Of Nominative and Accusative: The Hierarchical Assignment of Grammatical Case in Finnish

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1 INTRODUCTION

The basic question I want to address in this paper is this: what is the relationship between morphological case and grammatical functions? In particular, what are the principles governing the assignment of the grammatical cases, NOM and ACC? All work on case distinguishes at least 3 different kinds of case-assignment: grammatical or synactic (NOM, ACC); lexical (to verbal arguments); and semantic (to adverbial adjuncts). It is often assumed that the grammatical cases are used to encode grammatical functions (GFs).

(1) "The nominative is the case of the subject of the sentence, and of any word qualifying the subject, whether attributively, in apposition, or as predicate."

Such statements reflect the widespread assumption that there is a 1-1 mapping between morphological cases and GFs, such that the grammatical subject is always NOM, and the nominative NP (other than a predicate nominal) is necessarily the grammatical SUBJ. While this is probably the unmarked state...

1 My thanks are due to: Paul Kiparsky, for pointing out to me in July 1989 that Finnish was another example of a language in which so-called 'structural' case appears on adverbs; Jan Ekman, for bringing Tirkkonen (1978) to my attention; Urpo Nikanne, for being in the right place (Blander) at the right time (the academic year 1989-90), and for the generous help that made it possible for me to pursue the implications of the Case-Tax analysis on Finnish; Lauri Kortmann, for being an exceptionally well-informed informant; Einar Hallman, Antti Karanta, and Leonard Brandt for helpful comments on the first draft. Unless otherwise indicated, the Finnish judgments reported in this paper are those of Urpo. Any native speaker who disagrees with the data should blame the data on him and the analysis on me (but please let me know). The usual disclaimers apply, in particular, neither Urpo nor Lauri necessarily agree with my interpretation of these judgments. An earlier and shorter version of this paper was presented at the 12th Scandinavian Conference of Linguistics held in Reykjavik in June, 1990.

2 This is more clearly stated in the following quote from Halle & Keyser: "As far as NP at sentence level are concerned, there seems to be a one-to-one relationship between nominative, dative, and accusative and Subject, Indirect Object, and Direct Object respectively."
     (1981: 104 / 1989: 205). The authors note that exceptions to this general pattern must be allowed for verbs which govern a non-subject case on an object.
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However, there are languages whose certain classes of adverbials seem to get syntactic case, e.g., Chinese (Li 1985/1990), Korean (Maling 1980), Classical Arabic (McCarthy 1976; Noyer 1989), Warumunga (Simpson 1991).

There are two facts about this phenomenon to note: (i) the same class of adverbials shows up again and again: adverbial of duration/frequency, temporal phrases, cognitive objects, suggesting the existence of a semantically natural class, and (ii) not only do these adverbials get the same ACC case assigned to verbal objects, BUT they exhibit the same Case-alternations diagnostic of structural Case. I.e. they show up with NOM case in the same sorts of environments that verbal objects do. (Since adverbials do not pass as NPs, this fact has obvious implications for the usual case-theoretic account of NP-movement. Some recent work in GB distinguishes between case-assignment and case-licensing (Spector 1990; Pianta and Ponsaen 1990). Another language of this type is Finnish (but not Hungarian). The purpose of this paper is to explore the predictions of the Case-Tier model for the assignment by investigating the assignment of grammatical cases to verbal objects and certain adverbial adjuncts.

2. THE CASE OF FINNISH OBJECTS

Finnish is said to have four grammatical cases, illustrated in the paradigm for kirja 'book' shown in (3).

(3) Finnish grammatical cases:

<table>
<thead>
<tr>
<th>SO</th>
<th>PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOM kirja</td>
<td>kirj+AT</td>
</tr>
<tr>
<td>ACC kirja</td>
<td>kirjae</td>
</tr>
<tr>
<td>GEN kirja:n</td>
<td>kirje:n</td>
</tr>
<tr>
<td>PAR kirja:s</td>
<td>kirje:s</td>
</tr>
</tbody>
</table>

The question mark entered under accusative singular reflects the different surnomenclature encountered in the literature to describe the form of an object NP in the singular. Such an NP bears either a zero-suffix (the so-called 'endless accusative') or an a suffix (historically, i.e., depending on the form of the matrix verb):

(4) NOM subject — finite V — ACC object — a

GEN subject — 3SG verb — NOM object — Ø

The zero-suffix also occurs in a variety of systematically impersonal constructions, including passes and imperatives. Accounting for the /a/-alternation in the case-marking on the object is a classic problem in Finnish.
2. Joan Maling

syntactically. As can be seen from the paradigm in (3), this plural alternation occurs only in the singular; plural NPs are morphologically identical to the NOM and distinct from the GEN. Glues in this paper reflect the claim that the accusative singular suffix is always n, and the "endingsless accusative" is actually NOM. A major advantage of this view is that the same rules can then be said to govern the realization of both singular and plural objects as either NOM or ACC.

The traditional thinking among Finnish grammarians is that in the singular, except for certain pronouns, ACC is an "abstract" case that is realized morphologically as NOM or GEN depending on the environment and type of phrase (as sketched in 5a):

(3) a. ACC
   \ /  / \\
NOM GEN:n \ /  / \\
   \ /  ACCn

Under my analysis, as sketched in (5b), the traditional notion of "abstract ACC" corresponds to the NP OBJECT, which is morphologically marked as either NOM or ACC depending on the environment. This analysis assumes the existence of "nominative objects" (as suggested for English by Timberlake 1961, 1981; Tarallden, 1978; Emonds, 1980; inter alia).

