A Copula Functioning as a Light Verb in Korean: Aspectual Prominence and Subject Selection

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1. Introduction

Korean and Japanese both have three types of nominal elements, that is, verbal nouns (VNs),[1] adjectival nouns (ANs),[2] and bona fide nouns.[3] These three categories exhibit slightly different behaviors between categories and between languages when used predicatively. Korean VNs and ANs are normally followed by the light verb *ha(ta)* 'to do' and Korean regular nouns (Ns) by the copula *i(ta)* 'to be' when functioning as predicates. In contrast, Japanese VNs, again normally, are followed by the light verb *su(ru)* 'to do' and Japanese ANs and Ns by the copula *da* 'to be'. Sato,[4] however, has shown that a copula can follow a Japanese VN in place of light *suru* and license its arguments in verbal cases,[5] e.g., in the accusative, as shown in (1) below.[6] The VN *taiho* 'arrest' in (1) is followed by the copula *da* and co-occurs with its arguments in the nominative and accusative, just as when it is followed by *sita* (the past tense of *suru*) as in (2). (Hereafter, the nominal elements followed by a light verb or a copula are in small capitals.)

(1) *Keisatu-ga   hannin-o   TAIHO-da.* [the VN-*da* construction]
    police-Nom   offender-Acc   arrest-Cop[7]
    'The police arrested the offender.'[8]

(2) *Keisatu-ga   hannin-o   TAIHO-sita.*
    police-Nom   offender-Acc   arrest-did
    'The police arrested the offender.'[9]

Sato also demonstrated that transitive VNs can appear passivized when followed by a copula, but not when followed by *suru*.[10] The contrast between a transitive VN followed by a copula and by *suru* is shown in (3) and (4). The transitive VN *taiho* 'arrest' can co-occur with its theme in the nominative, as shown in (3), whereas the nominative NP *hannin-ga* in (4), where the same VN is followed by light *suru*, can never be interpreted as its theme argument. The nominative argument in (4) can only be interpreted as the agent in an event of arresting.

(3) *Hannin-ga   (keisatu-ni-yotte)   TAIHO-da.* [the VN-*da* construction]
    offender-Nom   police-by   arrest-Cop
    'The offender was arrested by the police.'[11]

(4) *Hannin-ga*   *TAIHO-sita.*
    offender-Nom   arrest-did
    'The offender arrested (someone).'[12]

The purpose of this article is to examine (i) whether Korean VNs can be followed by a copula when used predicatively, (ii) whether Korean transitive VNs can appear passivized when followed by a copula, and (iii) to give an analysis to account for alternations between active and passive voice when a transitive VN is followed by a copula. It will be concluded that Korean VNs can also be followed by a copula, albeit marginally, that is, the VN-*ita* construction exists, and that transitive VNs followed by a copula allow either the external or internal argument to be realized as subject. It follows from this that the copula also has the function of a light verb: i.e., realizing the argument(s) of a nominal element in clausal structure. The copula and other light verbs, however, differ in whether or not they have an inclination to select a specific type of subject. This difference in subject selection will be explained by their difference in event structure.

The organization of this paper is as follows. Section 2 presents data pertaining to whether or how the VN-*ita* construction appears on the Internet and, if it does, whether it exhibits alternation between transitive and passive. Section 3 presents formal descriptions of the VN-*ita* construction as well as other light verb constructions (LVCs) within the framework of Distributed Morphology. Section 4 is the conclusion.

2. The occurrence of the VN-*ita* construction on the Internet
2.1 The VN-*ita* construction in active voice

The ten most frequently used transitive VNs found in the Yonsei Corpus wordlist[13] were examined using the Google Advanced Search function, *this exact word or phrase*, to see whether they appear before the plain nonpast copula *-i-ta* or the formal nonpast copula *i-pni-ta*. In this case, however, the ninth most frequent transitive VN *cinceng* was excluded, and the first to eighth and the tenth and eleventh most frequent transitive VNs were used as the ten most frequent VNs. This is because *cinceng*, which is polysemous (e.g., 'to petition', 'to suppress', 'to give'), was written only in hangul on Han's list[14] and it could not be determined which of these morphemes was meant. Each search query included an accusative case marker (-*lul* or -*ul*), a VN, and a copula (either -*ita* or *ipnita*), e.g., *lul* VN*ita*, resulting in four types of queries per transitive VN. The Google site https://www.google.co.kr/ was accessed between December 16 and 27, 2017. The first 20 (or fewer) results of each search (resulting in a maximum of 80 results for each VN) were carefully examined and the following expressions were excluded from the count: (i) the result sounded unnatural and inauthentic in Korean, (ii) an accusative NP was not interpretable as the theme argument of the VN, (iii) the VN is contained in parentheses or quotation marks, and (iv) a morpheme homophonous to the VN under search (but with different meaning) appeared in its place. If identical expressions were repeated, only the first occurrence was counted. The results are shown in Table 1. As can be seen from Table 1, all of the ten transitive VNs were found to co-occur with a copula and

a theme in the accusative on the Internet.

VN	VN-*i-ta*	VN-*i-pni-ta*	VN	VN-*i-ta*	VN-*i-pni-ta*
selmyeng 'explanation'	1	4	*phyohyen* 'expression'	4	15
inceng 'recognition'	1	2	*palphyo* 'announcement'	16	8
hwakin 'confirmation'	7	28	*ceysi* 'presentation'	6	9
kyelceng 'decision'	2	4	*cwunpi* 'preparation'	13	20
cicek 'pointing out'	1	1	*senthayk* 'selection'	1	4

Table 1. Korean transitive VNs with their theme in the accusative and a copula

Some examples are given below. The VN *hwakin* 'confirmation' co-occurring with its theme in the accusative is followed by the plain copula -*ita* in (5), and the VN *kyelceng* 'decision' with its theme in the accusative is followed by the formal copula -*ipnita* in (6).

