Suppletive verbal morphology in Korean and the mechanism of vocabulary insertion[1]

INKIE CHUNG

University of Seoul

This paper provides a Distributed Morphology analysis of the paradoxical inter-action of the two cases of verbal suppletion in Korean, and argues that the two suppletion types are characterized by two different types of morphological oper-ations. The two roots found with short-form negation and honorification suggest different morphological structures: [[Neg-V] Hon] for *al-* 'know', *molu-* 'not.know', *a-si-* 'know-HON', *molu-si-* (not *an(*i*) *a-si-*) 'NEG know-HON'; and [Neg [V-Hon]] for *iss-* 'exist', *eps-* 'not.exist', *kyey-si-* 'exist-HON', *an*(*i*) *kyey-si-* (not **eps-*(*u*)-*si-*) 'NEG exist-HON'. Predicate repetition constructions support the [[Neg-V] Hon] struc-ture. In this structure, however, the negative suppletion (analyzed as fusion of negation and the root) is blocked by the honorific suffix structurally more peripheral to the root. C-command is the only requirement for context allomorphy in Distri-buted Morphology (Halle & Marantz 1993). Since the [+hon] feature c-commands the root, the root can show honorific suppletive allomorphy in the first cycle with negation intervening between the root and [+hon]. Negation fusion occurs in the second cycle after vocabulary insertion of the root. Fusion, then, should refer to vocabulary items, not abstract features, and will be interleaved with vocabulary in-sertion. If the output of the root is /kyey/ due to the honorific feature, negative sup-pletion will not apply and the correct form *an*(*i*) *kyey-si-* will be derived. Therefore, both of the distinct morphological operations for suppletion, i.e., fusion and con-textual allomorphy, are necessary. The revised formulation of fusion shows that certain morphological operations follow vocabulary insertion. This derivational ap-proach to the suppletion interaction provides support for separation of phonological and nonphonological features and for late insertion of phonological features.

1. INTRODUCTION

Two predicates in Korean show a suppletive negative form instead of the usual short-form negation construction, and three predicates show a suppletive honorific root form in the environment of the subject honorific suffix. This paper concerns the root 'exist' (with exponents *iss-*, *eps-* and *kyey-*), which shows both negative suppletion and honorific suppletion, and deals with their interactions. Specifically, negation is considered to be closer to the root than honorification is, but the structurally inner negative suppletion is blocked by the outer honorific suppletion. This paper provides an analysis of this paradoxical situation by appealing to different formal mechanisms for the two cases of suppletion, and identifies the morphological structure of conjugated predicates in Korean regarding the hierarchical relation of negation and honorifics to the root.

The theoretical framework adopted here is Distributed Morphology (Halle & Marantz 1993, 1994; Halle 1997; Marantz 1997, 2001; Harley & Noyer 1999; Bobaljik 2000, 2007; Embick & Noyer 2001 and Calabrese 2008 among others). In the original Distributed Morphology literature (Halle & Marantz 1993), vocabulary insertion was thought to follow all the morphological operations. When the phonology-free syntactic structure for an entire phrase or sentence is transferred to PF, morphological operations such as impoverishment, (morphological) merger, fission and fusion can manipulate a given morphosyntactic structure when necessary. The modified structure is then provided with phonological features (via vocabulary insertion).

In this article, I argue that fusion needs to be reformulated as being interleaved with vocabulary insertion, referring to vocabulary items in an inner cycle, as opposed to purely pre-insertion fusion as proposed in Halle & Marantz (1993). This reformulation resolves the paradoxical situation of short-form negative suppletion and honorific suppletion. While negative suppletion is formulated as fusion of the root node and negation, honorific suppletion is analyzed as contextual allomorphy of the root c-commanded by the honorific feature (i.e., [+hon]). In this light, post-insertion morphological operations such as the revised fusion interleaved with vocabulary insertion are identified.

Section 2 summarizes the analysis of suppletive short-form negation in the Distributed Morphology framework presented in I. Chung (2007a). The suppletive morphological phenomenon is analyzed as a fusion of the two morphosyntactic nodes before vocabulary insertion. Section 3 introduces honorific suppletion and presents the paradoxical situation arising from the interaction between negative suppletion and honorific suppletion. Section 4 then provides an integrated solution recognizing different formal apparatuses for the two different types of suppletion. It also identifies the morphological structure of fully inflected predicates in Korean, and discusses

534

advantages of late vocabulary insertion over a lexicalist approach. Section 5 concludes the paper. It is followed by a list of abbreviations used throughout the text.

2. A DISTRIBUTED MORPHOLOGY ANALYSIS OF SUPPLETIVE NEGATION

This section briefly summarizes the Distributed Morphology analysis of suppletive short-form negation in Korean, presented in I. Chung (2007a).

2.1 *Short-form negation as syntactic negation*

One way of negating a clause in Korean, commonly called short-form negation,[2] is to place the negator *an(i)* before the predicate, as in *an(i) ca-ss-ta* 'not sleep-PAST-DECL', *an(i) mak-nun-ta* 'not block-PRES-DECL' and *an(i) cak-ass-ta* 'not small-PAST-DECL'. Without the negator, the remaining verbal expression is affirmative. I argue, following J.-Y. Yoon (1990), H.-D. Ahn (1991), Y.-T. Hong (1992) and Han, Lidz & Musolino (2007) among others, in favor of a syntactic analysis of short-form negation. More specifically, the negator *an(i)* is the head of the functional category NegP.

Short-form negation with *an(i)* is allowed before a negative prefix such as *pu(l)-*, *pi-* and *mi-*, as in *an(i) pul-kanungha-* 'impossible', *an(i) pi-kwahakcek-i-* 'unscientific' and *an(i) mi-wanseng-i/toy-* 'incomplete', but not before another instance of *an(i)*, as in **an(i) an(i) kanungha-*, **an(i) an(i) kwahakcek-i-* and **an(i) an(i) wanseng-i/toy-*. The ungrammaticality of stacking the negator before a predicate stands in contrast to the restriction on multiple occurrences of the negative prefixes. The latter restriction is that a predicate can have only one of these prefixes, making forms such as **pul-pul-*A, **pi-pi-*A, **pi-pul-*A, **pul-mi-*A, **mi-pi-*A ungrammatical. The similarity and the contrast between the negator *an(i)* and the prefixes show that they are different syntactically and semantically. If *an(i)* were a prefix comparable to *pu(l)-*, *pi-* and *mi-*, its cooccurrence with the latter could not be explained without a special stipulation on the negator *an(i)*. By contrast, if *an(i)* is not such a prefix, there will be no problem in having this negative element in addition to a negative prefix. This shows that *an(i)* is not a negative prefix.

One characteristic of syntactic negation (as opposed to negative prefixes) concerns its scope interaction with respect to quantifiers. The negator *an(i)* shows a clear scope ambiguity effect with a quantifier, as in the following examples, which both have two readings. (See I. Chung 2007a for extensive discussion supporting the 'hard-to-get' Neg > ∀ reading.)

---

[2] The other way of clausal negation, i.e., long-form negation, places the negator *an(i)* after the predicate with the ending *-ci*, followed by the light predicate *ha-*, resulting in the string *V-ci an(i) ha-*, as in *ka-ci an(i) ha-n-ta* 'go-CI not do-PRES-DECL'. This paper does not deal with long-form negation or the relation of it to short-form negation.

(1) (a) *motun* haksayng-i **an(i)** ka-ss-ta.
     all   student-NOM NEG go-PAST-DECL
     $\forall >$ Neg: 'No student went.'
     Neg $> \forall$: 'It is not the case that all the students went.'

(b) wuli-ka *motun* chinkwu-lul **an(i)** manna-ss-ta.
     we-NOM all   friend-ACC   NEG meet-PAST-DECL
     $\forall >$ Neg: 'We met no friend.'
     Neg $> \forall$: 'It is not the case that we met all the friends.'

By contrast, the above scope ambiguity does not arise with predicates having a negative prefix, as shown below.

(2) (a) *motun* haksayng-i i   an-ey   **pul**chansengha-y-ess-ta.
     all   student-NOM this plan-DAT disapprove-EG-PAST-DECL
     $\forall > pul$-: 'All the students disapproved this plan.'
     **pul-* $> \forall$

(b) wuli-ka *motun* an-ey   **pul**chansengha-y-ess-ta.
     we-NOM all   plan-DAT disapprove-EG-PAST-DECL
     $\forall > pul$-: 'We disapproved all the plans.'
     **pul-* $> \forall$

The contrast between *an(i)* and the negative prefixes regarding quantifiers is a clear indication that *an(i)* is not a negative prefix but a syntactic negator.

Another piece of evidence in favor of the syntactic view of short-form negation comes from licensing of negative polarity items. One typical environment where a negative polarity item is licensed is a negative clause, which contains a syntactic (and semantic) negation element. In the following examples, the negator *an(i)* serves as such a licensor.

(3) (a) *amu-to* **an(i)** sengsilha-ta.
     any-NPI NEG sincere-DECL
     'Nobody is sincere.'

(b) na-nun *amu-to* **an(i)** manna-ss-ta.
     I-TOP   any-NPI NEG meet-PAST-DECL
     'I didn't meet anybody.'

(c) *amu-to* na-lul **an(i)** manna-ss-ta.
     any-NPI I-ACC NEG meet-PAST-DECL
     'Nobody met me.'

The crucial point is that a sentence without *an(i)* or with just a negative prefix cannot license a negative polarity item:

(4) (a) *amu-to (**pul**-)sengsilha-ta.
      any-NPI in-sincere-DECL

(b) *con-un   *amu* pep-(ey)-*to* (**pul**-)pokcongha-y-ess-ta.
     John-TOP any law-DAT-NPI dis-obey-EG-PAST-DECL

536

    (c) *amu-to i   pep-ey (**pul**-)pokcongha-y-ess-ta.
         any-NPI this law-DAT dis-obey-EG-PAST-DECL

If *an*(*i*) were a prefix like *pul-*, it should not be able to license a negative polarity item (see I. Chung 2007a for further supporting arguments). This contrast between *an*(*i*) and negative prefixes is another indication that *an*(*i*) is not a prefix but rather a syntactic negator which licenses a negative polarity item. From the above discussion, I conclude that short-form negation is a syntactic construction, not an instance of 'lexical' prefix attachment.

2.2 *Suppletive negation*: molu- '*not.know*' *and* eps- '*not.exist*'

This section looks into the two suppletive negative predicates. The affirmative roots in question are *al-* 'know' and *iss-* 'exist', and their negative counterparts are *molu-* 'not.know' and *eps-* 'not.exist'. These suppletive forms behave like short-form syntactic negation with respect to the distribution of the negator, negative polarity item licensing and scope ambiguity.

    The suppletive negative roots *molu-* and *eps-* pattern as if a syntactic negator were present in them, in that they cannot be preceded by *an*(*i*): **an*(*i*) *molu-* and **an*(*i*) *eps-*. This suggests that these negative roots are the result of syntactic negation, which is usually done by *an*(*i*).

    Negative polarity items further support the syntactic negation analysis of *molu-* and *eps-*. These predicates license a negative polarity item without the negator *an*(*i*), as in the following sentences.

(5) (a) na-nun *amu* tap-*to*   **moll**-ass-ta.
       I-TOP   any answer-NPI not.know-PAST-DECL
       'I didn't know any answer.'
    (b) *amu-to* tap-ul   **moll**-ass-ta.
       any-NPI answer-ACC not.know-PAST-DECL
       'Nobody knew the answer.'

(6) *amu-to* **eps**-ta.
    any-NPI not.exist-DECL
    'There is nobody.'

Quantifiers in sentences with *molu-* and *eps-* support these roots' status as syntactic negation. Consider the scope ambiguity between a quantifier and these suppletive negative predicates.

