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Structural Case Assignment and Phi-Agreement in Finnish[1]

Abstract

Structural Case assignment, agreement in phi-features, and the EPP-movement are related to each other. However, their exact syntactic relationship remains controversial. The matter is examined here from the point of view of Finnish morphosyntax. Finnish provides close to an ideal language for this purpose, as it has fifteen case forms and full syntactic phi-agreement on verbs (finite and nonfinite), nouns, adjectives and prepositions. In addition, Finnish exhibits certain more exotic Case assignment phenomena, among them the long distance Case assignment, quantificational Case and aspectual Case. It is argued that the recent minimalist theory of Agree provides a sound starting point to explain the phenomena, but requires certain modifications to fully capture the Finnish facts. Specifically, it will be argued that Case is not a reflex of an uninterpretable phi-set probe, as posited in the standard theory, but, instead, it is a reflex of a more abstract phi-specification feature of functional heads. In addition, locality restrictions on Agree posited in the standard theory are argued to be too strong.

1. Introduction

Not long ago Case assignment and phi-agreement (that is, agreement in person, number and gender features) were explained in the generative grammar by relying on strictly local phrase structure configurations, such as the Spec-Head configuration (Chomsky 1993). An example of this specimen is agreement between the grammatical subject and finite verb, as

shown in the example (1). The subject is assigned the nominative Case by the finite verb, and the verb receives phi-features from the subject.

(1)   *He   arrives.*
       nom↔3sg

According to this view, agreement takes place under strictly local configurations. In addition, Case assignment and agreement are clearly "paired" in some way. The subject that agrees with the verb is assigned the nominative, so that agreement and Case assignment go in tandem (see Adger & Harbour 2008).

A finite verb can nevertheless agree with a phrase that has not been raised to its Spec. English *there*-expletive and Finnish subject-object inversion provide clear examples. In the example (2a), there is agreement between the finite verb and *three men*. In the example (2b), there is agreement between the postverbal thematic subject *Graham Greene* and the finite verb, while the thematic object occupies the grammatical subject position (see Holmberg & Nikanne 2002).[2]

(2)   a. *There seem to have arrived three men.*
              pl   pl

       b. *Tämän   kirjan   kirjoitti   Graham   Greene.*
          this.ACC book.ACC wrote.3SG Graham.NOM Greene.NOM
          'Graham Greene wrote this book.'

Data such as this led linguists to give up the strict locality requirement, while keeping the pairing between Case assignment and phi-agreement (Chomsky 2000, 2001, 2008). Local checking is substituted by an operation Agree, which does *not* rely on the Spec-Head configuration. Movement to Spec follows if probe's EPP-feature is not satisfied otherwise. In the example (2a), it is satisfied by the expletive *there*, in (1) it is satisfied by moving the subject DP and in (2b) it is satisfied by moving the object. These assumptions are further illustrated in (3a–b). In (3a), the finite verb agrees

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[2] I will use the following abbreviations in this article: A = A-infinitival; ACC = accusative Case (any variant); ACC(n) = genitive-looking n-accusative; ACC(0) = nominative-looking zero-accusative; ABL = ablative Case; GEN = genitive Case; ELA = elative Case; INE = inessive Case; KO = question clitic; MA = ma-infinitival; NOM = nominative Case; NUT = past participle; PASS = impersonal passive; PRT = partitive Case; PX = possessive suffix/agreement marker; TRS = translative Case; VA = va-infinitival.

with the nominative subject but the subject remains *in situ* inside the *v*P in a postverbal position, while in (3b) the agreeing nominative subject also raises to the subject position Spec,TP (specifier of the tense phrase) or Spec,FP (specifier of the finiteness phrase).

(3)   *a. Tämän   kirjan   kirjoitti   Graham   Greene.*
        this.ACC   book.ACC wrote.3SG Graham.NOM Greene.NOM
        'Graham Greene wrote this book.'

      b. Graham   Greene   kirjoitti   tämän   kirjan.
        Graham.NOM Greene.NOM   wrote.3SG this.ACC   book.ACC
        'Graham Greene wrote this book.'

An important feature of this model is that once EPP is factored out of Agree, the case assigner (e.g. a finite verb) will c-command[3] the case assignee, and the phi-assigner (e.g. the nominal) will be c-commanded by the phi-assignee (the verb). Chomsky (2000: 122) proposes that structural Case (e.g. nom, acc) is a "reflex" of c-commanding phi-set probe (4).

(4)   *Condition on Phi-Agree (CPA)*
        Structural Case is a reflex of a c-commanding uninterpretable phi-set probe.

I will argue here that this generalization applies, in a surprisingly general fashion, to structural Case assignment in Finnish and unlocks the relation between phi-agreement and structural Case assignment in this language.

   One might be surprised to read an article-length treatment in the defense of (4), since this principle has established itself as part of the mainstream view during the last ten years. However, principle (4) is controversial what comes to the description and explanation of Finnish case, specifically (see Vainikka 1989, 2011). Yet my main concern and the principal motivation for this study lies elsewhere. It is perhaps useful to spell out these reasons before we move on. Finnish is a language with a particularly rich Case and agreement system, and that system gives rise to several rather perplexing Case assignment phenomena, such as long distance case, polarity case, aspectual case, quantificational case and case concord island, among other phenomena. It is these unexplained facts, and not the defense

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[3] To a first approximation, X c-commands Y if and only if Y is contained inside the sister of X. Intuitively, the notion designates a certain kind of structural dominance, where X is syntactically more prominent than Y. In Finnish a good heuristic is that, all else being equal, if X c-commands Y, then X precedes Y in the linear order.

of CPA, that motivate the present study. I will argue that all structural and semi-structural case assignment configurations in this language can be explained as a consequence of CPA, independent of whether they concern standard finite clauses such as (3a–b) or more peripheral and exotic constructions, such as long distance Case. If the argument holds, then these diverse facts can be shown to follow from one relatively simple and elegant principle of the UG. There is no need for construction-specific mechanisms. An extra benefit is that we can be sure that CPA is the right way to look at such matters.

The following is a rough blueprint to the structure of this article. Section 2 discusses the theoretical background and delineates CPA more carefully. Section 3 discusses various constructions in Finnish involving Case and Phi. We will not limit ourselves to finite and nonfinite clause structure but, instead, we will examine quantificational Case, negative constructions, accusative alteration, aspectual Case, adpositions, adjective constructions and noun phrases. Section 4 summarizes the data and Section 5 incorporates it all into a revised theory of Agree.

2.   Theoretical and methodological background

This work has been done in the context of the minimalist program (MP) (Chomsky 1995). Before explaining and elaborating the research hypothesis itself, a brief introduction to MP is provided (see also Huhmarniemi 2012: Ch. 4). CPA will then be reformulated.

The minimalist program is a research *program*, a set of stated goals for linguistic analysis rather than an empirical hypothesis. One may either adopt or reject these goals, depending on personal preference and interest. The minimalist program can be adopted inside any linguistic framework. Its goal, then, is to explain the properties of human language(s) on the grounds of certain "given", extra-linguistic faculties, properties and processes so that the role of complex, autonomous syntax is reduced to an absolute minimum. The program itself does not claim that such unification is possible, and it does not begin from the axiomatic assumption that the program will succeed; rather, it is an attempt to see how far that goal can be reached. (Perhaps it cannot be reached.)