(5) *Seysccay, kyengcayng   keyim kiep-tul-kwa   casa   kiep-i*
    third   competition game business-Pl-and own-company business-Nom
    sicang-eyse-uy   hyencay uychi-lul   HWAKIN-i-ta.
    market-in-Gen   current   position-Acc   confirmation-Cop-Dec
    'Third, competing game businesses and our own business are confirming the current positions in the market.'[15]

(6) *Casin-i   etten   pulayntu-lul kac-key toy-nunya-ka   milay*
    self-Nom   what-kind-of brand-Acc   carry-Comp-become-Q-Nom   future
    sengkong-ul   ha-l swu iss-nunya ani-nya-lul   KYENLCENG-i-pni-ta.
    success-Acc   do-Potential-Q   not-Q-Acc   decision-Cop-Pol-Dec
    'What kind of brand you end up carrying decides whether or not you can succeed in the future.'[16]

Note that VNs followed by a copula are sometimes immediately followed by paraphrasing expressions with VN-*ha*-. The news report in (7) is one such example. The VN *cwunpi* 'preparation' in (7a) is followed by a copula (which appears as phonologically null after a vowel-final expression) in a news headline, and it was immediately followed by exactly the same expression in (7b) except that the VN in this case was followed by *hata*. The example in (7) clearly shows that a VN-*i*- expression is used in the sense of VN-*ha*-. VN-*i*- expressions, however, differ from corresponding VN-*ha*- expressions in having a special stylistic flavor because they sound elliptic; they are often considered suitable for news headlines.

(7) a. *Phaliasu   kamtok, 'Iki-l swu iss-nun   kyengki-lul   cwunpi-ta.'*
       Farias   coach, win-Potential-Rel   game-Acc   preparation-Dec
       'Manager Farias: '(We have) prepared for a game that (we) can win.'
    b. *'Iki-l swu iss-nun   kyengki-lul   cwunpi-hay-ss-ta.'*
       win-Potential-Rel   game-Acc   prepare-Lv-Pst-Dec
       '(We have) prepared for a game that (we) can win.'[17]

2.2 The VN-*ita* construction in passive voice

In addition to examining the occurrence of transitive VNs with accusative themes in active voice as shown above, it was also examined whether they could appear passivized when followed by a copula. Transitive VNs followed by a copula were considered passives when either their theme argument appeared in the nominative or their agentive argument appeared in an agentive phrase, NP-*ey uyhay* 'by NP'. Note that those transitive VNs are not of an alternating type (e.g., *hwaktay* 'to expand', which can be realized as both transitive and intransitive when followed by *hata*), and that they have to co-occur with a nominative agent when followed by light *hata*, as shown in (8a–c). The co-occurrence of a theme in the nominative, (8b), or an agentive phrase, (8c), renders them ungrammatical in the intended readings.

(8) Transitive VN followed by *hata*
    a. *Chelswu-ka   ku   kes-ul   SELMYENG-ha-yess-ta.*
       Chelswu-Nom   that   thing-Acc   explanation-Lv-Pst-Dec
       'Chelswu explained that.'
    b. **Ku   kes-i   SELMYENG-ha-yess-ta.* [Theme subject]
       that   thing-Nom   explanatipon-Lv-Pst-Dec
       'That was explained.'
    c. **Chelswu-ey uyhay   SELMYENG-ha-yess-ta.* [Agentive phrase]
       Chelswu-by   explanation-Lv-Pst-Dec
       '(It) was explained by Chelswu.'

To investigate whether the ten most frequent transitive VNs examined above also appear passivized, the same method was applied as above. A search query this time consisted of either a nominative case marker (-*ka* or -*i*) or the agentive marker (-*ey uyhay* 'by'), and a VN, and a copula (-*ita* or *ipnita*), e.g., *ka* VN*ita* or *ey uyhay* VN*ipnita*, resulting in six queries per VN. The Google site https://www.google.co.kr/ was accessed between December 16 and 27, 2017. The first 20 (or fewer) results of each search (resulting in a maximum of 120 results for each VN) were carefully examined and the following expressions were excluded from the count: (i) the result sounded unnatural and inauthentic in Korean, (ii) either a nominative NP was not interpretable as the theme argument of the VN, or an agentive phrase was not interpretable as the agent of the VN, (iii) the VN is contained in parentheses or quotation marks, and (iv) a morpheme homophonous with the VN under search appeared in its place. If identical expressions were repeated, only the first occurrence was counted. The results are shown in Table 2. Eight of the ten transitive VNs were considered to be used as passives, i.e., they co-occurred with their theme in the nominative. Of those eight transitive VNs found co-occurring with a nominative theme, four co-occurred with an agentive phrase.

VN	gloss	nominative (-*ka* or -*i*)		agentive phrase (-*ey uyhay*)	
		VN-*ita*	VN-*ipnita*	VN-*ita*	VN-*ipnita*
selmyeng	explanation	0	0	0	0
inceng	recognition	2	1	0	0
hwakin	confirmation	1	2	0	0
kyelceng	decision	3	10	1	1
cicek	pointing out	1	0	0	1
phyohyen	expression	0	0	0	0
palphyo	announcement	5	4	0	3
ceysi	presentation	1	2	0	0
cwunpi	preparation	0	6	0	1
senthayk	selection	0	1	0	0

Table 2. Transitive VNs with the theme in nominative or an agentive phrase

Two examples are given below. The passage in (9) is a story about a gentleman, or *tayin*, of strict morals, who can serve as a lord when acknowledged as such by the king. The transitive VN *inceng* 'acknowledgement' is preceded by its theme in the nominative and followed by the plain copula. That it can be construed as a passive can be confirmed by the following NP *wangca-ey uyhan inceng* 'acknowledgement by the king', which paraphrases such a passive relationship. The transitive VN *palphyo* 'announcement' in (10) is preceded by an agentive phrase and followed by a copula.