(7) (a) *motun* haksayng-i ku wuhwa-lul **molu**-n-ta.
       all   student-NOM the fable-ACC not.know-PRES-DECL
       ∀ > Neg: 'No student knows the fable.'
       Neg > ∀: 'Not all students know the fable.'
    (b) ku haksayng-i *motun* wuhwa-lul **molu**-n-ta.
       the student-NOM all   fable-ACC not.know-PRES-DECL
       ∀ > Neg: 'The student knows no fable.'
       Neg > ∀: 'The student doesn't know all the fables.'

(8) *motun* haksayng-i   **eps**-ta.
    all   student-NOM not.exist-DECL
    ∀ > Neg: 'There are no students.'
    Neg > ∀: 'Not all students are present.'

This scope ambiguity is unique to syntactic negation and thus supports the syntactic negation status of the predicates *molu-* and *eps-*.[3]

    Negation of *iss-*, however, does not always result in *eps-*. In other cases, the usual negation *an(i) iss-* is found as well. Consider the following:

(9) (a) eysute-ka   yeki-ey   iss-ess-ta.
       Esther-NOM here-LOC exist/stay-PAST-DECL
       'Esther was here.'
   (b) eysute-ka   yeki-ey   **eps**-ess-ta.
       Esther-NOM here-LOC not.exist-PAST-DECL
       'Esther was not here.'
   (c) eysute-ka   yeki-ey   **an(i)** iss-ess-ta.
       Esther-NOM here-LOC NEG be-PAST-DECL
       'Esther was not/did not stay here.'

There is a semantic difference between the two (negated) predicates. While *eps-* means nonexistence 'not exist' or simple absence 'be not present, be lacking', *an(i) iss-* involves intention and means 'intentionally not stay'.[4]

---

[3] See I. Chung (2007a) for the parallelism between the usual short-form negation and the suppletive negation regarding the 'hard-to-get' reading.

[4] The polysemy of *iss-* is generally recognized by Korean linguists. One way to discriminate the two meanings may be imperatives, as one reviewer suggests. Indeed, only the agentive *iss-* can be used in imperatives:

  (i) (a) *sikyey-ya, chayksang-ey   iss-ela!
       clock-VOC desk-LOC   be/stay-IMP
       'Clock, be/stay on/at the desk!'
    (b) eysute-ya,   chayksang-ey   iss-ela!
       Esther-VOC desk-LOC   be/stay-IMP
       'Esther, stay at the desk!'

It is not certain whether the issue regarding the unacceptability of sentence (ia) (with an inanimate subject) is grammatical or pragmatic. The point, however, is that such sentences as (ia) are not legitimate unless the subject is personified or used figuratively. The contrast between the two sentences above provides support for the ambiguity of *iss-*.

    Negative imperatives show a similar contrast, as shown below (with the negative imperative suffix *-cimala*):

  (ii) (a) *sikyey-ya, chayksang-ey   iss-cimala!
       clock-VOC desk-LOC   be/stay-NEG.IMP
       'Clock, don't be/stay on/at the desk!'
    (b) eysute-ya,   chayksang-ey   iss-cimala!
       Esther-VOC desk-LOC   be/stay-NEG.IMP
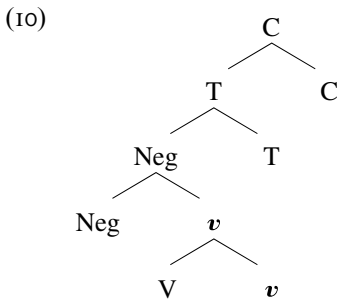   'Esther, don't be/stay at the desk!'

However, these negatives are not a perfect parallel to the affirmatives because of the fact that short-form negation, schematically *an(i)* V/A, is not available for negative imperatives; only long-form negation, V-*ci-ma(la)* with the (morpho)phonologically distinct negator *-ma*,

538

Also, the cases where *an(i) iss-* is used must have an animate subject which is an agent. In (9), both the *eps-* negation and the *an(i) iss-* negation are possible, because *iss-* is ambiguous between the existential meaning and the agentive meaning 'stay intentionally'.

2.3 *A postsyntactic fusion analysis of suppletive negation*

Sells (2001), in the same vein as Kim (1999), presents Korean as having three different kinds of clausal negation: long-form negation, short-form negation and suppletive negation ('lexically negative verbs', in his terminology). However, this classification misses the fact that the affirmative predicates of suppletive negative predicates do not have the expected short-form negation construction, and that long-form negation constructions do not have such suppletive cases. Short-form negation and suppletive negation can be systematically related in the Distributed Morphology as proposed in I. Chung (2007a)[5] and summarized below.

   The following diagram represents the (partial) structure of C^0 in Korean, as a result of overt movement of the verbal/adjectival root (in syntax or in morphology). This word structure reflects the phrase structure of a clause.[6]

(10)

```
                    C
                  /   \
                T       C
              /   \
           Neg      T
          /   \
       Neg      v
              /   \
            V       v
```

   The commonalities between the regular syntactic short-form negation construction and suppletive negative predicates suggest that there is a single short-form negation construction in syntax (overt and covert) encompassing both types of negation, and that the difference between the two arises in PF

---

is possible (see Han & Lee 2007; cf. Pak 2006 and Bošković 2008). The lack of short-form negation in imperatives makes it impossible to check the polysemy status of the verb *iss-* directly. See I. Chung (2007a, section 3.1.2) for extensive discussion of the different behaviors of *iss-* depending on the meaning.

[5] See also Embick & Noyer (2001), Marantz (2001), Embick (2007) and Embick & Marantz (2008) for criticisms of lexicalist treatments of the blocking of a phrasal form by a lexical form.

[6] Such heads as little (shell) *v* and Neg (and their projections) are assumed to be present in the structure only when their appropriate features are involved. Stative verbs like 'know' (as in (11)) and 'exist' do not involve an agent argument and hence there is no *v* head in the structure. For the optionality of *v*(P), see Hale & Keyser (1993), Chomsky (1995a) and Bošković (1997).

(i.e., in the postsyntactic component). The two roots 'know' and 'exist' (or their negative exponents) show the same configurations and properties in syntax and semantics as do other predicates. The difference is that suppletive negative forms do not have a separate negator and that these negative predicates are not morphophonologically related to their affirmative root.

The following is the structure of the verbal complex *molu-n-ta* 'not know' at Spell-Out, lacking phonological features.

(11) *Structure for* molu-n-ta *at the end of overt syntax*
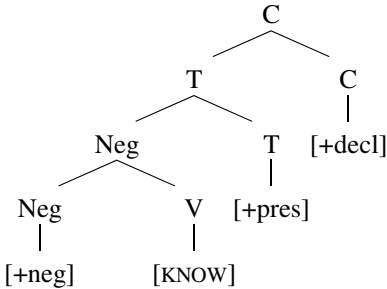
This structure enters PF and undergoes fusion. Fusion takes the V node containing [KNOW] and the Neg node with the [+neg] feature and turns them into a single terminal node. This resulting node contains all the original syntactico-semantic features, as shown in (12):[7]

(12) *Fusion of Neg and V with* [KNOW] *in PF (partial)*
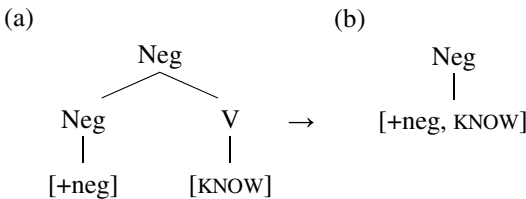
The Neg node is fused with the V node only if its sister node is the verb [KNOW] or [EXIST], and not any other verb. Subsequently, vocabulary insertion takes place. The following are the relevant vocabulary items:

(13) (a) [+neg, KNOW] ↔ /molu/
     (b) [KNOW] ↔ /al/

---

[7] The labels for non-terminal nodes are to be understood as sums of the terminal nodes that they dominate. For example, the two Neg nodes in (12a) are not the same as each other, in that they do not dominate the same terminal morphosyntactic features. The higher Neg would be the same as Neg in (12b) in the syntactic, semantic and morphological sense. What matters for non-terminal nodes and their labels is the terminal nodes and the features of which the non-terminal consists. In this paper, the non-terminal labels are used as such for the sake of notational convenience and as substitutes for abstract sums (or sets) of terminal nodes and the sister nodes they dominate, as put forward, for example, in Chomsky (1995b).

(14) (a) [+neg, EXIST] ↔ /eps/
    (b) [EXIST] ↔ /iss/

(15)   [+neg] ↔ /an(i)/

Potentially, any of the vocabulary items (13a), (13b) and (15) can be inserted into the node (12b). In such a situation, however, the most highly specified item compatible with a given terminal node wins the competition. Hence, (13a) /molu/ is chosen for the fused node, resulting in:

(16)   *Vocabulary insertion of /molu/ (into the fused node)*

$$\text{Neg} \qquad\qquad \text{Neg}$$
$$| \qquad\qquad\rightarrow\qquad\qquad |$$
$$[\text{+neg, KNOW}] \qquad\qquad /molu/$$
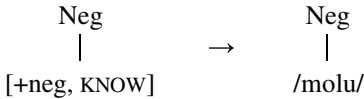
By contrast, fusion does not occur in a negative clause with verbs showing the regular short-form negation, and the original V and Neg nodes proceed to vocabulary insertion independently.

    The sisterhood relation in (11) (and likewise in (12)) is crucial for the fusion operation. Therefore, fusion will not take place if another element intervenes between Neg and V in the input structure. Consider the derived causative of 'know' in the negative context. The causative feature is the head of v(P), which intervenes structurally between V(P) and Neg(P). After head movement of V→v→Neg→T→C, the following structure is obtained as part of the C⁰ complex of the causative predicate.

(17)   *Structure for* an(i) al-li-ess- '*NEG know-CAUS-PAST-*' *at the end of overt syntax*
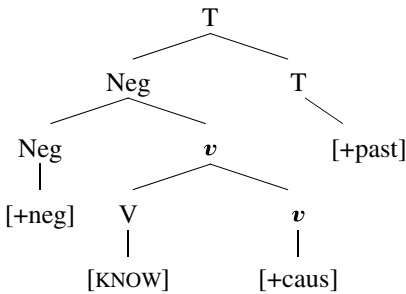
Here, Neg and V, though linearly adjacent, are not sisters, and therefore fusion is inapplicable. Then, each terminal node in the above structure separately undergoes vocabulary insertion, correctly yielding [an(i) [al-li]] with the vocabulary item (18).

(18)   [+caus] ↔ /li/

    The case of the existential *iss-* 'exist' and its negative counterpart *eps-* is treated in the same manner. With the root [EXIST], the output of overt syntax

541

(19a) is turned into the fused structure (19b) in morphology with the vocabulary items in (20).

(19) *Fusion of Neg and the V node of* [EXIST]

| | (a) Neg | → | (b) Neg |

(a) Neg branching into Neg [+neg] and V [EXIST] → (b) Neg dominating [+neg, EXIST]
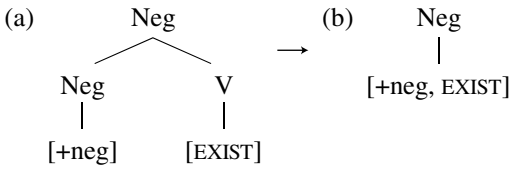
(20) (a) [+ neg, EXIST] ↔ /eps/
     (b) [EXIST] ↔ /iss/

Due to competition, (20a) is chosen over (20b) and (15) for the resulting fused node (19b).

The agentive *iss*- 'stay intentionally' (whose negative form is the non-suppletive *an(i) iss*-) behaves like any regular predicate. Agentive predicates are assumed to have an additional *v*(P) category intermediate between V(P) and Neg(P), associated with agentivity/volitionality and the agent theta role (see Hale & Keyser 1993 and Chomsky 1995a among others). The following structure illustrates this situation.

