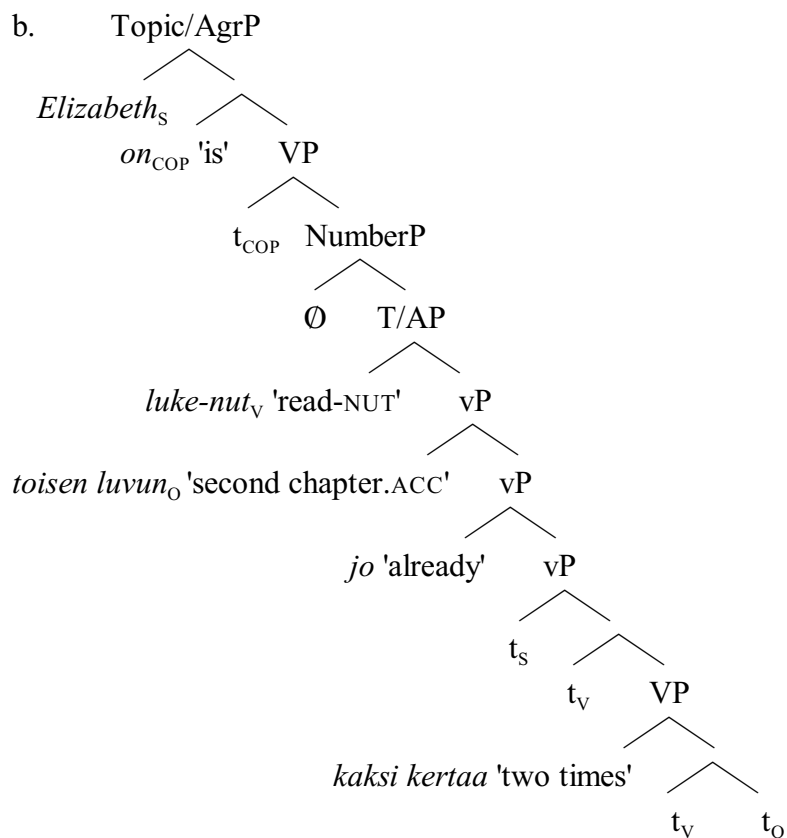
As in all other Finnish clause types discussed in this thesis so far, adjunction of presupposed DPs to all maximal projections is permitted. This accounts for the presence of the DPs *tänä syksynä*, 'this fall', in (102a), in (102b), and *apiloita*, 'clover', in (102c), which precede the Topic, T/AP and vP positions, respectively. The adjunct status of these raised DPs is revealed by intonational prominence in (102a-b), and the acceptability of multiple DPs in these positions, illustrated in (102c).

- (102) a. [<sub>TopicP</sub> Uude-n talo-n<sub>O</sub> on [<sub>VP</sub> t<sub>COP</sub> [<sub>Topic/DP</sub> tänä syksy-nä<sub>OBL</sub>  
new-ACC house-ACC be.3SG this.ESS fall-Ess  
[<sub>Topic/DP</sub> 23. kadu-lta<sub>OBL</sub> [<sub>T/AP</sub> osta-nut<sub>V</sub> [<sub>VP</sub> t<sub>V</sub> Diane t<sub>O</sub> t<sub>OBL</sub> t<sub>OBL</sub> ]]]]...  
23rd Street buy-NUT D.NOM  
'Diane has bought the new house on 23rd Street this fall (and Alana last summer in the Annex)'
- b. [<sub>TopicP</sub> Viime viiko-lla<sub>OBL</sub> ol-i [<sub>VP</sub> t<sub>COP</sub> [<sub>Topic/DP</sub> Judith<sub>S</sub> [<sub>T/AP</sub> tiistai-ilta-na<sub>OBL</sub>  
last week-ADE be-PAST.3SG J.NOM Tuesday.night-Ess  
[<sub>T/AP</sub> osallistu-nut<sub>V</sub> [<sub>VP</sub> t<sub>S</sub> t<sub>V</sub> Elizabethi-n luenno-lle t<sub>OBL</sub> t<sub>OBL</sub> ]]]]...  
take.part-NUT E-GEN lecture-ALL  
'Last week, Judith had, on Tuesday night, attended Elizabeth's lecture (and on Wednesday morning, been so sleepy that she overslept)'
- c. [<sub>TopicP</sub> Sofia-ko<sub>S</sub> on [<sub>VP</sub> t<sub>COP</sub> [<sub>Topic/DP</sub> apilo-i-ta<sub>O</sub> [<sub>T/AP</sub> poimi-nut [<sub>VP</sub> puisto-sta<sub>OBL</sub>  
S.NOM-Q be-3SG clover-PL-PAR pick-NUT park-INE  
[<sub>VP</sub> Nipsu-lle<sub>OBL</sub> [<sub>VP</sub> usein [<sub>VP</sub> t<sub>S</sub> t<sub>V</sub> tänä kesä-nä t<sub>O</sub> t<sub>OBL</sub> t<sub>OBL</sub> ]]]]]].  
N-ALL often this.ESS summer-Ess  
'Is it Sofia who has picked clover from the park for Nipsu often this summer?'

The functional features related to the past participle form in main clause perfective construction are shown in (103). (104) provides a sample derivation of a periphrastic perfect sentence.



- (104) a. Elizabeth on luke-nut toisen luvu-n jo kaksi kerta-a.  
 E.NOM be.3SG read-NUT second.ACC chapter-ACC already two time-PAR  
 'Elizabeth has probably already read it two times'



### 3.2.2.2. The negated past tense main clause

The negated main clause participle construction differs from the perfective one in that it has no adjective and noun correlates comparable to the copular counterparts of the perfective construction. (105a,b) show that negated structures with purely adjectival or nominal complements are unacceptable, in contrast with the grammaticality of equivalent examples with the auxiliary *olla*, 'be', which were shown in (94). Only the participial complement in (105c) is admissible.

- (105) a. \*He        ei-vät    iloise-t.  
              3PL.NOM NEG-3PL happy-PL.NOM.  
              'They (are) not happy'
- b. \*He        ei-vät    lääkäri-t.  
              3PL.NOM NEG-3PL doctor-PL.NOM  
              'They (are) not doctors'
- c. He        ei-vät    juos-see-t        ulos.  
              3PL.NOM NEG-3PL run-NUT-PL.NOM out  
              'They didn't run out'

I assume that nominal complements with the sentential negator are ruled out because sentences must be temporally anchored (Enç 1987). To achieve this, some element in a sentence must bear a [Temporal Reference] feature, and neither the purely nominal small clause complements nor the negator in (105a-b) carry such a feature. As was discussed in section 2.3.3.1 of the preceding chapter, the negator is simply the overt realization of the functional feature [Neg], and has no independent meaning beyond this. To fulfil the requirements for predication, the negated sentence must contain a feature that allows the expressed proposition to be linked to the time line. The negator does not carry this feature, and hence must take a complement that contains [T].

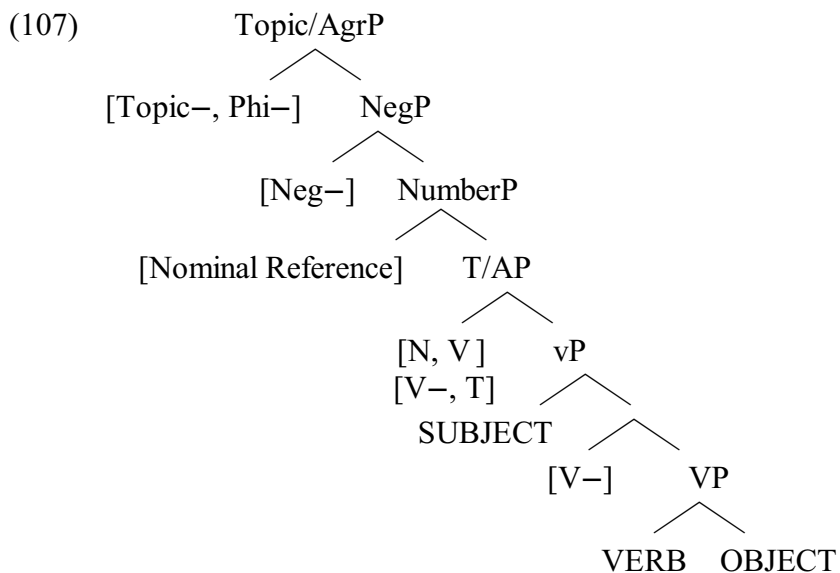
The [Topic] feature that is obligatorily selected with any [Temporal Reference] feature is housed in the Agr projection of the negator rather than on the embedded NumberP

projection. Although presupposed DP's may scramble to adjoin to T/AP or to NumberP, as in (106a,b), the sentences in (106c,d) illustrate that the negator and the participle also occur adjacent to each other, so that no DP necessarily intervenes between them.

- (106) a. Eeva-ko Aimo-lle **ei** **kukk-i-a** **muista-nut** osta-a taas?  
 E.NOM-Q A-ALL NEG.3SG flower-PL-PAR remember-NUT buy-TA again  
 'Is it Eeva who didn't remember again to buy flowers for Aimo?'
- b. Kati-sta-pa Petteri **ei** **juoru-j-a** **kyllä** **kuul-lut** koskaan.  
 K-ELA-EMP P.NOM NEG.3SG gossip-PL-PAR certainly hear-NUT ever  
 'Petteri certainly never heard rumours about Kati!'
- c. Eeva **ei** **muista-nut** osta-a Aimo-lle kukk-i-a.  
 E.NOM NEG.3SG remember-NUT buy-TA A-ALL flower-PL-PAR  
 'Eeva didn't remember to buy Aimo flowers'
- b. Petteri **ei** **kuul-lut** juoru-j-a Kati-sta.  
 P.NOM NEG.3SG hear-NUT gossip-PL-PAR K-ELA-EMP  
 'Petteri didn't hear rumours about Kati'

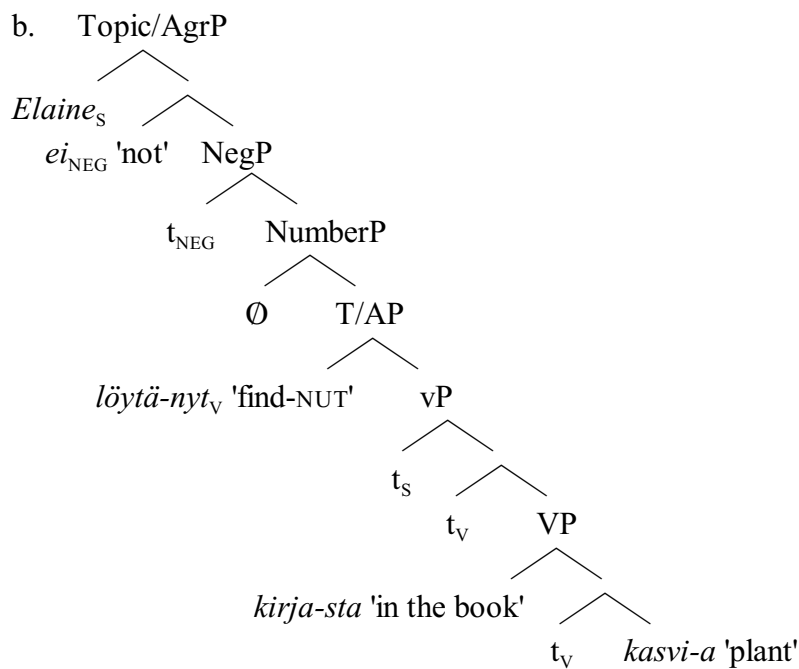
Since the negator does not bear a [temporal reference] feature (or express an independent event), there is no reason to propose that the construction is biclausal in the sense that there should be two [Topic] features. More research is needed into the question of how to predict what the position of the [Topic] feature in each construction should be, but for now the data can be used to establish the facts in Finnish.

The structure of the negated past tense main clause is shown in (107).



(108) provides a sample derivation.

- (108) a. Elaine ei löytä-nyt kirja-sta kasvi-a.  
 E.NOM NEG.3SG find-NUT book-INE plant-PAR  
 'Elaine didn't find the plant in the book'





- (111) a. [pallo-n heittä-ne-i-lle] laps-i-lle  
 ball-ACC throw-NUT-PL-ALL child-PL-ALL  
 'for/to the children who have thrown the ball'
- b. ilois-i-lle laps-i-lle  
 happy-PL-ALL child-PL-ALL  
 'for/to the happy children'

Participial clauses may also appear in other adjectival positions, such as resultative constructions, shown in (112a), or as modifiers of other adjectives, in (113a). (112b) and (113b) illustrate the same structures with lexical adjectives.

- (112) a. Aika ol-i kulutta-nut talo-n [peruksi-lta-an]  
 time.NOM be-PAST.3SG use-NUT house-ACC foundation-ADE-3Pos  
 täysin rappeutu-nee-ksi].  
 entirely decay-NUT-TRAN  
 'Time has used up the house (until it became) entirely decayed in its foundation'
- b. Aika ol-i kulutta-nut talo-n [asuikelvottomaksi].  
 time.NOM be-PAST.3SG use-NUT house-ACC uninhabitable-TRAN  
 'Time had used up the house (until it became) uninhabitable'
- (113) a. Kunio riehaantu-i [juuri päiväuni-lta herän-nee-n] hurmioitunee-ksi.  
 K.NOM get.wild-PAST.3SG just nap-ABL wake-NUT-ACC ecstasy-TRAN  
 'Kunio got as wild as (someone) just woken from a nap is ecstatic'
- b. Kunio riehaantu-i [hullunkurise-n] hurmioitunee-ksi.  
 K.NOM get.wild-PAST.3SG comical-GEN ecstasy-TRAN  
 'Kunio got as wild as (someone) comically ecstatic'

### 3.2.3.1. The prenominal participle is not a lexical adjective

The behaviour of the past participle form in sentences such as (109-113) seems to indicate that the participle functions like a full adjective in these constructions. One logical conclusion would be to suggest that the participles occurring in these forms are categorized as syntactic adjectives, and that the object of the participle is simply incorporated to the



adjectival head. Several arguments refute this proposal. First, even in these structures, the past participle retains its normal object case assignment abilities, with the standard aspectual effects on interpretation. Object case assignment by the participle can be observed in all the examples given above, but (114) illustrates the alternation with regard to semantic interpretation most clearly.

- |   |  |
|---|--|
| (114) a. [ <b>pallo-n</b> heittä-nyt] lapsi<br>ball-ACC throw-NUT child<br>'the child who threw the ball'<br>(telic interpretation) | b. [ <b>pallo-a</b> heittä-nyt] lapsi<br>ball-PAR throw-NUT child<br>'the child who threw ball'<br>(atelic interpretation) |
|---|--|

In addition to the regular case variation pattern, the object of the prenominal participle exhibits other properties that rule out an incorporation analysis of the construction. Unlike incorporated objects, the object in the prenominal participle construction bears stress independently from the participial verb. Another property often associated with incorporated objects requires them to be non-specific. However, as illustrated by the very specific modification of *kalaa*, 'fish', in (110), the object of the participial form can be fully referential. Finally, it can be observed in several of the examples above that modifiers other than a direct object may also complement the participial verb. (115) illustrates this explicitly. We would not expect to be able to incorporate this entire range of clausal complementation onto the head adjective. It is evident that an incorporation analysis of the prenominal participle use is not feasible.

- (115) Minä kaipa-a-n niitä    [**kuusi vuot-ta joka aamu viittä vaille kahdeksan**  
       I.NOM miss-1SG those.PAR six    year-PAR every morning five    to    eight  
    **kanssa-ni bussi-a odotta-ne-i-ta]**    pikku poik-i-a.  
    with-1POS bus-PAR wait-NUT-PL-PAR little boy-PL-PAR  
       'I miss those little boys who for six years waited for the bus with me every morning  
       five to eight'

Furthermore, the participle itself does not behave like a regular lexical adjective with regard to the availability of comparative or superlative forms. Although some participial

heads with no complements can bear comparative or superlative inflection, these processes are not productive, as shown in (116).

- (116) a. Tämä talo on paljon **rappeutu-nee-mpi** kuin tuo.  
 this.NOM house.NOM be.3SG much decay-NUT-COM than that.NOM  
 'This house is much more decayed than that one'
- b. Sofia on **innostu-nee-mpi** ehdotukse-sta kuin minä.  
 S.NOM be.3SG excited-NUT-COM suggestion-INE than I.NOM  
 'Sofia is more excited about the suggestion than I am'
- c. Gateau on huomattavasti **hyvinsyö-nee-mmä-n** näköinen kuin Anaïs.  
 G.NOM be.3SG considerably better.eat-NUT-COM-GEN like than A.NOM  
 'Gateau looks considerably more well fed (?eaten) than Anaïs'
- (117) a. \*Tämä talo on paljon **hajon-nee-mpi** kuin tuo.  
 this.NOM house.NOM be.3SG much break-NUT-COM than that.NOM  
 'This house is much more broken than that one'
- b. \*Kipling on **ui-nee-mpi** kuin Sofia.  
 K.NOM be.3SG swim-NUT-COM than S.NOM  
 'Kipling has swum more/is a more experienced swimmer than Sofia' (??)
- c. \*Gateau on **syö-nee-mpi** kuin Anaïs.  
 G.NOM be.3SG eat-NUT-COM than A.NOM  
 'Gateau has eaten more/is plumper than Anaïs' (??)

I assume that those participles that allow comparative formation have, in fact, been lexicalized as adjectives. In such cases the lexical item that bears the participial morpheme enters numeration with the syntactic feature matrix [N, V]. Consequently, these participles cannot bear the feature [(Assign) Object case], nor can they assign the range of theta-roles associated with propositional predicates. Since the forms never take complements or subjects, they do not express propositions, and therefore no [temporal reference] feature checking takes place. I assume that any temporal interpretation associated with such forms is encoded in their lexical meaning. This view of lexicalization of the participle forms that allow comparative formation is supported by the finding that many participial comparatives

may only appear in limited circumstances, such as abstract or metaphoric uses (examples from Koivisto 1987:43).

- (118) a. \**Kuol-lee-mpi mies vie-dä-än hauta-an.*  
 die-NUT-COM man.ACC bring-PASS-AGR grave-ILL  
 'The more dead man is brought into the grave'
- b. *Kuol-lee-mpa-a ilmet-tä saa hake-a.*  
 dead-NUT-COM-PAR expression-PAR can.3SG search-TA  
 'One can look for a more dead expression (and not find one)!'

Any participles that occur with full clause structures containing complements and modifiers can never be used in comparative constructions.

- (119) a. \**[Pallo-a heittä-nee-mpi] lapsi voitt-i kilpailu-n.*  
 ball-PAR throw-NUT-COM child.NOM win-PAST.3SG competition-ACC  
 'The child (who) threw the ball more won the competition'
- b. \**[Sitä vanha-a haiseva-a kala-a ahneesti syö-nei-mmä-t]*  
 that-PAR old-PAR stinking-PAR fish-PAR greedily eat-NUT-COM-PL.NOM  
 kissa-t sairastu-i-vat.  
 cat-PL.NOM get.sick-PAST-3PL  
 'The cats (who) most ate that old stinking fish greedily got sick'
- c. \**Se [perustuksi-lta-an rappeutu-nee-mpi] talo pure-ta-an*  
 that.ACC foundation-ABL-3POS decay-NUT-COM house.ACC demolish-PASS-AGR  
 ensin.  
 first  
 'The house (which is) more decayed in its foundation will be demolished first'

This diagnostic of comparative formation demonstrates that even in the most adjective-like use of the past participle the construction is distinct from lexical adjectives. Since an incorporation analysis is ruled out and the participial form manifests some non-adjectival qualities, and particularly since I seek to provide a monosemous account of the past participle morpheme, I start my explanation of the behaviour of the adjectival use of the participle with the following premise. Based on the central assumption underlying my

analysis of Finnish participles that the expression of full case assignment uniquely identifies a verb, I conclude that the participle in these adjectival constructions heads a vP-VP complex identical to those found in the other two participial environments. Furthermore, I assume that the adjectival characteristics of the prenominal participle stem from the syntactic [N, V] features of the T/A morpheme. However, the morphological and syntactic properties of the adjectival participle construction differ from those of the other two uses; thus a closer look at the structure of the functional domain in this form is warranted.

### 3.2.3.2. Finnish relative clauses

The prenominal participle clause has a semantic correlate in the finite relative clause construction. The finite form always occurs post-nominally, it is introduced with a relative pronoun, and it manifests the characteristics of finite clauses that were discussed extensively in chapter 2. The finite relative clauses portrayed in (120a) and (121a) contrast with the participial clauses in (120b) and (121b) (repeated here from (109a) and (110a)).

- (120) a. lapsi, [joka heitt-i pallo-n]  
 child.NOM who.NOM throw-PAST.3SG ball-ACC  
 'the child who threw the ball'

- b. [pallo-n heittä-nyt] lapsi  
 ball-ACC throw-NUT child  
 'the child (who) threw the ball'

- (121) a. ne kolme tyhmä-ä kissa-a, [jotka sö-i-vät  
 those.NOM three.NOM dumb-PAR cat-PAR who.PL.NOM eat-PAST-3PL  
 ahneesti sitä vanha-a haiseva-a kala-a]  
 greedily that-PAR old-PAR stinking-PAR fish-PAR  
 'those three dumb cats who greedily ate that old stinking fish (got sick)'

- b. ne kolme [sitä vanha-a haiseva-a kala-a ahneesti  
 those.NOM three.NOM that-PAR old-PAR stinking-PAR fish-PAR greedily  
 syö-nyt-tä] tyhmä-ä kissa-a  
 eat-NUT-PAR dumb-PAR cat-PAR  
 'those three dumb cats (who) greedily ate that old stinking fish'

The lack of finite inflectional marking on the participial verb in comparison with the finite main verb has been addressed at length, and accounted for, in the analyses of the embedded and main clause participle uses. Since the abstract participial morpheme bears only the syntactic features [N, V, V-, T], it cannot check the [Mood] or [Phi] features that characterize the functional projections of finite relative clauses, which are exemplified in (120a) and (121a). Consequently, finite mood, tense or person/number agreement morphology cannot be realized in the prenominal participial clauses.<sup>60</sup> However, the absence of a relative pronoun from the participial clause and the different order of constituents within the two relative clause construction types necessitate further examination.

It was proposed above that the participial verb in the prenominal construction originates within a VP projection. As elsewhere in the language, a verb must raise to the head of vP in order to check a strong [V] feature of v, and to take part in the licensing of a subject position in the specifier of vP. Although no subject is ever overtly observable in the prenominal participle construction, I will shortly demonstrate that the structure nonetheless includes a subject and a subject position.

I have suggested that the adjectival nature of the construction is due to the [N,V] features of an abstract T/A projection under which the participial vP is embedded. As in the other past participle constructions, I assume that the participial verb moves overtly to T/A to check a strong [V] feature and a [Temporal Reference] feature. The now familiar diagnostic of temporal adverb positioning cannot be used in this construction to identify verb movement, since the prenominal participle form places an idiosyncratic condition on all its arguments and modifiers: they must scramble out of vP, leaving the participial head right-most in the string. This is illustrated in (122a). However, the possibility of modifying the event described in the participial proposition independently of the main clause event confirms the presence of a higher functional head, as in (122b).

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<sup>60</sup> Under my assumption of morphological realization as taking place post-syntactically, if [Mood] and [Phi] features were to enter the derivation at numeration, and their checking could take place successfully, the end result would be a finite relative clause.

- (122) a. [Halloween karkke-j-a **usein** syö-nyt] Anneli sai hammassäry-n.  
 H. candy-PL-PAR often eat-NUT A.NOM get-PAST.3SG tooth.ache-ACC  
 'Anneli, who often ate Halloween candy, got a tooth ache'
- b. [**Aamu-lla** /**Koko päivä-n** Halloween karkke-j-a syö-nyt]  
 morning-ADE/ all day-ACC H. candy-PL-PAR eat-NUT  
 lapsi sai **illa-lla** kova-n hammassäry-n.  
 child.NOM get.PAST.3SG evening-ALL bad-ACC tooth.ache-ACC  
 'The child, who had eaten Halloween candy in the morning/all day, got a bad  
 toothache in the evening'

I propose that the [nominal reference] feature of the T/A head is checked covertly by a DP level of projection, whose presence also accounts for the presence of number and case marking on the participle. Due to the case morphology, we must assume that the projection is D level, rather than NumberP. I assume that the number and case features of the participle are determined and checked by the head noun that the participial clause modifies, through whatever mechanism is assigned to concord in attributive adjectives in general.

Although overt subjects never appear in the prenominal participle construction, the interpretation of the adjectival participle clause is basically identical to that of the finite relative clause, in which subject DP's are freely expressed. Because of this parallel, I propose that the prenominal participle form should also be considered a full clause. I have already argued that the participial verb assigns a subject thematic role, despite the fact that no subject is ever visible in the clause. I submit that the subject of the prenominal participle clause is a phonologically null relative operator.

Several kinds of evidence support the presence of a null subject in the adjectival participle clause. First, as already mentioned, the participial verb agrees in number with the head noun, which corresponds to the agent theta role assigned by the participial verb to the null subject. In (123b) both the head NP and the participle show plural marking, but the plural object in (123c) does not trigger plural marking on the verb. In the account of the main clause participle form in section 3.2.2 I analyzed the number agreement on the participle as the morphological realization of [nominal reference] feature checking. However, the morphological realization of this checking is determined through [number]

feature checking between a subject DP and the participial head. Analogously, I suggest that the prenominal participle clause contains a subject whose [number] features are checked against those of the participle.<sup>61</sup>

- (123) a. pallo-n          heittä-nyt          lapsi  
           ball-ACC(SG) throw-NUT(SG) child.NOM(SG)  
           'the child who threw the ball'
- b. pallo-n          heittä-nee-t      lapse-t  
           ball-ACC(SG) throw-NUT-PL child-PL.NOM  
           'the children who threw the ball'
- c. pallo-t          heittä-nyt          lapsi  
           ball-PL.ACC throw-NUT(SG) child.NOM(SG)  
           'the child who threw the balls'

In addition, subject-oriented modification of the non-overt subject is possible, as shown in (124). The adverbials *ikkunan rikkoakseen*, 'in order to break the window', and *tahallaan*, 'on purpose', refer to the agent of the participial verb. Comparing the participial structure again with the deverbal *-minen* nominal we find that while adverbial modification referring to the subject is acceptable in the participial clause, it is not possible with the deverbal noun form. The distinctions in behaviour with regard to syntactic categorization between the participial form and the *-minen* nominal were explained earlier based on the claim that the deverbal *-minen* form is a morphologically derived lexical noun, while the participial verb and its complements form a full vP projection. The behaviour of the prenominal participle form here, which corresponds to the characteristics of the embedded and main clause participles rather than the *-minen* construction, further supports a full clause analysis.

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61 As well as against those of the head noun, through concord.

- (124) a. [**Ikkuno-i-ta rikko-a-kse-en tahallaan** pallo-j-a heittä-nyt]  
 window-PL-PAR break-TA-TRAN-3POS on.purpose ball-PL-PAR throw-NUT.ACC  
 lapsi napa-tt-i-in äsken.  
 child.ACC catch-PASS-PAST-AGR just  
 'The child who threw balls on purpose in order to break windows was just caught'
- b. [Pallo-n heittä-minen ikkuna-an (**\*tahallaan, \*ikkuna-n /sen**  
 ball-ACC throw-DEVN window-ILL on.purpose window-ACC/3SG.ACC  
**rikko-a-kse-en**)] on käsittämätöntä.  
 break-TA-TRAN-3POS be.3SG incomprehensible  
 'To throw a ball at a window on purpose, in order to break the window/it, is  
 incomprehensible'

A third phenomenon that indicates the presence of a subject DP in the prenominal participle construction comes from the acceptability of reflexive pronouns in this environment. Based on the analysis of Steenbergen (1987, 1991) the anaphor *itse*, 'self', and the set of possessive anaphors have been used to uniquely identify the subject of a given clause. Notably these anaphors are perfectly admissible in the adjectival participle structures under analysis. This requires the presence of a subject within the clause. I also note that these anaphors do not allow long-distance binding in any other context, and hence we cannot assume that the head noun binds into the participial clause from the matrix environment. The binding subject must be located within the participial clause.

- (125) a. Prinsessa Elizabethi-n<sub>i</sub> nuhtelu-t ajo-i-vat [**itse-ä-än**<sub>\*i/j</sub>  
 princess E-GEN reproach-PL.NOM drive-PAST-3PL self-PAR-3POS  
 palvo-nee-n] prinssi Ronaldi-n<sub>j</sub> tiehe-nsä.  
 adore-NUT-ACC prince R-ACC away-3POS  
 'Princess Elizabeth's reproaches drove away the self-adoring Prince Ronald'
- b. Tuomise-n rouva<sub>i</sub> yllätt-i [**itse-lle-en**<sub>\*i/j</sub> piano-a kauan  
 T-GEN Mrs. surprise-PAST.3SG self-ALL-3POS piano-PAR long  
 toivo-nee-n] Jaana-n<sub>j</sub> erää-nä harmaa-na keskiviikkoiltapäivä-nä.  
 wish-NUT-ACC J-ACC one-ESS grey-ESS Wednesday.afternoon-ESS  
 'Mrs. Tuominen<sub>i</sub> surprised Jaana<sub>j</sub>, who (had) wished for a piano for herself<sub>\*i/j</sub> for  
 a long time, one grey Wednesday afternoon'



These data confirm the presence of a relative pronoun subject in the prenominal participle form. There is a difference between the participial relative clause and the finite relative clause, however, in that in the participial form only the subject may be relativized, while in the finite relative clause any DP (e.g. a subject, an object, an indirect object, an oblique DP) can undergo relativization. I assume that this difference is due to the fact that whereas the overt relative pronoun explicitly identifies the [case] and [phi] feature content of the relativized DP, in the participial construction this verification cannot be achieved through a null pronoun for any complement of the verb other than the subject. Since Finnish verbs, including the participle, manifest agreement with the [phi] features of the subject, minimally for number, the feature identity of a null subject pronoun in the prenominal participle construction is therefore recoverable. Information about the features of other null DPs, however, would not be interpretable based on the overt morphological or syntactic form of the clause.

Once I have identified a relative pronoun operator in the prenominal participle clause, I can now investigate what effects its presence has on the structure required for the clause. Under standard assumptions (e.g. May 1977, Huang 1982), a relative operator must raise to a position of scope over the proposition that it quantifies. In most published work on relativization in various languages this position has been taken to be CP. The Finnish CP position has, however, so far been linked solely with the presence of clause typing complementizers, and no DP raising to this position for feature checking purposes has been observed. Since no complementizers ever occur in the adjectival participle construction, it is hard to motivate the presence of a CP level of representation.

The location of overt relative pronouns can be used to shed light on the status of relativized DP's in the language. The examples given here have shown that overt relative pronouns raise overtly to a clause-initial position. No overt complementizers ever appear in such relative clauses. Since the position of the relative pronoun in (125) is to the left of both a focussed DP and a topicalized DP, we might assume that the relative pronoun is located in the [Spec, CP] position.

- (125) mies [CPjolle [FocusPHanna [TopicPkukk-i-a osta-a [vpaina tiistai-na]]]]  
 man.NOM who.ALL H.NOM flower-PL-PAR buy-3SG always Tuesday-ESS  
 'the man for whom Hanna always buys flowers on Tuesday (is here)'

I want to argue against this proposal, however. It is to be remembered that DPs also receive a intonational prominence and a focussed interpretation when adjoined to some maximal projection, such as Topic/AgrP. Nevertheless, a finite relative clause must contain a FocusP, since extraction of focussed elements out of the relative clause into the FocusP of the matrix clause is ruled out, as illustrated in (126a). This restriction contrasts with the possibility of extracting focussed elements out of embedded participle clauses into the matrix FocusP, as in (126b). I argued in section 3.2.1.5 that there is no FocusP projection within the embedded participial clause, and hence a focussed X(P) can raise to check the [Focus] feature of the matrix structure.

- (126) a. \***Kukk-i-a**<sub>O</sub> minä pidä-n miehe-stä [ZPjolle [Topic/AgrPTuija [vpusein myy t<sub>O</sub>]]].  
 flower-PL-PAR I.NOM like-1SG man-INE who.ALL T.NOM often sell-3SG  
 'I like the man to whom Tuija often sells flowers'
- b. **Kukk-i-a**<sub>O</sub> minä kuule-n [DP Tuija-n [T/APosta-nee-n taas Aki-lle t<sub>O</sub>]].  
 flower-PL-PAR I.NOM hear-1SG T-GEN buy-NUT-ACC again A-ALL  
 'I hear (that) Tuija (has) bought flowers again for Aki'

In contrast with the restriction set on focus movement by relative pronouns, extraction of focussed X(P)s is permitted with complementizers (Korhonen 1993:20).

- (127) [FocusP**Kukk-i-a**<sub>O</sub> ... minä luule-n [CPettä [TopicPTuija osta-a [vp taas t<sub>O</sub>]]].  
 flower-PL-PAR I.NOM think-1SG that T-NOM buy-3SG again  
 'I think (that) Tuija will buy flowers again'

If the relative pronoun is located in Comp position, we have no explanation for the ungrammaticality of (126a). If, on the other hand, the relative pronouns move into a lower

FocusP position, the limitation on movement is explainable.<sup>62</sup> Since the relative pronoun checks the relevant feature (I will call it [focus] for simplicity's sake) against the Focus head of the relative clause structure, no other element that bears a [focus] feature can move past this position to check the matrix [Focus] feature. (128) demonstrates that focus extraction from finite complement clauses is not acceptable if the FocusP of the subordinate clause is filled.

- (128) a. \*<sub>[FocusP]</sub> **Kukk-i-a**<sub>O</sub> ... minä luule-n <sub>[CP]</sub> että <sub>[FocusP]</sub> **tiistais-i-n** <sub>[TopicP]</sub> Tuija  
 flower-PL-PAR I.NOM think-1SG that Tuesday-PL-ESS T-NOM  
 osta-a <sub>[vp]</sub> taas **t<sub>O</sub>**]]]].  
 buy-3SG again  
 'I think (that) Tuija will buy flowers again on Tuesday'
- b. \*<sub>[FocusP]</sub> **Tiistais-i-n** ... minä luule-n <sub>[CP]</sub> että <sub>[FocusP]</sub> **kukk-i-a**<sub>O</sub> <sub>[TopicP]</sub> Tuija  
 Tuesday-PL-ESS I.NOM think-1SG that flower-PL-PAR T-NOM  
 osta-a <sub>[vp]</sub> taas **t<sub>O</sub>**]]]].  
 buy-3SG again  
 'I think (that) Tuija will buy flowers again on Tuesday'

Morphological evidence supports a view of the relative pronouns located in the same position as question words. (129) illustrates that the two kinds of words are remarkably similar, and often identical, in form.

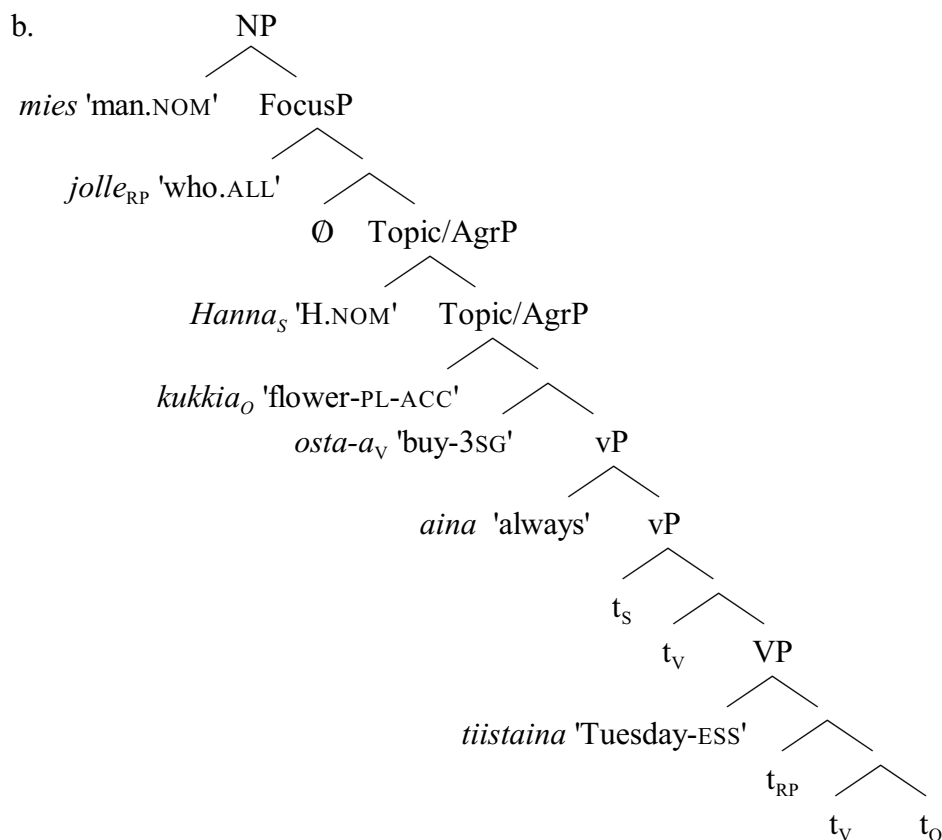
(129) <u>relative pronouns</u>	<u>question words</u>
<i>joka</i> 'who.NOM'	<i>kuka</i> 'who.NOM'
<i>jota</i> 'who.PAR'	<i>ketä</i> 'who.PAR'
<i>jolle</i> 'who.ALL'	<i>kenelle</i> 'who.ALL'
<i>mikä</i> 'what.NOM'	<i>mikä</i> 'what.NOM'
<i>mitä</i> 'what.PAR'	<i>mitä</i> 'what.PAR'
<i>mille</i> 'what.ALL'	<i>mille</i> 'what.ALL'
<i>jonne, minne</i> 'what.ILL'	<i>minne</i> 'what.ILL' = 'where'
<i>jolloin, milloin</i> 'when'	<i>milloin</i> 'when'

---

<sup>62</sup> Korhonen (1993:10, fn.17) also proposed that Finnish relative pronouns should end up in FocusP. I leave open, for the time being, the question of why no complementizers may co-occur with relative pronouns in such structures. This issue will come up again in chapter 4.

Under a revised analysis of the position of relative pronouns, the structure of the sentence first shown in (125) is the following.

- (130) a. mies jolle Hanna kukk-i-a osta-a aina tiistai-na ...  
 man.NOM who.ALL H.NOM flower-PL-PAR buy-3SG always Tues-ESS  
 'the man for whom Hanna always buys flowers on Tuesday (is here)'

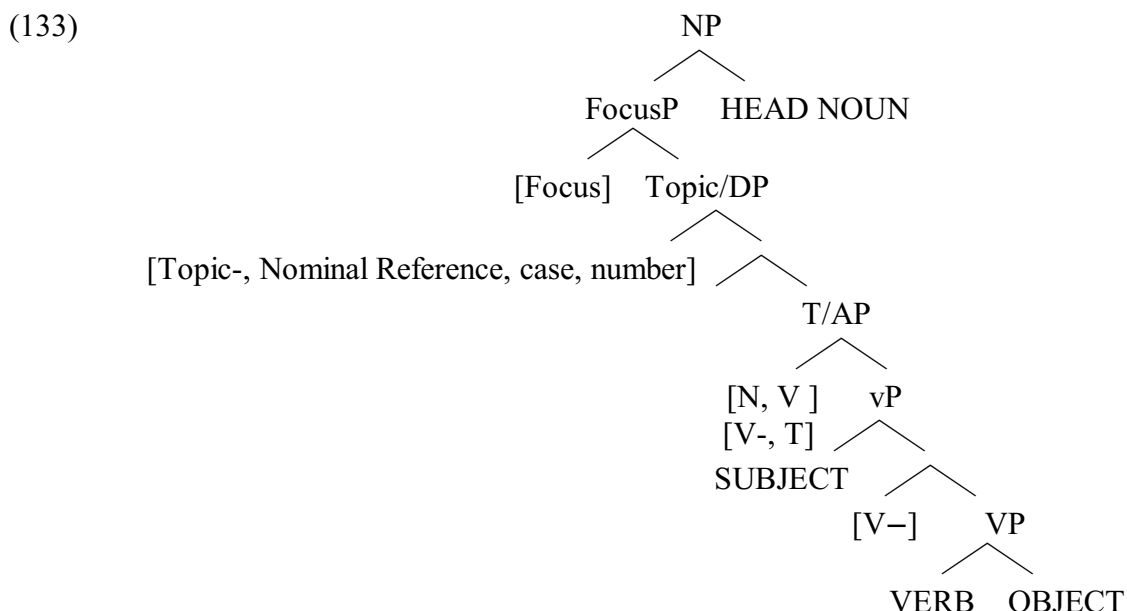


I now raise the question of whether the null relative operator in the prenominal participle clause can be assumed to move to a position identical to that of the overt relative pronouns, namely FocusP. Note first of all that the same restriction on focus extraction applies in both clause types. This limitation in the prenominal participle form contrasts with the possibility of extraction from embedded participle clauses that was illustrated in (126b).

- (131) \***Kukk-i-a**<sub>o</sub> minä pidä-n [<sub>FocusP</sub> [<sub>DP</sub> Tuija-lle [<sub>T/AP</sub> osta-nee-sta t<sub>o</sub>]]] miehe-stä.  
 flower-PL-PAR I.NOM like-1SG T-ALL buy-NUT-INE man-INE  
 'I like the man who buys flowers for Tuija'

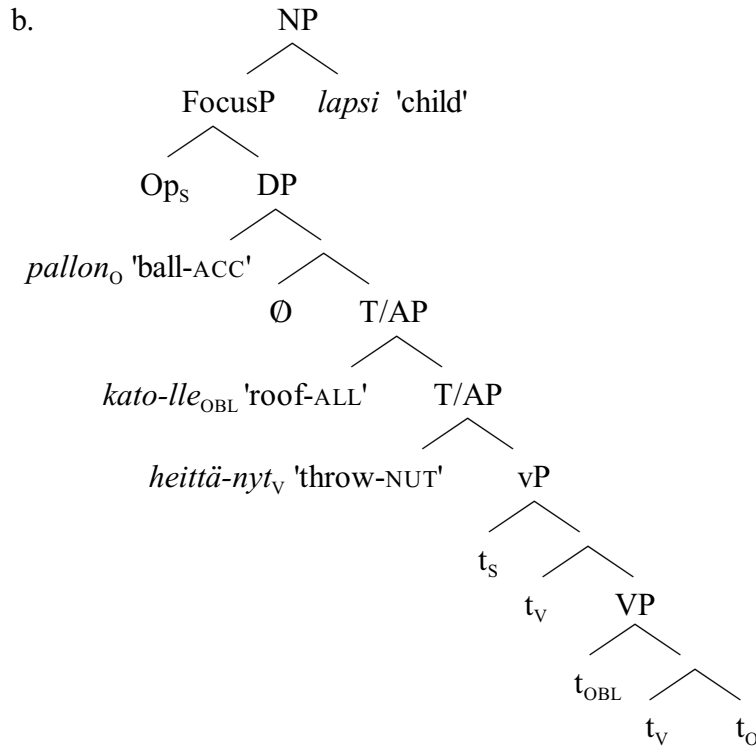
I will therefore assume that the relative operator raises to a Focus position. Since this raising is obligatory in every adjectival participle clause, no other focus type element can ever appear in such clauses, since FocusP is not recursive in Finnish. This explains why no question words or yes/no questions can occur in this environment, although the FocusP projection is present.

(133) shows in detail the structure that has been identified for the prenominal participle construction up to this point. Although no obligatory topic DP can be verifiably detected in the prenominal form, I will assume that it is present, based on the general claim made earlier that all Finnish TP clauses contain this feature. I place the [Topic] and [Nominal Reference] features in the head of Topic/DP, since the internal structure of DP's in Finnish is uncharted.



(134) provides a representative derivation of a prenominal participle clause.

- (134) a. [pallo-n kato-lle heittä-nyt] lapsi  
 ball-ACC roof-ALL throw-NUT child  
 'the child who threw the ball on the roof'  
 (= 'the ball-on-the-roof-thrown child')



This structure leaves open a question about the word order in the prenominal participle form. In contrast with all the sentence types investigated in this thesis up to this point, the adjectival participle clause manifests the seemingly un-Finnish quality of fixed word order. A comparison between (135a) and (135b,c) illustrates the restriction, which requires that all complements and modifiers of the prenominal participial verb appear to the left of the participle.

- (135) a. Ne kolme [sitä vanha-a haiseva-a kala-a ahneesti syö-nyt-tä]  
 those.NOM three.NOM that-PAR old-PAR stinking-PAR fish-PAR greedily eat-NUT-PAR  
 tyhmä-ä kissa-a sairastu-i-vat.  
 dumb-PAR cat-PAR get.sick-PAST-3PL  
 'Those three dumb cats who greedily ate that old stinking fish got sick'

- b. Ne kolme [\*niin ahneesti **syö-nyt-tä** sitä vanha-a haiseva-a  
 those.NOM three.NOM so greedily eat-NUT-PAR that-PAR old-PAR stinking-PAR  
 kala-a] tyhmä-ä kissa-a sairastu-i-vat.  
 fish-PAR dumb-PAR cat-PAR get.sick-PAST-3PL

'Those three dumb cats who so greedily ate that old stinking fish got sick'

- c. Ne kolme [\*sitä vanha-a haiseva-a kala-a **syö-nyt-tä**  
 those.NOM three.NOM that-PAR old-PAR stinking-PAR fish-PAR eat-NUT-PAR  
 niin ahneesti] tyhmä-ä kissa-a sairastu-i-vat.  
 so greedily dumb-PAR cat-PAR get.sick-PAST-3PL

'Those three dumb cats who so greedily ate that old stinking fish got sick'

This restriction contrasts with the word order variation that has been described in other clause types, and that is freely permitted in the corresponding post-nominal finite relative clause form.

- (136) a. se kissa, [joka kala-a niin ahneesti **sö-i** äsken]  
 that.NOM cat-NOM who.NOM fish-PAR so greedily eat-PAST.3SG just  
 'that cat who just ate fish so greedily (has already run away)'

- b. se kissa, [joka kala-a **sö-i** niin ahneesti äsken]  
 that.NOM cat-NOM who.NOM fish-PAR eat-PAST.3SG so greedily just

- c. se kissa, [joka niin ahneesti **sö-i** kala-a äsken]  
 that.NOM cat-NOM who.NOM so greedily eat-PAST.3SG fish-PAR just

A closer inspection reveals that the internal order of all constituents within the participial clause is in no way fixed; rather, the sole condition ties the participial verb as the right-most constituent, or, in other words, closest to the head noun within the attributive participle clause.

- (137) a. Ne kolme [niin ahneesti sitä vanha-a haiseva-a kala-a  
 those.NOM three.NOM so greedily that-PAR old-PAR stinking-PAR fish-PAR  
**syö-nyt-tä**] tyhmä-ä kissa-a sairastu-i-vat.  
 eat-NUT-PAR dumb-PAR cat-PAR get.sick-PAST-3PL  
 'Those three dumb cats who so greedily ate that old stinking fish got sick'

- b. Ne kolme [sitä vanha-a haiseva-a kala-a niin ahneesti  
 those.NOM three.NOM that-PAR old-PAR stinking-PAR fish-PAR so greedily  
**syö-nyt-tä**] tyhmä-ä kissa-a sairastu-i-vat.  
 eat-NUT-PAR dumb-PAR cat-PAR get.sick-PAST-3PL  
 'Those three dumb cats who so greedily ate that old stinking fish got sick'

Although I cannot offer an explanation for this phenomenon, I point out that the restriction is not limited to the prenominal participial construction, but is a general condition that applies to all adjectives and their complements. (138) and (139) illustrate the parallel word order restriction between an underived adjective and its complement, and a semantically related prenominal participle with its object. (140) shows that neither a regular adjective nor the past participle need be phrase-final when they occur in post-copular predicate positions.

- (138) a. tyttäre-stä-än ylpeä äiti  
 daughter-ELA-3POS proud mother  
 'a mother proud of her daughter'
- b. \*ylpeä tyttäre-stä-än äiti  
 proud daughter-ELA-3POS mother  
 'a mother proud of her daughter'
- (139) a. tyttäre-stä-än ylpeil-lyt äiti  
 daughter-ELA-3POS pride-NUT mother  
 'a mother (who) prided in her daughter'
- b. \*ylpeil-lyt tyttäre-stä-än äiti  
 pride-NUT daughter-ELA-3POS mother  
 'a mother (who) prided in her daughter'
- (140) a. Tuo äiti on aina hyvin ylpeä tyttäre-stä-än.  
 that.NOM mother.NOM be.3SG always very proud daughter-ELA-3POS  
 'That mother is always very proud of her daughter'
- b. Tuo äiti on aina ylpeil-lyt tyttäre-stä-än.  
 that.NOM mother.NOM be.3SG always pride-NUT daughter-ELA-3POS  
 'That mother has always prided in her daughter'



It is apparent that any element that bears the adjectival [N, V] features, whether a lexical adjective or a syntactically derived participial adjective, must, for whatever reason, be adjacent to the head noun. Consequently, all modifiers of this element must occur in a position away from the head noun. This movement must be considered to take place as adjunction, rather than for feature checking reasons, since any number of moved elements may occur in a freely variant order, as (141) illustrates. I assume that the adjunction may target any maximal projection above VP.

