Successive-cyclic case assignment: Korean nominative-nominative case-stacking

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1 Introduction

In recent literature, a debate has arisen between two theories of the calculation and realization of morphological case. The more commonly held theory, *the Agree model*, states that all Case-features on nominals are valued by nearby functional heads. Given a designated case-assigning functional head F^0 and a nominal α that is c-commanded by F^0, the case-marking associated with F^0 will be assigned to α. The case assignment relation and a simultaneously established ϕ-feature agreement relation between F^0 and α are both a product of the operation AGREE (Chomsky 2000, 2001). An alternative view, *the Dependent Case model*, holds that case is assigned to nominals given their structural relationship to one another. The case a nominal bears is dependent on the presence of other nominals within a defined domain (e.g. Yip, Maling & Jackendoff 1987, Marantz 1991, Bittner & Hale 1996). In many respects, the competing models make similar predictions, and many case-systems can conceivably be captured under either. Consequently, some recent work has sought to ascertain which languages adjudicate between the two theories (e.g. Legate 2008; Baker & Vinokurova 2010; Baker 2012, 2015; Richards 2013). In this paper, I argue that one such language is Korean. Korean displays a well-known pattern of case-stacking illustrated in (1), which has received significant attention since at least Gerdts & Youn (1988, 1990). Case-stacking occurs when a single nominal bears two case-markers simultaneously.

(1) a. Cheli-**hanthey-ka** ton-i isse[1]
C.-**DAT-NOM** money-NOM have
'Cheli has money.'

b. Swunhi-ka Yenghi-**hanthey-lul** chayk-ul cwuesse
S.-NOM Y.-**DAT-ACC** book-ACC gave
'Swunhi gave Yenghi the book.'

The types of arguments which permit case-stacking are extremely limited. I will address why this should be so below. As illustrated in (1), subjects of dyadic unaccusatives (1a) bear dative-nominative stacking, and (some) indirect objects[2] (1b) bear dative accusative stacking.

Under most theories of case assignment, these facts are surprising; nominals are often thought to be assigned case only once. Due to the cross-linguistic rarity of case-stacking, analyses of the phenomenon in Korean have been proposed within numerous models of case assignment, including those in Relational Grammar (e.g. Gerdts & Youn 1988, 1990, 1999; Youn 1990, 1995), Role and Reference Grammar (e.g. Park 1995; Han 1999; Van Valin 2009), Case in Tiers (Maling 2009), and GB/Minimalism (e.g. Yoon 1996, 2004, 2005; Jo 2001). Details aside, most of these analyses share the position that the dative-marker

[1] Following O'Grady (1991), I use the Yale Romanization system, except that the high back rounded vowel is uniformly represented as *wu*. When the details are irrelevant, I omit morphological decomposition of verb forms. The following abrreviations are utilized in glossing examples: ABL - ablative; ACC - accusative; CAUS - causative; CL - classifier; COMP - complementizer; COP - copula; DAT - dative; DEC - declarative; FUT - future tense; GEN - genitive; H/HON - honorific; LOC - locative; NEG - negation; NML - nominalization; NOM - nominative; PAS - passive; PL - plural; PRS - present tense; PST - past tense; Q - question particle; REFL - reflexive; SH - subject honorific agreement; TOP - topic.

[2] As Jung & Miyagawa (2004) observe, 'give' is one of the few ditransitive predicates that permits DAT-ACC stacking. I follow them in assuming that 'give' and related predicates have a distinct syntactic structure from other ditransitives which permits this stacking. Additional predicates that behave like *cwu-* 'give' are *kaluchi-* 'teach', and *cipwul-* 'pay'

in (1a,b) results from the properties of some underlying level of structure. It is an inherent/lexical case or postposition, indicating where a nominal entered the derivation. Nominative or accusative case, on the other hand, is structural Case and/or indicates the nominal's surface position. However, as we shall see in detail below, the idea that the bold-faced morphemes in (1) are case-markers is not uncontroversial. One complication a case-marker analysis faces is that case-stacking is, for most speakers, only licit in focus-contexts (e.g. Yoon 1989, Suh 1992, Hong 1991, Yang 1999). Noting this, some have wondered whether the stacked morphemes in question should be analyzed as case-marking at all (e.g. Schütze 1996, 2001a; Chung 2012).

On their own, the data in (1) do not adjudicate between the Agree and Dependent Case models of case assignment. It is possible to capture dative-nominative and dative-accusative stacking within both an Agree model (see e.g. Yoon 1996, 2004) and a Dependent Case model. However, a less frequently discussed instance of case-stacking exists which can decide between the theories – (honorific) nominative-nominative stacking – illustrated in (2):[3]

(2) Sensayng-nim-tul**-kkeyse**-man**-i** kulen il-ul hasipnita
teacher-HON-PL**-H.NOM**-only**-NOM** that.kind work-ACC do
'Only teachers do such work.' [*Sells 1995*]

In (2), the nominal *sensayngnim* 'teachers' bears both the honorific nominative-marker *-kkeyse* and the canonical nominative marker *-i/-ka*, whose realization is phonologically conditioned. Both the honorific nominative and standard nominative are structural case-markers (e.g. Chae 1991; Sells 1995, 1997; Cho & Sells 1995). In this paper, I bring the phenomenon of nominative-nominative case-stacking to bear on the current debate over the correct model of case assignment. I argue that nominative-nominative stacking is incompatible with an Agree model of case assignment. Specifically, it is impossible for a nominal to enter into two AGREE relationships with the same functional head for the purpose of valuing the same features. Under a view of case assignment where case is determined by the relative structural positions of pairs of nominals, it is possible to account for multiple nominative assignment. The nominal can receive the same case-value twice so long as it occupies the same position, relative to other nominals, in two distinct case assignment domains. Under this view, case assignment in Korean is a successive-cyclic process. The central prediction of such an account is that case-stacking should correlate with other diagnostics for movement; whenever we have reason to believe that movement has occurred, case-stacking should be well-formed. Whenever we have reason to believe that movement has not occurred, case-stacking should be disallowed. As we will see in subsequent sections, these predictions hold.

The remainder of the paper is organized as follows. Section 2 discusses the Agree and Dependent Case models in more detail. Section 3 presents an emendation to the Dependent Case model that accurately captures all three patterns of case-stacking, and demonstrates the correlation between case-stacking and movement. Furthermore, it is argued that the Agree model cannot capture nominative-nominative case-stacking. Section 4 addresses the related phenomenon of case alternation. Sections 5 and 6 provide arguments that the nominal morphology, which I have referred to as case morphology, should in fact be analyzed as case. Section 7 concludes.

The Korean data throughout this paper reflects the judgments of ten native speakers between the ages of 22-30. All are from Seoul or the surrounding Gyeonggi province. Two are native-speaker linguists. All examples are based on my own fieldwork unless otherwise noted. It must be acknowledged that not all

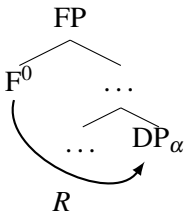
[3]Sells (1995) notes that such stacks require the focus-marker *-man* 'only' to intervene between the two nominals. Four of my informants found nominative-nominative stacks completely well-formed without an intervening *-man*. Two others found it acceptable but degraded. Examples of nominative-nominative stacking without intervening *-man* are marked with a percent sign (%) to reflect this difference in informants' judgments. See §5 for an account of this restriction.

speakers accept case-stacking. Of those that dislike the construction, some deny it outright, while others admit it marginally. For some, dyadic unaccusatives (one of the environments which permit case-stacking) occur most naturally with first person subjects. Nonetheless, my informants found a variety of subjects well-formed. In addition, some speakers find that such examples improve when placed in the past tense (e.g. Yoon 2004). My informants also observe that case-stacking is much more natural in colloquial speech. In lower registers, the dative marker *-eykey* is replaced with *-hanthey* and all speakers I consulted found that stacking was consistently well-formed with the use of *-hanthey*. Given this preference, I have chosen to use low register examples throughout the paper instead of examples common to the case-stacking literature which use *-eykey*. Lastly, as others have noted, stacking data of all kinds improves significantly with the addition of focus elements like *-man* 'only' (e.g. Yoon 1996).

2 Competing models of case assignment

As noted at the outset, a debate between competing accounts of morphological case has increased in recent literature.[4] The Agree model states that structural Case-features are assigned to nominals by functional heads. Given a designated Case-assigning head F^0 and a nominal α that is c-commanded by F^0, the case-marking associated with F^0 will be assigned to α. This is schematized in (3):

(3) *The Agree model of case assignment*



The case assignment relation *R* results in the assignment of nominative case by (finite) T^0 to the nearest nominal that T^0 c-commands. Similarly, accusative case is assigned by (active, transitive) v^0, and genitive case by (possessive/event nominal) D^0. Additional lexical cases may be assigned by specific functional/lexical heads. Accounts of this nature have been proposed and updated, since at least Chomsky (1981). Under the current instantiation (Chomsky 2000, 2001), it is held that the case assignment relation *R* in (3) is dependent on a simultaneously established ϕ-feature agreement relation between F^0 and α.

The Dependent Case model is fundamentally distinct. Under this account, the case a nominal receives is dependent on the presence of other nominals – case competitors – in a local domain. The most famous proposal of this sort is Marantz's (1991) (see Yip, Maling & Jackendoff 1987 for an earlier, similar proposal). Marantz distinguishes three categories of case:

(4) *Typology of case in the Dependent Case model*

a. Lexically governed case (i.e. case determined by the idiosyncratic properties of a particular item, such as quirky case assigning verbs in Icelandic or adpositions).
b. 'Dependent' case (accusative case and ergative case).
c. Unmarked case (e.g. nominative case assigned to any DP in a clause; genitive case assigned to any DP inside a DP).

[4] It is commonly assumed that only one of these accounts is correct. Baker & Vinokurova (2010) attempt to reconcile the two within a single language, though Levin & Preminger (2015) argue that this reconciliation is unwarranted. See also Baker (2015) for arguments that the choice between case assignment models may be a macro-parameter.

Marantz suggests that the varieties of case are organized in a hierarchy (5) which determines an algorithmic process of case assignment.

(5) *Case disjunctive hierarchy* (Marantz 1991)
lexical/oblique case » dependent case » unmarked case

Case assignment proceeds from left to right in (5) as follows: (i) All nominals that are selected by lexical items which idiosyncratically specify a case-marking for their arguments, including adpositions and verbs that govern quirky case, are assigned the case in question. (ii) Those nominals that did not receive lexical case are evaluated for dependent case. For every pair of as-yet caseless nominals within a local domain that stand in a c-command relation, one will be assigned dependent case. In Marantz's original proposal, the local domain was those elements governed by a V+T complex. However, in recent work (e.g. Baker & Vinokurova 2010, Baker 2015, Levin & Preminger 2015), the phase has been taken to be the relevant domain. In an ergative language, the *c-commanding* nominal receives dependent case. In an accusative language, the *c-commanded* nominal receives dependent case. These patterns are schematized in (6).[5]

(6) *Realizations of dependent case*

a. *Dependent case downwards*
NP ... NP "*ACC*" (nominative-accusative alignment)

b. *Dependent case upwards*
"*ERG*" NP ... NP (ergative-absolutive alignment)

(iii) Every nominal that has not been assigned lexical/oblique or dependent case in the preceding steps will be realized with unmarked case, which we informally term 'nominative' or 'absolutive'. Within the nominal domain, unmarked case is realized as 'genitive'. On some accounts, unmarked case signals the absence of morphological case assignment (Preminger 2011, 2014; Kornfilt & Preminger 2015; cf. Bittner & Hale 1996).[6]

In this theory, individual functional heads play only an indirect role. They assign lexical case and define case assignment domains. In its original formulation, the Dependent Case model was said to occur post-syntactically, on the 'PF-branch' (Marantz 1991, McFadden 2004, Bobaljik 2008), but this claim has not gone unchallenged (Legate 2008; Preminger 2011, 2014; Richards 2013). Others have suggested that the Dependent Case model is operative within the narrow syntax (Baker & Vinokurova 2010; Preminger 2011, 2014) or at the syntax-PF interface (Baker 2015). For the purpose of concreteness with respect to the current proposal, I will adopt an interface approach to the Dependent Case model. I will discuss some advantages of this choice when they become relevant. It may also be possible to account for the data using entirely syntax-internal or syntax-external implementations of the Dependent Case model. I leave it to future research to determine which of these positions is correct.

Case-stacking is unexpected in either model of case assignment as described above. First consider the Agree model. It is commonly held that a nominal bears exactly one unvalued Case-feature. Once an AGREE relationship has been established between a nominal and a functional head bearing a valued Case-feature, simultaneously established ϕ-agreement and case assignment relations should render the nominal

[5] Both case assignment operations in (6) may apply simultaneously yielding tripartite case systems (e.g. Deal 2013, Baker 2015), while languages with no overt case-morphology may employ neither operation in (6) (Baker 2012).

[6] Marantz suggests a fourth kind of case – default case. Default case was proposed as a means of assigning case to fragment answers and other stand-alone nominals to which lexical, dependent, and unmarked case cannot be assigned. For a discussion of default case, see Schütze (2001b).

inactive (Chomsky 2001) for further ϕ-probing and case valuation.[7] Within the original Dependent Case model, case-stacking is barred by stipulation. Nominals are said to exit the case disjunctive hierarchy upon case determination. This ensures that, for instance, a lexical case-marked nominal cannot trigger dependent accusative case on a case competitor. For this reason, it is impossible for a nominal to have two case-values.[8] The most straightforward means of capturing multiple case assignment to a single nominal is to posit that nominals in Korean can bear more than one case-marker. I will explore the details of and defend such a proposal within the Dependent Case model below.

Furthermore, I will show (see especially §3.4) that the Agree model is incapable of capturing the full range of facts. In short, nominative-nominative stacking is incompatible with an Agree model of case assignment. Specifically, it is impossible for a nominal to enter into two AGREE relationships with the same functional head for the purpose of valuing the same features. If we can show that the Dependent Case model can be extended to capture nominative-nominative stacking (and other instances of case-stacking) and that similar extensions are unavailable to the Agree model, we have an argument for adopting the Dependent Case model as the correct model of case calculation and realization.

3 The syntax of case-stacking

In this section, I will propose an emendation to the Dependent Case model to capture case-stacking. I begin by detailing why case-stacking is problematic. Then, I offer a solution to that problem. I posit that, in Korean, nominals are evaluated with respect to the Dependent Case assignment algorithm in every phase they occupy. Under the proposed view, when a nominal undergoes movement into a new phase it is considered for case assignment again. If the conditions for case assignment are met, a second case-value will be assigned. The result of multiple case assignment operations will yield stacked case on (some) nominals which have undergone movement across a phase boundary. The conditions on when a second instance of case assignment can take place are detailed in this section. In §4, I will propose post-syntactic morphological rules that will restrict the overt realization of these stacked morphemes.

3.1 The problem

The Dependent Case model, in the form sketched above, captures the canonical nominative-accusative case alignment of transitive clauses, the dative-nominative pattern of dyadic unaccusatives, and the nominative-dative-accusative pattern of ditransitives. I will review these case patterns to more fully flesh out the Dependent Case model.

To this end, I propose the following rules for case assignment in Korean.

(7) *Korean case assignment rules*

a. If a DP is (c-)selected by a functional head (F^0) which specifies idiosyncratic case morphology, assign that morphology to the DP.

b. If there are two distinct DPs in the same phase such that DP_1 (asymmetrically) c-commands DP_2, assign accusative morphology to DP_2 if and only if DP_1 is caseless.

c. If a DP does not receive lexical or dependent case, it is caseless (realized as nominative case).

[7] Even if the nominal can serve as a target of subsequent ϕ-probing by higher functional heads bearing unvalued ϕ-features, additional Case-valuation is unexpected as the nominal's sole Case-feature has already been valued.