(21) *Structure of the complex C for the agentive* iss- *in a negative clause* (*partial*)

Tree: Neg dominating Neg [+neg] and v, where v dominates V [EXIST] and v [+agent]
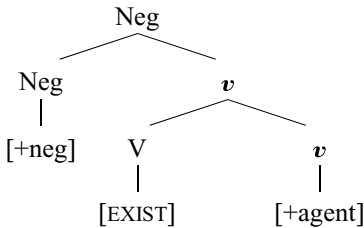
In this structure, unlike (19a), [+ neg] and [EXIST] are not sister nodes and hence they cannot undergo fusion. Given that the [+ agent] feature is phonologically null, vocabulary insertion applies to each node separately, yielding the correct form, *an(i) iss-Ø-*.

This section has presented the Distributed Morphology analysis of negative suppletion of 'know' and 'exist' in Korean. The morphological fusion operation is sensitive to the syntactico-semantic features of the terminal nodes being fused (i.e., [KNOW] and [EXIST]). Another critical aspect of the fusion operation is its structure: only sister nodes can be fused and a hierarchically intervening node blocks this operation. Finally, fusion occurs after syntax. The analysis of fusion of the negation node and the V root node in PF explains why the two non-long-form negation cases exhibit the same

syntactic and semantic behaviors. It also explains why there is no independent negator in the two suppletive negation cases and why a single vocabulary item appears instead of the negation-root sequence.[8]

3. SUBJECT HONORIFICATION SUPPLETION AND NEGATIVE SUPPLETION

This section considers subject honorification. After surveying subject honorification and suppletion of some roots in this environment, the morphological structure of inflected predicates with subject honorification is presented. In section 3.1, *iss-* is examined, which exhibits both subject honorific suppletion and negative suppletion. It is then contrasted to *al-* 'know', which does not show honorific suppletion, and based on this contrast a paradoxical situation is highlighted resulting from the two different structures of these predicates (section 3.2). Independent predicate repetition constructions are discussed in section 3.3, to demonstrate that negation is closer to the root than the honorific suffix is. Section 3.4 discusses how contextual allomorphy (of honorification) is formalized in the Distributed Morphology framework, with an intervening element between the allomorphy-exhibiting root and its context.

3.1 *Honorific root suppletion and blocking of negative suppletion*

Subject honorification or subject exaltation is used in Korean when the subject of the sentence is honorified or exalted by a speaker who is inferior to the subject (in terms of age, social status, etc.). In this case the predicate takes the honorific suffix *-si-* as shown below (with an epenthetic vowel *-u-* to break up two adjacent heteromorphemic consonants):[9]

(22) (a) eysute-ka   nichey-lul   ilk-ess-ta.
         Esther-NOM Nietzsche-ACC read-PAST-DECL
         'Esther read Nietzsche (non-honorific).'

---

[8] See I. Chung (2007a) for more discussion of the present Distributed Morphology analysis and against lexicalist approaches to suppletive negation.

[9] It is argued by some scholars that the honorific suffix is optional. Hence, such sentences as (22b), (23b) and (24b) could dispense with *-si-* even with a superior subject. In this case, however, the agreeing honorific nominative case suffix *-kkeyse* cannot be used. Instead, the non-honorific nominative case suffix, *-i* or *-ka* (depending on the presence or absence of a final consonant in the base nominal), must be used without *-si-* (see J.-W. Choe 2004).

Regarding the nature of honorification, H.-S. Han (1987), H.-S. Choe (1988), Ahn & Yoon (1989), Yoon (1990), S.-W. Kim (1996), Yang (1996), Ahn (2002), Choi (2003) and J.-W. Choe (2004) among others maintain a syntactic view of subject honorification, while E.-Y. Cho (1994) and Chang (1996) maintain a pragmatic view. Kim & Sells (2007) offer a hybrid analysis. Bobaljik (2008) argues that the agreement features, which have long been considered syntactic, are in fact morphological, according to which view the problem of whether subject honorification is syntactic or not would disappear.

  (b) apeci-**kkeyse**   nichey-lul   ilk-u-**si**-ess-ta.
      father-HON.NOM Nietzsche-ACC read-EV-HON-PAST-DECL
      '(My) father read Nietzsche (honorific).'

(23) (a) eysute-ka   pulwunsu-lul pulu-n-ta.
            Esther-NOM   Bruhns-ACC sing-PRES-DECL
            'Esther is singing Bruhns (non-honorific).'
     (b) apeci-**kkeyse**   pulwunsu-lul pulu-**si**-n-ta.
            father-HON.NOM Bruhns-ACC   sing-HON-PRES-DECL
            '(My) father is singing Bruhns (honorific).'

(24) (a) eysute-ka   khu-ta.
            Esther-NOM big-DECL
            'Esther is big (non-honorific).'
     (b) apeci-**kkeyse**   khu-**si**-ta.
            father-HON.NOM big-HON-DECL
            '(My) father is big (honorific).'

There are a few predicates whose root form is morphophonologically totally different from the usual root form when the honorific suffix -*si*- is attached.

(25) (a) eysute-**ka**   ttek-ul   mek-ess-ta.
            Esther-NOM rice cake-ACC eat-PAST-DECL
            'Esther ate rice cake (non-honorific).'
     (b) apeci-**kkeyse**   ttek-ul   *capswu*-**si**-ess-ta.
            father-HON.NOM rice cake-ACC eat.HON-HON-PAST-DECL
            'Father ate rice cake (honorific).'
     (c) *apeci-**kkeyse**   ttek-ul   *mek*-u-**si**-ess-ta.
             father-HON.NOM rice cake-ACC eat-EV-HON-PAST-DECL

(26) (a) eysute-**ka**   pang-eyse ca-n-ta.
            Esther-NOM room-LOC sleep-PRES-DECL
            'Esther is sleeping in the room (non-honorific).'
     (b) apeci-**kkeyse**   pang-eyse *cwumu*-**si**-n-ta.
            father-HON.NOM room-LOC sleep.HON-HON-PRES-DECL
            'Father is sleeping in the room (honorific).'
     (c) *apeci-**kkeyse**   pang-eyse *ca*-**si**-n-ta.
             father-HON.NOM room-LOC sleep-HON-PRES-DECL

Such honorific root forms are not possible without the honorific suffix: **capswu-n-ta* 'eat.HON-PRES-DECL'; **cwumu-ess-ta* 'sleep.HON-PAST-DECL'.

    An interesting situation arises when negation and honorification occur together with a predicate that has both a suppletive negative form and a suppletive honorific form. The predicate *iss*- 'exist' (with the negative form

544

eps- 'not.exist' and the honorific form *kyey-si-* 'exist-HON') is realized as *kyey-* in this situation: *an(i) kyey-si-*.[10]

(27) (a) apeci-kkeyse   silhemsil-ey   *an(i)*   *kyey*-**si**-ta.
    father-HON.NOM   lab-LOC   NEG   exist.HON-HON-DECL
    'Father is not in the lab (honorific).'

  (b) *apeci-kkeyse   silhemsil-ey   *eps*-u-**si**-ta.
    father-HON.NOM   lab-LOC   not.exist-EV-HON-DECL

  (c) *apeci-kkeyse   silhemsil-ey   *an(i)*   *iss*-u-**si**-ta.
    father-HON.NOM   lab-LOC   NEG   exist-EV-HON-DECL

Since only one of the two competing suppletion processes (i.e., honorific suppletion) operates here, it can be utilized to identify the morphological structure of the morphologically complex predicate.
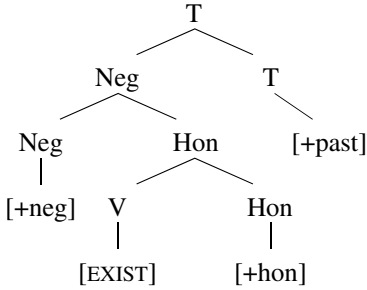
As assumed in Distributed Morphology (Halle & Marantz 1993, Harley & Noyer 1999, Bobaljik 2000 and Embick 2007 among others), vocabulary insertion takes place starting from the most deeply embedded terminal node (i.e., from the root) and moves outward cyclically. When a terminal node is provided with the phonological features in a given cycle, this vocabulary insertion may be sensitive to morphosyntactic features present in an outer cycle. This aspect of 'outwards sensitivity' can be observed in the following structure for *an(i) kyey-si-ess-ta* 'NEG exist.HON-HON-PAST-DECL' produced by overt syntax.

---

[10] The forms *iss-u-si-* and *eps-u-si-* are possible in certain contexts, as shown in the following examples:

(i) (a) eysute-ka   ton-i   iss-ta.
    Esther-NOM   money-NOM   exist-DECL
    'Esther has money.'

  (b) eysute-ka   ton-i   eps-ta (*an(i) iss-ta).
    Esther-NOM   money-NOM   not.exist-DECL
    'Esther does not have money.'

(ii) (a) apeci-kkeyse   ton-i   iss-u-si-ta (*kyey-si-ta).
    father-HON.NOM   money-NOM   exist-EV-HON-DECL
    'Father has money (honorific).'

  (b) apeci-kkeyse   ton-i   eps-u-si-ta (*an(i) kyey-si-ta/*an(i) iss-u-si-ta).
    father-HON.NOM   money-NOM   not.exist-EV-HON-DECL
    'Father does not have money (honorific).'

However, these forms involve possession rather than existence or staying. The semantic subject of the predicate is the possessee and is not a person (who can be honorified). The honorific suffix *-si-* on the verb honorifies the possessor and is not properly related to the subject. This paper does not deal with these non-honorific-suppletive forms that appear with so-called multiple nominative subjects.

(28) *Structure of* an(i) kyey-si-ess-ta *at the end of overt syntax* (*partial*)

```
                        T
                   ╱         ╲
               Neg             T
            ╱       ╲
         Neg         Hon        [+past]
          │       ╱      ╲
       [+neg]   V          Hon
                 │           │
              [EXIST]      [+hon]
```

When the root node is provided with phonological features in (28), the [+hon] feature in the next outer cycle chooses /kyey/ for [EXIST]. Formally, given the vocabulary items for [EXIST] and other relevant vocabulary items below, vocabulary insertion provides /kyey/ in (28) for [EXIST] in the environment of [+hon], which is the result of choosing (29b).

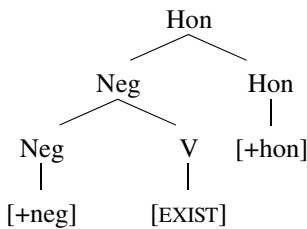(29) *Vocabulary items containing the feature* [EXIST]
      (a) [+neg, EXIST] ↔ /eps/
      (b) [EXIST] ↔ /kyey/ / _____ [+hon]
      (c) [EXIST] ↔ /iss/

(30) *Vocabulary items with a functional category feature*
      (a) [+hon] ↔ /si/
      (b) [+neg] ↔ /an(i)/
      (c) [+past] ↔ /ess/

To ensure that the honorific-suppletive root /kyey/ is chosen in an environment where both negation and honorification occur, the structure of the inflected predicate would be expected to be (28), rather than (31) below, in that in (28) the [+hon] node is structurally closer to the root than the [+neg] node is.

(31) *Possible alternative structure for* [+*neg*]-[EXIST]-[+*hon*]-

```
                     Hon
                  ╱       ╲
              Neg           Hon
           ╱       ╲          │
        Neg         V       [+hon]
         │           │
      [+neg]      [EXIST]
```

In addition, because the root node and [+neg] are sisters in (31), fusion of these two nodes, (19), would wrongly take place in (31), resulting in *eps-*. The structure (28) effectively blocks the suppletive negative exponent.
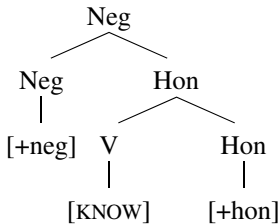
546

Vocabulary insertion converts (28) to [[[+ neg] [/kyey/ [+ hon]]] [+ past]] and ultimately to [[an(i) [kyey si]] ess].