- (141) a. **tyttöre-stä-än**      **juhli-ssa koko illa-n**      ylpeil-lyt äiti  
 daughter-ELA-3POS party-INE all night-ACC pride-NUT mother  
 'a mother (who) bragged about her daughter all night at the party'
- b. **juhli-ssa koko illa-n**      **tyttöre-stä-än**      ylpeil-lyt äiti  
 party-INE all night-ACC daughter-ELA-3POS pride-NUT mother  
 'a mother (who) bragged about her daughter all night at the party'
- c. **juhli-ssa tyttöre-stä-än**      **koko illa-n**      ylpeil-lyt äiti  
 party-INE daughter-ELA-3POS all night-ACC pride-NUT mother  
 'a mother (who) bragged about her daughter all night at the party'

### 3.2.4. Conclusion

This section has provided a unified analysis of the syntactic properties of the Finnish past participle morphemes in three different constructions. I have argued that while the attempt to account for the behaviour of the participles with strict syntactic category labelling has proven unproductive and ineffective, a new line of investigation with a fine-grained look at only syntactic features is much more explanatory. The analysis proposed here has raised questions about the status of syntactic categories. Syntactic projection has been argued to take place based on feature content, and syntactic derivation is driven by the feature sets that are selected at numeration. With these assumptions, coupled with a view of morphology as late insertion of lexical items, I have shown that seemingly paradoxical structures can be accounted for with the same syntactic features that are at work in finite clauses.

This approach leaves open the question of what the feature content of various functional heads might be. If the inventory and combination of such features is not constrained, a learnability problem is created. This question will be addressed further in chapter 5.

### 3.3. The present participle *-va/ -vä*

This section focuses on the syntactic structure of constructions with the present participle *-va /-vä* (VA). Like the past participle, the present participle appears in three distinct environments, in embedded clauses, in the prenominal position and under main clause auxiliaries. (The examples in (142) all come from Lander 1994.)

- (142) a. (Minä) odota-n [porti-n vihdoin aukea-**va**-n].  
 I.NOM wait-1SG gate-GEN finally open-VA-ACC  
 'I wait for the gate to finally open'
- b. tämä meidän yllätyks-i-ä rakasta-**va** Jumala-mme  
 this our surprise-PL-PAR love-VA god-1PL.POS  
 'this God of ours, who loves surprises'
- c. Vielä on koitta-**va** tämä päivä.  
 yet be.3SG come-VA this.NOM day.NOM  
 'This day will yet come'

#### 3.3.1. The present participle in embedded and prenominal clauses

The morpho-syntactic characteristics of the present participle are identical to those of the past participle in the embedded and prenominal constructions, which suggests a distinction only in the semantic specification of temporal reference. Whereas the past participle morpheme in these environments expresses a backshifting, or past reference, the present participle generally yields a non-past, simultaneous reading. The present participle

form denotes a time coterminous with some other point of temporal reference in the sentence, namely that of the matrix event.

- (143) a. Minä kuule-n [Nipsu-n kuikutta-**va**-n lounaspyyntö-ä-än].  
 I.NOM hear-1SG N-GEN squeak-VA-ACC lunch.request-PAR-3POS  
 'I hear Nipsu squeaking her request for lunch'
- b. Minä huomaa-n [Nipsu-n kuikutta-**nee**-n lounaspyyntö-nsä onnistuneesti].  
 I.NOM notice-1SG N-GEN squeak-NUT-ACC lunch.request-3POS successfully  
 'I notice (that) Nipsu has squeaked her request for lunch successfully'
- (144) a. [Asia-t aina unohta-**va**] Anniina unohti taas tapaamise-mme.  
 thing-PL.NOM always forget-VA A.NOM forgot again meeting-1PL.POS  
 'Anniina (who) always forgets things forgot our meeting again'  
 (interpretation: Anniina is still forgetful even after this particular forgetting event)
- b. [Asia-t aina unohta-**nut**] Anniina muista-a nykyään kaike-n.  
 thing-PL.NOM always forget-NUT A.NOM remember-3SG nowadays everything-  
 ACC  
 'Anniina (who) always forgot things remembers everything nowadays'  
 (interpretation: There was an Anniina who used to be forgetful in the past but she no longer is)

(145) and (146) illustrate the behaviour of the present participle that corresponds to that of the past participle that was investigated in section 3.2. (145a-b) show that the object case assignment ability of the present participle is verb-like. (145a-c) demonstrate that an overt subject DP in the embedded present participle clause always bears genitive case. In (145d) the person/number features of the empty subject pronoun are identified by the possessive suffix *-nsä*. The participial verb bears accusative case in all the example sentences, except when this case is not realized morphologically due to the presence of possessive suffixation. In (145e) the present participle clause is embedded under a raising verb. In such a case the subject bears nominative case and triggers [ $\phi$ ] feature agreement with the raising verb. All these properties are identical to those of the past participle discussed in the previous section.

- (145) a. Päivi näk-i [Sofia-n heittä-vä-n kiepi-n].  
 P.NOM see-PAST.3SG S-GEN throw-VA-ACC cartwheel-ACC  
 'Päivi saw Sofia do a cartwheel' (telic)
- b. Päivi näk-i [Sofia-n heittä-vä-n kieppi-ä].  
 P.NOM see-PAST.3SG S-GEN throw-VA-ACC cartwheel-PAR  
 'Päivi saw Sofia doing a cartwheel' (atelic)
- c. Jaana kerto-i [Eevi-n unelmoi-va-n tanssitunne-i-sta].  
 J.NOM tell-PAST.3SG E-GEN dream-VA-ACC dance.lesson-PL-ELA  
 'Jaana said (that) Eevi (is) dreaming of dance lessons'
- d. Auni unelmoi [*pro* tule-va-nsa iso-na prinsessa-ksi].  
 A.NOM dream.3SG come-VA-3Pos big-ESS princess-TRAN  
 'Auni dreams of becoming a princess (when she grows) big'
- e. Jila<sub>s</sub> kuulu-u [<sub>s</sub> nautti-va-n olo-sta-an Fresno-ssa].  
 J.NOM sound-3SG enjoy-VA-ACC stay-ELA-3Pos F-INE  
 '(It) sounds (like) Jila (is) enjoying her stay in Fresno'

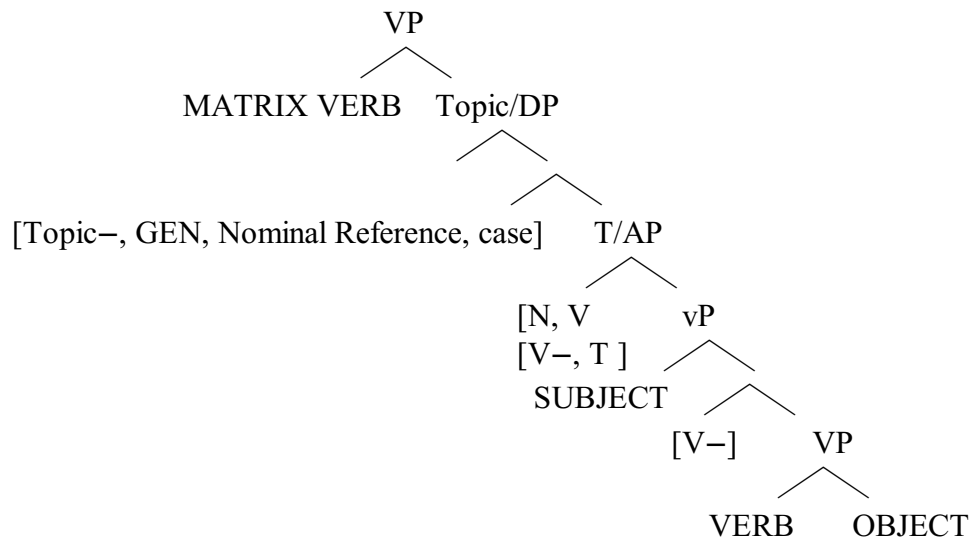
In the prenominal participle form the present participle bears case and number inflection that agrees with the head noun of the construction, as in (146a,b,c). The case marking of the object of the participle is normal, as illustrated by the aspectual contrast in (146a-b). The participle may also assign quirky case, as in (146c). There is no overt subject in the clause, but the same diagnostics that revealed the presence of a null subject in the prenominal past participle clauses can be used to detect a relative operator subject in the present participle form. For instance, in (146d) the reflexive object must be licenced by the null operator subject.

- (146) a. Minä kuuntel-i-n sen [miele-n hiljentä-vä-n] kappalee-n.  
 I.NOM listen-PAST-1SG 3SG.ACC mind-ACC quieten-VA-ACC piece-ACC  
 'I listened to that piece (of music) (that) quietens the mind' (telic interpretation:  
 you listen to the piece and by the end of it you feel perfectly calm)
- b. Minä kuuntel-i-n sen [miel-tä hiljentä-vä-n] kappalee-n.  
 I.NOM listen-PAST-1SG 3SG.ACC mind-PAR quieten-VA-ACC piece-ACC  
 'I listened to that piece (of music) (that) quietens the mind' (atelic interpretation:  
 you listen to the music and by the end of the piece you feel calmer than before)

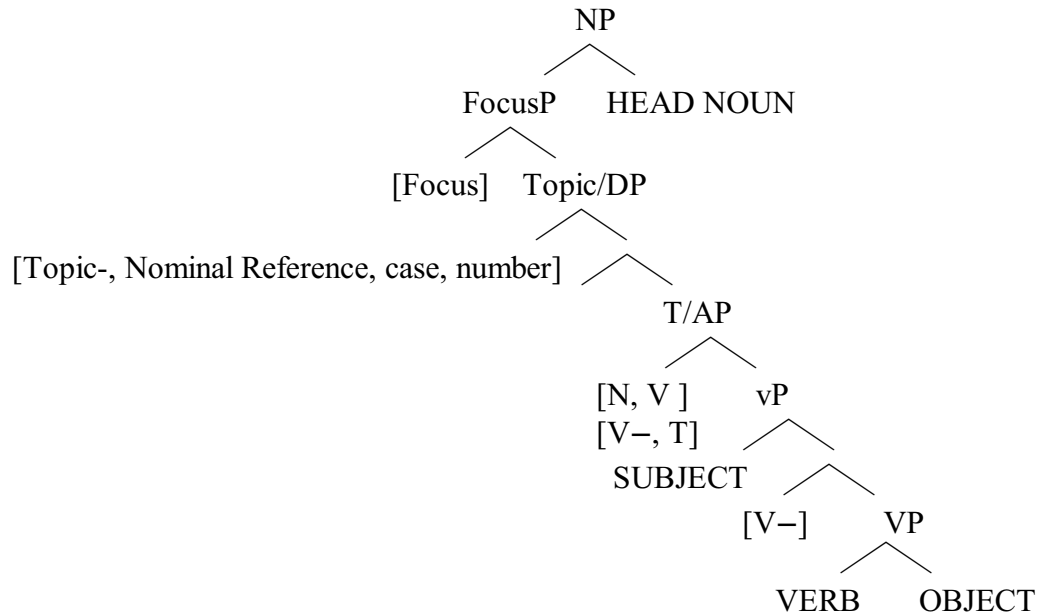
- c. [aidosti elämä-stä nautti-va-lle] ihmise-lle  
 genuinely life-ELA enjoy-VA-ALL person-ALL  
 'a person (who) genuinely enjoys life'
- d. [Op<sub>i</sub> konttori-n porta-i-lla itse-ä-än<sub>i</sub> pese-vä] kissa<sub>i</sub>  
 office-GEN stair-PL-ALL self-PAR-3POS wash-VA cat.NOM  
 'the cat (that) is washing herself on the office stairs'

Since the properties of these two constructions are the same for both the present and past participles, I assume that the structures of the present participial embedded (147) and prenominal (148) constructions are the same as those proposed for the past participle in (56) and (133), respectively.

(147) *embedded present participle construction:*



(148) *prenominal present participle construction*:



### 3.3.2. The present participle in the main clause environment

The present participle occurs in the main clause environment under the auxiliary *olla*, 'be', as does its past tense counterpart. Morpho-syntactically the present participle behaves like its past equivalent, in that it assigns a full range of object cases, it takes nominal number agreement as its only form on inflectional marking, and its subject occurs in nominative and agrees in person and number features with the auxiliary verb *olla*, 'be'. The structural representation of the main clause present participle construction appears identical to the past participle form.

Semantically, however, the combination of the copula *olla* with the present participle clause form deviates from the seemingly direct pattern of interpretation set by the past participle morpheme. Whereas the past participle always backshifts the temporal interpretation of the event with regard to some reference point, the temporal interpretation of the present participle appears inconsistent: the morpheme seems to express non-past simultaneity with the matrix verb in the embedded and prenominal forms, but, rather

unexpectedly, future or strong prediction in the main clause form. The reference point of the prediction is that defined by the modal or temporal indication of the auxiliary *olla*, 'be', as shown in (149).<sup>63</sup> Although the construction has a somewhat archaic or biblical flavour, it is not entirely absent from current use, at least in written language. For instance, a popular young contemporary author, Leena Lander, utilizes the structure frequently in her writing. The examples in (149) are from Lander's 1994 book *Tulkoon myrsky*.

- (149) a. Vielä tänään hän on ... tule-va tähän huoneese-en ja ...  
 still today 3SG.NOM be.3SG come-VA this-ILL room-ILL and  
 'Still today he will ... come to this room and ...' (p. 72)
- b. Vasta myöhemmin nainen ol-i oppi-va lisää kivi-stä.  
 only later woman.NOM be-PAST.3SG learn-VA more rock-INE  
 'Only later was the woman to learn more about rocks' (p. 42)
- c. Ei epäilystä-kään, hän ol-isi menehty-vä kuoliaa-ksi ...  
 no doubt-EMP 3SG.NOM be-COND perish-VA dead-TRAN  
 'Without a doubt, he would perish and die ...' (p. 27)
- d. ... lapse-lle-en, jota [hän] ei enää koskaan  
 child-ALL-3POS who.PAR 3SG.NOM NEG.3SG anymore never  
 ol-isi näke-vä elävä-nä.  
 be-COND see-VA alive-ESS  
 '...for her child, who she would never again see alive.' (p. 326)

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63 The present participle under the copula *olla*, 'be', also occurs in a neccessive construction, differentiated from the predictive use by two structural factors: the participial verb bears passive morphology, and the subject occurs in genitive rather than nominative case. I will not provide an analysis of this form in this thesis.

- (i) a. Sinun on syö-tä-vä papusi!  
 you.GEN be.3SG eat-PASS-VA beans.2SGPOS  
 'You have to eat your beans'
- b. Minun on lähde-ttä-vä nyt.  
 I.GEN be.3SG leave-PASS-VA now  
 'I have to leave now'

A second problem that the present participle introduces in the main clause context is that it cannot occur under the sentential negator. Since the past participial form appears obligatorily in simple negated matrix clauses in the past tense, we might expect the present participle to do the same. On the other hand, taking into account the fact that present tense in Finnish is unmarked in affirmative main clauses, the present participle's ungrammaticality could be explained by arguing that no tense morphology whatsoever occurs in this structure. This is not correct, however. As shown in section 2.3.3 of chapter 2, the main verb in negated present tense main clauses bears a null consonant suffix.

- (150) a. Kunio ei tul-lut leikki-mä-än.  
           K.NOM NEG.3SG come-NUT play-MA-ILL  
           'Kunio didn't come to play'
- b. \*Kunio ei tule-va leikki-mä-än.  
           K.NOM NEG.3SG come-VA play-MA-ILL  
           'Kunio doesn't /won't come to play'
- c. Kunio ei tule-Ø leikki-mä-än.  
           K.NOM NEG.3SG come-PRES play-MA-ILL  
           'Kunio doesn't /won't come to play'

Although it is beyond the scope of this thesis to provide a thorough examination of the temporal semantic contribution of all the Finnish morphemes with temporal content, I must rule out the possibility that the differences between the present and past participles with regard to negation are structurally caused.

### 3.3.2.1. The present participle under the auxiliary *olla*, 'be'

The future/prediction reading is not limited to the main clause use of the present participle, but also appears in embedded and prenominal contexts. The alternation between the simultaneous non-past and the future interpretations is conditioned by the choice of the matrix and participial verbs, as well as by the adverbial modification of the two clauses. The



availability of the different readings seems to hinge on a distinction between two semantic types: events and propositions.<sup>64</sup> Parsons (1990) distinguishes events, which can be directly observed, from propositions, which can be either true or false. The temporal meaning of the present participle appears sensitive to this contrast, in that when the clause headed by the past participle is a proposition, it receives a future interpretation. When it denotes an event, and not a proposition, it receives a simultaneous reading. This is best illustrated with perception main verbs, which take events as their complements. On the other hand, when the present participle appears in a construction that should have a propositional reading, as with verbs of propositional attitude, such as *uskoa*, 'believe', the temporal reference of the embedded clause becomes either habitual or predictive. This allows an eventive interpretation of the eventuality that participle describes: the event is to take place in the future. This is illustrated in (152).

- (151) a. Minä nä-i-n [Sofia-n tanssi-va-n].  
 I.NOM see-PAST-1SG S-GEN dance-VA-ACC  
 'I saw Sofia dancing'  
 (interpretation: I watched her as she twirled around the living room)
- b. Minä katsel-i-n [heidän lähte-vä-n].  
 I.NOM watch-PAST-1SG 3PL.GEN leave-VA-ACC  
 'I watched them leaving'  
 (interpretation: I watched as they put on their coats and mitts to go)
- (152) a. Minä usko-n [Eevi-n tanssi-va-n].  
 I.NOM believe-1SG E-GEN dance-VA-ACC  
 'I believe (that) Eevi dances'  
 (interpretation: I have heard that Eevi dances sometimes)
- b. Minä luule-n [heidän lähte-vä-n].  
 I.NOM think-1SG 3PL.GEN leave-VA-ACC  
 'I think (that) they will leave'

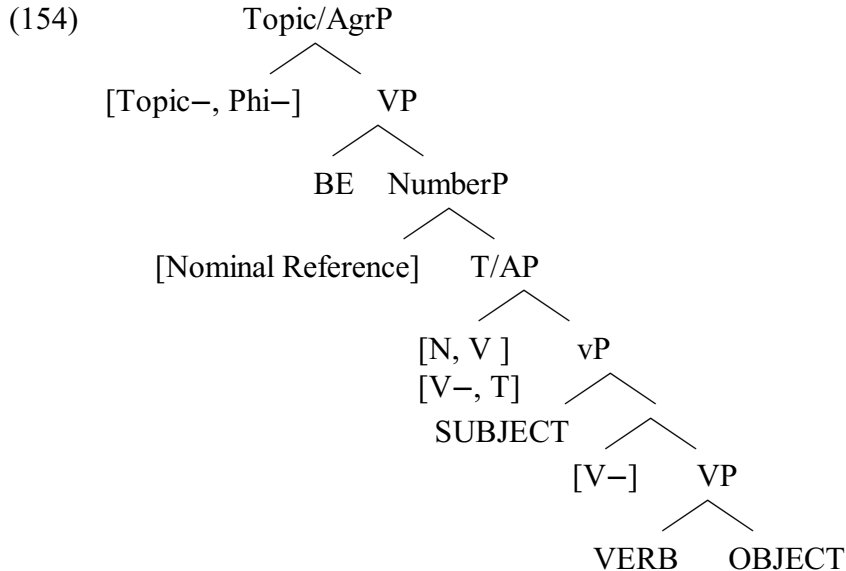
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64 I am grateful to E. Cowper for this observation.

Some perception verbs allow both interpretations of their participial complements. In (153), under the proposition reading the speaker can hear the children stomping around in the living room, presenting an impromptu Spanish dance, at the moment of speech. A second, eventive interpretation where the speaker has found out that the children are to perform a rehearsed version of the ballet at some future date is also possible.

- (153) Minä kuule-n [laste-n esittä-vä-n Pähkinänsärkijä-ä].  
 I.NOM hear-1SG child-GEN present-VA-ACC Nutcracker-PAR  
 'I hear the children **performing** the Nutcracker'  
 OR 'I hear (that) the children **will perform** the Nutcracker'

In light of these findings, I conclude that the seemingly anomalous interpretation of the present participle in the main clause environment under *olla*, 'be', results from the temporal meaning of the participle. Small clauses are generally propositional (Parsons 1990), and since the main clause participial complement is a small clause structure, the present tense participle obligatorily presents a future reading. Hence the syntactic structure of the participial clause has no effect on its unexpected temporal reference pattern. The main clause construction appears to have a marked status in modern, at least colloquial, Finnish, in that its use is limited to written language. In addition to the somewhat old-fashioned quality of form, I note that it is normally used only in the singular, most commonly in third person. In conclusion, although the construction presents several interesting lines of inquiry, none of them are related to the syntactic feature content of the participle's extended Infl. I assume that the structure of the main clause present participle construction is identical to the past participle form that was given in (103).



### 3.3.2.2. The present participle under the negator

Whereas negated past tense in Finnish obligatorily requires the past participle form of the verb to be embedded under the negator, the present participle never appears directly under the negator.

- (155) a. Lapsi sö-i jäätelö-ä.  
 child.NOM eat-PAST.3SG ice.cream-PAR  
 'The child ate ice cream'
- b. Lapsi ei syö-nyt jäätelö-ä.  
 child.NOM NEG.3SG eat-NUT ice.cream-PAR  
 'The child did not eat ice cream'
- c. Lapsi syö jäätelö-ä.  
 child.NOM eat.3SG ice.cream-PAR  
 'The child eats ice cream/ The child is eating ice cream'
- d. \*Lapsi ei syö-vä jäätelö-ä.  
 child.NOM NEG.3SG eat-VA ice.cream-PAR  
 'The child doesn't eat ice cream/The child isn't eating ice cream'

I propose that this restriction on the occurrence of the present participle directly under main clause sentential negation is due to the temporal status of the present participle: I argue that this morpheme is a temporal anaphor<sup>65</sup> whose temporal interpretation is dependent on some other temporal expression. The negator does not bear temporal specification, and consequently the event described by the participial verb cannot be linked to the time line.

There is no inherent constraint on the co-occurrence of negation with the present participle in Finnish. In embedded contexts where the event of the embedded participial clause can be bound by the matrix clause TP, the participial can occur under negation. Although a sentential negator cannot appear here because of structural limitations (i.e. it cannot check its [ $\phi$ i] features), constituent negation is perfectly acceptable.

- (156) Minä kuule-n las-te-n, ei siivoa-va-n lelu-j-a-an, vaan  
 I.NOM hear-1SG child-PL-GEN NEG clean-VA-ACC toy-PL-PAR-3POS but  
 tanssi-va-n olohuonee-ssa.  
 dance-VA-ACC living.room-INE  
 'I hear the children, not cleaning up their toys, but dancing in the living room'

Furthermore, the present participle can appear in a negated main clause structure if the copula *olla*, 'be', is also present. The functional features of the copula include a temporal specification, which can serve as the antecedent for the participial anaphor. This construction receives the expected future prediction interpretation.

- (157) a. Minusta ei kyllä ole koskaan tule-va hyvä-ä kokki-a.  
 I.ELA NEG.3SG certainly be ever become-VA good-PAR cook-PAR  
 'I'll certainly never become a good cook'
- b. ... lapse-lle-en, jota [hän] ei enää koskaan  
 child-ALL-3POS who.PAR 3SG.NOM NEG.3SG anymore never  
 ol-isi näke-vä elävä-nä.  
 be-COND see-VA alive-ESS  
 '...for her child, who she would never again see alive' (Lander 1994:326)

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<sup>65</sup> For a more detailed discussion of temporal morphemes as bound elements, see Cowper's (1996) referential approach to the interpretation of English tense morphemes.

Hence the present participle under main clause sentential negation is not ruled out for structural reasons, but rather on the basis of the temporal properties of the participial head. To express negated non-future, non-past meaning, the negated present tense main verb carries a null consonant morpheme, identifiable through consonant gradation on the verb stem. In addition to negated present tense propositions (*en*, 'I don't', *et*, 'you don't', *ei*, '3SG doesn't', etc.), this mysterious non-past zero morpheme occurs in the second person singular imperative (*lue!*, 'read!') and the second person singular negated imperative (*älä lue!*, 'don't read!').

- (158) a. Lapsi ei lue /\*luke kirja-a.  
 child.NOM NEG.3SG read-Ø / read book-PAR  
 'The child does not read the book'
- b. Te e-tte takuulla voita /\*voitta tätä veto-a.  
 you(PL).NOM NEG-2PL definitely win-Ø / win this.PAR bet-PAR  
 'You definitely won't win this bet'

The structural position of the functional counterpart of this morpheme has already been identified as the main clause T head position. I re-introduce this temporal element here to provide a full picture of the very complex network of present tense morphemes in Finnish. Chapter 4 will present two further pieces, *-de* and *-ma*, into this puzzle.

### 3.3.3. Summary

This section has demonstrated that in the three environments in which they occur, the present tense participle *-va* and its past tense counterpart *-nut* project identical syntactic structures. The distribution of *-va* is somewhat more limited than that of *-nut*, and its interpretation more variable. However, I have argued that these differences are due to the semantics of the present tense morpheme, not to structural factors.

### 3.4. Conclusion

The occurrence of nominal forms in embedded and relative clause position is not solely a quirk of the Finnish language. Similar constructions exist in various languages. In German, Inuktitut, Korean, Quechua and Turkish, among others, the equivalent of English relative clauses is or can be expressed in this way. In German, as in Finnish, a finite clause variant exists in parallel with the participial form. In the other languages cited, the non-finite clause construction is the only way to express a relative clause. In Quechua and Turkish, nominalized clause forms are also used for embedded clause constructions which have characteristics very similar to the Finnish ones discussed in section 3.2.1 (Lefebvre and Muysken 1988, Zidani-Eroğlu 1997). In many of these languages, the verbal element involved in the clause construction manifests nominal and/or adjectival properties, such as overt case marking. At the same time, like the Finnish participles analyzed in this chapter, these participial forms appear to be clausal heads in that they take accusative objects, possibly lexical subjects, and so on.

(159) German

- a. der [den Ball werfende] Junge  
 the.NOM the.ACC ball throw.PRES.PRC boy.NOM  
 'The boy (who is) throwing the ball'
- b. die [dem Fremden gehörenden] Sachen  
 the.PL.NOM the.DAT stranger.DAT belong.PRES.PRC..PL thing.PL.NOM  
 'the things (that) belong to the stranger'

(160) Inuktitut

- a. Angut arna-mik kunik-si-juq  
 man.ABS woman.ACC kiss-ANTIPASS-INTR.3SG  
 'The man kissed the woman' OR 'The man who kissed the woman'
- b. Angut arna-up kuni-ga-a.  
 man.ABS woman.ERG/GEN kiss-PASS-3SG.(Pos?)  
 'The woman kissed the man' OR 'The man who the woman kissed'

(161) Korean

- a. [hakko-ey ka-n] salam  
 school-to go-PAST person  
 'the one that went to school'
- b. [nolay-lul cal pwulu-nun] haksayng  
 song-ACC well sing-PRES student  
 'the student who sings well'

(162) Quechua<sup>66</sup>

- a. [Pidru hamu-sqa-n-ta] yacha-ni.  
 Pedro come -RES.NOM-3-ACC know -1  
 'I know that Pedro came'
- b. [Warmi hamu-q-ta] riku-ni.  
 woman come-AG.NOM-ACC see-1  
 'I see the woman who is coming'

(163) Turkish:

- a. [Hitay-in oku-yacağ-i] kitap  
 H-3SG.GEN read-FUT-POSS book  
 'the book which Hitay will read'
- b. (Ben) [Hitay-in bu kitab-i oku-yacağ-in-i] bil-iyor-um  
 I.NOM H-3SG.GEN this book-ACC read-FUT-POSS-ACC know-PRES-1SG  
 'I know that Hitay will read this book'

The nominalizing nature of many of these morphemes is well documented in the literature. For instance, Jensen and Johns (1988) and Johns (1992) have argued, respectively, that the Inuktitut antipassive and passive morphemes have nominalizing properties; Yüксеker (1997, in progress) has put forth a similar claim regarding the Turkish future morpheme; and Lefebvre and Muysken (1988) discuss several Quechua nominalizers. The nominal status of the German present participle form can be inferred from its general adjectival categorization (Moorcroft, p.c.).

Within the tradition of investigation into each individual language, these clause forms have often been considered somewhat "peculiar", in contrast with the finite relative and

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66 RES.NOM = resultative nominalizer, AG.NOM = agentive nominalizer.

complement clauses that co-exist in some of these languages, or that prevail in other more thoroughly studied languages like English. The existence of the construction type in so many languages across the boundaries of language families (five language families are exemplified here) suggests, however, that the syntactic conditions under which this kind of structure emerges cannot be highly marked in Universal Grammar. Based on the sample of languages cited here, relatively rich inflectional morphology appears to be a prerequisite for the occurrence of this construction type. Within such a language, changes in syntactic category from verbal to nominal, for instance, are recoverable from the inflectional marking on all nominal and verbal elements (e.g. the case marking of both the embedded object and the nominalized verb form). As the analysis of Finnish participial clauses has illustrated, however, these derivations do not involve any syntactic features particular to such "exotic" languages. The features that drive the derivation of nominal clauses are also present in finite structures; they are simply reorganized in different ways.

I have proposed that at the abstract functional level, the Finnish participial suffixes bear the adjectival features [N, V] (or possibly simply [Adjective]). The participial verb itself enters numeration with a feature complex that identifies it as a verb; it is only during the syntactic derivation that the entire participial proposition comes to bear adjectival categorization. If syntax only deals with features, and if vocabulary insertion takes place post-syntactically, then such an operation should be entirely viable. Morphology, and Phonetic Form, interpret the syntactic feature bundles only after all relevant syntactic processes have applied to them. If, in a language, there is a morpheme that can encode the feature bundle that is the outcome of a category changing syntactic feature movement, then the form receives a phonological form.

My claim that the participial complex bears the features [N, V] is not to be confused with other seemingly similar analyses of non-finite forms in which nominalized verbs are considered [+N, +V], but only project one of these features in any given structure (cf. e.g. accounts of Quechua nominalizations by Lefebvre and Muysken (1988) or Spanish infinitives by Yoon and Bonet-Farran (1991)). In these analyses, and presumably the language phenomena that they account for, the non-finite form behaves and functions as a



noun in one construction, but as a verb in another. Consequently, the non-finite suffix is categorized as either a noun or a verb, but not both at the same time. I allege that the Finnish participial suffixes are both nominal and verbal simultaneously. This is made possible by allowing category changing operations to take place not only at the level of morphology, but also during syntactic computation. At least the Turkish non-finite structures present characteristics that parallel very closely those described here for Finnish. A micro-syntactic analysis of the constructions in that language promises to be a useful undertaking.

A further cross-linguistic comparison that can be made here concerns the level at which the category changing feature combinations may occur. Siloni (1995) provides an analysis of reduced (= nominal) relative clauses in Hebrew, with proposed extensions of the account to Standard and Gulf Arabic as well as Classical Greek. The essence of that analysis is the proposal that Hebrew reduced relatives are dominated by a DP projection whose complement is a verbal AgrP projection. Although it is not spelled out explicitly in Siloni's discussion, effectively, then, the AgrP projection in these utterances must be said to contain some nominal categorial feature, either [N] or [N, V], to permit its becoming a complement of an extended nominal functional projection. This analysis fits in nicely with the approach that I have adopted in my explanation of the behaviour of Finnish participials. We now have evidence of syntactic category changing within the computational component cross-linguistically, as well as at more than one functional level. In the next chapter I examine the remaining Finnish non-finite morphemes under the same approach, to establish how their behaviour diverges from that of the participials that have been accounted for here, and what syntactic feature bundles are needed to explain such differences.

## CHAPTER 4

### THE STRUCTURE OF FINNISH INFINITIVAL CONSTRUCTIONS

#### 4.1. Introduction

Traditionally a distinction has been made between the Finnish participial structures described in the preceding chapter, and infinitival forms derived with the suffixes *-ta*, *-ma* and *-de*. This separation into two types of non-finites is based on a definition of infinitives as verbal constructs that do not inflect for tense, mood, person/number agreement or the impersonal passive. These traits contrast with the properties of participials, which carry temporal content, number agreement and passivization. This representation of infinitives is imprecise, however (as also pointed out in Hakulinen and Karlsson 1979:338), and the division between the two groups is not clear-cut. First, the so-called infinitival morphemes can be shown to function as temporal inflectional markers in the same sense as the participial suffixes do, which eliminates one of the main arguments for a division into two groups. Furthermore, the morpho-syntactic behaviour of the five non-finite suffixes cross-classifies the constructions in which they occur in various ways. For instance, the suffix *-ma* that is normally categorized as an infinitive, is also used in a prenominal form that closely resembles the prenominal participle construction; the present temporal and manner adjuncts formed with *-de*, again presumably infinitival in form, share many morpho-syntactic properties with the embedded participial clauses; and the passive past participle morpheme occurs in a past temporal adjunct construction that groups it with the infinitivals according to its syntactic properties. Thus the traditional split is neither accurate nor particularly explanatory.

This chapter extends the approach adopted in the preceding chapters for main and participial clauses to the structure of the infinitival suffixes. It will be shown that here again problems with syntactic categorization can be eliminated by focussing on the formal syntactic features that produce a given structure, rather than on preconceived definitions or characterizations of a specific category.

The Finnish infinitival suffixes *-ta*, *-ma* and *-de* have received even less attention in linguistic literature than the participial suffixes *-va* and *-nut*. Toivonen (1995) provided a comprehensive descriptive account of some syntactic properties of the traditional classes of infinitives, but did not propose structural representations for the constructions in question. Vainikka's (1989) and (1994) analyses addressed structural points regarding some of the infinitival forms, but, as with the participial constructions, left many unanswered questions. These accounts will be examined in detail in section 4.2.1.1 and 4.4.1.1. All three cited works aimed to provide maximally uniform accounts, not of a given infinitival morpheme, but of large sets of non-finite constructions in Finnish. As much as generalized explanations of linguistic phenomena are desirable in the name of economy and elegance, and are also my goal in this research, I believe that the authors of the cited works have missed a number of key quirks in the behaviour of the infinitivals by aiming for such extensive homogeneity. Thus no thorough overall account of the syntactic behaviour and structure of the infinitival forms is available in the literature to date.

This chapter examines the syntactic structure of all constructions in which the morphemes *-ta*, *-de* and *-ma* occur. For each morpheme, my aim is to provide an analysis based on a single, monosemous lexical entry, to the extent that this is possible. Section 4.2 discusses *-ta* constructions, and demonstrates that *-ta* is the most versatile of the non-finite forms, in that it appears in exceptional case marking, (subject feature) raising as well as control constructions. Section 4.3 focuses on three adjunct constructions, the present temporal adjunct and the manner adjunct, which use the *-de* morpheme, and a past temporal adjunct formed with the passive past participle suffix *-ttu*. These structures bear a close resemblance to the embedded participial construction, yet prove to be even more nominal in their morphological form. Section 4.4. analyzes the various *-ma* structures, which are shown

to be secondary predicates of one of the arguments in the main clause. All in all, the syntactic structures presented here display great variation, and it will be shown that, overall, the non-finite structures of Finnish share only one structural property: the presence of a non-finite temporal projection dominating a vP/VP projection.

#### 4.2. The *-ta* constructions

The *-ta* morpheme occurs in several syntactic environments: as an infinitive marker in embedded complement clauses of verbs (1a), nouns (1b) or adjectives (1c); and in a rationale adjunct construction shown in (1d).

- (1) a. Minä halua-n [ymmärtä-ä suome-n infinitiive-j-ä].  
 I.NOM want-1SG understand-TA Finnish-GEN infinitive-PL-PAR  
 'I want to understand Finnish infinitives'
- b. Minulla on aikomus [ymmärtä-ä suome-n infinitiive-j-ä].  
 I.ALL be.3SG intention understand-TA Finnish-GEN infinitive-PL-PAR  
 'I have an intention to understand Finnish infinitives'
- c. Suomen infinitiivi-t o-vat vaike-i-ta [ymmärtä-ä].  
 Finnish.GEN infinitive-PL.NOM be-3PL difficult-PL-PAR understand-TA  
 'Finnish infinitives are difficult to understand'
- d. [Ymmärtä-ä-kse-ni suome-n infinitiive-j-ä], tutk-i-n  
 understand-TA-TRAN-1SG.POS Finnish-GEN infinitive-PL-PAR study-PAST-1SG  
 Hakulise-n ja Karlssoni-n kirja-a.  
 H-GEN and K-GEN book-PAR  
 'In order to understand Finnish infinitives, I studied Hakulinen and Karlsson's book'

The semantic interpretation of all the *-ta* forms is similar, in that the morpheme encodes no inherent temporal meaning or reference (non-past/past, realis/irrealis). In this respect it resembles the English 'to' infinitive (cf. Cowper 1996). On the other hand, the morphological properties of the constructions illustrated in (1) are quite varied: whereas the infinitival *-ta* forms never bear any inflection at all, either nominal (case, number, possessive

suffixation) or verbal (tense, mood, person/number agreement, passive), the rationale adjunct form is obligatorily inflected for translative case and possessive suffixation. Syntactically, all lexical items bearing *-ta* always behave in a verb-like manner in that they may assign the normal object cases to, and place regular selectional restrictions on, their complements.

- (2) a. Viivi lupas-i [korja-ta polkupyörä-n].  
 V.NOM promise-PAST.3SG fix-TA bicycle-ACC  
 'Viivi promised to fix the bicycle' (telic: until it is fixed)
- b. Viivi lupas-i [korja-ta polkupyörä-ä].  
 V.NOM promise-PAST.3SG fix-TA bicycle-PAR  
 'Viivi promised to fix the bicycle' (atelic: to make it better than it is now)
- (3) Viivi-n täyty-i [syö-dä sana-nsa /\*ylpeyte-nsä /\*rakkaute-nsa].  
 V-GEN must-PAST.3SG eat-TA word-3Pos/ pride-3Pos / love-3Pos  
 'Viivi had to eat her words (i.e. break her promise)/\*her pride/\*her love'

Yet, the possibility of lexical subjects occurring in each construction again sharply differentiates between the structures: the rationale adjunct construction never allows an overt subject, as shown in (4d), but an embedded subject may appear in any of the infinitival constructions, depending on other structural factors (e.g. the choice of matrix verb in (4a)).

- (4) a. Sofia anto-i [Kiplingi-n laina-ta kruunua-a-n].  
 S.NOM let-PAST.3SG K-GEN borrow-TA crown-PAR-3Pos  
 'Sofia let Kipling borrow her crown'
- b. Tässä on tyyny [Anaïsi-n nukku-a auringo-ssa].  
 here.INE be.3SG pillow A-GEN sleep-TA sun-INE  
 'Here is a pillow for Anaïs to sleep (on) in the sun'
- c. Suome-n infinitiivi-t o-vat vaike-i-ta [kenenkään ymmärtä-ä].  
 Finnish-GEN infinitive-PL.NOM be-3PL difficult-PL-PAR anyone.GEN understand-TA  
 'Finnish infinitives are difficult for anyone to understand'
- d. Kipling lainas-i Sofia-n kruunu-a [(**\*heidän**) valmistu-a-kse-en  
 K.NOM borrow-PAST.3SG S-GEN crown-PAR 3PL.GEN get.ready-TA-TRAN-3Pos  
 Halloweeni-a varten].  
 H-PAR for  
 'Kipling borrowed Sofia's crown in order (**\*for them**) to prepare for Halloween'

Finally, manner modification of the *-ta* forms involves adverbs that commonly modify verbs (*mukavasti*, 'comfortably'), rather than adjectives linked to nouns (*mukava*, 'comfortable') or genitive-marked adjectival forms that are used with other adjectives or adverbs (*mukava-n*, 'comfortable-GEN').

- (5) a. Tässä on tyyny [Anaïsi-n nukku-a **mukava-sti** /\***mukava**  
 here.INE be.3SG pillow A-GEN sleep-TA comfortabl-y / comfortable  
 /\***mukava-n** auringo-ssa].  
 / comfortable-GEN sun-INE  
 'Here is a pillow for Anaïs to sleep comfortably/\*comfortable/\*comfortably in the sun'
- b. [Nukku-a-kse-en **mukava-sti** /\***mukava** /\***mukava-n** auringo-ssa,  
 sleep-TA-TRAN-3POS comfortabl-y / comfortable / comfortable-GEN sun-INE  
 Anaïs kiipes-i tyyny-lle].  
 A.NOM climb-PAST.3SG pillow-ALL  
 'In order to sleep comfortably /\*comfortable /\*comfortably in the sun, Anaïs climbed on the pillow'

Like the participial constructions, the *-ta* forms pose a challenge for syntactic categorization. Their ability to assign object case and a subject theta role strongly suggests a clausal structure based on a verbal head. This analysis is also supported by the presence of verb-oriented adverbial modification. Infinitive markers are generally classified as part of the temporal system in a given language, and as such the *-ta* morpheme again implies that its host is of verbal nature. On the other hand, the only inflection that is ever found attached to a *-ta* form is nominal case and possessive suffixation. Furthermore, the absence of passive marking, in particular, was identified as a nominal characteristic in the previous chapter, in the comparison of the participial forms with the *-minen* nominal. The inconsistent characteristics of *-ta* are summarized in Table 4.1.

**TABLE 4.1. The syntactic properties of the *-ta* infinitive**

<i>Verbal behaviour</i>	<i>Non-verbal behaviour</i>
<ul style="list-style-type: none"> <li>• Assigns full range of object cases</li> <li>• Theta role assignment &amp; selectional restrictions identical to finite verb</li> <li>• Modified by verb-oriented adverbs</li> <li>• Bears temporal content</li> </ul>	<ul style="list-style-type: none"> <li>• Occurs in non-verb positions</li> <li>• Sometimes occurs in theta positions</li> <li>• Never bears verbal inflection, e.g. cannot form a passive counterpart</li> <li>• Sometimes bears nominal inflection</li> </ul>

Although the syntactic structure of the infinitival construction itself does not appear remarkably complex or interesting, it is an important component in the larger puzzle of Finnish clause types. Let us proceed to examine what syntactic features in the different *-ta* constructions produce its conflicting behaviour, and what can be learned about the general system of syntactic feature matrices in Finnish based on these constructions.

#### 4.2.1. The infinitival *-ta*

The infinitival *-ta* form is commonly considered the most verbal of the Finnish non-finite suffixes, because it bears no nominal inflection. In this function it is never marked for case, person or number agreement, or possessive suffixation. Since the *-ta* form resembles all other non-finite forms in not bearing verbal inflection, either, it expresses minimal temporal content, and forms an independent lexeme (unlike the verb-stem alone), it is used as the base- or citation form of Finnish verbs in grammars and dictionaries.

- (6)
- |             |                         |
|-------------|-------------------------|
| a. hankkia  | v.tr. 'acquire, obtain' |
| b. kertoa   | v.tr. 'tell'            |
| c. lähettää | v.tr. 'send'            |
| d. lähteä   | v.intr. 'leave'         |
| e. uida     | v.intr. 'swim'          |

Syntactically, the uninflected *-ta* infinitive occurs as a complement of a higher verb. The embedded clause *-ta* form can be found under various types of matrix predicates: verbs with either nominative subjects, such as *haluta* 'want', *aikoa* 'intend', and *osata* 'be able to', in (7a-c), or genitive subjects, like *onnistua* 'succeed in', and *täytyä* 'have to', in (7d-e); psych verbs that always occur with partitive subjects, as *pelottaa* 'fear', and *kiinnostaa* 'be interested in', in (7f-g); as well as auxiliary constructions consisting of the verb *olla*, 'be', plus a bare noun (*olla aika* 'be time to', *be lupa* 'have permission'), which have genitive subjects, as illustrated in (7h-i).

- (7) a. Lapse-t halua-vat [katsel-**la** Leijonakuningas-ta].  
 child-PL.NOM want-3PL watch-TA Lion.King-PAR  
 'The children want to watch Lion King'
- b. Kipling aiko-o [hankki-**a** koira-n].  
 K.NOM plan-3SG acquire-TA dog-ACC  
 'Kipling plans to acquire a dog'
- c. Katie osa-a [ui-**da** kuin delfini].  
 K.NOM can-3SG swim-TA like dolphin  
 'Katie can swim like a dolphin'
- d. Heidän onnistu-i [katsel-**la** Leijonakuningas-ta].  
 3PL.GEN succeed-PAST.3SG watch-TA Lion.King-PAR  
 'They succeeded in watching Lion King'
- e. Sinun täyty-y [lähte-**ä** heti].  
 you.GEN must-3SG leave-TA immediately  
 'You must leave immediately'
- f. Ilaria-a pelotta-a [ui-**da** järvessä].  
 I-PAR scare-3SG swim-TA lake.in  
 'Ilaria is afraid to swim in a lake'
- g. Minua kiinnosta-a [luke-**a** se dekkari].  
 1SG.PAR interest-3SG read-TA that.ACC mystery.ACC  
 'I'm interested in reading that mystery'



- h. Sinun on aika [lähte-ä].  
 you.GEN be.3SG time leave-TA  
 'It's time for you to leave'
- i. Heillä on lupa [katsel-la Leijonakuningas-ta].  
 3PL.ADE be.3SG permission watch-TA Lion.King-PAR  
 'They have permission to watch Lion King'

Like the participial verb forms in chapter 3, all *-ta* infinitives may assign the standard range of object cases: accusative, partitive and quirky case.

- (8) a. Kaunotar päätt-i tutki-a Länsisiive-n.  
 Beauty.NOM decide-PAST.3SG explore-TA West.Wing-ACC  
 'Beauty decided to explore the West Wing'  
 (telic reading)
- b. Kaunotar päätt-i tutki-a Länsisiipe-ä.  
 Beauty.NOM decide-PAST.3SG explore-TA West.Wing-PAR  
 'Beauty decided to explore the West Wing'  
 (atelic reading)
- c. Kaunotar päätt-i pitä-ä Hirviö-stä.  
 Beauty.NOM decide-PAST.3SG like-TA Beast-INE  
 'Beauty decided to like the Beast'

In many of the *-ta* infinitive constructions we never find an overt subject, either in the nominative or the genitive. This realization has led many investigators to consider the construction a control structure (Setälä 1960, Leino 1986, Vainikka 1989, Toivonen 1995).

- (9) a. Sofia osa-a [(**\*Aurora** / **\*Aurora-n**) uid-a].  
 S.NOM can-3SG A.NOM / A-GEN swim-TA  
 'Sofia can (\*for Aurora to) swim'
- b. Kipling uskalta-a [(**\*David** / **\*Davidi-n**) kiive-tä palotikka-i-lle].  
 K.NOM dare-3SG D.NOM/ D-GEN climb-TA fire.escape-PL-ALL  
 'Kipling dares (\*for David) to climb on the fire escape'

- c. Minun onnistu-i            [(\***sinä**    /\***sinun**) löytä-ä avaimeni].  
 I.GEN succeed-PAST.3SG you.NOM/ you.GEN find-TA key-1SG.POS  
 'I succeeded in (\*you) to find my keys'
- d. Minun on       pakko [(\***sinä**    /\***sinun**) keksi-ä ratkaisu tähän kysymykse-en].  
 I.GEN be.3SG necessity you.NOM/ you.GEN think-TA solution this.ILL question-ILL  
 'I have to (\*you to) think of a solution for this question'

A small group of matrix verbs (*käskeä*, 'order', *antaa*, 'let', *sallia*, 'allow', *suoda*, 'grant', and *pyytää*, 'ask'), nevertheless, requires that their *-ta* complements always have an overt subject DP. The subject is marked for genitive.

- (10) a. Opettaja    käsk-i            [\*(**las-te-n**)    kirjoitta-a runo-n].  
 teacher.NOM order-PAST.3SG child-PL-GEN write-TA poem-ACC  
 'The teacher ordered the children to write a poem'
- b. Minä    anno-i-n    [\*(**marsu-n**)    juos-ta vapaa-na lattia-lla].  
 I.NOM let-PAST-1SG guinea.pig-GEN run-TA free-ESS floor-ADE  
 'I let the guinea pig run free on the floor'

Finally, other *-ta* constructions may occur either with or without a lexical subject. When an overt subject DP is present, it always appears in the genitive. The presence of a null subject is not indicated by a possessive suffix, as it was in the embedded participial construction in section 3.2.1 of chapter 3.

- (11) a. Vanhemma-t    halua-vat [(**las-te-n**)    /\*(**lapse-t**)    katsel-la Pinokkio-ta].  
 parent-PL.NOM want-3PL child-PL-GEN/ child-PL.NOM watch-TA Pinocchio-PAR  
 'The parents want (the children) to watch Pinocchio'
- b. Minua pelotta-a [(**las-te-n**)    /\*(**lapse-t**)    ui-da järvessä].  
 I-PAR scare-3SG child-PL-GEN/ child-PL.NOM swim-TA lake.in  
 'It scares me (for the children) to swim in the lake'
- c. Sofia    aiko-o [Kiplingi-n /\*Kipling) esittä-ä prinsessa-a].  
 S.NOM plan-3SG K-GEN / K.NOM portray-TA princess-PAR  
 'Sofia plans (for Kipling) to portray a princess'

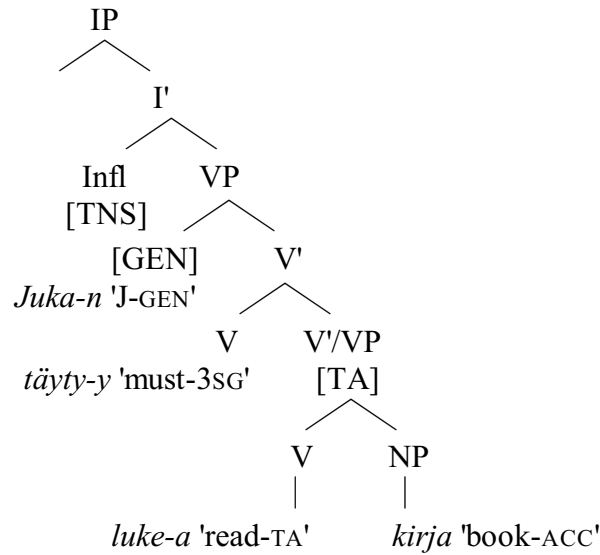
The behaviour of the *-ta* infinitives with regard to the availability of lexical subjects suggests that these structures should be divided into two or more syntactic sub-groups. Traditionally, the nominative-subject construction and the genitive-subject constructions have been categorized into separate units, and the status of subjects within each category has been investigated. For instance, Laitinen and Vilkuna (1993) examined the syntactic position of subjects in genitive-subject *neccessive* constructions. I show in this chapter, however, that a division based on the diagnostic of subject case is not the best available option. Rather, the different structures that I propose for the *-ta* construction cut across the standard split, so that some nominative-subject infinitives pattern together with the genitive-subject group, while others form their own category. The structural variation that results in the different subject properties will be investigated in detail in section 4.2.1.3.