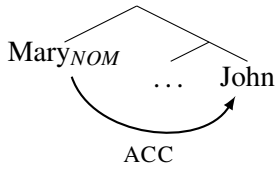
[8] If dependent case assignment is a feature valuation process (e.g. Preminger 2011, 2014), case-stacking is barred for the same reason as in the Agree model. Once a nominal's Case-feature is valued, subsequent valuation is impossible.

I maintain that the rules in (7) are ordered.[9] All DPs in a spell-out domain are evaluated for (7a), then (7b), then (7c). I follow Baker (2015) in contending that the rules in (7) apply upon phasal spell-out to PF. This treatment accounts for recent research that has converged on the observation that phases are the relevant domain of case competition, while simultaneously accounting for the relevance of syntactic structure in the case calculus. Phasal spell-out necessarily limits the case assignment domain to the phase, and, if ordered no later than linearization, maintains all the structure built in the syntax. As we will see below, this view can also capture why DPs in Ā-positions do not participate in the case calculus. For this paper, it will be necessary to adopt that (at least) *v*P and CP are phases. I hold that spell-out of a phase occurs as soon as the next head enters the derivation (e.g. Bobaljik & Wurmbrand 2005, Grimshaw 2005, Den Dikken 2007, Bošković 2014), and that the entire phase spells out when the trigger is merged, as opposed to just the complement of the phase head. This view is compatible with 'escape-hatch' effects, whereby movement to the phase edge renders an element visible to further syntactic operations if, as Fox & Pesetsky (2005) hold, phases fix linear order, but do not render elements inaccessible to subsequent operations provided those operations do not alter the established linear order. Baker (2015) assumes a view of phases quite similar to this. (See also Svenonius 2004 for arguments that escape-hatch effects can be captured even if the whole phase is spelled out.)

The rules in (7) can be successfully applied to canonical Korean case patterns. Consider first the nominative-accusative pattern on agentive transitive predicates (8). Upon spell-out of the *v*P phase, neither the direct object *John* nor the subject *Mary* receives lexical case. Thus, the direct object *John* receives dependent accusative by virtue of (7b). The direct object is c-commanded by the subject within the *v*P phase and neither is previously marked for case.

(8) a. Mary-ka John-ul ttayliesse
M.-NOM J.-ACC hit
'Mary hit John.'

b.



Mary receives unmarked nominative case (7c), because its structural position does not satisfy the conditions on the realization of either lexical or dependent case.

Unlike agentive transitive clauses, transitive clauses expressing psychological states and possession relations, such as (9) below, canonically display dative-marked subjects. Such arguments are said to be introduced lower in the clause than agentive subjects (e.g. Belletti & Rizzi 1988, Kim 2013) – i.e. in Spec-VP or Spec-ApplP rather than Spec-*v*P. Following Yoon (1996, 2004) *i.a.*, I take dative case in this environment to be a lexical case. Upon spell-out of *v*P, 'flavors' of V^0 (or $Appl^0$), which (c-)select elements in their specifier position, will yield dative case on those DPs by virtue of (7a).[10] Nominative morphology on the direct object is expected, as the subject bears lexical case. The conditions for dependent accusative assignment are not met. Though there are two DPs within a phase in a c-command relationship, the c-commanding nominal

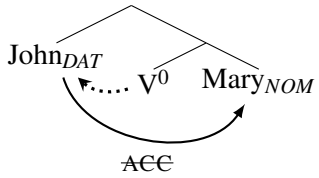
[9] See Preminger (2011, 2014) for an attempt to derive the order of the Case Disjunctive Hierarchy. I leave it for future work to determine if such a derivation is possible for Korean case-stacking.

[10] Another possibility would be to treat dative case as a dependent case. Under such a proposal, dative case is assigned upward to a c-commanding nominal within the VP/ApplP (Bobaljik & Branigan 2006, Baker & Vinokurova 2010, Baker 2015). Treating dative as a dependent case introduces its own complexities. On a feature-valuation analysis of dependent case (Preminger 2011, 2014), a valued indirect object could act as a defective intervener, blocking the dependent case relation between the subject and direct object. Furthermore, it requires adoption of two distinct case assignment domains - VP and *v*P. It is not clear if both are phases (but see Ko 2005). I thank an anonymous reviewer for helpful discussion on this point.

has already received case. Dependent case is therefore unavailable for the c-commanded nominal, yielding nominative case by (7c).

(9) a. John-hanthey Mary-ka mwusewe
J.-DAT M.-NOM be.afraid
'John fears Mary.'

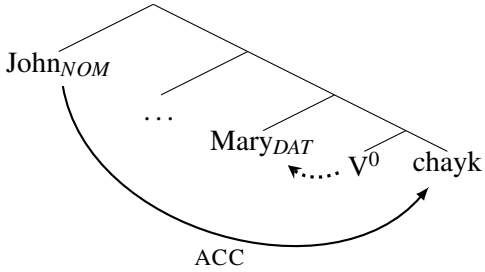
b.



The Dependent Case model can also be applied to capture the canonical case pattern of ditransitives:

(10) a. John-i Mary-hanthey chayk-ul cwuesse
J.-NOM M.-DAT book-ACC gave
'John gave Mary the book.'

b.



In ditransitive constructions, like dyadic unaccusative predicates, an argument occupies Spec-VP/ApplP, and receives lexical dative case via (7a) upon *v*P spell-out. Unlike dyadic unaccusatives, the conditions for dependent case assignment (7b) are met in ditransitives. Dependent accusative is assigned downward to the direct object in Compl-V, because it is c-commanded by the caseless subject in Spec-*v*P. Receiving no case specification throughout the phase, the subject will be realized with nominative case (7c).

The Dependent Case model is capable of accounting for the data above, but case-stacking (11) is unexpected.

(11) a. %Sengsayngnim-kkeyse-ka manhi il-ul hasipnita
teacher-H.NOM-NOM a.lot work-ACC do
'The teacher does a lot of work.' (NOM-NOM stacking)

b. Cheli-hanthey-ka ton-i isse
C.-DAT-NOM money-NOM have
'Cheli has money." (DAT-NOM stacking)

c. John-i Mary-hanthey-lul ton-ul cwuesse
J.-NOM M.-DAT-ACC money-ACC gave
'John gave Mary money.' (DAT-ACC stacking)

Stacked case is unexpected, because each nominal is predicted to receive case only once. Once a nominal receives case by means of the appropriate step in (7), it cannot receive any other case morphology.

3.2 A solution

In order to capture case-stacking in Korean, we must ensure that a nominal can participate in case-competition more than once in the course of a derivation. I propose the following emendation to the Dependent Case model to capture this requirement.

(12) *Case-stacking in a Dependent Case model*
Evaluate a nominal for case in every phase it occupies.

The emendation in (12) forces the case assignment rules formulated in (7) to be reapplied to nominals which have undergone movement into a higher phase. As noted above, I, along with Baker (2015), adopt the view from Fox & Pesetsky (2005) that phasal spell-out fixes linear order, but does not render spelled out elements inaccessible to subsequent syntactic operations. If the case assignment rules in (7) apply at phasal spell-out, a moved nominal will retain its previous case specification when it is evaluated upon spell-out of the subsequent phase. Because the moved nominal retains the case specification established in the lower phase and can receive case again in the higher phase, a nominal that has undergone movement across a phase boundary can be spelled out with multiple case values, yielding case-stacking. After demonstrating that the proposed emendation can capture the attested examples of case-stacking, I provide evidence of the reality of these movement operations. Furthermore, I show that a number of derivations attested to be ill-formed are ruled out.

Before demonstrating how (12) can capture Korean case-stacking, I want to briefly address a more general point. At first blush, a principle like (12) seems somewhat odd, and it may not be clear why it should exist or if the principle is generalizable cross-linguistically. To be sure, *something* must be said to capture the realization of stacked-case. Neither the Agree model nor the Dependent Case model can capture the phenomenon without emendation. As I illustrate below, adopting (12) accurately captures the facts. Therefore, the descriptive content of (12), whether stipulated or derived, should be an ingredient in any account of case-stacking. However, if it is assumed, as here, that case assignment is handled upon phasal spell-out and that spell-out applies to the entire phase, not just its domain, then something like (12) should actually be the null hypothesis. If case is assigned every time a phase is spelled out, and a nominal happens to be spelled out as part of two different phases, then it should be evaluated for case twice. If anything, some additional principle or stipulation would be required to block this. The fact that (overt) case-stacking is quite rare suggests that such principles are widespread; languages that may restrict case evaluation only to those DPs that have not already been case-marked or provide explicit conditions on exponence such that only one case is ever pronounced (see §4.2). The range of possibilities for restricting case-stacking must be left to future research.[11]

Let us now see how this modification allows us to capture the case-stacking examples in (11). First, consider nominative-nominative stacking, repeated in (13), which will be critical to the argument for the superiority of the Dependent Case model over the Agree model.

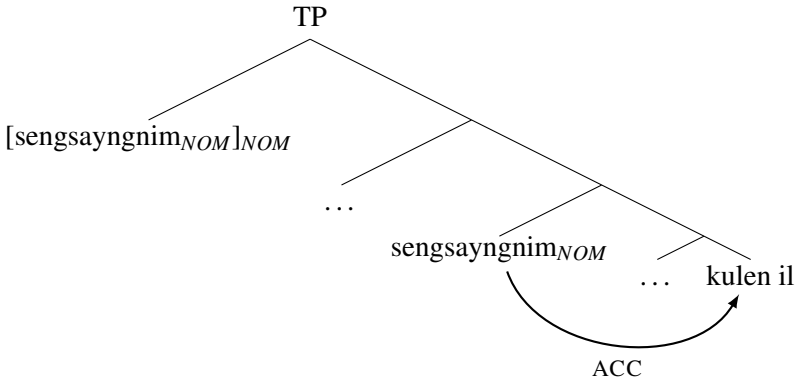
(13) %Sengsayngnim-kkeyse-ka manhi il-ul hasipnita
teacher-H.NOM-NOM a.lot work-ACC do
'The teacher does a lot of work.'

Given (12), we can capture nominative-nominative case-stacking if the subject receives unmarked nominative twice via (7c). For the nominal to bear unmarked nominative twice, it must first occupy a position within the *v*P phase that is ineligible for lexical or dependent case assignment. If neither condition in (7a,b) is met, the argument will remain caseless. Caselessness is realized as nominative case (Preminger 2011, 2014; Kornfilt & Preminger 2015). Subsequently, the nominal must enter the CP phase, and again occupy a

[11] I thank an anonymous reviewer for helpful discussion concerning this point.

position that is ineligible for lexical or dependent case. A second instance of caselessness will be recorded as a second nominative case. Agentive subjects are commonly thought to occupy two such positions. They are externally merged in Spec-*v*P and may undergo movement to Spec-TP. Under such a view, the agentive subject occupies the highest position in the *v*P phase and may be the only element in the CP phase. Consider the diagram below:

(14) *Nominative-nominative case-stacking*

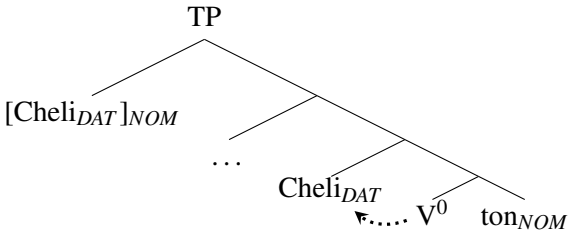


The honorific subject, as the highest nominal in the *v*P phase, is realized as nominative upon *v*P spell-out by (7c). It is neither eligible for lexical case nor dependent case. Upon subsequent movement to Spec-TP, the nominal will be evaluated for case again. In the CP phase, the subject is the only element. In the absence of case competitors, it is again realized as nominative by (7c). As (14), illustrates, a modified Dependent Case model can straightforwardly capture nominative-nominative stacking. Because the honorific subject underwent movement into a higher phase, both of its copies were evaluated under the case assignment rules in (7). Because both copies of the honorific subject do not satisfy the conditions for lexical or dependent case realization (7a,b), it is realized with nominative case morphology twice. This case calculus yields nominative-nominative case-stacking.

The current proposal immediately extends to the other case-stacking patterns. First, consider dative-nominative stacking (15).

(15) a. Cheli-hanthey-ka ton-i isse
C.-DAT-NOM money-NOM have
'Cheli has money.'

b.



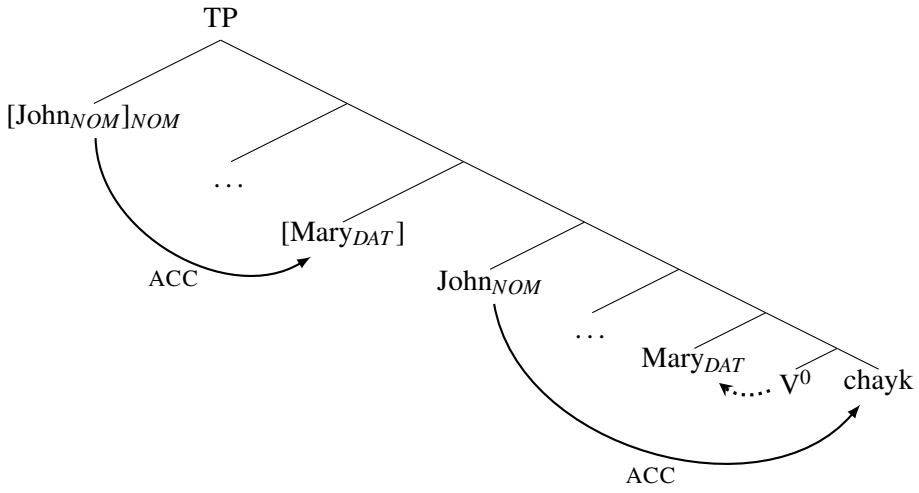
Within the *v*P phase, both the subject *Cheli* and object *ton* 'money' are evaluated for case. *Cheli* receives lexical dative case via (7a). The direct object receives nominative case via (7c). Raising to Spec-TP, the second copy of the experiencer subject is also evaluated upon spell-out of the CP phase. As the only element in the CP phase, the experiencer will receive nominative, yielding a dative-nominative stack.

The same account can be offered for dative-accusative stacking. In a dative-accusative stack like (16), the indirect object will receive dative case via (7a) upon *v*P spell-out. The subject receives nominative case

(7c) and the direct object accusative case (7b).

(16) a. John-i Mary-hanthey-lul ton-ul cwuesse
J.-NOM M.-DAT-ACC money-ACC gave
'John gave Mary money.'

b.



In order for the indirect object to receive accusative case, both it and the subject must move into the CP phase. In the CP phase, the nominals are evaluated for case again, (12). As the indirect object is c-commanded by the subject, and the subject has not received case in the *v*P phase (7c), the requirements for dependent case assignment are met (7b), and the indirect object receives accusative case, yielding a dative-accusative stack. It is in this scenario that the cyclic nature of case assignment is most fully displayed. The subject is evaluated for case in its base-position (Spec-*v*P), but, because the conditions for lexical case and dependent case are not met, it remains caseless (7c). Once the nominal has moved, the second copy is also evaluated for case assignment. Because it is caseless, the nominal is able to license dependent accusative on another nominal copy which occupies a position in the higher phase. Adopting the view that nominative case is in fact the realization of caselessness ensures that only elements that receive no case in a lower phase can license dependent case in a higher phase, ruling out unattested dative-accusative strings which could arise if both a dyadic unaccusative subject and nominative object moved into the CP.[12]

A prediction of the account sketched for ditransitives is that simultaneous case-stacking should be available on an honorific subject and the indirect object. This is, in fact, possible.

(17) Kim-kyosunim-kkeyse-man-i Cheli-hanthey-lul kkoch-ul cwusiessta
K.-professor-H.NOM-only-NOM C.-DAT-ACC flowers-ACC gave
'Only Professor Kim gave Cheli flowers.'

Case-stacking is predicted to be available on the subject when it is available on the indirect object, because movement of the subject into the higher phase is a prerequisite for accusative-assignment on the indirect object.