However, other evidence argues strongly that the correct structure is in fact (31) and not (28), as will be shown in the following section.

3.2 *Honorific suppletion and negative suppletion: a paradox*

A first problem arises when the structure for [+neg]-[KNOW]-[+hon]- is considered along with the above structure (28) for [+neg]-[EXIST]-[+hon]-. In the following structure (32), identical to (28) except for the root morpheme, vocabulary insertion should take place separately, i.e., without fusion, and the result would be *an(i) al-si- (or *an(i) a-si-, due to a general phonological process deleting [l] before a coronal consonant).

(32)   *Structure for* [+neg]-[KNOW]-[+hon]- *before vocabulary insertion*

```
                    Neg
             ┌───────┴───────┐
           Neg              Hon
            │          ┌──────┴──────┐
         [+neg]   V             Hon
                     │               │
                 [KNOW]         [+hon]
```

However, the correct form involves a fusion of [+neg] and [KNOW], i.e., *molu-si-*. The problem is the failure of fusion because the description of the fusion rule is not met: the root and the [+neg] node are not sisters in (32). Accordingly, the suppletive behaviors of 'exist' and of 'know' result in a paradoxical situation regarding whether [+neg] or [+hon] is to be the node structured more closely to the root.

3.3 *Predicate iteration constructions*

An independent diagnostic phenomenon is called for in order to determine which of the two non-root nodes, i.e., negation or honorific, is structurally closer to the root. Predicate iteration constructions will show that negation is in fact more closely structured with the root than is honorification. I provide three such constructions: iterated rhetorical questions, the echoed verb construction, and the *ha-* focus construction.

The first predicate iteration construction is the iterated rhetorical question, where a portion of the inflected predicate is repeated and the second copy appears with a *wh*-phrase. This paper does not discuss which of the two instances of the predicate is the original and which is the 'copy', although it appears that the second is the original because of the canonical OV word

547

order in Korean and because the first instance is nominalized and contains only a portion of the fully inflected predicate. When the predicate is copied, there is some freedom regarding the copied affixes. The honorific suffix may or may not appear in both instances of the predicate as shown in (33).

(33) *Iterated rhetorical question : affirmative, honorific*
    (a) apeci-kkeyse   po-**si**-ki-nun   nwukwu-lul po-**si**-ess-e?
           father-HON.NOM see-HON-NMLZ-FOC who-ACC   see-HON-PAST-INF
           'Father didn't see anybody, indeed. (lit. Who on earth did father see?)'
    (b) ?apeci-kkeyse po-**si**-ki-nun nwukwu-lul po-ass-e?
    (c) apeci-kkeyse po-ki-nun nwukwu-lul po-**si**-ess-e?

Negation, however, is obligatorily included in both copies of the predicate.

(34) *Iterated rhetorical question : negative, non-honorific*
    (a) eysute-ka   *an(i)* po-ki-nun   nwukwu-lul *an(i)* po-ass-e?
           Esther-NOM NEG see-NMLZ-FOC who-ACC   NEG see-PAST-INF
           'Esther did see somebody, indeed. (lit. Who on earth didn't Esther see?)'
    (b) *eysute-ka *an(i)* po-ki-nun nwukwu-lul po-ass-e?
    (c) *eysute-ka   po-ki-nun nwukwu-lul *an(i)* po-ass-e?

This asymmetry is confirmed in the following examples involving both negation and the honorific suffix.

(35) *Iterated rhetorical question : negative, honorific*
    (a) apeci-kkeyse   *an(i)* po-**si**-ki-nun
           father-HON.NOM NEG see-HON-NMLZ-FOC
           nwukwu-lul   *an(i)* po-**si**-ess-e?
           who-ACC   NEG see-HON-PAST-INF
           'Father did see somebody, indeed. (lit. Who on earth didn't father see?)'
    (b) *apeci-kkeyse   *an(i)* po-**si**-ki-nun nwukwu-lul po-**si**-ess-e?
    (c) *apeci-kkeyse   po-**si**-ki-nun nwukwu-lul *an(i)* po-**si**-ess-e?
    (d) ?apeci-kkeyse *an(i)* po-**si**-ki-nun nwukwu-lul *an(i)* po-ass-e?
    (e) apeci-kkeyse   *an(i)* po-ki-nun nwukwu-lul *an(i)* po-**si**-ess-e?

Because negation is an obligatory element in each copy and the honorific suffix is not, negation can be considered to form a smaller constituent with the root than the constituent including the honorific suffix.

    Exactly the same point is made by the second predicate iteration construction : the echoed verb construction (see No 1988, T. Chung 1994, Lee 1995, Cho, Kim & Sells 2004 and Aoyagi 2006 among others for discussions of this construction). In (36), the negation appears obligatorily in both copies of the iterated predicate.

(36) *Echoed verb construction: negative, non-honorific*
    (a) ailin-i   eysute-lul *an*(*i*) po-ki-nun   *an*(*i*) po-ass-e.
        Irene-NOM Esther-ACC NEG see-NMLZ-FOC NEG see-PAST-INF
        'Irene certainly did not see Esther.'
    (b) *ailin-i eysute-lul *an*(*i*) po-ki-nun po-ass-e.
    (c) *ailin-i eysute-lul po-ki-nun *an*(*i*) po-ass-e.

However, the honorific suffix need not appear in both copies, as shown in (37).

(37) *Echoed verb construction: affirmative, honorific*
    (a) apeci-kkeyse   eysute-lul po-**si**-ki-nun   po-**si**-ess-e.
        father-HON.NOM Esther-ACC see-HON-NMLZ-FOC see-HON-PAST-INF
        'Father certainly saw Esther.'
    (b) ?apeci-kkeyse eysute-lul po-**si**-ki-nun po-ass-e.
    (c) apeci-kkeyse eysute-lul po-ki-nun po-**si**-ess-e.

The examples in (38), containing both the negator and the honorific suffix, show the same asymmetry between these two affixes.

(38) *Echoed verb construction: negative, honorific*
    (a) apeci-kkeyse   eysute-lul *an*(*i*) po-**si**-ki-nun   *an*(*i*)
        father-HON.NOM Esther-ACC NEG see-HON-NMLZ-FOC NEG
        po-**si**-ess-e.
        see-HON-PAST-INF
        'Father certainly did not see Esther.'
    (b) *apeci-kkeyse eysute-lul *an*(*i*) po-**si**-ki-nun po-**si**-ess-e.
    (c) *apeci-kkeyse eysute-lul po-**si**-ki-nun *an*(*i*) po-**si**-ess-e.
    (d) ?apeci-kkeyse eysute-lul *an*(*i*) po-**si**-ki-nun *an*(*i*) po-ass-e.
    (e) apeci-kkeyse eysute-lul *an*(*i*) po-ki-nun *an*(*i*) po-**si**-ess-e.

Again, the obligatory negation supports the claim that negation is closer to the root than the optional honorific suffix is.

    The third type of predicate iteration construction is the *ha-* focus construction, where the second predicate is the pro-form *ha-* 'do' (see Kang 1988, Cho, Kim & Sells 2004 and Aoyagi 2006 among others). When the original predicate contains negation, the pro-form replaces the portion minimally including both the root and the negation, as in (39).

(39) Ha- *focus construction: negative, non-honorific*
    (a) ailin-i   eysute-lul *an*(*i*) po-ki-nun   ha-y-ess-e.
        Irene-NOM Esther-ACC NEG see-NMLZ-FOC do-EG-PAST-INF
        'Irene certainly did not see Esther.'
    (b) *ailin-i eysute-lul *an*(*i*) po-ki-nun *an*(*i*) ha-y-ess-e.
    (c) *ailin-i eysute-lul po-ki-nun *an*(*i*) ha-y-ess-e.

549

The honorific suffix, on the other hand, may or may not be part of the pro-form, as shown in (40).

(40) Ha- *focus construction : affirmative, honorific*
    (a) apeci-kkeyse   eysute-lul po-**si**-ki-nun   ha-**si**-ess-e.
         father-HON.NOM Esther-ACC see-HON-NMLZ-FOC do-HON-PAST-INF
         'Father certainly saw Esther.'
    (b) apeci-kkeyse eysute-lul po-**si**-ki-nun ha-y-ess-e.
    (c) apeci-kkeyse eysute-lul po-ki-nun ha-**si**-ess-e.

Another difference between the negator and the honorific suffix is that the honorific suffix -*si*- can appear on either the lexical predicate or on *ha*- or both. The honorific suffix is not required to appear on the main predicate, unlike the negator.

    The contrast between negation and the honorific suffix is confirmed in (41), where the predicate has both of these affixes.

(41) Ha- *focus construction : negative, honorific*
    (a) apeci-kkeyse   eysute-lul   *an*(*i*) po-**si**-ki-nun
         father-HON.NOM Esther-ACC NEG see-HON-NMLZ-FOC
         ha-**si**-ess-e.
         do-HON-PAST-INF
         'Father certainly did not see Esther.'
    (b) *apeci-kkeyse eysute-lul *an*(*i*) po-**si**-ki-nun *an*(*i*) ha-**si**-ess-e.
    (c) *apeci-kkeyse eysute-lul po-**si**-ki-nun *an*(*i*) ha-**si**-ess-e.
    (d) apeci-kkeyse eysute-lul *an*(*i*) po-**si**-ki-nun ha-y-ess-e.
    (e) apeci-kkeyse eysute-lul *an*(*i*) po-ki-nun ha-**si**-ess-e.
    (f) *apeci-kkeyse eysute-lul *an*(*i*) po-ki-nun ha-y-ess-e.

While the pro-predicate *ha*- replaces the root and the negator obligatorily, the honorific suffix may or may not be part of the replacement. This contrast between negation and the honorific suffix supports the claim that the root and negation form a minimal constituent for *ha*- replacement, which may further include other suffixes such as honorifics.

    Some linguists have suggested that honorification is optional (e.g., Niinuma 2003). If so, it could be argued that the asymmetrical patterns between negation and honorification in predicate iteration constructions may be due to this optionality. In other words, it might be the optionality of honorification, not the structure advocated in this article, that is responsible for the optionality of the honorific suffix in the data in this section.[11] However, there are many arguments against this view. First of all, the subject cannot be respected or honorified without the -*si*- suffix. Only with this suffix (and the honorific case suffix) is the subject honorified by the speaker.

---

[11] I thank one of the reviewers for bringing up this issue, which helps to articulate my case more clearly.

Second, when a subject DP contains the honorific nominative case suffix -*kkeyse*, the predicate must bear the agreeing honorific suffix -*si*- (see footnote 9). In the case of predicate iteration constructions, at least one of the two iterated predicate copies must bear -*si*- along with -*kkeyse*. Otherwise, the sentence is unacceptable. Third, this paper limits itself to those cases where honorification is in fact involved and present. If it is absent in a given expression, there can be no negative-honorific interaction. Therefore, the optionality would be irrelevant even if it were real. Finally, even if honorification were optional, it would be natural and expected to assume that a morphosyntactic element is represented in terms of hierarchical relationships when present. These considerations show that honorification itself is not optional, or that the optionality, if real, is irrelevant in the constructions under discussion.
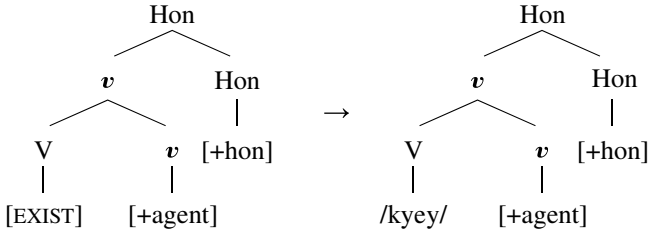
The asymmetry between negation and the honorific suffix in different predicate iteration constructions suggests that the negator and the root form a smaller constituent in copying or replacing a certain part of the predicate. Honorification is concluded to be outside of this constituent because the honorific suffix is not part of the obligatory copy or replacement pro-predicate. This result accords with (31), and runs counter to the discussion in section 3.1. I will henceforth consider (31) to be the correct structure.