#### 4.2.1.1. Previous analyses

This section reviews three recent contributions to the study of the *-ta* infinitive: Vainikka (1989) and (1994), and Toivonen (1995). Vainikka (1989) argued that the infinitival *-ta* form should be analyzed as a bare VP projection embedded under a matrix verb. In her account, the status of the infinitive as a verb is said to account for the fact that it assigns regular object case, while the lack of specifier position in the VP projection and any higher functional projections in the construction explains the absence of any kind of inflection on the *-ta* form. It is implied in Vainikka's representation, given in (12b), that all *-ta* infinitives are control structures, although this is never explicitly stated in the work. It is hard to see how the structure in (12b) could be interpreted otherwise. Moreover, Vainikka analyzes the genitive-subject forms like (12a) and the nominative-subject forms such as (13) identically, and since the nominative-subject forms are commonly labelled control forms, it is likely that my interpretation of Vainikka's view is correct.

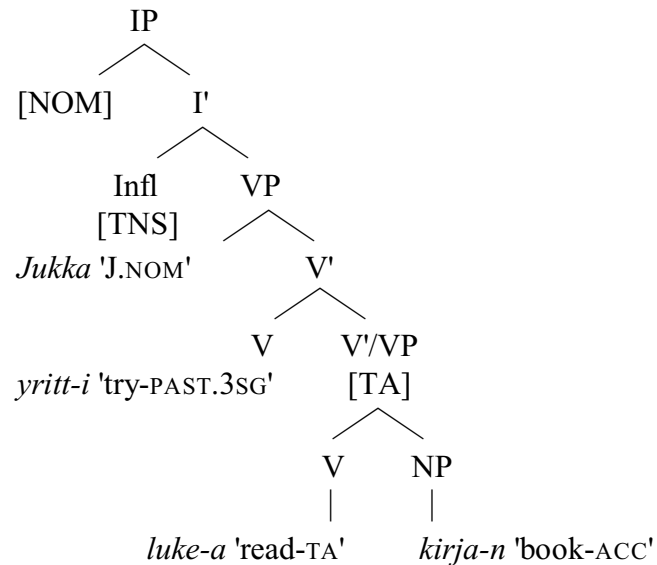
- (12) a. Juka-n täyty-y luke-a kirja.  
           J-GEN must-3SG read-TA book.ACC  
           'Jukka must read a book' (Vainikka 1989:172, (38b))

b. D-structure:



- (13) a. Jukka yritt-i luke-a kirja-n.  
 J.NOM try-PAST.3SG read-TA book-ACC  
 'Jukka tried to read a book' (Vainikka 1989:273, (24a))

b. D-structure (Vainikka 1989: 276, (26))

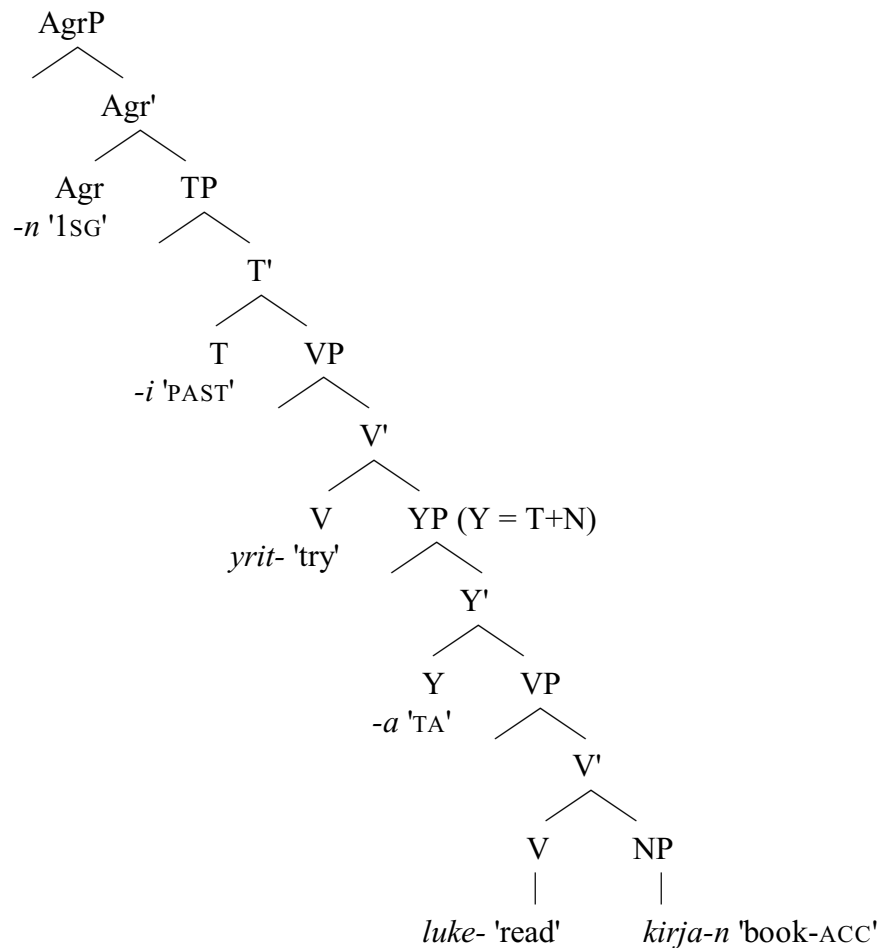


This analysis is quite problematic. First, the account of the form as a V'/VP projection provides no explanation for the presence of the infinitive morpheme in this

context in contrast with its absence from VP's in any other environment. Second, there is no evidence that matrix verbs in Finnish take pure VP complements under any other circumstances. Although such a structure cannot be ruled out *a priori*, it is necessary to clearly outline the conditions under which this combination may occur. Vainikka provides no such discussion. Furthermore, as will be demonstrated shortly, it is incorrect to treat all *-ta* infinitives as control structures. There is clear evidence that at least some of the matrix predicates that take a *-ta* complement are subject raising forms (as also proposed in Laitinen and Vilkuna 1993). This means that even if the structures shown in (12b) and (13b) account for a subgroup of *-ta* forms, they do not represent the full range of these sentence types.

Vainikka's (1994) account proposes that, like the participial forms and all other non-finite structures in Finnish, the *-ta* construction involves a combined functional-lexical category Y (=T + N), but no higher functional projections. (14b) demonstrates the proposed D-structure for the sentence in (14a). I do not include the subject in the representation, since Vainikka's discussion gives no indication of where this DP should originate.

- (14) a. Minä yrit-i-n luke-a kirja-n.  
       I.NOM try-PAST-1SG read-TA book-ACC  
       'I tried to read a book'

b. D-structure:

This revised analysis is an improvement over the (1989) account in that it explains the presence of the *-ta* morpheme: it is the phonological realization of the head of the Y category. Moreover, the nominal property of functional Y projection can be used to account for the distribution of the *-ta* construction, since several of the matrix verbs that take *-ta* complements also permit lexical DP objects. If the *-ta* complement is treated as a clausal direct object, the matrix verbs are no longer forced to take exceptional VP complements.

- (15) a. Minä halua-n **omena-n**.  
 I.NOM want-1SG apple-ACC  
 'I want an apple'

- b. Minä halua-n [**lähte-ä**].  
I.NOM want-1SG leave-TA  
'I want to leave'
- c. Lapse-t pelkää-vät **mehiläis-i-ä**.  
child-PL.NOM fear-3PL bee-PL-PAR  
'The children fear bees'
- d. Lapse-t pelkää-vät [**esiinty-ä yksin luoka-n ede-ssä**].  
child-PL.NOM fear-3PL perform-TA alone class-GEN front-INE  
'The children fear to perform alone in front of the class'
- e. Minä tarvitse-n **uude-t kengä-t**.  
I.NOM need-1SG new-PL.ACC shoe-PL.ACC  
'I need new shoes'
- f. Minun tarvitse-e [**osta-a uude-t kengä-t**].  
I.GEN need-3SG buy-TA new-PL.ACC shoe-PL.ACC  
'I need to buy new shoes'
- g. Sally osa-a **tango-a**.  
S.NOM can-3SG tango-PAR  
'Sally knows (=can dance) the tango'
- h. Sally osa-a [**tanssi-a tango-a loistavasti**].  
S.NOM can-3SG dance-TA tango-PAR brilliantly  
'Sally can dance the tango brilliantly'

However, this account still leaves a number of problems unsolved. It is true that the absence of any functional categories above the Y projection explains the lack of inflectional marking on the *-ta* form, but Vainikka's analysis provides no reason for this absence. Since the status of the *-ta* construction as a clausal complement of a matrix verb that assigns object case is identical to that of the embedded present and past participle clauses, we should expect the *-ta* form to bear object case marking and possessive suffixation parallel to that found on the participials. Moreover, Vainikka's proposal that the Y projection contains the verbal functional feature [T] predicts that any functional projections below TP, in particular PassiveP, should be available in the structure. This is indicated explicitly in the representation in (16) (Vainikka 1994:143, (5)). I have already pointed out, however, that

the *-ta* infinitive has no passive equivalent, and bears no case or possessive marking. These gaps in both the verbal and nominal derivations of the *-ta* form are not discussed in Vainikka's paper.

$$(16) \quad V \rightarrow \text{Pass(ive)} \rightarrow [T] \\ [N] \rightarrow \text{K(ase)} \rightarrow D$$

Vainikka's approach of accounting for the syntactic structure of these non-finite forms based solely on morphological structure provides a method of identifying what projections are present in a given construction, but it does not help us understand why certain levels of representation might be missing. In addition, if we extend our examination of the

*-ta* clause to include the other occurrences of the form, in noun and adjective attribute positions, we find that the nominal YP analysis cannot account for those structures.

Vainikka's investigation did not include such data, but based on my objective of providing maximally monosemous lexical entries for the Finnish non-finite suffixes, I investigate all possible relevant structures. Finally, Vainikka's most recent analysis provides no further insight into the status of the subject of the embedded *-ta* form as either raised or controlled, although this issue is integral in determining the structure of the constructions.

The third study, by Toivonen (1995), draws two central descriptive conclusions with regard to the *-ta* forms. First, the author identifies the infinitival *-ta* clause as an obligatory argument of the matrix verb<sup>67</sup>, whereas the rationale adjunct form is listed as an optional modifier. Second, the rationale adjunct form is shown to exhibit more independently clausal properties than the infinitival *-ta* form. In the rationale adjunct, the assignment of object case is unaffected by the form of the matrix inflectional complex, and the embedded object cannot be extracted into the main clause. In the complement clause *-ta* form, the matrix structure may influence the morphological form of the object, and a *wh*-object raises into the matrix Infl. Toivonen does not extend these findings into proposing a full structural

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67 Toivonen does not consider the noun and adjective attribute uses of the construction.



representation of the *-ta* constructions. However, her observations and diagnostics will be useful in the examination of the structure of these forms in the subsequent sections.

#### 4.2.1.2. Evidence for a functional projection above vP in the *-ta* complex

In the preceding chapters I have argued that any lexical item capable of assigning a full range of object cases bears the syntactic category feature [Verb]<sup>68</sup>. Based on this criterion the infinitival *-ta* form is always a verb, and originates in a VP projection. This view conforms with the assumption underlying Vainikka's proposals that the infinitive projects a VP. In addition, whether the *-ta* constructions are analyzed as raising or control structures, it is also consistently true that the embedded *-ta* verb assigns a thematic role to a subject position, whether this position is realized as a full lexical DP or as PRO.<sup>69</sup> This in turn necessitates the presence of a vP projection, within which such a subject can be licensed.

I will now determine what evidence there is for any further syntactic structure above vP in the embedded infinitive constructions. The diagnostics that were utilized in section 2.3.1.1 to identify a functional projection dominating the embedded participle clause suggest that the *-ta* verb raises out of its vP position to a higher functional level. This supports Vainikka's (1994) analysis where the *-ta* form involves a functional projection above VP. First, in all infinitival *-ta* constructions the embedded verb precedes a vP-adjoined temporal adverb.

- (17) a. Sofia halua-a **syö-dä usein** jäätelö-ä.  
       S.NOM want-3SG eat-TA often ice.cream-PAR  
       'Sofia wants to eat ice cream often'

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68 It was suggested earlier that this feature might reduce to [(Assign) Object case].

69 As stated in chapter 1, I do not consider the possible class of unaccusative verbs in this thesis.

- b. Sinun pitä-ä **ruokki-a heti** tuo marsu!  
 you.GEN must-3SG feed-TA immediately that.ACC guinea.pig.ACC  
 'You must feed that guinea pig immediately!'
- c. Sofia käsk-i Howardi-n **maista-a heti** kaurapuuro-a.  
 S.NOM order-PAST.3SG H-GEN taste-TA immediately oatmeal-PAR  
 'Sofia ordered Howard to taste the oatmeal immediately'

If the temporal adverb is positioned to the left of the infinitive, that is, between the matrix verb and the infinitive, it is interpreted as modifying the higher verb.

- (18) a. Sofia halua-a **usein syö-dä** jäätelö-ä.  
 S.NOM want-3SG often eat-TA ice.cream-PAR  
 'Sofia [wants often] to eat ice cream'
- b. Sinun pitä-ä **heti ruokki-a** tuo marsu!  
 you.GEN must-3SG immediately feed-TA that.ACC guinea.pig.ACC  
 'You [must immediately] feed that guinea pig!'
- d. Sofia käsk-i **heti** Howardi-n **maista-a** kaurapuuro-a.  
 S.NOM order-PAST.3SG immediately H-GEN taste-TA oatmeal-PAR  
 'Sofia [immediately ordered] Howard to taste the oatmeal'

(19) shows that adverbial modification of two separate events in the construction is possible. The presence of two events is taken to indicate the presence of two levels of inflectional structure (following Ritter and Rosen 1993).

- (19) a. Howard lupa-a aina **illa-lla** maista-a **aamu-lla** kaurapuuro-a  
 H.NOM promise-3SG always night-ADE taste-TA morning-ADE oatmeal-PAR  
 (ei-kä koskaan maista).  
 (NEG.3SG-and never taste)  
 'Howard always promises in the evening to taste oatmeal in the morning (but he never tastes it)'
- b. Minä päät-i-n **heti** tervehti-ä **pian** Helga-a.  
 I.NOM decide-PAST-1SG immediately greet-TA soon H-PAR  
 'I decided immediately to greet Helga soon'

- c. Minua kiinnosta-a usein **aamu-lla** lähte-ä **iltapäivä-llä** hölkä-lle...  
 I.PAR interest-3SG often morning-ADE leave-TA afternoon-ADE jog-ALL  
 'In the morning I'm often interested in going for a jog in the afternoon, (but by the time afternoon rolls around I find excuses not to)'

These diagnostics confirm the presence of a functional projection above the *-ta* vP.<sup>70</sup> Moreover, the position of temporal adverbs clearly shows that this projection must bear some strong feature that attracts the infinitival verb out of vP. Taking a look at the main clause and participial constructions that have been investigated so far we note that in all these verbal predicates the verb raises out of vP in order to check a [temporal reference] feature. I have argued previously that the checking of this feature is required for the licensing of the clausal vP structure as a proposition. I suggest that the *-ta* bearing verb moves for the same reason. Is there any evidence that the *-ta* morpheme has any temporal content?

As with the English *to* infinitive (Cowper 1996), it is somewhat difficult to pin down the exact temporal meaning contribution of the infinitival *-ta*. *-ta* discernibly lacks any value for a past/non-past distinction. In addition, *-ta* seems not to be inherently specified for a realis/irrealis value: the following examples illustrate that we find both indicative realis (20) and unrealized irrealis (21) interpretations of the form, depending on the meaning contribution of the matrix verb, its temporal inflection and other such factors involved.

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70 The third diagnostic of the acceptability of individual level predicates in this construction also implies the presence of some IP level of representation, since individual level predicates are possible in infinitival *-ta* clauses. (Cf. fn.46, p.135 for further discussion of this diagnostic.)

- (i) a. Minä yritä-n osa-ta ranska-a.  
 I.NOM try-1SG know-TA French-PAR  
 'I try to know French'
- b. Viivi-serku-n onnistu-i muistutta-a isoisä-ä kaike-ssa.  
 V-cousin-GEN succeed-PAST.3SG resemble-TA grandpa-PAR everything-INE  
 'Cousin Viivi succeeded in resembling grandpa in everything'

- (20) a. Sofia osa-a vihdoin kirjoitta-a molemma-t sukunime-nsä.  
 S.NOM can-3SG finally spell-TA both-PL.ACC last.name-3Pos  
 'Sofia can finally spell both of her last names'
- b. Minun onnistu-i löytä-ä Lea-n ja Maria-n artikkeli.  
 I.GEN succeed-PAST.3SG find-TA L-GEN and M-GEN article  
 'I succeeded in finding Lea and Maria's article'
- (21) a. Sinun kannatta-isi hankki-a Arboreal pu-ide-n piirtä-mise-en.  
 you.GEN be.worthwhile-COND.3SG obtain-TA A.ACC tree-PL-GEN draw-DEVN-ILL  
 'It would be worth your while to obtain Arboreal for drawing trees'
- b. Minä halua-n osta-a itse-lle-ni kajaki-n.  
 I.NOM want-1SG buy-TA self-ALL-1SG.POS kayak-ACC  
 'I want to buy myself a kayak'

Thus it is clear that the *-ta* clause depends on the matrix structure for its temporal interpretation, for both [tense] and [realis] feature values. This does not demonstrate any temporal semantic contribution from *-ta*. The following set of examples indicates, however, that the *-ta* infinitive does provide the semantic feature content necessary for the anchoring of the event described in the embedded clause within the temporal domain. Here the *-ta* form has no matrix clause to which to fix its temporal reference, yet the clauses can receive interpretation. In these sentences, as above, the temporal reference of the infinitival clause is rather vague. The examples given in (22) come from Hakulinen and Karlsson (1979: 363, (83a-c)).

- (22) a. Kaikke-a sitä kuule-e-kin: lähte-ä nyt noin vain ja jättä-ä  
 all-PAR 3SG.PAR hear-3SG-EMP leave-TA now so only and leave-TA  
 talo kylm-i-lle-en!  
 house.ACC cold-PL-ALL-3Pos  
 'Of all the things one hears: to set off like that and leave the house uninhabited!'
- b. Samalla hän moitti itseään: miksi otta-a niin vakavasti  
 same-ADE 3SG.NOM reproach-PAST.3SG self-3Pos why take-TA so seriously  
 tällainen pieni sananvaihto?  
 this.kind.ACC small.ACC word.exchange.ACC  
 'At the same time she reproached herself: why take so seriously an exchange of words like this?'

- c. Mistä nyt saa-**da** uusi mies hänen tila-lle-en?  
 what.INE now get-TA new.ACC man.ACC 3SG.GEN substitute-ALL-3Pos  
 'Where to get a new man as his substitute?'

Since my working hypothesis is that a monosemous account of all the *-ta* forms is feasible, I assume that the semantic content of all the *-ta* infinitives is identical. Although a full investigation into the system of temporal interpretation in Finnish is beyond the scope of this work, I conclude that the temporal meaning contribution of the *-ta* morpheme comes from a grammaticalized temporal feature. For the purposes of this thesis, I will continue to refer to the relevant syntactic feature as [T(emporal Reference)]. I leave further investigation of the exact content of the feature for future research.

In addition to this [T] feature, Vainikka (1994) places an [N] feature on the head of X. This is to account for the presence of case and possessive morphology on the *-ta* infinitive in the rationale adjunct construction. I conclude, however, that there is no evidence that the X head in the infinitival construction under discussion carries any nominal feature content, either [N] or [N, V] (=A). In my analysis of the participial constructions in chapter 3 I argued that whenever a [N] feature is present in a structure, its [nominal reference] content must be checked. The existence of such a checking relationship is realized morphologically as either number marking or case marking, or both. We observe that, except in the rationale adjunct form, the infinitive is never inflected for number or case. The syntactic structure of the rationale adjunct will be discussed in section 4.2.3. I determine, however, that its existence does not offer sufficient grounds for positing an [N] feature in the other infinitival constructions, since this claim contradicts the morpho-syntactic evidence manifest by the infinitival forms. I will examine this discrepant behaviour as a possible example of a situation where a monosemous account might not be workable.

A second justification that Vainikka offers for the presence of an [N] feature on the XP head, in addition to morphological evidence from the rationale adjunct, comes from the observation made earlier that many matrix verbs that take *-ta* complements also occur with simple lexical DP objects, to which they assign accusative or partitive case. The examples in

(15) are repeated in (23). If the functional X head dominating the *-ta* clause is analyzed as bearing a [N] feature, we have a simple explanation for the distribution of the infinitival complement: it is selected as a nominal direct object. This is the view taken in Vainikka (1989), although due to the fact that the theoretical framework adopted in her thesis only allowed for VP, IP and CP projections, the exact position of the [N] feature is left open in that work. Toivonen (1995) classifies the embedded *-ta* clause as an argument of the matrix verb, which implies that she also takes the construction to occupy a direct object position.

- (23) a. Minä halua-n **omena-n**.  
 I.NOM want-1SG apple-ACC  
 'I want an apple'
- b. Minä halua-n [**lähte-ä**].  
 I.NOM want-1SG leave-TA  
 'I want to leave'
- c. Lapse-t pelkää-vät **mehiläis-i-ä**.  
 child-PL.NOM fear-3PL bee-PL-PAR  
 'The children fear bees'
- d. Lapse-t pelkää-vät [**esiinty-ä yksin luoka-n ede-ssä**].  
 child-PL.NOM fear-3PL perform-TA alone class-GEN front-INE  
 'The children fear to perform alone in front of the class'
- e. Minä tarvitse-n **uude-t kengä-t**.  
 I.NOM need-1SG new-PL.ACC shoe-PL.ACC  
 'I need new shoes'
- f. Minun tarvitse-e [**osta-a uude-t kengä-t**].  
 I.GEN need-3SG buy-TA new-PL.ACC shoe-PL.ACC  
 'I need to buy new shoes'
- g. Sally osa-a **tango-a**.  
 S.NOM can-3SG tango-PAR  
 'Sally knows (=can dance) the tango'
- h. Sally osa-a [**tanssi-a tango-a loistavasti**].  
 S.NOM can-3SG dance-TA tango-PAR brilliantly  
 'Sally can dance the tango brilliantly'

There is both morphological and distributional evidence against analyzing the *-ta* infinitive as a nominal complement of the matrix verb. I consider crucial the fact that there is no case inflection on the infinitival head that would signal object status. In the embedded participial construction, which in section 3.2.1 was shown to be dominated by a DP projection and consequently to function as a regular (clausal) object complement of the matrix verb, the checking of the [nominal reference] feature by the participial head is overtly manifested by the default case marker *-n*. Since a purely nominal infinitive marker, with only an [N] feature, should be even more nominal than the adjectival participle, which was analyzed as [N, V], there should be no reason for it not to indicate number, case, or both.

Furthermore, the distributional parallel between lexical objects and the infinitival *-ta* clause is not quite as neat as the examples in (23) imply. A significant number of the matrix verbs that take *-ta* complements do not allow DP objects at all.

- (24) a. Minun täyty-y **\*kauppa-an/\*kylpy** **/\*kylvy-n**.  
 I.NOM must-3SG store-ILL / bath.ACC/ bath-ACC  
 'I must \*to the store /\*a bath'
- b. Minun täyty-y **[menn-ä kauppa-an/otta-a kylpy]**.  
 I.NOM must-3SG go-TA store-ILL /take-TA bath.ACC  
 'I must go to the store/take a bath'
- c. Minä aio-n **\*kieppi-ä** **/\*kauppa-an/\*kylvy-n**.  
 I.NOM plan-1SG cartwheel-PAR/ store-ILL / bath-ACC  
 'I plan \*a cartwheel /\*to the store /\*a bath'
- d. Minä aio-n **[heittä-ä kieppi-ä** **/men-nä kauppa-an/otta-a kylvy-n]**.  
 I.NOM plan-1SG throw-TA cartwheel-PAR/go-TA store-ILL /take-TA bath-ACC  
 'I plan to do a cartwheel /to go to the store /to take a bath'
- e. Minä voi-n **\*valokuva-n/(kanssa-si)** **Viro-on** **/\*kiepi-n**.  
 I.NOM can-1SG photo-ACC / with-2SG.POS Estonia-ILL/ cartwheel-ACC  
 'I can \*a photograph /\*(with you) to Estonia /\*a cartwheel'
- f. Minä voi-n **[otta-a valokuva-n** **/lähte-ä (kanssa-si)** **Viro-on**  
 I.NOM can-1SG take-TA photograph-ACC/leave-TA with-2SG.POS Estonia-ILL  
**/heittä-ä kiepi-n**.  
**/throw-TA cartwheel-ACC**  
 'I can take a photograph/leave (with you) to Estonia/do a cartwheel'

- g. Minä e-n viitsi **\*riita-a** /\***rosk-i-a**.  
 I.NOM NEG-1SG bother quarrel-PAR / gargage-PL-PAR  
 'I can't be bothered \*a quarrel /\*garbage.
- h. Minä e-n viitsi [**riidel-lä enää** /**vie-dä rosk-i-a ulos**].  
 I.NOM NEG-1SG bother quarrel-TA anymore/take-TA gargage-PL-PAR out  
 'I can't be bothered to quarrel anymore /to take the garbage out'

With other matrix verbs, although lexical objects do occur, they do so only when both the thematic structure of the sentence and the case marking of DP's are completely different from the sentence containing a *-ta* form.

- (25) a. Tämä kurpitsa kelpa-a meidän piirakka-a-mme.  
 this.NOM pumpkin.NOM be.fine-3SG our pie-ILL-1PL.POS  
 'This pumpkin will do for our pie'
- b. Sinun kelpa-a [lomail-la], kun väitöskirja-si on jo valmis!  
 you.GEN be.fine-3SG vacation-TA when dissertation-2SG.POS be.3SG already done  
 'It's fine for you to vacation, since your dissertation is already finished!'
- c. Tämä mekko sopi-i minulle kuin valettu.  
 this.NOM dress.NOM fit-3SG I.ALL like cast  
 'This dress fits (=also suits) me like (it's) cast (on me)'
- d. Sinun sopi-i [tul-la] milloin vain halua-t.  
 you.GEN suit-3SG come-TA when only want-2SG  
 'You can come whenever you want'
- e. Minä pidä-n sinusta.  
 I.NOM like-1SG you.INE  
 'I like you'
- f. Minun pitä-ä [lähte-ä].  
 I.GEN must-3SG leave-TA  
 'I have to leave'

The examples in (24) and (25) suggest that even when the *-ta* clause appears in an object-like position, it has not been c-selected as a nominal NP, or DP, complement. It is



also worth noticing that the matrix verbs that take *-ta* complements generally do not permit finite CP complements.

- (26) a. \*Minä tarvitse-n **että osta-n uude-t kengä-t.**  
 I.NOM need-1SG that buy-1SG new-PL.ACC shoe-PL.ACC  
 'I need that I buy new shoes'
- b. \*Sofia osa-a **että hän sukelta-a hyvin.**  
 S.NOM can-3SG that 3SG.NOM dive-3SG well  
 'Sofia can that she dives well'
- c. \*Minä e-n viitsi **että ve-isi-n roska-t ulos.**  
 I.NOM NEG-1SG bother that take-COND-1SG garbage-PL.ACC out  
 'I can't be bothered that I would take the garbage out'
- d. \*Sinun sopi-i **että tule-t milloin vain halua-t.**  
 you.GEN suit-3SG that come-2SG when only want-2SG  
 'You can that you come whenever you want'

This behaviour again distinguishes the *-ta* structures from matrix verbs that take participial clause complements, since those verbs freely allow finite CP clause complements. I take this distinction as further evidence for the claim that *-ta* infinitives do not function as object arguments of the matrix verb, unlike finite and participial complement clauses do. This is additional evidence against an [N] feature on the infinitival functional projection.

Further distributional confirmation that the *-ta* form is not a noun comes from the diagnostic of topicalization. (27) illustrates that neither the full *-ta* clause nor the infinitival verb on its own can check a [Topic] feature of the matrix clause.

- (27) a. \*[Otta-a päiväune-t]<sub>TA-CI</sub> halua-isi-n juuri nyt minä <sub>t<sub>TA-CI</sub></sub>.  
 take-TA nap-PL.ACC want-COND-1SG just now I.NOM  
 'I would like to take a nap right now'
- b. \*[Otta-a<sub>TA</sub>] halua-isi-n päiväune-t<sub>O</sub> juuri nyt minä [<sub>t<sub>TA</sub> t<sub>O</sub></sub>].  
 take-TA want-COND-1SG nap-PL.ACC just now I.NOM  
 'I would like to take a nap right now'

- c. \*[Lähte-ä loma-lle Karibia-lle]<sub>TA-CI</sub> suunnittele-e Arlene <sub>t<sub>TA-CI</sub></sub>.  
 leave-TA vacation-ALL Caribbean-ALL plan-3SG A.NOM  
 'Arlene plans to go on vacation to the Caribbean'
- d. \*[Lähte-ä<sub>TA</sub>] suunnittele-e Arlene [<sub>t<sub>TA</sub></sub> loma-lle Karibia-lle].  
 leave-TA plan-3SG A.NOM vacation-ALL Caribbean-ALL  
 'Arlene plans to go on vacation to the Caribbean'

I conclude that there is no reliable evidence to assign to the *-ta* clause the status of direct object, and, consequently, no evidence the feature [N] on the functional head to which the *-ta* verb raises. Other environments in which the infinitival *-ta* clause is found present similar facts. Neither of the authors who have examined the syntactic behaviour of *-ta*, Vainikka and Toivonen, have discussed its occurrence in the noun and adjective attribute constructions. However, in these environments we also see that the thematic status of the *-ta* clause is often different from that of a lexical DP that appears in the same position, and that finite CP complements are entirely ruled out in these structures.

- (28) a. Asta-lla on suunnitelma [**saa-da johtaja lähte-mä-än**].  
 A-ADE be.3SG plan get-TA boss.ACC leave-MA-ILL  
 'Asta has a plan to get the boss to leave'
- b. Asta-lla on suunnitelma [**johtaja-n pää-n meno-ksi**].  
 A-ADE be.3SG plan boss-GEN head-GEN going-TRAN  
 'Asta has a plan for the boss' downfall'
- c. Asta-lla on suunnitelma \*[**että saa-mme johtaja-n lähte-mä-än**].  
 A-ADE be.3SG plan that get-1PL boss-ACC leave-MA-ILL  
 'Asta has a plan \*that we get the boss to leave'
- (29) a. Minä en pidä hänen ehdotukse-sta-an [**muutta-a aikataulu**].  
 I.NOM NEG-1SG like 3SG.GEN proposal-ELA-3POS change-TA schedule-GEN  
 'I don't like her proposal to change the schedule'
- b. Minä en pidä hänen ehdotukse-sta-an **aikataulu-n muutta-mise-ksi**.  
 I.NOM NEG-1SG like 3SG.GEN proposal-ELA-3POS schedule-GEN change-DEVN-TRAN  
 'I don't like her proposal for the change in the schedule'

- c. Minä en pidä hänen ehdotukse-sta-an \*[että muutta-isi-mme  
 I.NOM NEG-1SG like 3SG.GEN proposal-ELA-3POS that change-COND-1PL  
**aikataulu-n].**  
 schedule-ACC  
 'I don't like her proposal \*that we would change the schedule'
- (30) a. Minä ost-i-n porkkano-i-ta [kaikkie-n syö-dä].  
 I.NOM buy-PAST-1SG carrot-PL-PAR all-GEN eat-TA  
 'I bought carrots for all to eat'
- b. Minä ost-i-n porkkano-i-ta kaikille.  
 I.NOM buy-PAST-1SG carrot-PL-PAR all.ALL  
 'I bought carrots for all'
- c. Minä ost-i-n porkkano-i-ta \*[että kaikki syö-vät niitä].  
 I.NOM buy-PAST-1SG carrot-PL-PAR that all.NOM eat-3PL 3PL.PAR  
 'I bought carrots \*that all eat them'
- (31) a. Infinitiivi-t o-vat vaike-i-ta [kenenkään ymmärtä-ä].  
 infinitive-PL.NOM be-3PL difficult-PL-PAR anyone.GEN understand-TA  
 'Infinitives are difficult for anyone to understand'
- b. Infinitiivi-t o-vat vaike-i-ta kaikille.  
 infinitive-PL.NOM be-3PL difficult-PL-PAR all.ALL  
 'Infinitives are difficult for all'
- c. Infinitiivi-t o-vat vaike-i-ta \*[että kukaan ei  
 infinitive-PL.NOM be-3PL difficult-PL-PAR that anyone.NOM NEG.3SG  
**ymmärrä niitä].**  
 understand 3PL.PAR  
 'Infinitives are difficult \*that anyone doesn't understand them'

Finally, note that if the feature [N] were present on the functional head of the *-ta* form, we might expect infinitival clauses to appear not only in direct object position, but also in subject, oblique and all other nominal positions, in the manner of the *-minen* nominal. This expectation is not met.

- (32) a. \*[Pohti-a infinitiive-j-ä koko päivän] väsyttä-ä minua.  
 ponder-TA infinitive-PL-PAR all day tire-3SG I.PAR  
 'To ponder infinitives all day tires me'

- b. Minä aio-n kirjoitta-a väitöskirja-a koko päivän /\*[tul-la ilta].  
 I.NOM plan-1SG write-TA dissertation-PAR all day /\*come-TA evening  
 'I plan to write my dissertation all day /\*to come the evening'
- c. Minä jätä-n väitöskirja-n kirjoitta-mise-n huomise-ksi /ilta-an  
 I.NOM leave-TA dissertation-GEN write-DEVN-ACC tomorrow-TRAN/evening-ILL  
 /\*[tul-la huominen].  
 / come-TA tomorrow  
 'I'll leave the writing of my dissertation until tomorrow/the evening/\*to come tomorrow'

I conclude that there is no reason to posit a nominal syntactic feature for the head of XP in any of these constructions. Since the structure that has been identified for the infinitival *-ta* clause thus far only contains the verbal (i.e. non-nominal) functional head [T], I will investigate what other extended verbal projections are present in the structure.

#### 4.2.1.3. The syntactic status of the subjects of the infinitival *-ta*

Before proceeding with an examination of the functional projections above the embedded TP structure, it is necessary to establish the syntactic status of the subject of the *-ta* infinitive. As has been stated before, most of those authors who have considered this question have simply assumed that all *-ta* infinitives are uniformly control constructions (e.g. Setälä 1960, Leino 1986, Vainikka 1989, Toivonen 1995). Laitinen and Vilkuna (1993) examined the relationship of the genitive subject in neccessive constructions to both the embedded infinitive and the matrix neccessive verb. They concluded that these structures are best described as raising constructions. This was discussed briefly in section 2.3.5 of chapter 2. Hence, both control and raising structures have been proposed for the *-ta* constructions, but no published source has established which matrix verb belongs to which class, and whether these two structural variants exhaust the attested possibilities. I will show that main verbs that take *-ta* complements are to be divided into three groups: those that can exceptionally case mark the embedded subject; those that force the embedded subject to raise into the main clause Infl for case checking; and finally those that take a control

complement with a PRO subject. The different structures allow somewhat different extended functional projections. After I have demonstrated the existence of the kinds of three structures, I will investigate what higher functional projections are present in each.

The traditional grouping of the matrix auxiliaries into nominative- and genitive-subject verbs refers to the case of the single subject in constructions where the *-ta* clause has no overt embedded subject. The sole subject of the genitive-subject group, which was introduced in section 2.3.5 of chapter 2, obviously bears genitive case. These main verbs do not agree with their subjects' [ $\phi$ ] features, but bear default third person agreement marking. Some genitive-subject verbs are: *kannattaa*, 'be worth', *kelvata*, 'be fine to', *onnistua*, 'succeed', *pitää*, 'must', *sopia*, 'be fitting', *tarvita*, 'need to', *tulla*, 'have to', and *täytyä*, 'must'.

- (33) a. Minun täytyy-y kirjoitta-a väitöskirja-a.  
**I.GEN must-3SG write-TA dissertation-PAR**  
 'I must write a dissertation'
- b. Meidän onnistu-i löytä-ä lopulta perille.  
**we.GEN succeed-PAST.3SG find-TA finally there**  
 'We finally succeeded in finding our destination'
- c. Sinun kannatta-isi hankki-a uus-i-a astio-i-ta.  
**you.GEN be.worthwhile-COND.3SG obtain-TA new-PL-PAR dish-PL-PAR**  
 'It would be worth your while to obtain new dishes'

A second genitive-subject construction replaces the auxiliary verb with a complex consisting of the copula *olla*, 'be', and either a bare noun (such as *aika*, 'time', *pakko*, 'necessity', *valta*, 'power', *oikeus*, 'right', *velvollisuus*, 'responsibility', *lupa*, 'permission') or an adjective (such as *kiva*, 'nice', *mukava*, 'comfortable, nice' *hauska*, 'fun', *inhottava*, 'disgusting, loathsome', or *huvittava*, 'amusing'). The subject of these forms also occurs in genitive, the finite copula bears default agreement morphology, and the embedded verb appears in the infinitival *-ta* form.

- (34) a. Meidän on pakko lähte-ä.  
**we.GEN be.3SG necessity leave-TA**  
 'We must leave'
- b. Sinun on aika oppi-a ui-ma-an.  
**you.GEN be.3SG time learn-TA swim-MA-ILL**  
 'It's time for you to learn to swim'
- c. Minun on lupa laina-ta Hitay-n kirja-a.  
**1SG.GEN be.3SG permission borrow-TA H-GEN book-PAR**  
 'I have permission to borrow Hitay's book'
- d. Heidän on mukava lomail-la Karibianristeily-llä.  
**3PL.GEN be.3SG nice vacation-TA Caribbean.cruise-ADE**  
 '(It's) nice for them to vacation on a Caribbean cruise'
- e. Järvis-te-n on ikävä asu-a uude-n valtatie-n viere-llä.  
**J-PL-GEN be.3SG unpleasant live-TA new-GEN highway-GEN by-ADE**  
 '(It's) unpleasant for the Järvinens to live by the new highway'

The fact that the adjective in the predicate does not manifest agreement with the subject is taken to demonstrate that the *olla*, 'be', plus Adj/N forms are lexicalized expressions rather than syntactically separable constituents.<sup>71</sup> Unlike these adjectives, predicate adjectives always agree with the noun that they modify. Furthermore, in predicate adjective constructions the modified DP is nominative, and the copula agrees with it in person/number features.

- (35) a. Nämä lista-t o-vat paksu-j-a.  
**these.NOM list-PL.NOM be-3PL thick-PL-PAR**  
 'These lists are thick'

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<sup>71</sup> In another variant of the same clause, the raised DP acts like the subject in that it bears nominative case, the copula *olla*, 'be', agrees with it, and the adjective also manifests number agreement. This structure is discussed in section 4.2.2.

(i) Infinitiivi-t o-vat vaike-i-ta [kenenkään ymmärtä-ä].  
**infinitive-PL.NOM be-3PL difficult-PL-PAR anyone.GEN understand-TA**  
 'Infinitives are difficult for anyone to understand'

- b. Näiden listo-je-n ol-isi hyvä /\*hyvä-t /\*hyv-i-ä  
 these.GEN list-**PL-GEN** be-COND.**3SG** good / good-**PL.NOM** / good-**PL-PAR**  
 ol-la paksu-**j-a**.  
 be-TA think-**PL-PAR**  
 'It would be good for these lists to be thick' (Laitinen and Vilkuna 1993:36,  
 (15.c))

A third verb type that appears with a non-nominative (although not genitive) subject is the psych verb that takes a partitive subject. Examples of this class are: *arveluttaa*, 'be hesitant', *huvittaa*, 'be amused', *iljettää*, 'be disgusted', *inhottaa*, 'be disgusted, loathing', *kiinnostaa*, 'be interested', and *pelottaa*, 'be scared'.

- (36) a. Minua arvelutta-isi lähte-ä yksin maailmanympärysmatka-lle.  
**I.PAR** be.hesitant-COND.**3SG** leave-TA alone trip.around.world-ALL  
 'I would be hesitant to leave on a trip around the world alone'
- b. Minua huvitt-i kuunnel-la koulu-n nokkahuilukonsertti-a.  
**I.PAR** amuse-PAST.**3SG** listen-TA school-GEN recorder.concert-PAR  
 'It amused me to listen to the school's recorder concert'
- c. Minua kiinnosta-a pohti-a suome-n infinitiive-j-ä.  
**I.PAR** interest-**3SG** ponder-TA Finnish-GEN infinitive-PL-PAR  
 'It interests me to ponder Finnish infinitives'

In opposition to the three construction types outlined above, in the nominative-subject form, the subject of the matrix verb bears nominative case marking and the main verb agrees with it in person/number features. This group consists of verbs such as *aikoa*, 'intend', *alkaa*, 'begin', *haluta*, 'want', *huomata*, 'notice', *luvata*, 'promise', *muistaa*, 'remember', *osata*, 'can, be able to', *pelätä*, 'fear', *pystyä*, 'be able to, be capable of', *pyytää*, 'ask', *päättää*, 'decide', *saada*, 'be permitted to', *saattaa*, 'be able to', *suvaita*, 'tolerate', *tietää*, 'know', *unohtaa*, 'forget', *uskaltaa*, 'dare', *vaatia*, 'demand', *viitsiä*, 'bother', *voida*, 'can, may', *ymmärtää*, 'understand', and *yrittää*, 'try'. This is a much larger group of verbs than the nominative-subject raising verbs listed in chapter 2.

- (37) a. Minä halua-n saa-da väitöskirja-ni heti valmii-ksi.  
**I.NOM** want-**1SG** get-TA dissertation-**1SG.POS** at.once ready-TRAN  
 'I want to finish my dissertation at once'
- b. Sofia osa-a kroola-ta selä-llä-än 25 metr-i-ä.  
**S.NOM** can-**3SG** crawl-TA back-ABL-**3POS** 25 meter-PL-PAR  
 'Sofia can do back crawl for 25 meters'
- c. Sinä e-t muista-nut osta-a uut-ta lamppu-a!  
**you.NOM** NEG-**2SG** remember-NUT buy-TA new-PAR light.bulb-PAR  
 'You didn't remember to buy a new light bulb!'

As usual, Finnish word order cannot be used reliably to indicate what the syntactic status of a given "subject" DP is. The sentences in (38) illustrate that the non-nominative subject may occur to the right of the *-ta* infinitive, which seems to indicate that the subject originates in the embedded vP and raises to the matrix Infl to check some feature of the matrix structure.

- (38) a. Väitöskirja-a täyty-y kirjoitta-a minun.  
 dissertation-PAR must-**3SG** write-TA **I.GEN**  
 'I must write a dissertation'
- b. Kauppa-an on pakko lähte-ä sinun (ei minun).  
 store-ILL be-**3SG** necessity leave-TA **you.GEN** NEG-**3SG** I.GEN  
 'You must go to the store, not I'

The word order variants in (39) demonstrate that the subject-verb agreement pattern of the nominative-subject structures holds even when the agreeing subject is located within the embedded *-ta* complement, and the object (in (39b)) or some oblique (in (39c)) from the embedded clause has moved to check the [Topic] feature of the raising verb. Hence, based on only word order facts, the genitive- and the nominative-subject structures behave identically. However, as was indicated earlier, it has been argued in the literature that the *-ta* constructions include both raising and control structures.



- (39) a. Me pääti-mme syö-dä illallis-ta takapiha-lla.  
 we.NOM decide-1PL eat-TA supper-PAR back.yard-ADE  
 'We decided to eat supper in the back yard'
- b. Illallis-ta pääti-mme syö-dä takapiha-lla me.  
 supper-PAR decide-1PL eat-TA back.yard-ADE we.NOM  
 'We decided to eat supper in the back yard'
- c. Takapiha-lla pääti-mme syö-dä illallis-ta me.  
 back.yard-ADE decide-1PL eat-TA supper-PAR we.NOM  
 'We decided to eat supper in the back yard'

Diagnostics other than surface word order provide more interesting insights into the structural make-up of these different constructions. Let us first examine the syntactic position of the embedded subject in *-ta* constructions with those matrix verbs that always require an overt embedded subject DP, namely *käskeä*, 'order', *antaa*, 'let', *sallia*, 'allow', and *suoda*, 'grant'.

- (40) a. Opettaja käsk-i [\***(las-te-n)**] kirjoitta-a runo-n].  
 teacher.NOM order-PAST.3SG child-PL-GEN write-TA poem-ACC  
 'The teacher ordered the children to write a poem'
- b. Minä anno-i-n [\***(marsu-n)**] juos-ta vapaa-na lattia-lla].  
 I.NOM let-PAST-1SG guinea.pig-GEN run-TA free-ESS floor-ADE  
 'I let the guinea pig run free on the floor'
- c. He salli-vat [\***(meidän)**] otta-a valokuv-i-a tästä silla-sta].  
 3PL.NOM allow-3PL we.GEN take-TA photo-PL-PAR this.INE bridge-INE  
 'They will allow us to take photos of this bridge'

There is strong evidence that the DP in question is syntactically the subject of the embedded clause, rather than the object of a ditransitive object control verb. The first type of evidence comes from case marking. It has already been stated several times, that the subject of the *-ta* clause bears genitive case. There are no verbs in Finnish whose thematic object occurs in genitive. Although the morphological distinction between genitive and accusative is eliminated with non-pronominal DP's, pronominal DP's demonstrate it clearly.

- (41) a. Minä anna-n **sinut** /\***sinun** hirviö-lle!  
 I.NOM give-1SG you.ACC / you.GEN monster-ALL  
 'I will give you to the monster!'
- b. Minä anna-n [**sinun** /\***sinut** tanssi-a].  
 I.NOM let-1SG you.GEN / you.ACC dance-TA  
 'I will let you dance'

Further evidence of the subject status of the embedded DP comes from the fact that quirky, impersonal and idiom chunk subjects are acceptable in this environment. The examples in (42a-b) are from Hakulinen and Karlsson (1979:362, (81b-c)).

- (42) a. Raakalainen anta-a [**koira-lla** /\***koira-n** ol-la kylmä].  
 barbarian.NOM let-3SG dog-ALL / dog-GEN be-TA cold  
 'Only a barbarian would let a dog be cold'
- b. Jumala salli-i [sata-a rake-i-ta ja tuhka-a].  
 god.NOM let-3SG rain-TA hail-PL-PAR and ash-PAR  
 'God lets (it) rain hail stones and ashes'
- c. Älä anna [**jauho-je-n** men-nä suu-hun] oppila-ide-n ede-ssä.  
 NEG.IMP let flour-PL-GEN go-TA mouth-ILL student-PL-GEN front-INE  
 'Don't let yourself go speechless in front of the students'

These examples illustrate that the *-ta* clause embedded under one of this small group of matrix verbs contains a lexical subject. Like the embedded subject in participial complement clauses, this one appears in genitive. The generalization that embedded subjects of non-finite verb forms occur in the genitive case has persuaded many linguists to search for a consistent account of their case assignment. For instance, Vainikka (1984, 1989, 1992, 1993) has argued that in both cases the genitive case of the subject is assigned structurally in a [Spec, VP] position. I suggest, however, that this generalization is incorrect. In chapter 3 it was proposed that the subject of an embedded participle clause bears true structural genitive case which is checked by the [GEN] feature of a D head. On the other hand, I have argued at length that the infinitival functional head of the *-ta* clause contains no

nominal feature. Consequently, no D head can be present. To account for the case marking of the subjects of these infinitival constructions, I propose that these verbs are lexically specified as exceptional case markers. The small number of members that belong to this group, four, justifies the designation as "exceptional".

Following Chomsky (1993:8), I assume that exceptional case marking is achieved through the checking of an [(Assign) Object Case] feature of the main verb by the embedded subject, within the matrix VP. This takes place along the lines outlined for regular object case checking in section 2.3.4 of chapter 2. I suggest that the genitive-like morphological form of this checked [case] feature is the default form that was argued for in section 2.3.5 in chapter 2. Although the exceptionally case-marked subject checks its [case] feature in the same position as a regular object DP, I assume that the morphological realization of the case checking relation is genitive rather than accusative due to the theta-marking of the relevant DP. I assume that only DP's that are theta-marked by the case-assigning verb may bear overt accusative case. As elsewhere in the language, for any DP whose case marking is not unambiguously realizable, morphological case comes out as the default *-n*. It is worth noting that the lack of object theta-role has such a significant effect on the morphological realization of the checked [case] feature that not only full lexical DP's but also pronouns bear the default form.

Several other matrix verbs optionally allow embedded subjects in *-ta* clauses. These include verbs like *haluta*, 'want', *luvata*, 'promise', *pelätä*, 'fear', *pyytää*, 'ask', *tahtoa*, 'want'; and such psych verbs as *inhottaa*, 'disgust', *kiinnostaa*, 'interest', and *pelottaa*, 'frighten'. The same criteria that were used to identify the genitive-marked DP as the embedded subject can be utilized here: case marking (compare (43a, 44a) to (43b, 44b)), and the possibility of quirky and idiomatic subjects (43c,d), (44c,d). Not all of these matrix verbs interact equally well with quirky, impersonal and idiomatic subjects, but there is no doubt that when a genitive-marked DP is present in these *-ta* clauses, it is the subject of the infinitival verb.