Timberlake argues that where the Nominative NP is the (b) pattern is the grammatical object. There are a number of reasons for this. First, there is never agreement with postverbal nominative objects in Finnish (unlike Icelandic). This lack of agreement with a nominative object is illustrated in (6a) as contrasted with (6b):

    Jukka+ADE bao-+SST+SST key+PL-NOM
    Jukka had/owned the car(s)
b. Akavainen olivat Jukalla.
    key+PL-NOM bao+3PL Jukka+ADE
    Jukka had the key(s) that were in Jukka's possession

Secondly, personal pronoun objects are clearly accusative in form (as noted in footnote 4), regardless of the case on the subject.

5 Personal pronouns do not exhibit this case alternation, but are clearly accusative, whatever the form of the matrix verb. Contra Reizer (this volume), I do not consider this fact an argument that the "endingsless accusative" is an "empty case". In many languages, pronouns are marked nominative/accusative whereas full NPs are negative/absolutive.

6 I am indebted to Paul Kiparsky for drawing my attention to this phenomenon in Finnish, and for providing a translation of the relevant sections of Hakulinen and Karttunen 1971-1972, and a summary of Tuomikoski (1978).
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(9) LEX
1
SUBJ OBJ
NOM ACC

a. Lapen anis majo child+GEN is+PST.3SG climb(NOM)
the child was thirsty
b. Lapenri anis majo child+GEN is+PST.3SG book(NOM)
the child had a book

(10) GEN
1
SUBJ OBJ ADV
NOM ACC

a. Lapen lokiri kirji illas child+GEN read=3SG book+ACC evening+NIE
the child read the book in the evening
b. Lapen tityri lokiri kirji child+GEN must read book+NOM+ACC
child+GEN must read book+ACC

c. Lapen tityri lokiri koko padoval+pasiv
child+GEN must read all day+NOM+ACC

Lexical case-marking on an object has exactly the same effect: nominative case shifts over to adverbial, exactly as expected under the Case-Tier. This is illustrated in (11) for the verb ihoati 'to trust', which governs illative (ILL) case on its object:

(11) OBL LEX
1
(SUBJ OBJ ADV)

NOM ACC

a. Kannu hokti Kekkoni vuendu
people+NOM trust=PST is+3SG Kekkonen+ILL year+NOM
people+GEN trust Kekkonen for a year
b. Kekkoni hoktiis vuendi Kekkonen+ILL trust=PASS year+NOM
'Kekkonen was trusted for a year'
c. Kannu hokti loxeta Kekkonen+ILL vuendi people+GEN must trust Kekkonen+ILL year+NOM
'People must trust Kekkonen for a year'

7 This is exactly the hypothesis offered by Audrey Li (1991/1990) in her analysis of Chinese.
8 One might want to claim that the model tityri assigns GEN lexically rather than structurally. There are two arguments against this. First, GEN will appear on the subject when the construction clearly involves 'returning', as often an 'itom' is embedded under the modal:
(i) Jokan potinne kaiva vuori yida
John+NOM kicked+PST.ISS empty+ACC last night+ISS
John kicked the bucket (i.e. died last night)
(ii) Jokan potinne potinne kajhaidi yiva yida
John+NOM kicked+PST.IMP empty+ACC last night+ISS
'John must have kicked the bucket last night'
On the standard assumption that lexical case marking can only be assigned to arguments, GEN cannot be lexically assigned by the modal.
Second, when a predicate with an oblique subject is reanalyzed under tityri, the OBL case is preserved until Return, but a NOM subject must be GEN, as shown by the contrast between (i) and (ii).

(iii) Jukaka tityri ilja kirja
Book+NOM must be+INFIN book+NOM
The book must be a book
(iv) Kirjan tityri ilja kirja
book+NOM must be+INFIN Jakka+AUT
* The book must be in Jakka's possession

-1-
Note that if both SUBJ and OBJ bear an oblique case, NOM from the syncastic Case Tier shifts over not just one, but two NPs, all the way to the Adverbial NP, as illustrated in (14c).

2.2 Combining Adverbials and Objects: Partitive versus Accusative

We have seen that NOM from the Syncastic Case Tier can shift over to the OBJ, if any, or if there is no OBJ, onto certain adverbials. The obvious question is what happens if both DO and ADV co-occur? What happens if we try to combine a syntactically case-marked object and a syntactically case-marked adverbial? Under the Case-Tier Hypothesis, we expect to be able to generalize the case pattern QBI, NOM ACC, whenever the subject bears an oblique case. It turns out that such combinations are often unacceptable, for reasons having to do with the grammaticality incompatibility of pronominal adverbs with the aspectual meaning of using NOM/ACC as opposed to PASS on the objects of agessive verbs. Note the difference in meaning between (12a) and (b).