(9) *Ku-nun   isangcek-in   thongchica-i-ko   ku-ey uyhayse   totek-ponseng-ey*
  he-Top   ideal   ruler-Cop-and   thereby   moral-nature-with
  pwuhapha-nun   thongchi-hayngwy-ka   INCENG-i-ta.
  matching-Rel   ruling-act-Nom   acknowledgement-Cop-Dec
  Wangca-ey uyhan   inceng-un   hyensil-uy   chapyelcek
  king-by   acknowledgement-Top   reality-Gen   discriminatory
  sinpuncek   cilse-lul   cengtanghwa-ha-n-ta.
  ranking   order-Acc   justify-Prs-Dec
  'He (gentleman or *tayin*) is an ideal ruler, and his act of ruling conforming to morality is thereby acknowledged. Acknowledgement by the king justifies the discriminatory ranking order in the real world.'[18]

(10) *2014-nyen 6-wel 25-il-ey   LG cenca-wa   Google-ey uyhay*
  2014 June 25-on   LG Electronics-and   Google-by
  PALPHYO-ipni-ta.
  announcement-Cop-Pol-Dec
  'On June 25, 2014, (it) will be announced by LG Electronics and Google.'[19]

As shown above, all the top ten VNs can be followed by a copula and co-occur with accusative theme arguments. Eight of the ten top transitive VNs were found to co-occur with their theme in the nominative when they were followed by a copula, and four of those eight were also found to co-occur with an agentive phrase when followed by a copula. It must be added, however, that although examples of the VN-

ita construction could be found on the Internet, they were often judged to be very unnatural by native speakers.

To sum up, the data shown so far in this section provide positive answers to two questions posed at the beginning of this paper, that is, (i) whether Korean VNs can be followed by a copula when used predicatively, and (ii) whether Korean transitive VNs can appear passivized when followed by a copula.

3. An analysis of the VN-*ita* construction

This section presents an analysis of the VN-*ita* construction within the framework of Distributed Morphology.[20] In particular, I adopt the view of Jung's,[21] Folli, Harley, and Karimi's[22] and Megerdoomian's[23] analyses of light verb constructions (LVCs) in Korean and Persian, where a light verb is treated as a little v. Folli and Harley[24] and Harley[25] have proposed different flavors of a little v, i.e., vDO, vCAUSE, vBECOME and vBE, for which Harley gives the following featural representations.

> (11) Features of little v's[26]
>   a. vCAUSE: [+dynamic], [+change of state], [+cause]
>   b. vBECOME: [+dynamic], [+change of state], [−cause]
>   c. vDO: [+dynamic], [−change of state], [−cause]
>   d. vBE: [−dynamic], [−change of state], [−cause]

Jung proposed that the Korean light verb *ha-* corresponds to vDO and vBE, respectively.[27] I follow Jung in the analysis of VNs with dynamic and stative *hata* and add here an analysis of the VN-*ita* construction. In the following I will introduce Jung's analysis of LVCs with dynamic and stative *hata* and the mechanism of subject selection in these constructions in 3.1, and an analysis of the VN-*ita* construction and the mechanism of subject selection in it in 3.2.

3.1 Subject selection by a little v in LVCs

A little v and a Voice projection are assumed to be bundled in this paper as well as in Jung[28] and Folli and Harley,[29] and thus a little v is the functional category responsible for determining whether or not there is an external argument. If a little v does not provide an external argument, an internal argument is raised from below to be realized as subject. In this way a little v determines the type of the subject. I assume that the little v's with the features in (11) have the capacity to determine which argument is realized as subject by choosing whether to project a specifier for an external argument and to license accusative case. This assumption is based on Grimshaw's observation of the relationship between the type of a subject and the event structure of its predicate.[30]

Grimshaw discusses the characteristics of the subject event structure or aspect,[31] or in terms of 'a projection of the event structure of predicates,'[32] and proposes that 'the aspectually most prominent argument is realized as the subject,'[33] following Pustejovsky.[34] The accomplishment verb *break*, for example, has an event structure as shown below, where, '[f]or *x* breaks *y*, the activity is one which *x* engages in breaking and the resulting state is one in which *y* is broken.'[35]

(12) The event structure of accomplishments[36]

```
          event
         /      \
   activity     state
```
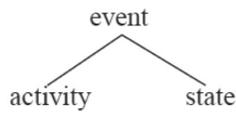
Grimshaw argues '… that an argument which participates in the first sub-event in an event structure is more prominent than an argument which participates in the second sub-event.'[37] She further argues that, although both x and y are involved in the first sub-event of the event structure and y alone is involved in the second sub-event, the argument x associated only with the first sub-event (excluding that associated with both sub-events, i.e., y) is chosen as the most prominent in this case.[38]

Activity verbs like *work* have an event structure below, which Grimshaw says 'resembles the first sub-event' in the above structure and thus follows 'the general pattern,' i.e., the argument involved only in the first sub-event is realized as subject.[39]

(13) The event structure of activities[40]
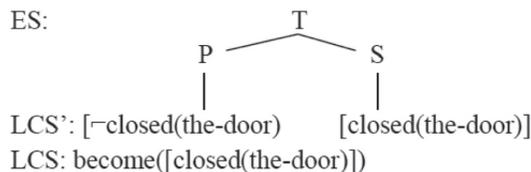
```
      event
        |
    activity
```

