

# There and back again: An accusative's journey for case

## A Phase Impenetrability Condition-consistent account of accusative variation in Finnish rationale adjuncts

W.A. (Walther) GlödstaF

PhD in Linguistics, University of Illinois, Urbana-Champaign (United States)

Manuscript written during his RMA Linguistics, Utrecht University, Utrecht

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### ABSTRACT

A previous analysis of long distance case assignment on Finnish direct objects was claimed to violate the Phase Impenetrability Condition (Brattico, 2014) due to the matrix verb's T clearly influencing the case assignment (Brattico & Vainikka, 2014) inside rationale adjuncts. A raising analysis will be proposed here to show that a Phase Impenetrability Condition-consistent analysis is possible, as data from relative clauses show that movement of the direct object to the edge of the phase would explain the lack of case form variation in relative pronouns in contrast to non-relative clauses.

## 1. Introduction

Finnish rationale adverbial clauses ('in order to verb'), vary which form the accusative case of a singular non-pronominal direct object takes, depending on whether the matrix clause's verb has morphology showcasing overt-phi-agreement (henceforth OPA).<sup>1</sup> As shown below, when the matrix verb has OPA, the accusative can only be realised as ACC(n) (1a). When it lacks OPA (1b), variation between ACC(n) and ACC(O) is possible. ACC(n) refers to the accusative form that is homophonous with the genitive case and identified by the '-n' case suffix, while ACC(O) refers to the accusative form homophonous with the nominative and identified through a 'zero' case suffix.

- (1) a. *Frodo ja Sam. läht-i-vät löytää-ksee-n*  
 Frodo and Sam.NOM left-PAST-3P find-KSE<sup>2</sup>-Px3S/P<sup>3</sup>  
*Bilbon/\*Bilbo.*  
 Bilbo.ACC(O)/ACC(n)  
 'Frodo and Sam needed to leave in order to find Bilbo.'

1 This is a descriptive label for the morphological correlation between verbs and accusative form, not a claim about a theory of phi-agreement!

2 Marks rationale adjuncts through the '-kse' affix that identifies it.

3 Possessive-suffix specified for person and number (here the affix is shared between 3rd singular and plural).

- b. *Frodon ja Samin. täyty-i lähteä löytää-ksee-n*  
 Frodo and Sam.GEN need-PAST leave find-KSE-Px3S/P  
*Bilbo/ Bilbon.*  
 Bilbo.ACC(0)/ACC(n)  
 ‘Frodo and Sam needed to leave in order to find Bilbo.’

## 2. Brattico (2014)’s Analysis

As introduced above, rationale adjuncts in Finnish alternate between ACC(0) and ACC(n) case when the matrix verb lacks OPA. Verbs that lack OPA are necessives (*need to verb*), possessives (*I have X*), and impersonal passives. The presence or absence of OPA, resulting in ACC(n) and ACC(0) respectively, also holds in simple clauses. 2(a), 2(b) and 2(d) show this for necessives, impersonal passives and possessives. All of these latter verbs take different subject cases including nominative. Thus, nominative case not having been assigned on the subject (Jahnsson’s Rule (Jahnsson, 1871)) cannot be the explanation for the variation (Brattico & Vainikka, 2014).

- (2) a. *Bilbo ja Gandalf löys-i-vät tie-n.*  
 Bilbo ja Gandalf.NOM find-PAST-3P road.ACC(n)  
 ‘Bilbo and Gandalf found a/the road.’
- b. *Bilbon ja Gandalfin täyty-i löytää tie.*  
 Bilbo and Gandalf.GEN need-PAST find road.ACC(0)  
 ‘Bilbo and Gandalf needed to find a/the road.’
- c. *Me löydett-iin tie.*  
 We.NOM find.IMPASS<sup>4</sup>-PAST road.ACC(0)  
 ‘We found a/the road.’
- d. *Bilbolla ja Gandalfilla ol-i kiire löytää tie.*  
 Bilbo and Gandalf.ADE have.PAST hurry.ACC(0) find road.ACC(0)  
 Literally: ‘Bilbo and Gandalf possessed a hurry to find a/the road.’