3.4 *Root suppletion with small v and* [+*hon*]

Now that the conjugated structure (31) is established, the mechanism of how suppletion/allomorphy works in this structure must be determined and explained. For this, consider suppletion of the roots 'know' and 'exist' with *v* and [+hon]. In the case of [[KNOW]-[*v*+caus]]-[+hon]-, the hierarchical structure is straightforward, and [KNOW] does not show root allomorphy in the environment of the causative suffix, honorification or both.

Consider now the more complex case of [EXIST]. The honorific agentive *kyey*- has the [*v*+agent] node, as does the non-honorific agentive *iss*- discussed in section 2 and in I. Chung (2007b). Significantly, the root [EXIST] is realized as the honorific suppletive allomorph *kyey*- even with *v* intervening between the root and the honorific node. If so, the v^0 node (with the [+agent] feature) will have to be ignored (or transparent) for the purpose of vocabulary insertion of [EXIST] in the presence of [+hon]. That is, this intervening [*v*+agent] behaves as if it were not present between the root and the [+hon] node. This transparency of *v* is confirmed by other agentive verbs showing honorific suppletion such as 'eat': [EAT]-[*v*+agent]-[+hon]- is realized as *capswu*-Ø-*si*- (with the null exponent for [+agent]), and not as *mek-u-si*- (with the phonologically conditioned epenthetic vowel -*u*-). The following structure shows the transparent behavior of the *v* node with respect to honorific allomorphy.

(42) *Structure of* [EXIST]-[ᵥ + agent]-[+ hon] *and vocabulary insertion of the root*

```
        Hon                              Hon
       /   \                            /   \
      v     Hon            →           v     Hon
     / \     |                        / \     |
    V   v  [+hon]                     V   v  [+hon]
    |   |                             |   |
 [EXIST] [+agent]                  /kyey/ [+agent]
```

Finally, consider [+ neg]-[EXIST]-[ᵥ + agent]-[+ hon]-[+ pres]-. The entire sequence is realized as *an(i) kyey-si-n-*, and not as **an(i) iss-u-si-n-*, as shown in the following example:
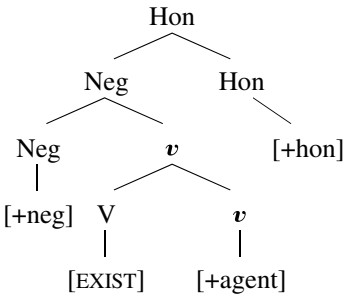
(43) *Agentive* kyey- *occurring with* an(i) *and* -si-
   (a) apeci-kkeyse   ilyoil-ey-to   cip-ey   an(i)
       father-HON.NOM Sunday-TEMP-also   home-LOC   NEG
       kyey-**si**-n-ta.
       exist.HON-HON-PRES-DECL
       'Father does not stay home on Sundays (honorific).'
   (b) apeci-kkeyse   pang-ey   an(i) *kyey*-**si**-n-ta(-ko)
       father-HON.NOM room-LOC   NEG   exist.HON-HON-PRES-DECL(-RPRT)
       ha-si-ess-ta.
       say-HON-PAST-DECL
       'Father said that (he) would not stay in the room (honorific in both clauses).'

In the case of [+ neg]-[EXIST]-[ᵥ + agent]-[+ pres]- without [+ hon], the root is realized as the normal allomorph *iss-* without showing negative suppletion (i.e., *an(i) iss-nun-*). This fact has suggested, in section 2.3, that the v^0 node is closer to the root than the Neg^0 node is, i.e., [Neg [ᵥ V ᵥ]]. When the [+ hon] node is added, the following structure results:

(44) *Morphosyntactic structure of* [+ neg]-[EXIST]-[ᵥ + agent]-[+ hon]-

```
              Hon
             /   \
          Neg     Hon
         /   \       \
      Neg     v      [+hon]
       |     / \
    [+neg]  V   v
            |   |
         [EXIST] [+agent]
```

The intervening *v* and [+neg] are both transparent with respect to honorific root suppletion in the environment of [+hon].

In order for the cyclic application of vocabulary insertion to yield the phonological form *kyey-Ø-si-* in (42) and *an(i) kyey-Ø-si-* in (44), the vocabulary item (29b) will have to be revised as follows, adopting the c-command view of contextual allomorphy (Halle & Marantz 1993, Bobaljik 2000).[12]

(45) *Vocabulary item for* [EXIST] (*revision of* (29b))
      [EXIST] ↔ /kyey/ when c-commanded by [+hon]

In structures (42) and (44), the root is c-commanded by the [+hon] feature, and hence allomorphy of the root is possible even if the *v* node intervenes between the root and its allomorphy-conditioning [+hon] feature. Bobaljik (2000) notes that the conditioning factor for allomorphy of a certain morpheme can be non-local, i.e., farther away from that morpheme than the immediate next outer cycle in a given word. Honorification in Korean shows that, indeed, (outwards-sensitive) contextual allomorphy is not always strictly local (Halle & Marantz 1993, Embick & Noyer 2001; contra Siegel 1977, Allen 1978, Simpson & Withgott 1986).

Section 4 will propose an integrated explanation of the two suppletion phenomena and blocking of the inner negative suppletion by the outer honorific suppletion. Before that, I will briefly discuss predicate iteration constructions a little more in section 3.5.

3.5 *Excursus: predicate iteration constructions with suppletive roots*

This section considers suppletive roots in two of the predicate iteration constructions. The negative, honorific and negative-honorific suppletives show the following behaviors:

(46) *Echoed verb construction: suppletive negative, non-suppletive honorific*
      (a) ailin-i   eysute-lul   *molu*-ki-nun   *moll*-a.
          Irene-NOM Esther-ACC not.know-NMLZ-FOC not.know-INF
          'Irene certainly doesn't know Esther.'
      (b) *ailin-i eysute-lul al-ki-nun *moll*-a.
      (c) *ailin-i eysute-lul *molu*-ki-nun al-a.

---

[12] The original configurational requirement of contextual allomorphy in the initial Distributed Morphology literature was (head-internal) government (Halle & Marantz 1993), which allows an adjoined head H to govern those nodes that another head with that head H adjoined to it governs. In this paper, the more straightforward notion of c-command is used instead. There is no practical difference between the two configurational notions in the present study. But the c-command view may cause interference with Halle & Marantz's (1993: 145–147) analysis of the complex verbal inflectional system in Potawatomi. For a discussion of sensitivity of a non-adjacent abstract feature to the choice of an inner exponent in Itelmen verbal inflection, see Bobaljik (2000).

553

(d) apeci-kkeyse   eysute-lul   a-**si**-ki-nun   a-**si**-e.
    father-HON.NOM Esther-ACC know-HON-NMLZ-FOC know-HON-INF
    'Father certainly knows Esther.'
(e) apeci-kkeyse eysute-lul al-ki-nun a-**si**-e.
(f) (?)apeci-kkeyse eysute-lul a-**si**-ki-nun al-a.

(47) *Echoed verb construction : non-suppletive negative, suppletive honorific*
(a) ailin-i   *an(i)* ca-ki-nun   *an(i)* ca-a.
    Irene-NOM NEG sleep-NMLZ-FOC NEG sleep-INF
    'Irene certainly isn't sleeping.'
(b) *ailin-i   ca-ki-nun *an(i)* ca-a.
(c) *ailin-i *an(i)* ca-ki-nun   ca-a.
(d) apeci-kkeyse   cwumu-**si**-ki-nun   cwumu-**si**-e.
    father-HON.NOM sleep.HON-HON-NMLZ-FOC sleep.HON-HON-INF
    'Father is certainly sleeping.'
(e) *apeci-kkeyse ca-ki-nun cwumu-**si**-e.
(f) *apeci-kkeyse cwumu-**si**-ki-nun ca-a.

(48) *Echoed verb construction : suppletive negative, suppletive honorific*
(a) apeci-kkeyse   pang-ey   *an(i)* kyey-**si**-ki-nun   *an(i)*
    father-HON.NOM room-LOC NEG exist.HON-HON-NMLZ-FOC NEG
    kyey-**si**-e.
    exist.HON-HON-INF
    'Father certainly isn't (staying) in the room.'
(b) *apeci-kkeyse pang-ey *an(i)* kyey-**si**-ki-nun kyey-**si**-e.
(c) *apeci-kkeyse pang-ey   kyey-**si**-ki-nun *an(i)* kyey-**si**-e.
(d) *apeci-kkeyse pang-ey *eps*-ki-nun/*an(i)* iss-ki-nun *an(i)* kyey-**si**-e.
(e) *apeci-kkeyse pang-ey *an(i)* kyey-**si**-ki-nun *eps*-e/*an(i)* iss-e.

In the echoed verb construction, as shown above, suppletive negation shows the same pattern as non-suppletive negation, while suppletive honorification does not pattern with non-suppletive honorification. With suppletive honorific roots, both copies of the predicate root must appear as the suppletive exponent, along with the honorific suffix -*si*-.

It appears that an independent identity condition on the two copies of an iterated predicate is needed. That is, the morphophonological form of the two copies of the root must be identical. In addition, the honorific suffix must appear on both copies because each copy needs the [+hon] feature within the word which motivates the suppletive exponent. That the identity condition is not a surface phonological condition is shown by sentences (46d–f). The general phonological process mentioned briefly in section 3.2 deletes a morpheme-final liquid consonant before a morpheme-initial coronal non-stop consonant in morphemes of a certain kind within a word, as in *a-si-e* < *al-si-e* 'know-HON-INF' (cf. *al-a* 'know-INF'), *a-n-ta* < *al-n-ta* 'know-PRES-DECL' (cf. *al-ki* 'know-NMLZ'), *tta-nim* < *ttal-nim* 'daughter-HONORIFIC.TITLE' (cf.

554

ttal-man 'daughter-only') and *so-namu* < *sol-namu* 'pine-tree' (cf. *sol-pangwul* 'pine-cone'). This phonological process and its results do not affect the identity condition, showing that this condition is not a purely phonological condition but a (somewhat deeper) morphological condition.

The identity condition, however, does not hold for the *ha-* focus construction. (The optionality of negation is not considered in the following examples.)

(49) Ha- *focus construction: non-suppletive negative, suppletive honorific*
    (a) apeci-kkeyse   cwumu-**si**-ki-nun   ha-**si**-ess-e.
        father-HON.NOM sleep.HON-HON-NMLZ-FOC do-HON-PAST-INF
        'Father certainly slept.'
    (b) apeci-kkeyse cwumu-**si**-ki-nun ha-y-ess-e.
    (c) (?)apeci-kkeyse ca-ki-nun ha-**si**-ess-e.

(50) Ha- *focus construction: suppletive negative, suppletive honorific*
    (a) apeci-kkeyse   pang-ey   *an*(*i*) kyey-**si**-ki-nun
        father-HON.NOM room-LOC NEG exist.HON-HON-NMLZ-FOC
        ha-**si**-ess-e.
        exist.HON-HON-PAST-INF
        'Father certainly wasn't (staying) in the room.'
    (b) apeci-kkeyse pang-ey *an*(*i*) kyey-**si**-ki-nun ha-y-ess-e.
    (c) ?apeci-kkeyse pang-ey *eps*-ki-nun/*an*(*i*) iss-ki-nun ha-**si**-ess-e.
    (d) *apeci-kkeyse pang-ey *eps*-ki-nun/*an*(*i*) iss-ki-nun ha-y-ess-e.