Inchoative achievement verbs like *close* (intransitive), for which Grimshaw[41] did not show an event structure, are supposed to have an event structure as shown below, which appeared in Pustejovsky.[42]

(14) The event structure of achievements[43]
   a. The door closed.
   b.

```
   ES:              T
              P  ——————  S
              |          |
LCS': [¬closed(the-door)     [closed(the-door)]
LCS: become([closed(the-door)])
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T (transition) on the top node stands for the entire event structure (ES) of the achievement verb *close*. The argument that appears in both sub-events, *the-door* in this case, is realized first in object position and later in subject position. Regarding unaccusative verbs, Pustejovsky states that, assuming 'that for unaccusative verbs the subject is an underlying object,' '[t]he semantic participant in a predicate opposition[44] is mapped onto the internal argument position of the lexical structure (roughly the d-structure object position).'[45] He considers the second sub-event referring to a state to be 'the primary event,' which functions as the head of the event.[46] Hence, the theme argument in an accusative achievement is expected to be the most prominent argument in this model.

Grimshaw, however, stated that the mechanism of subject selection for states is different from that for dynamic events and that the subject selection for states cannot be based solely on aspectual prominence, but must be based on both aspectual and thematic prominence.[47] In her discussion of *fear*, she writes, 'it must be admitted that in this case there is no independent evidence that the aspectual analysis will give this result,[48] so we must stipulate it.'[49] Grimshaw stipulates that 'the Experiencer is maximally prominent both aspectually and thematically,' just like the agentive class.[50] The event structure of a state is supposed to consist of 'a single event, which is evaluated relative to no other event,'[51] as shown in (15). The arguments of *fear*, e.g., *Mary* and *ghosts* in *Mary fears ghosts*, are both arguments of the state sub-event, and neither argument can be considered more prominent than the other according to the above criterion. This shows that selection of subject based on aspectual prominence alone does not work in the case of states, and that some other mechanism is at work.

(15) The event structure of states[52]
   a. The door is closed.
   b.

   ES: S
                                      |
                                      e
                                      |
      LCS':   [closed(the-door)]
      LCS: [closed(the-door)]

The Korean and Japanese dynamic light verbs (*ha-*, *toy-*, and *su-*), although thematically bleached, I argue, retain the relevant aspectual information inherited from their corresponding heavy verbs. I assume that these dynamic light verbs function as a little v and participate in subject selection, for example by deciding (i) whether or not to project a specifier for an external argument and (ii) whether or not to license the accusative case of an internal argument (if no accusative case is assigned, an internal argument is raised to subject position). The dynamic light verbs that have corresponding agentive heavy verbs, i.e., *hata* and *suru*, realize the most aspectually prominent argument of a VN as subject, and the Korean light verb *toyta*, which has a corresponding unaccusative heavy verb, realizes the theme argument of a VN as subject. In contrast, the stative light verb *hata* has to rely on thematic prominence for subject selection.

Based on the assumption regarding subject selection stated above, the derivation of the following two types of LVCs presented in Jung[53] will be re-interpreted as below.

(16) Korean LVCs
   a. *Chelswu-ka   yelon-ul   COSA-ha-yess-ta.*
      Chelswu-Nom   public-opinion-Acc   survey-Lv-Pst-Dec
      'Chelswu conducted a survey on the public opinion.'

b. *Ku   cakka-ka   YWUMYENG-ha-ta.*
   that   author-Nom   famous-Lv-Dec
    'That author is famous.'

Jung gives the following operation of Vocabulary Insertion for the functional morpheme v$_{DO}$.[54]

(17) Vocabulary Insertion of v$_{DO}$[55]
(a) v$_{DO}$ $\longleftrightarrow$ ø   / [√__]
(b) $\longleftrightarrow$ *ha-* / Elsewhere

The Vocabulary Insertion (VI) operation in (17a) applies to bona fide verbs like *mek-ø* 'to eat', and the VI in (17b) derives *cosa ha-* 'to conduct a survey'. The crucial difference between VN and AN roots, on the one hand, and bona fide verb roots (including stative verb roots), on the other, as discussed in Jung,[56] is that the former roots, i.e., VNs and ANs, are realized as free morphemes, more concretely as nominal, whereas the latter are all realized as bound morphemes. Ahn has demonstrated that VNs and ANs can be separated from the light verb *hata* by inserting a case particle or a delimiter.[57]

The clause projected from v$_{DO}$ refers to a process, type (13), and this little v is expected to project a specifier for an external argument, which is realized as an agentive subject. The schematic structure of (16a) given in (18) in the spirit of Jung[58] involves the following steps: (i) The activity VN root *cosa* 'survey' first merges with its theme argument to form a maximal projection √P, (ii) √P is merged with the category-defining functional morpheme n (headed by a phonologically null element), resulting in nP, (iii) the little v v$_{DO}$ (headed by *ha-*) merges with nP and projects a specifier to host an external argument, and (iv) the agent NP is raised to the specifier of TP to get its nominative case checked—for lack of space, TP is not mentioned in the figure. A category-defining functional category needs to merge with a root because in Distributed Morphology (DM) roots are not specified for any syntactic category. I assume with Jung that the little v, v$_{DO}$ in this case, can check the accusative case of a Theme NP across the maximal projection headed by n.