This case assignment is analysed as a two-step process of ‘First Agree’ and ‘Second Agree’ (Brattico, 2014).<sup>5</sup> ‘First Agree’ is the agreement process where the unvalued phi-features on T are valued and the subject receives its case and the partitive-accusative distinction on the DO based on telicity is made. During ‘Second Agree’, the probe from T with its now valued phi-features travels further, affecting other active goals in its path, as per the Chomsky-Hiraiwa Multiple-Agree hypothesis (Chomsky, 2008; Hiraiwa, 2005). This means that “Agree does not stop reading the structure when it finds the first goal; instead it keeps affecting active goals on its path” (Brattico, 2014, p. 325). Active goals here are for instance DPs lacking structural case. The process would thus look as below for sentence (2a) (Brattico, 2014).

4 Impersonal passive

5 A reviewer remarked this proposal is already made in Bejar & Rezac (2009). While the models might work together, they are only similar by using cycles, since Bejar & Rezac (2009) is not compatible with a multiple-agreement-hypothesis (Chomsky, 2008; Hiraiwa, 2005). It is also not clear what type of probe Bejar & Rezac (2009) would use since the OPA feature is about the absence/presence of morphology - not feature values.

- (i) Start of the derivation  
 T.[uφ] Bilbo ja Gandalf.[uCASE] v.[ uφ] löysi- tie-.[uTelicity & uCASE]  
 T.[uφ] Bilbo and Gandalf.[uCASE] v.[ uφ] find.PAST road.[uTelicity & uCASE]  
 ‘Bilbo and Gandalf found the road.’
- (ii) ‘First Agree’  
 T.[3P] Bilbo ja Gandalf.NOM v.[3P] löysivät tie-.[+Telicity & uCASE]  
 T.[3P] Bilbo and Gandalf.NOM v.[3P] find.PAST.3P road.[+Telicity & uCASE]  
 ‘Bilbo and Gandalf found the road.’
- (iii) ‘Second Agree’  
 T.[3P] Bilbo ja Gandalf.NOM v.[3P] löysivät tien  
 T.[3P] Bilbo and Gandalf.NOM v.[3P]find.PAST.3P road.ACC(n)  
 ‘Bilbo and Gandalf found the road.’

Since the DO is an active goal until ‘Second Agree’ and sensitive to the OPA on T, Brattico (2014) assumes that there are two different phi-feature types in Finnish; one overt ([+OPAφ]) and the other null ([-OPAφ]). Therefore, due to the accusative case form’s sensitiveness to whether the verb has or lacks OPA, ‘Second Agree’ can conceptually be explained as the DO having an unvalued phi-feature. The feature’s subsequent valuation as either the [+OPA] or [-OPA] type during ‘Second Agree’ determines the accusative form. Now that we understand how accusative case assignment works in simple clauses, let us turn to how the process works in rationale clauses to explain the accusative variation we find in it.

As explained before, ACC(0)/ACC(n) variation in rationale adjuncts only occurs when the matrix verb lacks OPA. On the surface this is easy to explain. When the matrix verb has OPA, its T and the rationale adjunct’s T can both assign ACC(n) only as the case form in (3a). Matrix T’s OPA is signaled through the ‘Ø’ third person singular ‘regular’ phi-morphology. The rationale adjunct’s T’s OPA is signaled through the third person singular/plural possessive suffix that denotes the anaphoric little pro (van Steenberghe, 1991).

- (3) a. *Bilbo petkutt-i-Ø Klonkku-a löytää-ksee-n.*  
 Bilbo.NOM deceive-PAST-3S Gollum-PAR find-KSE-Px3S/P  
*tie-n ulos luolista.*  
 road-ACC(n) out caves.ELATIVE  
 ‘Bilbo deceived Gollum in order to find the road out of the caves.’

However when the matrix verb lacks OPA, then ACC(0)/ACC(n) variation ensues.

- (3) b. *Bilbon täyty-i petkuttaa Klonkku-a löytää-ksee-n.*  
 Bilbo.GEN need-PAST deceive Gollum-PAR find-KSE-Px3S/P  
*tie-n ulos luolista.*  
 road-ACC(n) out caves.ELATIVE  
 ‘Bilbo needed to deceive Gollum in order to find the road out of the caves.’

Brattico (2014) explains this variation as an effect of partial intervention (Starke, 2001). Starke (2001)'s intervention framework works as follows: When the probe and the goal are intervened by functional projections bearing all the same features, a full intervention ensues. When only a subset of these features is present, a partial intervention ensues, resulting in the probe sometimes being intervened and sometimes not. If none of these features are present then the probe always matches with the goal.

