Genitive case in Finnish reconsidered

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In my previous work on the Finnish genitive (Vainikka 1989, 1993, 2003), I have argued that the genitive is a structural case assigned to various specifier positions. Recent work has revealed how closely connected Finnish grammatical case is to general syntactic processes such as functional heads, c-command, and long distance dependencies. The previous specifier analysis of the genitive is reassessed here in light of the new findings. I will end up with a two separate genitives, one associated with agreement (and possessive suffixes), and the other independent of agreement. The agreement-related genitive covers both those instances of the regular genitive that co-occur with possessive suffixes and the genitive variant of the accusative (which can be assigned remotely).

1. NEW FINDINGS ON GRAMMATICAL CASE

While semantic case marking can be justified semantically, it is safe to say that the purpose and function of grammatical case is yet to be discovered. However, recent research on the distribution of grammatical cases in Finnish has produced results that challenge many of the traditional ideas about the operation and function of grammatical cases, allowing us to make considerable headway in understanding case marking.

Perhaps the most important new finding concerns the existence of long distance case assignment (LDCA), subject to the syntactically typical locality and island constraints, as described in detail in Vainikka & Brattico (2009) for the Finnish accusative case; the phenomenon is extended to the second direct object case in Finnish, the partitive, in Brattico (2009, 2010), where ramifications of the phenomenon for theories of case are also examined.

The accusative phenomenon involves the three morphological variants of accusative case in Finnish, two of which are exemplified in (1). A non-agreeing verb in the matrix clause in these examples gives rise to the 0-form of the accusative (identical to the nominative, without any overt suffix; glossed as ACC(0)) in the embedded clause in (1a) and (1b) and these embedded non-finite clauses also allow WH-extraction, as shown in (2a-b). In the presence of agreement (details below), the ACC(n) – identical to genitive case – is attested. The third form (suffix
-t) is found on certain personal pronouns in both agreement and non-agreement contexts.

(1) a. Jukan täytyy antaa [minun ostaa
   Jukka-GEN must-3SG let-INF [me-GEN buy-INF
   uusi rengas]
   new-ACC(0) tire-ACC(0)]
   'Jukka must let me buy a new tire'

b. Jukan täytyy muistuttaa [minua ostamaan
   Jukka-GEN must-3SG remind-INF [me-PAR buy-INF
   uusi rengas]
   new-ACC(0) tire-ACC(0)
   'Jukka must remind me to buy a new tire'

c. *Jukan täytyy auttaa minua
   Jukka-GEN must-3SG help-INF me-PAR
   [ostettuani uusi rengas]
   [buy-PAST/PRTCPL-1SG new-ACC(0) tire-ACC(0)]
   (uuden renkaan OK)
   (new-ACC(n) tire-ACC(n) OK)
   'Jukka must help me after (I) have bought a new tire'

d. *Jukan täytyy lainata minulle rahaa,
   Jukka-GEN must-3SG lend-INF me-ALL money-PAR
   jotta voin ostaa uusi rengas]
   so.that can-1SG buy-INF new-ACC(0) tire-ACC(0)
   (uuden renkaan OK)
   (new-ACC(n) tire-ACC(n) OK)
   'Jukka must lend me money so that I can buy a new tire'

(2) a. Mitä Jukan täytyy antaa [minun ostaa t]
   what Jukka-GEN must-3SG let-INF [my-GEN buy-INF t]
   'What must Jukka let me buy t?'

b. Mitä Jukan täytyy muistuttaa [minua
   what Jukka-GEN must-3SG remind-INF [me-PAR
   ostamaan t]
   buy-INF t]
   'What must Jukka remind me to buy t?'

c. *Mitä Jukan täytyy auttaa minua
   what Jukka-GEN must-3SG help-INF me-PAR
   [ostettuani t]
   [bought-PAST/PRTCPL-1SG t]
   'What must Jukka help me after (I) have bought t?'
d. *Mitä Jukan täytyy lainata minulle
   what Jukka-GEN must-3SG lend-INF me-ALL
   rahaa, [jotta voin ostaa t]
   money-PAR [so.that can-1SG buy-INF t]
   'What must Jukka lend me money so that I can buy t?'

In contrast, the syntactic islands in (1c-d) and (2c-d) (a non-finite adjunct and a tensed embedded clause) block both WH-extraction and the relationship between non-agreement in the matrix clause vs. the 0-form in the embedded clause. The alternative (genitive) n-form of the accusative – given in parentheses in (1c-d) and glossed as ACC(n) – is fine, but in these examples it derives from the embedded clause with overt agreement (see Vainikka & Brattico 2009 for the full analysis).

Vainikka & Brattico’s finding (see also Toivonen 1995) reveals that grammatical case assignment is a syntactic process, rather than a purely morphological or phonological process. Brattico (2009, 2010) has further shown that the second object case in Finnish, partitive, can also be assigned across clause boundaries, and is sensitive to syntactic islands (in particular a finite CP or a tensed adjunct boundary).

The second new finding derives from Brattico’s work (2010b, to appear) on the internal structure of complex DPs and numerals in Finnish which shows that the recipient of grammatical case assignment need not be a full DP, as is traditionally assumed. In examples such as (3b), the numeral assigns partitive case to the elements (adjective and noun) it c-commands, regardless of the fact that these elements do not constitute a maximal projection. If we think of grammatical case as some sort of a syntactic chain between a case assigner and a case assignee, this finding tells us about the nature of the assignee.

(3) a. Odotin hievahtamatta ne minuutit.
   I-waited motionlessly those-ACC(0) minutes-ACC(0)
   'I waited those minutes without budging.'

b. Odotin hievahtamatta ne kaksi
   I-waited motionlessly those-ACC(0) two-ACC(0)
   viimeistä minuuttia
   last-PAR minute-PAR
   'I waited those last two minutes without budging.'

The third finding also emerges from the object case assignment processes described in Vainikka & Brattico (2009) and Brattico (2010), which reveal that grammatical case can be assigned more than once, contrary to traditional assumptions. As shown in Brattico (in preparation), and the examples in (4), this is a general pattern in Finnish, at least in
terms of the two object cases, accusative and partitive. An example of
the genitive n-form of the accusative (which correlates with agreement)
being assigned more than once is given in (4a) – with the ungrammatical
0-form in parentheses – and an example of the partitive (of negation)
being assigned more than once is given in (4b) (with the ungrammatical
n-accusative in parentheses); note that negation in Finnish is a verb that
carries subject-verb agreement:

(4) a. Päästin koiran (*koira) syömään
   let-PAST-1SG dog-ACC(n) (*dog-ACC(0)) eat-INF
   aterian (*ateria).
   meal-ACC(n) (?*ACC(0))
   ’I let the dog in to eat a meal.’

b. En päästän koiraa (*koiran) syömään
   not-1SG let-PAST dog-PAR (*dog-ACC(n)) eat-INF
   ateriaa (*aterian).
   meal-PAR (*meal-ACC(n))
   ’I didn’t let the dog in to eat a meal.’

This finding tells us about the nature of the case assigner, namely that
the features responsible for allowing a head to assign a case are not lost
(or checked, or deleted) under grammatical case assignment. It turns out
that the possibility of various cases being assigned more than once is
also required to account for the distribution of the three variants of the
accusative, as will be discussed further below.