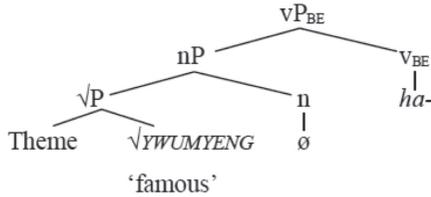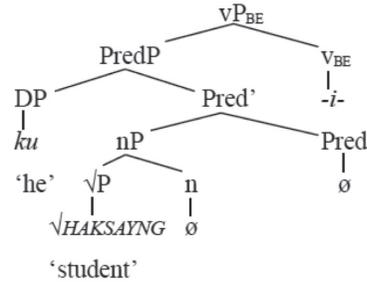
(18) Dynamic little v, Process event
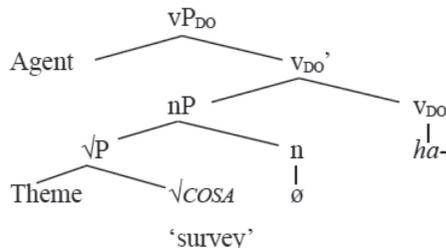
The stative little v is given the features [−dynamic][−change of state][−cause], as in (11d). The schematic structure of (16b) with the AN *ywumyeng* 'famous', in the spirit of Jung,[60] is given in (19a).

(19) Stative little v
 (a) stative *hata* (b) Copula

The VI operations for this little v are shown in (20); in (20b), I have added the VI operation for a copula to the VI operations proposed by Jung.[61] An example of a sentence with copular structure is given in (21) below, and its structure is shown in (19b) above.

(20) VI operations for the stative little v
 (a) v_{BE} $\leftarrow\rightarrow$ ø   / [$\sqrt{}$ ___][62]
 (b) $\leftarrow\rightarrow$ -*i*-   / [Pred ___]
 (c) $\leftarrow\rightarrow$ *ha*-   / Elsewhere[63]
(21) *Ku-ka*   *haksayng-i-ta.*
      he-Nom   student-Cop-Dec
      'He is a student.'

The stative little v is realized (i) as phonologically null when merging with a bound stative verb root, e.g., *noph-ø* 'to be high', as in (20a), (ii) as the copula -*i*- when it merges with a Predicational Phrase (PredP), e.g., *haksayng-i-* 'to be a student', as in (20b), or (iii) as *ha*- elsewhere, e.g., *ywumyeng ha*- 'to be famous', as in (20c). As nominal predicates generally do not take an argument, there needs to be a PredP so that its subject can be introduced into the structure as an entity to be predicated of, as shown in (19b) for the sentence in (21).

For the sentence with a stative predicate in (16b), both aspectual prominence and thematic prominence work to select a subject. The theme argument for *ku cakka* 'that author' is selected as subject, as there is no other argument. If it has an experiencer argument in addition to a theme argument, for example in the case of *min-mang* 'to be embarrassed', the experiencer is chosen as subject because it is thematically more prominent and both the experiencer and theme are identical in aspectual prominence.[64]

3.2 Subject selection in the VN-*ita* construction

The VN-*ita* construction has the same structure as the copular structure in (19b). One more mechanism, however, is needed to ensure the assignment of accusative case within copular structure, for which I follow Myler[65] in assuming different types of copulas. Myler posited different types of copulas depending on whether they

have a specifier and license accusative case. I have changed his notations of {},{D} and Φ[66] to [+Ext, +Acc] (Myler's {D}Φ), [+Ext, −Acc] (Myler's {D}) and [−Ext, − Acc] (Myler's {}) for ease of exposition. [+Ext, +Acc] subscripted on a stative little v below indicates that it projects a specifier and checks accusative case, [+Ext, −Acc] indicates that it projects a specifier, and [−Ext, −Acc] indicates that it neither projects a specifier nor checks accusative case. The VI operations in (22) ensure the projection of a specifier for an external argument and licensing of accusative case, if necessary.

(22) VI operations for the copula
    a. v<small>BE [+EXT, +ACC]</small> $\leftrightarrow$ *-i-* / [Pred _____]
    b. v<small>BE [+EXT, −ACC]</small> $\leftrightarrow$ *-i-* / [Pred _____]
    c. v<small>BE [−EXT, −ACC]</small> $\leftrightarrow$ *-i-* / [Pred _____]

The VI operation in (23) introduces an nP as the complement of Pred. A PredP is postulated for the VN-*ita* construction because it is needed for an ordinary copular sentence like (21) and the Japanese VN-*da* construction contains an overt Pred head. The data in (24) contain *de*, which functions as a Pred head in Japanese.[67]

(23) VI operation for the Predicational head
    Pred $\leftrightarrow$ ø / [n ___]

(24) *Indo-Kōka Daigaku Madorasu-kō-de-wa*   *Indo-no*   *kōtū-zizyō-ni*
    Indian-technology-university-Madras- in-Top India-Gen traffic-situation-to
    tekigō-sita *gazō-syori-hōsiki-rosoku-sensā-o*   *KENKYŪ-de*   *ar-u.*
    fitting   image-processing-style-curb-sensor-Acc research-Pred be-NPst
    'At Indian Technology of Institute Madras (they are) doing research on an image-processing curb-detection sensor that fits Indian traffic situations.'[68]

The event information of the stative little v does not match up with that of the VN it co-occurs with because a PredP intervenes between them, as shown in (19b) (or (26) below); this parallels the analysis of a light verb construction with two layers of little v projections by Jung,[69] an elaboration of which will be presented shortly.
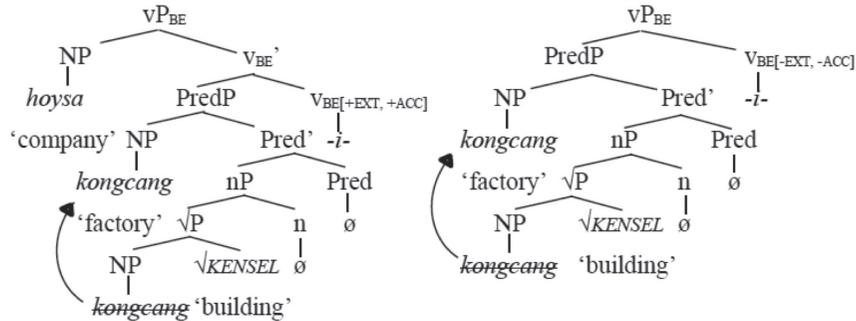
The examples of the VN-*ita* construction in (25a,b) are given the schematic structure in (26a,b).

(25) a. *Hoysa-ka*   *kongcang-ul*   *KENSEL-i-t*a.
      company-Nom   factory-Acc   building-Cop-Dec
      'The company has built a factory.'
    b. *Koncang-i*   *(hoysa-ey-uyhay)*   *KENSEL-i-ta.*
      factory-Nom   company-by   building-Cop-Dec
      'A factory has been built by the company.'

(26) The VN-*ita* construction with a transitive VN

    a. External argument as subject   b. Internal argument as subject