By definition, the pro-predicate *ha-* does not and cannot have the same exponent as the original predicate (except if the original predicate happens to be the lexical predicate *ha-* 'do' or the light predicate *ha-* 'do/be (so)'). Therefore, the *ha-* focus construction, in which the identity condition does not hold, shows the real optionality of the honorific suffix -*si-* in the predicate iteration constructions.

In brief, the discussion suggests that the output of the (morpho)syntactic predicate iteration constructions are subject to a morphological identity condition. But, abstracting away from this condition, the optionality of the honorific suffix is maintained in predicate iteration constructions in contrast to the obligatoriness of the negator.

This section has considered subject honorification and the paradoxical situation for 'exist' and 'know' in the environment of both negation and honorification. The predicate iteration constructions support the structure with negation closer to the root. The honorific suffix can cause root allomorphy even with negation intervening between the allomorphy-triggering feature and the allomorphy-exhibiting root. Furthermore, negation is not the unique intervening, transparent element. The agentive *v* node can also appear between the root and the honorific suffix triggering honorific allomorphy of the root. The identity of the intervening node(s) between the root

and the honorific suffix is thus in principle arbitrary; it is because of this arbitrariness that a c-command-based allomorphy rule was employed for honorific root suppletion. Based on this allomorphy, section 4 will propose an integrated explanation of two cases of suppletion and suppletion blocking.

4. ALLOMORPHY: NON-LOCALITY AND BLOCKING OF INNER SUPPLETION

This section extends the c-command analysis of contextual allomorphy for honorific suppletion to explain the blocking of negative suppletion by the structurally farther honorific morphology. Contextual allomorphy requires a c-commanding allomorphy-triggering morphosyntactic feature. This allows a non-local relation between the root and the triggering feature, with the consequence that negation and some other elements behave transparently between them. Consequently, negative suppletion will be reexamined here and a revised fusion formalism will be proposed: post-insertion fusion interleaved with vocabulary insertion (as opposed to strictly pre-insertion fusion of nonphonological features and to contextual allomorphy). In this way, the interaction of negative and honorific suppletion is explained. Section 4.3 shows that verbal suppletion in Korean supports the separation of phonological and nonphonological features and late vocabulary insertion.

4.1 *Blocking interaction of negative suppletion and honorific suppletion*

As mentioned in the previous section, it has been argued in the Distributed Morphology literature (Halle & Marantz 1993; Bobaljik 2000, 2007 among others) that contextual allomorphy only requires head-internal c-command (see footnote 12). In all of the structures in question – (42) with [[V *v*] Hon], (44) with [[Neg [V *v*]] Hon], and (31) with [[Neg V] Hon] – the [+hon] feature c-commands the root whether or not anything intervenes and regardless of what the intervening nodes are. All that matters is that [+hon] c-commands the root; if so, the root can show suppletive root allomorphy for honorification. Hence, allomorphy of the root is possible even with the intervening [+neg] feature. The vocabulary item (45) formulated for [EXIST] in section 3.4 fits into this picture perfectly without any modification:

(45) *Vocabulary item for* [EXIST] *in the environment of* [+*hon*]
      [EXIST] ↔ /kyey/ when c-commanded by [+hon]

The c-command approach ensures this non-local property of contextual allomorphy without any additional machinery and stipulation of transparency of certain features.

Furthermore, on this approach the problem of locality of the root and the Neg node does not arise. To allow the fusion process, the Neg-V-Hon sequence should be structured as [[Neg [V]] Hon], where the [+neg] feature is positioned structurally between the root and the [+hon] feature. This

structure is not only necessary for fusion, but is also maintainable under the assumption that the outer feature [+hon] can trigger its root allomorphy under c-command.

To implement this idea, an important difference between suppletive negation and suppletive honorifics needs to be highlighted: all the honorific cases involve suppletion of a root in the environment of honorification, but the entire structure is preserved. Most importantly, the honorific morpheme per se continues to surface as the invariant *-si-*. Therefore, honorific suppletion is contextual allomorphy. On the other hand, negative suppletion involves fusion, i.e., a portmanteau form is created.

Negative suppletion is thus local, requiring a strict sisterhood configuration, while honorific suppletion merely requires a c-commanding head. However, negative suppletion is bled by honorific suppletion. This effect can be obtained without stipulation if contextual allomorphy and fusion are treated in distinct ways. The root can show suppletive allomorphy for honorification whether or not [+neg] or anything else intervenes, simply because [+hon] c-commands the root. On the other hand, fusion operates strictly locally. Also, it is triggered crucially by the higher head (in this case, the higher Neg node containing only [+neg] and the root). If fusion is allowed to make reference to post-insertion vocabulary items of the root node rather than to pre-insertion abstract 'morphemes', i.e., if fusion is interleaved with vocabulary insertion, the bleeding effect will follow automatically. The fusion rule is then to be reformulated as follows:[13]

(51)   *Revised fusion of [+neg] and /iss/ to /eps/ (revision of (19))*

```
        Neg                    Neg
       /    \                   |
    Neg      V     →          /eps/
     |       |
  [+neg]   /iss/
```

---
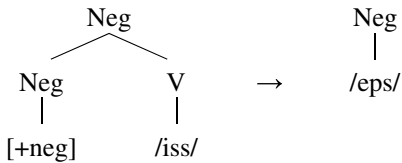
[13] Likewise, the fusion rule for negative suppletion with *molu-* 'not.know' has to be revised as:

(i)   *Revised fusion of [+neg] and /al/ to /molu/ (revision of (12))*

```
        Neg                    Neg
       /    \                   |
    Neg      V     →          /molu/
     |       |
  [+neg]   /al/
```
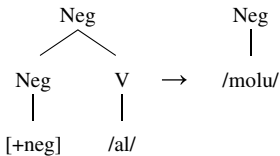
The revision is needed even though there is no practical difference between the two versions of the fusion rule in the case of 'know' in terms of yielding the correct phonological form due to the fact that this root does not exhibit honorific suppletion and hence negative suppletion does not interfere with honorific suppletion.

If the rule is part of the cycle with the root and the [+neg] node, the root node must be stated as /iss/, not as [EXIST], because vocabulary insertion will already have applied in the inner cycle.

The reformulated fusion rule makes reference to a root node with a phonological feature and a node in the second cycle with a formal feature. Even though these two features are quite different kinds of objects, fusing these two nodes is a necessary consequence of resolving the paradoxical situation. Further, this very type of fusion has been proposed in other recent work. Dealing with verbal repetition constructions in Nupe, Kandybowicz (2007) proposes the post-insertion fusion of a low tone L and a verbal root $\sqrt{}$ as shown below, where Foc(P) represents focus (phrase).

(52) *Fusion of a verbal root and a focus low tone in Nupe* (*Kandybowicz 2007: 93*)
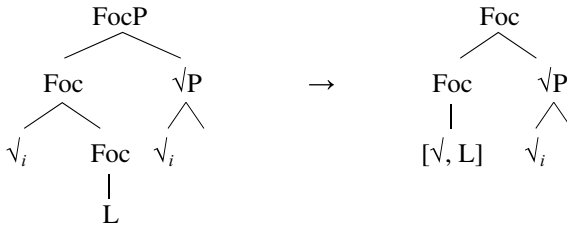
One of the two fused nodes, $\sqrt{}$, involves category information which is a morphosyntactic feature, and the other node involves a prosodic element which is a phonological feature. The situation with fusion in Nupe is exactly parallel to fusion in Korean in that both cases fuse a phonological feature and an abstract nonphonological feature.

With the reformulated fusion rule (51), cyclic vocabulary insertion will apply to the morphosyntactic representation [[Neg [EXIST]] Hon] as follows:

(53) *Vocabulary insertion of* [+neg]-[EXIST]-[+hon]- (*partial structure of the complex* C^0)
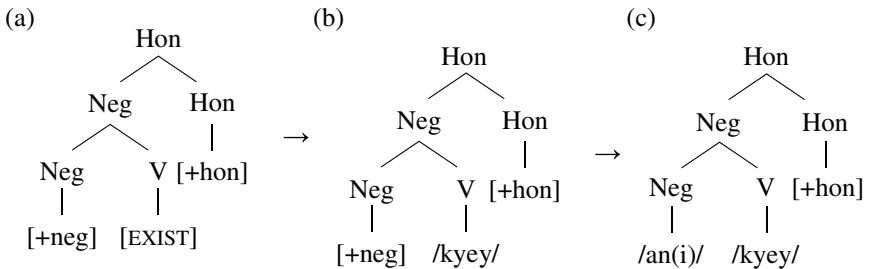

Note that the morphosyntactic structure (53a) – more precisely, the entire C^0 containing (53a) – enters PF as a whole after the overt syntactic component. Syntax constructs the entire structure, and this structure, still lacking

phonological features, is sent to the morphological component (within the larger PF component). The relevant nonphonological features in the above structure are all present before vocabulary insertion. Therefore, the third cycle with the [+hon] feature is already there at the time of vocabulary insertion in the root cycle.

In (53b), the root is provided with /kyey/ due to the vocabulary item (45) because [+hon] c-commands this node. As a result, the choice of the root allomorph (i.e., honorific suppletion) must be determined in the root cycle. Therefore, the proper domain of vocabulary insertion for the root cycle is that very cycle itself, i.e., not including the allomorphy-triggering [+hon] feature. The c-commanding [+hon] feature simply serves as the context for the root allomorphy operating in the first cycle. Even though [+hon] is required for the choice of the suppletive exponent /kyey/, vocabulary insertion in the root cycle does not involve the (lowest) Hon node (see Halle & Marantz 1993, Bobaljik 2000). However, the triggering morphosyntactic feature can 'penetrate' into negation (and any other intervening nodes such as *v*, as discussed in section 3.4), because this is contextual allomorphy. Subsequently, the [+hon] node will be provided with /si/ in (53c) as usual, and vocabulary insertion in this step yields the correct form *an(i) kyey-si-*.

The negative suppletion, however, crucially takes place in the second cycle. This fusion operation makes reference to the output of vocabulary insertion in the first cycle. Therefore, if the output of the first cycle is /kyey/ as in (53b), the negation fusion rule will not apply. On the other hand, when the [+hon] feature is not involved in a given word, fusion applies to [+neg] in the next outer cycle along with the root item /iss/. This is because vocabulary insertion converts the root morpheme into /iss/ in the first cycle and the rule description is met only in the next cycle. This situation is illustrated in the following, where [+hon] is absent:

(54) *Vocabulary insertion of [+neg]-[EXIST]-T- with negation fusion*
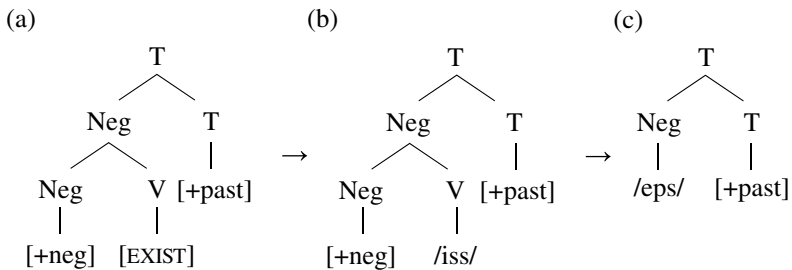
With the reformulation of the fusion rule, the analysis presented in section 2.3 remains almost the same. In particular, if the fusion operation is restricted to sisters, a null *v* in a negative clause will still block the fusion rule, giving the agentive *iss-*. When the [*v* +agent] feature is present, it is the sister of the root and causes the [+neg] feature to c-command the root

asymmetrically. The only change in the new fusion rule is that the root is now represented as a vocabulary item instead of an abstract morpheme, i.e., the nonphonological feature bundle [EXIST]. Consequently, the fusion rule finds its place accordingly. It does not apply before vocabulary insertion, but applies cyclically, interleaved with vocabulary insertion.