- (43) a. Minä halua-n **sinut** /\***sinun**.  
 I.NOM want-1SG you.ACC / you.GEN  
 'I want you'

- b. Minä halua-n [**sinun** /\***sinut** lähte-ä].  
 I.NOM want-1SG you.GEN / you.ACC leave-TA  
 'I want you to leave'
- c. ?Minä halua-n [**sinulla** ol-la oikein hauska-a].  
 I.NOM want-1SG you.ADE be-TA very fun-PAR  
 'I want you to have lots of fun'
- (44) a. Minua pelota-t **sinä** /\***sinun**.  
 I.PAR frighten-2SG you.NOM / you.GEN  
 'You frighten me'
- b. Minua pelotta-a [**sinun** /\***sinut** tasapainoil-la kato-lla].  
 I.PAR frighten-3SG you.GEN / you.ACC balance-TA roof-ADE  
 'I'm frightened by you balancing on the roof'
- c. Minua pelotta-a [Harrisi-n **hallitukse-lla** ol-la niin paljon valta-a].  
 I.PAR frighten-3SG H-GEN government-ADE be-TA so much power-PAR  
 'I'm frightened by the Harris government having so much power'
- d. Minua pelotta-a [**hänellä** ol-la sorme-nsa peli-ssä].  
 I.PAR frighten-3SG 3SG.ADE be-TA finger-3POS game-INE  
 'I'm frightened by his being involved' (lit. 'by his having his fingers in the game')

I propose that these verbs may optionally check the [case] feature of the embedded subject DP. This optionality can be encoded in one of two ways. Either the lexicon includes two entries for each of these verbs, one with, one without the relevant [Case] feature. Alternatively, the feature [(Assign) Object Case] may, in addition to being an inherent feature on a number of transitive verbs, be available as an optional feature at numeration, and the verbs in this small group are compatible with the feature. Since one of the aims of this thesis is to utilize the principle of monosemy to reduce redundancy in the lexicon wherever possible, I adopt the second hypothesis. I leave open the question of how the compatibility with this (and other) optional feature(s) is encoded in a given lexical item.<sup>72</sup>

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<sup>72</sup> This question can be raised more generally regarding all optional features that can be identified within syntactic derivation, such as the [number] and [case] features of nouns and [phi] and [tense] features of verbs, as identified in Chomsky (1995:231). To date, sufficient mechanisms have not been outlined for the process of numeration in order to ensure, without stipulation, that optional features attach only to

When the *-ta* complement of the *haluta*-group ('want') of verbs and psych verbs does not contain a subject, it clearly forms a control structure. Many of the other so called nominative-subject auxiliaries also belong to this group: *arvata*, 'guess', *huomata*, 'notice', *muistaa*, 'remember', *päättää*, 'decide', *tietää*, 'know', *unohtaa*, 'forget', *uskaltaa*, 'dare', *vaatia*, 'demand', *viitsiä*, 'bother', and *ymmärtää*, 'understand'. In a single-subject construction, these verbs do not permit any quirky (45), impersonal (46) or idiomatic (47) subjects. Moreover, (45) shows that when the embedded *-ta* verb assigns quirky case to its logical subject, this subject cannot raise into the matrix Infl, either suffixed for quirky case, with the main verb marked for default agreement, or bearing nominative, in which case the matrix verb would agree with its [ $\phi$ i] features.

- (45) a. \***Minulla/Minä** vaati-i /vaadi-n ol-la uusi-a kirjo-j-a.  
 I.ADE /I.NOM demand-3SG/demand-1SG be-TA new-PAR book-PL-PAR  
 'I demand to have new books'
- b. \***Minusta** päättä-ä /**Minä** päätä-n [tul-la iso-na kirjailija].  
 I.LINE decide-3SG /I.NOM decide-1SG come-TA big-ESS writer  
 'I decide to become a writer when I grow up'
- c. \***Minulla** halua-a /**Minä** halua-n [ol-la kylmä/nälkä /jano].  
 I.ADE want-3SG/I.NOM want-1SG be-TA cold /hunger.NOM/thirst.NOM  
 'I want to be cold/hungry/thirsty'
- d. \***Minua** unohta-a /**Minä** unohda-n pelo-tta-a /laula-tta-a.  
 I.PAR forget-3SG /I.NOM forget-1SG fear-CAUS-TA /sing-CAUS-TA  
 'I forget to be frightened/ I forget to feel like singing'
- e. \***Minulla/Minua** pelotta-a ol-la kylmä/nälkä /jano.  
 I.ADE /I.PAR frighten-3SG be-TA cold /hunger.NOM/thirst.NOM  
 'I'm frightened to be cold/hungry/thirsty'

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elements of appropriate category type, or that the derivation contains all the necessary optional features (e.g. that each DP bears a [case] feature).

- (46) a. ??Toivottavasti huomenna muista-a /ymmärtä-ä **ol-la kaunis-ta**.  
 hopefully tomorrow remember-3SG /understand-3SG be-TA beautiful-PAR  
 'Hopefully tomorrow remembers/dares/understands to be beautiful'
- b. \*Kyllä-päs tänään huvitta-a /pelotta-a /pelkä-ä /halua-a **sata-a**.  
 certainly-EMP today amuse-3SG /frighten-3SG /fear-3SG /want-3SG rain-TA  
 'It certainly amuses /frightens /fears /wants to rain today'
- (47) a. \***Päree-t** halua-vat pala-a minulta-kin Aatu-n kanssa.  
 wood.chip-PL.NOM want-3PL burn-TA I.ABL-EMP A-GEN with  
 'The wood chips want to burn from me with Aatu'  
 (attempted meaning: 'Even I want to lose my temper with Aatu')
- b. \***Sisu** päättä-ä men-nä kaula-an kaiki-lta joskus.  
 "guts" decide-3SG go-TA neck-ILL all-ABL sometime  
 'The guts decide to go in the throat from everyone sometime'  
 (attempted meaning: 'Everyone decides to lose their courage sometime')
- c. \***Jauho-t** pelotta-vat men-nä suuhu-n sinu-lle-kin.  
 flour-PL.NOM frighten-3PL go-TA mouth-ILL you-ALL-EMP  
 'The flour frightens to go in your mouth'  
 (attempted meaning: 'You are frightened to go speechless')

I suggest that the embedded subject in these structures is PRO. To account for the distribution of PRO, I adopt the proposal made by, among others, Chomsky and Lasnik (1993) that PRO bears and checks a [null case] feature within the non-finite embedded Infl projection. In other words, the control clause must include a functional head with the feature [Null Case]. Furthermore, I assume that, like other types of subject case in Finnish, null case is checked covertly. Thus, PRO may remain in its Merge position in [Spec, vP] in overt syntax. I will discuss shortly the position of the [Null Case] feature in the extended Infl structure of *-ta* clauses, as well as the implications of the proposal that some *-ta* structures are control structures for the presence of other functional projections in this construction.

The third matrix verb type, raising verbs, were introduced in section 2.3.5 at the end of chapter 2. This group of verbs comprises of the following subtypes: all genitive-subject verbs, a small number of the nominative-subject verbs, and all *olla*, 'be', plus noun/adjective complexes. Laitinen and Vilkuna (1993) presented evidence of subject raising behaviour in

genitive-subject necessity constructions, but did not extend their analysis beyond that group. The criteria that were introduced above oblige us to include the other matrix predicates in this category. The first indication that some of the *-ta* forms must be raising forms comes from evidence in impersonal constructions. Laitinen and Vilkkuna (1993) observed that the genitive-subject necessity constructions take subjectless weather verb complement clauses such as those in (48a). The same argument for raising can be extended to the *olla*, 'be', plus N/A complexes, and a few of the nominative-subject verbs, as shown in (48b,c).

- (48) a. Huomenna täyty-y **sata-a /ol-la kaunis-ta.**  
 tomorrow must-3SG rain-TA/be-TA beautiful-PAR  
 'It has to rain/be beautiful tomorrow' (Laitinen and Vilkkuna 1993:31, (5))
- b. Pian voi /alka-a /saa **sata-a.**  
 soon can.3SG /begin-3SG /may.3SG rain-TA  
 'It can/begins to/may rain soon'
- c. Nyt on jo aika **sata-a /ol-la kaunis-ta.**  
 now be.3SG already time rain-TA /be-TA beautiful-PAR  
 'It is already time to rain/be beautiful'

These matrix predicates also allow the subjects of quirky case assigning complements to retain their idiosyncratic form, which implies that the constructions are raising rather than control structures.

- (49) a. **Sinusta** sopi-i tul-la vaikka meribiologi.  
 you.ELA be.suitable-3SG become-TA even ocean.biologist  
 'You're suited for an ocean biologist, for example'
- b. **Sinua** kelpa-a laula-tta-a.  
 you.PAR be.fine-3SG sing-CAUS-TA  
 'It's fine for you to feel like singing'
- (50) a. **Sinusta** on pakko tul-la kuuluisa.  
 you.ELA be.3SG necessary become-TA famous  
 'You have to become famous'

- b. **Sinua** on lupa nuku-tta-a.  
 you.PAR be.3SG permission sleep-CAUS-TA  
 'You have permission to feel sleepy'
- (51) a. **Minun** sitten osa-a ol-la kylmä /nälkä /jano.  
 I.GEN then can-3SG be-TA cold /hunger.NOM/thirst.NOM  
 'I sure am cold/hungry/thirsty'
- b. **Minua** alka-a aivast-utta-a /pelo-tta-a /laula-tta-a.  
 I.PAR begin-3SG sneeze-CAUS-TA /fear-CAUS-TA /sing-CAUS-TA  
 'I begin to feel like sneezing/frightened/like singing'

Idiom chunk subjects are similarly acceptable with all three predicate types.

- (52) a. **Päree-t** täyty-y joskus pala-a sinu-lta-kin.  
 wood.chip-PL.NOM must-3SG sometime burn-TA you-ABL-EMP  
 'Even you must sometimes lose your temper'  
 (lit. 'The wood chips must burn sometime even from you')
- b. **Sisu** on oikeus men-nä kaula-an kaiki-lta joskus.  
 "guts" be.3SG right go-TA neck-ILL all-ABL sometime  
 'Everyone has the right to lose their courage sometime'  
 (lit. 'The guts have the right to go in the throat from everyone sometime')
- c. **Jauho-t** voi-vat /alka-vat men-nä suuhu-n sinu-lle-kin ...  
 flour-PL.NOM can-3PL /begin-3PL go-TA mouth-ILL you-ALL-EMP  
 'You can/begin to go speechless (when...)'  
 (lit. 'The flour can/begins to go in your mouth when...')

These diagnostics strongly suggest that this subset of *-ta* constructions are raising structures. The fact that the *-ta* constructions in this third group never allow a second lexical



subject within the infinitival clause<sup>73</sup> also supports a subject raising analysis. (53) repeats the data cited in (9) to illustrate the point.

- (53) a. Minun onnistu-i            [(\***sinä**    /\***sinun**) löytä-ä avaimeni].  
           I.GEN succeed-PAST.3SG    you.NOM/ you.GEN find-TA key-1SG.POS  
           'I succeeded in (\*you) finding my keys'
- b. Minun on            pakko [(\***sinä**    /\***sinun**) keksi-ä ratkaisu tähän kysymykseen].  
           I.GEN be.3SG necessity you.NOM / you.GEN think-TA solution this.ILL question-ILL  
           'I have to (\*you to) think of a solution for this question'
- c. Sofia osa-a [(\***Aurora** /\***Aurora-n**) uid-a].  
           S.NOM can-3SG    A.NOM / A-GEN            swim-TA  
           'Sofia can (\*for Aurora to) swim'
- d. Kipling uskalta-a [(\***David** /\***Davidi-n**) kiive-tä palotikka-i-lle].  
           K.NOM dare-3SG    D.NOM/ D-GEN            climb-TA fire.escape-PL-ALL  
           'Kipling dares (\*for David) to climb on the fire escape'

As I suggested in section 2.3.5 of chapter 2, I analyze these structures as "raising" structures based on the claim that [case] feature of the embedded subject raises covertly to check the [Case] feature of the matrix Topic/AgrP. The morphological agreement form of the finite auxiliary, and that of the subject case are determined by the agreement properties of the auxiliary: when the verb requires [phi] feature checking against the subject's features, we find nominative subjects whose features agree with those of the auxiliary, but when the verb does not require such checking, the subject bears the default *-n* suffix and the verb bears default agreement marking.

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<sup>73</sup> It is possible to find a subject in a pre-infinitival position within the embedded clause, but only when some non-subject DP has moved into the matrix clause to check the strong [Topic] feature. Even in this case, there is only a single subject present in the matrix-*ta*-clause complex, but its spell-out position is within the *-ta* structure.

- (i) Avaimeni onnistu-i            [**minun** löytä-ä jääkaapi-n alla].  
           key-1SG.POS succeed-PAST.3SG I.GEN find-TA fridge-GEN under-ABL  
           'I succeeded in finding my keys under the fridge'

In this sub-section I have identified three different structural configurations in which the *-ta* infinitive may occur: subject raising, subject control and ECM constructions. It is now possible to investigate what functional features in addition to the [temporal reference] feature in TP might contribute to the structural differences between these forms.

#### 4.2.1.4. Functional projections in the *-ta* infinitive constructions

##### 4.2.1.4.1. The [Topic] feature in Finnish clauses

Of the three structures, only the ECM construction shows clear evidence of a strong [Topic] feature. In raising (54) and control (55) structures the infinitival verb may be positioned clause-initially, but in an ECM sentence (56) this is not permissible. (57) illustrates that the ungrammatical ECM sentences in (56) become acceptable when the subject raises to the pre-infinitival position.

(54) *Raising:*

- a. Minun onnistu-i [löytä-ä avaimeni].  
I.GEN succeed-PAST.3SG find-TA key-1SG.POS  
'I succeeded in finding my keys'
- b. Minun on pakko [löytä-ä avaimeni].  
I.GEN be.3SG necessity find-TA key-1SG.POS  
'I have to find my keys'
- c. Minä voisi-n [löytä-ä avaimeni].  
I.NOM can-COND-1SG find-TA key-1SG.POS  
'I could/might find my keys (if I cleaned up my apartment)'

(55) *Control:*

- a. Minä halua-n [löytä-ä avaimeni].  
I.NOM want-1SG find-TA key-1SG.POS  
'I want to find my keys'
- b. Minua kiinnostaa [löytä-ä avaimeni].  
I.PAR interest-3SG find-TA key-1SG.POS  
'I interested in finding my keys'

- c. Minä päät-i-n [löytä-ä avaimeni].  
 I.NOM decide-PAST-1SG find-TA key-1SG.POS  
 'I decided to find my keys'
- (56) *ECM*:
- a. \*Kerttu käsk-i [löytä-ä minun avaimeni].  
 K.NOM order-PAST.3SG find-TA I.GEN key-1SG.POS  
 'Kerttu ordered me to find my keys'
- b. \*Kerttu halus-i [löytä-ä minun avaimeni].<sup>74</sup>  
 K.NOM want-PAST.3SG find-TA I.GEN key-1SG.POS  
 'Kerttu wanted me to find my keys'
- c. \*Kerttu-a kiinnost-i [löytä-ä minun avaimeni].  
 K-PAR be.interested-PAST.3SG find-TA I.GEN key-1SG.POS  
 'Kerttu was interested in me my finding my keys'
- (57) *ECM*:
- a. Kerttu käsk-i [minun löytä-ä avaimeni].  
 K.NOM order-PAST.3SG I.GEN find-TA key-1SG.POS  
 'Kerttu ordered me to find my keys'
- b. Kerttu halus-i [minun löytä-ä avaimeni].  
 K.NOM want-PAST.3SG I.GEN find-TA key-1SG.POS  
 'Kerttu wanted me to find my keys'
- c. Kerttu-a kiinnost-i [minun löytä-ä avaimeni].  
 K-PAR be.interested-PAST.3SG I.GEN find-TA key-1SG.POS  
 'Kerttu was interested in me my finding my keys'

It could be suggested that the embedded subject in the sentences in (57) occurs pre-infinitivally because it moves overtly to the matrix VP to check its [case] feature. This hypothesis is disproved by the set of examples in (58). As in other Finnish clause types, any DP, not only the subject, may move to the pertinent clause-initial position to check the

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<sup>74</sup> This sentence, as well as the sentence in (52c), are grammatical under an interpretation where the genitive DP is interpreted as a possessive pronoun rather than the embedded subject, for example 'Kerttu<sub>i</sub> wanted [PRO<sub>i</sub> to find my keys]'.

attracting strong feature. I conclude that it is in fact a [Topic] feature rather than a [Case] feature that drives this movement.

- (58) a. Kerttu käsk-i [TP avaimeni löytä-ä [vP minun ]].  
 K.NOM order-PAST.3SG key-1SG.POS find-TA I.GEN  
 'Kerttu told me to find my keys'
- b. Kerttu halus-i [TP avaimeni löytä-ä [vP minun ]].  
 K.NOM want-PAST.3SG key-1SG.POS find-TA I.GEN  
 'Kerttu wanted me to find my keys'

Hence, as in finite and embedded and prenominal participial clause structures, a strong [Topic] feature must be posited for the infinitival ECM clause. The most neutral reading of a *-ta* clause results from the subject occupying the pre-infinitival position, as in (59a). Yet it is also possible to find a non-topicalized, non-focussed subject, which always scrambles out of vP, as all non-presupposed constituents in Finnish must do. This is illustrated in (59c).

- (59) a. Kerttu käsk-i [TP **minun** löytä-ä [vP avaimeni]].  
 K.NOM order-PAST.3SG I.GEN find-TA key-1SG.POS  
 'Kerttu told me to find my keys'
- b. Kerttu käsk-i [TP avaimeni löytä-ä [vP **minun** ]].  
 K.NOM order-PAST.3SG key-1SG.POS find-TA I.GEN  
 'As for the keys, Kerttu told me to find them'
- c. Matilda anta-a [TP kadonne-i-ta avaimi-a-an etsi-ä [vP **Kaarlo-n** [vP aina  
 M.NOM let-3SG lost-PL-PAR key-PL-PAR-3POS search-TA K-GEN always  
 [vP tuntikausi-a, mutta Heimo-a hän autta-a oitis]]]].  
 hours-PAR but H-PAR 3SG.NOM help-3SG right.away  
 'Matilda lets Kaarlo always search for his lost keys for hours, but she helps Heimo right away'

(60) shows again that the *-ta* verb can occur in the left-most position in raising and control infinitival clauses, which suggests that no [Topic] feature is present. This raises the

question of why we should find a [Topic] feature in ECM infinitives, but not raising or control infinitives. More generally, why should there be a [Topic] feature in most Finnish clause types, finite, participial and ECM infinitival, but not in these two subtypes of infinitival clauses? To answer these questions, let us take a closer look at available DP positions in raising and control clauses. In addition to the structures shown in (60), we find forms in which non-subject DP's occur to the left of the *-ta* form in both raising (61a-b) and control (61c-d) constructions. As elsewhere, there is no constant case or agreement relationship between the moved DP and the *-ta* verb, and hence no [Case] or [Phi] feature can be posited that would attract the DP.

- (60) a. *Minun onnistu-i* [**löytä-ä** *avaime-ni*].  
 I.GEN succeed-PAST.3SG find-TA key-1SG.POS  
 'I succeeded in finding my keys'
- b. *Minä halua-n* [**löytä-ä** *avaime-ni*].  
 I.NOM want-1SG find-TA key-1SG.POS  
 'I want to find my keys'
- (61) a. *Minun* onnistu-i [**ne** **avaime-ni** *löytä-ä* *hetke-ssä*].  
 I.GEN succeed-PAST.3SG those.ACC key-1SG.POS find-TA moment-INE  
 'I succeeded in finding those keys of mine in a flash'
- b. *Pirkko* osa-a [**vuorimaisem-i-a** *maala-ta* *erikoisen kauniisti*].  
 P.NOM can-3SG mountain.scenery-PL-PAR paint-TA especially beautifully  
 'Pirkko can paint mountain scenery especially beautifully'
- c. *Minä halua-n* [**tästä** **valokuva-sta** *suurenta-a* *kopio-n* *eteisen seinä-lle*].  
 I.NOM want-1SG this.ELA photo-ELA enlarge-TA copy-ACC hall-GEN wall-ALL  
 'I want to enlarge a copy of this photo for the hall wall'
- d. *Ilaria-a* pelotta-a [**järv-i-ssä** *ui-da* *kaikkein eniten*].  
 I-PAR frighten-3SG lake-PL-INE swim-TA all most  
 'Ilaria is afraid to swim in lakes most of all'

I have proposed earlier that [Topic] is an obligatory feature in all Finnish clause types, and now I suggest that the feature is also active in these structures, even if not always

overtly observable. This accords with my generalization that every Finnish clause with temporal reference, i.e. with a TP, must have a topic. The sentences in (61) illustrate that a non-subject DP can check the [Topic] feature and occur pre-infinitivally. On the other hand, to account for the sentences in which no topic DP is visible, I propose the following. In raising constructions, a single DP may serve as the topic of both the embedded and the matrix clauses. In such a case the DP in question must select two [topic] features at numeration, and it checks one within the lower clause, the other in the main clause Infl.

- (62) a. [<sub>TopicP</sub>Minun<sub>S</sub> onnistu-i ... [<sub>TP</sub>t<sub>S</sub> löytä-ä [<sub>vp</sub>avaime-ni]]].  
 I.GEN succeed-PAST.3SG find-TA key-1SG.POS  
 'I succeeded in finding my keys'
- b. [<sub>TopicP</sub>Avaimeni<sub>O</sub> on pakko ... [<sub>TP</sub>t<sub>O</sub> löytä-ä [<sub>vp</sub>minun]]].  
 key-1SG.POS be.3SG necessity find-TA I.GEN  
 'I have to find my keys'
- c. [<sub>TopicP</sub>Tänään<sub>OBL</sub> vo-isi-n ... [<sub>TP</sub>t<sub>OBL</sub> löytä-ä [<sub>vp</sub>avaime-ni minä]]].  
 today can-COND-1SG find-TA key-1SG.POS I.NOM  
 'Today I could/might find my keys (instead of making you do it daily)'

In the control constructions, I propose that PRO can check the [Topic] feature. PRO must be considered a full DP in that it bears the same thematic role as a lexical subject, and it checks a [Case] feature. There is no reason to assume that PRO could not serve as a topic. (63) illustrates the structure of this construction.

- (63) a. [<sub>TopicP</sub>Minä halua-n [<sub>TP</sub>PRO löytä-ä [<sub>vp</sub>avaime-ni]]].  
 I.NOM want-1SG find-TA key-1SG.POS  
 'I want to find my keys'
- b. [<sub>TopicP</sub>Minua kiinnosta-a [<sub>TP</sub>PRO löytä-ä [<sub>vp</sub>avaime-ni]]].  
 I.PAR interest-3SG find-TA key-1SG.POS  
 'I interested in finding my keys'
- c. [<sub>TopicP</sub>Minä päät-i-n [<sub>TP</sub>PRO löytä-ä [<sub>vp</sub>avaime-ni]]].  
 I.NOM decide-PAST-1SG find-TA key-1SG.POS  
 'I decided to find my keys'

I propose that the strong [Topic] feature in all three clause types, ECM, raising and control structures, is housed on the head of TP, and so the topicalized DP occurs in the [Spec, TP] position. This distinguishes *-ta* clauses from finite and participial clauses, where the strong [Topic] feature is in a projection above TP. This claim is supported by the unnaturalness of manner adverbs intervening between a topic and an infinitive. If the [Topic] and [Temporal Reference] features reside on two distinct functional heads, there should be nothing to prevent manner adverb adjuncts on the lower maximal projection. In embedded participial clauses where the [Topic] feature is located in a D position higher than TP, manner adverbs may occur between a topic and the participial head, as illustrated in (35b), (36b) and (54) of chapter 3. (In (64) the check-marks (3) indicate possible adjunction sites of adverbials in infinitival *-ta* clauses.)

- (64) a. Minä halua-n [teidän (\*reippaasti) siivo-ta (3) lelu-nne (3) pois (3)].  
 I.NOM want-1SG 2PL.GEN briskly clean-TA toy-2PL.POS away  
 'I want you to clean up your toys briskly'
- b. Minun onnistu-i [avaime-ni (\*nopeasti) löytä-ä (3)].  
 I.GEN succeed-PAST.3SG key--1SG.POS quickly find-TA  
 'I succeeded in finding my keys quickly'
- c. Minua kiinnost-a [Casablanca (\*huolellise-mmi-n ) katso-a (3) uudestaan (3)].  
 I.PAR interest-3SG C.ACC careful-COM-ADV watch-TA again  
 'I'm interested in watching *Casablanca* again more carefully'

Based on this diagnostic, I identify TP as the topic projection in infinitival *-ta* clauses, and rename the projection Topic/TP. In addition to the topicalized DP, infinitival clauses of all three types may of course also contain other presupposed DP's that scramble out of the embedded vP to adjoin to either vP or to TP.

- (65) a. Omenafarmi-lta<sub>OBL</sub> voi-vat [<sub>TP</sub> t<sub>OBL</sub> osta-a [<sub>vP</sub> **lapse-t-kin** **luokkaretke-llä**  
 apple.farm-ABL can-3PL buy-TA child-PL.NOM-EMP class.trip-ADE  
**tuliais-i-a** aina koti-in]].  
 present-PL-PAR always home-ILL  
 'Even children can always buy presents for home on a class trip at an apple farm'

- b. Omenafarmi-lta voi-vat [<sub>TP</sub>tuliais-i-a luokkaretke-llä lapse-t-kin  
apple.farm-ABL can-3PL present-PL-PAR class.trip-ADE child-PL.NOM-EMP  
osta-a [<sub>vp</sub>aina koti-in]].  
buy-TA always home-ILL  
'Even children can always buy presents for home on a class trip at an apple farm'
- c. Omenafarmi-lta voi-vat [<sub>TP</sub>lapse-t-kin luokkaretke-llä tuliais-i-a  
apple.farm-ABL can-3PL child-PL.NOM-EMP class.trip-ADE present-PL-PAR  
osta-a [<sub>vp</sub>aina koti-in]].  
buy-TA always home-ILL  
'Even children can always buy presents for home on a class trip at an apple farm'
- (66) a. Minua inhotta-isi [<sub>TP</sub>ui-da [<sub>vp</sub>kesä-llä Ontario-järve-ssä  
I.PAR loathe-COND.3SG swim-TA summer-ADE O-lake-INE  
kaike-n saaste-en sea-ssa kyllä koskaan]].  
all-GEN pollution-GEN midst-INE certainly ever  
'I would loathe to ever swim in Lake Ontario in the midst of all the pollution in the summer'
- b. Minua inhotta-isi [<sub>TP</sub>kesä-llä Ontario-järve-ssä kaike-n  
I.PAR loathe-COND.3SG summer-ADE O-lake-INE all-GEN  
saaste-en sea-ssa ui-da kyllä [<sub>vp</sub>koskaan]].  
pollution-GEN midst-INE swim-TA certainly ever  
'I would loathe to ever swim in Lake Ontario in the midst of all the pollution in the summer'

#### 4.2.1.4.2. ECM constructions

I will now investigate the presence and position of syntactic features other than [Topic] and [Temporal Reference] in ECM structures. In the ECM *-ta* clause, sentential negation is not permitted. When a negator is found in this construction, it clearly expresses constituent negation.

- (67) a. Minä anno-i-n Sofia-n, e-n syö-dä koko pussillis-ta karkke-j-a,  
I.NOM let-PAST-1SG S-GEN NEG-1SG eat-TA whole bag-PAR candy-PL-PAR  
mutta mutustel-la muutam-i-a.  
but munch-TA some-PL-PAR  
'I allowed Sofia, not to eat the whole bag of candy, but to munch a few'



b. Minä halua-n, **e-n** sinun lähte-ä Maija-n luo, vaan Maija-n tul-la  
 I.NOM want-1SG NEG-1SG you.GEN leave-TA M-GEN to but M-GEN come-TA  
 tänne.  
 here.ILL

'I want, not you to leave (to go) to Maija, but Maija to come here'

The comma placed between the matrix verb and the embedded *-ta* infinitive indicates an obligatory phonological break. This pause is a characteristic of constituent negation rather than sentential negation: a pause before the negator is not required in finite main clauses. The constituent negation analysis is also supported by the observation that negation in a *-ta* clause is possible only with a contrastive meaning. Again, this condition does not hold for regular sentential negation. Finally, as can be seen in the examples above, the negator obligatorily bears the same  $[\phi]$  features as the finite main verb. This is a property of constituent negation in Finnish. In section 2.3.3.1 of chapter 2, ample evidence can be found to show that the agreement features of the sentential negator in finite embedded clauses can differ from those of the matrix clause. I conclude that negation in the ECM *-ta* clause is not sentential negation, and, consequently, that no NegP is present in the structure<sup>75</sup>. Why should NegP be ruled out here? In the main clause environment, NegP freely selects TP complements. Hence we might expect that this should also be the case in the infinitival *-ta* clause. I suggest that the restriction is related to the number of Comp positions that are present in the structure, and to the negator needing to be licenced by a finite Comp. However, I leave examination of the features of Comp until the syntactic structure of all three *-ta* clause types has been established, and will return to it at the end of section 4.2.1.4.4.

In addition to NegP, embedded CP and FocusP projections are also missing from the ECM construction. The absence of CP is demonstrated by the fact that no overt complementizers are ever present, as in (68), and the absence of a FocusP projection is manifest by the unavailability of short *wh*-movement (69a), yes/no question movement (69b) or focus movement (69c). The examples in (69a-b) might be ruled out without resort to

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75 A full discussion of constituent negation in Finnish is beyond the scope of this work.

structural considerations, since ordering and permission verbs do not take interrogative complements, but the same argument does not account for the ungrammaticality of (69c). The only explanation for that restriction is that the *-ta* clause cannot contain a FocusP.

- (68) He salli-vat [<sub>CP</sub>(\***että** /\***kun**) [<sub>Topic/TP</sub>meidän lähte-ä aikaisemmin]].  
 3PL.NOM allow-3PL that / when we.GEN leave-TA earlier  
 'They allowed (\*that/\*when) us to go earlier'
- (69) a. \*Opettaja käsk-i [<sub>FocusP</sub>**mitä**<sub>O</sub> [<sub>Topic/TP</sub>sinun kirjoitta-a t<sub>O</sub> huomise-ksi]]?  
 teacher.NOM tell-PAST.3SG what.PAR you.GEN write-TA tomorrow-TRAN  
 'What did the teacher tell you to write for tomorrow?'
- b. \*Opettaja anto-i [<sub>FocusP</sub>**sinun-ko**<sub>S</sub> [<sub>Topic/TP</sub>t<sub>S</sub> johta-a kuoro-a tänään]]?  
 teacher.NOM let-PAST.3SG you.GEN-Q conduct-TA choir-PAR today  
 'Was it you (that) the teacher let conduct the choir today?'
- c. \*Minä käsk-i-n [<sub>FocusP</sub>**omena-t-han** [<sub>Topic/TP</sub>sinun kuori-a tällä veitse-llä]].  
 I.NOM order-PAST-1SG apple-PL.NOM-EMP you.GEN peel-TA this knife-ADE  
 'It was the apples (that) I ordered you to peel with this knife'

Wh-words, yes/no questions and focussed elements move out of the ECM *-ta* clause into the matrix inflectional structure to check their [q] or [focus] features, as in (70).

- (70) a. [<sub>FocusP</sub>**Mitä**<sub>O</sub> opettaja käsk-i ... [<sub>Topic/TP</sub>sinun kirjoitta-a t<sub>O</sub> huomise-ksi]]?  
 what.PAR teacher.NOM tell-PAST.3SG you.GEN write-TA tomorrow-TRAN  
 'What did the teacher tell you to write for tomorrow?'
- b. [<sub>FocusP</sub>**Sinun-ko**<sub>S</sub> opettaja anto-i ... [<sub>Topic/TP</sub>t<sub>S</sub> johta-a kuoro-a tänään]]?  
 you.GEN-Q teacher.NOM let-PAST.3SG conduct-TA choir-PAR today  
 'Was it you (that) the teacher let conduct the choir today?'
- c. [<sub>FocusP</sub>**Omena-t-han**<sub>O</sub> minä käsk-i-n ... [<sub>Topic/TP</sub>sinun kuori-a t<sub>O</sub> tällä veitse-llä]].  
 apple-PL.NOM-EMP I.NOM order-PAST-1SG you.GEN peel-TA this knife-ADE  
 'It was the apples (that) I ordered you to peel with this knife'

It is possible to find focussed DP's that bear intonational prominence in the embedded *-ta* clause, but only when such DP's do not bear morphological focus marking

(i.e. one of the emphatic clitics *-pa(s)* or *-han*). As I concluded in the discussion of many other phonologically marked, focussed DP's in main clauses, I propose that such DP's do not occur in a FocusP position, but are adjoined to some maximal projection, here Topic/TP. More than one DP may appear in the position, in a freely varying order, and within such a group, more than one DP may also bear intonational prominence. This movement of presupposed DP's is in accordance with the general discourse-governed movement patterns identified in main clauses (section 2.3.4) and participial clauses (section 3.2.1.5.2).

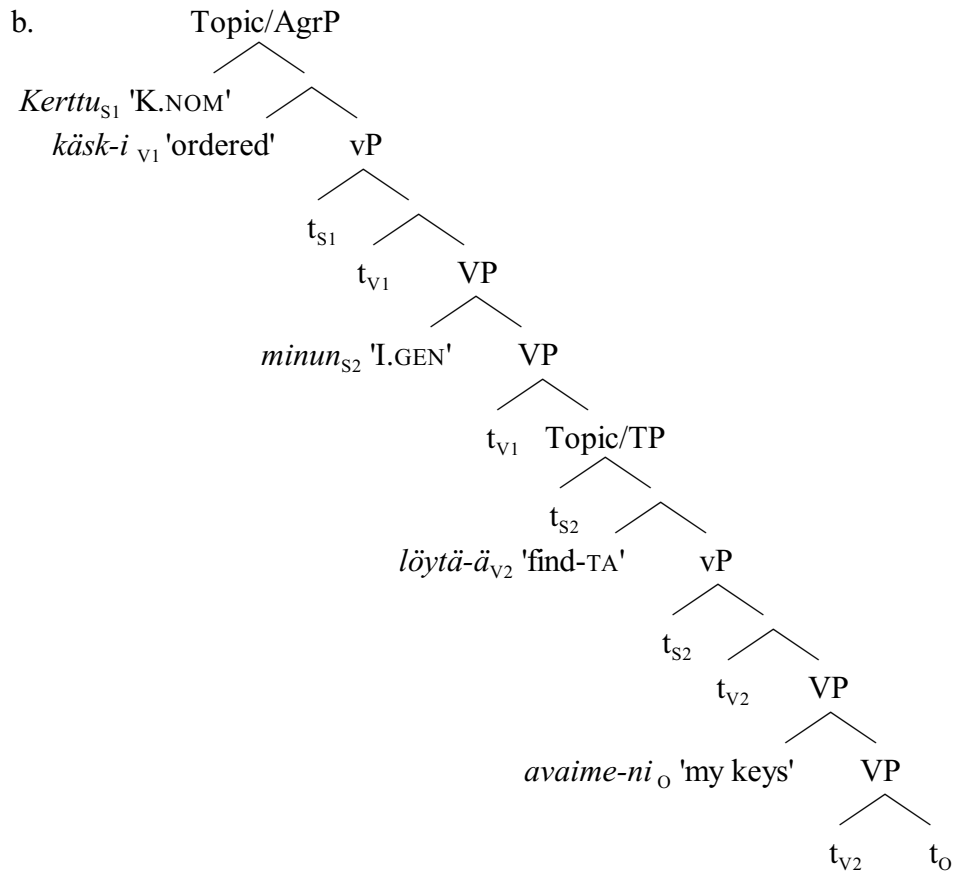
- (71) a. Penny anta-a mielellään lelu-j-a-an ystäv-ie-nsä laina-ta aina,  
 P.NOM give-3SG gladly toy-PL-PAR-3POS friend-PL-3POS borrow-TA always  
 (mutta hänen kirjoihinsa ei saa kukaan koske-a).  
 but her books NEG get anyone touch-TA  
 'Penny gladly lets her friends always borrow her toys, (but no one ever gets to touch her books)'
- b. Maisa anta-a [<sub>TP</sub>joka aamu ympäri huusholli-a kadonne-i-ta avaim-i-a-an  
 M.NOM let-3SG every morning round household-PAR lost-PL-PAR key-PL-PAR-3POS  
 etsi-ä [<sub>VP</sub> Kari-n [<sub>VP</sub> aina [<sub>VP</sub> kova-lla touhu-lla]]], ...  
 search-TA K-GEN always hard-ADE fuss-ADE  
 'Maisa lets Kari always search for his lost keys every morning round the household with much fuss (but she finds them for Heimo right away)'

Extraction facts provide more evidence against the presence of a CP projection in embedded *-ta* clauses. Only when the topic DP raises out of the *-ta* clause, for instance to the focus position of the main clause, can the infinitival verb be found adjacent to the matrix verb. The fact that the subject DP is able to raise out of the embedded clause at all shows that no CP projection dominates the *-ta* clause. In chapters 2 and 3 it was demonstrated that raising can take place out of embedded participial clauses, which do not contain a CP projection, but not from finite embedded clauses that are introduced by a complementizer. In the ECM clause, I assume that the pertinent DP has checked the [Topic] feature of the embedded clause prior to moving to the matrix clause to check its [Focus] feature. I assume that a single DP may act both as a topic (relaying old information) and a focus (imparting



(75) provides an example derivation of this sentence type. In this representation, overtly moving constituents are situated in the positions that they hold at spell-out in a convergent derivation.

- (75) a. Kerttu käsk-i minun löytä-ä avaimeni.  
 K.NOM order-PAST.3SG I.GEN find-TA key-1SG.POS  
 'Kerttu told me to find my keys'



#### 4.2.1.4.3. Raising constructions

The syntactic structure of the *-ta* clause embedded under raising verbs is identical to that of the ECM structures. The same structural constraints apply to both constructions: complementizers, short focal movements and negators are also not found in the raising *-ta* clause.

- (76) a. Minun täyty-y [<sub>CP</sub>(**\*että**) [<sub>TP</sub>löytä-ä avaimeni]].  
 I.GEN must-3SG that find-TA key-1SG.POS  
 'I must (\*that) find my keys'
- b. \*Sinun onnistu-i [<sub>FocusP</sub>**mitä** [<sub>TP</sub>löytä-ä]]?  
 you.GEN succeed-PAST.3SG what.PAR find-TA  
 'What did you succeed in finding?'
- c. \*Sinun onnistui-i [<sub>FocusP</sub>**avaimeni-ko** [<sub>TP</sub>löytä-ä]]?  
 you.GEN succeed-PAST.3SG key-1SG.POS-Q find-TA  
 'Was it my keys that you succeeded in finding?'
- d. \*Minun onnistu-i [<sub>FocusP</sub>**avaimeni-pas** [<sub>TP</sub>löytä-ä]]!  
 I.GEN succeed-PAST.3SG key-1SG.POS-EMP find-TA  
 'It was my keys that I succeeded in finding!'
- e. \*Minun onnistu-i [<sub>NegP</sub>**ei** [<sub>TP</sub>löytä-ä avaimeni]].  
 I.GEN succeed-PAST.3SG NEG.3SG find-TA key-PL-PAR-1SG.POS  
 'I succeeded in not finding my keys'

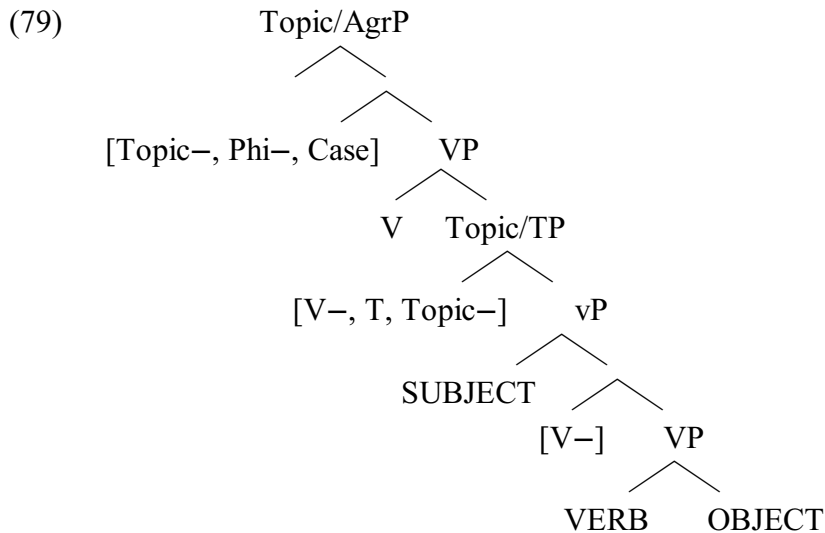
Negated utterances with a contrastive, constituent negation reading are acceptable.

- (77) a. Minun onnistu-i, **ei** löytä-ä avaimeni, mutta siivo-ta vähän.  
 I.GEN succeed-PAST.3SG NEG find-TA key-PL-PAR-1SG.POS but clean-TA little  
 'I succeeded, not in finding my keys, but in cleaning up a little'
- b. Minun onnistu-i, **ei** rikko-a maailmanennätys-tä,  
 I.GEN succeed-PAST.3SG NEG-3SG break-TA world.record-PAR  
 mutta ui-da 50m nopeammin kuin ole-n itse koskaan ui-nut.  
 but swim-TA faster than be-1SG self ever swim-NUT  
 'I succeeded, not in breaking the world record, but in swimming 50m faster than  
 I myself have ever swam before'

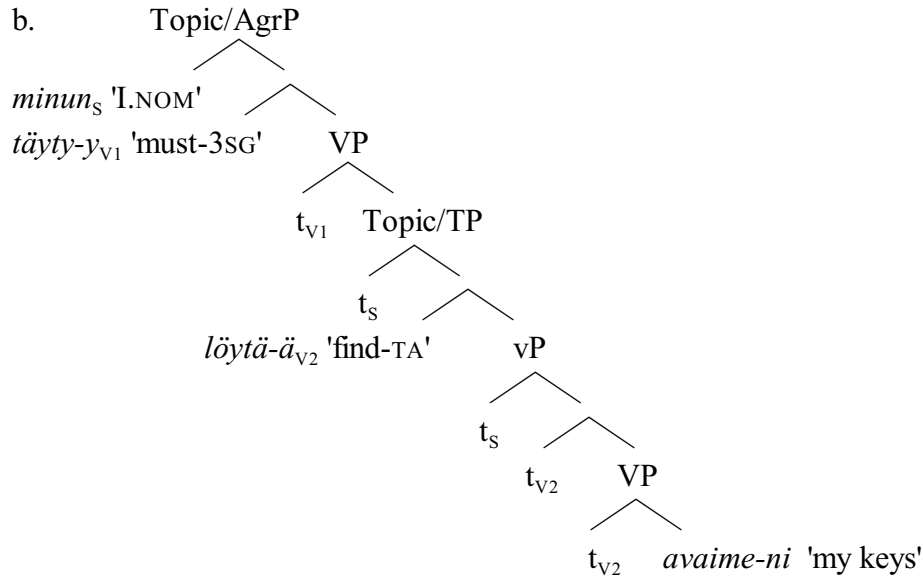
As with the ECM structures, the focus constructions become grammatical if the focussed element moves into the matrix clause to check the relevant features. I take this to mean that the clause does not contain a CP projection.

- (78) a. [<sub>FocusP</sub> **Mitä**<sub>O</sub> sinun onnistu-i [<sub>VP</sub> ... [<sub>Topic/TP</sub> t<sub>S</sub> löytä-ä t<sub>O</sub> ]]]?  
 what.PAR you.GEN succeed-PAST.3SG find-TA  
 'What did you succeed in finding?'
- b. [<sub>FocusP</sub> **Avaime-t-ko**<sub>O</sub> sinun onnistui-i [<sub>VP</sub> ... [<sub>Topic/TP</sub> t<sub>S</sub> löytä-ä t<sub>O</sub> ]]]?  
 key-PL.NOM-Q you.GEN succeed-PAST.3SG find-TA  
 'Was it the keys that you succeeded in finding?'
- c. [<sub>FocusP</sub> **Avaime-t-pas**<sub>O</sub> minun onnistu-i [<sub>VP</sub> ... [<sub>Topic/TP</sub> t<sub>S</sub> löytä-ä t<sub>O</sub> ]]]!  
 key-PL.NOM-EMP I.GEN succeed-PAST.3SG find-TA  
 'It was the keys that I succeeded in finding!'

The structure of a *-ta* clause with a subject raising matrix verb is given in (79). An example representation is shown in (80).



- (80) a. Minun täyty-y löytä-ä avaimeni.  
 I.GEN must-3SG find-TA key-1SG.POS  
 'I must find my keys'



#### 4.2.1.4.4. Control constructions

The control constructions present somewhat different structural properties. Negation as well as short *wh*- and yes/no-question movements are acceptable, which suggests the presence of FocusP and NegP projections. Concerning the negator here, it is important to notice that all indications of constituent negation status are missing: there is not necessarily a pause preceding the negator<sup>76</sup>, the negator does not obligatorily agree with the matrix clause agreement features, and the structure need not express a contrastive situation. These criteria indicate that the negator functions as a sentential operator.

- (81) a. Minä tiedä-n, [*mitä*<sub>O</sub> ei PRO teh-dä *t*<sub>O</sub>], ja [*mitä*<sub>O</sub> PRO teh-dä *t*<sub>O</sub>]  
 I.NOM know-1SG what.PAR NEG.3SG do-TA and what.PAR do-TA  
 'I know what not to do, and what to do!'

<sup>76</sup> The pause in (81h) precedes the entire *-ta* clause rather than solely the negator.



- b. Hän ei osan-nut päättä-ä, [**mihin** **suunta-an**<sub>OBL</sub> PRO lähte-ä t<sub>OBL</sub>].  
 3SG.NOM NEG.3SG can-NUT decide-TA which.ILL direction-ILL leave-TA  
 'He couldn't decide which direction to go to'
- c. Arvaa-t-ko sinä, [**miksi**<sub>OBL</sub> **ei** PRO lähte-ä t<sub>OBL</sub>].  
 guess-2SG-Q you.NOM why NEG.3SG leave-TA  
 'Can you guess why not to go?'
- d. Hänellä ei ole vielä selvi-llä, [**miten**<sub>OBL</sub> PRO aloitta-a työ-t t<sub>OBL</sub>].  
 3SG.ADE NEG.3SG be still clear-ADE how start-TA work-PL.ACC  
 'She still isn't clear on how to start the work'  
 (Hakulinen and Karlsson 1979:361, (76))
- e. Minä mieti-n, [**lähte-ä-kö**<sub>v</sub> PRO t<sub>v</sub>], vai ei.  
 I.NOM wonder-1SG leave-TA-Q or NEG.3SG  
 'I wonder whether to go or not'
- f. Minä mieti-n, [**ei-kö** PRO lähte-ä sitten-kin mukaan].  
 I.NOM wonder-1SG NEG.3SG-Q leave-TA after.all-EMP with  
 'I wonder whether not to go with (them) after all'
- g. Minä unohda-n, [**sokeri-a-ko**<sub>o</sub> PRO nyt laitta-a t<sub>o</sub>, vai suola-a].  
 I.NOM forget-1SG sugar-PAR-Q now put-TA or salt-PAR  
 'I forget whether to put sugar in now, or salt'
- h. Lapse-t kilju-i-vat kuoro-ssa vaati-e-n, [**ei** PRO odotta-a  
 child.NOM yell-PAST-3PL choir-INE demand-DE-INS NEG.3SG wait-TA  
 enää kauempaa].  
 anymore longer  
 'The children yelled in a chorus, demanding: not to wait any longer'

On the other hand, the entire *-ta* clause here has a more independent status than elsewhere. This is indicated by the phonological pause placed between the matrix verb and the *-ta* structure, as well as by the temporal autonomy of the embedded constituent. Whereas the temporal interpretation of the *-ta* clause in ECM and raising constructions is dependent on the temporal reference of the matrix clause predicate, in the control *-ta* clauses exemplified in (81) this is not necessarily so. (82) gives examples where the temporal reference of the *-ta* verb in a control clause is fully autonomous. Other examples, from Hakulinen and Karlsson (1979), were also cited in (22).

- (82) a. E-n osaa kuvitel-la sellais-ta pakkomiellet-tä: **jättä-ä** nyt pieni  
 NEG.1SG can imagine-TA such-PAR obsession-PAR leave-TA now little.ACC  
 lapsi omi-in olo-i-hi-nsa sillä aikaa  
 child.ACC own-ILL condition-PL-ILL-3POS that.ADE while  
 kun vanhemma-t pelaa-vat peliautomaate-i-lla.  
 when parent-PL.NOM play-3PL slot.machine-PL-ADE  
 'I can't imagine such obsession: to leave a small child on its own while the parents  
 play the slot machines!'
- b. Rauhoitu rakas ystävä: miksi **otta-a** yksi hylkäyskirje niin vakavasti?  
 calm.IMP dear friend why take-TA one rejection.letter so seriously  
 'Calm yourself, dear friend: why take one rejection letter so seriously?'
- c. Mitä nyt **teh-dä**?  
 what.PAR now do-TA  
 'What to do now?'

It is also possible to raise a question word out of the control *-ta* clause into the matrix FocusP. In such a case, the embedded *-ta* clause may not contain a negator, and the temporal reference of the *-ta* form is anaphorically dependent on the matrix tense.