```
        vPBE                                        vPBE
      /      \                                    /      \
    NP      VBE'                             PredP        VBE[-EXT, -ACC]
    |       /   \                          /      \        -i-
  hoysa  PredP   VBE[+EXT, +ACC]         NP       Pred'
         /   \      -i-                kongcang   /    \
'company' NP  Pred'              'factory'  nP      Pred
          |    /    \                       /  \     |
       kongcang nP   Pred                  VP   n    ø
               /  \    |                  /  \   |
      'factory' VP  n  ø               NP  √KENSEL ø
               /  \  |                 |
             NP  √KENSEL ø          kongcang  'building'
             |
          kongcang  'building'
```

The sentences in (25a,b) with the structures in (26a,b) undergo the following derivation: (i) the causative VN root *kensel* 'building' merges with its theme argument *kongcang* 'factory' to project a √P, (ii) √P is merged with the category-defining functional morpheme n, resulting in nP, (iii) Pred merges with nP and projects a specifier, (iv) the theme *kongcang* is raised to the specifier of PredP to satisfy the EPP condition, and (v) a little v merges with PredP. After this step, the little v with [+Ext, +Acc] in (26a) checks the accusative case on the theme and projects a specifier to host the agent *hoysa* 'company'. The little v with [−Ext, −Acc] in (26b), on the other hand, neither licenses accusative case nor projects a specifier for an external argument, which results in the raising of the theme to the specifier of TP to get nominative case.

I assume that after each sentence is derived in the syntax, it is checked at the Syntax-Semantics Interface as to whether the aspectual and thematic information of each morpheme in the Encyclopedia matches, as proposed by Harley and Noyer[70] and Kelly.[71] I further assume that VNs and ANs (as well as other morphemes) at least have the information in (27) in their Encyclopedia entries.

(27) VN/AN root entries in the Encyclopedia

	a. √ *COSA* 'survey'	b. √ *KENSEL* 'building'	c. √ *YWUMYENG* 'famous'
Participants	1, theme	1, theme	1, theme
Event	[+dynamic][−change of state][−cause]	[+dynamic][+change of state][+cause]	[−dynamic][−change of state][−cause]

I follow Kratzer,[72] Kelly,[73] and Harley and Noyer[74] in the specification of participants and aspectual information, although they have been slightly changed. Unlike Kelly, external arguments are excluded from the participants of all 'transitive' morphemes, as they cannot be considered arguments of morphemes, following Kratzer.[75] This mechanism of specifying the internal argument(s) of a morpheme alone as shown in (27) is particularly needed to account for the alternation between transitive and passive in the VN-*ita* construction. The need for each morpheme to have an

'external argument' in the projection of a little v, however, is implicated in their featural representations for event structure. Kratzer[76] wrote that 'there is a connection between the Aktionsarten of a verb and its external argument.' The specification only of internal arguments as Participants and the specification of event structure as Event for the sake of subject selection in the Encyclopedia will ensure the derivation of ordinary LVCs and the VN-*ita* construction.

The aspectual information carried by a little v is checked against that of the VN or AN it merges with. The dynamic little v v_{DO} with [+dynamic][−change of state] [−cause], (11b)/(17b), matches with the VN *cosa* 'survey' with the same aspectual features in (27a), and projects a specifier for an external argument due to its event structure, as shown in (18). The little v v_{BE} with [−dynamic][−change of state][−cause], (11c)/(20c), matches with the AN *ywumyeng* 'famous' with the same features in (27c) and lets the most thematically prominent argument be realized as subject.

In the VN-*ita* construction in (25a) with the structure in (26a), event-matching does not work. This is because the copula is stative whereas *kensel* 'building' is dynamic, as shown in (27b). This parallels the sentence with two little v's in (28a).

(28) a. C*helswu-ka   Yenghi-uy   hayngtong-ul MINMANG-ha-eha-ess-ta.*
        Chelswu-Nom Yenghi-Gen behavior-Acc embarrassment-v_{BE}-v_{DO}-Pst-Dec
        'Chelswu looked embarrassed by Yenghi's behavior.'[77]
    b. [v_{PDO} *Chelswu* [v_{PBE} [nP [√P t*Chelswu hayngtong* √*MINMANG*] ø]   *-ha*] *-eha*]
        Chelswu   behavior embarrassment v_{BE} v_{DO}

The outermost little v, v_{DO} *-eha-*, which is dynamic, does not match the event structure of *minmang* 'embarrasment', which is stative. I assume that just as an intervening phrase, i.e., v_{PBE}, between v_{DO} *-eha-* and *minmang* in (28b) allows a mismatch in event structure, the intervening PredP between a little v and the VN, as shown in (26), obviates the need for matching of event structure between the little v and the VN.