Finally, the general pattern that is beginning to emerge for Finnish
grammatical case is that case is assigned by a c-commanding head.
(This finding is not inconsistent with traditional assumptions about case
assignment.) Under a derivational approach to syntax, the elements that
are combined earlier than the relevant head are c-commanded by that
head. In this paper I address the question of whether this generalization
can be maintained for Finnish, in particular with respect to genitive case;
note that I will attempt to account both for the traditional genitive case, as
well as the genitive variant of the accusative (ACC(n)) in what follows.
The pattern is now clear for the other three grammatical cases, but the
situation is less straightforward with genitive case. In fact, I will have to
conclude that not all instances of the genitive can be accounted for under
the c-command generalization.

2. THE FOUR GRAMMATICAL CASES IN FINNISH

The case assignment generalizations for three of the four grammatical
cases are provided in (5), based on Vainikka & Brattico (2009); I
have omitted specification of the case assignee (although typically a DP). What matters is that the case assignee is c-commanded by the case assigner; in addition, an implicit assumption is that this type of case assignment takes place within a syntactic binding domain (i.e. no assignment across island boundaries):

(5) *(Primary) grammatical case in Finnish (to be slightly revised):*

a. Partitive case (-tA suffix): assigned by a lexical head (V, P, N) or a functional head (Q, Num, or Neg)\(^5\)

b. Accusative case (-t suffix): assigned by the functional head Aspect

c. Nominative case (0-suffix): assigned by the functional head C\(^6\)

Partitive case is one of the traditional object cases in Finnish, and as argued in Vainikka (1989, 1993, 2003; cf. also Kiparsky 2001 and Vainikka & Maling 1996), it is most typically the unmarked (default) case of a complement DP in Finnish, assigned by a lexical head. In addition – as already mentioned – we now know based on Brattico’s work (to appear) that the case assignee may be less than a full DP (see the numeral example [4b] above), and that the (intermediate) functional projections Neg, Q, and Num may also assign it. However, partitive case cannot be assigned by the functional heads T, Agr, C, or D. We return to a discussion of the types of heads that assign partitive in Finnish.

The accusative – which is unambiguously marked in Finnish only on human personal pronouns – is assigned by a verb, or some projection of a verb, typically to a complement DP. Since the Finnish accusative is always assigned in the context of completed action, we suggested in Vainikka & Brattico (2009) that the relevant head for accusative assignment is Aspect.

The accusative rule in (5) has, in fact, two functions: (i) to mark those elements that have a unique accusative form in the lexicon (that is, human pronouns) with the suffix -t; and (ii) to mark elements which do not have such an accusative form in the lexicon (all other nouns) as carrying the feature [ACC]. A later process which Vainikka & Brattico dubbed secondary case assignment – which has to take into account information higher in the same clause as well as in higher clauses – determines which of the other two variants of the accusative (the ACC(0) or the ACC(n)) elements marked with [ACC] will end up carrying; see details below.

In Brattico & Huhmarniemi (2006) it is argued based on negation that the Finnish nominative (the case of the subject DP) is assigned by a
high functional head such as C, or in any case a functional head that c-
commands the subject DP. Further evidence from Finnish L1 acquisition
of negation for this view is provided in Brattico & Saikkonen (2010). In
addition, the secondary accusative assignment pattern supports such an
analysis of the nominative in Finnish, as will be summarized here from
Vainikka & Brattico (2009).

In addition to the unambiguously marked accusative pronouns, there
are two possible accusative forms in Finnish, as already described: the
0-marked nominative (ACC(0)), and the genitive suffix -n (ACC(n)) –
recall the examples in (1). While superficially extremely complex, the
distribution of these two variants of the accusative turns out to be fairly
straightforward in terms of basic syntactic notions such as c-command
and syntactic islands.

As alluded to above, the choice between these two forms is determined
based on the presence or absence of agreement within an island, resulting
in the possibility of LDCA in non-finite clauses that are not islands. The
relevant types of agreement are either subject-verb agreement on verbs,
or possessive suffix (henceforth ‘Px’) marking on nominals.

The resulting analysis is this: whenever the lexicon does not provide a
unique accusative form (i.e. suffix -t on certain pronouns), secondary
accusative assignment takes place. That is, when the functional head
Aspect assigns accusative case to a complement of the verb, but that
DP does not have an accusative form in the lexicon, accusative case
is realized as one of two alternative forms. This secondary accusative
assignment has the following two steps:

(6) Secondary accusative assignment (based on Vainikka & Brattico
2009); to be reworded:

a. (i) if there is agreement (see below) within a domain, the
accusative DP receives the genitive suffix -n.

b. (ii) if there is no such agreement within a domain, the
accusative DP occurs in the nominative 0-form.

'Domain' here involves either a finite clause, or an adjunct with tense
marking (cf. Brattico (in preparation)). 'Agreement' turns out to be either
regular subject-verb agreement (with a nominative subject), or nominal
possessive suffix (Px) agreement (which can occur on various types of
heads in Finnish, including many non-finite verbs).

In order to unify grammatical case as much as possible, I provide
the following revision of (6), where agreement is taken to involve
the functional projection Agr (and again, assignment within the
relevant domain is taken for granted), and where genitive is the fourth
grammatical case in Finnish; the case rules in (5) and (7) now have the
same form:

(7) **Secondary accusative assignment (revised):**
Secondary case is assigned to an element with the feature [ACC] but with no case form, as follows
a. (i) Genitive (suffix -n): assigned by the functional head Agr, resulting in ACC(n)
b. (ii) Nominative (0-suffix): assigned by the functional head C, resulting in ACC(0)

Note further that the order of the two subrules may not have to be specified if nominative is taken not to be a case (cf. footnote 4); rule (ii) would then correspond to checking the whole CP for a potential secondary case assigner, but not finding one.

Thus, an elegant analysis of the superficially very complicated accusative data in Finnish (that has resisted full description or explanation for well over a hundred years) involves nominative case being assigned by a high functional head such as C, or in any case being related to the CP projection as just described, and by the genitive form being associated with agreement.

We are now in a position to compare the primary grammatical case rules in (5) with the secondary rules in (7). As is clear, the rule for nominative is identical for both types of assignment (i.e. regular nominative assignment to a subject, and realization of accusative as one of its three variants). I believe that it is not a coincidence that the 'true' nominative of a finite subject and the nominative variant of the accusative can be stated using the same case assignment generalization, but that this is, in fact, a desirable conclusion.

We have then the following situation: the three grammatical cases nominative, partitive and accusative all involve assignment by a c-commanding head within a syntactic domain (involving a tensed finite clause, or a non-finite adjunct). The rules in (5) and (7) cover all instances of these grammatical cases, both in their primary functions and in terms of the secondary assignment of nominative to accusative DPs (the 0-form of the accusative).

We now turn to the only clear remaining grammatical case in Finnish, genitive case. If the two types of nominative case (the 'true' nominative, and the ACC(0)) both involve assignment by the same functional head C, it would seem desirable that the two genitives (the 'true' genitive, and the ACC(n)) are also derived the same way. In fact, it will turn out that the (ACC(n)) genitive rule needed for secondary case assignment, (7ii), while sufficient for various instances of grammatical genitive of both
The two questions that will be addressed concerning the genitive are the following: (i) Is there a general rule that covers all instances of genitive case assignment in Finnish, including all instances of the 'true' genitive, and all instances of ACC(n)? and (ii) Can either type of genitive case assignment be seen as an instance of assignment by a c-commanding head? (See Brattico & Leinonen 2009 for an argument that Finnish case always involves c-command.) Unfortunately, I will have to conclude that both questions receive a negative answer; this result, however, will have interesting ramifications about the grammatical case system as a whole.