Matrix T's probe is in Brattico (2014)'s analysis a bundle of polarity- phi-, and full tense features. Full tense is defined as "a system where a single element has at least two overt tense forms, past and present" (Brattico, 2014, p. 318). They are motivated by the phi-feature determining the Accusative form, whereas the polarity feature assigns partitive case for instance in negations, which in Finnish act as auxiliaries specified for phi-features, while the main verb specifies the tense as below.

- (4) *Frodo ei-Ø tuho-nnut sormus-ta.*  
 Frodo.NOM no-3S destroy-PAST ring-PAR  
 'Frodo did not destroy the ring.'

The full-tense feature is responsible for the partial intervention in the rationale adjunct, since as shown below, it can host a negative-polarity item (such as 'hardly' (in Finnish 'tuskin')).

- (5) *Frodo täyty-i paeta Konnusta tuskin anta-ksee-n.*  
 Frodo.NOM need-PAST flee Shire.ELA hardly give-KSE-Px3S/P  
*sormus/sormuksen Sauronille vaan tuhota-ksee-n*  
 ring.ACC(0)/ACC(n) Sauron.ALLATIVE but destroy-KSE-Px3S/P  
 se/ se.  
 it.ACC(0)/ACC(n)  
 'Frodo needed to flee the Shire, hardly in order to give Sauron the ring but to destroy it.'

Through the possessive-suffix in the rationale adjunct we also know it has OPA, but what it lacks, is full-tense. Therefore, the probe from matrix T and the active DO goal inside the adjunct would only be intervened by polarity- and phi-features resulting in a partial intervention and variation. Further proof of this variation is that a Partitive ACC(n) variation can be induced by having a negated neccessive as the matrix clause's verb.

- (6) *Frodo ei-Ø men-nyt Mordoriin antaa-ksee-n.*  
 Frodo.NOM no-3S go-PAST Mordor.ILL give-KSE-Px3S/P  
*?sormusta/ sormuksen Sauronille.*  
 ring.?PAR/ACC(n) Sauron.ALLATIVE  
 'Frodo did not go to Mordor in order to give the ring to Sauron.'

The proposal is that when variation occurs, ACC(0) is licensed by matrix T whose phi-features are valued as their null variant, while ACC(n) is licensed through the adjunct internal T's overt variant through the possessive-suffix as in Table 1 below.

Table 1

| Type of Phi-feature valuation | Matrix T | Adjunct T <sup>6</sup> | DO Case       |
|-------------------------------|----------|------------------------|---------------|
| Overt                         | ACC(n)   |                        | ACC(n)        |
| Covert                        | ACC(0)   | ACC(n)                 | ACC(0)/ACC(n) |

The prediction of this analysis is thus that in a construction where matrix T's probe and an active DO goal are intervened by polarity-, phi-, and full tense features, a matrix verb lacking OPA should not be able to influence the case of a DO further down the syntactic structure (Brattico, 2014). As shown below, this is the case for instance in temporal adjectives (Brattico, 2014) that carry phi-features in the form of a possessive-suffix (7a), can host a negative polarity item (7b), and have full tense features as the past/present alternation between (7a) and (7c) show.

- (7) a. *Sam ilahtu-i-Ø näh-tyää-n haltia.*  
 Sam.NOM rejoice-PAST-3S see-TEMP(PAST)-Px3S elf.ACC(n)  
 'Sam rejoiced after seeing an elf.'
- b. *Sam ilahtu-i-Ø tuskin näh-tyää-n haltian.*  
 Sam.NOM rejoice-PAST-3S hardly see-TEMP(PAST)-Px3S elf.ACC(n)  
 'Sam rejoiced hardly after seeing an elf.'
- c. *Sam ilahtu-i-Ø nähd-essää-n haltian.*  
 Sam.NOM rejoice-PAST-3S see-TEMP(PRES)-Px3S elf.ACC(n)  
 'Sam rejoiced while seeing an elf.'

Yet, as shown below, even when the matrix T lacks OPA, ACC(0) is an ungrammatical form for the DO inside the temporal adjunct.

- (8) *Samin täyty-i ilahtua nähd-essää-n haltian/\*haltia,*  
 Sam.NOM need-PAST rejoice see-TEMP(PRES)-Px3S elf.ACC(n)/\*ACC(0)  
*tai Frodo petty-i-si-Ø.*  
 or Frodo.NOM disappoint-PAST-COND-3S  
 'Sam needed to rejoice while seeing an elf or Frodo would become disappointed.'

