

An integrated type-based analysis of the Korean verb *ha-* with verbal nouns and psych verbs

Jieun Oh 

Humboldt-Universität zu Berlin

Proceedings of the 32nd International Conference on
Head-Driven Phrase Structure Grammar

Centro de Linguística da Universidade de Lisboa, Lisbon, Portugal

Stefan Müller, Shûichi Yatabe (Editors)

2025

Berlin: Berlin Universities Publishing

pages 137–158



Keywords: verbal nouns, psych verbs, complex predicates, agentivity, Korean, HPSG

Oh, Jieun. 2025. An integrated type-based analysis of the Korean verb *ha-* with verbal nouns and psych verbs. In Stefan Müller & Shûichi Yatabe (eds.), *Proceedings of the 32nd International Conference on Head-Driven Phrase Structure Grammar, Centro de Linguística da Universidade de Lisboa, Lisbon, Portugal*, 137–158. Berlin: Berlin Universities Publishing. DOI: 10.83067/hpsg.2025.7.  CC-BY 4.0

Abstract

This paper examines the properties of the Korean verb *ha-*, focusing on its behavior in constructions with verbal nouns and psych verbs. It is assumed that the verb *ha-* does not function consistently across these constructions. That is, it does not always contribute to the agentive property. To examine this issue, an acceptability judgment experiment was conducted with Korean native speakers. The participants rated sentences with the verb *ha-* combined with either a verbal noun or a psych verb, each modified with the adverb *uytocekulo* ‘intentionally’. The findings demonstrate that the verb *ha-* exhibits distinct syntactic and semantic functions depending on the type of element it combines with. Based on the experimental results, an analysis is proposed within the HPSG framework. These results have implications for the typological classification of the verb *ha-* and contribute to a type-based analysis of the Korean verb *ha-*.

1 Introduction

This paper investigates the Korean verb *ha-*, which occurs in various constructions. The verb *ha-* is assumed to exhibit diverse syntactic behaviors and semantic interpretations across these constructions. As seen in (1), the verb *ha-* functions basically as a general verb¹ conveying the meaning of ‘doing something’ (cf. Jeong 2016: 98). In addition, it can serve as an auxiliary verb, particularly in causative constructions. In these cases, the connective marker *-key* should be attached to the embedded verb to form the causative construction, as shown in (2). This is not only the case, but the verb *ha-* also combines with nouns, such as verbal nouns (e.g., *kongpwu* ‘study’ in (3a)) as well as psych nouns (e.g., *hayngpok* ‘happiness’ in (3b) and *kekceng* ‘worry’ in (3c)). In these constructions, the verb *ha-* primarily functions as a verbalizer, converting a noun into a verb. Moreover, the verb *ha-* can combine with psych verbs (e.g., *mwusep-* ‘be scary’, in (4)). Because of its diverse uses, the verb *ha-* has attracted considerable attention. However, its properties in these constructions have not yet been fully captured.

- (1) Hyenwu-ka pap-ul ha-n-ta.
Hyenwu-NOM rice-ACC do-PRS-DECL
‘Hyenwu is doing to cook rice.’

¹When the verb *ha-* is used as a general verb, it can be replaced with another verb (e.g., *cis-* ‘cook’), as seen in (i). Through the verb *ha-*, the meaning of ‘doing something’ can be added. However, when the verb *ha-* functions as a light verb combined with verbal nouns, substitution with other verbs is not observable (cf. Jeong 2016: 97–98).

- (i) Hyenwu-ka pap-ul cis-nun-ta.
Hyenwu-NOM rice-ACC cook-PRS-DECL
‘Hyenwu cooks rice.’

- (2) Hyenwu-ka namtongsayng-eykey/ul/i pang-ul chiwu-key
 Hyenwu-NOM younger.brother-DAT/ACC/NOM room-ACC clean-CONN
 ha-n-ta.
 do-PRS-DECL
 ‘Hyenwu has his younger brother clean the room.’
- (3) a. haksayng-tul-i yenge-lul kongpwu-ha-n-ta.
 student-PL-NOM English-ACC study.N-do-PRS-DECL
 ‘Students study English.’
 b. Hyenwu-ka omul cengmal hayngpok-ha-(*n)-ta.
 Hyenwu-NOM today so happiness-do-PRS-DECL
 ‘Hyenwu is really happy today.’
 c. Hyenwu-ka namtongsayng-ul kekceng-ha-n-ta.
 Hyenwu-NOM younger.brother-ACC worry.N-do-PRS-DECL
 ‘Hyenwu is worried about his younger brother.’
- (4) Hyenwu-ka kangaci-lul mwuse-we ha-n-ta.
 Hyenwu-NOM puppy-ACC be.scary-CONN do-PRS-DECL
 ‘Hyenwu is scared of the puppy.’