3.1 Genitive with a possessive suffix (and the specifier analysis)

The most basic type of genitive marking in Finnish occurs in the possessive construction (alienable or inalienable), where the possessor occurs in genitive case, as in (8):

(8) a. pojan kirja  
    boy-GEN book  
    '(the) boy’s book'

b. Marin auto    
    Mari-GEN car  
    'Mari’s car'

c. sen jalka  
    it-GEN foot  
    'its foot'

d. kenen auto?  
    who-GEN car  
    'Whose car?'

When the possessor is a regular full DP (8a), a name (8b), a non-human pronoun (8c), or an interrogative pronoun (8d), there is no morphological marking on the possessed DP. However, when the possessor is a human pronoun (a set of six pronouns in the lexicon), a possessive suffix (Px) occurs on the possessed DP; this possessive suffix agrees in person/number with the possessor.
(9) a. minun kirjani
   my-GEN book-1sgPx
   'my book'

   b. teidän kirjanne
       your-GEN book-2plPx
       'your (pl.) book'

   In addition to the regular possessive construction in (9), the possessive
   suffix emerges when the possessor is empty – that is, when there is no
   overt possessor within the possessive DP, as in the examples in (10).\(^8\)
   Note that in this construction the Px occurs with all types of (empty)
   possessors, even the full DPs that would be ungrammatical with the Px
   in examples such as (8) above; compare (8a) and (10b):

   (10) a. (Minä) löysin [avaimeni].
       (I-NOM) found-1SG [key-1sgPx]
       'I found my key.'

   b. Poika löysi [avaimensäl]
       boy-NOM found-3SG [key-3sg/plPx]
       'The boy found his key.'

   c. He hukkasivat [ruokansa].
       they-NOM lost-3PL [food-3sg/plPx]
       'They lost their food.'

   In examples such as those in (10), the possessive suffix agrees with
   any DP (that is coindexed with it), as long as the DP is located outside
   of the possessive construction. As has been argued in Vainikka (1989)
   and Trosterud (1993), the third person Px -nsa, in particular, has the
   distribution of an anaphor, and must normally be bound within a finite
   clause.

   We now have two related processes: genitive case assignment, and
   possessive suffix (Px) marking. Px marking has two subtypes: (i) co-
   indexed with human pronouns within a possessive DP; and (ii) co-
   indexed with any DP outside of the possessive DP. We will refer to this
   Px pattern with the two subtypes as the ‘normal’ Px pattern.

   There are six constructions in Finnish that exhibit the normal Px
   pattern of the possessive DPs. These are listed in (11):

   (11) The constructions that have a genitive DP, and the ‘normal’ Px
       pattern:
       a. Possessive DP
       b. Postposition Phrase (PP)
c. AP with a nominal argument

d. The first argument of a derived nominal

e. The agent of MA-participle

f. The temporal adjunct (-essa/-ttu)

These constructions (other than the possessive) are exemplified in (12-16). The (a) examples represent the regular situation with a human pronoun, and a Px, corresponding to (9) above. The (b) and (c) examples show that a full DP cannot co-occur with the Px, within the maximal projection in which the genitive occurs. The (d) example shows that when the genitive position is empty, and the DP is interpreted as (and coindexed with) another DP outside of the most local DP, the Px emerges:

(12) Postposition Phrase (PP):

a. minun  takanani
   my-GEN behind-1sgPx
   'behind me'

b. pojan  takana
   boy-GEN behind
   'behind the boy'

c. *pojan  takanansa
   boy-GEN behind-3sg/plPx
   'behind the boy'

d. Poika näki käärmeen [takanansa]
   boy-NOM saw-3SG snake-ACC(n) behind-3sg/plPx
   'The boy saw a snake behind himself.'

(13) AP with a nominal argument:

a. minun  pituiseni
   my-GEN tall-1sgPx
   'of my height (i.e. the same height as me)'

b. isän  pituinen
   father-GEN tall
   'of Dad’s height'

c. *isän  pituisensa
   father-GEN tall-3sg/plPx
   'of Dad’s height'
d. Isä väitti [tyttären olevan father-NOM claimed-3SG daughter-GEN be-INF pituisensa] tall-3sg/plPx
   'Dad claimed (that) (his) daughter is as tall as he is; lit. Dad claimed (his) daughter to be of his height'

(14) *The first argument of a derived nominal:
   a. minun sakkojen saantini my-GEN ticket-GEN receipt-1sgPx
      'my getting a ticket'
   b. miehen sakkojen saanti man-GEN ticket-GEN receipt
      '(the) man’s getting a ticket'
   c. *miehen sakkojen saantinsa man-GEN ticket-GEN receipt-3sg/plPx
      '(as above)'
   d. Mies oli jo unohtanut [sakkojen man-NOM had-3SG already forgotten ticket-GEN saantinsa] receipt-3sg/plPx
      (The) man had already forgotten getting a ticket.’

(15) *The Agent of a MA-participle:
   a. minun hukkaamani avain my-GEN lost-PRTCPL-1sgPx key
      'the key I lost; lit. my having-lost key'
   b. pojan hukkaama avain boy-GEN lost-PRTCPL key
      'the key the boy lost; lit. (the) boy’s having-lost key'
   c. *pojan hukkaamansa avain boy-GEN lost-PRTCPL-3sg/plPx key
      '(as above)'
   d. Poika löysi hukkaamansa avaimen. boy-NOM found-3SG lost-PRTCPL-3sg/plPx key-ACC(n)
      '(The) boy found the key he had lost; lit. (The) boy found his having-lost key'

(16) *The temporal adjunct (-essa/ttu):
   a. minun lukuiessani kirjaa my-GEN read-ESSA-1sgPx book-PAR
'while I was reading (a) book; during my book-reading’

b. pojan lukiessa kirjaa
   boy-GEN read-ESSA book-PAR
   'while (the) boy was reading (a) book; during the boy’s book-reading’

c. *pojan lukiessansa kirjaa
   boy-GEN read-ESSA-3sg/plPx book-PAR
   '(as above)’

d. Poika söi karamelleja [lukiessaan kirjaa]
   boy-NOM ate-3SG sweets-PAR read-ESSA-3sg/plPx book-PAR
   '(The) boy ate candy while reading a book.’

In all of these constructions, as well as in the possessive construction, only human pronouns can co-occur with a Px within the maximal projection headed by the element that carries the Px (PP in [12], AP in [13], DP in [14] and perhaps VP in [15] and [16]). Any type of DP, however, can be coindexed with the Px from outside of the relevant projection, as shown in the (d) examples in (12-16).

It was this type of data that prompted Vainikka (1989, 1993, 2003) to posit that the genitive case in Finnish is a structural case assigned to the specifier position, with the following specifier positions of lexical projections implicated: Spec(NP), Spec(PP), Spec(AP), and Spec(VP). However, various problems have emerged with this analysis.