The minimalist program leads us to ask what we might consider as "given" in the context of linguistics. Perhaps we can agree that language establishes a relation between sound and meaning, and does so by utilizing a discrete, combinatorial system. We might also agree that there is a lexi-

con, a storage of primitive units. If so, we have established the four core components of MP: the basic structure-building operation, *Merge*; a repository of lexical information, *the lexicon*; and the two *interfaces* Logical Form (LF) and Phonetic Form (PF), which mediate between language and the two extra-linguistic systems, meaning-thought and perception-articulation, respectively. Merge builds structured linguistic representations from lexical items such that the representations have a "realization" at the interfaces.[4]

In addition to the four indispensable components, language has a fifth operation that is harder to justify on minimalist grounds: Agree. Agreement in the broadest sense of the term refers to feature covariation between linguistic elements. Another way to think about agreement is feature displacement: some linguistic feature or property is copied or displaced and occurs at another location. For instance, phi-features of a grammatical subject are redundantly copied or displaced to a finite verb in many languages. Furthermore, some grammatical heads impose Case features to the nominal elements they govern (3a–b).

The question of why such formal features, Case and phi in particular, exist, has been debated to some extent in the minimalist literature, without resolution. The general consensus seems to be that they have no minimalist explanation whatsoever and behave like "bogus" features that emerge from the lexicon but lack realization at the interfaces and must, therefore, be deleted. Here we arrive at the heart of the current minimalist technologies, partly inessential to the main goal of the present article but useful in illustrating the background of CPA. Consider again the derivation of (3a). When the tense T is merged, it possesses an uninterpretable phi-set probe, call the feature $\varphi*$. That feature is semantically uninterpretable, hence it

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[4] Another possibility is to view language as a trivial externalization of thought. According to such an extreme minimalist view, there is no need to posit a linguistic operation such a Merge. The problem with this view is that it is possible to compose words and expressions without meaning: *married bachelor*, for instance. We assume that words can be combined even if no meaning or thought is implied or involved. Language is more creative than thought, and not bound in any way by what can be interpreted semantically or understood by the faculty of thinking. Yet another possibility is to emphasize communication instead of, or in addition to, the cognitive architecture. Communication is an extra-linguistic phenomenon in the sense that there is both communication without language (e.g. in bacteria) and language without communication (keeping a diary). Communication and the cognitive processes supporting it are "given" in the sense required by minimalism. Its role in the description and explanation of morphosyntax and syntax is negligible, however.

does not have a realization at the LF-interface, and must be deleted before the representation is passed on to the LF-interface. Call the uninterpretable feature the *probe*. It will establish Agree with the closest DP, the *goal*, the subject (*Greene*). The configuration is shown in (5), where the 'v + V' cluster contains the verbal material.

(5)   T   [*Greene*   *v* V   *tämä kirja*]
      φ*   Case=NOM
      probe   goal

The derivation cannot continue unless something is done with φ*. Agree is, according to the minimalist theory of Chomsky (2000), the mechanism by which something gets done. Upon Agree(φ*, DP), the uninterpretable feature φ* is deleted and, during the same process, structural Case is assigned to the goal *Greene*. Structural Case is, therefore, viewed as a consequence of a minimalist "clean-up" operation. From this the "reflex" condition (CPA) follows. The nominative Case assigned to the subject *Greene* by Agree(φ*, DP) is associated with the c-commanding uninterpretable phi-set probe φ* that triggers the operation (5). In general, DPs obtaining structural Cases are paired with a functional head bearing an uninterpretable phi-set probe: the basic idea underlying the probe-goal system of Chomsky (2000, 2008).

If the uninterpretable features are deleted, why do we see phi-agreement and Case assignment? The additional assumption is that the lexicon provides phi- and Case-features without *value*. That is, a functional head might possess a feature such as Number* and a nominal element may posses a feature such as Case*. Unvalued features have realization neither at the LF-interface nor at the PF-interface. One cannot spell out Case* or Number*. What happens, then, is that such features are deleted from the path constructing a representation for the LF-interface, and they are provided morphological/phonological *values* for the path leading to the PF-interface. The latter operation is called *valuation*. For instance, valuation might lead to value assignments such as Number*=SG and Case*=NOM.

This is, in brief, how the current minimalist theory attempts to derive CPA as a theorem. The theory could be right or wrong, but the matter is inessential for the task at hand. I will attempt to show how CPA itself helps us to rationalize Finnish morphosyntax.

In opposition to much theorizing to the contrary, minimalism (and the generative theory in general) assumes that linguistics belongs to the natural

sciences. It assumes that language is (in part) a natural phenomenon, like vision, insect navigation or bee communication. It can therefore be fruitfully investigated by means of experimental hypothesis testing and rigorous, formal theory-development. There will be no *a priori* restriction on the type of evidence and method that can bear on some empirical question, whether it be acceptability judgment, corpus search, controlled experiment, brain imaging or a genetic study.

3.   Case and Phi in Finnish

3.1   Finite verbs

Finite clause constitutes a core example of CPA. Let's consider (2b) and (3) once again, repeated here as (6a–b).

(6)   *a. Tämän   kirjan   kirjoitti   Graham   Greene.*
           this.ACC   book.ACC   wrote.3SG   Graham.NOM   Greene.NOM
           'Graham Greene wrote this book.'

       b. Graham   Greene   kirjoitti   tämän   kirjan.
           Graham.NOM   Greene.NOM   wrote   this.ACC   book.ACC
           'Graham Greene wrote this book.'

Finite verbs in Finnish are associated with the nominative DP, and they phi-agree with such nominative DPs. The finite element, finite verb in this example, assigns the nominative Case to the DP at Spec,*v*P.[5] That DP will then value its phi-features to the verb. This instantiates Agree, exemplified in (6a). The subject DP may raise to Spec,TP (6b). CPA is satisfied: before the EPP-movement the external argument bearing the nominative is c-commanded by a finite verb that contains an uninterpretable phi-set. The situation is essentially the same if the subject agrees with an auxiliary, modal or with the pre-sentential negation: all these elements c-command the subject before EPP-operations apply.

The probe-goal relation underlying Agree can target an element inside another clause. Raising constructions such as (7) exemplify this phenomenon in Finnish.

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[5] Spec,*v*P is the postverbal position of the external argument that is associated with, or constitutes, the thematic role of Agent or Causer. The external argument may then be moved to Spec,TP, but not necessarily.

(7) *Professori   näyttää   _____   haluavan   lopettaa   kognitiotieteen.*
      professor.NOM seem.T.3SG   want.VA   terminate cognitive.science
      'Professor seems to want to terminate the cognitive science program.'