(12a) a. Mišk laen kirjan illasta
     [NOM] read-IQSG book=ACC evening+INE
     'I read a book (ie, one book) on one evening'

b. Mišk laen kirja ilisaste
     [NOM] read-IQSG book=PAR evening+INE
     'I am reading a book (ie, one book) on one evening (but am not sure if I will succeed in finishing it)

(13a) a. *Mišk laen kirjan illas
     [NOM] read book=ACC evening+ACC
     'I read the book for an evening'

b. Mišk laen kirja ilis
     [NOM] read-IQSG book=PAR evening+ACC
     'I am reading the book for one evening'

One might attribute the ungrammaticality of (13a) to the Case-filler: the adverbial NP has to get case from the syncastic Case Tier, but both syncastic cases have already been assigned. But there is another explanation: the meaning of the durational phrase ‘for one evening’ is semantically incompatible with telle predicates, and hence incompatible with the aspectual meaning of using grammatical case (as opposed to partitive) on the object of an aggregative verb.

If this explanation is correct, then the case pattern GEN NOM ACC will be ruled out for aggregative verbs where the use of structural case marks completion and the adverbial in durational. But under the Case-Tier hypothesis, this case pattern is in principle expected to occur, and indeed it does. Choosing a nonaggregative predicate with oblique subject as in (14a), a frequent adverbial as in (14b) makes the case pattern acceptable.

(14a) a. Lapseten olen yliden illasten yksi ilta
     child+GEN be=QSG bites+INOM one=ACC evening+ACC NOM/ACC 'the child was there for one evening'

b. Lapsilla oli kirja takti painväissä
     child+DAT be=PST book=NOM all day=ACC NOM/ACC 'the child had the book all day'

c. Lapsen ryttäjä luulka kirjan kösse: napa*mu*kin kerta
     child+GEN must read book=NOM third times=ACC NOM/ACC 'the child must read the book for a third time'

Another way of exemplifying the exact case pattern is to find a transitive verb where the use of structural case does not mark completion and hence the meaning is compatible with a duration time adverbial. One such verb is matkata to remember.7 For the case patterns on the object is not possible in an affirmative sentence, as illustrated in (15).

(15) a. Liisa muiista matkaten matkatas. Liisas(NOM) rememberd trips ACC/PAR
     'Liisa remembered the trip'

When combined with a duration adverb, we find the following case patterns:

(16) a. Liisa muiista matkata vuodena. Liisas(NOM) remembered trip=ACC year+ACC
     'Liisa remembered the trip for a year'

b. Miestä marka vuodeli. Remember trip=ACC year+ACC
     'Remember the trip for a year'

c. Liisat muiistat matkat matkatas vuoden. Liisas+GEN must remember trip=NOM year+ACC
     'Liisa must remember the trip for a year'

There is a related verb, muistella to reminisce, with the opposite properties: namely it takes only partitive and not accusative on its object.

(17) a. Liisat miisteli matkatas matkatas. Liisas(NOM) reminisced trip=PAR+ACC
     'Liisa reminisced about the trip'

As a consequence, when NOM is not assigned to the subject, it shifts over to the durational verb.8 Contrast the case patterns exemplified in (18) with those in (16).

(18) a. Liisa muiisteli matkata vuodena. Liisas(NOM) remememred trip=PAR year+ACC
     'Liisa reminisced about the trip for a year'

9 The judgments about the NOM case on the durational adverb are not uncontroversial for verbs with passive objects as they are for verbs with basically case-marked objects. One possible interpretation of this fact is that passive case is ambiguous between a lexical case and a structurally induced default case in Finnish. See Part I, Chapter 4, for discussion.

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2.3 Case Spreading

Finnish has no double accusative verbs. Ditransitive verbs have only one ACC object, while the other complement bears a case (A.PU., A.B., AD, or E.A.) which is usually semantically predictable but may be idiosyncratic (Valikka 1989:336). The lack of double accusative verbs might be attributed to the standard case-theoretic assumption that any case assigner has at most one case to assign. However, if certain adverbial NPs get syntactic case from the verb, as we have argued here, we must ask whether objects co-occur with adverbial NPs for a single syntactic ACC case in a finite clause where the subject receives NOM from the Case Tier. Unlike Chinese, an accusative object and an accusative adverbial case co-occur in Finnish, as illustrated in (16a) and (19).

(19) Mänileen kirjan kolmannen kerran. 
(NOM) read book +ACC third time +ACC
'I read the book for a third time.'

SUBJ OBJ ADV 
1 / NOM ACC

This indicates that there is Case-spreading in Finnish. Under the Case-Tier hypothesis, we expect NOM to be assigned to the first available NP on the hierarchy, and ACC from the Case-Tier will spread rightwards, associating with any available NPs. This is exactly what happens when there is more than one adverval NP in a clause: only the first adverbial gets NOM in impersonal constructions, and the others get ACC.

(a) Kivelänä kilpaisti lapsen
walked+PASS whole winter +NOM +ACC
'there was walked the whole winter'

(b) Kivelänä kilometri
koko ulovin+tahvi
walked+PASS kilometres (NOM) whole winter +ACC +NOM
'there was walked a kilometre the whole winter'.

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(10) It seems unlikely that the first adverbial gets NOM because it has actually been "promoted" to OBJ, given that the same NOM case-marking occurs in the presence of lexically case-marked objects, as in (21). 10

(21) a. Kekkonen+LL trusts+PASS third time +NOM
'Kekkonen was trusted for a third time.'

b. Kekkonen+LL trusts+PASS six(NOM)years +PAR third time +ACC
'Kekkonen was trusted for six years for the third time.'

c. Kekkonen+LL trusts+PASS one year(NOM) third time +ACC
'Kekkonen was trusted for a year for the third time.'