There have been other alternative proposals to Halle & Marantz's (1993) original postsyntactic, pre-insertion fusion. As noted earlier in this section, Kandybowicz (2007) recognizes fusion operating after vocabulary insertion. Trommer (1999) proposes that fusion (and other morphological operations) should be described as (part of) vocabulary insertion. These alternative analyses are in harmony with the present reformulation of fusion.[14] More broadly, other morphological operations have also been argued to take place after vocabulary insertion. Embick & Noyer (2001) discuss post-insertion local dislocation, a morphological merger, in Lithuanian and Huave. Schütze (1994) argues for post-insertion prosodic inversion of certain clitics in Serbo-Croatian. These studies and the analysis in this paper support the possible occurrence of morphological operations after vocabulary insertion. Along with the c-command analysis of contextual allomorphy (for honorific suppletion) and the revised fusion analysis of a portmanteau suppletion (for negative suppletion), the discussion in this section confirms the conjugation structure (44) in Korean. Negation is structured closer to the root than the honorific suffix is.

4.2 Negative suppletion is not contextual allomorphy

It could be proposed that suppletive negation be treated as contextual allomorphy (e.g., Trommer 1999). Specifically, it might be that the root node and the [+neg] node undergo vocabulary insertion separately and that [+neg] is realized as a phonologically null form with a suppletive root allomorph for [EXIST] and [KNOW]. This section considers this scenario and argues that suppletive negative cases in Korean must indeed be treated as fusion, as proposed in this paper, and not as contextual allomorphy.

The structure at issue is that seen in (31), [[[+neg] [EXIST]] [+hon]], which is realized as *an(i) kyey-si-*. The vocabulary items for [EXIST] and [+neg] would look like the following in the contextual allomorphy view:

(55) *Vocabulary items for* [EXIST]
    (a) [EXIST] ↔ /kyey/ when c-commanded by [+hon] (=(45))
    (b) [EXIST] ↔ /eps/ when c-commanded by [+neg]
    (c) [EXIST] ↔ /iss/   (=(29c))

---

[14] See Bobaljik & Thráinsson (1998), who propose a presyntactic bundling operation of syntactic and morphological features replacing Halle & Marantz's (1993) fusion.

(56) *Vocabulary items for* [+*neg*]
    (a) [+neg] ↔ Ø / ____ /eps/
    (b) [+neg] ↔ /an(i)/   (=(30b))

The contextual allomorphy view works for the case of [+ neg [EXIST]] without [+hon] in the given word. The vocabulary item (55b) realizes the root [EXIST] as /eps/ in such a structure. Then in the next cycle, a zero form is inserted for [+neg] in the environment of the morphophonologically peculiar root form /eps/ due to the vocabulary item (56a). The resulting morphophonological form is the correct Ø-*eps*-.

Several difficulties arise with this contextual allomorphy analysis. A major problem is the indeterminacy between /kyey/ and /eps/ when both negation and honorification are present in a given conjugated form, as in (31). Both [+neg] and [+hon] c-command the root, according to (55a) and (55b). Furthermore, neither of the two vocabulary items' environments, i.e., 'c-commanded by [+hon]' and 'c-commanded by [+neg]', is a subset of the other, and hence they are not in a competition relationship. Therefore, an extrinsic ordering will be necessary. At the same time, it would be reasonable and plausible to assume that the allomorphy-triggering feature closer to the root, in this case [+neg], would win out over an outer allomorphy feature, i.e., [+hon]. However, the reverse is true. This raises a question about the validity of the contextual allomorphy approach to suppletive negation.

Another serious problem with the contextual allomorphy view of negative suppletion is that it wrongly predicts that any intervening node between the root node and the negation node will be ignored, just as in the case of honorific allomorphy. The vocabulary item (55b) wrongly ignores the intervening null *v* with [+agent] (as in [[+neg] [[EXIST] [*ᵥ* +agent]]]) which, in fact, blocks negative suppletion of the root [EXIST]. This would result in the ungrammatical form **eps-nun-ta* 'not.exist-PRES-DECL' for the negative agentive [[[Neg [[EXIST] *v*]] T] DECL] with the vocabulary item (55b). The contextual allomorphy analysis of suppletive negation thus does not work either conceptually or empirically.

Hence, [+neg] does not serve as the environment of the suppletion phenomenon, but rather is the phenomenon itself. That is, the negative suppletion takes the root and the negation, and provides a single vocabulary item for them. To embrace the two sister nodes, a cycle bigger than the root cycle must be referred to, whereas contextual allomorphy refers only to the relevant cycle itself excluding the allomorphy-triggering feature from the vocabulary insertion operation. In this way, the apparent paradox noted in section 3.2 is resolved.[15]

---

[15] The structure [[+neg [[KNOW] [+caus]]] +hon] yields the correct (morpho)phonological form *an(i) al-li-si*-, which is the form predicted from the interaction of negative suppletion,

4.3 *In support of late vocabulary insertion*

The paradox between negative and honorific morphology can be resolved by employing two different mechanisms for negative suppletion and for honorific suppletion. However, a crucial assumption needs to be made. In order for the vocabulary item (45) to be inserted in structure (53) with [[[+neg] [EXIST]] [+hon]], the [+hon] feature should be present in the structure when vocabulary insertion applies to the root cycle. That is, vocabulary insertion of the root must wait at least until [+hon] is added. Otherwise, fusion will still operate: if vocabulary insertion took place in the structure [[+neg] [EXIST]] prior to the addition of [+hon], the root would be realized as /iss/ due to (55c) and then [[+neg] /iss/] would turn into /eps/ due to the new fusion rule (51). On the other hand, if all three morphemes are present in the given structure at the point of vocabulary insertion, the root will be directly realized as /kyey/ due to [+hon] in the given structure, as the vocabulary item (45) will be chosen in the environment. Therefore, the [+hon] feature must already be present at the time of vocabulary insertion of the root.

This situation provides another argument in favor of late insertion as assumed in Distributed Morphology. Suppose that phonological features and nonphonological features were to be provided at the same time for each morphological node, as in a lexicalist framework. In the case of [[[+neg] [EXIST]] [+hon]] which is realized as *an(i) kyey-si-*, morpheme concatenation will proceed in the order: root, negation, and honorifics. In the first cycle, the root node is provided with the nonphonological feature bundle [EXIST] and the corresponding phonological feature bundle. Critically, the root node by itself cannot determine the correct phonological form. The subseqent cycle containing the root node morpheme and the [+neg]-/an(i)/ pair cannot determine the correct root allomorph (i.e., /kyey/) either, because the [+hon] environment is not present. Instead, the negative suppletive form /eps/ would be yielded for the first two cycles containing negation and [EXIST]. If the [+hon]-/si/ cycle is added further, then (and only then) the entire structure

---

honorific suppletion and the intervening causative morpheme. It is impossible, however, to check the case of 'exist' in this combination because the relevant construction is not available. The root 'exist' does not have a suffixal causative, *[EXIST]-[+caus]. In Korean, only a certain group of predicates are available for suffixal (or 'morphological') causativization by adding one of the seven causative suffixes (-*i*-, -*hi*-, -*li*-, -*ki*-, -*wu*-, -*kwu*- and -*chwu*-), but 'exist' is not one of these. If a suffixal causative were available for 'exist', the hypothetical structure [[+neg [[KNOW] [+caus]]] +hon] would be realized as **an(i) kyey-i-si-* because the [+hon] feature c-commands the root. (However, see I. Chung 2007b for the role of the causative head as a phase and for the hypothetical form **an(i) iss-i-si-* due to the opacity of (multiple) Spell-Out domains, including this causative phase head, for vocabulary insertion.) Just to complete the story, it is possible to form a periphrastic (or 'syntactic') causative structure from any predicate – verb or adjective – as in *iss-keyha-* 'exist-CAUS'.

will turn into *an*(*i*) *kyey-si-* (due to the honorific feature). This lexicalist derivation is illustrated in (57):

(57) *Cyclic morpheme concatenation of* [[[+*neg*] [EXIST]] [+*hon*]] *in lexicalism*

	Phonological	Nonphonological
Cycle 1	iss-	[EXIST]
Cycle 2	eps-	[+neg, EXIST] (<[[+neg] [EXIST]])
Cycle 3	an(i) kyey-si-	[[[+neg] [EXIST]] [+hon]]

This needlessly complex and undesirable derivation is unavoidable if the phonological features are provided at the same time as the nonphonological features for each cycle.

On the other hand, if phonological features are available later in the derivation after nonphonological features are provided for all the relevant morphological nodes in a certain domain such as word,[16] then the entire morphophonological derivation will be coherent and consistent. The root node will make reference to the remote outer nonphonological feature (i.e., [+hon]) when it chooses the root allomorph (i.e., *kyey-*), as shown in the derivation (53). Determining the correct phonological form of the root in one fell swoop is possible when the environment [+hon] feature (c-commanding the root node) is present at the time of vocabulary insertion of the root node and the root cycle lacks its phonological information. Therefore, verbal suppletion in Korean provides strong support for separation and late insertion as assumed in Distributed Morphology, as opposed to lexicalism.

To summarize this section, the suppletion interaction in Korean can be explained by appealing to two different mechanisms for the different suppletion types. Negative suppletion is characterized as fusion in (51), replacing the post-insertion root and the sister negation feature. This revised fusion formalism is interleaved with vocabulary insertion and operates in the second cycle. Honorific suppletion is formalized as contextual allomorphy in the c-command configuration. With the c-command requirement, the honorific feature acts as the environment for honorific suppletion. Because honorific suppletion, i.e., choosing the honorific suppletive vocabulary item (45), operates crucially in the root cycle, it bleeds negative suppletion operating in the second cycle when the root [EXIST] has both the negative and the honorific features, resulting in *an*(*i*) *kyey-si-* for [[[+neg] [EXIST]] [+hon]]. The discussion and analysis presented toward the end of this section support the notion of late vocabulary insertion as assumed in Distributed Morphology.

---

[16] See I. Chung (2007b) for domains of vocabulary insertion based on phase as posited by Chomsky (2000, 2001).

5. CONCLUSION

This paper has considered verbal suppletion in negation and honorification and their interaction in Korean. The paper identified the morphological structure of conjugated predicates. Various suppletive and non-suppletive forms and predicate iteration constructions were considered. The predicate iteration constructions have determined that negation is more closely structured with the root than the honorific suffix is. When both negation and honorifics are involved in the root 'exist', negative suppletion is blocked by honorific suppletion. From these phenomena, a paradoxical situation was identified such that negative suppletion in the structurally closer configuration is blocked by the farther honorific morphology.

To resolve the paradox, different formalisms were adopted for negative suppletion and for honorific suppletion. Honorific suppletion was analyzed as contextual allomorphy with a c-command requirement. Since the honorific feature serves as the non-adjacent context c-commanding the root, the negation feature can intervene between the root and the honorific feature. This non-local aspect of contextual allomorphy (Halle & Marantz 1993, Bobaljik 2000) for honorific suppletion leads to a revision of the fusion rule in such a way that the rule refers to the vocabulary item per se, i.e., the result of vocabulary insertion in the root cycle, and to the negative feature. The possibility of analyzing negative suppletion in terms of c-command-based contextual allomorphy was considered. However, section 4.2 showed that this alternative approach cannot deal with the bleeding of negative suppletion in the environment of honorifics for the multifaceted root 'exist'.