3.2 Problems with the original specifier analysis

The following four problems have been identified with Vainikka’s analysis whereby genitive case is assigned to the DP in a specifier position:

i) As shown in Brattico & Leinonen (2009), more than one specifier position would be needed to account for nominalizations

ii) Adjectival concord unexpectedly skips the genitive DP in a specifier position (Brattico & Leinonen, 2009)

iii) Given the specifier analysis it is not possible to unify the two types of genitive marking found in Finnish, the regular genitive and the secondary genitive (i.e. one of variants of the accusative)

iv) There is no natural analysis of the possessive suffixes, given the specifier analysis
3.2.1 Problem (i) – more than one specifier

The examples in (17) show that nominalizations in Finnish allow two genitive arguments (also seen with the derived nominal in 14a/b above):

(17) a. isän vieraan kutsuminen
teacher-GEN guest-GEN invitation
'(the) invitation of the guest by Dad’

b. hänen vieraan kutsumisensa
his-GEN guest-GEN invitation-3sg/plPx
'(the) invitation of the guest by him’

c. (?)isän hänen kutsumisensa
father-GEN his-GEN invitation-3sg/plPx
'his invitation by Dad’

d. (?)minun hänen kutsumiseni/nsa
my-GEN his-GEN invitation-1sgPx/3sg/plPx
'his invitation by me’

As with the derived nominal in (14a), when the first argument (the Agent) is a human pronoun, a Px emerges (17b). It turns out that if the second genitive argument is a human pronoun, a Px is also possible (15c), although somewhat marked. If both arguments are human pronouns, the possessive suffix may agree with either one, as shown in (17d) (again, perhaps not perfectly naturally).

The patterns in (14) and (17) show that if the genitive in Finnish is assigned in the specifier position, there must be more than one such specifier position. Although Vainikka’s initial analysis could be stipulated to allow more than one specifier in a single projection, this track is not promising given the other problems with this analysis.

3.2.2 Problem (ii) – lack of concord

The second problem involves what is traditionally called case concord. In Finnish, all prenominal adjectives agree with the head noun, but a prenominal genitive DP fails to agree, as discussed in Brattico (in preparation). An example is provided in (18):

(18) a. Pidän [tästä sinun uusimmasta
like-1SG [this-ELA your-GEN newest-ELA
tietokonepelistäsi].
computer.game-ELA-2sgPx
'I like this latest computer game of yours.'
That is, the demonstrative pronoun *tämä* ‘this’ and the attributive adjective *uusin* ‘newest’ agree with the head noun *tietokonepeli* ‘computer game’, all in elative case required by the verb, while the possessive *sinun* ‘your’ remains in genitive case. Note that this is so even though the genitive possessor must be coindexed with the head noun to account for its agreement with the Px (2nd person singular -si) on the head noun.

It turns out that it is not straightforward to account for the immunity of the genitive argument in terms of the timing of case assignment to the Spec(NP) position, or by distinguishing case concord from grammatical case assignment, as shown in Brattico (to appear). However, an approach that involves assigned genitive case elsewhere and raising the DP to the specifier position holds promise; we return to this below.

### 3.2.3 Problem (iii) – two separate rules

The third problem with Vainikka’s specifier analysis involves the secondary case realization discussed in Vainikka & Brattico (2009), already summarized above. Since the secondary process involves case marking of objects of a verb (in particular, an accusative object of a verb implying completed aspect), it is not possible to extend a specifier analysis of regular genitives to the secondary genitives in the object position. This problem will persist even as we consider other alternatives.

### 3.2.4 Problem (iv) – the Px problem

Finally, we have seen that possessive suffixes and the genitive case are closely associated with each other in Finnish. On the other hand, Px’s and subject-verb agreement are also closely associated with each other: the two inflectional paradigms are morphologically related in the first and second person, and the omission pattern is the same. Finnish is a partial pro-drop language with subject omission possible in the first and second person, and the same holds for possessive suffixes – the possessor can be omitted in the first and second person, but the third person Px has to have an overt binder (Vainikka 1989; Vainikka & Levy 1999; Trosterud 1993, Toivonen 2000). If the subject-verb agreement paradigm is associated with a functional head such as Agr, then we would expect the Px paradigm to also be associated with a functional head. With the specifier analysis of the genitive, there is no such functional head. Furthermore, the secondary accusative analysis shows that both types of agreement behave identically (involving the functional head Agr, or its equivalent, according to Vainikka & Brattico 2009).
Having discussed the problems with the traditional specifier analysis of the Finnish genitive, we now turn to the problems with the alternative analysis, or assignment of the genitive by Agr.

3.3 Genitive without a possessive suffix (and the alternative Agr analysis)

3.3.1 Attempting to solve the four problems using the Agr analysis

Given the problems with the specifier analysis, let us now consider assignment by Agr, as proposed in Vainikka & Brattico (2009) (and in Section 2 above, rule (7ii)). Extending this secondary genitive rule to all instances of genitive in Finnish has the potential to solve all four problems encountered by the specifier analysis, as we shall see; yet the alternative account faces a problem of its own.

As far as the first problem is concerned, as discussed in the introduction, Vainikka & Brattico (2009) and Brattico (in preparation) show that case can be assigned more than once by a single head. The lack of a one-to-one correspondence between the case assigner and the case assignee is critical in Finnish grammatical case realization, given the existence of secondary case assignment in Finnish, and given examples such as (4) above. Therefore, it would not be surprising if an Agr head were able to assign genitive case to two arguments that it c-commands, as in (17), as long as Agr occurs higher in the tree than the genitive DPs (we return to the position of Agr).

The second problem is not directly solvable by an AgrP analysis, but a movement analysis whereby genitive is assigned in a different position and then raised to its surface position may be possible.

Similarly – concerning the third problem – Agr can assign case to an object argument that it c-commands. Both primary and secondary genitive would involve assignment by Agr, and the problem would be resolved.

Finally, the fourth problem could be solved by positing a verbal Agr head as the locus of the subject-verb agreement suffixes, and a corresponding nominal Agr as the locus of possessive suffixes.

While the Agr analysis of the Finnish genitive seems very promising, there is, in fact, a serious problem with it. This problem concerns the occurrence of genitive case without either a possessive suffix or subject/verb agreement. The proposal I will end up making is that Finnish, in fact, has two genitive rules – one that involves assignment by Agr, as just discussed, and a second rule that does not involve Agr.
3.3.2 A serious problem: verb constructions with the genitive but no Px

In addition to the genitive constructions already described that allow a possessive suffix under certain constructions, there are four constructions in Finnish involving specific verbs (or idioms) that contain a genitive DP, but a possessive suffix is not possible even when the usual conditions are met. These constructions are listed in (19):

(19) a. Subject of an impersonal construction with *olla/tulla* 'be/become'
   b. Subject of certain idioms with *tehdä* 'do, make'
   c. Subject of the necessive construction with *täytyy/pitää/kannattaa/kuuluu* 'must/ought/be-worthwhile/supposed-to'
   d. Subject of the embedded infinitive in the *antaa/sallia/käskeä* 'let/allow/order' construction

These constructions are exemplified in (20-23); although the genitive DP can readily be a human pronoun, there is no possibility of a possessive suffix anywhere in the construction; the examples in (21) come from the extensive reference grammar of A. Hakulinen et.al. (2004:1185):

(20) a. Hänen *he/she-GEN* on *is-3SG* vaikea *difficult* uskoa *believe-INF* sitä. *it-PAR* 'It is difficult for him/her to believe it.'
   b. Minun (/minulla) *I-GEN (/ADE)* on *is-3SG* nälkä *hunger-NOM* 'I am hungry.'
   c. Mikä *what-NOM* sinun *you-GEN* tulit? *became-3SG* 'What’s wrong (with you)l?’

(21) a. Minun teki *I-GEN* oikein pahaa. *did-3SG* very *bad-PAR* 'I felt very sick.'
   b. Hänen teki *he/she-3SG* mieli *mind-NOM* ulos hengittämään. *outside breathe-INF* 'He/she felt like going outside to breathe.'