(Urho Kekkonen is a former president of Finland who was elected to several six-year terms of office.) It is actually impossible to tell the case of 'six' in (21b), since cardinal numbers often get a case assignment on the basis of co-occurrence from the ACC. Now, I have changed the example to the pragmatically less natural (21c). Unlike other cardinals, yksi has both suffixed (ACC) and uninflected (NOM) "accusative" forms. If the matrix verb is finite, then both adverbials will get marked accusative, as expected.

(22) Lontoon Kekkonen+LL ylen vuoden kolmannen kerran. 
trust+SG Kekkonen+LL one year +ACC third time +ACC
'I trusted Kekkonen for a year for the third time.'

I said earlier that if there is more than one adverbial, only the first one gets assigned NOM. What do we mean by "the first" adverbial? Not surprisingly, the linear order of the adverbial phrase is irrelevant, as illustrated in (23b): the duration phrase gets marked NOM (ylen vuoden) and the frequency phrase gets ACC (ylen kerran):

(23) a. Kekkonen+LL trusts+PASS one time +NOM
'Kekkonen was trusted once.'

b. Kekkonen+LL trusts+PASS one year(NOM) one time +ACC
'Kekkonen was trusted for one year once.'

c. Kekkonen+LL trusts+PASS one year(NOM) one time +ACC
'Kekkonen was trusted for one year once.'

The fact that linear order does not affect the case-marking of the adverbials suggests that the GF hierarchy must distinguish between the different cases.

10 In (17a), the numeral kahdeksi is in the head of the data. No case noun for 'year' and the noun is in the genitive. This is true only when the NP is NOM or ACC, the other case forms are regular (i.e. the numeral and noun agree in case and number).
A duration adverb takes precedence over the frequency adverb in getting NOM case.

   Kekkonen utensituen trunk-pass six years+PAR third time+NOM
   b. *Kekkonen utensituen kusi vuotta vuoteen.
This suggests that the GF hierarchy should be SUBJ > OBJ > MEASURE > DUR > FREQ. Further evidence that the ADVERBIAL GF should be divided into two categories is the fact that for some speakers, FREQ adverbials of this type do not participate in the NOM/ACC alternation. For such speakers, while situation adverbials occur with either the zero or the -s suffix under the same conditions as verbal objects, many frequency adverbials like kekonen keran/kolman/kolmata kerua alternate only between the (accusative) s suffix and partitive. The grammar books report that the language is still in a state of flux with respect to this issue (Lahti Karttunen, p.c.).

2.4 Summary of the Case-Tier

The fundamental assumption of the Case-Tier Hypothesis is that NOM and ACC forms a syncretic case-tier which is mapped onto the NPs of a sentence one-to-one left-to-right by principles analogous to those of autogentrical phonology. The basic predictions of this Case-tier Hypothesis are summarized in (25).

(25) a. NOM is assigned before ACC.
   b. only one XP can get assigned NOM, any remaining NPs get
   c. which XP gets NOM reflects the hierarchy of GFs, where
   SUBJ > OBJ > MEASURE > DUR > FREQ

On the further assumption that NPs already bearing morphological case, however assigned, are unavailable for mapping onto the syntactic Case-Tier, the presence of such case marking will indicate by he now familiar Case-Tier shift. Because Finnish has lexical case marking and includes adverbials in the domain of the syntactic Case-tier, Finnish provides convincing evidence of Case Tier shift from various sources of case-marking. These are sketched in the diagrams in (26), where ADV is an abbreviation for any of the various adverbial functions lower than OBJ.

(26) Case-tier shifts:

<table>
<thead>
<tr>
<th>a. GEN</th>
<th>b. LEX</th>
<th>c. GEN LEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJ &gt; OBJ &gt; ADV</td>
<td>SUBJ &gt; OBJ &gt; ADV</td>
<td>SUBJ &gt; OBJ &gt; ADV</td>
</tr>
<tr>
<td>NOM ACC</td>
<td>NOM ACC</td>
<td>NOM ACC</td>
</tr>
</tbody>
</table>
b. Minen täytyy lukaa kirjaa iltaan.
1st GEN must read-INF book + PAR evening NOM/ACC
"I must read a book for an evening."

The use of NOM on the adverbial suggests that PAR is being analyzed as a lexical case, the use of ACC suggests that PAR is being treated as an "overlay" case with no Case-Tier effect. Further investigation of the effect of Partitive is beyond the scope of this study.

An object in a negative sentence must always be in the partitive, as illustrated in (31b); the same is true of measure phrases like "kilometre."

(31a) Liisa luokke kielin
Liisa reads book-ACC
Liisa will read the book.

b. Liisa ei luok kielins
Liisa not read book-GEN
"Liisa won't read the book/Liisa is not reading the book."

However, the NP-argument of the existential and possessive constructions may stay in the NOM (zero-suffix) rather than the partitive in a contradictory negative sentence:

(32a) Talossa ei ole kisaa / kisaa.
house-PLINE not be cat+PAR cat+NOM
"There is no cat in the house."

b. Liisalla ei ole kisaa (vaa koira).
Liisa has ADE not be cat (but dog+NOM)
"Liisa doesn't have a cat (but a dog)."