The uninterpretable phi-set at the raising verb *näyttää* 'seem' constitutes the probe, and its goal is the thematic agent of the complement clause *haluavan …* 'to want …' (there are several types of non-finite complements in Finnish, glossed as A, MA and VA in this paper; see Koskinen 1998; Vainikka 1989; Vilkuna 2005). Agree assigns the nominative to the subject and values the phi-features '3SG' to the raising verb. EPP-movement then brings the subject to its presentential subject position. The c-command condition holds, as can be seen by analyzing the derivation of (7) just before the EPP-movement applies (8).

(8) *näyttää   [professori   haluavan   lopettaa   kognitiotieteen.]*
      seem.T.φ* Professor.NOM want.VA   terminate cognitive.science
      Agree(φ*, *professori*.nom)

3.2 Numerals

Finnish numerals exhibit mysterious behavior that can be sorted out elegantly with the help of CPA. Many numerals (other than *yksi* 'one') in Finnish assign the partitive to their complement, which contains the noun head and, optionally, an adjective:

(9) *Nuo   kaksi   pien-tä   auto-a   varastettiin.*
      those.PL two.SG   small-SG.PRT car-SG.PRT were.stolen
      'Those two small cars were stolen.'

The numeral assigns the partitive irrespective of whether the host DP occurs in a subject or object position. The numeral is in singular and thus it cannot be combined with a *tantum plurale* noun such as *sakset* 'scissors' (10).

(10) **kaksi   saks-i-a*
       two.SG   scissor-PL-PRT
       'two scissors'

The numeral itself occurs in a case-less form. This is a marked form, since it is possible to inflect the numeral like an adjective, both in phi-features

and in case features. But the declining numeral does not assign the partitive, as shown in (11).

(11) *Nuo   kahdet   piene-t   auto-t   varastettiin.*
     Those   two-ACC.PL   small-ACC.PL   car-ACC.PL   were.stolen
     'Those two small cars were stolen.'

Following Rutkowski (2007), I will call the numeral which declines like adjectives but does not assign Case the "adjective numeral", or A-numeral, and the partitive assigning numeral as the Q-numeral, Q from "quantificational". Finnish therefore has two types of numerals in its lexicon, the Q-numeral and the A-numeral. There are two differences between the phi-features at the Q-numeral and at the A-numeral: whereas in the former the phi-features are uninterpretable, in the latter they are interpretable. For instance, the numeral *kaksi* 'two' in (9) denotes a plurality, but it is marked for singular (Brattico 2008, 2010). Such number marking is semantically uninterpretable. The second difference is that the Q-numeral assigns Case while the A-numeral doesn't. Hence the numeral that is marked (by lexical specification) by an uninterpretable number feature functions as a Case assigner, while the numeral which is not so marked does not function as a Case assigner. The existence of uninterpretable phi correlates with Case assignment, as predicted by CPA (Brattico 2011b) and shown in (12).

(12) *Nuo   kaksi   pien-tä   auto-a   varastettiin.*
     those.PL   two.φ*   small-PRT   car-PRT   were.stolen
              →   ↗   ↗
     'Those two small cars were stolen.'

The hypothesis that Case assignment by the Q-numeral results from the uninterpretable phi-feature at the numeral makes the following prediction. If the grammatical feature [singular] is attached to a numeral representing singularity, such as *yksi* 'one', Case assignment should not materialize. This prediction is borne out, as shown in (13a–c).

(13) *a. Näin   yhden   auton.*
       saw.1SG   one.SG.ACC   car.SG.ACC
       'I saw one car.'

      *b. *Näin   yksi   autoa*
        saw.1SG   one.SG.0   car.SG.PRT

    c. *Näin   yhden   autoa
       saw.1SG   one.SG.ACC car.SG.PRT

The numeral *yksi* has only the declining A-numeral form. The hypothesis predicts that a combination of *yksi* 'one' and [plural] should create a Q-numeral. At first it looks as if this prediction is not borne out. There is no way to make the plural form of *yksi* a Case assigner (14a–b); instead, the construction is grammatical if and only if the plural numeral and the noun head decline (14c).

(14) *a. *yhde-t   auto-a*
       one-ACC.PL car-SG.PRT

      b. *yhde-t   auto-ja
       one-ACC.PL auto-PL.PRT

      c. yhde-t   auto-t
       one-ACC.PL car-ACC.PL

However, here we have overlooked one important detail, namely the difference in interpretation between 'one car' marked as singular and 'one car' as plural. Reflecting on the meaning of (14c) makes it clear that *yhdet autot* 'one.PL car.PL' does not refer to just one car, but several, and that the plural marked *yhdet* 'one.PL' signals indefiniteness and not a cardinal number. Its syntactic behavior shows that the plural 'one' further belongs to the category of D and not Num, since it can occur together with another numeral (15).[6]

(15) *a. Me   tavattiin yhdet   kolme   miestä.*
       we   met   one.PL three.0 man.SG.PRT
       'We met three indefinite men.'

      b. Yhdet   kolme   pistettä vaihdoin   viivaksi.
       one.PL three.SG points   changed.1SG into.line
       'I changed three points into a line.'

      c. Taas   yhdet kolme   vuotta elämästä takana.
       again one.PL three.SG years   from.life behind
       'Again (one chunk of) three years of my life have elapsed.'

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[6] Examples (15b–c) from the Internet.

Returning to the main point again, the combination of *yksi* 'one' and the feature [plural] does not produce a Q-numeral; instead, it produces a plural indefinite determiner. It does not function as Case assigner, as predicted by CPA, because the feature set [plural][indefinite] is interpretable.

In sum, then, several mysterious properties of Finnish numerals follow from CPA. It is useful at this point to state quite explicitly what has been established and what has not. What these facts suggest is that we should put the finite clause and the quantificational construction completely on par what comes to φ* and Case assignment. They exhibit the same regularity, and instantiate the same Case assignment/phi-Agree system, regardless of the fact that two entirely different constructions are at stake. In addition, the observation should increase our confidence towards CPA. The third important thing to notice is that the common regularity between the finite clause and the quantificational construction only comes visible once we have dissociated Agree and EPP and eliminated the idea that Case assignment in a finite clause is a function of a local Spec-Head relation. Case assignment must always be a "downstream relation". Finally, what was said here by no means explains the whole picture; lexical Case assignment, for instance, interacts with structural Case assignment in a manner I do not discuss here (see Brattico 2011b).

3.3 Sentential negation

A negated clause in Finnish is formed by adding a verbal negative particle *e-* to the beginning of the clause, above the TP according to most experts (Holmberg & Nikanne 1993, 2002). The negative word agrees in phi-features with the nominative subject DP (if there is one) that is typically located at its Spec, assigns partitive Case to the direct object(s) of the clause, and selects for a special form of the matrix verb *syönyt* (participle in the past, suffixless form in the present) which shows tense information (16a–b).

(16) *a. Pekka   e-i   syö-nyt   leipä-ä   /   *leivä-n.*
      Pekka.NOM   not-3SG   eat-NUT.PAST bread-PRT /   bread-ACC
      'Pekka did not eat a/the bread.'

    b. Pekka   söi   leipää   /   leivän
      Pekka.NOM   ate   bread.PRT / bread.ACC
      'Pekka ate some bread/ the bread.'