Combining the case assignment rules in (7) with a requirement that those rules be applied to nominals within each phase they occupy (12) allows us to capture the attested patterns of case-stacking. The proposed analysis also makes a number of testable predictions. Movement (into a higher phase) is a prerequisite for

[12]This proposal does not result in subjects licensing accusative case on their selves. The rule for dependent case assignment in (7b) makes reference to *distinct* nominals. Copies of a single nominal are not distinct. Therefore, two copies of a nominal in a c-command relation do not meet the structural requirements for dependent case assignment.

case-stacking. Therefore, case-stacking should arise whenever movement into a higher phase has occurred. One obvious environment to explore is derived subject constructions such as passives and unaccusatives. Nominative-nominative case-stacking is well-formed on subjects of passives and unaccusatives (18). Dative-nominative stacking arises on goal subjects of passivized ditransitives (19).

(18) a. Kim-kyoswunim-kkeyse-man-i cap-hi-si-ess-ta
K.-professor-H.NOM-only-NOM catch-PAS-SH-PST-DEC
'Only Professor Kim was captured.'
b. Kim-kyosunim-kkeyse-man-i ssuleci-si-ess-ta
K.-professor-H.NOM-only-NOM faint-SH-PST-DEC
'Only professor Kim fainted.'

(19) Chelswu-hanthey-ka wuywenhoy ey uyhay sang-i cwue-ci-esse
C.-DAT-NOM committee by prize-NOM give-PAS-PST
'Chelswu was given a prize by the committee.'

If passive and unaccusative *v*Ps are phases (e.g. Legate 2004), this behavior is expected under (12). In (18), the passive and unaccusative subjects are the only nominals within the *v*P phase, yielding nominative case via (7c) upon *v*P spell-out. Nominative case is assigned again within the CP phase. In (19), the subject receives dative case via (7a) in the *v*P phase and nominative case via (7c) in the CP phase. Furthermore, case-stacking is predicted to correlate with other diagnostics of movement. When these diagnostics tell us movement (into a higher phase) has occurred, case-stacking should be permissible. When these diagnostics tell us movement has not occurred, case-stacking should be barred.

3.3 Case-Stacking correlates with movement

In this paper, I have posited that the calculation of case morphology in Korean displays a unique parameter. Unlike most languages in which nominals only receive case once, in Korean nominals are evaluated within the Dependent Case model in each phase they occupy, yielding stacked-case morphology. This parameterization correctly predicts that all nominals with overt case-stacking should behave as if they have undergone movement. The effects are most easily seen in dative-nominative and dative-accusative stacking patterns, but can also be found in nominative-nominative stacking. Below, I present two arguments that case-stacking correlates with movement.

3.3.1 Case-stacking and specificity

First, I demonstrate that stacked case-marking correlates with interpretive consequences conditioned by movement. As has been observed in previous work on Korean case-marking, choice of case-morphology, where one exists, has consequences for the specificity of the case-marked argument. This follows if both case-stacking and specific interpretations are achieved via movement (across a phase boundary).

Existentially quantified subjects of possession and psych-predicates display such interpretive consequences (Suh 1992). A dative-marked subject can receive either a non-specific or specific interpretation, while stacked case subjects must receive a specific interpretation.

(20) a. Etten-salam**-hanthey** Yenghi-ka coha
some-person**-DAT** Y.-NOM likes
'Some person likes Yenghi.' [*specific / non-specific*]
b. Etten-salam**-hanthey-ka** Yenghi-ka coha
some-person**-DAT-NOM** Y.-NOM likes
'Some person likes Yenghi.' [*specific*]

A natural way to capture the interpretive differences tracked by case morphology is to posit, as I did above, that dyadic unaccusative subjects are generated low in the clause – within the VP (following Belletti & Rizzi 1988 and as argued for by Kim 2013). If these elements remain low, they will only receive dative case, and will remain within the domain of existential closure (e.g. Diesing 1992), ensuring a non-specific interpretation. If they undergo movement outside of the *v*P, the specific interpretation will be forced. As discussed above, movement of this kind results in stacked-case; the dyadic unaccusative subject receives dative case, via (7a), upon *v*P spell-out, and it is realized with nominative case, via (7c), upon CP spell-out. The hypothesized movement explains the specific interpretation in (20b) and the non-specific interpretation in (20a), but we must also capture the specific interpretation in (20a). As I will discuss in §4, the stack formed via movement into the CP phase need not be fully pronounced. Under the current proposal, post-syntactic rules will determine how that stack is realized. One option will be that, in a dative-nominative stack, only the dative-marker is realized. Allowing for this possibility, the ability of the dative-marker to carry both a specific and non-specific interpretation is captured. When the dative-marked subject is non-specific, it has not undergone movement. It remains within the *v*P phase. When the dative-marked subject is specific, it has undergone movement into the CP phase, and formed a case-stack, realized as dative only.

The same facts hold of dative-accusative stacking. If an existentially quantified indirect object bears dative case, it can receive either a non-specific or specific interpretation (21a), just like a dative-marked subject. However, an existentially quantified indirect object marked with stacked-case must receive a specific interpretation (21b) (Yang 1999, Schütze 2001a).

(21) a. John-i etten-salam**-hanthey** chayk-ul cwuesse
J.-NOM some-person**-DAT** book-ACC gave
'John gave someone a book.' [*specific / non-specific*]

b. John-i etten-salam**-hanthey-lul** chayk-ul cwuesse
J.-NOM some-person-DAT-ACC book-ACC gave
'John gave someone a book.' [*specific*]

This effect is identical to that seen above with dyadic unaccusative subjects (20). As noted above, a natural way to capture the interpretive differences tracked by case morphology is to posit that indirect objects are generated within the VP. If these elements remain low, they will only be eligible to receive dative case and will remain within the domain of existential closure, forcing a non-specific interpretation. If they move outside the domain of existential closure, into the CP phase, the specific interpretation is achieved. Movement to a higher phase feeds both changes in interpretation and case-stacking. Again, the variable interpretation (specific/non-specific) for the dative-marked indirect object (21a) arises because dative case can surface in two ways: (i) Dative case can be the only case assigned. This occurs when the indirect object remains in the *v*P phase and is only evaluated for case once, upon *v*P spell-out. (ii) Dative case and accusative case can be assigned, but, subsequently, accusative case-realization can be blocked. This can only occur when the indirect object is spelled out twice, in the *v*P and CP phases. The former scenario yields a non-specific interpretation. The latter yields a specific interpretation.

The proposed movement of indirect objects and dyadic unaccusative subjects in Korean is string-vacuous, but direct objects also display interpretive consequences of overt movement. Interpretive possibilities decrease when direct objects move to the left of indirect objects.

(22) a. John-i Yenghi-hanthey etten-senmwul-ul cwuesse
J.-NOM Y.-DAT some-present-ACC gave
'John gave Yenghi some present.' [*non-specific / specific*]

b. John-i [etten-senmwul-ul]$_i$ Yenghi-hanthey t_i cwuesse
J.-NOM [some-present-ACC] Y.-DAT gave
'John gave Yenghi some present.' [*specific*]

As overt movement appears responsible for forcing the specific interpretation of an existentially quantified direct object, it seems reasonable to conclude that string-vacuous movement is responsible for forcing the specific interpretation of indirect objects and dyadic unaccusative subjects. The movement in (22b) places the direct object within the CP phase. This will result in the nominal receiving a second instance of accusative case, via (7b). However, accusative-accusative case-stacking is never attested. I discuss why this should be in §4.[13]

The examples in (20) and (21) demonstrate that case-stacking correlates with interpretive consequences thought to be conditioned by movement. This suggests that case-stacking is conditioned by movement, providing support for the proposal offered in §3.2. Case-stacking arises when nominals enter a higher phase and are evaluated for case assignment, via the rules in (7) upon spell-out of both the lower and higher phases (12). If this analysis is on the right track, we also expect phenomena which indicate a failure to move to correlate with the unavailability of case-stacking.

3.3.2 Case-stacking and inverse scope

Miyagawa (2001, 2010) demonstrates that (some speakers') Japanese displays EPP-effects by examining the scope interaction of a quantified subject and verbal negation in scrambling contexts. Japanese, like Korean, is a scope freezing language. In canonical SOV word order (with neutral intonation), quantified subjects must take wide scope with respect to quantified objects (23a) and verbal negation (23b).

(23) a. Dareka-ga hitobito daremo-o hihansita
someone-NOM people everyone-ACC criticized
'Someone criticized every person.' [∃>∀; *∀>∃]

b. Zen'in-ga sono tesuto-o uke-nakat-ta
all-NOM that test-ACC take-NEG-PST
'All didn't take that test.' [∀>¬; *¬>∀]

[*Miyagawa 2001*]

In both contexts, scrambling the object to the left of the subject permits ambiguous interpretations.

(24) a. [Hitobito daremo-o]$_i$ dareka-ga t_i hihansita
[people everyone-ACC] someone-NOM criticized
'Someone criticized every person.' [∃>∀; ∀>∃]

b. [Sono tesuto-o]$_i$ zen'in-ga t_i uke-nakat-ta
[that test-ACC] all-NOM take-NEG-PST
'All didn't take that test.' [∀>¬; ¬>∀]

[*Miyagawa 2001*]

Example (24a) is unsurprising under the assumption that the direct object can be interpreted in its derived position or reconstruct to its base-position. More striking is the behavior of (24b). On the surface, the relative position of the subject *zen'in* 'all' with respect to verbal negation is unchanged. It is mysterious

[13] An anonymous reviewer questions why dative-accusative stacking is unavailable when the direct object moves to c-command the indirect object, as in (i).

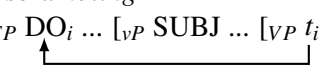
(i) *John-i [etten-senmwul-ul]$_i$ Yenghi-**hanthey-lul** t_i cwuesse
J.-NOM [some-present-ACC] Y.-**DAT-ACC** gave
'John gave some present to Yenghi.'

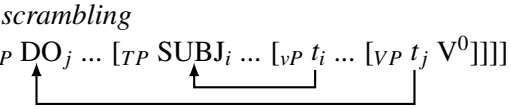
This is because the conditions on dependent case assignment (7b) are not satisfied. In (i), the direct object moves into the CP phase, but the indirect object remains *in situ*. If the indirect object does not move into the CP phase, it can only be evaluated for case once. In the *v*P phase, the indirect object receives lexical, dative case (7a), as such it is ineligible for accusative case (7b).

why scrambling an element which carries no quantificational force should alter the sentence's interpretive possibilities.[14]

Miyagawa (2001) suggests that the ambiguity in (24b) arises due to the target of scrambling. Scrambling can target two positions: (i) Spec-TP, in which case the movement is A-scrambling triggered by the EPP-feature on T^0, or (ii) the specifier of a higher projection (XP), in which case the movement is Ā-scrambling. The position of the scrambled element has consequences for the position of the subject. Specifically, if the scrambled object occupies Spec-TP, the subject will remain in its base-position. However, if the object Ā-scrambles above Spec-TP, the subject undergoes EPP-driven movement to Spec-TP. The two possible derivations are diagrammed in (25).

(25) *Possible derivations of OSV word order in Japanese*

a. *A-scrambling*


b. *Ā-scrambling*


These two possible derivations explain the scopal ambiguity in (24b). Assuming that the negative morpheme enters the derivation (or moves to a position) above *v*P, if the direct object A-scrambles (25a) to Spec-TP, the subject will remain within the scope of negation. Conversely, if OSV word order is derived by Ā-scrambling (25b), the subject will move to a position above negation, and necessarily take wide scope.

The same effect is detectable in Korean, though to my knowledge it has not been discussed in the literature. Controlling for intonation (see fn. 14), my informants attest that SOV sentences containing universally quantified subjects take wide scope with respect to short-form negation (26a), while an OSV sentence is ambiguous (26b).[15]

(26) a. Motun namhaksayng-i ku sihem-ul an-poasse
all male.student-NOM that test-ACC NEG-saw
'Every male student didn't take that test.' [∀>¬; *¬>∀]

b. [Ku sihem-ul]$_i$ motun namhaksayng-i t_i an-poasse
[that test-ACC] all male.student-NOM NEG-saw
'That test, every male student didn't take (it).' [∀>¬; ¬>∀]

Adopting Miyagawa's (2001) analysis, we expect case-stacking to restrict the available interpretation of sentences like (26b): if case-stacking requires subjects to move into the CP-phase (specifically to Spec-TP), then we predict that case-stacking will make the inverse scope reading impossible as Spec-TP is structurally higher than negation. This is indeed the case.

In SOV contexts, the experiencer subject QP takes wide scope with respect to negation (27). In OSV

[14] As Ishihara (2007) observes, it is crucial that neutral intonation be used in these examples. The inverse scope interpretation goes away if the subject and negated verb occupy distinct major phrases.

[15] One of the reasons Miyagawa's observation may not have been reproduced in Korean is that there is notorious disagreement among native speakers/researchers regarding the base line judgments (e.g. Cho 1975, Suh 1989, Cho 1994, Sohn 1995, Hagstrom 1997). See especially Han, Lidz & Musolino (2007) for discussion of these disagreements, and a possible explanation. Discussing scopal interaction between negation and object QPs, they demonstrate that there are two populations of Korean speakers. In one population, the verb (and short form negation) raises to T^0. In the other, V^0-raising does not occur. This split arises because there is a poverty of data available to the acquirer as to whether Korean has V^0-raising or not. If this position is correct, speakers that do not find a contrast in (26) can be said to lack of V^0-raising. If V^0 and short form negation do not raise above the subject's base-position, no ambiguity is expected in (26). Crucially, this does not invalidate the present argument. These speakers may still have A- and Ā-scrambling as described by Miyagawa. However, in the absence of V^0-raising, the distinction cannot be diagnosed by interactions between subject QPs and verbal negation.

contexts, only dative-marked subjects (28a), not dative-nominative subjects (28b), permit inverse scope.

(27) Motun namhaksayng-hanthey/-i/-hanthey-ka holangi-ka an-mwusewe
all male.student-DAT/-NOM/-DAT-NOM tiger-NOM NEG-be.afraid
'Every male student doesn't fear tigers.' [∀>¬; *¬>∀]

(28) a. [Holangi-ka]$_i$ motun namhaksayng-**hanthey** t_i an-mwusewe
[tiger-NOM] all male.student-**DAT** NEG-be.afraid
'Tigers, every male student doesn't fear (them).' [∀>¬; ¬>∀]

b. [Holangi-ka]$_i$ motun namhaksayng-**hanthey-ka** t_i an-mwusewu
[tiger-NOM] all male.student-**DAT-NOM** NEG-be.afraid
'Tigers, every male students doesn't fear (them).' [∀>¬; *¬>∀]

Case-stacking on the subject QP correlates with obligatory wide scope, because nominative case can only be realized upon movement. Such movement places the subject above negation, forcing a wide scope interpretation. Taking inverse scope in OSV sentences to indicate a failure of the subject to move, we again see a correlation between movement and case possibilities. When movement does not occur, case-stacking is blocked. The ambiguity of the dative-marked QP with respect to negation in (28a) is captured in the current proposal, because dative case can mark the subject QP when it does not move at all, and is interpreted below negation, or mark the subject if it has undergone movement forming a dative-nominative stack, but only the dative case-marker is realized.[16]

Dative-accusative stacking also correlates with scope possibilities of subject QPs and verbal negation. If accusative case on indirect objects is only possible when the subject has undergone movement into the CP phase, we expect case-stacking on an indirect object to force a wide scope interpretation of the subject above negation. This prediction is confirmed. When an indirect object is scrambled to the left of the subject, but only bears dative case, the subject can take wide or narrow scope with respect to negation (29a). When the indirect object bears a dative-accusative stack, the subject must take wide scope (29b).