Similarly, manner adverbials lack polarity-<sup>7</sup>, phi-<sup>8</sup>, and tense features as shown in (9). They are thus 'transparent' for the probe (Brattico, 2014).

6 The rationale Adjunct T always has OPA obligatorily.

7 Or at the least the sentence seems 'odd' with one (Brattico, 2014:320).

8 Some native Finnish speakers in Helsinki interviewed by the author spontaneously produce overt phi-morphology on the manner adverbial. The data here is presented as in Vainikka & Brattico (2011:49) and Brattico (2014).

- (9) a. ?\**Gandalf viehett-i-Ø lapsia tuskin ampu-malla.*  
 Gandalf.NOM charm-PAST-3S child.PAR hardly shoot-MA  
*ilotulitteen.*  
 firecracker.ACC(n)  
 ‘\*Gandalf charmed the children hardly by shooting a firecracker.’
- b. \**Gandalf viehätt-i-Ø lapsia ampu-mallaa-\*n.*  
 Gandalf.NOM charm-PAST-3S child.PAR shoot-MA-\*Px3S/P  
*ilotulitteen.*  
 firecracker.ACC(n)  
 ‘Gandalf charmed the children by shooting.Px3S/P a firecracker.’

Further the adjunct internal DO’s Case is always decided according to whether the matrix verb has or lacks OPA or is negated. Predictably when the matrix verb has OPA, the DO can only be ACC(n) (10a). When the matrix lacks OPA, the DO can only be ACC(0) (10b), and when the matrix verb is negated, the DO is always assigned Partitive Case (10c).

- (10) a. *Gandalf viehätt-i-Ø lapsia ampu-malla ilotulitteen.*  
 Gandalf.NOM charm-PAST-3S child.PAR shoot-MA firecracker.ACC(n)  
 ‘Gandalf charmed the children by shooting a firecracker.’
- b. *Gandalf täyty-i viehättää lapsia ampu-malla lotulite.*  
 Gandalf.NOM need-PAST charm child.PAR shoot-MA firecracker.ACC(0)  
 ‘Gandalf charmed the children by shooting a firecracker.’
- c. *Gandalf ei-Ø viehättä-nyt lapsia ampu-malla ilotulitetta.*  
 Gandalf.NOM no-3S charm-PAST child.PAR shoot-MA firecracker.  
 PAR  
 ‘Gandalf did not charm the children by shooting a firecracker.’

Given this evidence, it is tempting to assume that the accusative variation is caused by partial intervention and violates PIC, since matrix T’s probe travels into the adjunct to give the DO case and we have no proof the DO was ever at the phase edge for this process. This analysis thus predicts that all DOs in rationale adjuncts should exhibit this accusative variation. But as will be shown in the next section, relative pronouns do not conform to this prediction.

### 3. Counterevidence

This section will provide counter evidence to the analysis in Brattico (2014), by showing that relative pronouns lack the expected accusative form alternation in rationale clauses. These constructions are constructed with a main clause, modified by a relative clause consisting of a rationale clause and the rationale clause’s licensing matrix clause. Even when the main clause and matrix clause’s verb lack OPA (11a) and are negated (11b), the rationale clause’s DO (the relative pronoun) always surfaces as ACC(n). Instead, according to the analysis in Brattico (2014), it should show variation or surface as a partitive respectively, both of which are ungrammatical. For ease of reference, the clausal structure of the following ex-

amples will be indicated as follows: the main clause of which the DO is modified by the relative pronoun is marked in **bold**. The rationale clause is marked in underlined, and the matrix clause licensing the rationale clause is marked as underlined bold.

- (11)a. **Frodon täyty-i tuhota sormus, jonka/\*joka**  
 Frodo.GEN need-PAST destroy ring.ACC(0) which.ACC(n)/\*ACC(0)  
saada-ksee-n Bilbon täyty-i petkuttaa Klonkua.  
 get-KSE-Px3S/P Bilbo.GEN need-PAST cheat Gollum.PAR  
 ‘Frodo needed to destroy the ring which in order to get Bilbo had to cheat Gollum.’
- b. **Frodon ei-Ø täyty-nyt tuhota sormusta, jonka/\*jota**  
 Frodo.GEN no-3S need-PAST destroy ring.PAR which.ACC(n)/\*PAR  
saada-ksee-n Bilbon ei-Ø täyty-nyt petkuttaa Klonkkua.  
 get-KSE-Px3S/P Bilbo.GEN no-3S need-PAST cheat Gollum.PAR  
 ‘Frodo did not need to destroy the ring which in order to get Bilbo did not have to cheat Gollum.’