For those unfamiliar with the syntax of Finnish negation, it can be thought of as "tenseless auxiliary". That the partitive is assigned by the negation and not the by participle verb is shown by two facts. First, the participle verb by itself does not require its complement to be in the partitive Case. This can be shown by using the participle form in its adjectival function (17).

(17) *Leipä-ä   / leivä-n   syö-nyt   koira nukkui.*
      bread-PRT / bread-ACC eat-NUT.PAST dog   slept
      'A dog that ate some bread/the bread slept.'

Second, if the participle verb is complemented with a non-finite verb, or a sequence thereof, the object must still take the partitive Case in a negated sentence (Brattico in press, Ross 1967):

(18) *a. Uskoin   Pekan   haluavan   olla syömässä leivä-n   / leipä-ä.*
      believed   Pekka   want.VA   be.A eat.MA   bread-ACC / bread-PRT
      'I believed that Pekka wanted to be eating bread.'

      b. En   uskonut   Pekan haluavan   olla   syömässä
      not.1SG   believed.SG Pekka want.VA   be.A   eat.MA
      *leivä-n   / leipä-ä.
      *bread-ACC/   bread-PRT
      'I did not believe Pekka to want to be eating the bread.'

The relationship between the negation and the object persists despite the intervening nonfinite complements. Neither the main verb nor any of the embedded verbs have a vote on the matter. Therefore, it is a feature of Finnish grammar that the negation requires all direct objects in its path of government to be in the partitive.

CPA suggests that the negation data should be compared with the Q-numeral data. Specifically, the negation assigns partitive Case to an object (or several) it c-commands, but it also bears uninterpretable phi-features. Hence this data confirms CPA. The negation data further demonstrates that it would be wrong to confine Case assignment into a local domain. The negation is able to partitivize direct objects over a distance. This supports the theory of Agree, but it shows at the same time that the standard theory of Agree cannot be the full story. Finnish object Case assignment is not even clause bound, so we need to revisit the issue of locality.

The construction reveals an additional property of Agree that is not part of the standard theory: the negation does *not* phi-Agree with the object DP which it partitivizes; rather, the negation phi-Agrees with the subject, which it also probes into Spec,NegP. Stated in other words, the partitive is a "reflex" of a c-commanding phi-feature probe at the negation as stated in CPA, but there is no upward phi-Agree as assumed in the standard theory. The standard theory will be revised accordingly. The situation is illustrated in (19).

(19) *Pekka   ei   syönyt   leipää*
     Pekka.NOM   not.3SG   eat.NUT   bread.PRT
     NOM $\leftrightarrow$ φ^* $\rightarrow$ PRT

The present analysis can be objected on the grounds that also other negative polarity items, such as negative adverbs, have a similar partitivization effect. This suggests that partitivization is related to polarity, not to agreement. I concur with the hypothesis that polarity does affect Case assignment. On the other hand, these items do not necessitate the partitive, unlike the negation, as they only license it under a verb that does not normally do so (20a–b).

(20) a. *Voitan   *kilpailua   / kilpailun*
        win.1SG   competition.PRT / competition.ACC(n)
        'I will win the competition.'

     b. *Tuskin   voitan   kilpailua   /   kilpailun*
        hardly   win.1SG competition.PRT /   competition.ACC(n)
        'I will hardly win the competition.'

Thus, it still remains that the uninterpretable phi-features at the negation contribute to partitive Case assignment: they make it obligatory in a manner required by structural Case assignment.

Another objection is based on the fact that the partitive-accusative alteration encodes aspect. In brief, the partitive direct object signals the fact that the event described by the sentence is perceived as being incomplete (Vainikka 1989). This opens up the possibility of explaining the partitivization by negation as resulting from the fact that a negative sentence must always be incomplete in its aspect: something that is negated was never completed. This hypothesis is wrong, however. First, because the partitivization by negation is not restricted by clause boundaries, it affects direct

objects in clauses whose aspectual interpretation is not affected by the presence or absence of the negation in *another clause*. Second, the grammatical tests which diagnose the presence of complete/incomplete aspect interpretation can register complete aspect in a sentence that has been negated and whose direct object still occurs in the partitive (Brattico in press).

Both the negation and the quantificational numeral bear uninterpretable phi-features, and they both assign the partitive to a goal they c-command. The negation can assign the partitive to several goals. A finite verb, in contrast, assigns the nominative. This calls for an explanation. The explanation is that the negation and the Q-numeral assign the object Case to an element from which they do *not* get any phi-features, while the finite verb assigns the nominative to an element from which it *does* obtain phi-features. In other words, the nature of the Case assigned depends on whether the goal will donate its phi-features to the probe (see (19)). We will return to this observation later on.

3.4 Accusative alteration

Possibly the most interesting piece of data related to the generalization CPA concerns the Finnish accusative.[7] There are several forms of the accusative in Finnish, two of which are important for present purposes: the n-accusative (ACC(n)) and the 0-accusative (ACC(0)). Vainikka & Brattico (submitted) argue that which of the two accusative suffixes is realized depends on whether the object DP is c-commanded by a predicate (or several) that possesses uninterpretable phi-features $\varphi*$. To see this principle at work, consider (21a–b). In (21a), the direct object is c-commanded by a finite verb which agrees with the subject, hence the n-accusative emerges; in (21b), the impersonal passive verb lacks agreement and the 0-accusative is assigned. Both sentences have a nominative subject and their meaning is the same, regardless of the passive morphology at the verb. They are thus

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[7] The literature on the Finnish accusative is vast and cannot be reviewed here. Basically, if a direct object DP is not assigned partitive Case, it is assigned the accusative. The distribution of the two is controlled by several factors, still partly controversial (Kiparsky 1998, 2001; Vainikka & Brattico submitted). A consensus has emerged which says that the partitive is assigned if the action denoted by the verb phrase is interpreted as not being completed, while the accusative is assigned if it is completed. The accusative Case is therefore linked with the aspectual properties of the clause (Vainikka 1989).

both active sentences. The passive form is used in colloquial Finnish, while the active form is used in written Finnish.

(21) a. *Me   löysimme   auto-n.*
         we.NOM   found.1PL   car-ACC(n)
         'We found a car.'

     b. *Me   löydettiin   auto.*
         we.NOM   found.PASS   car.ACC(0)
         'We found a car.'

Vainikka & Brattico (submitted) argue that this generalization covers all sentence/phrase types. I will not repeat their arguments here. Why should c-commanding phi-features affect the form of the direct object Case? Although at first a mystery, the answer is provided by CPA: Case is a reflex of c-commanding uninterpretable phi $\varphi*$.

The accusative alteration further supports the contention that we should dissociate phi-Agree from Case assignment. The phi-set that regulates the form of the accusative does not come from the direct object bearing the accusative. There is never an agreement between the n-accusative or 0-accusative and the verb. The phi-set that determines the form of the direct object in examples such as (21) emerges from another DP, usually the grammatical subject (21'). A further reason to follow this hypothesis is that the accusative Case assignment, like the partitive of negation, is a long distance phenomenon (Vainikka & Brattico submitted; Brattico in press). There is a remote Case assignment between a probe and its goal such that the two *never* phi-Agree. Brattico (in press) claims that direct object Case assignment and only direct object Case assignment in Finnish is a long distance phenomenon.