- (83) a. [<sub>FocusP</sub> **Minne**<sub>OBL</sub> [<sub>Topic/Agp</sub> **sinä** halua-t ... [<sub>Topic/TP</sub> **PRO** (\*ei) lähte-ä **t<sub>OBL</sub>**]]]?  
 what.ILL you.NOM want-2SG NEG leave-TA  
 'Where do you want (\*not) to go?'
- b. [<sub>FocusP</sub> **Mitä**<sub>OBJ</sub> [<sub>Topic/Agp</sub> **te** ole-tte [<sub>TP</sub> **päättä-nee-t** ... [<sub>Topic/TP</sub> **PRO** (\*ei)  
 what.PAR 2PL.NOM be-2PL decide-NUT-PL NEG  
**teh-dä** **t<sub>OBJ</sub>** **tänä** **ilta-na**]]]]]?  
 do-TA this.ESS night-ESS  
 'What have you decided (\*not) to do tonight?'
- c. [<sub>FocusP</sub> **Tuula-lle-ko**<sub>OBL</sub> [<sub>Topic/Agp</sub> **sinä** unohd-i-t ... [<sub>Topic/TP</sub> **PRO** lähettä-ä  
 T-ALL-Q you.NOM forget-PAST-2SG send-TA  
**korti-n** **t<sub>OBL</sub>**]]]]]?  
 card-ACC  
 'Was it Tuula who you forgot to send a card to?'

These sentences demonstrate that neither a CP nor a NegP projection can be present in the syntactic structure of these control clauses: the first is ruled out by the ability of the

question word to raise out of the embedded clause; the second by the ungrammaticality of a sentential negator. In other words, the data in (81-82) and (83) exhibit contradictory properties. Overt complementizers present a further division between the two types of forms: complementizers are never permitted in non-question infinitival *-ta* clauses (84), but can co-occur with *-ta* forms that contain questions and/or negation (85).

- (84) a. Sofia jaksa-a [(**\*että**) PRO hyppi-ä sāngy-llä tuntikausi-a].  
 S.NOM be.able.to-3SG that jump-TA bed-ADE hour.period-PAR  
 'Sofia can (**\*that**) jump on a bed for hours'
- b. Minä lupaa-n [(**\*että**) PRO tiska-ta astia-t].  
 I.NOM promise-1SG that wash-TA dish-PL.ACC  
 'I promise (**\*that**) to wash the dishes'
- c. Minä varmaan unohda-n [(**\*kun** /**\*jos**) PRO anta-a merkki].  
 I.NOM probably forget-1SG when / if give-TA sign.ACC  
 'I'll probably forget (**\*when/if**) to give the sign'
- (85) a. Elaine takuulla tietä-ä, [**että** mitä PRO teh-dä t<sub>o</sub> ]!  
 E.NOM certainly know-3SG that what.PAR do-TA  
 'Elaine will certainly know what to do!'
- b. Hän ei osan-nut päättä-ä, [**että** mihin suunta-an<sub>OBL</sub> PRO lähte-ä t<sub>OBL</sub>].  
 3SG.NOM NEG.3SG can-NUT decide-TA that which.ILL direction-ILL leave-TA  
 'He couldn't decide which direction to go to'
- c. Minä vaan mieti-n, [**että** lähte-ä-kö<sub>v</sub> PRO t<sub>v</sub> ], vai ei.  
 I.NOM still wonder-1SG that leave-TA-Q or NEG.3SG  
 'I'm still wondering whether to go or not'
- d. Lapse-t kilju-i-vat kuoro-ssa vaati-e-n, [**että** ei  
 child.NOM yell-PAST-3PL choir-INE demand-DE-INS that NEG.3SG  
 PRO odotta-a enää kauempaa].  
 wait-TA anymore longer  
 'The children yelled in a chorus, demanding: not to wait any longer'
- e. Minä e-n usko-nut korv-i-a-ni: (**?että**) ei PRO  
 I.NOM NEG-1SG believe-NUT ear-PL-PAR-1SG.POS that NEG.3SG  
 enää pääs-tä koskaan Puurokallio-lle ui-ma-an.  
 anymore get-TA ever Porridge.rock-ALL swim-MA-ILL  
 'I didn't believe my ears: (that) never to get to swim at Porridge Rock anymore'

To examine the contradictory *-ta* clause types further, it is worth noting that the acceptability of both negation and focus movement in control clauses is restricted. Mostly sentential negation alone, without question movement, does not occur under the characteristics of sentential negation, as illustrated in (86), but only as constituent negation, as in (87). Since the structure is possible, however, I assume that the constraints are semantic, and leave the question for later study.

- (86) a. Minä muist-i-n                    \***[ei**            PRO tervehti-ä Helga-a].  
           I.NOM remember-PAST-1SG NEG.3SG            greet-TA H-PAR  
           'I remembered not to greet Helga (since she had asked me not to)'
- b. Minä päät-i-n                    \***[ei**            PRO lähte-ä ].  
           I.NOM dedice-PAST-1SG NEG.3SG            leave-TA  
           'I decided not to leave'
- c. Minä aio-n                    \***[ei**            PRO vuokra-ta auto-a].  
           I.NOM plan-1SG NEG.3SG            rent-TA car-PAR  
           'I plan not to rent a car'
- (87) a. Minä muist-i-n,                    **[e-n**            [Topic/TP PRO tervehti-ä Helga-a]],  
           I.NOM remember-PAST-1SG NEG-1SG            greet-TA H-PAR  
    mutta hymyil-lä Franki-lle.  
    but smile-TA F-ALL  
           'I remembered, not to greet Helga, but to smile to Frank'
- b. Minä päät-i-n,                    **[e-n**            [Topic/TP PRO lähte-ä ]], vaan jää-dä.  
           I.NOM dedice-PAST-1SG NEG-1SG            leave-TA but stay-TA  
           'I decided -- not to leave, but to stay'
- c. Minä aio-n,                    **[e-n**            [Topic/TP PRO vuokra-ta auto-a]], vaan PRO osta-a  
           I.NOM plan-1SG NEG-1SG            rent-TA car-PAR but buy-TA  
    polkupyörä-n.  
    bicycle-ACC  
           'I plan not to rent a car but to buy a bicycle'

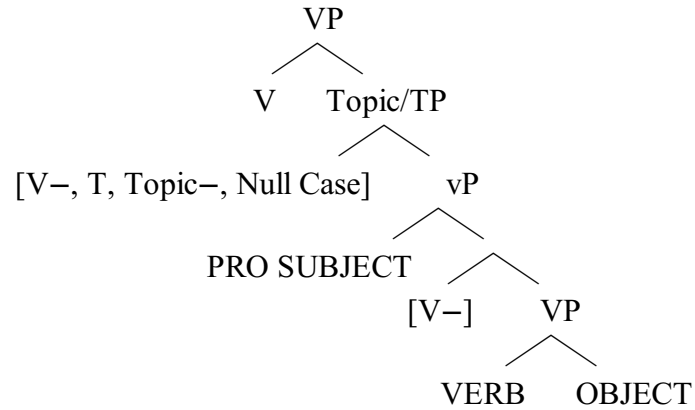
Furthermore, movement of non-question elements into the embedded FocusP is never legitimate, as (88) demonstrates.

- (88) a. \*Minä päät-i-n /uskals-i-n /lupas-i-n [<sub>FocusP</sub> **lähettä-ä-päs**<sub>O</sub>  
 I.NOM decide-PAST-1SG /dare-PAST-1SG /promise-PAST-1SG send-TA-EMP  
 [TP PRO t<sub>V</sub> Liisa-lle korti-n]!  
 L-ALL card.ACC  
 'I decided /dared /promised to send Liisa a card' (instead of always just buying  
 one for the drawer)
- b. \*Kleopatra uskals-i /aiko-i /tahto-i  
 Cleopatra.NOM dare-PAST.3SG /plan-PAST.3SG /want-PAST.3SG  
 [<sub>FocusP</sub> **Markus Antonius-ta-pas**<sub>O</sub> [TP PRO pyytä-ä t<sub>O</sub> treffe-i-lle ]!  
 Marc Anthony-PAR-EMP ask-TA date-ALL  
 'Cleopatra dared /planned /wanted to ask Marc Anthony for a date'

The apparent contradiction can be resolved if *-ta* may occur in two distinct control structures, one with CP and one without a CP. The presence of CP determines the availability of questions and negation. The structure of clauses where no focussed elements or negation are permitted is like that of the ECM and raising *-ta* clauses: there are no CP, FocusP or NegP projections. The only difference between this structure and the other *-ta* forms is that the head of Topic/TP also contains a [Null Case] feature which licenses a PRO subject.

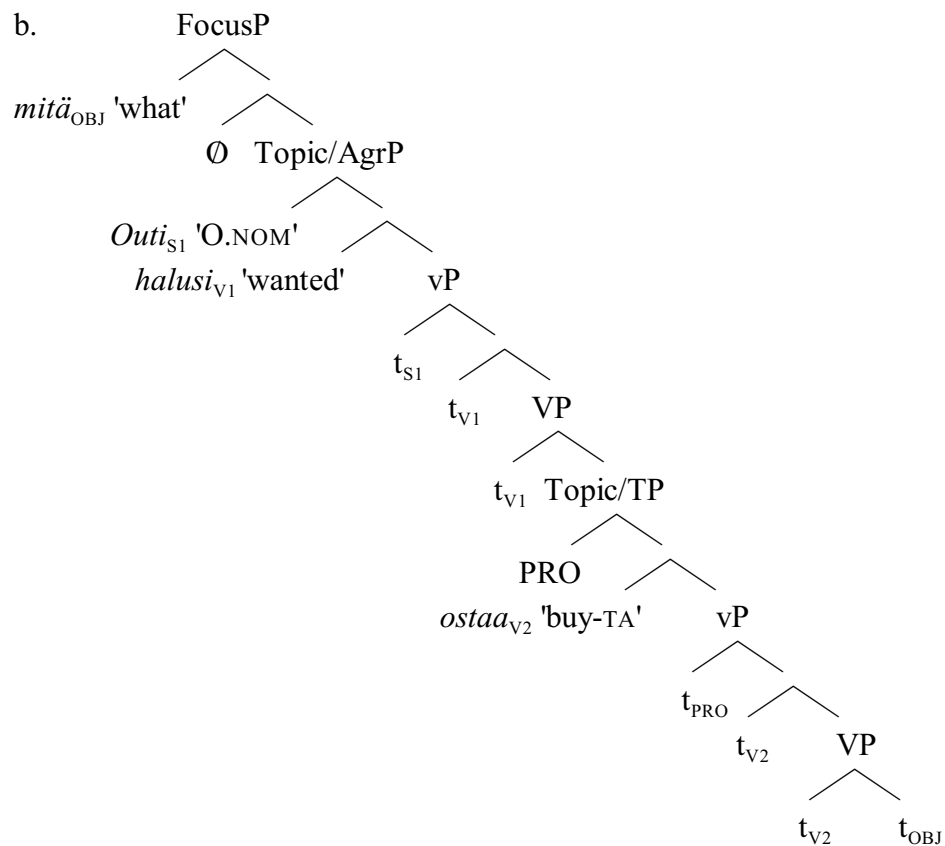
The [Null Case] feature must be located on the Topic/TP projection for two reasons. First, Topic/TP is the only functional projection in the structure, and there is no evidence to support positing a separate projection to house only the case feature. Since the aim of this research is to eliminate any unmotivated structure, I will assume that the case feature resides in Topic/TP. On the other hand, I argue that the case feature must appear on Topic/TP rather than on vP, since I adopt Chomsky's (1995) stipulation that features on arguments must move in order to check their features. Consequently, the PRO subject cannot check its case in its vP internal merge position. In the end, however, nothing crucial in the analysis as a whole hinges on this assumption. (89-90) present the control *-ta* structure with no CP.

(89)



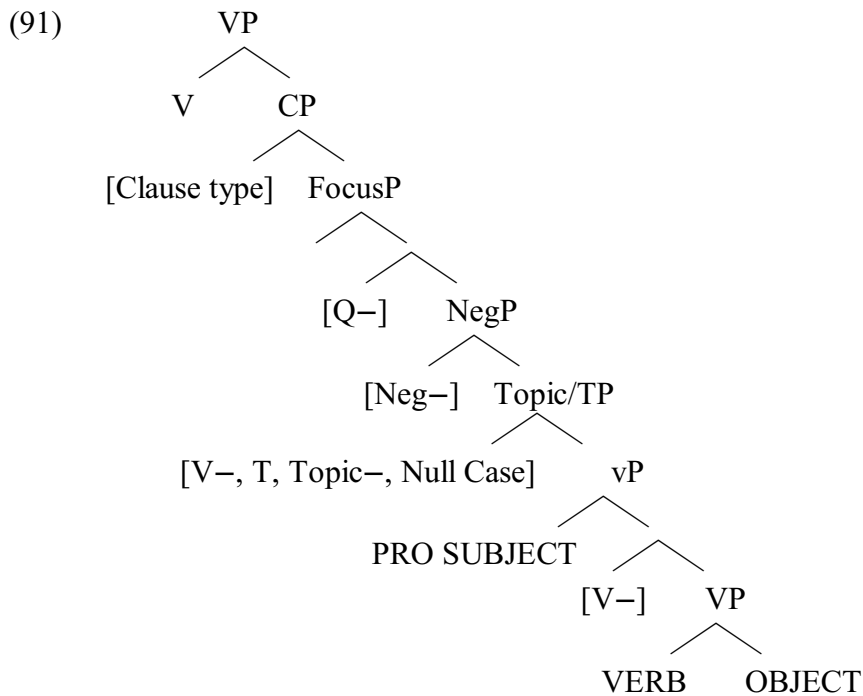
- (90) a. Mitä<sub>OBJ</sub> Outi halus-i [PRO osta-a t<sub>OBJ</sub>]?  
 what.PAR O-NOM want-PAST.3SG buy-TA  
 'What did Outi want to buy?'

b.

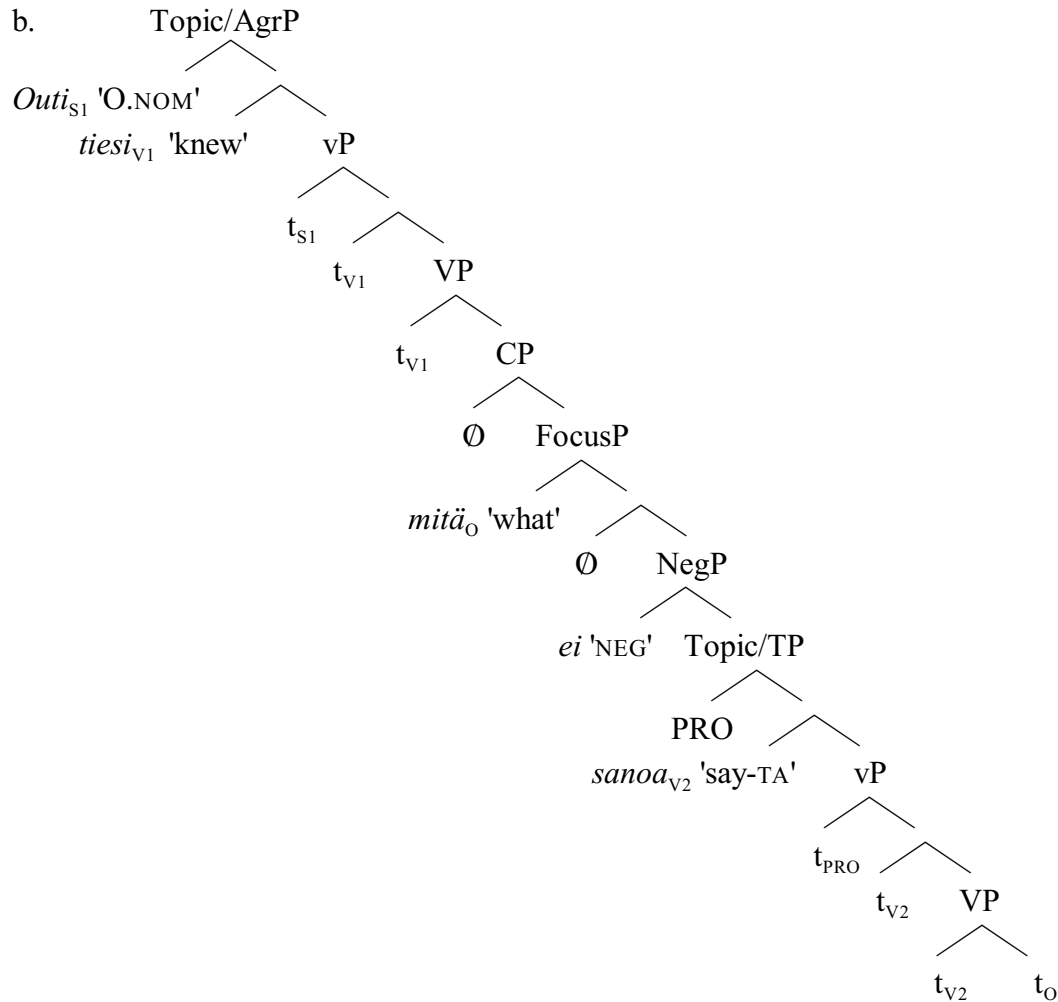


If, on the other hand, a complementizer feature is selected at numeration, [Q] and [Neg] features may also be legitimately merged into the structure. This raises a question

about the relationship between CP on the one hand, and FocusP and NegP on the other. The number of Focus and Neg projections in a Finnish sentence is always identical to the number of CP projections; in other words, the presence of CP must be linked to the presence of these features. I will examine the syntactic composition of Finnish Comp after I have presented the structure of CP-dominated control clauses in Finnish. It is as shown in (91). I assume that the CP projection is also involved in enabling the time reference of the infinitival clause to be non-anaphoric. This structural relationship was suggested for English infinitival *to* constructions by McGinnis (1993).



- (92) a. Outi ties-i [mitä<sub>o</sub> ei PRO sano-a t<sub>o</sub>].  
 O.NOM know-PAST.3SG what.PAR NEG.3SG say-TA  
 'Outi knew what not to say'



The proposal that a CP projection is not necessary for the licensing of a PRO subject is not without precedent. Bošković (1996) made a similar proposal regarding infinitival constructions in English and French. His account compared ECM and control structures, to show that the availability of lexical versus PRO subjects can be predicted on the basis of the s-selectional properties of the matrix verbs, and hence the need for a CP projection to rule out lexical subjects in control constructions is eliminated.

The particulars of Bošković's analysis are not directly transferable to Finnish: his analysis is based on the claim that the control complements of matrix verbs are selected for their non-propositional, irrealis status (encoded in the feature [+Tense], with no specification for the value of [Past]), whereas ECM complements are always non-finite but propositional



([-Tense]). A brief glance at the Finnish data demonstrates that such a distinction does not exist in Finnish: in section 4.2.1.3 I showed that there is strong evidence for analyzing verbs like *käskeä*, 'order', *antaa*, 'let', *sallia*, 'allow', and *suoda*, 'grant', as ECM verbs in Finnish, yet they clearly take irrealis (=non-propositional) complements. Since the *-ta* complements of control verbs also express irrealis events, the semantic distinction is eliminated.

On the other hand, based on evidence from structural diagnostics, I have concluded independently that not all Finnish control constructions are dominated by CP. I take Bošković's findings as support for my approach, in that there is evidence from other languages for non-CP control structures. The differences in the syntactic features within each language that Bošković's and my accounts have identified as licensors of these structures raises the very interesting question for future research of whether the structural conditions that result in non-CP control constructions must be uniform cross-linguistically, or whether distinct factors may lead to the same resulting structure in different languages.

Let us now return to the examination of the syntactic feature composition of Comp in Finnish, and how the presence of questions and negation is licensed in *-ta* constructions. I propose that CP in Finnish is characterized by the presence of at least one of the abstract features, [Agr] and [Question]<sup>77</sup>. One of these features must be checked during computation.

In finite embedded clauses, discussed in chapter 2, (Topic/)*AgrP* checks the [ $\phi$ ] features of the finite element (the negator or a verb). I propose that *AgrP* also bears an [agr] feature that consequently moves covertly to Comp and checks an abstract [Agr]. This

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<sup>77</sup> The existence of these features in CP is not a novel innovation: the presence of both has been suggested previously in the literature. Rizzi (1990) proposes that agreement (Agr) can be either an autonomous head of a functional projection, or a feature on some other head, such as C. Platzack and Holmberg (1989) and Holmberg and Platzack (1990) proposes that C contains a finiteness operator [+F], whose existence is related to nominative case licensing. Murasugi (1992) utilizes a syntactic [ $\pm$ Finite] feature of C to account for case assignment and word order phenomena in various languages. I label the feature as [Agr], to avoid any unwanted associations with case marking, but in essence the feature is a [Finite] feature. The splitting of questions into two features, [WH] and [Q] has been proposed by, among others, He (1997). These exact feature labels are not functional for Finnish, however, since not only wh-question words but also yes/no questioned elements move into FocusP. This is why I codify them as [Q] and [Question]. Nevertheless, the core of the proposal is the same: to distinguish the feature that ensures correct question operator positioning for scope purposes from the feature that is responsible for clause typing.

movement types the clause as a finite clause. I label the finiteness feature of Comp as [Agr] rather than [Phi] to distinguish it from the agreement features of the verb or negator. I assume that [Agr]/[agr] are abstract finiteness features that are relevant only for clause typing. The head of Comp may also contain other lexical information that is interpreted phonetically as one of the complementizers listed in section 2.3.1.2 of chapter 2.

Furthermore, a finite Comp may also bear a [Q] feature. A question FocusP, in addition to bearing a strong [q] feature that attracts a wh-word or a yes/no question marker, contains a [question] feature. This feature checks a matching feature of CP covertly.

I propose that negated non-finite question clauses, exemplified in (81a,c,f), are derived in the following way. The CP in these structures contains both the [Question] and [Agr] features. The [Question] feature is checked by the FocusP that contains a raised question word. The [Agr] feature, on the other hand, checks the [agr] of AgrP, within which the [phi] features of the negator have been checked. The negator selects for a TP complement, as also in main clauses, and it is impervious to the other ([Null case, Topic]) features of the Topic/TP of the *-ta* clause. Since the PRO subject of the infinitival clause bears no [phi] features, the negator always bears default third person agreement. Thus we find that, to be accurate, the so-called negated non-finite clause in effect is not non-finite; rather, it is a complex intermingling of sets of feature matrices with both finite and non-finite features that results from the feature checking and selectional needs of its composite parts.

A similarly mixed derivation is created in a negated non-finite non-question clause, where the CP contains an [Agr] feature that is checked by the negator. Consequently no [Question] feature is necessary. This is the structure of the sentence in (81h).

It is also possible for CP to bear only a [Question] feature, and no [Agr]. This is the situation in affirmative, question control *-ta* clauses, such as (81b,d,e,g). No finite agreement inflection can occur in a clause without an [Agr] feature. If no [Agr] is present in the computation, AgrP cannot check its [agr] feature. If AgrP is present in the structure, nonetheless, because it has checked finite [phi] features, the derivation crashes. The absence of [Agr] and AgrP also rules out both a lexical subject and a *pro* subject, since the availability of the [(Subject) Case] feature is limited to finite environments. The null case of

PRO can be checked under these conditions, however, as the relevant feature is present on the Topic/TP head of the *-ta* complex. A FocusP projection merges into the structure, selecting for a TopicP complement. However, only a question FocusP can appear in such non-finite clauses, never an emphatic FocusP, since the [Question] feature of CP must be checked. Finally, the appearance of overt complementizers in question *-ta* clauses supports the argument that a CP level of structure is present.

A final point to be raised concerns the fact that negation is always ruled out in ECM and raising constructions. It was shown above that negation in non-finite clauses must always be licenced by a question word. I propose that questions are prohibited in ECM and raising constructions on very simple semantic grounds: none of the matrix verbs s-select for question complements.

#### 4.2.1.5. Remaining questions

A small number of questions that have been raised in the discussion regarding infinitival *-ta* constructions remain to be answered. First, the fact that the *-ta* verb has no passive counterpart requires explanation. This property of the *-ta* form was initially listed in Table 4.1. as a nominal trait. I have consequently argued in length, however, that the *-ta* infinitive originates as the head of a VP projection, and that no nominal syntactic features are present in the functional projections that dominate this VP. The existence of the gap in the verbal paradigm of *-ta* is thus increasingly perplexing. I suggest that the unavailability of passive *-ta* forms is a direct result of the structure of the Finnish impersonal passive construction. Koskinen (1992a, b, 1993a) analyzed this construction as involving a *pro* subject with the specific [ $\phi$ ] features of [third person, plural, human]. Moreover, it was argued that *pro* in Finnish bears subject case exactly as lexical pronouns do. In other words, the passive *pro* must check its [case] and [ $\phi$ ] features under the same processes as overt pronouns. The representations in (94) illustrate the structure of impersonal passive sentences, leaving open the question of whether the passive morpheme itself heads an independent functional position or not.

- (94) a. [<sub>Topic/AgrP</sub> Yökerho-ssa **näh-t-i-in** ... [<sub>VP</sub> *pro* [<sub>VP</sub> kuulemma sinut ]]]!  
 night.club-INE see-PASS-PAST-AGR apparently you.ACC  
 'You were apparently seen at the night club!'
- b. [<sub>FocusP</sub> Mitä-s [<sub>Topic/AgrP</sub> täällä teh-dä-än ... [<sub>VP</sub> *pro* ]]]?  
 what.PAR-EMP here.ADE do-PASS-AGR  
 'And what are (people) doing here?'

In light of these findings, it is not surprising that no passivized *-ta* constructions exist. In the control constructions, only a [Null Case] feature is available, and the passive *pro* cannot check its [case] feature. This results in a crashed derivation. In the ECM construction, I argue that *pro* is barred due to its inability to check its [phi] features. It is not only the passive *pro*, but also the *pro* that is identified through possessive suffixes that cannot occur in *-ta* constructions.

- (95) a. \*Paavo käsk-i [olohuonee-n siivo-ta-ta *pro*].  
 P.NOM order-PAST.3SG living.room-ACC clean-PASS-TA  
 'Paavo ordered the living room to be cleaned'
- b. \*Muumipeikko anto-i [*pro* pudo-ta-nsa narutikka-i-lta maa-han].  
 Moomintroll.NOM let-PAST.3SG drop-TA-3Pos rope.ladder-PL-ABL ground-ILL  
 'Moomintroll let himself drop from the rope ladder onto the ground'

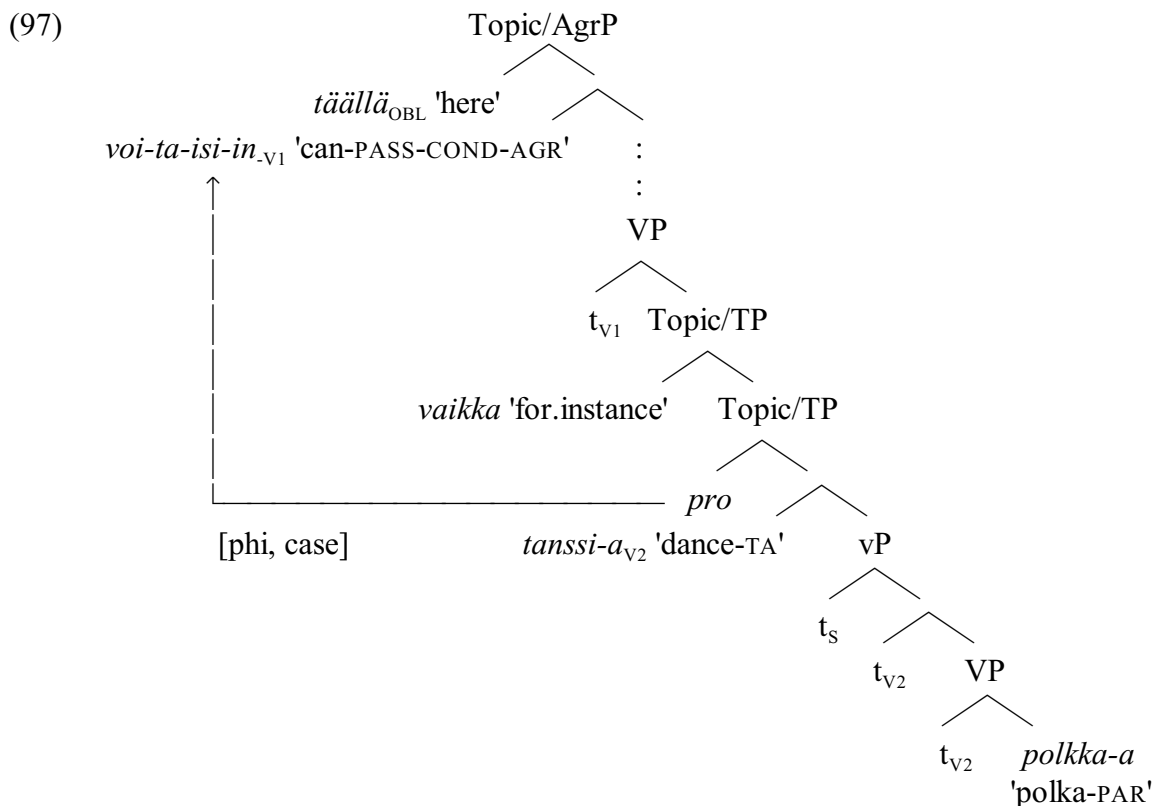
I assume that both types of null pronouns must check their [phi] features within a specifier-head configuration with either a D head (available in, for instance, the embedded participial construction, which has a passive counterpart) or an Agr head (in finite clauses). Neither projection is available in the embedded ECM structure. In the raising construction the embedded *-ta* verb cannot be passivized, and possessive suffixes are not manifested. However, passivization of the matrix raising verb is possible.

- (96) a. \*Köyhä-n puutarhuri-n onnistu-i [*pro* piiloutu-a-nsa  
 poor-GEN gardener-GEN succeed-PAST.3SG hide-TA-3Pos  
 näkymättömyyde-n viitta-an].  
 invisibility-GEN cloak-ILL  
 'The poor gardener succeeded in hiding himself into the cloak of invisibility'

- b. Täällä voi-**ta**-isi-in vaikka [*pro* tanssi-a polkka-a].  
 here.ADE can-PASS-COND-AGR for.instance dance-TA polka-PAR  
 'Here (people) could, for instance, dance polka'
- c. \*Täällä voi-isi vaikka [*pro* tanssi-**ta**-ta polkka-a].  
 here.ADE can-COND.3SG for.instance dance-PASS-TA polka-PAR  
 'Here (people) could, for instance, dance polka'

Again I assume that a possessive *pro* or a passive *pro* would have to raise to a specifier-head configuration within an appropriate projection, either DP or AgrP, to check its [ $\phi$ i] features, and the structure repeated in (96) reminds us that no such projection exists at the level of the non-finite *-ta* clause. On the other hand, the [ $\phi$ i] features of a passive *pro* subject can raise to the Topic/AgrP of the matrix clause to be checked. In this case, however, it checks its features against those of the matrix verb, not the embedded non-finite verb, and consequently the passive morphology is phonologically realized on the main verb. A possessive *pro* subject could not undergo the same process of checking, since the matrix verb's [ $\phi$ i] features are finite, and those of the possessive suffix are nominal.

(96) illustrates the derivation of the sentence in (95b).



A second outstanding issue has to do with the alternative word orders of the control structures first shown in (39), repeated here as (97).

- (98) a. Me pääti-mme [PRO syö-dä illallis-ta takapiha-lla].  
 we.NOM decide-1PL eat-TA supper-PAR back.yard-ADE  
 'We decided to eat supper in the back yard'
- b. Illallis-ta<sub>OBJ</sub> pääti-mme [PRO syö-dä t<sub>OBJ</sub> takapiha-lla] me.  
 supper-PAR decide-1PL eat-TA back.yard-ADE we.NOM  
 'We decided to eat supper in the back yard'
- c. Takapiha-lla<sub>OBL</sub> pääti-mme [PRO syö-dä illallis-ta t<sub>OBL</sub>] me.  
 back.yard-ADE decide-1PL eat-TA supper-PAR we.NOM  
 'We decided to eat supper in the back yard'

The position of the matrix subject below the embedded clause in (97b,c) raises curiosity. I assume that the object (97b) and oblique (97c) DP's have moved to the main

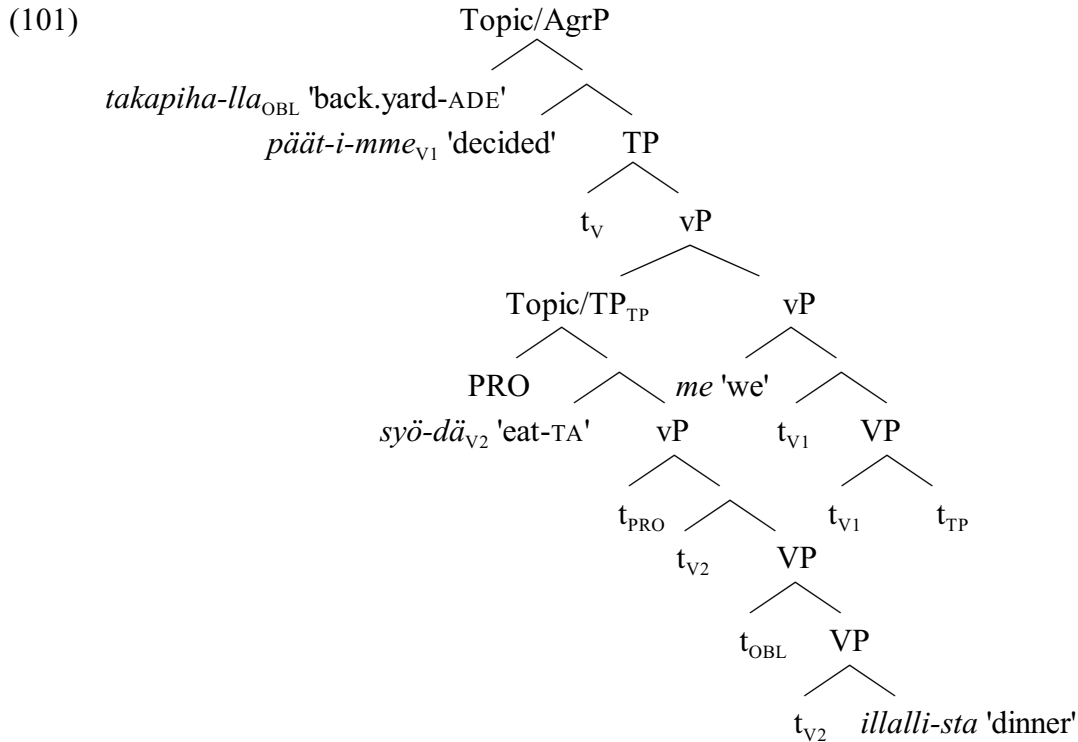
clause to check the matrix [Topic] feature, and that the main verb has checked its [phi] features, as expected. It appears, however, that either the matrix subject has lowered to a position below the embedded non-finite clause, or else the entire embedded TP has also moved up to adjoin to a position left of the matrix subject. Why should either of these movements take place? I assume that a raising rather than a lowering analysis is preferable within the framework adopted in this work, and so I must motivate the movement of the embedded clause to a pre-subject position. I assume that this movement is driven by the requirement that all presupposed constituents must scramble out of vP, as was demonstrated in section 2.3.4 of chapter 2. In the examples in (98b,c), the informational content provided by the matrix subject is new, while the control clause supplies old information. (99) below shows that when some of the content of the embedded clause is new, it is the matrix subject that must raise out of its merged [Spec, vP] position, and the control clause remains below the subject.

- (99) a. *Illallis-ta<sub>O</sub> pääti-mme me [PRO syö-dä t<sub>O</sub> takapiha-lla].*  
 supper-PAR decide-1PL we.NOM eat-TA back.yard-ADE  
 'Supper we decided to eat in the back yard'
- b. *Takapiha-lla<sub>OBL</sub> pääti-mme me [PRO syö-dä illallis-ta t<sub>OBL</sub>].*  
 back.yard-ADE decide-1PL we.NOM eat-TA supper-PAR  
 'We decided to eat supper in the back yard'

The same clausal movement also takes place in ECM *-ta* constructions, as illustrated in (100).

- (100) a. *Puuro-a<sub>O</sub> käsk-i [Howardi-n syö-dä t<sub>O</sub>] Sofia.*  
 porridge.PAR order-PAST.3SG H-GEN eat-TA S.NOM  
 'Sofia ordered Howard to eat porridge'
- b. *Howardi-n<sub>S</sub> käsk-i [puuro-a syö-dä t<sub>S</sub>] Sofia.*  
 H-GEN order-PAST.3SG porridge.PAR eat-TA S.NOM  
 'Sofia ordered Howard to eat porridge'

(101) illustrates the structure that I propose for the sentence in (98c).



#### 4.2.2. Noun and adjective modifier uses

The *-ta* infinitive construction is also used to modify nouns and adjectives. Nouns with infinitival *-ta* modifiers may occur in any nominal position: subject, object or oblique. The head noun in these constructions is generally abstract, such as *aie*, 'plan', *oikeus*, 'right', *tapa*, 'habit', *mahdollisuus*, 'possibility', *kunnia*, 'honour', *ajatus*, 'thought', *ideologia*, 'ideology', *tilaisuus*, 'opportunity', *kyky*, 'ability', *halu*, 'willingness', *pyrkimys*, 'aspiration', *lupa*, 'permission', and so on (Hakulinen and Karlsson 1979:123).

- (102) a. Luonnontutkijo-ide-n tapa [kategorisoi-**da** maailma-a] on erilainen  
 naturalist-PL-GEN way.NOM categorize-TA world-PAR be.3SG different  
 kuin sinun.  
 than you.GEN  
 'Naturalists' way of categorizing the world is different from yours'



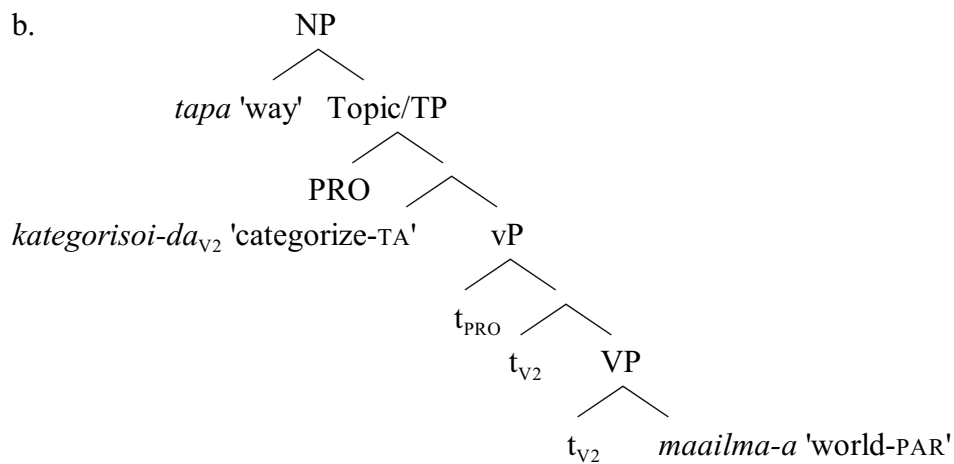
- b. Tämä anta-a sinulle tilaisuude-n [osallistu-a täysiaikaisesti projekti-in].  
 this.NOM give-3SG you.ALL opportunity-ACC participate-TA full.time project-ILL  
 'This gives you an opportunity to participate in the project full time'
- c. Hänessä heräs-i ajatus [saa-da aika-an jotain suur-ta].  
 3SG.INE wake-PAST.3SG thought get-TA time-INE something great-PAR  
 'In her awoke a thought to produce something magnificent'  
 (Hakulinen and Karlsson 1979:124, (63.e))
- d. Minä e-n pidä hänen aikee-sta-an [muutta-a pian Georgia-an].  
 I.NOM NEG-1SG like 3SG.GEN intention-ELA-3POS move-TA soon G-ILL  
 'I don't like his plan to soon move to Georgia'

The examples in (102) show that the *-ta* form is not inflected for any nominal or verbal marking. As elsewhere, the *-ta* verb assigns regular object case, shown in (102a,c), and takes various DPs as modifiers, as in (102b,d). The *-ta* clause can be modified by temporal adverbials, as in (102d), or verb-oriented adverbs, in (102b). (102d) shows that the position of the *-ta* verb with regard to a temporal adverb is identical to that of its counterpart in the infinitival complement clause discussed in section 4.2.1. It is evident that the structure of the noun attribute *-ta* clause should be similar to that of the infinitival *-ta* clause. In the examples above there is no evidence of any functional features above the infinitival TP projection, since no negation, focus-movement or complementizers are present. However, as in the control clause structure embedded under verbs, the noun attribute construction permits limited embedded question formation, with and without a negator.

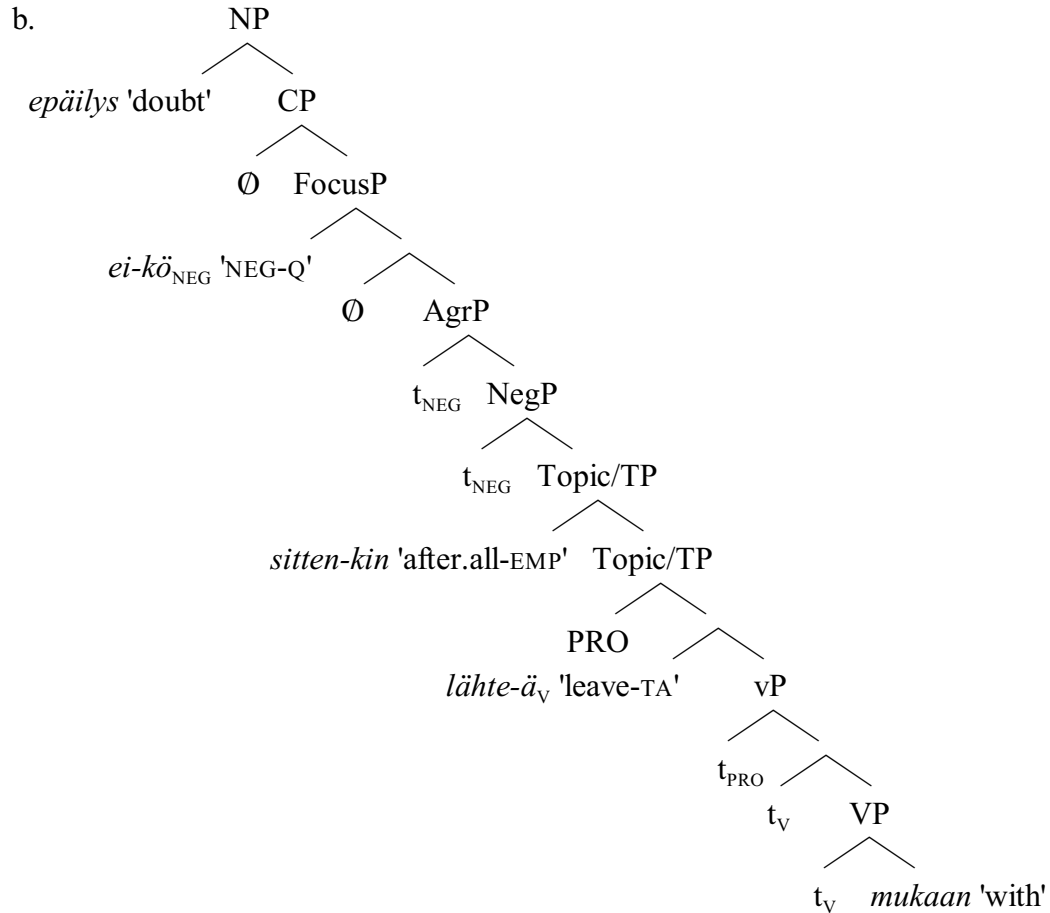
- (103) a. Mielee-ni nous-i kysymys, [mitä teh-dä nyt].  
 mind-1SG.POS rise-PAST.3SG question what.PAR do-TA now  
 'Into my mind rose a question: what to do now?'
- b. Kaisa-a kiusas-i epäily, [ei-kö sittenkin lähte-ä mukaan].  
 K.NOM bother-PAST.3SG doubt NEG.3SG-Q after.all leave-TA with  
 'Kaisa was bothered by a doubt whether not to go with (them) after all'

Based on the parallel properties of the embedded *-ta* clauses and the noun attribute *-ta* clauses, I will assume that the structures of the latter constructions are equivalent to those of the two types of control clauses that were proposed in the preceding section. The structures of the Topic/TP and the full CP clauses are represented in (104-105).

- (104) a. *tapa* [*kategorisoi-da maailma-a*]  
           way   categorize-TA world-PAR  
           'way of categorizing the world'



- (105) a. *epäily*s, [*ei-kö*        *sittenkin lähte-ä*    *mukaan*].  
           doubt    NEG.3SG-Q after.all    leave-TA with  
           'a doubt whether not to go with (them) after all'



Noun attribute *-ta* constructions that allow an overt lexical subject DP appear to pose a problem for the representations given in (104-105). Since only [Null Case] can be checked within the modifier clause, lexical subjects should not be possible.

- (106) a. Opettaja anto-i luva-n [**las-te-n** lähte-ä välitunni-lle].  
 teacher.NOM give-PAST.3SG permission-ACC child-PL-GEN -TA leave-TA recess-ALL  
 'The teacher gave permission for the children to go on recess'
- b. Tilaisuus [opettaj-ie-n **ammattiyhdistys-te-n** kaata-a lakiehdotus 160]  
 opportunity.NOM teacher-PL-GEN union-PL-GEN reverse-TA bill.ACC 160  
 tuhla-tt-i-in.  
 squander-PASS-PAST-AGR  
 'The opportunity for the teachers' unions to reverse Bill 160 was squandered'

I suggest that the overt subject DP's are licenced by the head noun exceptionally case marking its complement. I assume that the head noun bears a [Case] feature, which the lexical subject of the *-ta* infinitive attribute clause checks. A *pro* subject is not acceptable in this position, since, although it can check its [case] feature, its [phi] features would remain unchecked. The data in (107) show that abstract nouns that take *-ta* attributes generally also permit DP modifiers. These DP attributes bear one of the many locative cases, which must be lexically assigned by the modified noun.

- (107)
- |  |                                       |
|--|---------------------------------------|
| a. oikeus kahte-en kahvitauko- <b>on</b><br>right two-ILL coffee.break-ILL | 'a right to two coffee breaks'        |
| b. mahdollisuus voitto- <b>on</b><br>possibility win-ILL                   | 'a possibility of a win'              |
| c. ajatus muutokse- <b>sta</b><br>thought change-ELA                       | 'a thought of a change'               |
| d. tilaisuus anteeksianto- <b>on</b><br>opportunity forgiveness-ILL        | 'an opportunity for forgiveness'      |
| e. aie aikataulu-n muuttamise- <b>ksi</b><br>plan schedule-GEN change-TRAN | 'a plan for a change in the schedule' |
| f. pyrkimys hyvyyte- <b>en</b><br>aspiration good-ILL                      | 'an aspiration for goodness'          |

These Finnish data and my analysis of them contradict the English facts, shown in (108), and Chomsky's (1985:190) resulting claim that nouns cannot exceptionally case mark their complements.

- (108)
- |                                      |                        |
|--------------------------------------|------------------------|
| a. I believe John to be the winner   | (Chomsky 1985, (262i)) |
| b. *the belief John to be the winner | (Chomsky 1985, (264i)) |

My account is not entirely in opposition to Chomsky's view, however, since I also assume that nouns cannot assign object case. Rather, I argue that in these constructions the embedded subject of the *-ta* clause raises to check the head noun's lexical case feature, in the same configuration as the regular DP attributes in (107) have done. The genitive-like morphological form of the subject case is the result of default interpretation of the non-thematic case checker.

The analysis of overt subject noun attribute *-ta* clauses as ECM constructions is supported by two other findings. First, as expected, lexical subjects are not acceptable in *-ta* clauses that contain a question word, since in these cases the CP boundary blocks the case checking movement.

- (109) a. Mielee-ni nous-i kysymys, [minne (\***las-te-n**) lähte-ä nyt].  
 mind-1SG.POS rise-PAST.3SG question what.ILL child-PL-GEN leave-TA now  
 'Into my mind rose a question: where (\*for the children) to go now?'  
 b. Kaisa-a kiusas-i epäily, [ei-kö (\***Peka-n**) sittenkin lähte-ä mukaan].  
 K.NOM bother-PAST.3SG doubt NEG.3SG-Q P-GEN after.all leave-TA with  
 'Kaisa was bothered by a doubt whether (\*for Pekka) not to go with (them) after all'

Second, *pro* drop, overtly manifested by possessive suffixation, is not admissible in these structures. This is as expected: *pro* should be ruled out in this environment due to the fact that it cannot check its [ $\phi$ ] features. Lexical DP's need only check their [case] features, not [ $\phi$ ] features.

- (110) a. \*Minä pyys-i-n lupa-a [**pro** lähte-ä-**ni** mukaan],...  
 I.NOM ask-PAST-1SG permission-PAR leave-TA-1SG.POS with  
 'I asked for a permission to go with (them, but I didn't get it)'  
 b. \*Mati-lla on ideologia [**pro** otta-a-**nsa** osaa kaikki-in mielenosoituks-i-in].  
 M-ADE be.3SG ideology take-TA-3POS part all-ILL demonstration-ILL  
 'Matti has an ideology to take part in all demonstrations'

*-ta* clauses also modify adjectives in a structure whose properties resemble those of the English *tough* construction. The English phenomenon has baffled investigators for decades (e.g. Chomsky 1973, 1977, 1981). (111) presents the Finnish data. The main clause appears to be a regular predicate adjective construction: the subject of the matrix clause is in the nominative, the copula *olla*, 'be', agrees with the subject's [ $\phi$ ] features, and the predicate adjective agrees with the subject in number. This structure can be modified by an attributive *-ta* clause which may or may not contain an overt subject. The theta role pattern of the *-ta* clause suggests, however, that the infinitival clause must contain a nominal element that is coindexed with the matrix subject. The commonly adopted solution to this problem is to consider the modifying clause a control structure whose object position contains an operator (e.g. Chomsky 1977). The relationship between the matrix subject and the embedded object position is, hence, not one of movement, but one of coindexation.