(29) a. [Sue-**hanthey**]$_i$ motun namhaksayng-i t_i kkoch-ul an-cwuesse
[S.-**DAT**] all male.student-NOM flower-ACC NEG-give
'To Sue, all male students didn't give flowers.' [∀>¬; ¬>∀]

b. [Sue-**hanthey-lul**]$_i$ motun namhaksayng-i t_i kkoch-ul an-cwuesse
[S.-**DAT-ACC**] all male.students-NOM flower-ACC NEG-give
'To Sue, all male students didn't give flowers.' [∀>¬; *¬>∀]

In order for the indirect object to receive accusative case it must have undergone movement into the CP phase, and the subject must have as well. Movement of the subject into the CP phase will simultaneously place it in a position to trigger accusative-assignment to the indirect object and to scope over negation. Subsequent Ā-scrambling of the indirect object to achieve the word order in (29b) will not affect the scopal relationship between the subject and negation.

If the linear order of the indirect object before the subject is achieved via A-scrambling, we expect the subject to remain *in situ* scoping under negation. The analysis predicts that A-scrambling an indirect object

[16] An anonymous reviewer wonders if the contrastive focus associated with case-stacking introduces a confound in these judgments. It could be the semantics of contrastive focus, not structural position, which yields unambiguous interpretations. However, contrastive focus does not force a subject QP to scope over negation in English.

(i) a. All the boys didn't take the test. (Only some of them did).
b. [All the boys]$_F$ didn't take the test. (Only some of them did, but the girls are all done).

The licit continuations to (ia,b) in parentheses demonstrate the availability of narrow scope for the subject QP, even with contrastive focus. Something more must be at play in the Korean examples, namely structural position.

to Spec-TP should yield dative-nominative stacking. Some speakers find this well-formed and observe that, in such cases, the subject QP must take narrow scope with respect to negation.

(30) %[Sue-**hanthey-ka**]$_i$ motun namhaksayng-i t_i kkoch-ul an-cwuesse
[S.-**DAT-NOM**] all male.student-NOM flowers-ACC NEG-gave
'To Sue, all male students didn't give flowers.' [*∀>¬; ¬>∀]

I have nothing to say in regards to the variable acceptability of (30).

Lastly, we can find similar evidence in nominative-nominative stacking, as well. Given the interaction of scrambling and negation discussed above, we expect case-stacking to restrict the available interpretation of OSV sentences: if case-stacking requires the subjects to occupy Spec-TP, then we predict that case-stacking will make the inverse scope reading impossible as Spec-TP is structurally higher than negation. This is indeed the case.

(31) a. %Motun sensayngnim-**kkeyse-ka** ku sihem-ul an-poasse
all teacher-**H.NOM-NOM** that test-ACC NEG-saw
'Every teacher didn't take that test.' [∀>¬; *¬>∀]
b. %[Ku sihem-ul]$_i$ motun sensayngnim-**kkeyse-ka** t_i an-poasse
[that test-ACC] all teacher-**H.NOM-NOM** NEG-saw
'That test, every teacher didn't take (it).' [∀>¬; *¬>∀]

When only one nominative marker is realized on the subject, inverse scope becomes available.[17]

(32) [Ku sihem-ul]$_i$ motun sensayngnim-**kkeyse/-i** t_i an-poasse
[that test-ACC] all teacher-**H.NOM/-NOM** NEG-saw
'That test, every teacher didn't take (it).' [∀>¬; ¬>∀]

This is somewhat surprising. The present analysis of dative-nominative and dative-accusative stacking holds that dative is always assigned within the *v*P phase and nominative or accusative is assigned in the CP phase. If this pattern extended to nominative-nominative stacking, we would expect that regular nominative-marking would also disallow inverse scope as it could only be realized after movement to Spec-TP. However, *-kkeyse*, the inner case-marker, should permit scope ambiguity, because it would be assigned to the nominal within the *v*P phase. However, I contend that both instances of nominative case are unmarked cases. Post-syntactically a nominal deserving of deference which is determined to bear nominative case can have that case realized as either the honorific or the standard marker. See §4 and §5 for further discussion of these points, including why honorific nominative must appear inside standard nominative case. In the narrow syntax, the two instances of nominative are indistinguishable, accounting for inverse scope regardless of the form of the nominative-marker. A single case-marker realized on the nominal even when it remains *in situ* can be spelled out as *-kkeyse* or *-i/-ka*. Only when case-stacking is present, can we be sure that movement has taken place, and demonstrate, as predicted, that inverse scope is blocked.

[17] An anonymous reviewer observes a possible confound in the data. As has been observed in previous literature, and in the reviewer's own judgment, *-man* 'only' is required to co-occur with nominative-nominative stacking. Crucially, *only* is itself a scope bearing element (or indicates the presence of a scope bearing element via agreement e.g. Lee 2004). Even in English, the addition of only yields the attested judgment.

(i) a. Every teacher didn't take that test. [∀>¬; ¬>∀]
b. Only every teacher didn't take that test. [∀>¬; *¬>∀]

However, for those informants that do permit nominative-nominative stacking without the co-occurrence of *-man*, the judgment is informative.

In regard to nominative-nominative, dative-nominative, and dative-accusative stacking, the availability of the outer case-marker correlates with movement. In the proposed analysis, it is this movement that both forces the interpretive differences attested above and permits case-stacking. Given that the proposed analysis is able to neatly capture the facts, especially the nominative-nominative stacking pattern, I conclude that the emended Dependent Case model is well-suited to the phenomenon of Korean case-stacking. In §3.4, I argue that the Agree model is not. Before presenting this argument, I will briefly address instances when case-stacking *does not* occur despite movement into a higher phase.

3.3.3 Case-stacking and the A/Ā-distinction

Adopting Miyagawa's proposal for capturing scope ambiguities between subject QPs and verbal negation in Korean also makes predictions regarding possible case morphology on the scrambled argument.[18] In both A- and Ā-scrambling environments (25), the scrambled argument has moved into the CP phase, and, all things being equal, the higher copy should be considered for case assignment again, via (12). In this section, however, I will show that all things are not equal. A-scrambling does result in case-stacking of the scrambled argument, but Ā-scrambling does not.

Case-stacking is available for A-scrambled arguments. This point was made in passing above, where it was observed that A-scrambling an indirect object to Spec-TP yields dative-nominative stacking (30). Unlike the more familiar dative-accusative stacking, dative-nominative stacking occurs in A-scrambling environments, because the subject remains within the *v*P. As the sole argument of the CP phase, the A-scrambled indirect object receives nominative case, via (7c), upon CP spell-out. Similarly, A-movement in passives and unaccusatives also yield case-stacking (18-19). When the internal argument A-scrambles to Spec-TP, it is the only element in the CP phase. As the sole argument of the CP phase, it will not receive lexical or dependent case. Rather, it will be realized as nominative via (7c). If A-movement across a phase boundary uniformly results in case-stacking, A-scrambled direct objects should bear underlying accusative-nominative case. As we will see below, this combination of case-markers cannot be realized simultaneously. However, in such environments, case alternation – pronunciation of either of the two underlyingly assigned case-markers – should be possible. This is indeed what is attested. Case alternation is available on an A-scrambled, clause-initial direct object.

(33) [Ku sihem-**ul/-i**]$_i$ motun namhaksayng-i t_i an-poasse
[that test-**ACC/-NOM**] all male.student-NOM NEG-saw
'That test, every male student didn't take (it).' [¬>∀]

Recall that narrow scope for the subject implicates A-scrambling in (33).

A plausible alternative account of the case alternation in (33) might be to posit two derivations for OSV word order contributing distinct case-marking. Specifically, accusative case signals movement, while nominative case signals base-generation of the logical object. This second option is akin to English and German Hanging Topic Left Dislocation constructions (e.g. Schütze 2001b). Nominative case, on that view, would be a default case, assigned when none of the rules in (7) can apply.

There are reasons to believe this alternative is not correct. First, whether the object is marked nominative or accusative, the subject is able to scope below negation. If the nominative-object were generated above Spec-TP, the subject would be expected to undergo EPP-movement to Spec-TP, forcing a wide scope interpretation of the subject over negation. Furthermore, as is well known, A-scrambling remedies binding condition violations (Mahajan 1990, Saito 1992). This effect is seen in (34).

(34) a. *Selo$_i$-uy sensayngnim-i [Cheli wa Swuni]$_i$-lul kkwucicessta
each.other-GEN teacher-NOM [C. and S.]-ACC scolded

[18] I thank the anonymous reviewers for raising this point.

'Each other's teachers scolded Cheli and Swuni.'

b. [Cheli wa Swuni]$_i$-lul/-ka selo$_i$-uy sensayngnim-i t_i kkwucicessta
[C. and S.]-ACC/-NOM each.other-GEN teacher-NOM scolded
'Cheli and Swuni, each other's teachers scolded (them).'

Ungrammaticality in (34a) is attributed to the unbound reciprocal. A-scrambling in (34b) creates a new antecedent for binding, ameliorating the Condition A violation. As (34b) shows, this ameliorating effect is achieved regardless of case morphology. This is compatible with the present analysis whereby A-scrambled objects receive case twice, upon *v*P and CP spell-out. The data are inconsistent with an account whereby the nominative form of the logical object is base-generated in an Ā-position. Elements in Ā-positions cannot serve as antecedents for binding, and (34b) would be expected to be ungrammatical with a nominative-object on such an account. A final point in favor of the A-scrambling treatment of accusative-nominative case alternations is their prosody. Schütze, citing Grohmann (2000), notes that German left dislocation constructions differ in prosody. Those constructions formed by base-generation of the dislocated item have a noticeable prosodic break that is lacking in those constructions formed by movement of the dislocated element. We might expect to find a similar difference in Korean; where a more noticeable break follows the base-generated nominative object than the scrambled accusative object. This is not the case. According to my informants, there is no prosodic difference conditioned by changes in object case morphology.

Let us now consider Ā-scrambling, as diagrammed in (25): If the direct object Ā-scrambles, we expect *both* the direct object and subject to be present in the CP phase. We might expect this configuration to result in a reversal of case alignment. In the CP phase, it is the direct object which asymmetrically c-commands the subject. If dependent case were available in such a configuration, we would expect the subject to be valued accusative and the direct object valued nominative. Again combinations of accusative and nominative case cannot be pronounced simultaneously. However, this scenario would predict four possible case patterns. The subject should be able to be realized as nominative *or* accusative and the object should be able to be realized as nominative *or* accusative. This runs contrary to fact. Using the interaction of a subject QP and negation to ensure Ā-scrambling, we see that only one of the possibilities is attested.

(35) a. [Ku sihem-**ul**]$_i$ motun namhaksayng-**i** t_i an-poasse
[that test-**ACC**] all male.student-**NOM** NEG-saw

b. *[Ku sihem-**i**]$_i$ motun namhaksayng-**i** t_i an-poasse
[that test-**NOM**] all male.student-**NOM** NEG-saw

c. *[Ku sihem-**ul**]$_i$ motun namhaksayng-**ul** t_i an-poasse
[that test-**ACC**] all male.student-**ACC** NEG-saw

d. *[Ku sihem-**i**]$_i$ motun namhaksayng-**ul** t_i an-poasse
[that test-**NOM**] all male.student-**ACC** NEG-saw
'That test, every male student didn't take (it).' [∀>¬]

This result is not problematic for the dependent case rules in (7), so long as we adopt the position that Ā-movement does not interact with case assignment. I will address why this ban might be so below. First consider how the ban accounts for the facts in (35). If case assignment ignores nominals in Ā-positions, we never expect an Ā-moved object to license dependent case on the subject, capturing the ungrammaticality of (35c,d). Furthermore, case alternation on the object is also not expected. As the subject QP scopes over negation, we can be sure that the subject has moved into the CP phase. Clause-initial position for the direct object can only be achieved via Ā-movement. As this movement is ignored by the case calculus, the direct object will never be the highest nominal in the CP phase and will never be eligible for nominative case, capturing (35b).

The examples in (35c,d) are independently ruled out given the proposed conditions for dependent case

assignment (7b). A canonical direct object receives accusative case in the *v*P, and should be unable to trigger subsequent dependent case. However, a similar scenario of case reversal in dyadic unaccusatives cannot be ruled out in this manner. If Ā-scrambling yields OSV word order in dyadic unaccusatives, we might expect the c-commanding copy of the direct object to license dependent accusative case on the c-commanded copy of the subject. This would not violate (7b) as dyadic unaccusative objects do not receive lexical or dependent case in their base-positions. The hypothesized derivation would yield an unattested dative-accusative stack (36), or accusative case only, on the subject

(36) *Holangi-ka John-hanthey-lul mwusewe
tiger-NOM J.-DAT-ACC be.afraid
'Tigers, John fears (them).'

To rule out (36) we must make reference to the positon occupied by the object. Because the scrambled direct object occupies an Ā-position, the structural requirements for dependent case assignment are not met, and accusative case cannot surface on the subject.

Further support for the argument that nominals in Ā-positions are not re-evaluated for case assignment, via (12), comes from environments that disallow case alternation. Ā-scrambling does not create new antecedents for binding. If an anaphor is Ā-scrambled, it should not trigger a Condition C (or B) violation, whereas an A-scrambled anaphor should. If case alternations on direct objects only occur under A-scrambling, we predict nominative-marked anaphors to be ill-formed in OSV constructions while accusative-marked ones are not. This is the case.

(37) a. Cheli$_i$-ka caki$_i$-lul cohahanta
C.-NOM self-ACC likes
'Cheli likes himself.'
b. Caki$_i$**-lul/*-ka** Cheli$_i$-ka t_i cohahanta
self**-ACC/*-NOM** C.-NOM likes
'Himself, Cheli likes.'

On the present account, nominative-case marking on the subject implicates A-movement. Accusative-marking is consistent with either A-movement or Ā-movement. The unavailability of nominative case in (37b) signals the unavailability of well-formed A-scrambling. If Ā-scrambling also resulted in new case assignment, we would expect case-alternation to be well-formed in (37b), contrary to fact.

Similarly, a bound variable interpretation of the possessor *ku* 'his', in OSV constructions, is only available when the scrambled object bears accusative case.

(38) a. Nwukwuna ku-uy emeni-lul cohahanta
everyone.NOM his-GEN mother-ACC likes
'Everyone$_i$ likes his$_i$ mother.'
b. [Ku-uy emeni]$_i$**-lul/*-ka** nwukwuna t_i cohahanta
[his-GEN mother]**-ACC/*-NOM** everyone.NOM likes
'His$_i$ mother, everyone$_i$ likes (her).'

Here too, by hypothesis, the presence of nominative case on the scrambled object diagnoses A-scrambling. A-scrambling places the variable in a position where it cannot be bound by the subject QP. Only when Ā-scrambling takes place will the object reconstruct for variable binding. As Ā-positions are ignored for case assignment, an Ā-scrambled object will not be marked nominative.

Having shown that limiting case assignment to nominals in A-positions yields the desired result, I now briefly discuss why such a restriction should exist. Limiting dependent case assignment to A-positions is a necessary ingredient in any implementation of the Dependent Case model. See Baker (2015; and sources

cited therein for numerous examples where Ā-movement does not affect case assignment). In Marantz's (1991) formulation, the ban is stipulated. This stipulation has faced significant criticism from those who have argued that case must be determined in syntax (e.g. Legate 2008), because the A/Ā-distinction is a fundamentally syntactic distinction. In syntax-internal implementations (e.g. Baker & Vinokurova 2010; Preminger 2011, 2014), the ban can be captured if case assignment happens before any Ā-movement can take place. For the present proposal, which holds that cyclic case assignment occurs at phasal spell-out, the ban can also be derived. As Baker (2015) suggests, Ā-scrambling involves adjunction (e.g. Saito 1985 *et seq.*), and he contends that adjuncts, unlike arguments, are delayed in their spell-out to PF. Thus, if the case calculus occurs after argument spell-out but before adjunct spell-out, we do not expect adjuncts (including Ā-scrambled elements) to participate in the case assignment rules in (7). Though, adjuncts may still be able to be case-marked, as in German Hanging Topic Left Dislocation. This case-marking will fall under the purview of default case (e.g. Schütze 2001b).