(22) a. Hänen/sinun *he/she/you-GEN* kannattaa *be-worthwhile-3SG* odottaa. *wait-INF* 'It would be worthwhile for him/her/you to wait.'
The first three constructions are very similar: each involves an impersonal construction where no nominative subject or subject-verb agreement is possible. The finite verb occurs in the 3rd person singular default form, regardless of the features of the (genitive) subject. Each construction is somewhat idiomatic, presumably specified in the lexicon. Each verb, however, has a full range of finite tense marking. It is clear that none of the three constructions contain an AgrP: there is no possibility of subject-verb agreement, no possibility of a possessive suffix, and the secondary case assignment of accusative case with a genitive morpheme (that requires agreement) is not possible.

The fourth construction involves an embedded complement of a small number of verbs, perhaps corresponding to a causative construction of a sort. The construction normally has no overt subject, but with the verbs in (23) a genitive subject is required. The embedded verb is the TA-infinitive which is the most reduced non-finite complement in Finnish (cf. Koskinen 1998 for details). The TA-infinitive has no aspectual, tense, or agreement marking; it is not an island, and it does not give rise to secondary case assignment (Brattico & Vainikka 2009). However, the matrix verb is a regular agreeing verb that has a nominative subject.

What the data in (20-23) suggest to us is that while genitive marking and agreement are closely intertwined, genitive marking is in some way more basic that Px marking. (There is only one construction in Finnish that has an overt Px and no overt genitive morpheme, the rationale clause, which I return to below.) On the other hand, in addition to the sentential constructions in (20-23) there are further constructions in Finnish with genitive case but without a Px, which will now be detailed.

3.3.3 Further problematic constructions: nominal structures with genitive but no Px

In addition to the genitive subjects of the various impersonal and infinitival verbs in (16-17), there are a number of nominal genitive constructions in Finnish that never occur with a Px, in particular the three subtypes shown in (24):

(24)  a. Compounds: linnunpesä 'bird’s (GEN) nest’
     b. Names: Virtasen Virpi 'Virpi (of the) Virtanen’s (GEN))’,
             Mattilan emäntä 'the mistress of Mattila (GEN)’; Setälän
             kieloopp ‘the Setälä (GEN) grammar’; Espon Pitkäjärvi
'Lake Pitkäjärvi in Espoo (GEN)'; Nilsiän kaupunki 'the city of Nilsiä (GEN)' (from A.Hakulinen et.al. (2004:1185)

c. Certain other nouns: savon murre 'the Savo (GEN) dialect', 1900-luvun loppu 'the end of the 1900s (GEN)', viikon loma 'a week’s (GEN) vacation', litran purkki 'a one-liter (GEN) container'; leivän puolikas 'half a bread (GEN)'; kirjojen kirja 'the book of books (GEN)' (from A.Hakulinen et.al. (2004:1185)

However, since none of these constructions allow a human pronoun (or binding from the outside of the nominal), it is not possible to conclusively test the claim that these constructions can never have a Px (or AgrP), even though in practice a Px never emerges.

3.3.4 Other constructions with genitive but no Px

In addition to the verb-related and noun-related constructions already considered, the following adjectival, adverbial, and quantifier constructions also involve the genitive but do not contain a Px or any other form of agreement, precluding the possibility of unifying all Finnish genitives under the agreement-based analysis:

(25)  a. Intensifier or modifier [or swear word] of an adjective: kamalan pitkäveteinen 'horribly (GEN) boring'

b. Intensifier or modifier [or swear word] of an adverb: erityisen nopeasti 'particularly (GEN) fast'; mahtavan hienosti 'extremely (GEN) well'

c. Intensifier or modifier [or swear word] of a quantifier: ihmeellisen paljon 'amazingly (GEN) much'; uskomattoman vähän 'unbelievably (GEN) little'

d. Argument of a superlative adjective: luokan pisin 'the tallest in the class (GEN)'

While we saw a Px on a different type of adjective earlier in (13), and thus an abstract Px or AgrP might be feasible in (25a), the remaining three constructions do not allow a possessive suffix morphologically. A Px in Finnish can neither attach to the adverbial suffix -sti '-ly' in (25b), nor the superlative adjective form in (25d). Furthermore, quantifiers (25c) never allow a Px, either.

We have reached the conclusion that – despite its attractiveness – the Agr analysis of the genitive cannot be extended to all instances of the Finnish genitive, in particular the constructions just described in (19-25).
4. THE NEW TWO-RULE ANALYSIS

I wish to propose that Finnish in fact has two genitive case assignment rules, given in (26). Genitive 1 corresponds to Vainikka’s original specifier rule, while Genitive 2 is the alternative Agr-rule. Note that these two rules are intended to cover both the ‘true’ genitive and the genitive variant of the accusative, or ACC(n). Note further that ‘Genitive 1’ involves only those constructions that never instantiate a possessive suffix (Px), as described in sections 3.3.2-3.3.4. ‘Genitive 2’ covers all constructions that involve a Px, even when a particular instantiation of the construction may not have a Px.\(^{12}\)

(26) *The two genitive rules:*

a. Genitive case 1 (-n suffix without a Px): assigned by a lexical head (V, N, P, or Adj) or a functional head (Adv, Superlative, or Q)

b. Genitive case 2 (-n suffix co-occurring with a Px): assigned by the functional head Agr

The first genitive rule covers all the construction types discussed in Section 3.3 where a Px is not possible, while the second genitive rule covers both primary and secondary genitive in constructions associated with a Px.

We now have three remaining questions: (i) How does the new rule set in (26) deal with the problems that the single-genitive accounts faced? (ii) Is genitive 1 assigned to the specifier position, or to some other position under c-command? (iii) Where is AgrP of genitive 2 located? After considering these questions, I will assess the Finnish grammatical case system as a whole.

4.1 The problems with the single-rule genitive approaches reconsidered

The serious problem faced by the approach that all instances of genitive are assigned by Agr forced us to adopt a second genitive rule, related to Vainikka’s original specifier rule.

Turning now to the four problems discussed earlier with the specifier analysis, the first one – the possibility of two specifiers – is no longer a problem. When we consider the constructions (discussed in Section 3.3) that never allow a Px such as compounds, genitive modifiers of adjectives, and impersonal finite verbs with a genitive subject, such constructions also never allow two genitives. Thus, the constructions covered under the Genitive 1 rule only need to involve one specifier...
position (we return to the question whether the position is truly a specifier position).

Genitive 2, on the other hand, involves case assignment by c-command to positions lower in the tree that are obviously not restricted to one. Two genitives are possible, and attested (in e.g. nominalizations).

As far as the second problem is concerned (i.e. a genitive DP skipped under concord), the problem is solved for Genitive 1 since I assume that the projections within which Genitive 1 is assigned (such as the DP in (24) or the AP in (25a)) are completed before they are combined with higher projections, resulting in DPs that already carry genitive case before being inserted into larger structures.

The solution involving genitive assignment early in the derivation, on the other hand, does not work for Genitive 2; we return to concord and Genitive 2 in connection with the discussion of the location and structure of the AgrP.

The situation concerning problem (iii) – separate rules for primary and secondary genitive – is somewhat unexpected. While we have, in fact, ended up with two genitive rules, the second rule, Genitive 2, involves *both* primary genitive assignment (with a Px) and secondary case assignment (i.e. accusative realization). Genitive 1 rule, on the other hand, only covers those instances of primary genitive that never co-occur with a Px.