Not surprisingly, there is considerable disagreement in the literature about the syntactic role (subject or object) and case (nominative or "endless accusative") that kisaa 'cat' has here when not partitive. Whatever its OP, the NOM case-marking, however, is exactly what is predicted under the Case-Tier hypothesis. It is the sole NP-argument, and NOM is always assigned before ACC.

3. AN ALTERNATIVE ANALYSIS: VAINIKKA (1989)

Recall that GEN subjects and "ACC" objects are morphologically identical in the singular: they both have an n suffix. Vainikka (1989) exploits this morphological identity to account for the near-complementary distribution between having an n suffix on the subject and on the object, by suggesting that both are instances of the same GEN case. The empirical claim is that GEN (on subject) and ACC/GEN (on object) are in complementary distribution.

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(p.237). Furthermore, she suggests that the "endless accusative" is a default (NOM) case which arises because there is no accusative SG form.11

Vainikka (1989)

two patterns: abstract m-case
NOM ACC/GEN -0 -0
GEN NOM -0 -0

Vainikka assumes that all subjects are base-generated in [SPEC, VP], but that this position is not generated for passives and other systematically impersonal constructions. GEN is the case assigned to [SPEC, XP] in Finnish. If GEN (n) is not assigned in [SPEC,VP] because the subject moves to SPEC, then the n precesses to any "recepeive" NP within V; the net result is that the object NP will get n suffix. In caseless data, GEN n will be assigned whenever possible, to SPEC,VP if failed, otherwise to the NP-complement of V.

There are several problems with this account of nominative objects. First, it does not extend naturally to other languages (including other stages of Finnish) where the class of oblique subjects is not morphologically identical to the case on the object of finite verbs (e.g. DAT = / ACC). Secondly, even within Finnish, there are counterexamples to the undergeneralization that GEN and ACC are in complementary distribution.12 Vainikka's analysis leaves no source for n on adverbials in either impersonal constructions where by hypothesis GEN is not available because [SPEC, VP] is not generated, or in impersonal constructions where GEN is assigned to an NP that remains in [SPEC, VP].

(34a) Lapnen oli jano yldeen illaan yksi ilta
child + GEN be-PST thru (NOM) one evening + ACC NOM
"The child was thirsty for one evening."

b. Lapnen oli kirja koko päivän päivä
child + ADE be-PAR book (NOM) all day + ACC NOM
"She had the book all day."

11 In other words, there is a morphological gap, which seems to me to be a虐fern odd class for a language like Finnish with no shortage of morphological cases.
12 As Ugo Nikanne pointed out to me, the passivization (as in "he had the book all day") is also consistent with Vainikka's claim that accusative case only occurs with the category V; only V's can have the feature [+case]. (p. 235).
In order to account for the zero-suffix on kirja 'book', Vainikka must assume that no SPEC.VP is generated for this impersonal construction, hence no GEN n suffix is generated; but then there is no source for the n suffix on the adverbial of duration, which we have seen seems to get syntactic case in Finnish.

4 NONFINITE COMPLEMENTS

Thus far, we have considered only verbs which are monomorphemic. Let us now consider VP-complements which occur as arguments of a matrix verb. Following Vainikka (1989:Chapter 5). There are two kinds of verbal complements: clausal (IP) and nonclausal (VP or V).

\[ (35) \text{clausal (IP)} \]
\[ /\]
\[ VP \text{ (TA-infinitive)} \]
\[/\]
\[ \text{nonclausal (nonfinite)} / \]
\[ V' \text{ (obligatory control 'MA-infinitive')} \]

The TA-infinitive has the distribution of a direct object (Vainikka 1989:249), while the MA-infinitive has the syntactic category and distribution of a locative PP (Nikanne 1958); note that the MA-infinitive bears the same case as the direct object case (GEN, ETA or IIL) as a PP-complement to the same matrix verb. These two constructions are productively used in Standard Finnish and are common in colloquial Finnish as well. Finite complements may be assumed to have their own Case. Tier; only the non-finite complements are of interest here. As Vainikka observes (p. 243), there are at least a dozen productively used non-finite verb forms in Finnish, and they all share the following features:

\[ (36) \]
\[ \text{a. they do not allow nominative subjects;} \]
\[ \text{b. they do not allow the negative verb olla (or any of the four tenses found in tested sentences)} \]

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Vainikka (1989:244) accounts for these properties by assuming that subjects are base-generated in [Spec,VP] position, and that the non-finite complements lack an IP. They therefore lack both [SPEC,IP] and INFL. As a consequence, there is no position in which agreement suffixes, the negative verb or the accusative verb can be base-generated. Furthermore, the subject cannot raise to [Spec,VP] and will therefore be assigned GEN. The genitive NP is clearly not a matrix object since no verb in Finnish takes a genitive object (p.284). Of particular interest is the fact that the alternation between NOM and ACC assigned to complements of impersonal verbs extends to the objects of infinitival complements.