3.4 Against the Agree model

Having shown that an emended Dependent Case model can capture the behavior of case-stacking, I now demonstrate that the Agree model cannot.

Yoon (1996, 2004) suggests that dative-nominative and dative-accusative case-stacking can be captured within an Agree model in at least two ways: (i) The dative case-marker is the realization of lexical/inherent case while the nominative or accusative-marker is the realization of structural Case. (ii) Nominals in Korean can enter into AGREE relationships with multiple functional heads. Multiple AGREE relationships yield multiple case assignment. Specifically, dative case is a lexical case assigned to the subject of dyadic unaccusative predicates and indirect objects, which may both be generated in Spec-VP/ApplP. Nominative and accusative are structural cases assigned by T^0 and v^0 respectively. While such analyses are capable of capturing the more well-known dative-nominative and dative-accusative stacking constructions, they are problematic for instances of nominative-nominative stacking. Adopting the commonly held position that nominative case assignment arises only when a nominal enters an AGREE relationship with T^0, we would never expect to see nominative-nominative stacking, because T^0 cannot agree with the same nominal twice.

If case assignment is achieved by ϕ-probing, then all feature-valuation will be achieved upon the initial probing of the subject by T^0. Nothing would be gained by a second instance of the same functional head probing the same element to value the same feature. Probing of this kind is redundant.[19] In this respect, the Agree model, with T^0 as the sole nominative licensor, cannot be extended to nominative-nominative stacking. T^0 will probe the honorific agentive subject in Spec-vP in an attempt to value its ϕ-features. Successful ϕ-agreement ensures simultaneous case assignment, and, yields subject honorific agreement on the verb. At this point, assuming all of T^0's unvalued features have been valued, additional probing is impossible. Under the Agree model, multiple instances of the same case-marker are impossible on a single nominal, because multiple ϕ-probing of one nominal by one functional head is impossible.

As noted at the outset, neither the Agree model nor the Dependent Case model can capture the Korean data without modification. Thus, it is important to note that this impasse is maintained even if we attempt to incorporate the emendation in (12) into the Agree model. The proposed modification for the Dependent Case model was that case assignment takes place upon spell-out of every phase. Suppose we apply a similar emendation to the Agree model. Within the Agree model, such an emendation would allow a nominal to be targeted by a ϕ-probe in every phase in which it occupied an A-position. In the case of nominative-

[19] This is not to say that a single functional head cannot probe more than one goal. It has been suggested that a functional head can probe multiple targets in an attempt to value its unvalued features. The operations of Multiple AGREE (e.g. Hiraiwa 2001, 2005), where a functional head agrees with multiple nominals simultaneously, and Cyclic AGREE (Béjar & Rezac 2009), where a functional head agrees with nominals successively, are two such cases. However, in these cases, the same goal is not probed twice by the same functional head.

nominative stacking, the external argument will be targeted by the unvalued ϕ-feature of T^0 in Spec-*v*P. Upon movement to Spec-TP in the CP phase, the nominal will again become a viable goal for ϕ-probing by (12). However, adopting (12) is not sufficient to yield case-stacking, because T^0 cannot target the external argument again; an unvalued Case-feature on a nominal is not sufficient to yield case assignment. An unvalued ϕ-probe must initiate the valuation process by targeting the nominal. It is this second ingredient that is lacking in the emended Agree model. Even if the external argument, having moved, is a viable target, and assuming that AGREE relationships can be established in Spec-Head configurations, there is still no viable probe to target the nominal in its new positon. T^0's ϕ-feature is already valued.[20] Multiple AGREE, as proposed by Hiraiwa (2001, 2005) will not be helpful in this scenario due to the timing of the derivation. In a Multiple AGREE relation a probe targets all possible goals simultaneously. As the external argument has yet to move to Spec-TP when T^0 enters the derivation, that copy will never be visible to T^0 as one of multiple targets.[21]

We might attempt to avoid the problem of redundant probing by T^0 by treating the honorific nominative as a lexical case assigned by a verb to its subject, just as Yoon (1996, 2004) treats dative case. This alternative is too weak, because it cannot capture the near identical distribution of the honorific and standard nominative markers. This point will be discussed in more detail in §5. For now, observe that direct objects of psychological predicates can bear honorific nominative (39).

(39) Swuni-hanthey Kim-sensayngnim-kkeyse philyohey
S.-DAT K.-teacher-H.NOM need
'Swuni needs Professor Kim.'

This distribution is unexpected of lexical case-markers which are thought to be associated with specific positions of external merge (e.g. Woolford 1997). That the honorific nominative case-marker is not limited in its distribution to one site of external merge suggests that a lexical case account is unlikely, and the problem of redundant probing is real.

A second significant problem faced by the Agree model is the observation that in Korean non-nominative subjects can control agreement (Gerdts & Youn 1988, Yoon 2004).[22]

(40) a. Kim-sensayngnim**-kkey**-(nun) Swuni-ka philyoha**-si**-ta
K.-teacher**-H.DAT**-(TOP) S.-NOM necessary**-SH**-DEC
'Professor Kim needs Swuni.'
b. *?Swuni-eykey-(nun) Kim-sensayngnim-i/-kkeyse philyoha**-si**-ta
S.-DAT-(TOP) K.-teacher**-NOM/-H.NOM** necessary**-SH**-DEC
'Swuni needs Professor Kim.' [*Yoon 2004*]

These facts are surprising, as cross-linguistically nominative objects often control agreement in such environments.

[20] David Pesetsky (p.c.) observes another alternative would be to suggest that honorific nominative is a structural case, assigned by a functional head other than T^0. This alternative avoids the problematic scenario of a single nominal entering two ϕ-agreement relationships with the same functional head. While this alternative effectively sidesteps the issue of redundant probing, it introduces unwanted complexity. It requires a second functional head to assign the second instance of nominative case to the subject. It is not clear if this functional head would have any additional function, and I am unaware of any independent evidence for such a head.

[21] I am grateful to an anonymous reviewer for helpful discussion regarding these points.

[22] See Ura (1999) for a similar effect in Japanese. Some authors do report instances where an honorific nominative object can control agreement (cf. Shibatani 1999 for relevant Japanese and Nepali data; Kim 2001 for Korean).

(41) a. Mir gefallen *diese Bücher*
I.DAT like.**PL** these books
'I like these books.' (German)

b. Mne nravjatsja *knigi*
I.DAT like.PRS.**3PL**.REFL book.PL
'I like books' (Russian)

c. Henni voru gefnar *bækurnar*
she.DAT were.**3PL** given book.NOM.PL
'She was given books.' (Icelandic)

[*Yoon 2004*]

Under the Agree model, case assignment and ϕ-agreement arise simultaneously as a result of the operation AGREE. If whichever head assigns nominative case also bears ϕ-features realized as subject (honorific) agreement, the Agree model predicts that the nominative-marked element should control agreement. This is the case for the languages in (41), but is not the case for Korean as seen in (40). The fundamental split between case and agreement is incompatible with the Agree model, further supporting an analysis in which case assignment and ϕ-agreement are not reflexes of the same operation. The Dependent Case model is such an analysis.[23]

Lastly the observation that scopal relationships between the subject and verbal negation can affect case morphology on a scrambled indirect object (29) is extremely surprising within the Agree model. Recall that when an indirect object is scrambled to the left of the subject and bears a dative-accusative stack, the subject must take wide scope. These facts are some of the strongest in support of the Dependent Case model of case-stacking. Case-stacking is only possible when a nominal has undergone movement, and accusative assignment is available only when two nominals are in a c-command relationship, and the c-commanding nominal is caseless. In order for the indirect object to receive accusative case it must have undergone movement into the CP phase, and the subject must have as well. Movement of the subject into the CP phase will simultaneously place it in a position to trigger accusative-assignment to the indirect object and to scope over negation. It is not at all clear, why the interaction between case assigning functional heads and the nominals they Agree with should be affected by other nominals not involved in the feature-valuation process.

In all of these cases, the superiority of the Dependent Case model can be attributed to the fact that within this model, functional heads play a limited role. Rather, case reflects c-command relationships between nominals in various domains. It is quite common that during the course of the derivation such nominals occupy multiple domains (i.e. phases) and enter multiple c-command relationships. Adopting is view avoids the problem of redundant probing, dissociates case and agreeent, and captures the interplay of nominal position (and the consequences of such position for scope) and case-realization. Korean is unique in more fully articulating multiple c-command relationships, given the ability to realize multiple case morphemes on a single nominal.

4 The morphology of case-stacking

In §3, I suggested that within the narrow syntax, case is assigned successively to nominals which undergo A-movement across a phase boundary, forming case-stacks. However, case-stacking is not obligatory. Arguments which permit stacked case also permit case alternation. Case alternation describes a scenario where only one of the multiple case-markers assigned to a DP is pronounced on the nominal. All arguments

[23] See Bobaljik (2008) and Preminger (2011, 2014) for accounts of how ϕ-agreement is conditioned by case.

which permit case-stacking discussed above – honorific agentive subjects, subjects of dyadic unaccusatives, and (some) indirect objects – also permit case alternation.[24] Wherever (honorific) nominative-nominative stacking is permitted, both honorific nominative and standard nominative are also permitted. Wherever dative-nominative and dative-accusative stacks are permitted, dative or nominative and dative or accusative case is also permitted, respectively.

(42) a. Sengsayngnim-tul**-kkeyse/-i** kulen il-ul hasipnita
teacher-PL**-H.NOM/-NOM** that.kind work-ACC do
'Only teachers do that kind of work.'
b. Cheli**-hanthey/-ka** ton-i isse
C.**-DAT/-NOM** money-NOM have
'Cheli has money.'
c. Swunhi-ka Yenghi**-hanthey/-lul** chayk-ul cwuesse
S.-NOM Y.**-DAT/-ACC** book-ACC gave
'Swunhi gave Yenghi the book.'

Crucially, while case-stacking is limited to focus environments for most speakers, case alternation occurs freely. It can arise in both focus and non-focus environments. In this section, I will suggest that case-alternation is achieved when morphological rules act upon underlying case-stacks blocking their overt realization (see also Gerdts & Youn 1988, Youn 1990, Hong 1991 *i.a.* for similar approaches). In this regard, the behavior of Korean case-stacking is not unlike other case-stacking languages.

4.1 Case alternation (also) correlates with movement

A crucial prediction the present analysis of case alternation makes is that pronunciation of the outer case-marker alone should only occur when movement has occurred. Thus, like case-stacking, we expect case-alternation to correlate with other diagnostics of movement. This prediction is borne out for dyadic unaccusative subjects and indirect objects. When we have reason to believe movement has occurred, case-alternation is possible. When we have reason to believe movement has not occurred, case-alternation is impossible.

Case-alternation on agentive subjects does not diagnose movement. As both honorific and standard nominative markers are the realization of unmarked case, either can be realized even if the subject has not undergone movement. Only stacked case reveals agentive subject movement. Nevertheless, the observation that nominative case on dyadic unaccusative subjects and accusative case on indirect objects correlates with other diagnostics of movement suggests that the proposed analysis of case alternation is correct.

[24] Adjuncts permit case-stacking, but do not permit case alternation (e.g. Schütze 2001a).

(i) a. Ecey**-pwuthe-(ka)** nalssi-ka cohaciesse
yesterday**-since-(NOM)** weather-NOM became.good
'Since yesterday, the weather has been good.'
b. Ecey**-pwuthe-(lul)** cengpwu-ka swuip-ul kumcihaysse
yesterday**-since-(ACC)** government-NOM imports-ACC banned
'Since yesterday, the government banned imports.' [*Schütze 2001a*]

Failure to realize *-pwuth(e)* 'since' on the nominal in (i) results in ungrammaticality. I follow many previous authors (e.g. Kim & Maling 1998, Kim 2001, Yoon 2004, Maling 2009, Baker 2015; see also §3.3.3) in treating case assignment to adjuncts as a distinct process from case assignment to arguments. Assuming such a distinction, adjuncts are not expected to serve as case competitors.

4.1.1 Dative-nominative alternation

In §3.3, I presented two arguments that dative-nominative subjects have undergone movement. First, I demonstrated that stacked case correlates with interpretive consequences, which are thought to be conditioned by movement. Second, I showed that failure to move prevents the realization of stacked case. These correlations also hold of dyadic unaccusative subjects bearing only nominative case.

Recall, a dative-marked subject can receive either a non-specific or specific interpretation. Stacked case subjects must receive a specific interpretation.

(43) a. Etten-salam-hanthey Yenghi-ka coha
some-person-DAT Y.-NOM likes
'Some person likes Yenghi.' [*non-specific / specific*]

b. Etten-salam-hanthey-ka Yenghi-ka coha
some-person-DAT-NOM Y.-NOM likes
'Some person likes Yenghi.' [*specific*]

I posited that movement of the subject places it outside the domain of existential closure (Diesing 1992), forcing the specific interpretation. If movement is essential for nominative assignment in both case-stacking and case-alternation scenarios, we expect a dyadic unaccusative subject bearing only nominative case to be necessarily interpreted as specific. This prediction holds (Suh 1992).

(44) Etten-salam-**i** Yenghi-ka coha
some-person-**NOM** Y.-NOM likes
'Some person likes Yenghi.' [*specific*]

The parallel behavior between case-stacking nominals in (43b) and nominative-marked nominals (44) supports the position that nominative case is only available if movement has taken place.[25]

Furthermore, if this analysis is correct, dative-nominative- and nominative-marked dyadic unaccusative subjects should pattern identically with respect to phenomena which indicate a failure to move. Nominative case (realized as part of a case-stack or alone) should be unavailable when movement is unavailable. As discussed above, one scenario where we think movement has not occurred is OSV clauses, in which a subject QP scopes under negation. Inverse scope is only available if the subject remains in its base-position within the c-command domain of negation. In OSV contexts, only dative-marked subjects (45a), not dative-nominative subjects (45b), permit inverse scope.

(45) a. [Holangi-ka]$_i$ motun namhaksayng-hanthey t_i an-mwusewe
[tiger-NOM] all male.student-DAT NEG-be.afraid
'Tigers, every male student doesn't fear (them).' [∀>¬; ¬>∀]

b. [Holangi-ka]$_i$ motun namhaksayng-hanthey-ka t_i an-mwusewe
[tiger-NOM] all male.student-DAT-NOM NEG-be.afraid
'Tigers, every male student doesn't fear (them).' [∀>¬; *¬>∀]

[25] An anonymous reviewer objects to the claim that nominative-marked subjects which alternate with dative-marked subjects must be interpreted as specific. They claim that a non-specific interpretation is available in (i):

(i) Etten haksayng-tul-i ton-i philohata-ko tulesse
some student-PL-NOM money-NOM need-COMP heard
'I heard that some students need money.'

The reviewer suggests that this may indicate that dative case need not be assigned to dyadic unaccusative subjects in Spec-VP. Such a proposal is adopted by Yoon (2004). While this possibility would lose the correlation between dative-nominative stacking and alternation, it is nevertheless consistent with the central claim of this paper that, unlike the Dependent Case model, the Agree model is incompatible with the full range of Korean case-stacking data.

Case-stacking on the subject QP correlates with obligatory surface scope. This follows from the current proposal, because nominative-marking can only be achieved upon movement of the subject. Such movement places the subject QP above negation, yielding a wide scope interpretation. If nominative case alone is the overt realization of an underlying dative-nominative stack, we predict the nominative-marked subject to behave the same. This prediction is borne out; only the surface scope reading is available.

(46) [Holangi-ka]$_i$ motun namhaksayng-**i** t_i an-mwusewe
[tiger-NOM] all male.student-**NOM** NEG-be.afraid
'Tigers, every male student doesn't fear (them).' [∀>¬; *¬>∀]

The parallel behavior of dative-nominative subjects (45b) and nominative subjects (46) of dyadic unaccusative predicates suggests that the two have a common source for nominative case. In both cases dative is assigned *in situ* and nominative is assigned upon movement. Nominative-only realization signals a morphologically impoverished underlying case-stack.