- (111) Suome-n    infinitiivi-t<sub>i</sub>    o-vat    vaike-i-ta    [ $Op_{ii}$  [PRO /kenenkään  
 Finnish-GEN infinitive-PL.NOM be-3PL difficult-PL-PAR                    /anyone.GEN  
    ymmärtä-ä    t<sub>Op</sub> ]].  
    understand-TA  
 'Finnish infinitives are difficult (for anyone) to understand'

A constraint on question formation in the attributive clause supports this analysis. It also suggests that the operator must move to a FocusP projection, since question words cannot appear in this structure. In section 2.3.2.2 I showed that all question words in Finnish obligatorily move to the nearest [Spec, FocusP] position to check their [ $q$ ] feature. (112) illustrates that a question word subject cannot either front to the matrix clause for this checking, nor move to an intermediate FocusP position within the *-ta* clause. Based on these facts, I conclude that these constructions contain a null operator that raises to a FocusP position within the embedded *-ta* clause, hence blocking any movement of question elements within or out of the infinitival structure.

- (112) a. \*Kenen<sub>S</sub> suome-n infinitiivi-t o-vat vaike-i-ta  
 who.GEN Finnish-GEN infinitive-PL.NOM be-3PL difficult-PL-PAR  
 $[_{?P}Op_i [t_S \text{ymmärtä-ä } t_{Op} ]]$ ?  
 understand-TA  
 'For whom are Finnish infinitives difficult to understand?'
- b. \*Suome-n infinitiivi-t o-vat vaike-i-ta [<sub>FocusP</sub>kenen<sub>S</sub>  
 Finnish-GEN infinitive-PL.NOM be-3PL difficult-PL-PAR who.GEN  
 $[_{?P}Op_i [t_S \text{ymmärtä-ä } t_{Op} ]]$ ?  
 understand-TA  
 'For whom are Finnish infinitives difficult to understand?'

There is no conclusive confirmation of the presence or absence of a CP projection in this structure. Neither of the two CP features, [Question] or [Agr], is present in the construction. Since functional projections are posited only based on firm evidence, and since no such evidence is currently on hand, I conclude that there is no CP in this structure.

The construction in (111) contrasts with a second pattern, in which overt movement of the embedded object DP seemingly must have taken place. In section 4.2.1.3 I argued that these constructions are lexicalized expressions rather than predicate adjective forms, and I discussed these structures as part of the larger group of raising predicates. In such structures, no overt subject is present in the matrix clause, but rather a DP bearing some non-subject case (here partitive and relative) appears raised from the embedded *-ta* clause. The copula bears default third person singular agreement, and the predicate adjective is obligatorily singular, so that it does not agree in number with its clause-mate DP. Again, the embedded *-ta* clause may or may not contain a lexical subject.

- (113) a. Suome-n infinitiivi-j-ä<sub>O</sub> on /\*o-vat vaikea /\*vaike-i-ta  
 Finnish-GEN infinitive-PL-PAR be.3SG/ be-3PL difficult / difficult-PL-PAR  
 $[(\text{kenenkään}) \text{ymmärtä-ä } t_O ]$ .  
 anyone.GEN understand-TA  
 'Finnish infinitives are difficult for anyone to understand'
- b. Hyttys-i-stä<sub>O</sub> on /\*o-vat vaikea /\*vaike-i-ta  $[(\text{kenenkään}) \text{pitä-ä } t_O ]$ .  
 mosquito-PL-ELA be.3SG/ be-3PL difficult/ difficult-PL-PAR anyone.GEN like-TA  
 'Mosquitoes are difficult for anyone to like'

I have suggested that the attributive clause here is not dominated by either CP or FocusP, which allows for movement out of the *-ta* structure. I claim that the structures in (113) are derived by the strong [Topic] feature of the matrix Infl attracting one of the DP's from the embedded *-ta* clause, here the object. The data in (114) support this analysis. In (114a), the subject DP raises to matrix TopicP, and the structure is grammatical. This behaviour contrasts with the control structure from (111), for which (114b) demonstrates that the (genitive) subject cannot replace the (nominative) object in the main clause position. Furthermore, in (115) I illustrate that a questioned subject obligatorily and grammatically raises out of the raising type *-ta* attribute into the main clause FocusP. These data offer further support for treating the two constructions as distinct, and for maintaining that the structure in (111) is a control construction, while that in (113) involves raising.

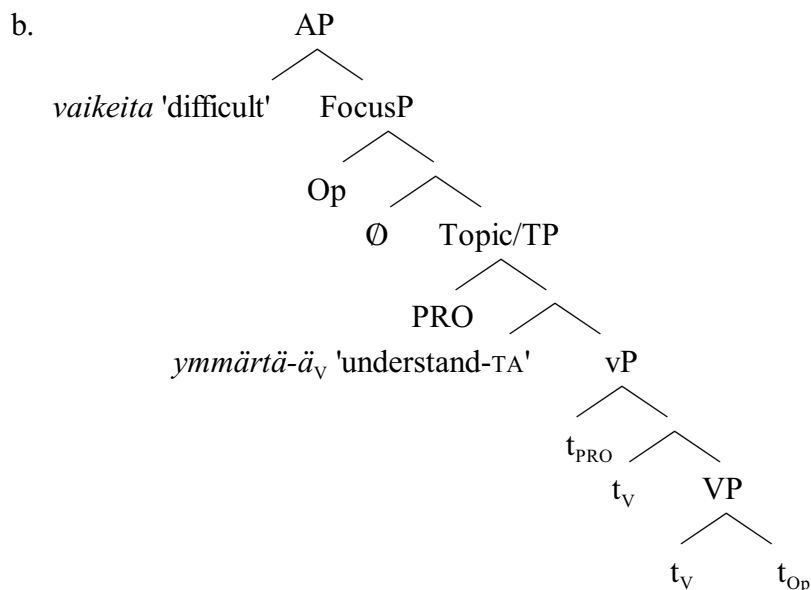
- (114) a. Kenenkään<sub>S</sub> on vaikea [t<sub>S</sub> ymmärtä-ä suome-n infinitiive-j-ä].  
 anyone.GEN be.3SG difficult understand-TA Finnish-GEN infinitive-PL-PAR  
 'Finnish infinitives are difficult for anyone to understand'
- b. \*Kenenkään<sub>S</sub> o-vat vaike-i-ta [t<sub>S</sub> ymmärtä-ä suome-n infinitiivi-t].  
 anyone.GEN be-3PL difficult-PL-PAR understand-TA Finnish-GEN infinitive-PL.NOM  
 'Finnish infinitives are difficult (for anyone) to understand'
- (115) [<sub>FocusP</sub> Kenen<sub>S</sub> on vaikea [t<sub>S</sub> ymmärtä-ä suome-n infinitiive-j-ä]?  
 anyone.GEN be.3SG difficult understand-TA Finnish-GEN infinitive-PL-PAR  
 'For whom is it difficult to understand Finnish infinitives?'

(116) illustrates a construction similar to the *tough* movement structure, but here the modified nominal is a concrete noun rather than an adjective. These examples present a further problem of recoverability, since the operator position may receive any of a number of cases, both structural and semantic, that are not manifested overtly (e.g. adessive in (116a), accusative or partitive in (116b,c) and adessive or inessive in (116d)).

- (116) a. Me jäädytä-mme kentä-n<sub>i</sub> [Op<sub>i</sub> [(las-te-n) luistel-la t<sub>Op</sub> iltai-i-n]].  
 we.NOM froze-1PL field-ACC child-PL-GEN skate-TA evening-PL-INS  
 'We will freeze the field (for children) to skate (on) in the evenings'







#### 4.2.3. The rationale adjunct

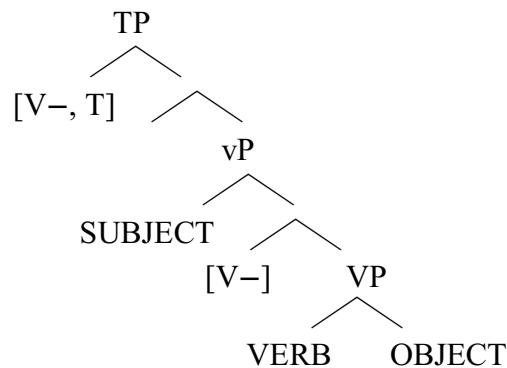
In addition to its uninflected infinitival uses, the *-ta* form occurs in a rationale adjunct construction in which it obligatorily bears both case and a possessive suffix. The only case possible is the translative which normally expresses a change of state. No other case marking can be found on the *-ta* form in any environment.

- (118) a. Lea ost-i uude-n dekkari-n [luke-a-kse-en  
 L.NOM buy-PAST.3SG new-ACC mystery-ACC read-TA-TRAN-3POS  
 sen loma-lla-an].  
 3SG.ACC vacation-ALL-3POS  
 'Lea bought a new mystery novel in order to read it during her vacation'
- b. [Ymmärtä-ä-kse-ni infinitiive-j-ä paremmin] minä  
 understand-TA-TRAN-1SG.POS infinitive-PL-PAR better I.NOM  
 lu-i-n Ida-n tutkielma-n.  
 read-PAST-1SG I-GEN treatise-ACC  
 'In order to understand infinitives better I read Ida's treatise'

- c. [Möki-lle pääs-**tä-kse-en** aina viikonlopu-ksi], Leo lopetta-a  
 cottage-ALL get-TA-TRAN-3POS always weekend-TRAN L.NOM stop-3SG  
 perjantais-i-n työ-nsä kahde-lta.  
 Friday-PL-INS work-3POS two-ABL  
 'In order to always get to the cottage for the weekend, Leo quits work at two on  
 Fridays'

The full object case assignment properties, as well as the positioning of temporal adverbs in the rationale clause construction imply that the structure of this form is identical to that of the other infinitival *-ta* clauses up to the TP level. (118a,b) demonstrate that the *-ta* verb assigns both accusative and partitive object case. The presence of the possessive suffix implies the presence of a *pro* subject, which in turn requires a vP projection for subject theta role assignment. The temporal adverb *aina*, 'always', in (118c) illustrates that the infinitival verb has moved up to TP.

(119)



In addition to this structure, the presence of the translative case marker and the possessive suffix suggests that the rationale clause structure must contain a DP level of representation. A DP projection would account for the case marking of the infinitive, as well as allow for the checking of the [case] and [phi] features of the *pro* subject whose features are overtly realized as the possessive suffix. For a DP to take a *-ta* complement, the Topic/TP projection has to contain some nominal feature, [N] or [N, V], as originally suggested in Vainikka (1994). This entails that the infinitival *-ta* and the rationale adjunct

-*ta* form distinct lexical entries. Before making this conclusion, I will examine what evidence other than morphological there is for the presence of a nominal feature on the rationale adjunct temporal head.

Evidence against positing a DP projection in the structure comes from the fact that the rationale adjunct construction is never compatible with an overt lexical subject, neither in nominative nor in genitive. If a DP projection were present in the structure, its head should be able to check the [case] feature of a lexical subject DP in the same configuration as it checks the [case] of a *pro* subject.

- (120) a. Lea ost-i dekkari-n \*[(**Jukka /Juka-n**) luke-a-ksi sen  
 L.NOM buy-PAST.3SG mystery-ACC J.NOM/ J.GEN read-TA-TRAN 3SG.ACC  
 loma-lla-an].  
 vacation-ALL-3POS  
 'Lea bought a new mystery novel in order (\*for Jukka) to read it during her(/\*his) vacation'

- b. (\***Minun**) ymmärtä-ä-kse-ni infinitiive-j-ä paremmin,  
 I.GEN understand-TA-TRAN-1SG.POS infinitive-PL-PAR better  
 (minä) lu-i-n Ida-n tutkielma-n.  
 I.NOM read-PAST-1SG I-GEN treatise-ACC  
 'In order (\*for me) to understand infinitives better, I read Ida's treatise'

- c. Ritva luke-e innokkaasti anatomia-a [tul-la-kse-en lääkäri-ksi]  
 R.NOM read-3SG eagerly anatomy-PAR become-TA-TRAN-3POS doctor-TRAN  
 /\*[**hänestä** tul-la-kse-en lääkäri].  
 / 3SG.ELA become-TA-TRAN-3POS doctor  
 'Ritva reads anatomy eagerly in order (\*for her) to become a doctor'

On the other hand, the unacceptable lexical subject version of the rationale adjunct can be expressed by the *tough* construction-like structure described at the end of the previous section.

- (121) a. Lea ost-i uude-n dekkari-n<sub>i</sub> [*Op<sub>i</sub>* [**Juka-n** luke-a t<sub>Op</sub> loma-lla-an]].  
 L.NOM buy-PAST.3SG new-ACC mystery-ACC J.GEN read-TA vacation-ALL-3POS  
 'Lea bought a new mystery novel for Jukka to read (it) during his vacation'

- b. Ida selvittä-ä infinitiive-j-ä [*Op*<sub>i</sub> [**kaikkien** ymmärtä-ä *t*<sub>Op</sub> paremmin]].  
 I.NOM explain-3SG infinitive-PL-PAR all.GEN understand-TA better  
 'Ida explains infinitives for all to understand (them) better'

Since we do not know much about the structure of this construction, it is impossible to draw any firm conclusions about the relationship between the two forms. I only want to point out that the meaning of the unacceptable rationale adjunct can be expressed with another *-ta* construction.

Furthermore, the passive *pro* subject is as ungrammatical in the rationale clause adjunct as in the infinitival *-ta* constructions. If the extended Infl of the rationale adjunct *-ta* form contained a DP, there should be no reason to rule out the impersonal passive structure.

- (122) Kuoro-ssa opetel-t-i-in tänään taas joululaulu-j-a  
 choir-INE learn-PASS-PAST-AGR today again Xmas.carol-PL-PAR  
 \*[laule-**ta**-a-ksi niitä vuosijuhla-ssa].  
 sing-PASS-TA-TRAN 3PL.PAR annual.party-INE  
 'In the choir (people) practiced Christmas carols again today, in order to sing them at the annual party'

At the same time, there is strong evidence that the rationale adjunct functions as a DP. First, question movement argues for the DP status of the rationale adjunct clause. We find that question words cannot be extracted out of the rationale adjunct clause; rather, the entire rationale adjunct clause raises obligatorily to the matrix FocusP position. This was pointed out in Toivonen (1995:48).

- (123) a. \*<sub>[FocusP]</sub> **Millaise-n auto-n** <sub>[Topic/AgP]</sub> sinä säästä-t <sub>[vP]</sub> raha-a  
 what.kind-ACC car-ACC you.NOM save-2SG money-PAR  
<sub>[Topic/TP]</sub> osta-a-kse-si *t*<sub>O</sub>?  
 buy-TA-TRAN-2SG.POS  
 'What kind of car are you saving money in order to buy?'



The most convincing evidence for the DP status of the rationale adjunct comes from the realization that it may function as the topic of the matrix clause. This is illustrated in (125). It was illustrated in chapter 2 that only DP's may check the strong [Topic] feature. Moreover, only nominal DP's may do so, as demonstrated by the fact that adjectival participle clauses are ruled out as topics.

- (125) a. [**Lahjo-a-kse-en**            **joulupuki-n**]    jätt-i            Sofia   iso-n   kasa-n  
              bribe-TA-TRAN-3POS Santa.Claus-ACC leave-PAST.3SG S.NOM big-ACC pile-ACC  
    pikkuleip-i-ä   kuuse-n            a-lle.  
    cookie-PL-PAR Xmas.tree-GEN under-ALL  
              'In order to bribe Santa Claus, Sofia left a big pile of cookies under the Christmas tree'
- b. [**Ymmärtä-ä-kse-ni**            **paremmin tarkoituslausekke-i-ta**]  
              understand-TA-TRAN-1SG.POS better            rationale.adjunct-PL-PAR  
    sö-i-n            minä   koko   pussillise-n lakritsa-a.  
    eat-PAST-1SG I.NOM whole bag-GEN    licorice-PAR  
              'In order to understand rationale clauses better, I ate a whole bag of licorice'

The nominal properties of the rationale adjunct thus prove rather contradictory. On the one hand, it manifests many qualities that unquestionably imply the presence of a DP level of representation: the infinitive bears a case suffix, a possessive *pro* subject is licenced, and the entire clause undergoes topic and question movement in the manner of nominal phrases. On the other hand, the ungrammaticality of lexical and passive *pro* subjects is unexplainable under this analysis. I conclude that the evidence in favour of a DP projection is stronger and more incontrovertible than that against it. Although I have no explanation at the moment for the unavailability of lexical and passive *pro* subjects, I assume that their absence is not due to structural factors.

This extended TP projection must, of course, also contain a [Topic] feature. Although this strong feature is often checked by the null *pro* subject, the clause-initial position of the DP *mökille*, 'to the cottage', in (118c) illustrates that non-subjects may also raise. The diagnostic of adjuncts intervening between the topic and the infinitive in TP

suggests that the [Topic] feature is located on the D head. The sentence in (126) exemplifies this pattern.

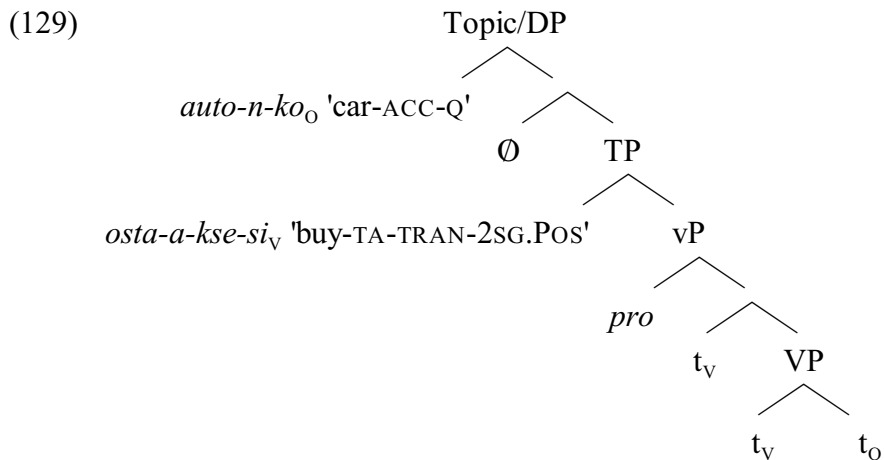
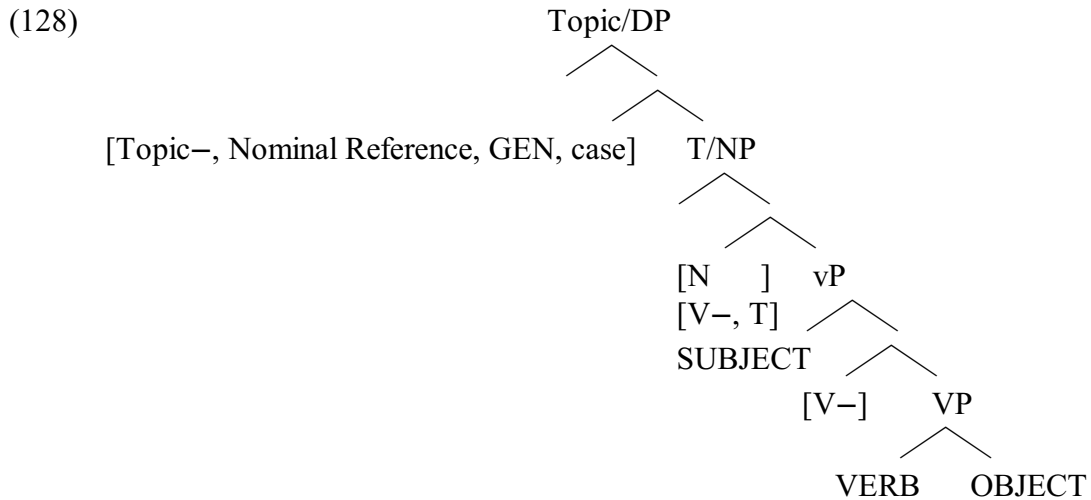
- (126) [Möki-lle **ennen ruuhka-aika-a** ehti-ä-kse-en] lopetta-a  
 cottage-ALL before rush.hour-PAR have.time-TA-TRAN-3POS stop-3SG  
 Leo perjantais-i-n työ-nsä kahde-lta.  
 L.NOM Friday-PL-INS work-3POS two-ABL  
 'In order to make it to the cottage before rush hour, Leo quits work at two on Fridays'

The word order of DP's within the rationale clause is governed by the general discourse constraints that have been identified throughout this thesis. In (127a,b), the object DP *auton*, 'car', contributes new information, and remains within the vP projection of the rationale clause. In (127c,d), however, the informational contribution of the object DP is old, and it moves to TopicP. In (127e) the indirect object *tyttäreillesi*, 'for your daughter', moves to TopicP, and the direct object *auton*, 'car', scrambles out to adjoin to vP, to illustrate its presupposed status.

- (127) a. [Osta-a-kse-si auto-n-ko] sinä säästä-t raha-a?  
 buy-TA-TRAN-2SG.POS car-ACC-Q you.NOM save-2SG money-PAR  
 'Is it in order to buy a car that you're saving money?'  
 b. [Osta-a-kse-si-ko auto-n] sinä säästä-t raha-a?  
 buy-TA-TRAN-2SG.POS-Q car-ACC you.NOM save-2SG money-PAR  
 'Is it in order to buy a car that you're saving money?'  
 c. [Auto-n-ko osta-a-kse-si] sinä säästä-t raha-a?  
 car-ACC-Q buy-TA-TRAN-2SG.POS you.NOM save-2SG money-PAR  
 'Is it in order to buy a car that you're saving money?'  
 d. [Auto-n osta-a-kse-si-ko] sinä säästä-t raha-a?  
 car-ACC buy-TA-TRAN-2SG.POS you.NOM save-2SG money-PAR  
 'Is it in order to buy a car that you're saving money?'  
 e. [Tyttäre-lle-si auto-n osta-a-kse-si-ko] sinä  
 daughter-ALL-2SG.POS car-ACC buy-TA-TRAN-2SG.POS you.NOM  
 säästä-t raha-a?  
 save-2SG money-PAR  
 'Is it in order to buy a car for your daughter that you're saving money?'



(128) presents the structure of the rationale adjunct clause, and (129) gives a sample derivation of the rationale adjunct in (127c).



#### 4.2.4. Summary

In this section I have provided analyses of a number of constructions that involve the infinitival morpheme *-ta*. It has been shown that a monosemous account of the *-ta* suffix is not achievable, but that the features of the affix occurring in the rationale adjunct construction are distinct from the uninflected *-ta* form found elsewhere.

The structure of the *-ta* infinitive in most contexts is minimal: a single functional projection checks the verb's [temporal reference] feature, and also the obligatory topic of the clause. No higher projections are present. This extended projection occurs in various structural positions, depending on the availability of subject case checking: exceptional case marking, subject raising into matrix Infl, or control environment, where the Topic/TP bears a [Null Case] feature that licenses PRO. In control structures one of two CP features may also be selected and merged into the construction, [Q] or [Agr]. This level of representation is checked either by the [ $\phi$ ] features of the finite negator, or by the [q] feature of a question word. Finally, the syntactic structure of the rationale adjunct construction was shown to resemble that of the embedded past participle, in that the infinitival TP projection bears a nominal, here [N], feature that requires the occurrence of a higher DP projection, to check all relevant features.

Contrasting this analysis of the *-ta* infinitive with the account of the present and past participials in chapter 3, we observe that there is no fundamental distinction between the two kinds of non-finite forms. In both types of constructions, we find a verbal projection embedded under a TP. The further morpho-syntactic characteristics of each construction are determined by the lexical feature content of this TP: the participial TP's are adjectives, the rationale adjunct TP is a noun, and the infinitival *-ta* TP bears no category specification at all. It is not particularly meaningful to arrange these non-finite elements into smaller sub-groups, however, based on the nature of their extended Infl projections. I will raise this issue again at the conclusion to this chapter. I now turn to an investigation of the infinitival *-de* and *-ma* suffixes, to determine whether they can be shown to present similar structures to the elements analyzed to this point, or whether their structures contain any distinctive and unique featural content.

### 4.3. The *-de* constructions

#### 4.3.1. The present tense temporal adjunct and the manner adjunct

The *-de* morpheme occurs in two adjunct constructions, the (present tense) temporal adjunct and the manner adjunct. The structures are exemplified in (130).

- (130) a. Lapse-t nuris-i-vat äänekkäästi [siivo-**te**-ssa-an lelu-j-a-an].  
 child-PL.NOM grumble-PAST-3PL loudly clean-**DE**-INE-3POS toy-PL-PAR-3POS  
 'The children grumbled loudly while cleaning (up) their toys'
- b. Sofia katsel-i elokuva-a [laula-**e**-n mukana sydäme-nsä pohja-sta].  
 S.NOM watch-PAST.3SG movie-PAR sing-**DE**-INS with heart-3POS bottom-ELA  
 'Sofia watched the movie while singing along from the bottom of her heart'

These constructions display the typical categorially discrepant characteristics of Finnish non-finite structures. Their inflectional marking is always nominal. Both forms always bear case: inessive in the temporal adjunct, instrumental<sup>78</sup> in the manner adjunct. While either type of *-de* adjunct clause may contain a genitive lexical subject, in the absence of an overt subject, or if the subject is pronominal, the infinitival verb may be marked with a possessive suffix in addition to the case marker. In the temporal adjunct a possessive suffix is obligatory, but in the manner adjunct it is most commonly left out. Despite the nominal morphology, the syntactic properties of the *-de* infinitives are verbal: they assign both accusative (131a, 132d) and partitive (131b,c, 132a) object case, and are modified by verb-oriented adverbs, as illustrated in (131b) and (132a).

- (131) a. [Nelli-n korja-te-ssa kato-n] Aapeli valmist-i lasagne-n.  
 N-GEN fix-**DE**-INE roof-ACC A.NOM fix-PAST.3SG lasagna-ACC  
 'While Nelli fixed the roof, Aapeli fixed a lasagna'

---

<sup>78</sup> Finnish grammars label the instrumental case *-n* as 'instructive'.

- b. [Minun korja-te-ssa-ni innokkaasti katto-a] tiile-t lentele-vät.  
 I.GEN fix-DE-INE enthusiastically roof-PAR tile-PL.NOM fly-3PL  
 'While I fix a roof enthusiastically, tiles fly'
- c. [Korja-te-ssa-an katto-a] Nelli lö-i sorme-e-nsa.  
 fix-DE-INE-3POS roof-PAR N.NOM hit-PAST.3SG finger-ILL-3POS  
 'While fixing the roof, Nelli hit her finger'
- d. [Katto-a korja-te-ssa-an] Nelli lö-i sorme-e-nsa.  
 roof-PAR fix-DE-INE-3POS N.NOM hit-PAST.3SG finger-ILL-3POS  
 'While fixing the roof, Nelli hit her finger'
- (132) a. Sofia tanssi-i villisti, [tamburiini-a-an meluisasti rymistä-e-n].  
 S.NOM dance-3SG wildly tambourine-PAR-3POS noisily bang-DE-INS  
 'Sofia is dancing wildly (while) banging her tambourine noisily'
- b. Virve pudott-i maljako-n [Lasu-n näh-de-n].  
 V.NOM drop-PAST.3SG vase-ACC L-GEN see-DE-INS  
 'Virve dropped the vase, Lasu seeing it'
- c. Maljakko putos-i [minun näh-te-ni].  
 vase.NOM fall-PAST.3SG I.GEN see-DE-1SG.POS  
 'The vase fell, me seeing it'
- d. Maija juhl-i voitto-a-an [syö-de-n koko kaku-n].  
 M.NOM celebrate-PAST.ESG win-PAR-3POS eat-DE-INS whole cake-ACC  
 'Maija celebrated her win by eating the whole cake'

Table 4.2 summarizes the verbal and nominal characteristics of the *-de* suffixes. At first glance, the structures appear to behave in a very verb-like manner except for their nominal inflection patterns. Based on these traits I posit the usual VP/vP projection, within which the infinitival verb assigns its object case and thematic roles, and takes adverbial modification. The temporal content implies that there is also a [temporal reference] feature in a functional projection, labelled TP for convenience.



- (134) [Pandakarhu-a-an       **lujasti** rutista-e-n] nyhykkyttä-vä Sofia hiip-i  
           panda.bear-PAR-3POS tightly hug-DE-INS sob-VA          S.NOM tiptoe-PAST.3SG  
    vuoteese-e-ni keske-llä yö-tä.  
    bed-ILL-1SG.POS middle-ADE night-TA  
           'Hugging her panda bear tightly, sobbing Sofia tiptoed into my bed in the middle of  
           the night'

The *-de* adjuncts resemble the rationale *-ta* adjunct in most ways. As was also true for the rationale adjunct, in the *-de* constructions the morphological marking of both the infinitival verb and of its subject suggests that the non-finite TP projection is embedded under DP. I assume that the presence of the DP projection should be attributed to a [N] feature of the *-de* T head. The D checks the [nominal reference] of T.

The only difference between the rationale adjunct clause and the *-de* adjuncts is the elements permitted in subject position. Whereas the rationale adjunct does not allow lexical or passive *pro* subjects, the *-de* adjuncts do so freely. This is, of course, what we would expect in a DP construction: the genitive case of the lexical subject is checked by the D head. Since there is no possible exceptional case marker in the structure, the genitive case must be assigned by D. At the same time, *pro* subjects are acceptable in both *-de* constructions, which again implies the presence of a DP. The [case] and [phi] features of *pro* can be checked within the DP, as outlined in the discussion in section 3.2.1.6 of chapter 3.

In the manner adjunct, the [phi] features of the *pro* subject are often not realized overtly, since the possessive suffix is generally not present (although it can be, as in (132c)). I assume that this phenomenon is morphological rather than syntactic; part of the commonly observable pattern in Finnish where either the *-n* form case marker or a possessive suffix is phonologically realized in a certain position, but not both. Here, the presence of a possessive marker would eliminate, by phonological processes, the overt expression of case. I expect that a similar the explanation is to be found for the missing possessive suffixes.

In addition to the null possessive pronouns, a passive *pro* can occur in the *-de* constructions. Again, I propose that the DP projection licenses the impersonal passive form by checking the [case] and [phi] features of the *pro* subject.

- (135) a. [Katto-a korja-**tta**-e-ssa] putoa-a usein tiil-i-ä.  
 roof-PAR fix-PASS-DE-INE fall-3SG often tile-PL-PAR  
 'While (people) fix a roof, tiles often fall'
- b. [Peukalo-i-ta pyöritel-**tä**-e-n] ei raportti-a saada loppuun.  
 thumb-PL-PAR roll-PASS-DE-INS NEG.3SG report-PAR get ready  
 '(One) won't get the report ready by twiddling (one's) thumbs'

As with the rationale adjunct construction, the presence of an [N] feature on the *-de* TP here is supported by the diagnostic of topicalization: the *-de* clause may raise to Topic/AgrP to check the matrix [Topic] feature.

- (136) a. [**Jättä-e-ssä-än teevee-n auki aina puuhail-le-ssa-an olohuonee-ssa**]  
 leave-DE-INE-3POS TV-ACC open always work-DE-INE-3POS living.room-INE  
 usko-o Darlene oppi-va-nsa ranska-a tehokkaasti.  
 believe-3SG D.NOM learn-VA-3POS French-PAR effectively  
 'When leaving the TV on while she's working in the living room, Darlene  
 believes (that she is) learning French effectively'
- b. [**Libanonilais-ta lounas-ta syö-de-n**] juhl-i-mme me kaikki  
 Lebanese-ALL lunch-ALL eat-DE-INS celebrate-PAST-1PL we.NOM all.NOM  
 Niina-n uut-ta työpaikka-a.  
 N-GEN new-PAR job-PAR  
 'By eating a Lebanese lunch, we all celebrated Niina's new job'

Question formation also patterns similarly to the rationale adjunct form: the entire *-de* construction must move to the FocusP of the matrix construction. This confirms the DP status of the temporal and manner adjunct clauses.

- (137) a. \*<sub>[FocusP]</sub> [**Mitä<sub>0</sub>** sinä lö-i-t sorme-e-si [**korja-te-ssa-si t<sub>0</sub>** ]]?  
 what.PAR you.NOM hit-PAST-2SG finger-ILL-2SG.POS fix-DE-INE-2SG.POS  
 'What<sub>0</sub> did you hit your finger while fixing t<sub>0</sub>?'  
 b. <sub>[FocusP]</sub> [**Mitä<sub>0</sub> korja-te-ssa-si t<sub>0</sub>** ]<sub>TempCl</sub> sinä lö-i-t sorme-e-si t<sub>TempCl</sub>]?  
 what.PAR fix-DE-INE-2SG.POS you.NOM hit-PAST-2SG finger-ILL-2SG.POS  
 '[When fixing what] did you hit your finger?'

- (138) a. \*<sub>[FocusP]</sub> **Mitä**<sub>O</sub> hän sinua terveht-i **[sano-e-n t<sub>O</sub> ]**?  
 what.PAR 3SG.NOM you.PAR greet-PAST.3SG say-DE-INS  
 'What<sub>O</sub> did she greet you by saying t<sub>O</sub> ?'
- b. <sub>[FocusP]</sub> **Mitä**<sub>O</sub> **sano-e-n t<sub>O</sub> ]**<sub>MnrCl</sub> hän sinua terveht-i t<sub>MnrCl</sub>?  
 what.PAR say-DE-INS 3SG.NOM you.PAR greet-PAST.3SG  
 '[By saying what] did she greet you t?'

The nominal character of the *-de* clauses is also indicated by the unavailability of sentential negation in these structures. Although the negator should be compatible with a TP complement, as it is in the main clause participial construction and the extended control structure, it cannot check its verbal [ $\phi$ i] features in the DP structure of the *-de* clauses, and the derivation crashes.

- (139) a. Lapsi murjott-i **[(\*ei)** osallistu-e-ssa-an leikki-in].  
 child.NOM sulk-PAST.3SG NEG(.3SG) take.part-DE-INE-3POS game-ILL  
 'The child sulked while (\*not) taking part in the game'
- b. **[Mitä (\*e-t /\*ei)** luki-e-ssa-si] sinä nukahd-i-t?  
 what.PAR NEG-2SG/ NEG.3SG read-DE-INE-2SG.POS you.NOM fall.asleep-PAST-2SG  
 'What were you (\*not) reading when you fell asleep?'
- c. Ulla tako-i naula-a **[(\*ei)** hyräil-le-n itse-kse-en].  
 U.NOM pound-PAST.3SG nail-PAR NEG(.3SG) hum-DE-INS self-TRAN-3POS  
 'Ulla pounded the nail while (\*not) humming to herself'
- d. **[Mitä (\*ei)** laula-e-n] Inkeri surist-i ompelukonee-lla-an.  
 what.PAR NEG(.3SG) sing-DE-INS I.NOM buzz-PAST.3SG sewing.machine-ADE-3POS  
 'While (\*not) singing what did Inkeri buzz (on) with her sewing machine?'

A final diagnostic for the nominal character of the *-de* structures comes from the co-occurrence of possessive pronouns and possessive suffixes. In section 3.2.1.7 I discussed a difference between possessive DP's, as in (140a), and the null subject participial construction, illustrated in (140b). The former requires third person pronominal possessors to be overtly expressed, while in the latter they are ungrammatical. I concluded there that the difference derives from the thematic properties of the two structures: the thematic

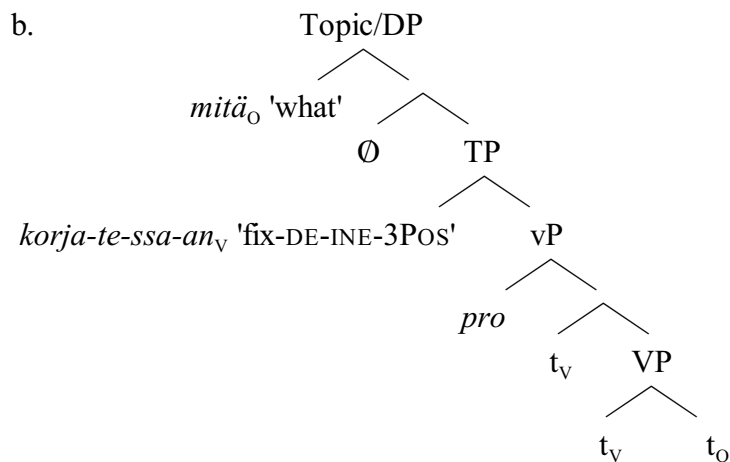


relationship between the possessor and the possessed in the possessive construction is much more indeterminate than the relation between the participial verb and its agent subject. Now, however, the *-de* constructions bring to light an interesting further contrast. These structures pattern with the possessive construction, in that the pronominal subject must be overt. Whatever the reason for this requirement, the data in (140) suggest that it is dependent on the lexical categorial status of the element in the possessed position. Both the possessed noun in the possessive construction, and the infinitival head in the temporal adjunct structure bear the feature [N], whereas the participial was argued to be adjectival, [N, V]. Although this finding brings me no closer to a solution to the phenomenon, it does support my analysis of the *-de* structures as extended nominal projections.

- (140) a. Minä lu-i-n            **\*(hänen)** kirja-nsa.  
           I.NOM read-PAST-1SG 3SG.GEN book-3POS  
           'I read his/her book'
- b. Hän sano-i            **[\*(hänen)** luke-nee-nsa kirja-n].  
           3SG.NOM say-PAST.3SG 3SG.GEN read-NUT-3POS book-ACC  
           'S/he says (that) s/he read the book'
- c. **[(Hänen)** luki-e-ssa-an kirja-a] minä selas-i-n sanomalehte-ä.  
           3SG.GEN read-DE-INE-3POS book-PAR I.NOM flip-PAST-1SG newspaper-PAR  
           'While she was reading a book, I scanned the newspaper'

In this section I have provided evidence that the structure of the two *-de* clauses, the present tense temporal adjunct and the manner adjunct, is identical to the structure of the rationale adjunct. I have shown that the tense projection of these clauses also bears a nominal category feature, whose checking requirements force the temporal tree to merge into a DP projection. (141) provides a sample derivation.

- (141) a. [Mitä korja-te-ssa-an] Nelli lö-i sorme-e-nsa.  
           what.PAR fix-DE-INE-3POS N.NOM hit-PAST.3SG finger-ILL-3POS  
           'While fixing what, did Nelli hit her finger'



#### 4.3.2. The past tense temporal adjunct

I present the past tense temporal adjunct in this section on the *-de* infinitive, although the form does not contain that morpheme. I do so to contrast its syntactic structure with the features of the present tense temporal adjunct. The form of the past tense temporal adjunct is an anomaly: the construction is formed with the passive past participle suffix *-ttu*. The morphological passive marking, however, has no syntactic effects in this form, since the temporal can occur with both an overt lexical subject and a null *pro* subject, as indicated by possessive suffixation. These characteristics are the same in the present tense *-de* temporal. Furthermore, the accusative object of the passive past participial verb in the past tense temporal adjunct bears the morphological case form typical of active rather than passive constructions. I conclude that the temporal adjunct *-ttu* suffix forms a separate lexical item distinct from the passive past participle *-ttu*. This idiosyncratic lexicalized form has retained the temporal meaning of the participial morpheme, in that it expresses completed past activity, but not the impersonal passive specifications normally associated with this suffix.

(142) a. Past tense temporal adjunct:

**Hänen** korja-ttu-a-an auto-n, me kaikki ajo-i-mme  
 3SG.Posp fix-PASS.NUT-PAR-3Pos car-ACC we.NOM all.NOM drive-PAST-1PL  
 eläintarha-an.  
 zoo-ILL

'After she fixed the car, we all drove to the zoo'

b. Past tense impersonal passive, with past tense marker -i :

Siellä (\*he /\*heidän) korja-tt-i-n auto(-\*n).  
 there.ADE 3PL.NOM/ 3PL.GEN fix-PASS-PAST-AGR car.ACC  
 'The car got fixed there (?by them)'

c. Present perfect impersonal passive, with passive past participle -ttu :

Nyt se meidän auto-mme on vihdoin korja-ttu (\*hän  
 now that we.GEN car-1SG.POS be.3SG finally fix-PASS.NUT 3SG.NOM  
 /\*hänen) siellä korjaamo-lla.  
 / 3PL.GEN there.ADE garage-ADE  
 'Now our car has finally been fixed (\*by her) there at the garage'

The morphological case of the past tense temporal adjunct is different from that of the present tense form: instead of inessive case, the past tense verb bears partitive case. Except for the exceptional form of the non-finite suffix, and this variation in the case marking of the infinitive, however, the two constructions have identical properties. As already mentioned, both allow lexical subjects as well as null pronoun subjects. When no overt subject is present, like its present counterpart, the *-ttu* temporal infinitive bears a possessive suffix.

- (143) Juos-tu-a-an ympäri piha-a liian kauan, Momo kompastu-i.  
 run-PASS.NUT-PAR-3POS round yard-PAR too long M-NOM stumble-PAST.3SG  
 'Having (been) run(ning) around the yard too long, Momo stumbled'

However, there is no passive counterpart of the past temporal adjunct. I assume that this is ruled out because of the exceptional phonological form of the infinitival morpheme. The derived passivized past temporal adjunct would bear two adjacent passive past participle morphemes.

- (144) \*[Kakku syö-ty-ty-ä] juhli-ssa tanssi-tt-i-in.  
 cake.ACC eat-PASS.NUT-PASS.NUT-PAR party-INE dance-PASS-PAST-AGR  
 'When the cake had been eaten, (people) danced at the party'

I argue that this structure is ruled out by temporal constraints: since both passive participle morphemes express temporal back-shifting, the resulting temporal reference of such a doubly affixed construction is either uninterpretable, or doubly backshifted in some fashion. This situation has an interesting consequence for the No Vacuous Affixation Principle of Marantz (1984). The Finnish data suggest that two identical affixes may not co-occur on one form even when only part of their semantic contribution is shared. The past tense temporal adjunct suffix *-ttu* does not include the syntactic feature content of the passive past tense suffix *-ttu*, whatever such features may be. Since their [temporal reference] feature content is identical, however, the double suffixation is blocked.

The nominal behaviour of the past tense temporal form coincides with that of its present tense equivalent: the temporal clause may topicalize, raise in a question, and it requires a third person pronoun subject. I assume that its structure is identical to that of the present tense form, as given in (141).

#### 4.3.3. Summary

The analysis in this section of the manner and present tense temporal *-de* adjuncts and the past tense temporal *-ttu* adjunct has shown that the structure of these three constructions is identical to that of the rationale *-ta* adjunct. The non-finite TP projection in these forms bears a noun feature, and the external behaviour of the clauses is clearly nominal. This behaviour is determined by the extended nominal complex that the [N] feature precipitates by its feature checking needs. The seemingly incongruous emergence of the passive past participle in the past tense temporal adjunct was shown to conform to the same structural pattern as the other nominal adjunct, with the assumption that the phonological form of the infinitival morpheme itself is a separate lexicalized form rather than the actual passive past participle suffix.

#### 4.4. The *-ma* constructions

The infinitival suffix *-ma* is found in three syntactic environments. As a complement of another verb, or in an adjunct construction, the *-ma* form seems to occur in an NP position inside a PP, as in (145a,b). The *-ma* construction also occurs in the prenominal modifier position, shown in (145c).

- (145) a. Riita-n kirja        autta-a    minua ymmärtä-**mä**-än    konjunktio-i-ta.  
           R-GEN book.NOM help-3SG I.PAR understand-**MA**-ILL conjunction-PL-PAR  
           'Riitta's book helps me to understand conjunctions'
- b. Lemmikki marss-i                ulos, sano-**ma**-tta    edes näkemiin.  
           L.NOM    march-PAST.3SG out    say-**MA**-ABE even goodbye  
           'Lemmikki marched out, without even saying goodbye'
- c. Jaana-n kirjoitta-**ma**-t        kirjee-t  
           J-GEN    write-**MA**-PL.NOM letter-PL.NOM  
           'the letters written by Jaana'

The nominal inflection borne by the *-ma* infinitives very obviously indicates that the extended projection of the infinitive must contain some nominal feature, [D], [N] or [N, V]. However, the range of nominal morphological marking found on the *-ma* form in prepositional contexts is severely restricted: a small set of locative cases can be attached to the *-ma* element, but not the full inventory of cases, and never number or possessive suffixation. In the prenominal construction, the infinitive bears number and case inflection that agrees with the marking of the head noun. With pronominal subjects, the prenominal infinitive is also inflected for possessive suffixation. Like all non-finite lexical items in Finnish, in neither environment does the *-ma* form ever bear the finite tense, mood and person/number agreement markers that were identified in chapter 1, and, like the *-ta* infinitive, the *-ma* form also lacks a passive counterpart.

The verbal nature of the *-ma* structure in the embedded construction is signalled by the regular theta marking and object case marking capacities of the infinitive. In terms of



The semantic contribution of the *-ma* suffix is always temporal. It encodes an imperfective meaning, although other aspectual contributions in the clause may conspire to mask this interpretation.

The complement *-ma* construction has a null subject variant. The properties of this *-ma* structure resemble those of the null subject *-ta* clause rather than the null subject participial or *-de* clauses, in that the [phi] features of the missing element are not expressed overtly by possessive suffixation. The missing subject is obligatorily interpreted as coindexed with the matrix subject. The adjunct *-ma* construction most commonly occurs without a lexical subject, as in (145b).

- (148) a. Lapse-t      läht-i-vät      leikki-**mä**-än takapiha-lle.  
           child-PL.NOM leave-PAST-3PL play-**MA**-ILL back.yard-ALL  
           'The children left to play in the back yard'
- b. Me      aio-mme      katso-**ma**-an ilotulitus-ta      Laureni-n kato-lle.  
           we.NOM intend-1PL watch-**MA**-ILL fireworks-PAR L-GEN      roof-ALL  
           'We intend to (go) watch the fireworks at Lauren's roof'

In summary, the structures in which the *-ma* morpheme appears manifest conflicting characteristics parallel to those of the participles and the *-ta* and *-de* infinitives. The *-ma* form appears more nominal than *-ta* in that it is inflected for case, number and possessive suffixes, parallel to the participles and *-de*. Like *-ta*, *-ma* also lacks a passive correlate, adding to its nominal character. However, like all Finnish non-finite forms, the *-ma* element behaves in a verb-like manner in that it assigns regular object case and is modified by verb-oriented adverbs. Finally, the temporal content of the *-ma* suffixes suggests that the morpheme belongs to the temporal inflection system of Finnish. Hence, the *-ma* constructions present the same quandary in terms of syntactic categorization as the other non-finite forms. The *-ma* forms also contradict the traditional division of non-finite forms into participles and infinitives, since the morpho-syntactic traits of the prenominal *-ma* structure are identical to those of the prenominal participle construction, while the complement and adjunct *-ma* forms function more closely like the *-ta* infinitive. Let us

investigate what combinations of syntactic features can account for these behavioural patterns.

#### 4.4.1. The complement clause *-ma*

Table 4.3 summarizes the conflicting verbal and nominal characteristics of the embedded *-ma* infinitive.

**TABLE 4.3. The syntactic properties of the embedded *-ma* infinitive**

<i>Verbal behaviour</i>	<i>Nominal behaviour</i>
<ul style="list-style-type: none"> <li>• Assigns full range of object cases</li> <li>• Theta role assignment &amp; selectional restrictions identical to finite verb</li> <li>• Bears temporal content</li> <li>• Modified by verb-oriented adverbs</li> </ul>	<ul style="list-style-type: none"> <li>• Occurs in a noun position</li> <li>• Never bears verbal inflection, e.g. cannot form a passive counterpart</li> <li>• Bears nominal case inflection</li> </ul>

As elsewhere, I conclude that the object case assignment capacity of the *-ma* infinitive and the presence of a subject theta role show that the form originates as the head of a VP/vP projection. Furthermore, the infinitival head raises out of vP to a higher functional projection, as revealed by the position of temporal adverbs and by the possibility of independent adverbial modification of two separate events. Based on the parallel between verb raising in this construction and all verbal movement out of vP in Finnish, I assume that a strong [V] feature attracts the *-ma* verb out of vP. Moreover, since the *-ma* suffix produces a temporal change in the interpretation of its predicate, I argue that the raised form also checks a [temporal reference] feature within the TP projection into which it moves.