As per Huhmarniemi (2012) and Huhmarniemi and Brattico (2013), we also know that Finnish relative pronouns start head-externally in accordance with Smith (1964) and Chomsky (1965). This means that the head of the relative clause (the DP being modified by it, in our case *ring*), was never inside the relative clause (Huhmarniemi & Brattico, 2013). The relative pronoun is thus a DO comparable to one in a non-relative rationale adjunct, as both have the same base position.

Evidence for the head-external analysis is the so called ‘snowballed pied-piping’ (Huhmarniemi, 2012) that is evident in (12). In a regular head-external analysis of relative clauses, the relative pronoun moves to the front of the relative clause via wh-movement as below (Huhmarniemi & Brattico, 2013).

- (12) Elrond called [<sub>DP</sub> a council [<sub>CP[+WH]</sub> Pippin attended a council in secret]]  
 Elrond called [<sub>DP</sub> a council [<sub>CP[+WH]</sub> which<sub>1</sub> Pippin attended a council<sub>1</sub>  
 in secret]]

For (11a), the same operation applies, but now we get much more radical pied-piping, that results in the linear sentence order between the rationale adjunct and its matrix clause being reversed. The DO targeted for wh-movement, therefore, moves to the edge of each phase and moves everything below itself with it at each movement step. The operation starts off with (13a). The first step is to move the DP to the edge of the rational adjunct (CP2) as in (13b). Then, the entire rational adjunct is moved to the edge of its matrix clause (CP1) as in (13c), where both the rational adjunct and its matrix clause are attached to the DP and delete the +WH-feature that triggered the movement.

- (13)a. **Frodon täytyi tuhota** [<sub>DP</sub> **sormus**, [<sub>CP1[+WH]</sub> [<sub>C1</sub> Bilbon täytyi  
 Frodo needed to destroy [the ring [Bilbo needed  
petkuttaa Klonkua [<sub>CP2</sub> saadakseen jonka]]]]  
 to cheat Gollum [in order to get which]]]
- b. **Frodon täytyi tuhota** [<sub>DP</sub> **sormus**, [<sub>CP1[+WH]</sub> [<sub>C1</sub> Bilbon täytyi  
 Frodo needed to destroy [the ring [Bilbo needed  
petkuttaa Klonkua [<sub>CP2</sub> jonka<sub>1</sub> [<sub>C2</sub> saadakseen \_\_\_\_\_<sub>1</sub>]]]]]]  
 to cheat Gollum [which in order to get ]]
- c. **Frodon täytyi tuhota** [<sub>DP</sub> **sormus**, [<sub>CP1[+WH]</sub> [<sub>C1</sub> jonka<sub>1</sub>  
 Frodo needed to destroy [the ring [ which  
 [<sub>C2</sub> saadakseen \_\_\_\_\_<sub>1</sub>]]<sub>2</sub> [<sub>C1</sub> Bilbon täytyi petkuttaa Klonkua]] \_\_\_\_\_<sub>2</sub>]  
 [in order to get]] [Bilbo had to cheat Gollum.]]

So far, the analysis for Finnish LDCA presented here has not taken PIC into consideration. Yet I will argue in the next section that the difference in case variation between relative pronouns and other DOs in rationale clauses merits a consideration of phases. For if we take phases into consideration, then the DO would only be able to alternate in rationale adjuncts if it were able to move to the edge of the rationale adjunct phase and from there be visible to the probe from matrix T. Consequently, if the DO is forced to stay in its base position, unable to move into the phase-edge, then no variation should be possible.

#### 4. Towards a PIC-consistent Analysis

Recent developments in how to account for the free word order in Finnish by Brattico (2018) help explain why the DO has to stay low in precisely those environments where the DO is being targeted for wh-movement. According to Brattico (2018), Finnish sentences are built in three stages that follow each other in a fixed order:

Stage 1 is the stage where Narrow Syntax (thus Case assignment) takes place.

Stage 2 satisfies information structural needs that allow Finnish to have free word order, by attaching arguments left-/rightwards as adjuncts, to satisfy the information structure.