As with the nominative, I suggest that Genitive 2 is originally (or at least in a logically prior fashion) a primary case assignment rule that has been extended to secondary case assignment. Recall that for the nominative, the case rules for primary case assignment (i.e. regular nominative assignment to a subject) and secondary case assignment (i.e. one of the variants of the accusative) were identical. Similarly, for Genitive 2, the rules for primary assignment (i.e. regular genitive DPs associated with a Px) and for secondary assignment (i.e. one of the variants of the accusative, conditioned by subject-verb or Px agreement) are identical. The difference between the nominative and genitive domain is that there is an additional genitive rule (Genitive 1) not attested with the nominative.

Problem (iv), the Px/genitive connection, is no longer a problem. By definition, Genitive 2, assignment by Agr, involves the Px. In fact, most likely the Px is itself the head of Agr, and thus the case assigner in the Genitive 2 rule.

In sum, the two-rule approach to the Finnish genitive accounts for the original problems with the specifier analysis, apart from the lack of concord. The serious problem with the Agr-analysis no longer holds,
since the problematic constructions have been relegated to the specifier analysis.

4.2 Is Genitive 1 the specifier rule?

We now turn to the question of the nature of Genitive 1 rule (recall, again, that this covers only those instances of genitive that never instantiate the Px). Various possibilities present themselves: (a) Genitive 1 is assigned to the pre-head specifier position, as in Vainikka’s original rule; (b) Genitive 1 is assigned by some functional head (other than Agr); (c) Genitive 1 is assigned to a pre-head complement position; and (d) Genitive 1 is assigned to a post-head complement position, and raised to the pre-head position. Let us consider each option, in turn.

4.2.1 The specifier alternative

The original specifier analysis of Vainikka (1989) would actually work for all the non-Px constructions involving the Finnish genitive – the subject of the impersonal verbs in Spec(VP) in (19), the Spec(NP) in the compounds and other special constructions in (24), the modifier of the adjective in Spec(AdjP) in (25a), the modifier of the adverb in Spec(AdvP) in (25b), the modifier of the quantifier in the Spec(QP) in (25c), and perhaps the argument of the superlative in Spec(SuperlativeP) in (25d). However, without considering the other three alternative analyses we cannot determine the status of c-command in Finnish grammatical case assignment.

4.2.2 The functional head alternative

The second alternative would involve a functional head other than Agr that assigns genitive in the non-Px constructions; Agr is not a possibility, as I am assuming that it closely connected with the Px (to the extent that the Px itself may be the head of AgrP), and in these constructions a Px is not possible. Beyond the lexical head of each construction (N, Adj, V, etc.), the only potential overtly realized functional projections are the following. There are none in the compound-type nominal constructions in (24), or in the adjectival construction in (25a), or in the (very reduced) TA-infinitival in (19d). The remaining constructions in (25) have one potentially functional projection each: the AdvP in (25b), the QP in (25c), and the SuperlativeP in (25d). Given tense marking, the impersonal constructions (19a-c) clearly have a TP projection (and presumably other sentential projections) but do not have the AgrP. Thus,
while some of these constructions have a functional projection, there is no single functional head that they all share that might be responsible for the genitive. The only way to pursue this option would be to stipulate that there is a completely invisible (abstract) functional head that assigns the genitive – an alternative that I will not pursue. (An argument against such an abstract alternative is provided in Brattico, in preparation, ch.5).

4.2.3 The head-final alternative

The third potential option involves assigning Genitive 1 to the left of the head under c-command, as in a head-final language. Historically, in fact, the Finno-Ugric languages were head-final (L. Hakulinen 1979:503), and even modern Finnish has many traces of the head-final word order, although in general Modern Finnish can be considered to be a head-initial language. The clearest case in Finnish where an argument can either follow or precede the head, resulting in different case marking, are the Finnish adpositions, as exemplified in (27):

(27) a. ilman sateenvarjoa
   without umbrella-PAR
   'without an umbrella'

b. sateenvarjon kanssa
   umbrella-GEN with
   'with an umbrella'

Prepositions such as ilman 'without' usually assign partitive case to their complement, while postpositions such as kanssa 'with' typically assign genitive case to the argument that precedes them, as in (27b) (Vainikka 1989; Vilkuna 1996).

Could all the non-Px constructions involve a genitive argument to the left complement position of the head? In the nominal constructions in (24) such an approach would be straightforward, since these heads take no complement to the right of the head. To the extent that the pre-head element can be semantically thought of as an argument (which may be difficult for the adjectives and adverbs), the same holds for the adjectival construction in (25a), the adverbial construction in (25b), and the superlative construction in (25d). For all of these constructions, genitive assignment leftwards by a c-commanding head might be feasible.

The problem with this head-final approach are the remaining constructions, the quantifiers in (25c) and the verbs in (19). Both heads can occur with a pre-head and a post-head 'argument', as shown in (28) for the quantifiers and in (29) for the verbs, corresponding to the list in (19):
(28) a. valtavan paljon ihmisiä
   enormous-GEN many people-PAR
   ‘an enormous number of people’

b. uskomattoman vähän maalia
   unbelievable-GEN little paint-PAR
   ‘unbelievably little paint’

(29) a. Hänen oli mahdotonta [uskoa
   he/she-GEN was-3SG impossible-PAR [believe-INF
   sitä].
   it-PAR]
   ‘It was impossible for him/her to believe it.’

b. Minun teki pahaa.
   I-GEN did-3SG bad-PAR
   ‘I felt sick.’

c. Sinun kannattaa [odottaa meitä].
   you-GEN be-worthwhile-3SG wait-INF us-PAR
   ‘It is worthwhile for you to wait for us.’

d. Annoin [hänem ostaa suklaata]
   let-1SG [him/her-GEN buy-INF chocolate-PAR
   ‘I let him/her buy chocolate.’

The quantifiers in (28), the impersonal (idiomatic) verb in (29b), and
the infinitival verb in (29d) each take a genitive element that precedes
the head and a partitive element that follows the head. In (29a), the
(idiomatic) impersonal verb takes – in addition to a genitive subject –
an adjectival complement (which may occur in partitive case, as it does
here), which itself takes an infinitival complement. Similarly, in (29c),
the impersonal modal-type verb takes both a genitive subject and an
infinitival complement.

Given the co-occurrence of two arguments with the constructions in
(28-29) – most clearly demonstrated with the genitive subject and the
partitive object in (29d) – it cannot be maintained that these constructions
are head-final, since some arguments precede and others follow the head.

4.2.4 The raising alternative

The final option to consider is one where Genitive 1 is assigned by the
head rightward to a complement position, and subsequently raised to a
pre-head position (presumably the specifier position). First of all, recall
that raising of a genitive DP assigned by Genitive 1 is not needed to
account for the concord problem (given the assumption that Genitive 1 is assigned before the other potential cases become relevant).

The first problem in assuming that Genitive 1 is assigned to the right of the head are compound examples of the type in (24a), presumably already composed in the lexicon where the option of syntactic raising of the genitive DP would not be available.

The second problem is that in the construction types in (24-25), the genitive element never has the option of following the head (and in (19) only if the verb has clearly been raised higher than the subject). That is, under the proposal that Genitive 1 is assigned to the right of the head, all such genitive DPs must always raise to the pre-head position, including the subject DPs in (19). Modern Finnish is an SVO language, and there is no particular reason or evidence for such across-the-board movement other than to allow us to stipulate that Genitive 1 is assigned to the right.