4.1.2 Dative-accusative alternation

The same facts hold of dative-accusative alternations. Accusative-marked indirect objects behave just like dative-accusative indirect objects. If an existentially quantified indirect object bears dative case, it can receive either a non-specific or specific interpretation. However, an existentially quantified indirect object marked with stacked-case must receive a specific interpretation (Yang 1999, Schütze 2001a).

(47) a. John-i etten-salam-hanthey chayk-ul cwuesse
J.-NOM some-person-DAT book-ACC gave
'John gave someone a book.' [*non-specific / specific*]

b. John-i etten-salam-hanthey-lul chayk-ul cwuesse
J.-NOM some-person-DAT-ACC book-ACC gave
'John gave someone a book.' [*specific*]

If accusative assignment is only available on indirect objects which have undergone movement, we expect them to only permit a specific reading. This prediction is confirmed.

(48) John-i etten-salam-**ul** chayk-ul cwuesse
J.-NOM some-person-**ACC** book-ACC gave
'John gave someone a book.' [*specific*]

We also saw compelling evidence in favor of the Dependent Case model in regards to scope possibilities of a subject QP and verbal negation given the case of a scrambled indirect object. This fact is particularly striking because *prima facie* only the indirect object and neither of the scope-sensitive elements appears affected. When the indirect object bears dative case, the subject can scope above or below negation (49a). When the indirect object bears dative-accusative case, the subject must scope above negation (49b).

(49) a. [Sue-hanthey]$_i$ motun namhaksayng-i t_i kkoch-ul an-cwuesse
[S.-DAT] all male.students-NOM flower-ACC NEG-gave
'To Sue, every male student didn't give flowers.' [∀>¬; ¬>∀]

b. [Sue-hanthey-lul]$_i$ motun namhaksayng-i t_i kkoch-ul an-cwuesse
[S.-DAT-ACC] all male.students-NOM flower-ACC NEG-gave
'To Sue, every male student didn't give flowers.' [∀>¬; *¬>∀]

Again accusative-marked indirect objects behave like dative-accusative indirect objects, forcing the subject QP to take wide scope over negation.

(50) [Sue-**lul**]$_i$ motun namhaksayng-i t_i kkoch-ul an-cwuesse
[S.-**ACC**] all male.students-NOM flower-ACC NEG-gave
'To Sue, every male student didn't give flowers.' [∀>¬; *¬>∀]

The wide scope interpretation is necessitated in (49b) and (50), because accusative case on the indirect object is only available if both the indirect object and the subject have undergone movement. Such movement necessarily places the subject outside the c-command domain of negation.

In sum, comparing the behavior of nominals bearing stacked case to those bearing the outer case-marker alone shows that the two pattern identically with respect to phenomena associated with movement. This similarity supports the claim I, and others, have made that case-stacking and alternation are related phenomena. Specifically, many (if not all) instances of case-alternation arise when an underlyingly stacked-case nominal only has one of its two cases spelled out. Crucially, one of the two cases that can be realized is the inner case-marker. If a dyadic unaccusative subject bears dative-nominative case it can be realized as dative. Similarly, an underlying dative-accusative indirect object can also be realized as dative. This optionality explains why the dative-marked elements are consistently ambiguous. They can be associated with both a specific or non-specific interpretation (51a,b) and can take wide or narrow scope with respect to negation in OSV clauses (51c).

(51) a. Etten-salam-hanthey Yenghi-ka coha
some-person-DAT Y.-NOM like
'Some person likes Yenghi.'
b. John-i etten-salam-hanthey chayk-ul cwuesse
J.-NOM some-person-DAT book-ACC gave
'John gave someone a book.'
c. [Holangi-ka]$_i$ motun namhaksayng-hanthey t_i an-mwusewe
[tiger-NOM] all male.student-DAT NEG-be.afraid
'Tigers, every male student doesn't fear (them).'

The specific and wide scope interpretations arise when movement has occurred, forming a stack, but only the dative case-marker is pronounced. The non-specific and narrow scope interpretations arise when no movement has taken place and dative is the only available case-marker.

4.2 Obscuring stacked case

Under the proposed analysis, arguments displaying case alternation bear underlying stacked case. To account for the rarity of the surface realization of these stacks, something must intervene at PF to (at times) render stacking inaudible. In this regard, Korean behaves like other case-stacking languages, which often do not pronounce all the morphology assigned to nominals. For example, Richards (2013) observes that Lardil (Tangkic, Australia) displays unpronounced case-stacking. Direct objects usually bear accusative case (52a), but this case is not realized in the future tense, where future morphology spreads to the direct object (52b).

(52) a. Ngada ngthungu warnawu dulnhuka-**n**
I slowly cook monkfish-**ACC**
'I slowly cooked the monkfish.'
b. Ngada ngthunguthu-r warnawu-thur dulnhuka-**thur**
I slowly-FUT cook-FUT monkfish-**FUT**
'I will slowly cook the monkfish.' [*Richards 2013*]

We can be sure that in (52b) accusative is assigned and then obscured, because Lardil relative clauses bear

the same case as the head noun (53a). Relative clauses which modify direct objects of future tense verbs bear accusative case, even though accusative is no longer visible on the direct object (53b) (Richards 2013).

(53) a. Kara nyingki kurri kiin**-i** thungal**-i** kirdi-**thuru-∅**?
Q you see that**-ACC** tree**-ACC** cut**-FUT-ACC**
'Do you see that tree which I am going to cut down.'
b. Ngada kurri-**thur** karnjin-**kur** [ngithun thabuji-kan**-i-la** tharrba-**∅**]
I see**-FUT** wallaby**-FUT** [my brother**-GEN-ACC** spear**-ACC**]
'I want to see the wallaby that my older brother speared.' [*Richards 2013*]

Similarly in Russian, case and number mismatches occur between a noun and its modifiers when the noun is modified by a paucal numeral. Compare (54a) and (54b):

(54) a. posledn**-ie** krasiv**-ye** stol**-y**
last**-NOM.PL** beautiful**-NOM.PL** table**-NOM.PL**
'the last beautiful tables'
b. posledn**-ie** dva krasiv**-yx** stol**-a**
last**-NOM.PL** two.NOM beautiful**-GEN.PL** table**-GEN.SG**
'the last two beautiful tables' [*Pesetsky 2014*]

In (54a), nominative plural marking is realized throughout the DP. Similarly, the adjective *posledn-ie* 'last' bears nominative plural in (54b). However, *krasuv-yx* 'beautiful' and *stola* 'table' are preceded by the paucal numeral *dva* 'two' and bear genitive case. Additionally, while the former bears plural marking, the latter is marked singular. In oblique environments such mismatches disappear and dative plural morphology is realized throughout.

(55) a. (k) posledn**-im** krasiv**-ym** stol**-am**
(to) last**-DAT.PL** beautiful**-DAT.PL** table**-DAT.PL**
'to the last beautiful tables'
b. (k) posledn**-im** dvu**-m** krasiv**-ym** stol**-am**
(to) last**-DAT.PL** two**-DAT.PL** beautiful**-DAT.PL** table**-DAT.PL**
'to the last two beautiful tables' [*Pesetsky 2014*]

Pesetsky (2014) suggests that nouns enter the derivation valued with genitive case, and functional heads assign subsequent case morphology. D^0 assigns nominative and P^0 assigns oblique case – including dative. In (54a), D^0 merges and assigns nominative on top of the 'primordial' genitive case of the noun, forming a stack. However numerals like those in (54b) have the ability to block assignment of nominative on nouns preserving the original genitive morphology. In (55), the P^0 *k* 'to' assigns dative case on top of the nominative case of D^0 and genitive case of the noun.

Pesetsky's analysis of the Russian patterns, though also crucially involving case-stacking, is incompatible with the approach to case assignment adopted in this paper. I leave it to future work to determine how case-stacking in Russian and Lardil should be treated within the Dependent Case model. However, I adopt from his account (a version of) the mechanism that obscures stacked case. Like Korean and Lardil, Russian is a language in which case-stacking is obscured; not all cases assigned to a nominal are pronounced. To account for this, Pesetsky proposes the *One Suffix Rule*.

(56) *One suffix rule* (Pesetsky 2014)
Delete all but the outermost case suffix.

I adopt a version of (56) to account for the obscuring of stacked case in Korean. (56) is too strong for Korean. However, we can account for case-alternation by adopting (57), which permits case alternation.

(57) *Generalized one suffix rule*
Delete all but one case suffix.

Employing (57) allows us to capture case alternation. In the morphological structure, (57) will apply to any nominal which has accrued stacked case and delete all but one of the suffixes.

4.3 Pronouncing stacked case

If (57) is correct, case alternation can be accounted for successfully. Whenever stacked case is achieved in the syntax, one of the two case-markers assigned to the nominal is pronounced. However, without modification, case-stacking is never expected. I posit that while operative, (57) is *not* inviolable. In focus-contexts, both case morphemes assigned to a nominal can be pronounced, because focus permits retention of stacked case, despite (57).

It is well-known that case elision in Korean (and Japanese) is constrained by discourse/semantic factors. Case-markers cannot be deleted when the argument they mark is contrastively focused (e.g. Tsutsui 1984; Masunaga 1988; Yatabe 1999; Ko 2000; Lee 2002).[26] In correction (58, 59) and *wh*-question and answer contexts (60, 61), omission of case morphology is strongly dispreferred.

(58) A: I computer cikum-un toy-ne. Ney-ka kochiesse?
this computer now-TOP work-FP. you-NOM fixed
'This computer is working now. Did you fix (it)?'
B: Ani, i chinkwu***(-ka)** kochiesse
no, this guy***(-NOM)** fixed
'No, this guy fixed (it).'

(59) A: Cheli-ka computer-(lul) sasse
C.-NOM computer-(ACC) bought
'Cheli bought a computer.'
B: Aniya, hywutaephon**??(-ul)** sasse.
no, cell.phone**??(-ACC)** bought
'No, (he) bought a cell phone.'

(60) A: I computer cikum-un toy. Nwuka kochiesse?
this computer now-TOP work. who.NOM fixed
'This computer is working now. Who fixed (it)?'
B: I chinkwu***(-ka)** kochiesse.
this guy***(-NOM)** fixed
'This guy fixed (it).'

(61) A: Cheli-ka mwues**??(-lul)** sasse?
C.-NOM what**??(-ACC)** bought
'What did Cheli buy?
B: Hywutaephon**??(-ul)** sasse
cell.phone**??(-ACC)** bought
'(He) bought a cell phone.' [*Lee & Choi 2010*]

The requirement that case morphology be preserved when a nominal it marks is focused could be enforced by a constraint like (62):[27]

[26] Lee (2010, 2011) and Lee & Choi (2010) demonstrate that case elision is tolerated on focused direct objects.

[27] This behavior is reminiscent of the role focus plays is VP-ellipsis where MaxElide (Takahashi & Fox 2005) is sensitive to focused elements.

(62) *Korean case preservation constraint*
A case particle cannot be deleted when a nominal to which it is suffixed is focused.

There are (at least) two ways of modeling the interaction between constraints like those in (57) and (62). As I cannot presently offer independent arguments in favor of either of these two approaches, I will remain agnostic as to which (if either) is correct, and leave some details to be determined. In an Optimality Theoretic model of morphology selection (e.g. McCarthy 2006 and sources therein), (57) and (62) would need to be equally ranked. Whenever a nominal bearing stacked case was not focused, (57) would apply yielding case-alternation, but no case-stacking. In focus environments, pronouncing or not pronouncing stacked case would be equally penalized yielding the observed variability. If (62) outranked (57), we would predict case-stacking to be obligatory in focus environments, contrary to fact. If (57) outranked (62), we would predict case-stacking to never arise. Under a Distributed Morphology approach to morphological calculation, the features of a multiply case-valued nominal would compete for realization at Vocabulary Insertion. Neither case value would be more specific than the other, rendering both realizations appropriate in non-focus context. In the presence of focus-marking, realizing both markers at the same time would also need to be possible. Crucially, both approaches briefly sketched above appear capable of capturing the desired interaction of case-deletion and focus, ensuring the case alternation can occur in focus and non-focus contexts, while case-stacking is limited to, but not obligatory in, focus contexts.

4.4 The lack of widespread case-stacking

Given that all nominal copies that have undergone A-movement across a phase boundary receive case, we might expect a subject to bear stacked (non-honorific) nominative-nominative case or a raised possessor to bear stacked genitive-accusative case. Both of these (and many other combinations) are ungrammatical:

(63) a. *John**-i-ka** Mary-lul saranghey
J.**-NOM-NOM** M.-ACC love
'John loves Mary.'
b. *Mary-ka John**-uy-lul** tali-lul capasse
M.-NOM J.**-GEN-ACC** leg-ACC grabbed
'Mary grabbed John's leg.'

I follow previous authors in attributing the impossibility of such combinations to independent morphological restrictions (e.g. Cho & Sells 1995, Schütze 2001a; *contra* Yoon 2005).

Such treatments hold that there are four post-nominal particle slots, as schematized in (64): each particle is confined to a particular slot, and each slot can contain at most one particle at a time.

(64) *Korean nominal template* (Schütze 2001a)

N_{root}	Postposition		Conjunctive		X-lim		Z-lim	
	-eykey	DAT	*-(k)wa*	'and'	*-man*	'only'	*-ka*	NOM
	-hanthey	DAT	*-pwuthe*	'from'	*-kkaci*	'even'	*-i*	NOM
	-kkey	H.DAT	*etc.*		*etc.*		*-(l)ul*	ACC
	-ey	DAT/LOC					*-(n)un*	TOP
	-eyes	LOC					*-uy*	GEN
	-(u)lo	DIR						
	-kkaci	GOAL						
	-kkeyse	H.NOM						

Ungrammatical examples, like (63), are ruled out because two particles occupying the same slot receive overt exponence.[28]

While nominals which receive two cases that must occupy the same slot cannot bear stacked case, we expect them to exhibit case alternation, due to the One Suffix Rule. Such alternation is attested in Possessor Raising Constructions (65) and ECM (66). See Ko (2007) and Yoon (2004, 2007) and sources cited therein, respectively, for arguments that movement is implicated in the case alternations below.

(65) a. John**-uy** tali-ka aphe
J.**-GEN** leg-NOM be.hurt
'John's leg hurts.'

b. John**-i** tali-ka aphe
J.**-NOM** leg-NOM be.hurt
'John's leg hurts.'

(66) a. Tom-un Swunhi**-lul** yeypputa-ko sayngkakhaesse
T.-TOP S.**-ACC** be.pretty-COMP thought
'Tom thought Swunhi to be pretty.'

b. Tom-un Swunhi**-ka** yeypputa-ko sayngkakhaesse
T.-TOP S.**-NOM** be.pretty-COMP thought
'Tom thought Swunhi to be pretty.'

Under the current proposal, a raised possessor such as *John* in (65) will receive unmarked genitive case within the DP, as it is the structurally highest nominal in the relevant domain (the DP). If the possessor undergoes movement out of the DP, it will be evaluated for case again and receive unmarked nominative, as it is now the structurally highest nominal in the CP domain. Similarly, in (66), *Swunhi* will be assigned unmarked nominative case within the embedded CP. After subject-to-object raising into the matrix CP, *Swunhi* will be evaluated for case again. As it is c-commanded by the caseless matrix subject *Tom*, Swunhi can receive dependent accusative case.

Case alternation of this kind provides additional evidence that a stack of case morphology is acquired by a moved nominal in the syntax. As we have seen above, either of the stacked cases can be pronounced. Moreover, both morphemes of the stack can be overtly realized if the appropriate conditions are met.