(21') a. *Me   löysimme   auto-n.*
          we.NOM   found.1PL   car-ACC(n)
          NOM $\leftrightarrow$ $\varphi*$ $\rightarrow$ ACC(n)

      b. *Me   löydettiin   auto.*
          we.NOM   found.PASS   car.ACC(0)
          NOM   PASS   ACC(0)

Example (21, 21') shows that the nominative Case of the subject must be available without the presence of uninterpretable phi-features at the finite

element. Vainikka & Brattico (submitted) follow the standard minimalist theory and assume that it originates from the C (complementizer), which is often assumed to contain φ* as well.

The accusative rule deviates from the examples investigated so far in the sense that here the bearer of the uninterpretable phi-set assigns the n-accusative and the 0-accusative, not the partitive or the nominative. The problem here is, however, that it has never been clear what the "n-accusative" and the "0-accusative" really are. The difficulty stems from the fact that the n-accusative is homonymous with the genitive, while the 0-accusative is homonymous with the nominative. It is not irrelevant whether we think these features as the true subject Cases, genitive and nominative, respectively, or whether they are regarded as merely homonyms. I leave this technicality for a further study.

3.5 Adpositions

Many adpositions (PPs here) in Finnish assign the partitive to their complement DP (compare *towards him/*he*). For some adpositions there exists a near-synonymous expression with a genitive DP at Spec,PP that also exhibits phi-agreement with the preposition. Compare (22a–b).

(22) *a. Hän nukkui lähellä minu-a.*
        He   slept   near   I-PRT
        'He slept near me.'

      b. Hän nukkui (minu-n)lähellä-ni.
        He   slept   I-GEN   near-PX/1SG
        'He slept near me.'

Agreement in number and person is represented by the possessive suffix in (22b). A non-agreeing DP in an object Case occurs after the preposition, while a DP in the subject Case appears before the preposition, presumably at Spec,PP, and triggers agreement.[8] Example (22a) reveals that a head that assigns the partitive does not need to show overt phi-features, contrary to the the negation and the Q-numeral, both which possess an overt phi-set.

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[8] Only genitive human pronouns trigger overt agreement in this construction, never full DPs. But regardless, Case and phi are systematically related. My own thinking is that the possessive agreement suffix encodes person, number and a human feature (compare *hänen autonsa* 'his car.PX/3SG', **sen autonsa* 'its car.PX/3SG')

The same phenomenon can be observed in connection with transitive verbs, as shown in the next section. We will return to the explanation of this observation in the last section. In addition, to maintain the hypothesis that Case assignment is a reflex of *c-commanding* phi-set, as stated in CPA, we must assume that the genitive DP reaches the Spec,PP position via movement and is assigned its Case prior movement (Manninen 2003; Brattico 2011a). This analysis is illustrated in (23a–b).

(23) *a.* [PP _____   *lähellä*   [DP   *minä*]] (first Merge positions, P + DP)
                          near   I

      b. [PP *minun*   *lähellä-ni* [DP   ____]] (Agree + EPP, Spec + P)
                I.GEN   near-PX/1SG
            'near me'

3.6 Prenominal genitives

In this section we will look at prenominal genitive Case assignment. We begin with the basic properties of Finnish deverbal nominals, as illustrated in (24).

(24) *ne   kaksi holtitonta   isä-n   auto-n ostami-sta*
       those two   reckless-PRT father-GEN car-GEN buying-PRT
       'those two reckless buyings of the car by the father'

The noun head *ostamista* 'buying' is made of a verbal root *osta-* 'buy' and a nominal suffix *-minen* '-ing' in the partitive (*-minen > -mista*). In the sentential context, the verbal root *osta-* is used as a transitive verb; in the nominalized context (20) it is used as a transitive predicate in the sense that the DP contains both the agent (father) and the patient (car). In agreement with previous literature (Brattico 2008; Brattico & Leinonen 2009), I assume that the nominalizer *-minen* selects for a VP (*v*P) which contains the verbal root together with the thematic arguments. The verbal root is combined with the nominalizer *n*, by head movement.

This assumption is supported by several facts, worth keeping in mind. First, the *-minen* nominalization is fully productive. This is expected if the process takes place in syntax. Second, as shown in (25a–b), the deverbal nominalizer can be modified by an adverb. If we assume that adverbs are adjoined to VPs, then this fact poses no mystery.

(25) *a. Uude-n   auto-n osta-minen liian nopea-sti on   virhe.*
      New-GEN   car-GEN buying-NOM too   fast-ADV is   mistake
      'The buying of a new car too fast is a mistake / It is a mistake to buy a car too
      fast.'

      b. ...lukeminen   liian hitaasti voi   tarkoittaa, että ymmärtäminen
      reading   too slowly can mean   that understanding
      vaikeutuu.
      becomes.more.difficult
      'Reading too slowly can mean that understanding becomes more difficult.'

Third, whatever thematic roles are assigned in the corresponding clausal
context are mirrored in the nominal context. This parallelism is illustrated
in (26a–b).

(26) *a. Isä   osta-a   auton.*
      father.agent   buy-3SG   car.patient.
      'The father buys a car.'

      b. isän   auton   ostaminen
      father.agent   car.patient buying.NOM
      'the buying of a car by the father'

This pattern becomes understandable if both expressions are built from the
same underlying VP, distributing the same thematic roles to the argument
DPs.

Vainikka (1989) argues that Finnish genitive Case is assigned to
Spec,NP (or Spec,*n*P under the current system, see Huhmarniemi 2012;
Brattico & Leinonen 2009). The genitive DPs, unlike PP and CP argu-
ments, always occur in a prenominal position. There are three problems in
Vainikka's hypothesis. The first puzzle is that there can be from zero to
two genitive DPs in the prenominal position, suggesting that one specifier
position is not enough.[9] The second puzzle concerns case concord. Finnish
shows extensive case concord, as shown in (27a–b).

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[9] In a recent study, Huhmarniemi (2012) assumes that *n* selects for an NP. This leaves
room for two nominal specifiers, Spec,NP and Spec,*n*P. If the DP is projected originally
from a category-neutral root, as I assume here, then Huhmarniemi's hypothesis means
that there are two nominalizers *n-n**, perhaps analogous to the verbal *v-v** system. This
hypothesis provides the two specifier positions required in Vainikka's analysis.

(27) *a. Minä katsoin   yh-tä   pien-tä   punais-ta talo-a.*
     I   looked at   [one-PRT small-PRT red-PRT   house-PRT]:PRT
     'I watched that one small read house.'

   b. Minä näin yhde-n   piene-n   punaise-n   talo-n.
     I   saw   [one-ACC   small-ACC red-ACC   house-ACC]:ACC
     'I saw one small red house.'