The information in the Encyclopeia for the VN *kensel* 'building' is satisfied in both (26a) and (26b). Its sole argument specified in (27b) is realized as its complement, and its agentive argument, which is expected from its causative event structure, as in (12), is provided by the little v with [+Ext, +Acc] in (26a). The agentive argument expected from its causative event structure is not realized in (26b), but this does not violate its Participant information. An agentive argument, in fact, is implied even in (26b) and thus can be realized as an adjunct argument,[78] e.g., as an agentive phrase. The mechanism of subject selection in the VN-*ita* construction is based on thematic prominence, because the little v is stative in this case. The thematic prominence of the theme argument and that of the agent, which is only expected from event structure and is more like an adjunct argument, I believe, are identical, which allows either argument to be realized as subject in this construction.

4. Conclusion

I have shown above that the VN-*ita* construction can be found on the Internet, although native speakers usually judge it very unnatural and marginal at best. The

VN-*ita* construction, just like the Japanese VN-*da* construction, exhibits an alternation between transitive and passive. I have presented an analysis within the framework of Distribute Morphology. Such alternation of voice in the VN-*ita* construction is accounted for by postulating that (i) subject selection in the VN-*ita* construction is made based on either aspectual or thematic prominence when a little v is stative, and (ii) transitive VNs have only their internal arguments in their Encyclopedia entries.

Acknowledgements

Notes

1) S. E. Martin, *A Reference Grammar of Japanese*, (New Haven: Yale University Press, 1975); S. E. Martin, *A Reference Grammar of Korean: A Complete Guide to the Grammar and History of the Korean Language*, (Tokyo: Charles E. Tuttle Company, 1992).

2) Ibid.

3) VNs are here regarded as nouns, contra H-D Ahn, "On light verb constructions in Korean and Japanese," in Hajime Hoji, edit., *Japanese/Korean Linguistics*, (Stanford, CA: the Center for the Study of Language and Information, 1990), 221–237, and M. D. Pak, *On Deriving Syntactic Properties of Verbal Nouns in Korean Light Verb Constructions*, (Doctoral dissertation, Georgetown University, 2001), (as unspecified categories), among others. Korean stative verbs, like *noph-* 'to be high', are referred to as adjectival nouns (VNs) but are treated as verbs syntactically.

4) Yutaka Sato, "Some evidence for a zero light verb in Japanese," in M. Nakayama & C. Quinn, edit., *Japanese/Korean Linguistics*, 9, (Stanford, California: Center for the study of Language and Information (CSLI), 2000), 365–378, ; Yutaka Sato, "A phonologically null copula functioning as a light verb in Japanese," in M. Endo Hudson, S.-A. Jun, P. Sells, P. M. Clancy, S. Iwasaki, and S.-O. Sohn, edit., *Japanese/Korean Linguistics*, 13, (Stanford: the Center for the study of Language and Information (CSLI), 2008), 207–217,; Yutaka Sato, "Japanese passives with verbal nouns," in M. Giriko, N. Nagata, A. Takemura, and T. J. Vance, edit., *Japanese/Korean Linguistics*, 22, (Stanford: the Center for the study of Language and Information (CSLI), 2014), 308–322.

5) M. Iida, "Case assignment by Nominals in Japanese," in M. Iida, S. Wechsler, and D. Zec edit., *Working papers in grammatical theory and discourse structure: Interactions of morphology, syntax, and discourse*, (Stanford, CA: CSLI, 1987), 93–138.

6) Y. Sato, "Some evidence for a zero light verb in Japanese," *Japanese/Korean Linguistics*, 9, (2000), 365–378; Y. Sato, "A phonologically null copula functioning as a light verb in Japanese," in *Japanese/Korean Linguistics*, 13, (2008), 207–217; Y. Sato, "Japanese passives with verbal nouns," *Japanese/Korean Linguistics*, 22, (2014), 308–322.

7) Acc: accusative, Comp: complementizer, Cop: copula, Dec: declarative, Gen: genitive, Lv: light verb, NPst: nonpast tense, Nom: nominative, Pl: plural, Pol: polite, Pred: the head of a Predicational Phrase, Prs: present tense, Pst: past tense, Q: question marker, Rel: relative clause linking, Top: topic marker.

8) Sato 2014, op. cit., 308 (4).

9) Ibid., 307(1).

10) Ibid.

11) Ibid., 308(5).

12) Ibid., 308(3).

13) C. Han, C. "Sangwi pinto 'hata' tongsa moknok [A list of high-frequency verbs with 'hata']," in *Report of the Special Project for the Typological Investigation of Languages and Cultures of the East and West*, (Tsukuba: The University of Tsukuba, 2001), 563–612.

14) Ibid.