\[ (37) \]
\[ \text{a. Mati} \text{ antoi} \text{ Jukan syödä suklaa.} \]
\[ \text{Matti(NOM) lets-3PS(3SG) Jukan-GEN cas=INF chocolate-ACC} \]
\[ \text{ 'Matti let Jukka eat the chocolate' (ibid: 284, 39a, b)} \]
\[ \text{b. Anna} \text{ Jukan syödä suklaa*stiklan!} \]
\[ \text{Leitet-3PS(2SG) Jukan-GEN cas=INF chocolate+NOM*ACC} \]
\[ \text{ 'Let Jukka eat the chocolate!'} \]

Obligatory control MA-infinitives, which are categorically V rather than VP, lack even a [SPEC-VP] position; so here too ACC/GEN objects are possible only if the matrix verb agrees with its nominative subject, a feature available due to the matrix [SPEC-VP] position.

\[ (38) \]
\[ \text{a. Pekka} \text{ käävi ostamaa soluniin*solmini} \]
\[ \text{Peikka(NOM) went buys-MASINE case=ACC+NOM} \]
\[ \text{ 'Pekka went to buy a tie!' (ibid: 254, 7a, b)} \]
\[ \text{b. Kyö} \text{ ostamaa soluniin*solmini} \]
\[ \text{ go buys+MASINE case=NOM+ACC} \]
\[ \text{ 'Go buy a tie!'} \]

In both of these sentences, the verb implies completion, so we get grammatical case as opposed to partitive on the infinitival object. The choice between NOM or ACC case depends on the matrix verb if the matrix V agrees with a NOM subject, the infinitival object is ACC, if the matrix verb is such that its object would occur in NOM (i.e. passive, imperative, and in certain infinitival verbs), the infinitival object is NOM. This effect is not restricted to one clause, i.e. it is recursive.

\[ (40) \]
\[ \text{a. Pekka} \text{ mutistoi käävi ostamaa soluniin*solmini.} \]
\[ \text{Pekka(NOM) remembered goes-3PS(MASINE case=ACC+NOM} \]
\[ \text{ 'Pekka remembered to go buy a tie!' (ibid: 235, 8a, b)} \]
\[ \text{b. Muistit käävi ostamaa soluniin*solmini, remember goes-3PS(MASINE case=ACC+NOM} \]
\[ \text{ 'Remember to go buy a tie!'} \]

The basic problem, then, is to account for why the embedded VP "inherits" the case-assigning properties of the matrix V. It is clear that these non-finite

\[ (41) \]
transmitted from the embedded VP to its head (as suggested, for example, by Revere and Vergnaud (1980) and Rosen (1990) for Romance causatives). This gives the appearance that structural case can permeate down from the infinitival VP-complement to any "receptive" NP.

Although Case-Tier shift easily accounts for the ACC case-marking on an adverbial following a NOM object, examples like (41) pose a different problem for the Case-Tier Hypothesis, since NOM is assigned to a different NPs, both the matrix object and the infinitival object. How can this spreading of NOM be reconciled with the apparent Case-shift of ACC onto the adverbial NPs?

I suggest that the relation to this problem lies in the following descriptive generalization.

(42) All internal arguments of a predicate must get the same syntactic case.17

The clearest evidence for this generalization comes from Korean, which is well-known for having a variety of "multiple Accusative" constructions. When such sentences are passivized, all of the accusatives become nominative, as illustrated below:

(43) a. Chel-i-ra Mary=ACC pani+ci+la semalulun has-seo+la ACTIVE Chel=NOM Mary=ACC ring=ACC gift=ACC done=PST+DEC

Chel presented Mary with a ring

b. Mary=ACC pantic=la semalto+ga toy-ese+a+la PASSIVE Mary=NOM ring=NOM gift=NOM become=PST+DEC

Mary was presented with a ring

Now consider different case-marking properties of the so-called lexical passive, illustrated below in conjunction of "nominative objects" in Finnish. This is entirely expected under the Case-Tier Hypothesis: the availability of NOM and ACC is entirely independent of the assignment of GEN to [SPEC,VP].

Adapting Vainikka's analysis of infinitival complements to the Case-Tier Hypothesis, let us assume that such VP-complements are transparent to case assignments from the main-clause. In other words, unlike DPs, VPs are not a barrier to case-assignment (cf. Emonds 1989).16 Since these infinitival complements function as arguments of the matrix verb, let us assume that they are assigned syntactic case in the same way that NP-complements would be. However, since a VP is not itself capable of bearing Case, the Case feature is

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14 As was plausible for some subject control complements in Russian, for example. See Nesbit (1984), Chapter 5 and Bird (1990) for discussion.

15 "MA" and "YA" in the glosses stand for MA- and YA-derivatives.

16 This means that that syntactic case problem is down through a complement which is itself assigned lexical case. As indicated in the analysis of the VPs complement is itself assigned a locative case which is realized on the infinitival head. This is the case that would be represented as a reductive ACC complement (Revere 1984).

17 Note that this contribution correctly allows for the accruative case-marking on the retained object as the passive of derivatives in English.

(a) He was given these.

I assume that in English, the surface subject of passive is no longer an internal argument, and hence its case-marking can differ from the case of the retained object. In Finnish, however, there is no evidence that passive morphology results in the promotion of an internal argument.