But genitive DPs constitute an exception to this pattern: they need not show the Case feature assigned to the DP as whole. We say that they constitute a "case concord island" within the DP:

(28) *Todistin   sitä   kauheaa   **sikojen**   teurastamista.*
     Witnessed.1SG [that.PRT horrible.PRT   pig.PL.GEN butchering.PRT]:PRT
     'I witnessed that horrible butchering of the pigs.'

Why genitive DPs are spared from Case concord even if they appear to c-command the nominal head? Vainikka's model can describe these facts by stipulation, but it does not explain them.

    The third problem is as follows. We have seen evidence that nominalization takes place in syntax by means of head raising (verbal root => *n*). The thematic arguments of the deverbal nominal, on the other hand, are generated inside the VP. But these operations predict that the genitive DPs should occur in the postnominal position. The two genitive DPs must, therefore, find their way to Spec,*n*P before they are pronounced or spelled out. But if they obtain the genitive Case at that position, then the hypothetical Spec-head Case assignment rule must assign the genitive Case *after* A-movement. This assumption violates the theory of Agree, which says that the EPP-movement follows Case assignment and phi-agreement.

    These problems are related to each other. They are all solved if we follow the standard theory of Agree and assume that the genitive Case is assigned *before* movement. If the genitive DPs are based-generated inside the VP, there is no reason why they should be assigned matrix Case. This is because case concord does not reach postnominal elements and will therefore not percolate to the VP. Case concord island phenomenon is explained, too. Suppose that the genitive arguments are first assigned genitive Case *in situ* inside the VP by the nominalizer *n* and are then moved to the prenominal Spec,*n*P position. A Case concord island will be generated. These operations also derive the correct word order facts: genitive DPs appear at the

Spec,*n*P while other constituents, such as PPs and CPs, can appear in the postnominal position.

More evidence for the assumption that prenominal genitive DPs are moved rather than base-generated to their prehead position can be derived from Finnish nominal raising constructions. The relevant construction is shown in (29).

(29) a. *Vauvan   näyttäminen   nukkuv-a-lta   oli   helpotus.*
         Baby.GEN semblance   sleep-VA.SG-ELA was   relief
         'Baby's looking like he would be sleeping was a relief.'

      b. *Vauvojen   näyttäminen   nukku-vi-lta   oli   helpotus.*
         Babies.GEN semblance   sleep-VA.PL-ELA was   relief
         'Babies' looking like they would be sleeping was a relief.'

Vauva 'baby' is not the semantic subject of *näyttäminen* 'semblance', but rather the thematic subject of *nukkuvalta* 'like sleeping.SG'. As can be seen by comparing (29a–b), the embedded predicate *nukkuvilta* 'like sleeping.PL' agrees in number with the raised subject *vauva/vauvojen* 'baby/babies' (incomplete agreement is associated with a trace/copy left by movement). As expected, it is possible to construct a sentence in which the prenominal genitive represents the embedded object, as in the following:

(30) *Pellon   näyttäminen   rottien   tuhoamalta säikäytti minut*
      field   semblance   rats.GEN   destroyed   frightened me
      'The field's looking like it had been destroyed by rats frightened me.'

The prehead genitive DP *pellon* 'field.GEN' is the thematic object of *tuhoamalta* 'get destroyed'. This evidence shows that the prenominal position, like the subject position of a finite clause, is not a thematic position, and is presumably filled by EPP-movement.

Two further pieces of evidence for the assumption that the genitive DP comes to Spec,*n*P via movement is provided by agreement facts. First, the prenominal genitive pronoun DPs agree in phi-features with the nominal head.

(31) *Minun   auto-ni   hajosi.*
      My   car-PX/1SG broke
      'My car broke down.'

The possessive suffix agreement does not encode possession or other se-
mantic attribute, but reflects the pronoun that is raised to Spec,*n*P irrespec-
tive of its semantic role:

(32) *minun   esittely-ni*
      my   introduction-PX/1SG
      'the introduction of me to somebody else' or
      'the introduction of somebody by me.'

Second, we have seen that the genitive pronoun agrees with the noun in full
phi-features. The genitive DP also agrees with the embedded predicate, but
this agreement is incomplete. Incomplete agreement often takes place be-
tween traces/copies left behind by movement. For instance, in a Finnish
negative clause the negation shows full phi-features but the tensed verb
shows incomplete number agreement (in the past). There is evidence that
the subject DP has been moved through the Spec,TP position before land-
ing into Spec,NegP (Brattico & Huhmarniemi 2006). Analogously, the in-
complete phi-agreement shown on the predicate in a nominal raising con-
struction might signal the presence of movement.

     Consider CPA, which says that Case is a reflex of c-commanding un-
interpretable phi. The prenominal genitive constructions have exactly these
properties. The functional head *n* possesses uninterpretable phi-features
and, therefore, counts as a Case-probe. The nominalizer is merged with a
VP that contains the (two) argument DP(s), so *n* will c-command these
DPs. Therefore, it will assign Case to them. Finally, *n* has the EPP-feature
which forces both DPs to move to Spec, *n*P (see Brattico & Leinonen
2009)(33a–b).

(33) *a.* [$_{nP}$ _____   -*y*   [$_{VP}$ *esittele- minä*]
                       *n,*φ*   present- I

      b. [$_{nP}$ *minun*$_i$ *esittel*$_j$-*y-ni* [$_{VP}$ __$_j$ __$_i$]
              I.GEN   present-*n*-PX/1SG
           'introduction of me/introduction by me'

3.7 Preverbal genitive DPs

The genitive is also associated with certain verbs. Finnish VA-infinitivals,
for one, take prehead genitive DP arguments:

(34) *Pekka   näki Merja-n   lähte-vän.*
     Pekka.NOM saw Merja-GEN leave-VA.present
     'Pekka saw Merja leaving.'

Because the VA-infinitival shows tense, it contains at least the TP (tense phrase). The VA-infinitival agrees in phi-features with the embedded subject, provided that the subject is phonologically empty and coreferential with the matrix subject, hence assumed to be represented by PRO (an empty pronominal):

(35) *Minna   uskoi   PRO lähte-vä-nsä.*
     Minna   believed   leave-VA-PX/3SG
     'Minna believed that she would leave.'

This construction can be unified seamlessly with the prenominal genitive data by assuming that the genitive DP has been moved to the Spec,TP, exactly as the prenominal genitive is moved to Spec,*n*P, both triggering prenominal agreement. There is direct evidence for this proposition. It is possible to craft a VA-raising construction and then have an embedded thematic object DP to occupy the same prehead position:

(36) *Minä uskon   auton   näyttävän   hienolta.*
     I   believe car.GEN seem.VA   fine.SG.ELA
     'I believe that the car will look fine.'

I therefore assume that the genitive Case is assigned by T, after which the genitive DP is moved to Spec,TP. This analysis agrees with CPA: the genitive Case is assigned by a c-commanding functional head bearing an uninterpretable phi-set (37a), just prior EPP-movement (37b).