- (149) a. Opettaja kehoitt-i laps-i-a harjoitte-le-ma-an usein  
 teacher.NOM urge-PAST.3SG child-PL-PAR practice-MA-ILL often  
 tavaamissano-j-a-an.  
 spelling.word-PL-PAR-3POS  
 'The teacher urged the children to practice their spelling words often'



- b. Minä kiels-i-n laps-i-a **koske-ma-sta koskaan** kaktukse-en.  
 I.NOM forbid-PAST-1SG child-PL-PAR touch-MA-ELA ever cactus-ILL  
 'I forbade the children to ever touch the cactus'
- c. Minä näe-n Anniina-n **odotta-ma-ssa joka aamu kello kuude-lta**  
 I.NOM see-1SG A-ACC wait-MA-INE every day o'clock six-ABL  
 bussi-a Rajja-n kanssa.  
 bus-PAR R-GEN with  
 'I see Anniina waiting for the bus with Rajja every morning at six o'clock'
- (150) a. Minä ano-i-n **koko eilise-n päivä-n** heitä lähte-mä-än  
 I.NOM ask-PAST-1SG all yesterday-ACC day-ACC 3PL.PAR leave-MA-ILL  
**huomenna** kanssa-mme matka-lle.  
 tomorrow with-1PL.POS trip-ALL  
 'I begged them all day yesterday to go on the trip with us tomorrow'
- b. Minä kiels-i-n **eilen** Asteri-a osta-ma-sta **huomenna** uut-ta auto-a.  
 I.NOM forbid-PAST-1SG yesterday A-PAR buy-MA-ELA tomorrow new-PAR car-PAR  
 'Yesterday I forbade Asteri to buy a new car tomorrow'

The embedded *-ma* construction shares a number of syntactic properties with the embedded participle construction: in both structures a non-finite clause appears as the complement of a matrix verb, and bears case marking corresponding to the morphological case borne by a DP in that position. Unlike the embedded participles, the complement *-ma* can occur in more than one case form, yet it can never bear either of the direct object cases, accusative or partitive. The *-ma* constructions can be divided into two groups based on their case marking, although I will argue that they all have the same structure. When the *-ma* clause occurs in an argument position, it is inflected for one of the inner locative cases inessive ('in'), elative ('from') or illative ('to'). The *-ma* form may also be found as a free adjunct carrying either the adessive (roughly translated to English as 'by, through') or abessive ('without') case. The adjunct forms will not be discussed further in this subsection. They are dealt with in section 4.4.2.

- (151) a. Minä nä-i-n lapse-t ui-ma-ssa.  
 I.NOM see-PAST-1SG child-PL.ACC swim-MA-INE  
 'I saw the children swimming'

- b. Minä kiels-i-n laps-i-a ui-ma-**sta**.  
 I.NOM forbid-PAST-1SG child-PL-PAR swim-MA-ELA  
 'I forbade the children to swim'
- c. Minä lähet-i-n lapse-t ui-ma-**an**.  
 I.NOM send-PAST-1SG child-PL.ACC swim-MA-ILL  
 'I sent the children swimming'
- d. Minä u-i-n altaa-n pää-stä pää-hän kroolaa-ma-**lla**.  
 I.NOM swim-PAST-1SG pool-GEN end-ELA end-ILL crawl-MA-**ADE**  
 'I swam from one end of the pool to the other by (using) the crawl'
- e. Auringonkukansiemene-si ei kasva kastele-ma-**tta**.  
 sunflower.seed-2SG.POS NEG.3SG grow water(V)-MA-**ABE**  
 'Your sunflower seed won't grow without watering'

The case borne by the *-ma* complement is generally identical to the case that would appear on a regular DP occurring with these verbs. In this way, *-ma* appears to have the distribution of a noun<sup>79</sup>. This observation was also made by Nikanne (1988), and discussed further in Nikanne (1989) and Vainikka (1989).

- (152) a. Minä auto-i-n pappa-a bussi-**in**.  
 I.NOM help-PAST-1SG grampa-PAR bus-ILL  
 'I helped Grampa onto the bus'
- b. Minä auto-i-n las-ta [kirjoitta-ma-**an** joulupuki-lle].  
 I.NOM help-PAST-1SG child-PAR write-MA-ILL Santa.Claus-ALL  
 'I helped the child to write to Santa Claus'
- c. Minä pyys-i-n Teuvo-a eläintarha-**an**.  
 I.NOM ask-PAST-1SG T-PAR zoo-ILL  
 'I asked Teuvo to the zoo'
- d. Minä pyys-i-n Terhi-ä [tule-ma-**an** kahvi-lle].  
 I.NOM ask-PAST-1SG T-PAR come-MA-ILL coffee-ALL  
 'I asked Terhi to come for coffee'

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<sup>79</sup> Depending on how Finnish semantic cases are treated, this can be interpreted as referring to a noun case-marked for a semantic case, or as a noun embedded within a PP projection. The distinction will be discussed shortly.

- e. Minä nä-i-n Vilpu-n ranna-**ssa**.  
 I.NOM see-PAST-1SG V-ACC shore-INE  
 'I saw Vilppu at the shore'
- f. Minä nä-i-n Johanna-n [ui-ma-**ssa**].  
 I.NOM see-PAST-1SG J-ACC swim-MA-INE  
 'I saw Johanna swimming'
- g. Minä pakot-i-n Jussin komero-**on**.  
 I.NOM force-PAST-1SG J-ACC cupboard-ILL  
 'I forced Jussi into the cupboard'
- h. Minä pakot-i-n Orvoki-n [kirjoitta-ma-**an** elämäkerta-nsa].  
 I.NOM force-PAST-1SG O-ACC write-MA-ILL autobiography-3Pos  
 'I forced Orvokki to write her autobiography'
- i. Minä kiels-i-n laps-i-a pahanteo-**sta**.  
 I.NOM forbid-PAST-1SG child-PL-PAR mischief-ELA  
 'I forbade the children from mischief'
- j. Minä kiels-i-n Sofia-a [heittä-mä-**stä** pallo-a olohuonee-ssa].  
 I.NOM forbid-PAST-1SG S-PAR throw-MA-ELA ball-PAR living.room-INE  
 'I forbade Sofia to throw the ball in the living room'

Based on a close look at the data in (152) we can draw a generalization about the function of the locative DP's and the *-ma* clauses in these sentences: they appear to be resultatives predicated of the matrix direct object<sup>80</sup>. Resultatives are generally considered instances of secondary predication, sharing an argument with the matrix clause. The syntactic status of the shared DP will be discussed in detail in section 4.4.1.2, after a review of earlier analyses of the *-ma* structure.

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<sup>80</sup> This generalization was brought to my attention by E.A. Cowper, and it upholds the central gist of Vainikka's (1989) proposal.

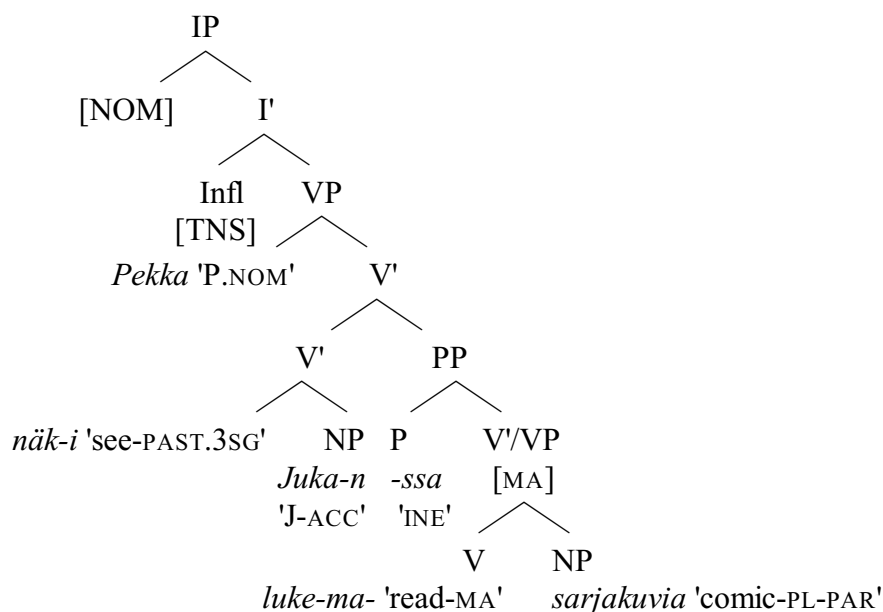
#### 4.4.1.1. Problems with previous analyses

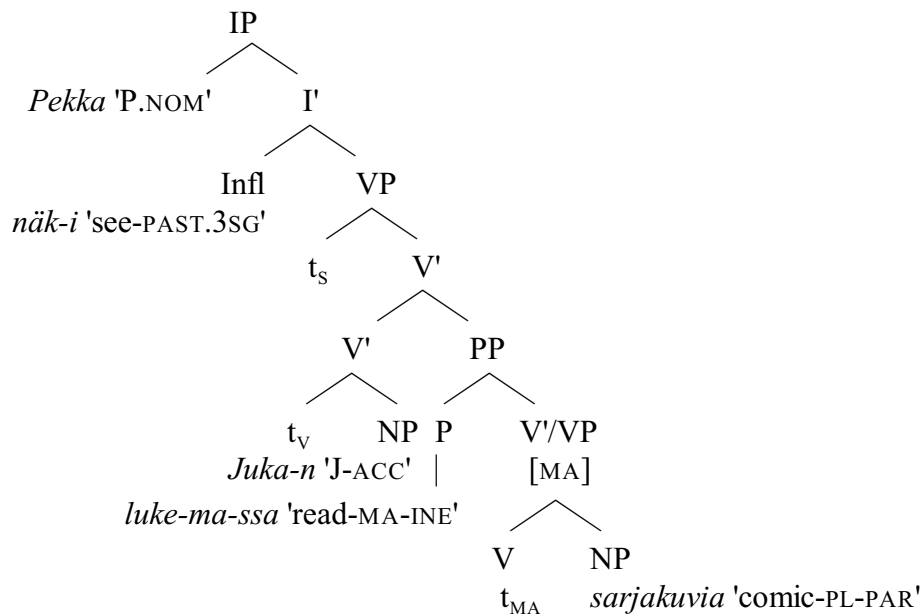
Based on the parallels of case marking that were illustrated in (150), Nikanne (1989) and Vainikka (1989) analyze the *-ma* complements as locative PP complements. This view of the locative cases as PP derives from Nikanne's argument (p.152) that Finnish locative case markers are empty prepositions which may take NP, PP, AP or VP complements.

Vainikka suggests that the thematic subject of the *-ma* clause is the syntactic direct object of the matrix verb, and that the non-finite PP construction is predicated of this object. This account is in accord with my proposal of *-ma* clauses as secondary resultative predicates. However, Vainikka's insight could not be structurally implemented due to the limits of the theoretical mechanisms at the time of writing. The structure that she proposed for the *-ma* form is given in (153).

- (153) a. Pekka näk-i Juka-n luke-ma-ssa sarjakuv-i-a.  
 P.NOM see-PAST.3SG J-ACC read-MA-INE comic-PL-PAR  
 'Pekka saw Jukka reading comics' (Vainikka 1989: 261, (14a))

b. D-structure: (adapted from Vainikka 1989:260, (13))



c. S-structure:

This structural analysis faces the same problems that were identified in section 4.2.1.1 about Vainikka's account of the *-ta* infinitive. Again we are left wondering why a simple VP projection occasionally bears an infinitival morpheme, such as *-ma* or *-ta*, but in various other instances it is entirely unmarked. This solution cannot account for the distribution of the *-ta* and *-ma* morphemes on VP projections. Moreover, as Vainikka herself acknowledges (p. 261), it is also perplexing that a PP would take a VP complement, since this situation does not occur elsewhere in the language (i.e. PP's never take finite, participial or *-ta* complements). More attention to this phenomenon is clearly in order.

Finally, the relationship between the direct object and the non-finite PP complement is obscure: it has generally been assumed that this link is thematic, so that the DP functions as the logical subject of the *-ma* clause. In the structure in (153), however, there is no direct syntactic connection between the two constituents. It is true that the thematic subject manifests many syntactic properties that associate it with the object position of the matrix clause, but the representation shown in (153) wrongly eliminates even any thematic connection between the DP in question and the embedded *-ma* verb. Since the PP

complement that contains the *-ma* verb does not contain a subject, even a null one, there is no possibility of coindexing through binding or control.

The solution to the first problem raised above comes from Vainikka's (1994) paper, in which she proposes that the infinitival VP projection is embedded under a higher functional projection. Recall that in Vainikka's newer analysis, all Finnish non-finite verb forms include the extended projection Y, whose syntactic features are [N, T]. Under this analysis, the *-ma* morpheme overtly reveals the presence of this projection. Also, this position mediates between the PP and VP levels of representation, so that the selectional behaviour of PP which seemed aberrant in the tree in (153) is normalized.

One interesting aspect of the parallel between regular locative complements and *-ma* clause complements of the matrix verbs is that they can be stacked. The sentences in (154a,c,e,g) show that a *-ma* clause may co-occur with another locative DP. (154b,d,f,h) illustrate that similar stacking of identically case marked DP's is permissible in general. (155) demonstrates that *-ma* clauses may be stacked with other *-ma* clauses as well as with locative DP's.

- (154) a. Minä auto-i-n papp-a **bussi-in** [istu-ma-an ikkuna-n viere-en].  
 I.NOM help-PAST-1SG grampa-PAR bus-ILL sit-MA-ILL window-GEN next.to-ILL  
 'I helped Grampa onto the bus to sit by the window'
- b. Minä auto-i-n papp-a **bussi-in takapenkki-in**.  
 I.NOM help-PAST-1SG grampa-PAR bus-ILL back.bench-ILL  
 'I helped Grampa onto the bus to the back bench'
- c. Minä pyys-i-n Teuvo-a **eläintarha-an** [katso-ma-an käärme-i-tä].  
 I.NOM ask-PAST-1SG T-PAR ZOO-ILL see-MA-ILL snake-PL-PAR  
 'I asked Teuvo to the zoo to see the snakes'
- d. Minä pyys-i-n Terhi-ä **Toronto-on eläintarha-an käärmetalo-on**.  
 I.NOM ask-PAST-1SG T-PAR T-ILL ZOO-ILL snake.house-ILL  
 'I asked Terhi (to come) to Toronto to the zoo to the snake house'
- e. Minä nä-i-n Vilpu-n **ranna-ssa** [ui-ma-ssa].  
 I.NOM see-PAST-1SG V-ACC shore-INE swim-MA-INE  
 'I saw Vilppu at the shore swimming'

- f. Minä nä-i-n ravu-n **ranna-ssa [hieka-ssa]**.  
 I.NOM see-PAST-1SG crab-ACC shore-INE sand-MA-INE  
 'I saw a crab at the shore in the sand'
- g. Minä pakot-i-n Olli-n **kirjoituspöydä-n ääre-en [kirjoitta-ma-an elämänkerta-nsa]**.  
 I.NOM force-PAST-1SG O-ACC desk-GEN edge-ILL write-MA-ILL autobiography-3Pos  
 'I forced Olli to the desk to write his autobiography'
- h. Minä pakot-i-n Olli-n **toimisto-on kirjoituspöydä-n ääre-en**.  
 I.NOM force-PAST-1SG O-ACC office-ILL desk-GEN edge-ILL  
 'I forced Olli to the office to the desk'
- (155) a. Minä nä-i-n Vilpu-n **[ui-ma-ssa] [räpiköi-mä-ssä koira-a]**.  
 I.NOM see-PAST-1SG V-ACC swim-MA-INE splash-MA-INE dog-PAR  
 'I saw Vilppu swimming splashing like a dog'
- b. Minä pakot-i-n Olli-n **kirjoituspöydä-n ääre-en [hikoile-ma-an] [kirjoitta-ma-an elämänkerta-a-nsa]**.  
 I.NOM force-PAST-1SG O-ACC desk-GEN edge-ILL sweat-MA-ILL write-MA-ILL autobiography-PAR-3Pos  
 'I forced Olli to the desk to sweat to write his autobiography'

There are semantic constraints on the types of DP's that can occur within the same clause, but this matter is beyond the scope of this thesis. Brunson (1992) provides a thorough investigation of the issue of thematic discontinuity, based on English data. The relevant point to be observed here is that the *-ma* complement behaves like other DP's in terms of being both available for stacking, and semantically constrained.

- (156) a. Minä auto-i-n pappa-a **#bussi-in [äänestä-mä-än]**.  
 I.NOM help-PAST-1SG grampa-PAR bus-ILL vote-MA-ILL  
 'I helped Grampa onto the bus to vote'
- b. Minä auto-i-n pappa-a **#bussi-in keinutuoli-in**.  
 I.NOM help-PAST-1SG grampa-PAR bus-ILL rocking.chair-ILL  
 'I helped Grampa onto the bus to the rocking chair'

- c. Minä pyys-i-n Teuvo-a #eläintarha-an [äänestä-mä-än].  
 I.NOM ask-PAST-1SG T-PAR zoo-ILL vote-MA-ILL  
 'I asked Teuvo to the zoo to vote'
- d. Minä pyys-i-n Terhi-ä #eläintarha-an huvipuisto-on.  
 I.NOM ask-PAST-1SG T-PAR zoo-ILL amusement.park-ILL  
 'I asked Terhi (to come) to the zoo to the amusement park'
- e. Minä nä-i-n Vilpu-n #ranna-ssa [äänestä-mä-ssä].  
 I.NOM see-PAST-1SG V-ACC shore-INE vote-MA-INE  
 'I saw Vilppu at the shore voting'
- f. Minä nä-i-n ravu-n #ranna-ssa [akvaario-ssa].  
 I.NOM see-PAST-1SG crab-ACC shore-INE aquarium-MA-INE  
 'I saw a crab at the shore in the aquarium'

Before we proceed further with the examination of the syntactic category of the *-ma* clause, I want to discuss briefly the status of locative constituents in Finnish. Nikanne (1989), whose view Vainikka (1989) adopts, proposes that Finnish locative case markers are empty prepositions taking complements of various categories, NP, PP, AP or VP. This suggestion is based on the following categorization of example forms (from Nikanne 1989:151-2, (i-iv)):

- (157) a. Hän pysy-i sauna-ssa. N  
 3SG.NOM stay-PAST.3SG sauna-INE  
 'S/he remained in the sauna'
- b. (pöydä-n) pää-lle; (pöydä-n) pää-ltä; (pöydä-n) pää-llä P  
 table-GEN top-ALL table-GEN top-ABL table-GEN top-ADE  
 'to the top of the table; from the top of the table; on top of the table'
- c. Hän pysy-i kaunii-na. A  
 3SG.NOM stay-PAST.3SG beautiful-ESS  
 'S/he stayed beautiful'
- d. Hän ol-i [osta-ma-ssa leipä-ä]. V  
 3SG.NOM be-PAST.3SG buy-MA-INE bread-PAR  
 'S/he was buying bread'



In chapters 2 and 3 I have assumed that all elements marked with one of the fifteen traditionally identified case suffixes in Finnish are DP's, not PP's, and the examples in (157) do not refute this assumption. It is true that elements bearing both noun and adjective features may be marked for case in Finnish. I assume that this is due to the fact that both bear a [N] feature which may check its [Nominal Reference] content against a D head that also bears a [case] feature. However, there is no convincing evidence of case-marking of strictly prepositional or verbal forms.

Those elements which have traditionally been classified as prepositions or postpositions in Finnish, based on the syntactic category of their translation equivalents in other languages, can easily be shown to be nominal. For instance, the word *pää*, cited as a P in (157b), is a noun stem meaning 'head, top, end'. Despite the fact that it may take an argument, there is no morphological or syntactic reason to consider it a postposition – nouns also assign lexical case. Second, in the preceding section I showed that the *-ma* form, which Nikanne cites as a VP complement, in fact has nominal properties. It was shown to be dominated by a functional projection, which according to Vainikka (1989) has nominal feature content. In other words, the locative case markers always attach to a nominal base, either noun or adjective. Consequently, I will continue to assume that all case-marked forms in Finnish bear the syntactic features associated with the category label DP, not PP.

Vainikka (1994) proposes that the functional features dominating *-ma* include an [N] feature. However, there is ample evidence that the *-ma* structure does not behave like a regular argument NP/DP. Criteria that were utilized in chapter 3 to demonstrate that participial clauses do not behave like normal nouns, despite their apparently nominal qualities of occurring in object position and bearing object case, also suggest that the syntactic properties of the *-ma* clause are not identical to those of regular argument NP's or DP's, or the more nominal rational, manner and temporal adjunct clauses that were examined above. This would be expected if the *-ma* structures are secondary predicates.

The diagnostics of topic raising and DP transposition illustrate the differences between DP complements and the *-ma* clause. (158) shows that, unlike lexical DP's, but like participial clauses, the *-ma* complement cannot be raised to check the strong [Topic] and [D]

features of the matrix clause. In (158a) and (158c) it is the subject and in (158b) the oblique object that moves to check these features. (158d) demonstrates that the *-ma* clause, in spite of its case morphology, cannot check the nominal features. The restriction cannot simply be due to some prosodic limitation on the length of the moved constituent, as the parallel between (158b) and (158d) clearly reveals. In (158e) we see that the *-ma* form on its own does not contain the nominal features required to rescue the derivation either.

- (158) a. [<sub>TopicP</sub> **Minä**<sub>S</sub> kiels-i-n [<sub>VP</sub> t<sub>S</sub> laps-i-a jatkuva-sta pahanteo-sta]].  
 I.NOM forbid-PAST-1SG child-PL-PAR continuous-ELA mischief-ELA  
 'I forbade the children from continuous mischief'
- b. [<sub>TopicP</sub> **Jatkuva-sta pahanteo-sta**<sub>O</sub> kiels-i-n [<sub>VP</sub> minä t<sub>V</sub> laps-i-a t<sub>O</sub>]].  
 continuous-ELA mischief-ELA forbid-PAST-1SG I.NOM child-PL-PAR  
 'As for continuous mischief, I forbade the children from it'
- c. [<sub>TopicP</sub> **Minä**<sub>S</sub> kiels-i-n [<sub>VP</sub> t<sub>S</sub> t<sub>V</sub> laps-i-a lähte-mä-stä järve-lle]].  
 I.NOM forbid-PAST-1SG child-PL-PAR leave-MA-ELA lake-ALL  
 'I forbade the children to go on the lake'
- d. \* [<sub>TopicP</sub> [**Lähte-mä-stä järve-lle**]<sub>O</sub> kiels-i-n [<sub>VP</sub> minä t<sub>V</sub> laps-i-a t<sub>O</sub>]].  
 leave-MA-ELA lake-ALL forbid-PAST-1SG I.NOM child-PL-PAR  
 'As for going to the lake, I forbade the children'
- e. \* [<sub>TopicP</sub> **Lähte-mä-stä**<sub>O</sub> kiels-i-n [<sub>VP</sub> minä t<sub>V</sub> laps-i-a [t<sub>O</sub> järve-lle]]].  
 leave-MA-ELA forbid-PAST-1SG I.NOM child-PL-PAR lake-ALL  
 'As for going, I forbade the children to the lake'

The constraint cannot be stated as some sort of a general ban on the movement of the *-ma* clause, since the construction can be focussed and raised to FocusP. The only difference between movement into TopicP and that to FocusP is that the former is triggered by a categorial feature, [D], whereas the latter is not.

- (159) [<sub>FocusP</sub> [**Järve-lle lähte-mä-stä-kö**]<sub>O</sub> [<sub>TopicP</sub> sinä<sub>S</sub> kiels-i-t [<sub>VP</sub> t<sub>S</sub> t<sub>V</sub>  
 lake-ALL leave-MA-ELA-Q you.NOM forbid-PAST-2SG  
 laps-i-a t<sub>O</sub>]]]? (Ei-vät he totel-lee-t!)  
 child-PL-PAR NEG-3PL 3PL.NOM obey-NUT-PL  
 'Was it from going to the lake that you forbade the children? They didn't obey you!'

The *-ma* clause exhibits equally un-DP-like behaviour with regard to argument transposition. As the comparison of the sentence pairs in (160a,b) and (160c,d) shows, the complement *-ma* construction does not permute with other DP's in the sentence, as regular DP's do. Again, this patterning would be expected if the *-ma* clause were not an argument but a secondary predicate.

- (160) a. *Minä opet-i-n Sofia-lle tavaami-sta.*  
 I.NOM teach-PAST-1SG S-ALL spelling-ELA  
 'I taught Sofia spelling'
- b. *Minä opet-i-n tavaami-sta Sofia-lle.*  
 I.NOM teach-PAST-1SG spelling-ELA S-ALL  
 'I taught spelling to Sofia'
- c. *Minä opet-i-n Sofia-a [tavaa-ma-an kysymyssano-j-a].*  
 I.NOM teach-PAST-1SG S-PAR spell-MA-ILL question.word-PL-PAR  
 'I taught Sofia [to spell question words]'
- d. \**Minä opet-i-n [tavaa-ma-n kysymyssano-j-a] Sofia-a.*  
 I.NOM teach-PAST-1SG spell-MA-ILL question.word-PL-PAR S-ALL  
 \*'I taught [to spell question words] to Sofia'

Finally, we also observe that although the *-ma* clause appears in one nominal position, it cannot freely occur in all DP sites. It cannot be found as the subject, the direct object or even as the indirect object of most verbs. A secondary predicate would not be expected to occur in such environments. The unacceptable *-ma* sentences in (161) are contrasted with the acceptability of the truly nominal *-minen* form in the identical environments in (162).

- (161) a. \**[Mylesi-n juokse-ma] ol-i vaikuttava-a.*  
 M-GEN run-MA be-PAST.3SG impressive-PAR  
 'Myles's running was impressive'
- b. \**Minua harmitta-a [Sofia-n kaata-ma(-n) maito-a].*  
 I.PAR be.annoyed-3SG S-GEN spill-MA(-ACC) milk-PAR  
 'I'm annoyed at Sofia spilling the milk'

- c. \*Minä opet-i-n                      Sofia-lle [**tavaa-ma-sta kysymyssano-j-a**].  
 I.NOM teach-PAST-1SG S-ALL    spell-MA-ELA    question.word-PL-PAR  
 'I taught Sofia to spell question words'
- (162) a. [**Mylesi-n juokse-minen**] ol-i                      vaikuttava-a.  
 M-GEN    run-DEVN              be-PAST.3SG impressive-PAR  
 'Myles's running was impressive'
- b. Minua harmitta-a              [**Sofia-n maido-n kaata-minen**].  
 I.PAR    be.annoyed-3SG S-GEN    milk-GEN spill-DEVN.ACC  
 'I'm annoyed at Sofia's spilling of the milk'
- c. Minä opet-i-n                      Sofia-lle [**kysymyssano-je-n    tavaa-mi-sta** ].  
 I.NOM teach-PAST-1SG S-ALL              question.word-PL-GEN spell-DEVN-ELA  
 'I taught Sofia spelling of question words'

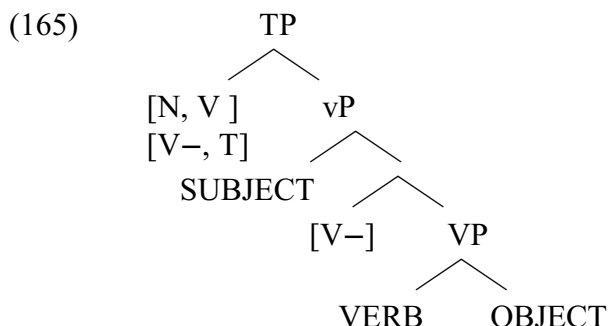
The examples shown in (158-162) clearly indicate that the functional projection that dominates the *-ma* vP does not have the feature [N], since the construction does not function like a regular DP. The presence of nominal inflection on the *-ma* form dictates, however, that the functional head must bear some nominal feature. I appeal once more to the principle of monosemy, recalling that, in addition to the complement construction, the *-ma* infinitive occurs in a prenominal, adjectival construction. Consequently, I propose that the nominal properties of the *-ma* constructions stem from the temporal functional projection bearing the adjectival features [N, V]. In this way, the syntactic features of the *-ma* form closely resemble those of the participials, rather than those of the rationale adjunct *-ta*, or *-de*. Like the adjectival participial, however, the *-ma* verb itself does not bear the [N, V] features, since it is capable of assigning normal object case, as well as quirky case. The examples in (163) illustrate that Finnish permits lexical adjectives in positions where they receive source and goal thematic roles, as well as locative case. The position of the syntactically derived adjectival *-ma* clause is therefore not exceptional.

- (163) a. Auringo-n noust-e-ssa sää muuttu-i hetke-ssä  
 sun-GEN rise-DE-INE weather change-PAST.3SG moment-INE  
 jäätävä-n kylmä-stä suloise-n lämpimä-än.  
 freezing-GEN cold-ELA wonderful-GEN warm-ILL  
 'When the sun rose, the weather changed in a moment from freezing cold into wonderfully warm'
- b. Syksy-n tulo-sta ilmoitt-i myös Päivi-n hius-te-n väri-n  
 fall-GEN coming-ELA announce-PAST.3SG also P-GEN hair-PL-GEN colour-GEN  
 vaihtu-minen vaalea-sta punaise-en.  
 change-DEVN blonde-ELA red-ILL  
 'The change of the colour of Päivi's hair from blonde to red also announced the coming of fall'

-*ma* clauses can be found in other adjectival positions, such as the constructions in (164).

- (164) a. Se on komea maljakko [**lasise-ksi**].  
 3SG.NOM be.3SG handsome vase glass-TRAN  
 'It's a handsome vase for a glass one'
- b. Se on komea maljakko [**Liisa-n osta-ma-ksi**].  
 3SG.NOM be.3SG handsome vase L-GEN buy-MA-TRAN  
 'It's a handsome vase for one that Liisa has bought'
- c. Hevonen laahust-i piha-an [**hikise-nä ja uupunee-na**].  
 horse.NOM straggle-PAST.3SG yard-ILL sweaty-ESS and exhausted-ESS  
 'The horse straggled into the yard sweaty and exhausted'
- d. Hevonen laahust-i piha-an [**Hilma-n talutta-ma-na**].  
 horse.NOM straggle-PAST.3SG yard-ILL H-GEN lead-MA-ESS  
 'The horse straggled into the yard, led by Hilma'

The syntactic structure of the -*ma* clause that has been established up to this point is identical to that of the embedded participial clause, analysed in chapter 3. The structure above the TP projection is yet to be confirmed.



Moreover, since the overt morpho-syntactic properties of the *-ma* constructions differ somewhat from those of the embedded participial structures, although both structures have been analyzed as adjectival, the discrepancies require explanation.

#### 4.4.1.2. The subject of the complement *-ma* construction

The behaviour of the logical subject of the complement *-ma* clause differs from that of the subject in both the embedded participial construction and the *-ta* and *-de* infinitivals. Whereas the overt subjects of other non-finite forms always occur in genitive case, the thematic subject of the *-ma* construction exhibits the morphological characteristics of a matrix object. The subject of the *-ma* form bears object case, accusative or partitive, as determined by the matrix verb. The choice of case has aspectual consequences for the interpretation of the sentence, although the distinctions can be very subtle, as can be seen from (166) and (167).

- (166) a. Opettaja      laitto-i              lapse-t              kirjoitta-ma-an runo-j-a.  
           teacher.NOM have-PAST.3SG child-PL.ACC write-MA-ILL    poem-PL-PAR  
           'The teacher had the children write poems' (all the children)
- b. Opettaja      laitto-i              laps-i-a              kirjoitta-ma-an runo-j-a.  
           teacher.NOM have-PAST.3SG child-PL-PAR write-MA-ILL    poem-PAR  
           'The teacher had some children write poems' (some children)
- c. Opettaja      ei              vaati-nut      las-ta      /\*lapse-n      kirjoitta-ma-an runo-a.  
           teacher.NOM NEG.3SG demand-NUT child-PAR/ child-ACC write-MA-ILL    poem-PAR  
           'The teacher didn't demand (that) the child write a poem'

- (167) a. Minä kutsu-i-n Sofia-**n** syö-mä-än.  
 I.NOM call-PAST-1SG S-**ACC** eat-MA-ILL  
 'I called Sofia to eat' (it is presupposed that she would come once called)
- b. Minä kutsu-i-n Sofia-**a** syö-mä-än.  
 I.NOM call-PAST-1SG S-**PAR** eat-MA-ILL  
 'I called Sofia to eat' (and it was up to her whether to come or not)

Moreover, the case form of the logical subject of the *-ma* form is affected by matrix negation and the aspectual requirements of the matrix verb, exactly as would be expected from a syntactic object of the matrix verb. In (168) matrix negation forces the DP in question to bear partitive case, and in (169) the matrix verbs, such as *kieltää*, 'forbid' and *estää*, 'prevent', similarly restrict the choice of case to partitive.

- (168) a. Minä e-n kutsu-nut **teitä** /\***teidät** syö-mä-än.  
 I.NOM NEG-1SG call-NUT you.PL.**PAR**/ you.PL.**ACC** eat-MA-ILL  
 'I didn't call you to eat'
- b. Minä e-n opetta-nut **häntä** /\***hänet** viheltä-mä-än Marseljeesi-a.  
 I.NOM NEG-1SG teach-NUT 3SG.**PAR**/ 3SG.**ACC** whistle-MA-ILL Marseillaise-**PAR**  
 'I didn't teach her to whistle the Marseillaise'
- (169) a. Minä kielsi-n Sofia-**a**/\*Sofia-**n** hyppi-mä-stä sohva-lla.  
 I.NOM forbid-1SG S-**PAR** / S-**ACC** jump-MA-ELA sofa-ADE  
 'I forbid Sofia to jump on the sofa'
- b. Minä kiellä-n **sinua** /\***sinut** laula-ma-sta Marseljeesi-a.  
 I.NOM forbid-1SG you.**PAR** / you.**ACC** sing-MA-ELA Marseillaise-**PAR**  
 'I forbid you to sing the Marseillaise'

Adverb scope facts also link the logical subject of the embedded *-ma* clause with the main clause structure. In the *-ma* sentences in (170a) and (170c), the agent-oriented adverbs *hajamielisesti*, 'absent-mindedly', and *vihaisesti*, 'angrily', most naturally modify the matrix event, even though they occur to the right of the logical subject of the embedded *-ma* clause. Conversely, in the participial complement clause constructions in (170b) and (170d), an adverb that occurs to the right of the embedded subject is obligatorily interpreted as

modifying the embedded event, never the matrix one. Whereas the subject of the participial clause clearly marks a scope boundary between the matrix and embedded environments, the thematic subject of the *-ma* clause does not do this. In this way, the DP behaves more like a matrix object than an embedded subject.

- (170) a. Minä kehoit-i-n      Floora-a **hajamielisesti** lähte-mä-än kahde-lta.  
 I.NOM urge-PAST-1SG F-GEN absent-mindedly leave-MA-ILL two-ABL  
 'I absentmindedly urged Floora to leave at two o'clock',  
 \*'I urged (that) Floora should absent-mindedly leave at two o'clock'
- b. Minä unohd-i-n      Floora-n **hajamielisesti** lähte-nee-n kahde-lta.  
 I.NOM forget-PAST-1SG F-GEN absent-mindedly leave-NUT-ACC two-ABL  
 'I forgot (that) Floora had absent-mindedly left at two o'clock',  
 \*'I forgot, absentmindedly, (that) Floora had left at two o'clock'
- c. Winnie kiels-i      laps-i-a      **vihaisesti/naura-e-n** piirtä-mä-stä  
 W.NOM forbid-PAST.3SG child-PL-PAR angrily / laugh-DE-INS draw-MA-ELA  
    liidu-lla aita-an.  
    chalk-ADE fence-ILL  
 'Angrily/Laughingly, Winnie forbade the children to draw with chalk on the fence',  
 \*'Winnie forbade the children to angrily/laughingly draw with chalk on the fence'
- d. Winnie väitt-i      las-te-n      **vihaisesti/naura-e-n** piirtä-nee-n  
 W.NOM claim-PAST.3SG child-PL-GEN angrily / laugh-DE-INS draw-NUT-ACC  
    liidu-lla aita-an.  
    chalk-ADE fence-ILL  
 'Winnie claimed (that) the children (had) angrily/laughingly drawn with chalk on the fence', \*'Winnie claimed angrily/laughingly (that) the children (had) angrily drawn with chalk on the fence'

These facts strongly suggest that the thematic subject of the *-ma* clause should be analyzed syntactically as the matrix object rather than as the subject of the complement clause. However, the reflexivization data in (171-172) show that the logical subject of *-ma* has also has syntactic subject properties. (171a) demonstrates that the anaphor *itsestään*, 'about self', can only be bound by the subject *Ilmari*, not by the direct object *Tanelia*. In contrast, in the *ma*-constructions in (171b-c) the thematic subjects *Tanelia/Tanelin* successfully bind the anaphor. (172) shows a similar contrast between the binding capacity



of the direct object and the logical subject of the *-ma* clause. This suggests that, despite its morphological object case marking, the DP functions as a syntactic subject.

- (171) a. Ilmari<sub>i</sub> varoitt-i Taneli-a<sub>j</sub> itse-stä-än<sub>i/\*j</sub>.  
 I-NOM warn-PAST.3SG T-PAR self-INE-3POSS  
 'Ilmari<sub>i</sub> warned Tanelia<sub>j</sub> about himself<sub>i/\*j</sub>.'
- b. Minä varoit-i-n Taneli-a<sub>i</sub> pitä-mä-än huol-ta itse-stä-än<sub>i</sub>.  
 I.NOM warn-PAST-1SG T-PAR take-MA-ILL care-PAR self-ILL-3POS  
 'I warned Taneli to take care of himself'
- c. Minä käsk-i-n Taneli-n<sub>i</sub> pitä-mä-än huol-ta itse-stä-än<sub>i</sub>.  
 I.NOM order-PAST-1SG T-ACC take-MA-ILL care-PAR self-ILL-3POS  
 'I ordered Taneli to take care of himself'
- (172) a. Antti<sub>i</sub> näke-e Sari-n<sub>j</sub> piha-lla kiikari-lla-an<sub>i/\*j</sub>.  
 A.NOM see-3SG S-GEN yard-ADE binoculars-ADE-3POS  
 'Antti sees Sari in the yard with his/\*her binoculars'
- b. Antti<sub>i</sub> näke-e Sari-n<sub>j</sub> leikki-mä-ssä piha-lla kiikari-lla-an<sub>i/j</sub>.  
 A.NOM see-3SG S-GEN play-MA-INE yard-ADE binoculars-ADE-3POS  
 'Antti sees Sari playing with his/her binoculars in the yard'

These apparently contradictory behaviours of the thematic subject DP of the *-ma* form further support the status of *-ma* clauses as secondary predicates. To account for the fact that the *-ma* verb still assigns a theta role to the subject, I adopt an object control structure for the secondary predicate. The analysis of resultative *-ma* clauses as object control structures accounts for the availability of reflexivization in the structure: the reflexive anaphors are bound by the PRO subject. At the same time the case marking status of the object DP is clarified. The general unacceptability of quirky, impersonal or idiomatic

subjects in the complement *-ma* form<sup>81</sup> supports my conclusion that the embedded subject of the *-ma* verb is PRO.

- (173) a. \*Tuovi est-i                      **Heino-lla** ole-ma-sta yhtään raha-a.  
 T.NOM prevent-PAST.3SG H-ADE    be-MA-ELA any-PAR money-PAR  
 'Tuovi prevented Heino from having any money'

- b. \*Unelma autta-a **Saima-a** nuku-tta-ma-an.  
 U.NOM help-3SG S-PAR    sleep-CAUS-MA-ILL  
 'Unelma helps Saima to feel sleepy'

- (174) a. \*Siiri vaat-i                      heti                      sata-ma-an.  
 S.NOM demand-PAST.3SG immediately rain-MA-ILL  
 'Siiri demanded (that) it rain immediately'

- b. \*Minä halua-n tänään ole-ma-an kaunis-ta.  
 I.NOM want-1SG today be-MA-ILL beautiful-PAR  
 'I want it to be beautiful today'

- (175) a. \*Anneli käsk-i                      **jauho-t**                      mene-mä-än suu-hun    Mati-lla.  
 A.NOM order-PAST.3SG flour-PL.ACC go-MA-ILL    mouth-ALL M-ILL  
 'Anneli ordered Matti to go speechless' (lit. 'flour to go in Matti's mouth')

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81 A few matrix verbs, such as *auttaa*, 'help', and *saada*, 'get', permit their *-ma* complements to occur with some quirky, weather or idiom chunk subjects. Since these occurrences are small in number, I consider the forms anomalous, and leave their investigation for future research.

- (i) ?Auli autto-i                      Reiska-sta tule-ma-an                      lääkäri-n.  
 A.NOM help-PAST.3SG R-INE                      become-MA-ILL doctor-ACC  
 'Auli helped Reiska become a doctor'

- (ii) Minä sa-i-n                      eilen                      sata-ma-an sadetanssi-lla-ni!  
 I.NOM get-PAST-1SG yesterday rain-MA-ILL rain.dance-ADE-1SG.POS  
 'I got it to rain yesterday by my rain dance'

- (iii) a. Se vastaus                      sa-i                      jauho-t                      mene-mä-än Anti-lla suuhu-n.  
 that answer.NOM get-PAST.3SG flour-PL.ACC go-MA-ILL    A-ADE    mouth-ILL  
 'That answer got Antti to go speechless'

- b. Micah saa                      päreet                      pala-ma-an pyhimyks-i-ltä-kin.  
 M.NOM get.3SG wood.chip-PL.ACC burn-MA-ILL saint-PL-ABL-EMP  
 'Micah can get even a saint to lose his/her temper'



- (176) Minä nä-i-n Maija-n [olut-ta **hanakasti** kittaa-ma-ssa eilen  
 I.NOM see-PAST.3SG M-ACC beer-PAR eagerly guzzle-MA-INE yesterday  
 nurkkapubi-ssa.  
 corner.pub-INE  
 'I saw Maija guzzling beer eagerly at the corner pub yesterday'

There is little evidence for higher functional projections above the Topic/DP. The *-ma* clause never contains an overt complementizer (177) or a sentential negator (178).

- (177) a. Me nä-i-mme Artturi-n (**\*että/\*kun**) rakenta-ma-ssa puumaja-a.  
 we.NOM see-PAST-1PL A-ACC that/ when build-MA-INE tree.house-PAR  
 'We saw Artturi (\*that/\*when) building a tree house'
- b. Sarah kehoitt-i minua (**\*että/\*jos**) rentoutu-ma-an.  
 S.NOM urge-PAST.3SG I.PAR that/ if relax-MA-ILL  
 'Sarah urged me (\*that/\*if) to relax'
- (178) a. Minä pyys-i-n sinua (**\*e-t / \*ei**) luke-ma-an Kahdettatois-ta yö-tä.  
 I.NOM ask-PAST-1SG you.PAR NEG-2SG/ NEG.3SG read-MA-ILL twelfth-PAR night-PAR  
 'I asked you (\*not) to read the Twelfth Night'
- b. Elaine taivutt-i minut (**\*e-n / \*ei**) lähte-mä-än elokuvi-in.  
 E.NOM persuade-PAST.3SG I.ACC NEG-1SG/ NEG.3SG leave-MA-ILL movies-ILL  
 'Elaine persuaded me (\*not) to go to the movies'

The position of focus elements (question words, yes/no questions, focussed words) exhibits a pattern of variation that has not yet been encountered among the non-finite constructions. On the one hand, as in the embedded participial clauses and the infinitival *-ta* structures, a focus element that originates in a *-ma* clause can raise into the extended functional projections of the matrix verb to check its [focus] feature, as in (179). This indicates that the only FocusP projection present is at the main clause level of structure, and that no CP projection intervenes.

- (179) a. \*<sub>[TopicP]</sub> Sinä pyys-i-t ...minua <sub>[FocusP]</sub> **mitä**... <sub>[Tp]</sub> PRO teke-mä-än t<sub>o</sub> ]]]?  
 you.NOM ask-PAST-2SG I.PAR what.PAR do-MA-ILL  
 'What did you ask me to do?'

- b. [<sub>FocusP</sub>**Mitä** [<sub>TopicP</sub>sinä pyys-i-t ... minua ... [<sub>TP</sub>PRO teke-mä-än t<sub>o</sub>]]]?  
 what.PAR you.NOM ask-PAST-2SG I.PAR do-MA-ILL  
 'What did you order me to do?'
- c. \*[[<sub>TopicP</sub>Arwyn pyys-i ... Sofia-a [<sub>FocusP</sub>**kuutanssi-a-ko** ... [<sub>TP</sub>PRO  
 A.NOM ask-PAST.3SG S-PAR moon.dance-PAR-Q  
 tanssi-ma-an t<sub>o</sub>]]]?  
 dance-MA-ILL  
 'Was it the Moon Dance (that) Arwyn asked Sofia to dance?'
- d. [<sub>FocusP</sub>**Kuutanssi-a-ko** [<sub>TopicP</sub>Arwyn pyys-i ... Sofia-a ... [<sub>TP</sub>PRO  
 moon.dance-PAR-Q A.NOM ask-PAST.3SG S-PAR  
 tanssi-ma-an t<sub>o</sub>]]]?  
 dance-MA-ILL  
 'Was it the Moon Dance (that) Arwyn asked Sofia to dance?'
- e. \*[[<sub>TopicP</sub>Minä kiels-i-n ... sinua [<sub>FocusP</sub>**niin meluisasti-pas** ...  
 I.NOM forbid-PAST-1SG you.PAR so loudly-EMP  
 [<sub>TP</sub>PRO soitta-ma-sta Les Mizi-ä t<sub>OBL</sub> taas]]]?!  
 play-MA-ELA L. M-PAR again  
 'I forbade you to play Les Miz again so loudly'
- f. [<sub>FocusP</sub>**Niin meluisasti-pas** [<sub>TopicP</sub>minä kiels-i-n ... sinua ...  
 so loudly-EMP I.NOM forbid-PAST-1SG you.PAR  
 [<sub>TP</sub>PRO soitta-ma-sta Les Mizi-ä t<sub>OBL</sub> taas]]]?!  
 play-MA-ELA L. M-PAR again  
 'I forbade you to play Les Miz again so loudly (I didn't mean that you couldn't  
 play it at all)'

On the other hand, like the rationale clause *-ta* adjunct and the *-de* and *-ttu* adjuncts, the entire *-ma* clause may raise to the main clause Focus position.

- (180) a. [<sub>FocusP</sub>[**Mitä PRO osta-ma-an**] [<sub>TopicP</sub>sinä Peka-n lähet-i-t t<sub>MA-Cl</sub>]]]?  
 what-PAR buy-MA-ILL you.NOM P-ACC send-PAST-2SG  
 'Was it to buy flowers that you sent Pekka?'
- b. [<sub>FocusP</sub>[**Kuutanssi-a-ko PRO tanssi-ma-an**] [<sub>TopicP</sub>Arwyn pyytä-ä Sofia-a t<sub>MACl</sub>]]]?  
 moon.dance-PAR-Q dance-MA-ILL A.NOM ask-3SG S-PAR  
 'Was it to dance the Moon Dance (that) Arwyn asked Sofia?'

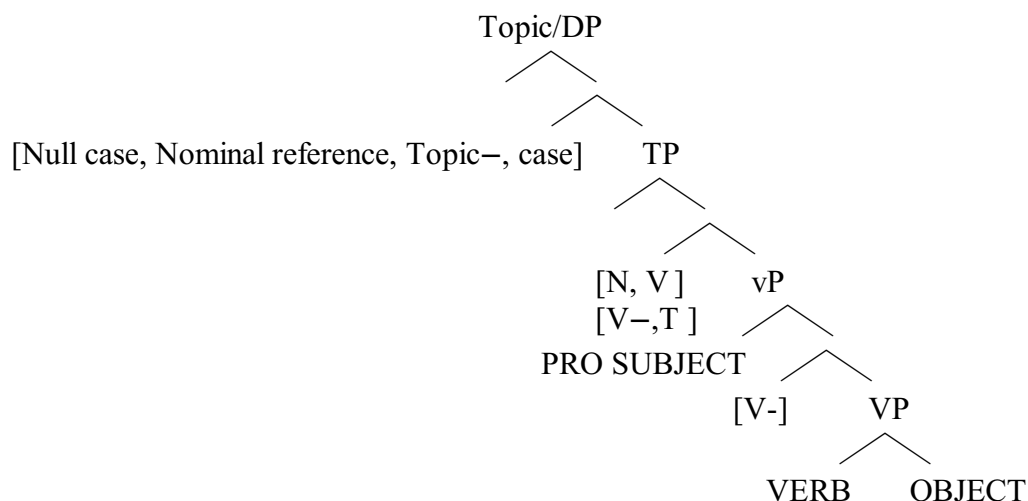
- c. [<sub>FocusP</sub>[**Kukk-i-a** **PRO osta-ma-an-ko**] [<sub>TopicP</sub>sinä Peka-n lähet-i-t t<sub>MACI</sub>]]?  
 flower-PL-PAR buy-MA-ILL-Q you.NOM P-ACC send-PAST-2SG  
 'Was it to buy flowers that you sent Pekka?'

This pattern is easily accounted for by noting that in this case the [focus] feature is housed on the DP dominating the entire *-ma* complex, and hence the whole clause must pied-pipe along. The question this movement raises is what causes the differences between the other adjunct structures and the *-ma* adjunct. In the former, only the whole clause raising pattern is permitted, never extraction out of the clause. The *-ma* form allows both movements. I propose that the distinction is due to the categorial feature difference between the two adjunct types: the rationale, temporal and manner adjuncts are of the category [N], whereas the *-ma* adjunct is adjectival. The nominal adjuncts form nominal islands, but no such restriction is placed on the [N, V] form. This conclusion is supported by the finding that the other adjectival clause form in the language, the embedded participial, also exhibits both movement patterns. The extraction out of this clause type was illustrated in chapter 3; (181) gives an example of the raising of the complete participial clause.

- (181) [**Peka-n osta-nee-n eilen Tuija-lle kukk-i-a-ko**] Liisa väittä-ä?  
 P-GEN buy-NUT-ACC yesterday T-ALL flower-PL-PAR-Q L.NOM claim-3SG  
 'Is it that Pekka bought Tuija flowers yesterday that Liisa claims?'