Finally, the interaction of two suppletion types – negative and honorific – supports the late insertion of vocabulary items and disfavors lexicalism. In order for the proposed analysis of bleeding interaction of the two suppletion-exhibiting affixes to operate, a certain domain needs to be considered as a whole for vocabulary insertion. Phonological features are to be supplied after this domain is fully formed. This mechanism strongly supports the separation of phonological and nonphonological features and the late insertion of vocabulary items. Furthermore, the proposed analysis of the interaction of negative and honorific suppletion posits that fusion, a morphological operation, is interleaved with vocabulary insertion. The newly formulated fusion rule, which contains both a phonological feature (i.e., a vocabulary item) in a previous cycle and an abstract morpheme in the next cycle, applies after vocabulary insertion in that previous cycle. Hence the morphological operation can follow vocabulary insertion. This finding is consistent with such studies as Schütze (1994), Embick & Noyer (2001) and Kandybowicz (2007) among others, who argue the same point that some morphological operations must follow vocabulary insertion, contrary to Halle & Marantz's (1993, 1994) original conception that all morphological operations precede vocabulary insertion.

564

ABBREVIATIONS

A	adjective	NEG/neg	negative, negation, negator
ACC	accusative	NMLZ	nominalizer
agent	agentive	NOM	nominative
CAUS/caus	causative	NPI	negative polarity item
DECL	declarative	PAST	past (tense)
EG	epenthetic glide	PRES	present (tense)
EV	epenthetic vowel	RPRT	reportive
FOC	focus marker	T	tense
HON/hon	honorific (suffix)	TEMP	temporal
HON.NOM	honorific nominative	TOP	topic marker
	case suffix	V	verb
IMP	imperative	*v*	little/small/shell *v*
INF	infinitive	VOC	vocative
LOC	locative		

REFERENCES

Ahn, Hee-Don. 1991. *Light verbs, VP-movement, negation and clausal architecture in Korean and English*. Ph.D. dissertation, University of Wisconsin–Madison.

Ahn, Hee-Don & Hang-Jin Yoon. 1989. Functional categories in Korean. *Harvard Studies in Korean Linguistics* 3, 79–88.

Ahn, Sung-Ho. 2002. Honorification and AgrP. Presented at the Linguistic Society of Korea Winter 2002 Meeting, Seoul National University.

Allen, Margaret. 1978. *Morphological investigations*. Ph.D. dissertation, University of Connecticut.

Aoyagi, Hiroshi. 2006. On predicate focus constructions in Korean and Japanese. In Susumu Kuno, Ik-hwan Lee, John Whitman, Joan Maling, Young-Se Kang, Peter Sells & Hyang-Sook Sohn (eds.), *Harvard Studies in Korean Linguistics* 11, 359–372.

Bobaljik, Jonathan D. 2000. The ins and outs of contextual allomorphy. In Kleanthes K. Grohmann & Caro Struijke (eds.), *The 1999 Maryland Mayfest on Morphology* (University of Maryland Working Papers in Linguistics 10), 35–71. College Park, MD: Department of Linguistics, University of Maryland.

Bobaljik, Jonathan D. 2007. On comparative suppletion. Ms., University of Connecticut.

Bobaljik, Jonathan D. 2008. Where's Phi? Agreement as a post-syntactic operation. In David Adger, Susana Béjar & Daniel Harbour (eds.), *Phi-theory: Phi-features across modules and interfaces*, 295–328. Oxford: Oxford University Press.

Bobaljik, Jonathan D. & Höskuldur Thráinsson. 1998. Two heads aren't always better than one. *Syntax* 1, 37–71.

Bošković, Željko. 1997. *The syntax of nonfinite complementation: An economy approach*. Cambridge, MA: MIT Press.

Bošković, Željko. 2008. When are negative imperatives banned? Ms., University of Connecticut.

Calabrese, Andrea. 2008. On absolute and contextual syncretism: Remarks on the structure of paradigms and on how to derive it. In Andrew Nevins & Asef Bachrach (eds.), *The bases of inflectional identity*, 156–205. Oxford: Oxford University Press.

Carnie, Andrew, Heidi Harley & Tony Bures (eds.). 1994. *Papers in phonology and morphology* (MIT Working Papers in Linguistics 21). Cambridge, MA: Department of Linguistics and Philosophy, MIT.

Chang, Suk-Jin. 1996. *Korean*. Amsterdam: John Benjamins.

Cho, Euy-Yeon. 1994. Kwuke cwue contayilchiuy twu hyengsikkwa hwayongcek thukcing [Two forms and their pragmatic properties of subject honorification agreement in Korean]. *Korean Journal of Linguistics* 19, 599–620.

Cho, Sae-Youn, Jong-Bok Kim & Peter Sells. 2004. Contrastive verb constructions in Korean. *10th Harvard International Symposium on Korean Linguistics*, 360–371. Cambridge, MA: Department of Linguistics, Harvard University.

Choe, Hyun-Sook. 1988. *Restructuring parameters and complex predicates: A transformational approach*. Ph.D. dissertation, MIT.

Choe, Jae-Woong. 2004. Obligatory honorification and the honorific feature. *Studies in Generative Grammar* 14, 545–559.

Choi, Kiyong. 2003. Hankwukeuy hayk itong: Congkyelhyengul cwungsimulo [Head movement in Korean finite clauses]. *Studies in Generative Grammar* 13, 119–142.

Chomsky, Noam. 1995a. *The Minimalist program*. Cambridge, MA: MIT Press.

Chomsky, Noam. 1995b. Bare phrase structure. In Gert Webelhuth (ed.), *Government and Binding theory and the Minimalist program*, 383–439. Oxford: Blackwell.

Chomsky, Noam. 2000. Minimalist inquiries: The framework. In Roger Martin, David Michaels & Juan Uriagereka (eds.), *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, 89–155. Cambridge, MA: MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In Michael Kenstowicz (ed.), *Ken Hale: A life in language*, 1–52. Cambridge, MA: MIT Press.

Chung, Inkie. 2007a. Suppletive negation in Korean and distributed morphology. *Lingua* 117, 95–148.

Chung, Inkie. 2007b. *Ecology of PF: A study of Korean phonology and morphology in a derivational approach*. Ph.D. dissertation, University of Connecticut.

Chung, Taegoo. 1994. *Argument structure and serial verbs in Korean*. Ph.D. dissertation, University of Texas at Austin.

Embick, David. 2007. Blocking effects and analytic/synthetic alternations. *Natural Language & Linguistic Theory* 25, 1–37.

Embick, David & Alec Marantz. 2008. Architecture and blocking. *Linguistic Inquiry* 39, 1–53.

Embick, David & Rolf Noyer. 2001. Movement operations after syntax. *Linguistic Inquiry* 32, 555–595.

Hale, Kenneth & Samuel J. Keyser. 1993. On argument structure and the lexical representation of syntactic relations. In Hale & Keyser (eds.), 53–109.

Hale, Kenneth & Samuel J. Keyser (eds.). 1993a. *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger*. Cambridge, MA: MIT Press.

Halle, Morris. 1997. Distributed morphology: Impoverishment and fission. In Benjamin Bruening, Yoonjung Kang & Martha McGinnis (eds.), *PF: Papers at the Interface* (MIT Working Papers in Linguistics 30), 425–449. Cambridge, MA: Department of Linguistics and Philosophy, MIT.

Halle, Morris & Alec Marantz. 1993. Distributed morphology and the pieces of inflection. In Hale & Keyser (eds.), 111–176.

Halle, Morris & Alec Marantz. 1994. Some key features of distributed morphology. In Carnie et al. (eds.), 275–288.

Han, Chung-hye & Chungmin Lee. 2007. On negative imperatives in Korean. *Linguistic Inquiry* 38.2, 373–395.

Han, Chung-hye, Jeffrey Lidz & Julien Musolino. 2007. Verb-raising and grammar competition in Korean: Evidence from negation and quantifier scope. *Linguistic Inquiry* 38, 1–47.

Han, Hak-Sung. 1987. *The configurational structure of the Korean language*. Ph.D. dissertation, University of Texas at Austin.

Harley, Heidi & Rolf Noyer. 1999. State-of-the-art article: Distributed morphology. *GLOT International* 4.4, 3–9.

Harley, Heidi & Rolf Noyer. 2000. Formal versus encyclopedic properties of vocabulary: Evidence from nominalizations. In Bert Peeters (ed.), *The lexicon–encyclopedia interface*, 349–374. Amsterdam: Elsevier.

Hong, Yong-Tcheol. 1992. *Théorie de l'incorporation et théorie du cas: Leurs implications sur la structure phrastique et sur la structure du syntagme nominal en coréen*. Ph.D. dissertation, Université de Paris VIII.

Kandybowicz, Jason. 2007. Fusion and PF architecture. In Tatjana Scheffler, Joshua Tauberer, Aviad Eilam & Laia Mayol (eds.), *30th Annual Penn Linguistics Colloquium* (University of Pennsylvania Working Papers in Linguistics 13.1), 85–98. Philadelphia, PA: Department of Linguistics, University of Pennsylvania.

Kang, Myung-Yoon. 1988. *Topics in Korean syntax: Phrase structure, variable binding, and movement*. Ph.D. dissertation, MIT.

Kim, Jong-Bok. 1999. On the prefixhood and scope of short form negation. In Susumu Kuno, Ik-Hwan Lee, John Whitman, Joan Maling, Young-Se Kang & Young-joo Kim (eds.), *Harvard Studies in Korean Linguistics* 8, 403–418.

Kim, Jong-Bok & Peter Sells. 2007. Korean honorification: A kind of expressive meaning. *Journal of East Asian Linguistics* 16, 303–336.

Kim, Sun-Woong. 1996. Hankwuke cwukyek mokceke yenkwu [Nominative objects in Korean]. *Korean Journal of Linguistics* 21, 241–262.

Lee, Jeong-Shik. 1995. A study on predicate clefting. *Studies in Generative Grammar* 5, 531–584.

Marantz, Alec. 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. In Alexis Dimitriadis, Laura Siegel, Clarissa Surek-Clark & Alexander Williams (eds.), *21st Annual Penn Linguistics Colloquium 1997* (University of Pennsylvania Working Papers in Linguistics 4.2), 201–225. Philadelphia, PA: Department of Linguistics, University of Pennsylvania.

Marantz, Alec. 2001. Words. Presented at the 20th Annual Meeting of the West Coast Conference on Formal Linguistics (WCCFL 20).

Niinuma, Fumukazu. 2003. *The syntax of honorification*. Ph.D. dissertation, University of Connecticut.

No, Yongkyoon. 1988. Negative morphemes in Korean: Evidence for a derivational treatment. In Eung-Jin Baek (ed.), *6th International Conference of Korean Linguistics*, 556–567. Toronto: Department of East Asian Studies, University of Toronto.

Pak, Miok Debby. 2006. Jussive clauses and agreement of sentence-final particles in Korean. *Japanese/Korean Linguistics* 14, 295–306.

Schütze, Carson. 1994. Serbo-Croatian second position clitic placement and the phonology–syntax interface. In Carnie et al. (eds.), 373–473.

Sells, Peter. 2001. Three aspects of negation in Korean. *Journal of Linguistic Studies* 6, 1–15.

Siegel, Dorothy. 1977. The adjacency condition and the theory of morphology. *The North East Linguistic Society (NELS)* 8, 189–197.

Simpson, Jane & Meg Withgott. 1986. Pronominal clitic clusters and templates. In Hagit Borer (ed.), *The syntax of pronominal clitics*, 149–174. Orlando, FL: Academic Press.

Trommer, Jochen. 1999. Morphology consuming syntax's resources: Generation and parsing in a minimalist version of Distributed Morphology. Ms., Universität Potsdam.

Yang, Dong-Whee. 1996. The Korean case structure in the Minimalist program. *Korean Journal of Linguistics* 21, 139–189.

Yoon, Jong-Yurl. 1990. *Korean syntax and generalized X-bar theory*. Ph.D. dissertation, The University of Texas at Austin.

Author's address: University of Seoul, Department of General English, 13 Shiripdae-gil Rd., Dongdaemun-gu, Seoul, 130-743, South Korea
inkiechung@alumni.uconn.edu