Different internal arguments can, of course, bear different morphological cases if other sources of case-marking are available in a language, e.g., lexical case-marking, or case assigned in a particular configuration position such as [SPEC,VP] (it seems possible that the two "structural" case should properly be reversed). If this suggestion is on the right track, it indicates that the Case-Tier mapping must both direct and indirect objects as well. Furthermore, the CFP hierarchy is not as limited into two object functions, at least for the purposes of acquisition syntactic cases.
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(44) a. Yumiksa phal si syncr-1+si Ta khata siTa capb ba rasataTa.
Yumis+NOM arm+NOM left+side+NOM/ACC end+NOM/ACC
catch+PASS+PST+IND

Yumis+NOM arm+NOM left+side+NOM/ACC+NOM end+NOM/ACC
catch+PASS+PST+IND

Yumis was caught by the arm on the left side at the end.

Superficially the object(s) of a lexical passive can be either NOM or ACC; however, if there is more than one object, these case marking cannot vary independently. Since only one NP can be the surface subject, the remaining NPs must all be internal arguments, and the internal arguments necessarily share the same syntactic case. See Maling and Kim (1992) for further discussion.

Returning to Yumika, then, recall our assumption that infinitival VP-complements are transparent to case assignment from the matrix clause, and get assigned syntactic case in the same way that an NP-complement would. For simple clauses, there is no overt evidence for the generalization that all internal arguments bear the same syntactic case; as noted above, any verb that subcategorizes for two NPs has only one ACC object, while the other complement bears a locative case (ALL, ABL, ADE, ELA) which is usually semantically predictable, but may be idiosyncratic (Yamada 1969:326).

However, when the locative complement is infinitival, we do see overt evidence that the same syntactic case is assigned to both complements, since the same case is realized on both matrix and infinitival object. This is sketched below (cf Yamada 1969:260) for discussion of the phase structure of (object-) control verbs:

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What we want to say in that verbs which take infinitival complements are not exceptional, but have exactly the same case-assigning properties as other verbs of the language. This phenomenon is reminiscent of causativization: cross-linguistically, the output behaves like a single very complex predicate with respect to case assignment (Room 1989). Two alternative analyses come to mind: merger (complex predicate formation), or alternatively, we might assume that the Case Tier is associated only with IP, so that when the infinitival complement is a bare VP, only one Case Tier is available. Whichever analysis is correct for of course, an internal argument of the matrix verb, both NP and

69 Of Nominative and Accusative

the MA-infinitive must be assigned the same syntactic case in accordance with the generalization in (42).

What about the case on adverbiais? It is possible to have sentence adverbials modifying either the matrix or the embedded infinitive, or both.

(46) Pyöri Jakka kolmannen kerroksen kirja.
Ask Jakka+NOM third time+NOM reads book+ACC

'Ask Jakka for the third time to read the book!'

'Ask Jakka to read the book for the third time!'

Consider now what happens if the infinitival verb assigns lexical case. In the following example, the infinitival verb vastea to 'answer' takes an NP object. If the VP-complement supplied its own Case-Tier, we would expect NOM from the Case-Tier to shift over to any Adverbial; however, this is not what happens.

(47) Opytulis pakastettava kolmannen kerroksen koulu
pupil+NOM force+PASS+PST third time+NOM/support
vakaru
kysymyksesi itsellesi?
Your+ACC questions+PL+PST, hour+NOM

'the pupil was forced for the 3rd time to answer questions for an hour'

The case on the adverbial modifying the infinitive is determined not by the case-assigning properties of the infinitive, but by the properties of the matrix V. This indicates that its case is supplied by the matrix Case Tier.

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18 Under the Case-Tier Hypothesis, NOM on the adverbial is predicted to be impossible whenever it has already been assigned. This is easily correct for sentences with nominative subjects, but interact with Upal Nikander produced occasional examples of NOM being assigned to both object and adverbial:

(i) Pyöri koulu kolmannen kerroksen kirja
ask+INF people+NOM third Kerroksen-ILL, third time+NOM

(ii) Kukle koulu kerros presidentti vastaan
question+3rd time+NOM president+NOM to-answer questions+hour+NOM

(iii) Kukle kolmannen kerros presidentti vastaan
question+3rd time+NOM president+NOM to-answer questions+hour+NOM

Note that in the absence of an infinitival-complement, FAM is obligatory on object, and as a result, the adverbial can be either NOM or ACC:

(iii) Kukle oppilaspulla koulu kolmannen kerros
ask+INF student+FAM people+NOM third time+NOM/ACC

'The student asked the school third time'

Resolution of these problems will be
matrix object can be PAR (implying resistance to the pressure), in which case NOM becomes possible on the adverbials as well (see section 2.5 above):

(48) Oppilasta pakottettiin kolmena kerran kokonotkat kerta
puolil PAR forces FALLS PAST three TIMES ACCT/NOM
vaatimusta kysymyksensä
requirements demand
- to-answer=ILL questions=III.L HOURS ACCT/NOM
they tried to force the student for the 3rd time to answer questions for an hour

What is especially telling is the fact that matrix adverbial and embedded adverbial tend to agree in case: they are either both NOM or both ACC. This is as expected if the entire sentence is treated as a single domain with respect to the Case-Tier. Of course, if the matrix verb is finite, then NOM on the adverbial is no longer possible, as illustrated below:

(49) Työma-räkki kolmena kerran=kolmena kertaa presidentin
judge=NOM orders=PAST three TIMES ACCT/NOM president=ACC
- to-answer=questions=III.L HOURS ACCT/NOM
the judge ordered the president for the third time to answer questions for an hour

In conclusion, I have argued in this section that sentences with VP-complements are treated as one domain for the Case Tier, and that verbal objects must share the same syntactic case, being either both accusative or both nominative. This study is by no means a definitive study of Finnish case-marking; for example, various participial complements are not treated here.13 My hope is that it contributes nonetheless to our understanding not just of Finnish, but of the possible case systems used by natural languages. Finnish is by no means unique in exhibiting lexical case-marking, structurally assigned

13 See Vainikka (1990, Chapter 5.3), who notes that the form of the object in the "classified" conventions, including participial complements, is somewhat independent of the matrix verb. My own informant work reveals that the preferred case on what is traditionally called the "subject of the participial clause" depends at least on the type of predicate.