4.2.5 The specifier alternative prevails

To conclude this discussion, as the other alternatives have been ruled out, the Genitive 1 rule is Vainikka’s original specifier rule. However, the original specifier analysis is not sufficient to account for the Finnish genitive data, given the requirement for Genitive 2 (which involves assignent by the functional head Agr under c-command), in addition to Genitive 1.

4.3 The resulting system

The grammatical case rules posited in this paper are combined in (30), which covers the original rules in (5) and (7) and the two genitive rules in (26) (recall that these rules cover both regular, primary, grammatical case in Finnish, as well as the secondary case of the accusative variants, or ACC(n)):

**Grammatical Case in Finnish; Variant 1**

(30) a. Partitive case (-tA suffix): assigned by a lexical head (V, P, N) or a functional head (Q, Num, or Neg)
b. Accusative case (-t suffix): assigned by the functional head Aspect
c. Nominative case (0-suffix): assigned by the functional head C
d. (i) Genitive case 1 (-n suffix in constructions with no Px): assigned by a lexical head (V, N, P, or Adj) or a functional head (Adv, Superlative, or Q)
Genitive case 2 (-n suffix in Px constructions): assigned by the functional head Agr

It can now be observed that there are two types of rules: partitive and Genitive 1 that involve assignment by a number of heads, and accusative, nominative, and Genitive 2, each of which is assigned by a single functional head. Although it is beyond this paper to discuss partitive of negation, based on Brattico (in preparation) I suspect that partitive also has two variants: Partitive 2 assigned by the functional head Neg (which gives rise to long distance case), and Partitive 1, covering the other heads.

If we take the partitive to also involve two rules, the resulting system, given in (31), would involve local case assignment to either the complement or the specifier position of a head, possible by a number of heads (A), and potentially more remote case assignment by specific functional heads (B):

Grammatical Case in Finnish; Variant 2

(31) A) local grammatical case:
   i) partitive 1 (-tA): assigned to the complement of V, P, N, Num, or Q
   ii) genitive 1 (-n; no Px possible): assigned to the specifier of V, P, N, Adj, Adv, Q, Superlative

B) potentially remote grammatical case:
   i) accusative (-t): assigned by Aspect
   ii) partitive 2 (-tA): assigned by Neg
   iii) genitive 2 (-n in Px constructions): assigned by Agr (verbal or nominal)
   iv) nominative (0): assigned by C

Most of the problems with the specifier analysis delineated earlier (all but the concord problem) were accounted for as follows: the problems only occur in those constructions which fall under the second case rule Genitive 2, and as Genitive 2 involves case assignment by Agr (under c-command), the problems are automatically resolved. However, in addition to Genitive 2, the Genitive 1 rule (corresponding to the traditional specifier analysis) appears to be required in the system to account for the constructions in which the genitive occurs, but the Px is never possible. Furthermore, the LDCA involved in the accusative variants is not relevant for Genitive 1, and the ACC(n) always ends up being subsumed under Genitive 2, as it always involves Px constructions.

We now turn to some details of Genitive 2.
4.4 Where is the AgrP of Genitive 2 located?

Recall Problem (ii) with the specifier analysis – i.e. why the genitive DP fails to agree in case with the other elements within the larger DP – as in example (18), repeated here as (32):

(32) a. Pidän [tästä sinun uusimmasta
like-1SG [this-ELA your-GEN newest-ELA
tietokonepelistäsi],
   computer.game-ELA-2sgPx
   'I like this latest computer game of yours.'

A new problem arises in attempting to account for this problem of lack of concord. In the case of Genitive 1, the early assignment of genitive was taken to solve this problem. However, for Genitive 2 and its association with Px, assignment early on in the derivation is not a straightforward possibility. In the morphosyntactic composition of the head noun in (32), the Px is located outermost in the word, after elative case marking. Given some version of the Mirror Principle (Baker 1985, Grimshaw 1986), the location of the Px furthest away from the noun head indicates that the functional projection associated with the Px is also high up in the structure.

Such a result is, in fact, consistent with the assumption that Px is associated with a nominal AgrP;\(^{14}\) the corresponding sentential AgrP is located high in the structure in Finnish, probably right below CP (cf. the equivalent FP projection in Holmberg et.al. 1993). Furthermore, a high syntactic location for the nominal AgrP allows us to maintain a solution for the original problem (i), whereby more than one element can be assigned Genitive 2.

I wish to tentatively suggest that the nominal AgrP in Finnish one of the highest projections in a complex nominal phrase, below DP but above all other projections. The example in (32) would correspond to the base-generated order in such a structure. However, I leave for future research the problem of the ‘immunity’ of Genitive 2 to case concord – that is, why the genitive in (32) fails to carry the elative suffix.

5. CONCLUSION AND RESIDUAL PROBLEMS

Apart from explaining the lack of case concord with genitive, the grammatical case system developed here and summarized in (30) and (31) accounts for the distribution of the grammatical cases of nominative, accusative, partitive and genitive in Finnish. Under this approach, the distribution of these grammatical cases is fully describable in syntactic
As in Vainikka (1989, 1993, 2003), partitive case emerges as a 'default' complement case. Similarly, Genitive 1 is a 'default' specifier case in constructions without a possessive suffix (whereas in Vainikka (1989) all genitives were assumed to be assigned to the specifier position). In Px contexts, Agr assigns Genitive 2, under c-command; both primary and secondary genitive assignment are covered by the same rule; the original analysis (Vainikka & Brattico 2009) of secondary genitive (i.e. one of the accusative variants) has here been extended to regular genitives, as long as they are agreement-related. Tentatively, in negative contexts, Neg assigns Partitive 2 under c-command (see Brattico, in preparation).

Accusative is a very restricted object case, assigned in aspectually bound contexts by a verb (or its projection Aspect), and morphologically realized only on human pronouns (with the suffix -t). The other [ACC] DPs end up – under secondary case assignment – either with Genitive 2, assigned by Agr, or with nominative, assigned by C (including long distance case assignment by these heads, as detailed in Vainikka & Brattico 2009 and Brattico, in preparation).

While the resulting system is quite elegant given the extreme complexity of the grammatical case system of Finnish, we are forced to conclude that it does not appear possible to account for all of the genitive data based on a single genitive assignment rule or generalization. Furthermore, while it is possible to categorize Genitive 2 as a grammatical case assigned by a functional head under c-command (and there exists the possibility of Long Distance Case Assignment, subject to syntactically typical island constraints), Genitive 1 unfortunately fails to conform to the same type of case assignment, as we have seen. Rather than being associated with a particular functional head, Genitive 1 (and tentatively, Partitive 1) appears to be associated with structure building at a very fundamental level, close to the lexicon.

The constructions discussed so far cover all the relevant genitive constructions in Finnish, except for two somewhat exceptional constructions that we will briefly consider, followed by a note on historical development.

5.1 The rationale clause

The first of the two verb-based constructions that do not conform to the 'normal' Px pattern is the rationale clause (Vainikka 1989, Koskinen 1998); the non-finite verb carries the (infinitival) suffix -kse followed by an obligatory Px:
(33) a. Poika osti suklaata (*Jukan)
   boy-NOM bought-3SG chocolate-PAR (*Jukka-GEN)
   syödäksensä sen.
   eat-KSE-3sg/plPx it-ACC(n)
   'The boy bought chocolate in order (for Jukka) to eat it'

b. Ostin suklaata syödäsen sitä
   bought-1SG chocolate-PAR eat-KSE-1sgPx it-PAR
   jälkiruoaksi.
   dessert-TRA
   'I bought chocolate in order to eat it for dessert.'