As illustrated in sentences (1)–(4), the verb *ha-* can function as a general verb, an auxiliary verb in causative constructions, and can be combined with nouns and psych verbs. This raises the question of what syntactic and semantic functions it serves (cf. Chae 1997: 590–598; Jung 2002b: 24–39, 2002a: 61–71; Jung 2016: 103–108, a.o.). This paper aims to identify the types of the verb *ha-* in the constructions with verbal nouns (3a) and psych verbs (4), and to address the unresolved question of what underlies its syntactic function and which semantic properties it exhibits.

Before examining how the verb *ha-* combines with other elements, it is necessary to clarify what is meant by verbal nouns and psych verbs in this paper. Verbal nouns are, first of all, nouns. In a sentence, they function as the head of a noun phrase and can be marked with a case marker, just like any other noun. For instance, the verbal nouns like *kongpwu* ‘study’ and *chotay* ‘invitation’ can serve as the head of an NP, and they may appear with case markers such as *-i/ka* or *-ul/lul*, as shown in (5). Psych verbs like *mwusep-* ‘be scary’ or *sulphu-* ‘be sad’, on the other hand, function as predicates that express psychological states or emotions, as shown in (6).

- (5) verbal nouns
- a. Hyenwu-nun pan-eyse kongpwu-lul ceyil cal
 Hyenwu-TOP classroom-in.LOC study.N-ACC most well
 ha-n-ta.
 do-PRS-DECL
 ‘Hyenwu is the best at studying in the class.’

- b. Hyenwu-nun ecey cenyek chotay-lul pat-ass-ta.
 Hyenwu-TOP yesterday dinner invitation-ACC receive-PST-DECL
 ‘Hyenwu received a dinner invitation yesterday.’

(6) psych verbs

- a. na-nun holangi-ka mwusep-ta.
 I-TOP tiger-NOM be.scary-DECL
 ‘A tiger is scary to me.’
 b. ku sosel-un kyelmal-i mwuchek sulphu-ta.
 the novel-TOP ending-NOM very be.sad-DECL
 ‘The ending of that novel is very sad.’

The following examples illustrate how the verb *ha-* combines with verbal nouns and psych verbs. With verbal nouns, as in (7), the verb *ha-* attaches to a verbal noun, and the resulting combination functions as the predicate of a sentence (e.g., *kongpwu-ha-* ‘study’, *chotay-ha-* ‘invite’). With psych verbs, as in (8), the verb *ha-* combines with the stem of a psych verb. When the verb *ha-* is added, the second argument may take the accusative marker *-ul/lul*, which contrasts with the case marking pattern observed when a psych verb is used alone.

(7) with verbal nouns

- a. Hyenwu-ka yeksa-lul kongpwu-ha-n-ta.
 Hyenwu-NOM history-ACC study.N-do-PRS-DECL
 ‘Hyenwu studies history.’
 b. na-nun sahoi kakchung lite-tul-ul chotay-ha-n-ta.
 I-TOP social classes leader-PL-ACC invitation-do-PRS-DECL
 ‘I invite leaders from various social classes.’

(8) with psych verbs

- a. Hyenwu-ka holangi-lul mwuse-we ha-n-ta.
 Hyenwu-NOM tiger-ACC be.scary-CONN do-PRS-DECL
 ‘Hyenwu is scared of a tiger.’
 b. na-nun i saken-ul sulph-e ha-n-ta.
 I-TOP this incident-ACC be.sad-CONN do-PRS-DECL
 ‘I feel sad about this incident.’

This paper is based on the hypothesis that the verb *ha-*² does not always display the same properties. Namely, it does not always convey the agentivity. Rather, its agentive interpretation depends on the elements with which it combines.

²The Korean verb *ha-* generally functions as a main verb with agentive properties.

It is structured as follows. In Section 2, a brief review of previous analyses is provided. Section 3 introduces an experiment designed to investigate the research question. The experiment tested the acceptability of sentences modified with adverbs such as *uytocekulo* ‘intentionally’ in these constructions. Based on the results of the experiment, lexical entries for the verb *ha-* are proposed in Section 4, depending on the types of combined predicates, and a classification of the verb *ha-* is presented within the framework of Head-driven Phrase Structure Grammar (HPSG; Pollard & Sag 1994, Müller et al. 2021). Finally, the conclusions of the paper are summarized in Section 5.