(50) Lasu li sucesso eleven gos (11) years
thought by child=ACC=PASS 11 YEARS NOM=ACC
I thought the child to be thirteen
(51) Lasu li sucesso eleven gos (11) years
thought by child=ACC=PASS 11 YEARS NOM=ACC
I thought the child to be a book

As Lauri Kastman (1970) pointed out to me, these judgements are the opposite of the claim of Hakulinen and Karlsson (1979:364) that the nominative is more likely in a participial than in an exocentric participial clause.

Another test for the coding used is marking of cumulative word order:

(52) Kosken Leuvassa synnytti kolmen Kiistanan

crèche IN LEUVASSO BIRTHS three KIISTANAN ACC
"the exposed Leuva has twins"

5. COMPARING ICHELANDIC AND FINNISH

Icelandic is another language known to have nominative objects. However, nominative objects seem to occur in quite different syntactic environments in the two languages:

(a) Nominative objects occur in both finite and nonfinite clauses in Icelandic, whereas in Finnish they are found primarily in nonfinite constructions (but also in imperatives and pastives).

(b) In Icelandic, nominative objects occur only as complements to intransitive verbs (including passive); in Finnish, there are no such lexical restrictions.

(c) In Finnish but not Icelandic, human personal pronouns are exempt from the nominative object construction.

(d) In Icelandic but not Finnish, the finite verb agrees with the nominative object (in number).

(e) In as many languages, grammatical (NOM or ACC) case can be assigned to various kinds of adverbial NPs, including cognate objects, path-NPs, and certain elements of temporal duration. Finnish but not Icelandic includes adverbials of duration in the domain of "nominative objects."

Despite these differences, Finnish and Icelandic have something in common: NOM case occurs on the object only in constructions which happen not to have a NOM subject.20 This paper explores the hypotheses that NOM is assigned

20 This generalization is often referred to as "Hakulinen's rule" (after the author of a treatise on Finnish-Swedish speakers that appeared in the 1960s). Johnson observed that the object is the nominative case only in sentences that do not have a nominative subject. Although this generalization is a good rule of thumb, there are four counterexamples: (1) generic sentences like "missing person construction"; (2) certain participial constructions, discussed in Section 4; and (3) the gradual replacement of the 1st person plural verb form ("we learn" vs. "we read") by the 2nd-person passive ("we learn" vs. "we read") in modern colloquial Finnish (Lauri Kastman, per. comm.): Of them, the third is the most problematic, but since colloquial Finnish differs from Standard Finnish in a variety of ways, such examples can be analyzed as idiosyncratic. The first type is not actually a problem. What actually matters is the presence of a ROM subject, but the form of the matrix verb. Any finite verb form is treated as if it is
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On Assigning Semantic Cases in Finnish

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1. INTRODUCTION

The Finnish case system is traditionally taken to consist of two types of cases: (i) structural cases: nominative, genitive, partitive, and accusative; (ii) semantic cases, which are divided into two subgroups: (a) locative cases: (aa) internal locative cases: intensive, relative, illative; (ab) external locative cases: adative, ablative, allative; (ac) general locative cases: essive and translative; (b) marginal cases: ablative, instructive, comitative, prohibitive etc. (See the introduction of this volume.)

It is often assumed that the structural cases reflect the syntactic relations and semantic cases the thematic relations of the sentence. I will argue that all case marking is structural. Following Jackendoff (1987a) I assume that language processing is a computational activity. In language interpretation one translates the phonological structures into a syntactic format, and then the syntactic representation into a conceptual format. The supposed Logical Structure of Language Processing (Jackendoff 1987a: 92) is phonological structure &rarr; syntactic structure &rarr; conceptual structure. The function of case marking is, then, to make the relevant level of syntactic representation recoverable.

2. THE CATEGORY OF THE "SEMANTIC CASE PHRASE" IS PP

The category of the phrase with semantic case inflection has been a problem for Finnish grammarians. It has the distribution of a PP while there seems to be no P around. For instance:

(1) a. Elina kiveih kohi koti-a
Elina walked toward home-FAR
'Elina walked toward home'

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1 This article is based on section 3.2 of Nikanne (1991), which, in turn, is based on the syntactic half of Nikanne (1989). I am grateful to Audun Holenberg, Ray Jackendoff, Joan Maling, Harri Rissanen, Tord Troeltzsch, and Anne Välimaa among others for being interested in my work and for many enlightening discussions. Still, my friends are not responsible for my mistakes, flaws and idiosyncrasies.

2 Of course, the sentence does not need to be analyzed in its entirety as the next level before the