[28] In general, morphological templates are cross-linguistically rare (Rice 2000). It is commonly thought that morphological ordering reflects syntactic ordering (Baker 1985), and attempts have been made to completely eliminate instances of templatic morphology. The most well-known example of templatic morphology is the Bantu CARP template (e.g. Hyman 2003) which, to my knowledge, has resisted reduction to a Mirror Principle account. Yoon (2005) attempts such a reduction for Korean nominal morphology, but this attempt faces some issues, particularly in regard to the proper treatment of honorific nominative case. I leave it to future research to determine if other attempts to derive (64) might be more fruitful.

5 *-kkeyse* and *-hanthey* are case-markers

Until now, I have taken it for granted that the honorific nominative marker *-kkeyse* and the dative-marker *-hanthey/-eykey* are case-markers. This position is not uniformly accepted. There has been some debate over whether these markers are best analyzed as structural case-markers, lexical case-markers, or postpositions (e.g. Shibatani 1977, O'Grady 1991, Urushibara 1991, Martin 1992, Sells 1995, 1997, Cho & Sells 1995, Schütze 2001a, Yoon 2004, 2005). In this section, I demonstrate that *-kkeyse* behaves like a structural case-marker, not a lexical case-marker or postposition. This supports the position maintained above that *-kkeyse* is an allomorphic variant of the canonical nominative case-marker *-i/-ka*, whose realization is limited to [+honorific] nominals. Similarly, a postposition analysis of *-hanthey/-eykey* is unavailable, though a lexical case analysis, as adopted in §3, can be maintained.

I will first rule out a lexical case account of the honorific nominative-marker *-kkeyse*. As mentioned briefly in §3.4, the distribution of *-i/-ka* and *-kkeyse* is (often) identical. Either *-i/-ka* or *-kkeyse* can mark agentive subjects (67a) and cannot be realized on objects of agentive predicates (67b). Furthermore, *-kkeyse* is available on the subjects of passive (68a) and raising constructions (68b).

(67) a. Kyoswunim-tul-i/-kkeyse osiessta
professors-PL-NOM/-H.NOM came
'The professors came.'

b. John-i Kim-kyoswunim-ul/*-i/*-kkeyse mannasse
J.- K.-professor-ACC/*-NOM/*-H.NOM met
'John met professor Kim.'

(68) a. Kim-kyoswunim-i/-kkeyse cap-hi-si-ess-ta
K.-professor-NOM/-H.NOM catch-PAS-SH-PST-DEC
'Professor Kim was captured.'

b. Kim-kyoswunim-i/-kkeyse [tachi-si-nkes] kat-(?usi)-ta
K.-professor-NOM/-H.NOM [hurt-SH-COMP] seem-(?SH)-DEC
'Professor Kim seems to be hurt.' [*Yoon 2005*]

In light of (68), the ungrammaticality of (67b) would seem to provide evidence in favor of a structural analysis of *-kkeyse*, because, in general, lexical case-markers, unlike structural case-markers, are retained under A-movement. This property is famously observed in Icelandic quirky case, which is preserved under passivization and raising, unlike structural accusative case (e.g. Andrews 1982, Zaenen, Maling & Thráinsson 1985, Sigurðsson 1989). That *-kkeyse* is unavailable in the position where passive subjects are thought to be base-generated suggests that the marker is not retained.[29]

Both nominative forms can also appear on nominative objects. Dyadic unaccusative predicates mark their objects with nominative case. Either standard or honorific nominative is permitted.[30]

[29] Noting that idiomatic readings are not retained in Korean passives, Yoon (2005) questions whether Korean passives involve a derived subject at all. If the subjects of these passives are base-generated high in the clause then the point is moot. However, the failure to retain idiomatic readings in the passive may not argue in favor of a base-generation account of passive subjects. Certain Japanese passives also do not permit idiomatic interpretations, but there is evidence that the subjects of these constructions are derived (e.g. Fukuda 2006). Also, case-stacking in passivization (18-19) suggests that passive subjects are derived.

[30] Yoon (2005) does not consider such examples, but notes that negative copulas and *become* constructions, which canonically mark both arguments with nominative case, disallow *-kkeyse* on the internal argument.

(i) a. Kim-kyoswunim-i/-kkeyse chongcangnim-i/*-kkeyse anisita
K.-professor-NOM/-H.NOM president-NOM/*-H.NOM is.not
'Professor Kim is not the president.'

b. Kim-kyoswunim-i/-kkeyse chongcangnim-i/*-kkeyse toysiessta
K.-professor-NOM/-H.NOM president-NOM/*-H.NOM became
'Professor Kim became the president.' [*Yoon 2005*]

(69) Yuna-hanthey Pak-sensayngnim-i/-kkeyse mwusewe
Y.-DAT P.-teacher-NOM/-H.NOM be.afraid
'Yuna is afraid of Professor Pak.'

The free variation between honorific and standard nominative-marking in (67-69) and the fact that *-kkeyse* does not appear to be preserved under passivization, but rather assigned only to a derived nominal when accusative case is unavailable, strongly argues against both a lexical case and postposition account. Furthermore, as noted above, that *-kkeyse* can be assigned to nominals which enter the derivation in distinct positions strongly suggests against lexical case analysis.

In other environments where *-i/-ka* is permitted, *-kkeyse* is said to only be permitted marginally (e.g. Yoon 2005). My informants, however, found such examples consistently well-formed. For instance, Korean inalienable possessors display case alternation. In addition to the canonical genitive case, these elements can bear the same case as their possessees (e.g. Choe 1987a, Ura 1996). As expected under a structural case account of *-kkeyse*, the honorific nominative marker can also appear on possessors, in place of genitive marking. In this case, both the possessor and possessee can be marked with *-kkeyse*.

(70) Kim-sensayngnim-uy/-i/-kkeyse twulccay atunim-i/-kkeyse chencayisita
K.-professor-GEN/-NOM/-H.NOM second son-NOM/-H.NOM be.genius
'Professor Kim's second son is a genius.' [*Yoon 2005*]

As (70) illustrates, alternation between honorific and canonical nominative case is permissible. The possessor can bear one form of nominative while the possessee bears the other.[31] Under the assumption that the source of case for the possessor and possessee is identical (as argued by the authors cited above), this behavior is amenable to the position that *-kkeyse* is an allomorphic variant of the canonical nominative marker *-i/-ka*. In sum, the near identical distribution of *-kkeyse* and *-i/-ka* is incompatible with a lexical case account of *-kkeyse*.[32]

A postpositional account of *-kkeyse* can also be ruled out by employing diagnostics originally used to determine if *-eykey/-hanthey* is a case-marker. The status of the dative marker *-eykey/-hanthey* as a case-maker has also been debated (e.g. Shibatani 1977, O'Grady 1991, Urushibara 1991, Schütze 2001a). Previous research has revealed that the dative-marker is ambiguous. In some cases, it behaves like a case-marker, in others like a postposition. Crucially, *-kkeyse* displays properties in common with the case-marker form of *-eykey/-hanthey*, not the postposition form.

The morphemes *-eykey/-hanthey* can appear on a number of elements (e.g. O'Grady 1991). They mark 'goal'/'location' adjuncts (71a) as well as indirect objects (71b), causees (71c), and, as we have seen, dyadic unaccusative subjects.

On the surface the dichotomy between (69) and (i) is surprising. Why should some objects permit *-kkeyse* while other do not? An anonymous reviewer suggests that honorific-marking is tied to reference, and since predicates are non-referential they cannot bear honorific nominative. It would remain to be explained why predicates should be case-marked at all.

[31] Most of my informants preferred case-matching, but found mismatches acceptable.

[32] There are some environments in which my informants agree that *-kkeyse* is unacceptable in place of *-i/-ka*. Honorific nominative is unavailable in *tough*-movement (i) and ablative subject constructions (i).

(i) Kim-kyoswunumi-i/*-kkeyse [PRO t_i manna-ki]-ka swip-ci anhta
K.-professor-NOM/*-H.NOM [meet-NML]-NOM easy-COMP NEG.DEC
'Professor Kim is not easy to meet.'

(ii) Apenim-ccok-eyse/-i/*-kkeyse mence ceyuy-lul hasiessta
father-part-ABL/-NOM/*-H.NOM first suggestion-ACC did
'Father first made the suggestion.' [*Yoon 2005*]

I leave explanation of these facts for future research, but contend that the preponderance of evidence in favor of a structural case account of *-kkeyse* should not be ignored, even in light of (i) and (ii).

(71) a. Aki-ka emma-hanthey kanta
baby-NOM mommy-to goes
'The baby goes to mommy.'
b. Aki-ka emma-hanthey senmwul-ul cwunta
baby-NOM mommy-to present-ACC gives
'The baby gives a present to mommy.'
c. Emma-ka aki-hanthey pap-ul mek-i-esse
mommy-NOM baby-DAT rice-ACC eat-CAUS-PST
'Mommy made the baby eat rice.'

Given its wide distribution, some (e.g. O'Grady 1991, Yoon 2005) conclude that *-eykey/-hanthey* is uniformly a postposition whose semantics is determined by the predicate to which the PP adjoins.

However, Schütze (2001a) provides an argument that the dative morpheme in dyadic unaccusatives is, in fact, a case-marker. Following Shibatani (1977) and Miyagawa (1989) for Japanese, he demonstrates that experiencer subjects permit long-distance quantifier float. Like unambiguous arguments, marked with accusative case (72a), dative-marked nominals license Q-float (72b). Crucially, unambiguous PPs disallow Q-float (72c).

(72) a. Cip-ul kyengchal-i twu-chay-lul twulekasse
house-ACC police-NOM 2-CL-ACC entered
'The police entered two houses.'
b. Haksayngtul-hanthey ton-i seys-hanthey philyohata
students-DAT money-NOM 3-DAT need
'Three students need money.'
c. *Cip-ulo kyengchal-i twu-chay-lo twulekasse
house-into police-NOM 2-CL-into entered
'The police entered into two houses.' [*Schütze 2001a*]

Extending this test to the other instances of nominals marked with *-hanthey/-eykey*, we see that whenever *-hanthey/-eykey* marks DPs – indirect objects and causees – Q-float is licensed (73). However, when *-hanthey/-eykey* marks PPs Q-float is blocked (74).

(73) a. Sensayngnim-i haksayng-hanthey senmwul-ul sey-myeng-hanthey cwuesse
teacher-NOM students-DAT present-ACC 3-CL-DAT gave
'The teacher gave three students presents.'
b. Emeni-ka ai-hanthey pap-ul sey-myeng-hanthey mekiesse
mother-NOM child-DAT rice-ACC 3-CL-DAT eat.made
'Mother made three children eat rice.'

(74) *Sensayngnim-hanthey ai-ka sey-myeng-hanthey kanta
teacher-to child-NOM 3-CL-to goes
'The child is going to three teachers.'

This confirms that the treatment of dative case as a case-marker in §3-4 was correct, though the data here do not indicate whether a lexical or structural account of dative case is correct (see §3 for discussion).

If *-kkeyse* is a case-marker, we expect *-kkeyse*-marked nominals to also license Q-float. This prediction is borne out.

(75) Kyoswunimtul-i/-kkeyse ppali twu-pwun-i/-kkeyse osiessta
professors-NOM/-H.NOM quickly two-H.CL-NOM/-H.NOM came
'Two professors came.' [*Yoon 2005*]

The ability of *-kkeyse* to license Q-float strongly suggests that the marker be analyzed as a case-marker. Further support for the view that *-kkeyse* is an (honorific) variant of the canonical case-marker *-i/-ka* comes from the observation that case-markers on the floated quantifier and its host can be mismatched. The former can be *-kkeyse*, the latter *-i/-ka*. On the assumption that the source of case for both these elements is identical, the variability seems best attributed to flexible morphological realization of a rigid underlying feature – namely, nominative case.

Kim (2013) provides additional arguments against the PP analysis of Korean experiencer subjects (*contra* e.g. Landau 2010). She demonstrates that experiencer subjects behave differently than unambiguous PPs suggesting they are DPs introduced in Spec-ApplP (Pylkkänen 2008). Korean dative-marked subjects behave like nominative-marked subjects in that they *can* license subject honorific agreement and control plural copying, a concord process whereby plural morphology is realized on non-plural elements within the VP. In (76), both nominative- and dative-marked subjects trigger subject honorific morphology. In (77), regardless of case-marking, the subject triggers plural copy.

(76) a. Sensayng**-nim**-i o-**#(si)**-ess-ta
teacher**-HON**-NOM come-**#(SH)**-PST-DEC
'The teacher came.'

b. Sensayng**-nim**-hanthey Inho-ka miw-**#(usi)**-esse
teacher**-HON**-DAT I.-NOM hate-**#(SH)**-PST
'The teacher hated Inho.'

(77) a. Ku haksayng**-tul**-i tosekwan-eyse**-tul** yelshimhi**-tul** kongpwuhayssta
that student**-PL**-NOM library-LOC**-PL** hard-**PL** studied
'Those students studied hard at the library.'

b. Ku ai**-tul**-hanthey mul**-tul**-i silesse
that child**-PL**-DAT water**-PL**-NOM hated
'Those children hated water.' [*Kim 2013*]

Both subject agreement morphology and plural copy cannot be controlled by an unambiguous PP.

(78) a. *Sensayng**-nim**-hanthey chayk-i tochakha**-si**-esse
teacher**-HON**-DAT book-NOM arrive**-SH**-PST
'The book arrived to the teacher.'

b. *Ai**-tul**-eykey mul**-tul**-i tochakhayesse
child**-PL**-DAT water**-PL**-NOM arrived
'To the children, water arrived.' [*Kim 2013*]

Given the discussion above, we can conclude that dyadic unaccusative subjects are DPs and not PPs. Unfortunately, as these tests only apply to subjects they cannot be extended to indirect objects which permit dative-accusative stacking. Nevertheless, since indirect objects permit Q-float, whereas unambiguous PPs deny it, we can be sure that the dative-marker, in both cases, is a case-marker.

Again, the tests devised for determining the status of *-eykey/-hanthey* can be extended to *-kkeyse*. Like dative-marked subjects, *-kkeyse*-marked subjects trigger subject honorific agreement (79a) and license plural copying (79b).

(79) a. Apenim-kkeyse mence ka***(-si)**-ess-ta
father-H.NOM first leave***(-SH)**-PST-DEC
'Father left first.' [*Yoon 2005*]

b. Kyosumin**-tul**-kkeyse ppali**-tul** kasiessta
professor**-PL**-H.NOM quickly**-PL** left
'The professors left quickly.'

This behavior is only expected if *-kkeyse* is a case-marker. Combined with arguments above that *-kkeyse* is not a lexical case-marker, we can conclude that it must be a structural case-marker.[33]

A final piece of evidence for the view that *-kkeyse* is a structural case marker like *-i/-ka* comes from nominative-nominative stacking itself. Recall that, for many speakers, nominative-nominative stacking is only well-formed when an element like *-man* intervenes between the two morphemes.

(80) Sensayng-nim-tul-kkeyse-***(man)**-i kulen il-ul hasipnita
teacher-HON-PL-H.NOM-***(only)**-NOM that.kind work-ACC do
'Only teachers do such work.' [*Sells 1995*]

No other pattern of case-stacking shows this restriction. If both instances of case, in (80), are the same underlying feature (structural nominative case), the ban on adjacent realization can be modeled as an instance of syntactic haplology. Ungrammaticality arises without intervening *-man* because two instances of the same feature are pronounced too close together. Neeleman & Van de Koot (2006; and sources cited therein) demonstrate that haplology effects can arise based on underlying syntactic features, even when the two adjacent elements are morphologically distinct. No such account is available if honorific nominative is not structural case, and the restriction in (80) remains mysterious. Those speakers who tolerate instances of adjacent nominative case can be said to lack this instance of haplology.