(37) *a.* _____   T   *näyttävän* [*auton   hienolta*]
               φ* seem.VA   car.GEN fine.SG.ELA
          Agree(φ*, *auton*)

     b. auton   T   *näyttävän* [_____   *hienolta*]
          car.GEN φ* seem.VA   fine.SG.ELA
          EPP(*auton*)

3.8   Preadjectival genitives

A participle adjective (glossed as MA) crafted from a transitive root may take either the patient or the agent argument within its own projection (but not both). When the agent argument is included, it appears before the adjective and agrees in full phi-features with the adjective:

(38) *Meidän nopeasti löytä-mä-mme   pallo   oli   rikki.*
      we.GEN fast   find-MA-PX/1PL ball   was   broken
      'The ball found fast by us was broken.'

It is not possible to show that the genitive DP has been moved to the prehead position, because the participle adjective does not have a raising form. On the other hand, as seen in (38), these adjective phrases are compatible with verbal adverbs. This suggests that they are composed out of underlying VP, which hosts the thematic argument before it is raised to Spec,*a*P (*a* = adjectivizer, see Brattico 2005). Is there any reason to believe that the adjective contains the TP? One obvious reason derives from the observation that the participle adjectives in Finnish do show overt tense alteration. If we indeed assume that the adjective phrase is composed out of the T + *a* + *v** structure, namely, because they allow eventive adverb modification, assign object Case, contain an external argument and show tense, then this construction can be unified with other constructions with prehead genitive DPs arguments. The adjectivizer *a* or T (or both) first assign the genitive to the argument it c-commands and phi-agrees with it, then the genitive DP is raised to a left peripheral "subject" position at Spec,TP or Spec,*a*P. Principle CPA applies. The genitive Case is assigned either by T or *a* to the base position of the argument DP, after which the DP raises to Spec,TP or Spec,*a*P. The Case-probe contains an uninterpretable phi-set, as shown by the agreement facts.

3.9   Transitivity and object Case

Transitivity in Finnish is associated with the partitive and the accusative. Transitive verbs assign either Case depending on the aspectual properties of the verb (or the whole VP). This is true of finite and non-finite verbs alike. Deverbal participle adjectives, too, are capable of assigning the object cases and they come with a similar shift in aspectual interpretation (39a–b).

(39) *a. Leivä-n   syö-nyt   koira löytyi.*
         bread-ACC eat-NUT.PAST dog   was.found
         'The dog that ate the whole bread was found.'

      b. Leipä-ä   syö-nyt   koira löytyi.
         bread-PRT eat-NUT.PAST dog   was.found
         'The dog that ate some of the bread was found.'

I assume that the object Case is assigned by the transitivizer *v**. In this case, it is more difficult to assess directly how well these facts fall under CPA: Finnish doesn't show object agreement. Therefore it is hard to tell whether *v** possesses phi-features. Either *v** constitutes an exception, or an independent factor prevents overt object agreement in Finnish. These theoretical options are discussed in the last section.

3.10 Summary of the data

Several grammatical contexts have been examined which involve Case assignment, phi-Agree and movement. The results are summarized in Table 1.

Table 1. Case assignment, phi-agreement and EPP

Probe	Assigns Case	Phi-probe	phi-Agree	EPP
Finite verb	NOM	yes	yes	yes
Preposition (type 1)	GEN	yes	yes	yes
Noun head	GEN	yes	yes	yes
VA-infinitival	GEN	yes	yes	yes
MA-adjective	GEN	yes	yes	yes?[a]
Q-numeral	PRT	yes	no[b]	no
Negation	NOM/PRT	yes	yes/no	yes[c]
Transitivity (*v**)	PRT(ACC)	no	no	no
Preposition (type 2)	PRT	no	no	no
Quantifier	no	no	no	no
Demonstrative	no	no	no	no
Numeral yksi 'one'	no	no	no	no
A-numeral	no	no	no	no
Adjective modifier	no	no	no	no
Complementizer	no	no	no	no
Conjunction	no	no	no	no
Clitic (-kO,-hAn,-pA)	no	no	no	no

[a] Property not possible to show, because the diagnostic raising construction is illicit.
[b] The numeral is fixed lexically to [singular], agreeing with the noun head.
[c] The negation assigns NOM to the subject and PRT to the direct object. It phi-Agrees with the subject.

The left column lists the Case-probes discussed so far together with a control group containing functional heads for which it is not possible to show that they assign Case. The second column from the left lists the Case features assigned by that particular probe. The middle column labeled as 'phi-probe' is composed so that 'yes' appears if the probe can have phi-features, and the next column tells whether the goal must also agree in its phi-features with the probe. The rightmost column tells whether the probe also attracts the goal to its Spec.

Prepositions occur twice in Table 1, because many of them have two forms: one assigning the partitive and the other the genitive.

4. A theory of Agree

The data shows a near-perfect correlation between Case assignment and the presence of uninterpretable phi-features (second and third rows from the left). In addition, the grammatical head bearing the uninterpretable phi-set c-commands the Case assignee. These properties follow from CPA. It would seem that CPA describes structural Case assignment in Finnish in a cross-categorical or construction-independent fashion. When a functional head comes to possess uninterpretable phi-features, for whatever reason, Case feature always emerges downstream, independent of the grammatical context or construction.

We cannot claim that Case assignment goes in tandem with phi-valuation (assignment of a phi-value). There are too many constructions which violate this condition: the negation, adpositions and transitive verbs being the clearest counterexamples. The negation data is particularly telling, since the partitivization crosses clause boundaries and thus Case assignment obtains between remote elements that can *never* phi-Agree, under any circumstances. On the other hand, Table 1 reveals that the bidirectional feature flow holds quite generally for the subject Cases, the genitive and the nominative. These are regularly associated with overt phi-Agree. To capture this correlation, I will correlate phi-Agree with the subject Case assignment ("subject Case assignment" covering both the nominative and genitive assignment) and not with object Case assignment. We will still sharpen this idea later on, but the underlying idea must be correct.

According to the standard theory, phi-agreement and Case assignment establish a bidirectional relation even if there are no overt phi-features at the probe. But since there aren't always overt phi-features at the probe,

something more has to be said. The usual strategy is to claim that the transitivizer, say, bears abstract, or *covert*, phi-features. Finnish data leads me to question this analysis: there are too many constructions which require the presence of abstract phi-agreement, making the notion suspiciously empty of empirical content. In addition, long distance Case assignment would require abstract phi-agreement over a distance and between elements which can never agree.

It is tempting to correlate object Case assignment with the presence of c-commanding uninterpretable phi-features, as stated by CPA. There is much data which confirms this generalization: the Q-numerals, accusative alteration, and the partitive of negation striking me as particularly interesting. But there are counterexamples, such as the adpositions and transitive verbs. They assign the object Cases but do not bear overt uninterpretable phi-features. If we look closer, it is evident that the criterial property for the object Case assignment is not the *existence* of c-commanding uninterpretable phi-features φ* but the fact that phi-Agree does not and cannot take place. The reason why a c-commanding uninterpretable phi-feature set at some grammatical head is linked with the object Case assignment must be because *those heads cannot phi-Agree the second time*. If a functional head is valued some phi-features, or the phi-features are lexically specified, that functional head must reject further phi-Agree. This condition subsumes also the transitive verbs and adpositions. There is no object agreement in Finnish, so transitive verbs, or rather *v*, must reject phi-Agree with the object DP. The same generalization applies to those adpositions which assign the object Cases: there is never phi-Agree. I propose that object Case assignment results from "rejected phi-Agree".