This construction is exceptional in that a Px occurs without a genitive DP – while a possessive suffix must occur, an overt genitive DP cannot occur, as shown in (33a). The Px corresponds to the subject of the embedded verb, and must be coindexed with a c-commanding DP (typically the matrix subject) outside of the rationale adjunct clause. Given the presence of a Px, this construction would presumably involve an AgrP; even though there is no overt DP to which Genitive 2 can be assigned. The accusative pattern also confirms the presence of an AgrP in this construction, as discussed in Vainikka & Brattico (2009).

5.2 The VA-construction

The second problematic construction involves the non-finite VA-complement (suffixes -va/PRES or -nut/PAST) of a matrix verb, as exemplified in (34):

(34) a. Poika uskoi minun
   boy-NOM believed-3SG I-GEN
   pitäneen/*pitäneeni kiinni.
   hold-PRTCPL-PAST-GEN/*1sgPx attached
   'The boy believed (that) I (had) held on.'

b. Poika uskoi Jukan
   boy-NOM believed-3SG Jukka-GEN
   pitäneen/*pitäneensä kiinni.
   hold-PRTCPL-PAST-GEN/*3sg/plPx attached
   'The boy believed (that) Jukka (had) held on.'

c. Poika uskoi
   boy-NOM believed-3SG
   *pitäneen/pitäneensä kiinni.
   hold-PRTCPL-PAST-*GEN/3sg/plPx attached
   'The boy believed (that he had) held on.'
This construction differs from the normal Px pattern in that if there is an overt genitive DP — regardless of whether the DP is a pronoun or a full DP — no Px can occur, as shown in (34a-b). That is, the genitive DP and the corresponding Px are in complementary distribution. However, when the overt genitive is omitted, as in (34c), an obligatory Px emerges that is bound by a c-commanding DP; this pattern is similar to what happens in the rationale clause, as well as in the normal Px pattern discussed earlier. While a full analysis of the VA-construction awaits future research, the two genitive rules proposed in this paper open up a new possibility for analyzing the VA-construction, namely that either one of the two genitive rules could be applied. If (34a-b) were to involve Genitive 1, the impossibility of a Px would be accounted for. On the other hand, the presence of a Px in (34c) would indicate that Genitive 2 is involved, and the analysis of (34c) would be identical to the analysis of the rationale clause discussed in the previous section.

5.3 An idea for the historical development

Finally, the relationship between the two genitive rules might be seen as follows. Historically, the grammatical genitive may have been assigned by a head to an argument to its left, given the original head-final nature of Finnish. With the language generally changing to a head-initial one, the genitive DPs would have to have been reanalyzed. It appears that two types of reanalysis took place: wherever possible, a functional head Agr that typically co-occurred with the genitive (in the form of a Px) was taken to be the assigner for the genitive, resulting in Genitive 2 rule; this outcome would be consistent with what appears to be the general tendency with Finnish grammatical case – assignment by a functional head under c-command, resulting in the possibility of more than one recipient of the case, and in long distance case (as long as island conditions are not violated). For a large number of constructions which contain no evidence of any type of agreement — and of which many are idiomatic — a specifier analysis was forced on the genitive, as in the Genitive 1 rule. The specifier rule, Genitive 1, seems to be more closely associated with the lexicon than Genitive 2 which involves assignment by a functional head.

References


1 The first mention of this phenomenon is found in Ross' (1967) seminal dissertation on syntactic islands, but the topic has not been further pursued until Toivonen 1995 and Vainikka & Brattico 2009.
2 For an in-depth study of WH-movement and syntactic islands in Finnish, see Huhmarniemi (in preparation).
3 For some speakers, the ACC(n) variant is possible in this example (Brattico, personal communication; however, given the marked status of such as example for the author, it will not be further considered here.
4 It turns out that once case can be assigned to less than a DP, what have traditionally been two separate processes, case assignment and case concord, are in fact one and the same process (see Brattico (to appear) for this argument).
5 Note that the lexical head Adj may not be able to assign partitive, and assignment by an N head is restricted to certain types of nouns (related to quantifiers, or derived from a verb), as well. While partitive can be assigned in the context of deverbal or participial adjectives, it will be assumed here that the verbal root is responsible for
such instances of partitive. Furthermore, the comparative form of the adjective can co-
occur with partitive, but this presumably involves partitive assignment by a functional

6 Under Vainikka’s (1989) approach to Finnish grammatical case, the nominative (which
bears no overt affix) in fact corresponds to the lexical entry of a word and is not a case
at all. Furthermore, Brattico (personal communication, June 2010) has noted syntactic
evidence for nominative not being a case. However, it will turn out for the secondary
accusative assignment that the CP projection is relevant for determining when the
0-form occurs. I take it to be equivalent for the purposes of this paper to state that
nominative is assigned by C, or that an element ends up with no case (i.e. nominative)
if within the CP there no possibility of assigning an overtly marked case.

7 The full set of possessive suffixes is as follows: 1st sg. -ni; 2nd sg. -si; 3rd sg/pl -nsA;
1st pl. -mme; and 2nd pl. -nne. There is no gender marking in Finnish. For the most
recent discussion of the Finnish Px’s in the generative literature, see Toivonen (2000).

8 In Standard Finnish, a 1st or 2nd person DP possessor can typically be omitted, but a
3rd person DP possessor can only be omitted if there is a c-commanding, coindexed,
DP that binds it (see Vainikka 1989; Trosterud 1993). A similar pattern holds for null
subjects in Finnish (see Vainikka & Levy 1999 for details).

9 I return to the second argument below.

10 The 3rd person Px -nsA has a variant -An that appears to be preferable in (16d).

11 While the TA-verb itself does not give rise to the agreement-related variant of the
accusative, given the non-island status of a TA-infinitive, the object DP of the infinitive
will display variation in accusative form depending on the matrix verb, as described in

12 Recall that Px’s only co-occur with human pronouns (or when an empty DP is bound
from the outside of a construction), and thus full DPs do not give rise to a Px. However,
if a particular construction allows a Px in the pronominal context, all instances of the
construction will be subsumed under ‘Genitive 2’, consistent with the assumption that
the construction has a unified syntactic structure (that gives rise to Px’s) whether or not
a Px is instantiated. That is, while instances of the nominalization construction such
as ‘isän tapaaminen’/lit. ‘father’s meeting’ do not exhibit a Px, the pronominal version
‘hänen tapaamisensa’/lit. ‘his meeting-3Px’ does. This construction thus belongs to the
jurisdiction of Genitive 2.

13 Note that while Brattico & Leinonen [REF] argue that in the case of deverbal nouns
and adjectives, the nominalizing or adjectivizing morphemes are functional heads –
and while I agree with such an analysis – treating such morphemes as potential case
assigners for Genitive 1 would not work as nominalizations and participial adjectives
allow Px marking and thus fall under Genitive 2.

14 As pointed out by Pauli Brattico (p.c.), there is a problem in assuming that Px’s involve
a nominal AgrP: unlike a sentential AgrP, a nominal Agr does not assign ACC(n) to
accusatives downstream. See Brattico (BOOK) for discussion.

15 In addition to the traditional set of these four grammatical cases, Vainikka (1993)
proposes that the elative is also a structural case in Finnish. In addition, Finnish has
a pair of potentially syntactic cases of essive (associated with stative adjectives and
nouns) and translative (used with change-of-state adjectives and nouns).