The discussion in this section has demonstrated that *-kkeyse*, like some instances of *-eykey/-hanthey*, is a case-marker. Moreover, its distribution is too wide to be a lexical case-marker, and it patterns distinctly from unambiguous postpositions, eliminating a PP account. It is a form of nominative case, just like *-i/-ka*, whose distribution is limited to honorific nominals. Adopting this position, we expect *-kkeyse* to be assigned by whatever mechanism determines case assignment more generally. Above, I argued that that mechanism is the Dependent Case model.

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[33] An anonymous reviewer observes that the diagnostics discussed may distinguish arguments from adjuncts not PPs from DPs. On this view *-kkeyse* might still be viewed as an argument PP which patterns like other arguments and unlike the unambiguous PPs which are all adjuncts. The Q-float data can adjudicate between these two positions. As Jung & Miyagawa (2004) observe, inanimate goal arguments disallow accusative case, even when the verb *cwu-* 'give', one of the roots that permit DAT-ACC stacking/alternation, is utilized.

(i) a. Mary-ka hakkyo**-ey/*-lul** ton-ul cwuessta
M.-NOM school**-DAT/*-ACC** money-ACC gave
'Mary gave money to the school.'
b. Uysa-ka sontung**-ey/*-ul** chim-ul cwuessta
doctor-NOM the.back.of.the.hand**-DAT/*-ACC** acupuncture-ACC gave
'The doctor applied acupuncture to the back of the hand.' [*Jung & Miyagawa 2004*]

A similar observation holds for Japanese (e.g. Miyagawa & Tsujioka 2004). Furthermore, in both languages inanimate goals resist Q-float even while animate ones permit it (cf. (73a)). Speakers attest that Q-float from dative-marked inanimates is significantly degraded.

(ii) a. Nay-ka chinkwu-tul-hanthey card-ul sey-myeng-hanthey cwuessta
I-NOM friend-PL-DAT card-ACC 3-CL-DAT gave
'I gave cards to three friends.'
b. ?*Sacang-i kongcang-hanthey kwanlica-lul twu-dong-hanthey cwuessta
president-NOM factory-DAT supervisor-ACC 2-CL-DAT gave
'The president gave supervisors to two factories.'

Miyagawa & Tsujioka suggest that the dichotomies presented above can arise if Korean (and Japanese) have both double object constructions (DOC) an *to*-ditransitives. Crucially, DOCs only permit animate DP goals. *To*-ditransitives always take argument PP goals. If this characterization is correct, we can be sure that the Q-float diagnostic distinguishes between DPs and PPs – not arguments and adjuncts.

6 *-i/-ka* and *-(l)ul* are case-markers

Just as it is not uncontroversial to treat the inner morpheme of a case-stack as case morphology, it is also not uncontroversial to treat the outer morpheme as case morphology. Most accounts of case-stacking in Korean treat stacked *-i/-ka* and *-(l)ul* as case morphemes, just like their unstacked counterparts (e.g. Gerdts & Youn 1988, 1999; Gerdts 1991; Harbert & Toribio 1991; Hong 1991; O'Grady 1991; Park; 1991; Yoon & Yoon 1991; Cho & Sells 1995; Youn 1995; Nakamura 1996; Yoon 1996, 2004; Börjars & Vincent 1997; Yang 1999). However, as mentioned above, case-stacking and focus interpretations are intimately intertwined. For most speakers, case-stacking *always* carries a focus-interpretation. Therefore, some have suggested that the stacked morpheme is not a case-marker, but a focus-marker (Schütze 1996, 2001a; Chung 2012). In order to use Korean case-stacking as a testing ground for competing theories of case assignment, it is crucial to ensure that the outer case-marker, be it nominative or accusative, is in fact a case-marker.

Schütze (2001a) summarizes a significant amount of literature demonstrating the well-formedness of case-stacking in focus contexts (e.g. Yoon 1989; Hong 1991; Suh 1992; Yang 1999). For example, stacked case can occur on *wh*-phrases (81) and correction contexts (82-83).

(81) a. Nwukwu-hanthey-ka Mary-ka mwusep-ni
who-DAT-NOM M.-NOM be.afraid-Q
'Who is afraid of Mary?'

b. Swunhi-ka nwukwu-hanthey-lul chayk-ul cwuess-ni
S.-NOM who-DAT-ACC book-ACC gave-Q
'Who did Swunhi give the book to?'

(82) A: Swunhi-hanthey Chelswu-ka cohunkapwa
S.-DAT C.-NOM seems.like
'Swunhi seems to like Chelswu.'

B: Aniya, Yenghi-hanthey-ka Chelswu-ka coha
No Y.-DAT-NOM C.-NOM likes
'No, Yenghi likes Chelswu.'

(83) A: Mary-ka John-hanthey ton-ul cwuesse
M.-NOM J.-DAT money-ACC gave
'Mary gave John money.'

B: Aniya, Mary-ka Tom-hanthey-lul ton-ul cwuesse
No M.-NOM T.-DAT-ACC money-ACC gave
'No, Mary gave Tom money.' [*Schütze 2001a*]

As we have seen, stacked case can also co-occur with overt focus markers like *-man* 'only'.

(84) a. Na-hanthey-man-i mwutangbelley mwusewe
I-DAT-only-NOM ladybug be.afraid
'Only I am afraid of ladybugs.'

b. Mary-ka John-hanthey-man-ul ton-ul cwuesse
M.-NOM J.-DAT-only-ACC money-ACC gave
'Mary gave only John money.' [*Schütze 2001a*]

For many speakers case-stacking occurs most naturally in this environment.[34]

[34] An anonymous reviewer comments that there are instances where seemingly non-focused elements appear with stacked case. For example, in the question and answer pair below (i):

6.1 Against a focus-marker analysis

Schütze (1996, 2001a), building on the observation that case stacked nominals have a focus interpretation, argues that the stacked case morpheme is not a case-marker but a *focus-marker* homophonous with and in a similar distribution to the nominative or accusative case-marker. Under his analysis, the dyadic unaccusative subject or indirect object receives dative case in Spec-*v*P, and moves to adjoin to a focus position. Similarly, agentive honorific subjects receive case in Spec-TP and move to a focus position.

Many of the critiques of the focus analysis are based on disagreements over data (Gerdts & Youn 1999, Youn 1998); however, Yoon (2004) presents a number of conceptual and empirical arguments against this approach. Yoon's chief concern is that the focus-markers and case-markers display (near) identical distribution. Schütze captures this fact by suggesting that T^0 assigns focus-nominative and v^0 assigns focus-accusative (see also Horvath 1995). He appeals to minimality to capture the distributional requirements. If both functional heads are specified as [+focus], elements generated within the VP will be targeted by v^0, while elements generated outside the VP will be targeted by T^0. However, focus-specification in this system is optional. Therefore, it is conceivable that T^0 may be valued [+focus] while v^0 is not. In this scenario, we would expect focus-nominative on VP-internal elements, contrary to fact.

In addition to Yoon's arguments, it should be noted that Schütze does not discuss case alternation. As seen above, every argument that permits case-stacking also permits case-alternation. Given that case-alternation occurs in non-focus contexts, a focus-marker analysis of the outer morpheme of a case-stack introduces unnecessary complexity into the grammar. To account for the alternation data, we must devise a model of case assignment that permits either of the two possible case morphemes to be assigned to a nominal. It is parsimonious then to posit a unified source of stacked and unstacked nominative and accusative case, instead of a distinct source for both. Unlike Schütze's proposal, and, in fact other case-based analyses (e.g. Yoon 1996, 2004; Jo 2001), the account proposed above can achieve this goal (see Gerdts & Youn 1988, Youn 1990, Hong 1991 for related proposals).

While the points of Yoon (2004) and the behavior of case-alternation are strong arguments against Schütze's position that *-i/-ka* and *-(l)ul* have two forms – as case-markers and focus-markers – it could still be the case that *-i/-ka* and *-(l)ul* are consistently focus-markers as suggested by Chung (2012). The observation that the markers *-i/-ka* and *-(l)ul* can appear on what seem to be non-focused elements presents an immediate complication to this analysis. Chung suggests that in these cases the apparent non-focused elements are nevertheless marking focus. Non-focused elements may bear focus-markers in two scenarios: (i) If the entire sentence bears broad focus, as the answer to a general question like *what's up?* (ii) If the focus-marked elements are verbatim repetition of nominals which were focused in previous discourse.[35] While the analysis provides a uniform treatment of *-i/-ka* and *-(l)ul*, it faces at least one significant empirical problem; there are constructions, simultaneously incompatible with both the broad focus and verbatim repetition conditions, which still permit the realization of *-i/-ka* and *-(l)ul* on non-focused arguments.

One such environment is monoclausal Right Dislocation (RD), displayed in (85). In RD, one or more elements appear to the right of the verb, leaving a gap in their canonical positions. There is no prosodic break between the verb and the dislocated element(s). RD is sensitive to focus (Choe 1987b, Choi 2008,

(i) A: Nwu-ka Sue-hanthey-lul satang-ul cwu-ess-ni
who-NOM S.-DAT-ACC candy-ACC give-PST-Q
'Who gave candies to Sue?'
B: John-i Sue-hanthey-lul satang-ul cwuesse
J.-NOM S.-DAT-ACC candy-ACC gave
'John gave candies to Sue.'

This may suggest that the characterization that stacked case is limited to focus contexts is insufficient. However, it should be noted that Korean is a multiple foci language (e.g Choe 1995). Therefore, in (i), *both* the indirect object Sue and the *wh*-word and its answer may be simultaneously focused.

[35] I thank an anonymous reviewer for pointing out the relevance of Chung's work.

Yun 2013). Only non-focused elements can undergo RD; inherently focused elements like *wh*-words cannot (85a). Crucially, elements which have undergone RD can be realized with overt case morphology (85b-d).

(85) a. *Chelswu-ka poass-upnikka mwues-ul
C.-NOM saw-Q what-ACC
'What did Chelswu see.'
b. Chelswu-(ka) cwuesse Yenghi-(hanthey) ton-(ul)
C.-(NOM) gave Y.-(DAT) money-(ACC)
'Chelswu gave Yenghi money.'
c. Ton-(lul) cwuesse Chelswu-(ka) Yenghi-(hanthey)
money-(ACC) gave C.-(NOM) Y.-(DAT)
'Chelswu gave Yenghi money.'
d. Yenghi-(hanthey) cwuesse Chelswu-(ka) ton-(ul)
Y.-(DAT) gave C.-(NOM) money-(ACC)
'Chelswu gave Yenghi money.' [*Suyeon Yun p.c.*]

As the dislocated, case-marked nominals are not focused, Chung's account must assume that these constructions involve either broad focus *or* verbatim repetition. However, RD is uniformly infelicitous in broad focus contexts. RD cannot be used as an answer to a general question like *what happened?*.

(86) A: Mwusen iliya
'What happened?'
B: #John-i ttelyess Tom-ul
J.-NOM hit T.-ACC
'It was John that hit Tom.' [*Suyeon Yun p.c.*]

Furthermore, it is possible to construct felicitous conversation fragments in which the case-marked, right dislocated element is not present at all in previous discourse. For example, in a scenario where John and Mary are a particularly discourse salient couple, the following discourse fragment is well-formed.

(87) A: Selo-lul cohahayyo
each.other-ACC like
'Do they like each other?'
B: Aniyo. John-i miwehayyo Mary-lul
No. J.-NOM hate M.-ACC
'No. John hates Mary.' [*Suyeon Yun p.c.*]

Similarly, when talking about John's wealth the following discourse fragment is well-formed.

(88) A: Phwungpwuhata
'Is he rich?'
B: Aniyo, ton-i epse John-i
No money-NOM not.have J.-NOM
'No. John doesn't have money.' [*Suyeon Yun p.c.*]

While their referents are discourse salient, the nominals *John* and *Mary* are never mentioned in previous discourse. Therefore, B's utterance cannot be seen as verbatim repetition. Furthermore, as they are right dislocated, they cannot be understood as focused. Given this, Chung's (2012) uniform analysis of *-i/-ka* and *-(l)ul* as focus-markers is untenable. Observing the shortcomings of analyses which treat the stacked-case (or all case-markers) as focus-markers, stacked *-i/-ka* and *-(l)ul* must be viewed as case-markers. This ensures that nominative-nominative case-stacks, as well as dative-nominative and dative-accusative stacks,

are instances of multiple case assignment to the same nominal, and that nominative-nominative stacks are a testing ground for competing theories of case assignment.

6.2 In favor of a case-marker analysis

If stacked nominative and accusative markers are case-markers, we predict that nominals bearing stacked case should behave just like those bearing unstacked case with respect to case-marking diagnostics presented in §5. Namely stacked-case bearing elements should permit Q-float, and, in the case of subjects, trigger subject honorific agreement and plural copy. Each of these predictions is confirmed. Like their *-kkeyse-* and *-hanthey*-marked counterparts, arguments bearing stacked-case license Q-float.[36]

(89) a. %Kyoswunimtul-kkeyse-man-i ppali twu-pwun-kkeyse-ka osiessta
professors-H.NOM-only-NOM quickly 2-H.NOM-NOM came
'Only two professors came.'
b. Haksayngtul-hanthey-ka ton-i seys-hanthey-ka philyohata
students-DAT-NOM money-ACC 3-DAT-NOM need
'Three students need money.'
c. Swunhi-ka hansayng-hanthey-lul seys-hanthey-lul iyaki haysse
S.-NOM student-DAT-ACC 3-DAT-ACC talk did
'Swunhi talked to three students.' [*adapted from Schütze 2001a*]

Similarly, subjects bearing (honorific) nominative-nominative stacks and dative-nominative stacks can also license subject honorific agreement (90) and plural copy (91).

(90) a. Ape**-nim**-kkeyse-man-i ka-***(si)**-ess-ta
father**-HON**-H.NOM-only-NOM leave-***(SH)**-PST-DEC
'Only father left.'
b. Kim-sensayng**-nim**-kkey-ka Swuni-ka philyoha-***(si)**-ta
K.-teacher**-HON**-H.DAT-NOM S.-NOM necessary-***(SH)**-DEC
'Professor Kim needs Swuni.' [*Yoon 2004*]

(91) a. Kyosumin**-tul**-kkeyse-man-i ppali**-tul** kasiessta
professor**-PL**-H.NOM-only-NOM quickly**-PL** left
'Only the professors left quickly.'
b. Ce haksayng**-tul**-hanthey-ka mwuncey-ka taytanhi**-tul** manha
those student**-PL**-DAT-NOM problem-NOM extremely**-PL** be.much
'Those students have a lot of problems.' [*Yoon 2004*]

Given the unavailability of a focus-marker account of stacked case along with the observation that nominals marked with stacked case behave like canonical case-marked elements with respect to Q-float, subject honorific agreement, and plural copy, we can be sure that both markers in a case-stack are, in fact, case-markers, and that the conclusions reached in §3 regarding the proper modeling of case assignment hold.

7 Conclusion

In this paper, I identified Korean nominative-nominative case-stacking as a phenomenon which permits adjudication between two competing theories of case assignment. I argued that only an emended Dependent

[36] Schütze notes that his informants found Q-float for nominals bearing stacked-case degraded. My informants found similar examples well-formed. Furthermore, Schütze observes interactions between the various cases a nominal host can bear and those that its floated quantifier can bear. I direct the interested reader to his work for details

Case model, which permits case calculation to re-apply upon the spell-out of every phase, is able to capture the facts discussed above. This is because the Dependent Case model indicates the position of nominals with respect to one another within the phase. It is therefore not surprising that a nominal which occupies the same relative structural position in two case assignment domains might bear two iterations of the same case-marker. The Agree model, in which case signals relationships between nominals and functional heads, cannot capture nominative-nominative stacking, because multiple AGREE relationships between the same functional head and nominal for the purposes of valuing the same features are impossible. A prediction of the analysis is that diagnostics for movement and case-stacking should correlate. This is indeed the case, lending credence to the view that Korean case-stacking is a successive-cyclic process. Even in Korean, case-stacking is limited because morphological constraints restrict its overt realization.

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