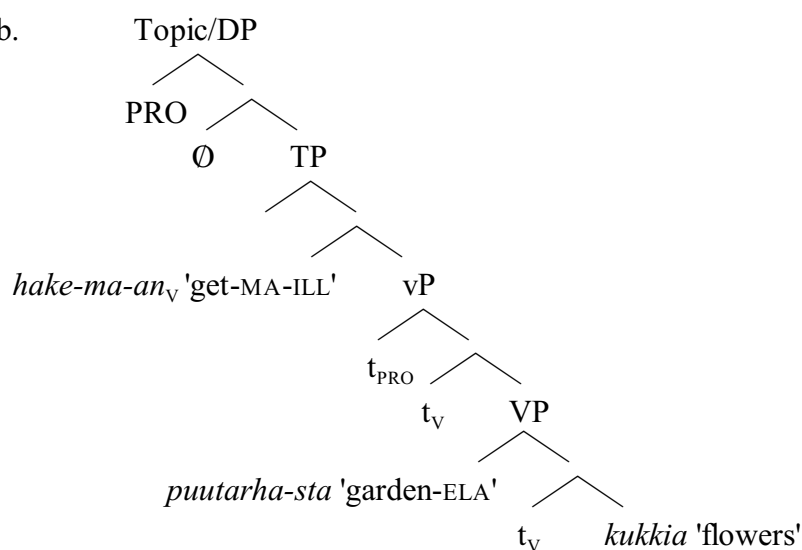
To summarize the account of the functional complex of the resultative *-ma* clause, (182) presents the structure that has been identified. (183b) provides a derivation of the clause in (183a) to illustrate.

(182)



- (183) a. Lea pyys-i Jukka-a hake-ma-an puutarha-sta kukk-i-a.  
 L.NOM ask-PAST.3SG J-PAR get-MA-ILL garden-ELA flower-PL-PAR  
 'Lea asked Jukka to get flowers from the garden'

b.



#### 4.4.1.4. The subject control *-ma* construction

The embedded argument *-ma* construction has a counterpart which is predicated of the the matrix subject of intransitive verbs, rather than the matrix object of transitive ones. These structures are not resultative, but still involve secondary predication.

- (184) a. Tuula<sub>i</sub> käv-i [PRO<sub>i</sub> osta-**ma**-ssa itse-lle-en haalari-t].  
 T.NOM visit-PAST.3SG buy-MA-INE self-ALL-3POS overall-PL.ACC  
 'Tuula went and bought herself overalls'
- b. Marju<sub>i</sub> tule-e juuri [PRO<sub>i</sub> istutta-**ma**-sta uus-i-a ruusu-j-a].  
 M.NOM come-3SG just plant-MA-ELA new-PL-PAR rose-PL-PAR  
 'Marju is just coming from planting the new roses'
- c. Lasse<sub>i</sub> men-i [PRO<sub>i</sub> ui-**ma**-an].  
 L.NOM go-PAST.3SG swim-MA-ILL  
 'Lasse went swimming'

As with the object control construction that has been already discussed, the subject control forms correspond to identically case marked locative complements of the matrix verb.

- (185) a. Tuula käv-i [kaupa-**ssa**].  
 T.NOM visit-PAST.3SG store-INE  
 'Tuula went to the store'
- b. Marju tul-i juuri [Newfoundlandi-**stä**].  
 M.NOM come-PAST.3SG just N-ELA  
 'Marju just came from Newfoundland'
- c. Lasse men-i [uimahalli-**in**].  
 L.NOM go-PAST.3SG swimming.pool-ILL  
 'The child went to the swimming pool'

In addition to verbs of motion and location, verbs of temporal reference (*alkaa*, 'begin', *ruveta*, 'begin, start', *ryhtyä*, 'start, undertake', *lakata*, 'quit') and verbs of mental activity (*kieltäytyä*, 'refuse', *kyetä*, 'be able to/capable of', *pystyä*, 'be able to/capable of', *suostua*, 'agree to', *tottua*, 'get used to', *tyytyä*, 'agree with') take locative DP complements and subject control *-ma* complements.



- (186) a. Ale-taan-pas heti [tö-i-hin] / [PRO teke-mä-än tö-i-tä].  
 start-1PL-EMP immediately work-PL-ILL / do-MA-ILL work-PL-PAR  
 'Let's start work/to work'
- b. Minä tyydy-n [kahvikupillise-en] / [PRO jää-mä-än koti-in].  
 I.NOM be.content-1SG coffee.cup-ILL / stay-MA-ILL home-ILL  
 'I'll be content with a cup of coffee/to stay home'
- c. Ilaria tottu-i helposti [uute-en koulu-un] / [PRO herää-mä-än  
 I.NOM get.used.to-PAST.3SG easily new-ILL school-ILL / wake-MA-ILL  
 aikaisin].  
 early  
 'Ilaria easily got used to the new school/to waking up early'
- d. Minä lakkaa-n nyt [tästä leiki-stä] / [PRO keksi-mä-stä lisää  
 I.NOM quit-1SG now this.ELA game-ELA / invent-MA-ELA more.PAR  
 esimerkke-j-ä].  
 example-PL-PAR  
 'I'll now quit this game/inventing more examples'

The subject-control *-ma* form behaves exactly as the object-control *-ma* construction does. First, the unacceptability of quirky and idiomatic subjects suggests that we are again dealing with control rather than raising structures.

- (187) a. \*Ensi vuon-na minulla kyken-isi ole-ma-an uusi polkupyörä.  
 next year-ESS I.ADE be.able.to-COND be-MA-ILL new.ACC bicycle.ACC  
 'Next year I would be able to have a new bike'
- b. \*Minulla kieltäyty-y ole-ma-sta nälkä.  
 I.ADE refuse-3SG be-MA-ELA hunger  
 'I refuse to be hungry'
- c. \*Jauho-t ryhty-i-vät mene-mä-än suu-hun Jaako-lla-kin.  
 flour-PL.NOM start-PAST-3PL go-MA-ILL mouth-ALL J-ADE-EMP  
 'Even Jaakko began to go speechless'
- d. \*Päree-t lakkas-i-vat vihdo-in pala-ma-sta Kaija-lta.  
 wood.chip-PL.NOM stop-PAST-3PL finally burn-MA-ELA K-ABL  
 'Kaija finally stopped losing her temper'

As in the object-control form, in the subject-control version the *-ma* verb raises out of vP to TP, as indicated by the position of the temporal adverb to the right of the *-ma* verb in (188a-c), and the evidence of independent event structure in (188d-f).

- (188) a. Ulla kieltäyty-y [PRO **osta-ma-sta koskaan** auto-a].  
 U.NOM refuse-3SG buy-MA-ELA ever car-PAR  
 'Ulla refuses to ever buy a car'
- b. Me ole-mme tottu-nee-t [PRO **käy-mä-än usein** elokuv-i-ssa].  
 we.NOM be-1PL used.to-NUT-PL go-MA-ILL often movie-PL-INE  
 'We're used to going to the movies often'
- c. Minä lakka-an [PRO **pelaa-ma-sta aina** tietokonepele-j-ä].  
 I.NOM quit-1SG play-MA-ELA always computer.game-PL-PAR  
 'I'll quit always playing computer games'
- d. Minä alo-i-n **viime viiko-lla** [PRO ui-ma-an **joka päivä**].  
 I.NOM start-PAST-1SG last week-ADE swim-MA-ILL every day  
 'I started last week to swim every day'
- e. Sofia oppi-i **pikku hiljaa** [PRO uima-an **nopeasti**].  
 S.NOM learn-3SG little quietly swim-MA-ILL fast  
 'Sofia is slowly learning to swim fast'
- f. Minä suostu-n **nyt** [PRO lähte-mä-än **huomenna** elokuv-i-in]...  
 I.NOM agree-1SG now leave-MA-ILL tomorrow movie-PL-ILL  
 'I'll agree now to go to the movies tomorrow' (but I might change my mind)

The null-subject *-ma* form is never inflected with a possessive suffix. In this it differs from the null-subject participial complement clauses, the rationale adjunct and the *-de* infinitivals that were discussed in sections 3.2.1.6, 4.2.3 and 4.3.

- (189) a. Minä käv-i-n [PRO/\***pro** osta-ma-ssa(\*-ni) sanomalehde-n].  
 I.NOM go-PAST-1SG buyt-MA-INE-1SG.POS newspaper-ACC  
 'I went and bought a newspaper'
- b. Sofia opp-i [PRO/\***pro** sukelta-ma-a(n)(\*-nsa) viime kesä-nä].  
 S.NOM learn-PAST.3SG dive-MA-ILL-3POS last summer-ESS  
 'Sofia learned to dive last summer'

This limitation is the result from the null-subject embedded *-ma* construction being a control structure: the *pro* subject whose [ $\phi$ ] features are realized as the possessive suffix cannot check its [case] feature in the *-ma* structure. The DP dominating the *-ma* clause does contain a case feature, but only [Null case], which cannot check the [case] feature of *pro*. The appearance of passive *-ma* clauses is ruled out for the same reason. The derivation crashes when the [case] feature of the passive *pro* subject remains unchecked.

#### 4.4.2. The adjunct *-ma* construction

The adjunct *-ma* constructions do not appear in argument positions, but like their other *-ma* counterparts, they correspond to identically case marked DP's in their syntactic positioning.

- (190) a. Minä u-i-n altaa-n pää-stä pää-hän [kroolaa-ma-**lla**].  
 I.NOM swim-PAST-1SG pool-GEN end-ELA end-ILL crawl-MA-ADE  
 'I swam from one end of the pool to the other by (using) the crawl'
- b. Ehkä tämä selviä-ä [pohti-ma-**lla**].  
 maybe this.NOM become.clear-3SG ponder-MA-ADE  
 'Maybe this will become clear by pondering (it)'
- c. Auringonkukansiemene-si ei kasva [kastele-ma-**tta**].  
 sunflower.seed-2SG.POS NEG.3SG grow water-MA-ABE  
 'Your sunflower seed won't grow without watering'
- d. Hän läht-i juuri [maksa-ma-**tta** lasku-a-an].  
 3SG.NOM leave-PAST.3SG just pay-MA-ABE bill-PAR-3POS  
 'He just left without paying his bill'
- (191) a. Minä u-i-n altaa-n pää-stä pää-hän [uimarensi-**lla**].  
 I.NOM swim-PAST-1SG pool-GEN end-ELA end-ILL float-ADE  
 'I swam from one end of the pool to the other with a float'
- b. Ehkä tämä selviä-ä [raha-**lla**].  
 maybe this.NOM become.clear-3SG money-ADE  
 'Maybe this will become clear with money'

- c. Auringonkukansiemene-si ei kasva [auringo-**tta**].  
 sunflower.seed-2SG.POS NEG.3SG grow sun-**ABE**  
 'Your sunflower seed won't grow without sun(light)'
- d. Hän läht-i juuri [taki-**tta** ja laki-**tta**].  
 3SG.NOM leave-PAST.3SG just coat-**ABE** and hat-**ABE**  
 'He just left without his coat and his hat '

Their syntactic properties are parallel to those of the complement *-ma* structures, and I assume that the structure of the adjunct *-ma* clause is identical to that given in (182). However, one problem that the *-ma* adjuncts present for this analysis stems from the fact that some speakers permit lexical subjects in the construction, contrary to the standard pattern in which *-ma* adjuncts generally have no lexical subjects.

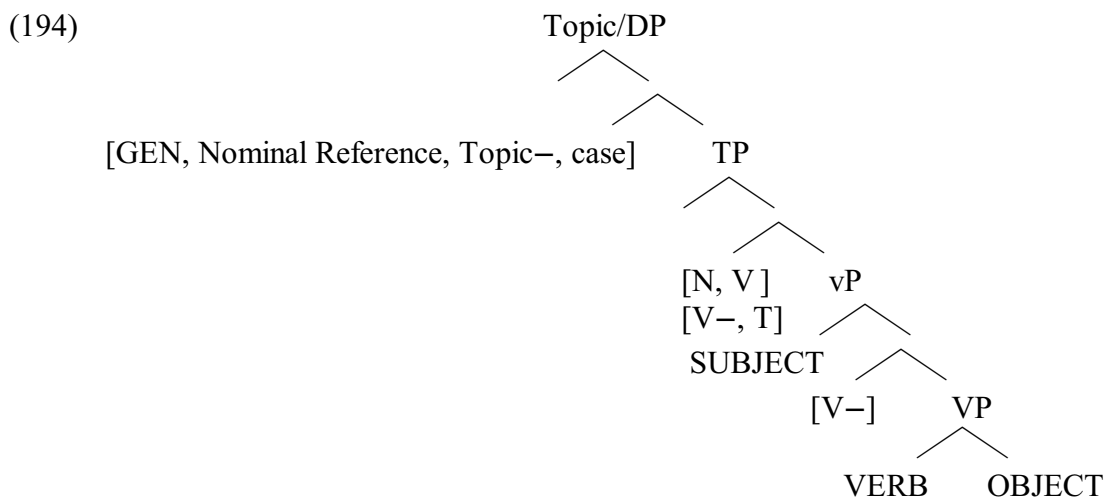
- (192) a. Hän jäi henki-in [**meidän** autta-ma-lla häntä].  
 3SG.NOM stay-PAST.3SG life-ILL we.GEN help-MA-ADE 3SG.PAR  
 'He survived by our helping him' (Toivonen 1995:12, fn.8, (i))
- b. Tämä kriisi helpottu-isi huomattavasti [**Akun** teke-mä-llä  
 this.NOM crisis.NOM ease-COND.3SG considerably A.GEN do-MA-ADE  
 jotakin sen hyvä-ksi].  
 something.PAR 3SG.GEN behalf-TRAN  
 'This crisis would ease considerably by Aku doing something for it'
- c. Auringonkukansiemene-si ei kasva [**sinun** kastele-ma-tta sitä].  
 sunflower.seed-2SG.POS NEG.3SG grow you.GEN water-MA-ABE 3SG.PAR  
 'Your sunflower seed won't grow without you watering it'
- d. Minä hiivi-n sisä-än [**Anun** huomaa-ma-tta ollenkaan].  
 I.NOM tiptoe-1SG in-ILL A.GEN notice-MA-ABE at.all  
 'I tiptoed in without Anu noticing at all'

Since the DP projection that dominates the *-ma* TP only bears a [Null Case] feature, the [case] feature of these overt subjects should find no checker in the structure. Furthermore, these constructions cannot be treated as ECM structures, as there is no

available case assigner in the matrix clause. I propose that the structure of these *-ma* forms is different from the normal subject-control constructions. Whereas the DP projection of *-ma* structures is usually exceptional in that its [Case] feature can only check null, not genitive case, I suggest that those speakers who allow genitive subjects in *-ma* adjunct clauses have reanalyzed the construction so that the embedded (Topic/)DP projection now has the regular [Genitive] feature. Hence the case checking of the lexical subject is identical to that of subjects in the embedded participial clauses. Of interest here is the observation that pronominal subjects, overt or null, do not always trigger possessive suffixation. I take this to indicate that the speakers still consider the construction in some way irregular. Possibly only the [case] feature of D has been changed, but not the [ $\phi$ ] feature checking required for possessive suffixes. There is support for my explanation in the fact that possessive suffixation appears in some structures, as illustrated in (193d,e).

- (193) a. Hän jäi henki-in [meidän autta-ma-lla(-\***mme**) häntä].  
 3SG.NOM stay-PAST.3SG life-ILL we.GEN help-MA-ADE-1PL.POS 3SG.PAR  
 'He survived by our helping him'
- b. Tämä kriisi helpottu-isi huomattavasti [sinun teke-mä-llä(-\***si**)  
 this.NOM crisis.NOM ease-COND.3SG considerably you.GEN do-MA-ADE-2SG.POS  
 jotakin sen hyvä-ksi].  
 something.PAR 3SG.GEN behalf-TRAN  
 'This crisis would ease considerably by you doing something for it'
- c. Auringonkukansiemene-si ei kasva [sinun kastele-ma-tta(-\***si**) sitä].  
 sunflower.seed-2SG.POS NEG.3SG grow you.GEN water-MA-ABE-2SG.POS 3SG.PAR  
 'Your sunflower seed won't grow without you watering it'
- d. Minä hiivi-n sisä-än [sinun huomaa-ma-tta-**si**].  
 I.NOM tiptoe-1SG in-ILL you.GEN notice-MA-ABE  
 'I tiptoed in without you noticing'
- e. ?[Hänen tunte-ma-tta-**an** mitään] lääkäri anto-i  
 3SG.GEN feel-MA-ABE-3POS anything.PAR doctor.NOM give-PAST.3SG  
 nopeasti piiki-n.  
 quickly shot-ACC  
 'Without her feeling anything, the doctor quickly gave (her) a shot'

The revised structure of these adjunct *-ma* constructions differs from that given in (182) for the complement *-ma* form only in that the [Null case] feature of Topic/DP has been replaced by [Genitive]. This change raises an interesting question about the status of the other *-ma* structures in these idiolects. If the embedded Topic/DP of *-ma* clauses has the structure of a regular DP in subject-control constructions, we might expect the pattern to hold of all *-ma* forms. In that case, has the complement clause structure been similarly reanalyzed, so that the form is no longer parasitically predicated of the matrix object, but rather the matrix object has become the lower subject? Since both *-ma* and the participles bear adjectival category features on the non-finite TP projection, we should expect the properties of the two construction types to be similar under a revised analysis of *-ma*. I have no such colloquial data available to me presently, but I pose the phenomenon as an intriguing future research question.

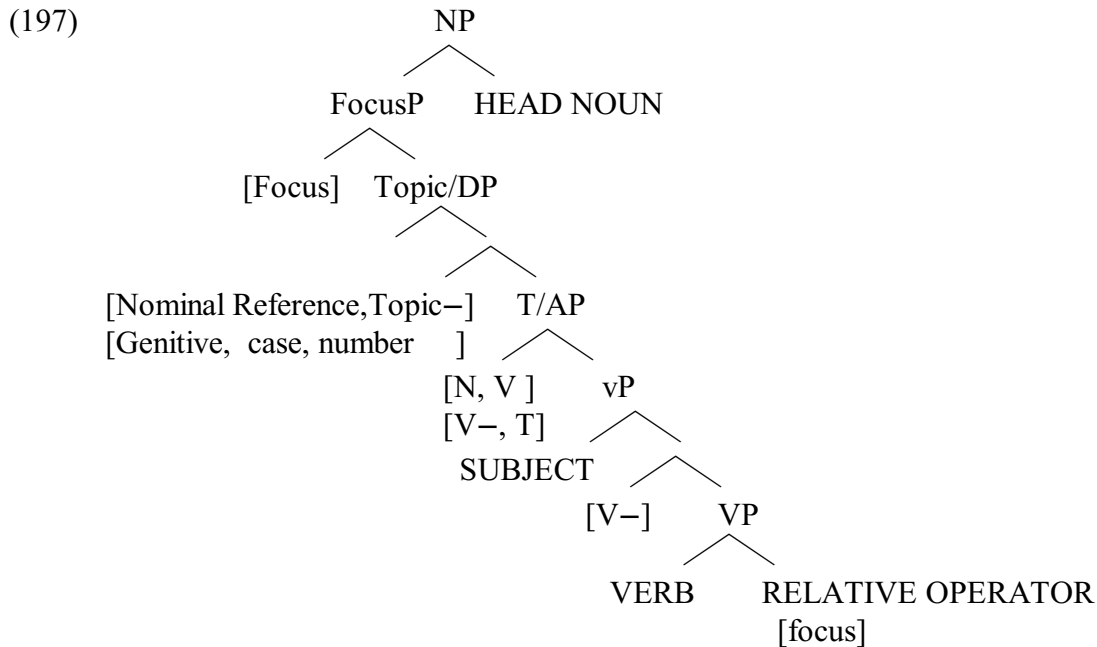


#### 4.4.3. The prenominal *-ma* construction (the "agentive participial")

According to its syntactic characteristics, the prenominal *-ma* structure can be classed together with the prenominal participle forms: it exhibits the same adjectival traits with regard to pre-nominal position, obligatory right-headedness, and number and case concord with the head noun. The prenominal *-ma* differs from the past and present



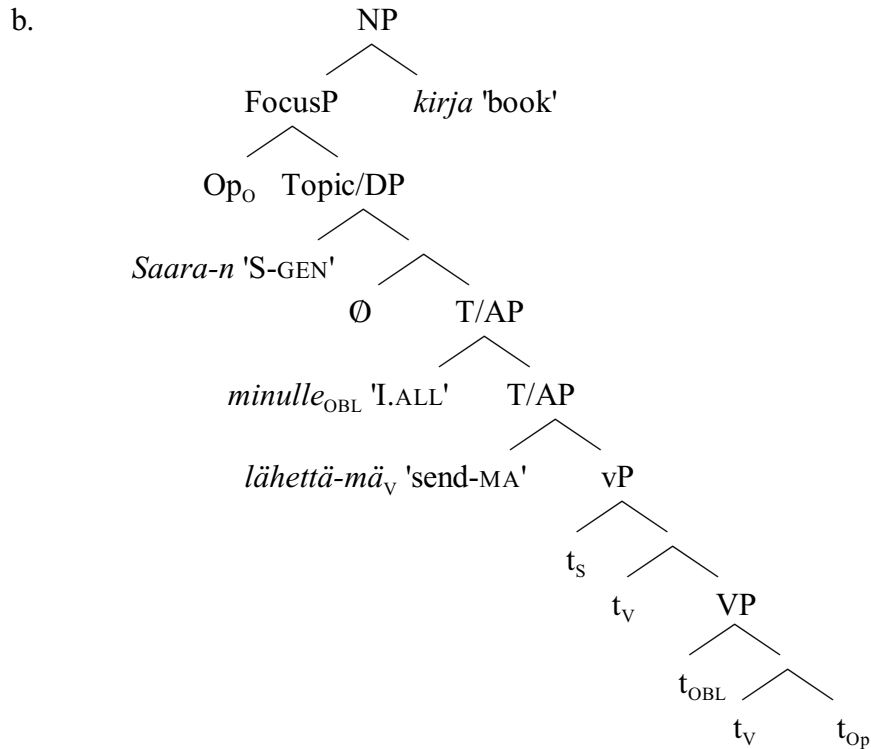
was given in (133) in chapter 3. The difference between the participial and *-ma* infinitival relative clause structures is that in the former, a relative operator is merged into the subject position, whereas in the agentive participle, the operator originates as the object.



The derivation proceeds as follows. The *-ma* infinitive raises to vP to check the strong [V] feature of v, and continues to T/AP to check its [temporal reference] feature. The [nominal reference] feature of T/AP is checked by the head of DP. I have placed the number and case features of the adjectival T/AP complex on the head of D; it is to be remembered that these are checked against the relevant features of the head noun through concord, however such a mechanism works. The operator object raises to FocusP where relative operators must appear in order to receive the correct interpretation. The lexical subject checks its [genitive case] feature with the D head covertly. Finally, some DP in the clause must raise to check the strong [Topic] feature of Topic/DP, and all other arguments, modifiers and adjuncts scramble out of vP, to the left of the infinitival verb. This latter movement is forced by the mysterious 'adjectival head to the right' requirement of Finnish. (198) is a sample derivation.



- (198) a. Saara-n minulle lähettä-mä kirja  
 S-GEN I.ALL send-MA book.NOM  
 'the book that Sarah sent me'



#### 4.4.4. Summary

In this section I have investigated the infinitival *-ma* form, which in some contexts is apparently synonymous with the embedded present participle construction, while in others it is interpreted like the *-ta* infinitive. The participial and *-ta* infinitive complements have been shown to occur in very different syntactic structures, however, which raises a question about the syntactic structure of the *-ma* clause. I showed that the *-ma* constructions are secondary predicates, parasitically predicated of either the object or some other argument of the matrix clause. To account for the fact that they seem to assign a thematic role to that argument, I have adopted a control structure approach to accounting for secondary predication. This is the characteristic that they share with (some of) the *-ta* infinitives. The temporal infinitival projection of these clauses, on the other hand, was shown to bear adjectival features. In this

way, the form parallels the structure of the participials. Because of this adjectival categorization, the *-ma* form also occurs in a prenominal agentive relative clause construction. The syntactic structure of this "agentive participial" clause was argued to be identical to the other prenominal participle forms, except that here the relative operator originates in the direct object position.

#### 4.5. Conclusion

Toivonen (1995:27) pointed out that the choice among the large number of non-finite constructions in Finnish appears to a great degree idiosyncratic, since, for instance, among four semantically identical verbs we find three different complement selection patterns.

- (199) a. Lapse-t        alka-vat    laula-**a** /laula-**ma**-an.  
                  child-PL.NOM begin-3PL sing-TA/sing-MA-ILL  
                  'The children begin to sing'
- b. Lapse-t        ryhty-vät    laula-**ma**-an.  
                  child-PL.NOM begin-3PL sing-MA-ILL  
                  'The children begin to sing'
- c. Lapse-t        rupea-vat    laula-**ma**-an.  
                  child-PL.NOM begin-3PL sing-MA-ILL  
                  'The children begin to sing'
- d. Lapse-t        aloitta-vat    laulu-n    / laula-**mise**-n.  
                  child-PL.NOM begin-3PL song-ACC/ sing-DEVN-ACC  
                  'The children begin the song /the singing'

On the other hand, the same verb may appear with a number of different finite or non-finite complements, whose meaning, for all practical purposes, is the same.

- (200) a. Minä    halua-n    Leena-n laula-**a** /laula-**va**-n.  
                  I.NOM want-1SG L-GEN    sing-TA/sing-VA-ACC  
                  'I want Leena to sing'

b. Minä halua-n Leena-n laula-**ma**-an.

I.NOM want-1SG L-ACC sing-MA-ILL

'I want Leena to sing'

c. Minä halua-n **että** Leena laula-a.

I.NOM want-1SG **that** L-NOM sing-3SG

'I want that Leena will sing'

In chapters 3 and 4 I have illustrated, however, that the non-finite constructions in Finnish exhibit very distinct syntactic structures, and that the differences in (199), and particularly the similarities in (200), are merely coincidental. It has been shown that the participial forms are clausal adjectives that occur in adjectival positions: as predicate adjectives (the main clause use), as prenominal modifiers (the relative clause use) and in object position, which is licenced by s-selection for their propositional content. The *-ta* infinitives were shown to bear no nominal categorial features, and hence they appear in positions where infinitival clause complements are permitted: in some ECM, raising and control structures, in nominal ECM constructions, and *tough* constructions. The *-ta* morpheme also appears in a rationale adjunct construction which shares syntactic properties and structure with a number of other adjunct forms, the present and past tense temporal and the manner adjuncts. All these structures, derived with various temporal morphemes (*-de*, *-ttu*, *-ta*), contain a functional [Temporal Reference] (=Tense) head whose syntactic category is [N]. These adjuncts freely merge to any verbal clause in any position where semantically related nouns would be acceptable, and they take part in syntactic derivation in the role of a nominal DP projection. Finally, the various *-ma* constructions, complement and adjunct forms, were shown to share an argument with the clause that they modify. This likely accounts for their freer distribution in (199), in contrast with other infinitivals. Overall, the five Finnish non-finite suffixes share the syntactic core of a verbal clause structure embedded under a non-finite temporal projection, but the functional feature complexes dominating that level of representation are different in each case, and account for the characteristic differences in the patterning and occurrence of each form.

A further conclusion to be drawn from the discussion in this and the preceding chapter is that no clear distinction emerges between the participial and infinitival forms in Finnish with regard to their syntactic features. I continue to use the labels as convenient identification devices for those readers who have encountered the forms in traditional grammars of the language. It should be noted, however, that in this study no theoretical basis for such a division has been substantiated. Rather, the five morphemes under investigation appear to form one group defined by the presence of the tense feature [temporal reference] and the absence of the finiteness feature [Agr].

#### **4.6. On the syntactic feature content of CP**

My analysis of the structure of the different non-finite constructions has raised a question about the role of CP in Finnish. CP is commonly assumed to house information about sentence type. I have suggested that some of this information is contained in a question and/or finiteness feature that CP holds. These features must be checked during syntactic derivation. However, the question feature in CP does not attract the question word itself to that position, since the CP feature is present only for clause typing, not for the purpose of establishing scope relations. The feature that attracts question words for scope reasons is located in FocusP.

This division of question features into two casts potential doubt on the diagnostic of question extraction that I have utilized in some parts of the thesis to establish the presence or absence of CP in a given construction. I have used the possibility of question extraction into the matrix environment to indicate that no CP is present in embedded contexts. To be exact, however, it is the presence or absence of an embedded FocusP rather than a CP that governs the availability of question movement. This appears to leave the status of CP in such constructions indeterminate.

I conclude, however, that the diagnostic is valid for both FocusP and CP structures in the non-finite contexts that have been examined here. CP consists of one of two features, [Question] or [Agr]. In finite clauses, CP bears an [Agr] feature. Since one of the CP

features is already checked, a FocusP projection is not obligatory in this environment. If no FocusP is projected in an embedded finite clause, but a question word has been selected at numeration, this question word must raise from within the embedded CP to the main clause FocusP to check its [q] feature. This is illustrated in (201a,b). An embedded FocusP, on the other hand, attracts any embedded question word, as shown in (201c), and blocks movement of any other embedded elements out of the clause, as demonstrated in (201d). This analysis seems to suggest that the presence of CP is in no way linked to the availability of extraction.

- (201) a. **Kukk-i-a-ko** Kati sano-i että Maija ost-i t<sub>o</sub>?  
 flower-PL-PAR-Q K.NOM say-PAST.3SG that M.NOM buy-PAST.3SG  
 'Was it flowers that Kati said that Maija bought?'
- b. **Mitä** Kati sano-i että Maija ost-i t<sub>o</sub>?  
 what.PAR K.NOM say-PAST.3SG that M.NOM buy-PAST.3SG  
 'What did Kati said that Maija bought?'
- c. Kati kysy-i että **kukk-i-a-ko** Maija ost-i t<sub>o</sub>.  
 K.NOM ask-PAST.3SG that flower-PL-PAR-Q M.NOM buy-PAST.3SG  
 'Kati asked whether it was flowers that Maija bought'
- d. \***Kukk-i-a-ko** Kati kysy-i että **Liisa-lle-pa** Maija ost-i t<sub>o</sub> t<sub>OBL</sub>.  
 flower-PL-PAR-Q K.NOM ask-PAST.3SG that L-ALL-EMP M.NOM buy-PAST.3SG  
 'Was it flowers that Kati asked whether that Maija bought for Liisa'

In non-finite environments, however, CP bears a [Question] feature, since, by definition, no finiteness feature [Agr] is present. If the embedded clause contains a FocusP that checks the [q] feature of a question word, neither that question word nor any other focussed element can be extracted from the embedded clause.

- (202) a. Maija mietti-i, **kukk-i-a-ko** osta-a t<sub>o</sub>.  
 M.NOM wonder-3SG flower-PL-PAR-Q buy-TA  
 'Maija wonders whether to buy flowers'
- b. \***Liisa-lle** Maija mietti-i, **kukk-i-a-ko** osta-a t<sub>o</sub> t<sub>OBL</sub>.  
 L-ALL M.NOM wonder-3SG flower-PL-PAR-Q buy-TA  
 'Maija wonders whether to buy flowers for Liisa'

- c. \***Kukk-i-a-ko** Maija mietti-i, **Liisa-lle-pa** osta-a t<sub>O</sub> t<sub>OBL</sub>.  
 flower-PL-PAR-Q M.NOM wonder-3SG L-ALL buy-TA  
 'Maija wonders whether to buy flowers for Liisa'

In relative clauses, both finite and non-finite, I have argued that the relative operator, overt or null, occupies the FocusP position. Consequently question words cannot occur either inside or outside the relative clause: their features cannot be checked within the embedded clause, yet their movement out of the clause is also blocked.

- (203) a. \*Se [**kukk-i-a-ko** osta-nut t<sub>O</sub>] Maija niin sano-i?  
 that.NOM flower-PL-PAR-Q buy-NUT M.NOM so say-PAST.3SG  
 'Was it that was-it-flowers-that-she-bought Maija who said so?' (??)
- b. \***Kukk-i-a-ko** se [osta-nut t<sub>O</sub>] Maija niin sano-i?  
 flower-PL-PAR-Q that.NOM buy-NUT M.NOM so say-PAST.3SG  
 'Was it that was-it-flowers-that-she-bought Maija who said so?' (??)
- c. \***Kukk-i-a-ko** se Maija, [joka ost-i t<sub>O</sub>] niin sano-i?  
 flower-PL-PAR-Q that.NOM M.NOM who.NOM buy-PAST.3SG so say-PAST.3SG  
 'Was it that was-it-flowers-that-she-bought Maija who said so?' (??)

If a question word moves out of a non-finite embedded clause, then, I conclude that there is no lower FocusP, and consequently no lower CP either. Although the projection that blocks movement out of an embedded non-finite clause is FocusP, extraction facts also diagnose the presence or absence of CP in these environments.

- (204) a. *embedded participial clause:*  
**Kukk-i-a-ko** Kati sano-i Maija-n osta-nee-n t<sub>O</sub>?  
 flower-PL-PAR-Q K.NOM say-PAST.3SG M.GEN buy-NUT-ACC  
 'Was it flowers that Kati said that Maija bought?'
- b. *main clause participle:*  
**Kukk-i-a-ko** Maija on osta-nut t<sub>O</sub>?  
 flower-PAST-PAR-Q M.NOM be.3SG buy-NUT  
 'Is it flowers that Maija has bought?'

c. *ECM -ta clause*:

**Kukk-i-a-ko** Kati käsk-i Maija-n osta-a  $t_o$ ?  
 flower-PL-PAR-Q K.NOM order-PAST.3SG M.GEN buy-TA  
 'Was it flowers that Kati told Maija to buy?'

d. *raising -ta clause*:

**Kukk-i-a-ko** Maija-n täyty-y osta-a  $t_o$ ?  
 flower-PL-PAR-Q M.GEN must-3SG buy-TA  
 'Is it flowers that Maija must buy?'

e. *control -ta clause*:

**Kukk-i-a-ko** Maija päätt-i osta-a  $t_o$ ?  
 flower-PL-PAR-Q M.NOM decide-PAST.3SG buy-TA  
 'Was it flowers that Maija decided to buy?'

The question data have identified two clause typing features that define the C head: a question feature, and a finiteness feature. Complementizers presumably must also add their own particular semantic information. It is an open question what other features must be checked within C, such as temporal or aspectual information. Since matrix verbs clearly take non-CP complements with propositional content, however, as in the ECM and raising *-ta* constructions, access to tense and aspect features must be available without the presence of CP.

## CHAPTER 5

### CONCLUSIONS AND IMPLICATIONS FOR FUTURE RESEARCH

#### 5.1. On syntactic categorization and syntactic features

This thesis set out to examine the syntactic categorial status of non-finite clauses in Finnish. I have explored issues at both the syntax-morphology and the syntax-semantics interfaces. The principal goal of the investigation has been to provide an approach for dealing with the categorially inconsistent properties of various non-finite constructions. My starting hypothesis was that such incongruities are best treated as alternative combinations of those syntactic features that are common cross-linguistically, rather than as rare and exceptional functional categories. Within the Minimalist Program, much work has focussed on syntactic features, and their position in syntactic structures. My aspiration has been to resolve the ongoing, frustrating disagreements over the labels of functional projections by explicitly identifying the feature content of all functional positions.

Work on various languages has clearly indicated that the inventory and ordering of functional features varies from language to language (cf. among others, Fukui 1986, Fukui and Speas 1986, Iatridou 1990, Laka 1990, Speas 1991, Moorcroft 1993, 1995). Such findings imply that all languages do not necessarily grammaticalize the same set of possible functional features. As an example of this optionality I can cite the lack of syntactic tense in Mandarin Chinese (e.g. Cheng and Tang 1996) and Yiddish (Gold, in progress), or the occurrence in Finnish of the features [Topic] and [Focus] which are not active in many other languages, for example French or German. It has also become increasingly obvious that there is no one-to-one relationship between a given syntactic feature and a given functional



position. For instance, different analyses have placed agreement features (whether they are labelled as [ $\phi$ ] or Agr) in various functional positions other than AgrP, namely in CP, VP, TP, and so on (cf. e.g. Rizzi 1990, Belletti 1990, Mitchell 1994b, Koskinen 1993b, van Gelderen 1993), and a wh-feature (or a question feature, as in Finnish) has been shown to occur in, at least, CP or FocusP. Moreover, these accounts suggest that several features may combine in a single position, so that CP, in addition to the feature that is realized as a complementizer, can contain, for example, agreement features, or one IP projection may bear several functional features, such as [Tense] and [Topic] (cf. Moorcroft 1995 on Yiddish). These observations leave us with a framework in which the initial position of any feature is not limited to a single position, several features may reside in one position, and syntactic computation is feature movement. Under such an approach, it is unclear what category labels would stand for. Gelderen (1996) has independently expressed similar sentiments.

Furthermore, I have argued, based on the Finnish data presented in chapters 2 to 4, that a given functional position may combine not only several functional features, but also functional and lexical specifications.<sup>82</sup> This claim amounts to the theoretical possibility of syntactic category change taking place during syntactic computation. The mechanism was introduced to account for the mixed categorial qualities of the non-finite constructions: the participial and infinitival heads of such clauses were clearly shown to function syntactically as verbs, yet at the clause level the structures often have nominal or adjectival morpho-syntactic properties. There is no theoretical obstacle to such a possibility: under the view of

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<sup>82</sup> Fukui (1995) has also proposed that functional categories bear lexical features [ $\pm$ N,  $\pm$ V] in the following combinations with their functional specification [+F]: AGR = [+F, +N, +V], T = [+F, -N, +V], D = [+F, +N, -V], C = [+F, -N, -V]. Although Fukui's system might appear preferable in that it is considerably more restrictive than the one outlined in my thesis, it cannot account for the Finnish data. For instance, I have shown in the discussion of non-finite constructions that Finnish temporal (i.e. T) heads may bear adjectival (*-nut*, *-va*, *-ma*), nominal (one homophone of *-ta*, *-de*, one homophone of *-ttu*) or verbal (presumably the finite clause elements *-Ø* and *-i*, possibly in the infinitival *-ta* structures) lexical specifications. Furthermore, Fukui's approach does not allow for combinations of functional features to occur in a single position, such as [Agr] features forming a part of the lexical specification of C. Finally, as the author himself acknowledges, this limited four-way division leaves no room for the inclusion of such other features as [Neg], [Topic] or [Focus].

lexical insertion adopted here, morphological derivation takes place after all syntactic processes are complete, and therefore will be sensitive only to the syntactic feature matrices that surface at the end of the computational component.

The analysis presented here supports the view of morphological derivation as a post-syntactic process of feature interpretation (along the lines proposed in the Distributed Morphology approach of Halle and Marantz 1993 and others). I have exploited the concept of morphological derivation as post-syntactic vocabulary insertion based on syntactic features to account for the syntax-morphology feature clashes that are prevalent in the Finnish inflectional system. An example of such a phenomenon is the inability of the participial clauses to bear quirky case in object position. An additional assumption that I have made regarding the Finnish morphological system is that morphological realization utilizes a number of default markers that are inserted in non-finite constructions where, for instance, the syntactic feature information contradicts thematic information: the case marker *-n* (homophonous with the genitive marker), the finite agreement marker *-V* (homophonous with the third person singular form) and the nominal reference marker *-t* (homophonous with the nominal plural suffix). The suggestions that have been made here with regard to the morphological realization of syntactic feature matrices are tentative, and the questions raised here about inflectional morphological derivation in Finnish present a significant future research program.

If both the inventory and combination of syntactic features are allowed to vary cross-linguistically, the restrictive advantages of ideas such as that of a universal functional tree structure (e.g. Chomsky 1991) are lost, and we are faced with a learnability problem. How can an unlimited number of features and their unrestricted amalgamations be constrained to make the system learnable? In terms of available features, the Finnish data support the view that Universal Grammar provides the child with a small stock of functional features whose potential presence is to be monitored. All the features that occur in any of the Finnish finite and non-finite structures that have been examined in this thesis were shown to be ones that are also commonly used in many languages: [tense], [agreement], [question], [topic], [case], [negation], [sentence type]. The only unusual aspect of the constructions under

investigation is how the features combine. With regard to feature combinations, there are also clear general trends. In all the Finnish constructions, it is the temporal reference projection that bears category changing features, and the [Topic] feature is always housed on the highest nominal projection in the clause. Such generalizations do not provide an explanation for how to restrict potential feature mixes; on the other hand, they suggest that the system is rule-governed rather than random. More cross-linguistic data is needed to investigate whether the Finnish patterns are attested more commonly, and what other blends are permitted.

## 5.2. A review of the non-finite structures of Finnish

The investigation in this thesis has focussed on five non-finite suffixes in Finnish, the so-called participials *-nut* and *-va* (past and present), and the infinitivals *-ta*, *-de* and *-ma*. All five morphemes share a set of properties that strongly suggest a clausal structure based on a verbal head: they assign a full range of object cases (accusative, partitive, quirky case) and a subject theta role. Moreover, the selectional restrictions that they place on their complements are identical to those specified by finite verbs. The non-finite forms are always modified by verb-oriented adverbs. Finally, all the non-finite markers affect the temporal interpretation of the clause, which classifies them as part of the temporal system of Finnish. As such, the presence of these morphemes again implies that their hosts are verbal.

On the other hand, all five suffixes exhibit some nominal behaviours. The only inflectional markings that are ever found on any of the five morphemes are nominal, case, nominal plural and possessive suffixation. The syntactic positions in which the non-finite clauses occur are also nominal: for instance, the direct object position, or adjective positions (prenominal, predicative as well as positions such as those held by adjectives in depictive structures). The suffixes split with respect to the availability of passivization. The passive morpheme is commonly considered a verbal inflectional marker, and hence the unavailability of a passive counterpart can be identified as a nominal characteristic. Some forms do not permit passivization (*-ta*, *-ma*), while others do (*-nut*, *-va*, *-de*).

Table 5.1 contrasts the overall pattern of categorial disparity that the non-finite suffixes manifest.

**TABLE 5.1. The common syntactic properties of all the Finnish non-finite morphemes**

<i>Verbal behaviour</i>	<i>Non-verbal behaviour</i>
<ul style="list-style-type: none"> <li>• Assigns full range of object cases</li> <li>• Theta role assignment &amp; selectional restrictions are identical to finite verb</li> <li>• Modified by verb-oriented adverbs</li> <li>• Situates the event of its verb host on the time line</li> <li>• Some have a passive counterpart</li> </ul>	<ul style="list-style-type: none"> <li>• Occurs in nominal (non-verb) position</li> <li>• May occur in theta position</li> <li>• May bear nominal inflection (case, nominal number, possessive suffix)</li> <li>• Never bears most types of verbal inflection (finite tense, mood, person/number agreement)</li> </ul>

I have resolved the puzzle of contradictory properties by proposing that the non-finite forms enter syntactic computation bearing feature content that is normally associated with verbs, such as the features [(Assign) Object Case] and [temporal reference]. The nominal properties of the structures derive from the unusual feature content of the functional category that checks the [temporal reference] feature. I have suggested that the abstract functional Tense head bears lexical categorial features: the adjectival [N, V] in the case of the participial suffixes and *-ma*, and the nominal [N] in the case of the rationale adjunct *-ta*, *-de* and the temporal suffix *-ttu*. Because these categorial features bring with them their own feature checking needs ([nominal reference]), the temporal clause structures enter into different nominal constructions. The infinitival *-ta* on its own forms a third subgroup of non-finite heads in that its temporal projection was shown to bear no lexical category features at all.<sup>83</sup>

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83 If we assume, for the sake of symmetry, that all Finnish tense morphemes must bear a categorial feature, it is possible that the TP of the infinitival *-ta* bears a categorial [V] feature. Since the more elementary feature composition of the category “Verb” is not fully understood at the moment, I leave this option for later examination.

I have shown evidence for both the adjectival and nominal non-finite structures that the participial or infinitival head itself cannot be considered an adjective or a noun; rather, some higher position in the syntactic structure must bear the categorial features. In addition to the verbal characteristics of each infinitival head that were outlined in table 5.1, table 5.2 summarizes the diagnostics that differentiate the features of the non-finite verbal head from the non-verbal features of the abstract functional head, for the adjectival participial and *-ma* structures. Table 5.3 does the same for the nominal rationale adjunct *-ta*, *-de* and temporal *-ttu* forms.

**TABLE 5.2. Summary of the evidence for the [N,V] feature of [T] on the participles and the *-ma* structures, and why the non-finite head is not an adjective**

<i>Adjectival behaviour</i>	<i>Non-adjectival behaviour</i>
<ul style="list-style-type: none"> <li>• Occurs in some adjective positions</li> <li>• Bears adjectival morphology (case, nominal number, possessive suffix)</li> <li>• May assign quirky case</li> </ul>	<ul style="list-style-type: none"> <li>• Assigns full range of object cases</li> <li>• Bears temporal meaning</li> <li>• Is never marked for partitive case</li> <li>• Does not form comparatives</li> </ul>

**TABLE 5.3. Summary of the evidence for the [N] feature of [T] on the rationale adjunct *-ta*, the *-de* and the temporal *-ttu* infinitives, and why the non-finite head is not a noun**

<i>Nominal behaviour</i>	<i>Non-nominal behaviour</i>
<ul style="list-style-type: none"> <li>• Bears nominal inflection (case, possessive suffixation)</li> <li>• Pied-pipes a larger constituent in question raising</li> <li>• Topicalizes</li> </ul>	<ul style="list-style-type: none"> <li>• Assigns a full range of object cases</li> <li>• Bears temporal meaning</li> <li>• Occurs in very limited nominal positions</li> </ul>

In chapters 3 and 4 I identified the particular syntactic structures into which the various non-finite morphemes enter, based on the categorial specification of each abstract temporal head, and semantic contribution of each suffix.

### 5.3. The temporal meaning of the Finnish tense morphemes

An issue that has come up several times in the discussion, but which I have consistently left aside is the temporal semantic interpretation of the various finite and non-finite morphemes in Finnish. With regard to the past tense markers, I concluded that the past participle suffix *-nut* is differentiated from the finite past tense marker *-i* in that the participle contains only a back-shifting [temporal reference] feature, while the finite marker is also associated with a set of [ $\phi$ i] features. The system of present tense markers, however, is considerably more complex, and I have not provided an account of the distinct semantic contributions that each of the present tense suffixes makes to the temporal interpretation of a clause. However, the findings of this study can be summed up as follows. There are five verbal inflectional morphemes in Finnish whose meaning specification includes some non-past temporal reference: the present participle *-va*, the infinitive markers *-ta*, *-ma* and *-de*, and the enigmatic non-past null consonant marker  $\emptyset$  that emerges in negated finite clauses and imperatives. What are the finer distinctions among this group?

Both *-ma* and *-de* contain the specification that the event expressed by their host must be an interval. This is shown in (1a,b). On the other hand, the present participle *-va* has the default interpretation of an interval, as all Finnish present tense verb forms do. (1c) illustrates this.

- (1) a. Satee-n alka-e-ssa me juoks-i-mme nopeasti koti-in.  
       rain-GEN begin-DE-INE we.NOM run-PAST-1PL quickly home-ILL  
       'When the rain started (falling), we quickly ran home'
- b. Minä näe-n lapse-t kerää-mä-ssä kukk-i-a metsikö-ssä.  
       I.NOM see-1SG child-PL.ACC gather-MA-INE flower-PL-PAR grove-INE  
       'I see the children gathering flowers in the grove'

- c. Minä kuule-n las-te-n tanssi-**va**-n.  
 I.NOM hear-1SG child-PL-GEN dance-PR-ACC  
 'I hear the children dancing'

Although *-de* only occurs in the temporal and manner adjunct structures due to its nominal features, *-va* and *-ma* can be found in constructions with seemingly identical meaning.

- (2) a. Minä nä-i-n las-te-n tanssi-**va**-n.  
 I.NOM see-PAST-1SG child-PL-GEN dance-PR-ACC  
 'I saw the children dancing'
- b. Minä nä-i-n lapse-t tanssi-**ma**-ssa.  
 I.NOM see-PAST-1SG child-PL.NOM dance-MA-INE  
 'I saw the children dancing'

*-ta* and *-ma* also appear in some identical constructions. This is probably due to the relatively underspecified temporal meaning of *-ta* that allows it a wide distribution in terms of temporal contexts.

- (3) Minä ala-n luke-**a** /luke-**ma**-an.  
 I.NOM begin-1SG read-TA /read-MA-ILL  
 'I begin to read'

The semantic content of the null consonant suffix that appears in finite present tense clauses under negation presents a further mystery in presenting a link between negated finite clause and imperative interpretations.

- (4) a. Lapse-t ei-vät tanssi-**Ø** /\*tanssi-**va**.  
 child-PLNOM NEG-3PL dance-PRES / dance-PR  
 'The children aren't dancing/don't dance'
- b. Tanssi-**Ø** vielä vähän aika-a!  
 dance-IMP still little time-PAR  
 'Dance still a little longer!'

These examples have outlined the range of variation that exists within the group of suffixes that, at the same time, all express a non-past meaning. Of these morphemes, the temporal representation of the present participle suffix *-va* received the most discussion. At the end of chapter 3 it was demonstrated that the temporal semantic properties of *-va* are very restricted. First, *-va* was shown to be sensitive to the semantic type of the event that its verb describes in that its interpretation changes from temporal simultaneity with events to a strong future reading with propositions. Furthermore, the fact that *-va* is ruled out in present tense main clauses was argued to be due to its temporal binding properties. It was claimed that *-va* is a temporal anaphor. This property of *-va* contrasts with the temporal independence of the past participle suffix *-nut*, which consequently must be temporally pronominal. By identifying the syntactic representations that these temporal elements occur in I have provided a starting point for a more in-depth examination of the temporal meanings of the non-finite suffixes, and of the temporal structure of Finnish.

#### **5.4. Conclusion**

In this thesis I have provided a unified analysis of the syntactic structures of all constructions in which the five Finnish non-finite suffixes occur. In addition to contributing to the general understanding of Finnish grammar by putting forward a comprehensive and explanatory account of these previously unexamined forms, this research has outlined a cross-linguistic approach for dealing with morphemes whose syntactic category affiliation has traditionally been difficult to determine. The theoretical framework laid out here has demarcated a research program for further study of similar elements in other languages.



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