15) http://google.co.kr/url?q=http://home.kocca.kr/mportal/bbs/view/B0000204/1312991.do%3BKCSESSIONID%3Dr2WhWd2ZKQ62LlPQ_JpPrWPGhHczBnhzmp5Q1My2ZSCv4Qc8ZTRhh!1384163490!-1557403900%3FsearchCnd%3D%26searchWrd%3D%26cateTp1%3D%26cateTp2%3D%26useAt%3D%26menuNo%3D201225%26categorys%3D4%26subcate%3D67%26cateCode%3D0%26type%3D%26instNo%3D0%26questionTp%3D%26uf_Setting%3D%26recovery%3D%26option1%3D%26option2%3D%26pageIndex%3D21&sa=U&ved=0ahUKEwjmr-_g8JLYAhWLopQKHdEIBwMQFggfMAI&usg=AOvVaw1EQCMbtD3SiX8KUn5Zzqry

16) https://books.google.co.kr/books?id=PgnwCgAAQBAJ&pg=PT60&lpg=PT60&dq=%22*%EB%A5%BC+%EA%B2%B0%EC%A0%95%EC%9E%85%EB%8B%88%EB%8B%A4*%22&source=bl&ots=qKkkmDfKN2&sig=kmEFiyFMrnGcmF8O6UI9HIy_PLY&hl=ko&sa=X&ved=0ahUKEwiP2dOPgpPYAhUNNpQKHTJaBUkQ6AEIFDAA

17) http://google.co.kr/url?q=http://www.xportsnews.com/%3Fac%3Darticle_view%26entry_id%3D20100&sa=U&ved=0ahUKEwj-4Kis1JjYAhWBHJQKHSgqCewQFgglMAQ&usg=AOvVaw3vwfdmNTfzWXofP7lnVnji

18) http://google.co.kr/url?q=http://cabincrew.co.kr/bbs/board.php%3Fbo_table%3Dcrew89%26wr_id%3D32103%26sst%3Dwr_hit%26sod%3Ddesc%26sop%3Dand%26page%3D2215&sa=U&ved=0ahUKEwj37-Xx_JDYAhXLy7wKHaGyCKEQFghIMAs&usg=AOvVaw0mGyLg-JhFpYqT-oicAuyJ

19) http://google.co.kr/url?q=http://ps.termwiki.com/KO/work_placement&sa=U&ved=0ahUKEwj7l9v8pZfYAhUBKJQKHb8LByMQFggUMAA&usg=AOvVaw0kKQ3j5GNH-f6jW_hnPaN-

20) M Halle and A. Marantz, "Distributed Morphology and the pieces of inflection," *The View from Building*, 20, (1994), 111–176; A. Marantz, "No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon," in A. Dimitriadis, L. Siegel, C. Surek-Clark, and A. Williams edit., *Proceedings of the 21st Penn Linguistics Colloquium*, (Philadelphia: UPenn Working Papers in Linguistics, 1997), 201–225.

21) H.-K. Jung, "On the verbalizing suffixes in Korean and their implications for syntax and semantics," *Lingua*, 179, (2016), 97–123.

22) R. Folli, H. Harley, and S. Karimi, "Determinants of Event Type in Persian Complex predicates," *Lingua*, 115, (2005), 1365–1401.

23) K. Megerdoomian, *Beyond Words and Phrases: A Unified Theory of Predicate Composition*, (Doctoral dissertation, University of Southern California, 2002).

24) R. Folli, and H. Harley. "Causation, obligation, and argument structure: On the nature of little v," *Linguistic Inquiry*, 38.2, (2007), 197–238.

25) H. Harley, "The morphology of nominalizations and the syntax of vP," in A. Giannakidou and M. Rathert edit., *Quantification, Definiteness, and Nominalization*, (Oxford: Oxford University Press, 2009), 321–343.

26) Ibid.

27) Jung, op. cit.

28) Ibid.

29) Folli and Harley, op. cit.

30) J. Grimshaw, *Argument structure*, (Cambridge, Massachusetts: the MIT Press, 1990).

31) Ibid., 25.

32) Ibid., 26.

33) Ibid., 27.

34) J. Pustejovsky, "The geometry of events," in C. Tenny, edit., *Studies in Generative Approaches to Aspect, Lexicon Project Working Papers*, 24, (MIT Working Papers in Linguistics,1988).

35) Grimshaw, op. cit., 26.

36) Ibid., 26(44).

37) Ibid., 26.

38) Ibid., 27.

39) Ibid.

40) Ibid., 27(45).

41) Ibid.

42) J. Pustejovsky, "The syntax of event structure," *Cognition*, 41, (1991), 47–81.

43) Ibid., 58(15).

44) E.g., in terms of LCS or lexical conceptual structure ¬*closed(the-door)* as opposed to *closed(the-door).*

45) Pustejovsky 1991, op. cit., 75.

46) Pustejovsky 1988, op. cit., 24.

47) Grimshaw, op. cit.

48) 'this result' here was meant to be the Experiencer of *fear* being the aspectually most prominent.

49) Grimshaw, op. cit., 27–28.

50) Ibid., 28.

51) Pustejovsky 1991, op. cit., 56.

52) Ibid., 57(14).

53) Jung, op. cit.

54) Ibid.

55) Ibid., 111(55).

56) Ibid.

57) Ahn, op. cit.

58) Jung, op. cit.

59) Ibid., 107.

60) Ibid.

61) Ibid.

62) Ibid., 111(57).

63) Ibid.

64) See Jung op. cit. for why the experiencer is more thematically prominent.

65) N. Myler, *Building and Interpreting Possession Sentences*, (Cambridge, MA: the MIT Press, 2016); N. Myler, "Complex copula systems as suppletive allomorphy," *Glossia: Journal of general linguistics*, 3.1, (2018), 51: 1–43.

66) Myers 2018, op. cit., 4.

67) K. Nishiyama, "Adjectives and the copulas in Japanese," *Journal of East Asian Languages*, 8.3, (1999), 183–222.

68) http://open_jicareport.jica.go.jp/pdf/12087474_01.pdf, accessed September 23, 2018.

69) Jung, op. cit.

70) H. Harley and R. Noyer, "Formal versus encyclopedic properties of vocabulary: Evidence from nominalization," in B. Peeters edit., *The Lexicon-Encyclopedia Interface*, (Amsterdam: Elsevier Press, 2000).

71) J. R Kelly, *The Syntax-Semantics Interface in Distributed Morphology*, (Doctoral dissertation, Georgetown University, 2013).

72) A. Kratzer, "Severing the external argument from its verb," in J. Rooryck & L. Zaring edit., *Phrase Structure and the Lexicon*, (Dordrecht: Kluwer Academic Publishers, 1996), 109–137.

73) Kelly, op. cit.

74) Harley and Noyer, op. cit.

75) Kelly op. cit. also did not specify the external argument of a verb like *break* used transitively.

76) Kratzer, op. cit., 123.

77) Jung, op. cit., 116(67).

78) Grimshaw, op. cit.