Stage 3 is where A-bar movement such as wh-movement takes place and only once stage 3 is completed, the structure is sent to LF and PF.

Evidence for this distribution is, for instance, that informational structural movement such as topicalization or focalization (roughly indicating that certain information is new or old) does not change the case of arguments. Hence case must be assigned before stage 2. Likewise, as shown previously, wh-movement results in pied-piping phenomena, meaning the word order inside the pied-piped constitu-



ents must be fixed before wh-movement is initiated. Stage 2 operations, however, change the word order significantly so wh-movement must happen after it.

If we assume phases exist, both the +WH-probe and the probe from matrix T would target the same position, namely the edge of the adjunct phase. Thus if a DO were to move to the edge of the adjunct phase during stage 1 to receive case, it would also match with the +WH-probe and start stage 3 prior to stage 2, which is prohibited. My suggestion is therefore that the lack of variation in environments where the DO of the rationale adjunct is wh-moved, is a sign that when ACC(n)/ACC(0) variation occurs, the DO can move to the phase edge to receive ACC(0), as expected by Phase theory. If it is prohibited to move there, we expect it to only be able to receive ACC(n), as shown by the data in the last section. Likewise, when the DO is WH-moved in questions, an ACC(0) marked question-word is marginal.

- (14) *Minkä/ ??Mikä pelastaa-ksee-n Frodon täyty-i*  
 What.ACC(n)/??ACC(0) rescue-KSE-Px3S/P Frodo.GEN need-PAST  
*tuhota sormus?*  
 destroy ring.ACC(0)  
 ‘What in order to save did Frodo have to destroy ring?’

This, however, does not explain why the DO would move to the phase edge to receive ACC(0). After all, it has already received ACC(n) adjunct-internally; satisfying the case filter. As explained in section 2, the rationale adjunct’s T has OPA but lacks full-tense features. Usually in Finnish, having OPA entails having full-tense features. Therefore, I suggest that the adjunct internal case assignment is ‘weaker’ due to this and sometimes fails, leading to the DO being moved to the edge of the phase as a last-resort mechanism to avoid a case filter violation. However, it would result in a preverbal DO word order prior to information structure being applied, which, while not entirely ungrammatical, is lyrical and marked. But it can be solved by appealing to stage 2’s domain over information structure, because there are many processes in Finnish and other languages where marked structures are used, such as diary pro-drop in English or adjective-noun word order reversals in Finnish songs.

Accusative variation in rationale adjuncts is thus summarized as follows: During stage 1, when Case is assigned, the DO is assigned ACC(n) adjunct-internally. However, because the adjunct lacks a full tense feature, this valuation fails sometimes and the DO is moved to the edge of the adjunct phase. There, it can be seen by matrix T’s probe, which, if the matrix verb lacks OPA, assigns ACC(0). This results in a lyrical preverbal word-order, so that during stage 2, the preverbal DO is moved back to its postverbal position in neutral contexts. Similarly, DO’s targeted by WH-movement stay low and thus do not showcase variation.

## 5. Conclusion

In conclusion, this paper proposed a PIC-consistent analysis of accusative variation in Finnish rationale clauses. The motivation for the analysis was to explain the lack of the expected variation in environments where the DO was the target of wh-movement, such as in relative clauses. In order to account for this data, it was proposed that the variation in accusative case is PIC-consistent, since in this analysis, the DO would have to raise to the phase edge in order to receive ACC(O). Lack of ACC(O) in environments where the DO was the target of wh-movement was thus explained through the three stages of Finnish sentence compilation, as proposed in Brattico (2018), where wh-movement is the last stage of the compiler. Moving the DO to the phase edge, where it could be targeted by wh-movement would have triggered the last stage prematurely in relative clauses. Therefore, lack of variation is caused by the DO being forced to stay low.

The DO's movement to the phase edge outside of relative clauses was motivated through occasional failure of the case assignment inside the adjunct, as the adjunct lacked the usual full-tense feature that accompanies overt phi-morphology, which governs whether ACC(O) or ACC(n) is assigned. Failure to assign ACC(n) thus would lead to the raising of the DO. Since this is only occasional, it produces a variation pattern.

The next steps for this analysis would be to see if it can be generalized across LDCA in Finnish and whether similar phenomena of back-and-forth movement can be found in related languages such as Hungarian and Estonian that are also hypothesized to share some of the underlying three-stage-compilation machinery. ■

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