These generalizations can be unified in the following way. Suppose P is a functional head, a probe, and G is a nominal element, the goal. Then (40) must be part of the theory of Agree:

(40)   *Condition of Agree*
       a. The goal G is assigned an object Case (partitive, accusative) only if it does not and cannot value its phi-features to P (its phi-features are *rejected*)
       b. The goal is assigned a subject Case (genitive, nominative) only if it does value its phi-features to P (its phi-features are *accepted*).

Generalization (40) puts the quantificational Case construction on par with transitive verbs, many adpositions and the negation in that all of these elements *reject* the phi-features from the goal they assign the object Case.

They reject the phi-features for different reasons, however. Transitive verbs and many adpositions reject the phi-features because they cannot inflect for the phi-features in the first place (in any context in this language); the negation rejects them because it had agreed already with another DP, the subject; and the Q-numeral rejects the phi-features because it is lexically marked for the phi-feature [singular].[10]

Generalization (40) makes a distinction between direct object Cases and subject Cases, but there are two varieties of both: the partitive and the accusative are both direct object Cases while the nominative and the genitive are subject Cases. While the partitive and the genitive are the cross-categorically default object and subject Cases, respectively, the nominative and accusative are "special". The nominative is linked with agreement in the finite clause (excluding the possibility that the zero-accusative is actually the nominative), and the accusative Case is associated with a special aspectual interpretation and therefore only occurs in the direct object position of verbal or deverbal predicates. The accusative Case is thus triggered by an aspectual feature residing in the vP, and the nominative is associated with the finiteness fin^0-head residing in the CP-layer. Because fin^0 phi-Agrees, a subject Case is assigned; because v never phi-Agrees, it assigns the object Case. These properties follow from (40).

According to (40), Case assignment is linked with phi-valuation. Specifically, Case assignment reflects probe's desire or refusal to get phi-features. Let's call this property its *phi-specification*. Functional head's phi-specification is a lexical property which dictates how the element will interact with phi-features nearby. CPA may then be reformulated:

(41) *Condition of Phi-Agree (final version) (CPA*)*
     Structural Case is a reflex of c-commanding phi-specification.

Intuitively, structural Case assignment is a reflex of whether a c-commanding functional head will accept or reject its phi-features.

What other properties must hold for Agree? The probe must c-command the goal. The probe can only "probe" into its derivational past, not into its future. Another obvious property is that the goal must be a potential phi-donator. I capture this property by borrowing Chomsky's *feature*

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[10] Notice that this generalization only works if we assume that the two variants of the accusative, 0-accusative and n-accusative, are direct object cases and on par with the partitive and the true t-accusative Case. An alternative analysis is to regard them as the subject Cases nominative and genitive.

match condition (Chomsky 2000: 122–123). Probe's phi-specification must match with interpretable phi-features at the goal. This explains why Case is assigned to nominal element: they are the potential phi-donors. Finally, for most situations we must assume that a given DP is assigned its Case only once. In other words, for each probe-goal pair, the decision concerning whether the goal will donate its phi-features to the probe will be made only once; after the decision is made, it is never negotiated again.

As stated in the standard theory of Agree, EPP must be factored out from the mechanism that regulates Case assignment and phi-valuation. It is often true that the EPP follows subject Case assignment and phi-Agree, but not necessarily. Similar, it is often true that EPP-movement does not follow object Case assignment, but this condition, too, is not absolute. The reversed construction discussed by Holmberg & Nikanne (2002) shows this: the agreeing subject remains *in situ* while the direct object satisfies the EPP-condition of the finite verb. In addition, there are constructions where the relation between EPP and Agree is strict. For instance, the genitive DPs inside a noun phrase can never be in the post-nominal position: they must always EPP-move. I have argued elsewhere that the EPP-diacritic regulating such facts is irreducible and must be assumed to be part of the lexical specification (Brattico 2011a). Why it correlates with phi-specification remains to be explained; one possibility is that movement of a whole DP is functionally equivalent to the transfer of its phi-features. This explains why heads which do not agree overtly with a DP in the Spec nevertheless can assign the subject Case (Brattico submitted).

In a recent paper, Vainikka (2011) presents strong arguments towards the conclusion that in Finnish, the genitive can be assigned also into an upward direction, from a head to its Spec. This analysis returns partially to the earlier theory which implements Case assignment under a local Spec-Head relation. She proposes that there are two Case assignment mechanisms, the downstream pointing relation, described here, and another pointing into an upward direction. CPA* rules out the upward directed Case assignment mechanism. Vainikka's main argument derives from examples such as *valtavan paljon ihmisiä* 'enormous.GEN many people', where there seems to be no c-commanding functional head assigning the genitive to the adverbial modifier. An obvious theoretical alternative is to regard the adverb as consisting of a lexical root and a functional head ('adverbializer'), and assume that the modifier is merged between the root and the functional head and assigned its Case by the functional head, exactly as is the case with the verbal, adpositional, nominal and adjective constructions. But the

case is hard to establish convincingly. I will leave the matter for future research, merely noting here where the disagreement lies and how Vainikka's argument can be used as a powerful argument against the present theory.

Agree, and agreement in general, presents a mystery for minimalism. There appears to be nothing that is "given" in the context of linguistics that could explain these properties. The present hypothesis provides the following perspective on this matter. Each functional head makes a stance, its phi-specification in essence, concerning what type of phi-features it will require within its own projection: interpretable in their own terms (e.g. plural marking on nouns) or uninterpretable (e.g. plural marking on a finite verb), and if the latter, whether they are lexical (e.g. singular on the numerals) or borrowed from another location (e.g. singlar on a finite verb). It they are borrowed, it will also require either the transfer of phi-features (Agree), the transfer of a whole phrase carrying those features (EPP), or both. If we assume that language(s) incorporate a hierarchical phi-specification system of this kind, structural Case appears to encode, in a one-to-one fashion, such specification. I propose that phi-specification is a lexically determined feature of functional heads, and structural Case is its phonological exponent. If so, at least one half of the mystery, the origin and function of structural Case, is solved.

5. Conclusions

A number of constructions were examined in Finnish which involve Case and Phi. It was argued that the theory of Agree provides a useful perspective to examine these constructions, allowing us to explain their otherwise mysterious properties. However, some properties do not fall under the standard theory of Agree and it was revised accordingly. More specifically, it was proposed that structural Case is a reflex of uninterpretable *phi-specification feature* of a c-commanding functional head. A phi-specification in turn determines whether a functional head will require phi-features within its own projection. If it does, it may request them by phi-Agree (transfer of phi-features alone), by EPP-movement (transfer of the host together with the phi-features), or by both. If if doesn't, then phi-Agree does not apply and EPP becomes optional.

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