2 Previous analysis and syntactic properties of the verb *ha-*

This section briefly reviews previous research related to the verb *ha-*, especially focusing on how it has been investigated.

In previous studies, it has been argued that predicates possess agentive values, which are determined by whether their subject functions as an AGENT. According to the agentivity hierarchy, these values can be classified into agentive and non-agentive types, with further distinctions such as inherently or non-inherently agentive and non-agentive, as illustrated in Figure 1.

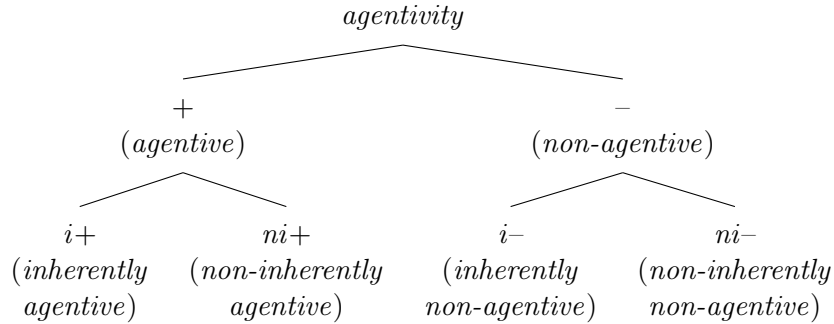


Figure 1: Classification of agentive types

Importantly, in Korean, the case assignment of arguments can depend on whether the head verb is agentive (AG +) or non-agentive (AG -). When the verb is agentive, the object typically receives accusative case, whereas with non-agentive verbs, the object often appears in nominative case. This demonstrates that the agentivity of the predicate directly influences case assignment. To account for these patterns, a case principle for Korean has been proposed, as illustrated in (9).

(9) Case Principle (for Korean)

For an unresolved structural NP that is a daughter of a phrase α

- a. it is [acc], if it is a COMPS-DTR of α whose head is [AG +], and
- b. it is [nom], if it is a SUBJ-DTR of α , or a COMPS-DTR of α whose head is [AG -].

(from Yoo 2002: 1025)

The following examples show the case principle in Korean. As shown in (10a), the verb *kongpwu-ha-* ‘study’ is agentive, so the object (e.g., *yeksa* ‘history’) receives accusative case. In contrast, as shown in (10b), the verb *mwusep-* ‘be scary’ is non-agentive, so the THEME (e.g., *holangi* ‘tiger’) is realized as a nominative NP marked with *-i/ka*.

- (10) a. Hyenwu-ka yeksa-lul kongpwu-ha-n-ta.
 Hyenwu-NOM history-ACC study.N-do-PRS-DECL
 ‘Hyenwu studies history.’
- b. Hyenwu-nun holangi-ka mwusep-ta.
 Hyenwu-TOP tiger-NOM be.scary-DECL
 ‘A tiger is scary to Hyenwu.’

Regarding auxiliary verb constructions, it has been proposed that auxiliary verbs, being generally transparent in terms of agentive values, inherit the agentive properties of their embedded verbs (cf. Yoo 2002: 1011–1013).

However, like main verbs, auxiliary verbs can also be assigned their own agentive values in the lexicon. Yoo proposes a dual lexical entry for the verb *ha-*, allowing it to either inherit or share the agentive value of the embedded verb. Specifically, it has been argued that the verb *ha-*³ is restricted to combining with embedded verbs that have the agentive values *ni+*, *ni-* and *i-*, as it has been argued, it never combines with verbs that have the agentive value *i+*. It has been claimed that when combined with verbs that have the agentive values *ni+* or *ni-*, the auxiliary verb *ha-* shares its agentive property. It is specified in (11a). Additionally, when the auxiliary verb *ha-* combines with a lexically non-agentive psych verb, it imposes its inherent agentive property. As a result, in such constructions, the argument is realized as the accusative NP, aligning with the entry in (11b). To account for the phenomenon in constructions with the verb *ha-*, the dual lexical entry of the verb *ha-* was introduced, as illustrated in (11) (cf. Yoo 2002: 1029).

- (11) *ha-*
- a. [AG $\square$, GOV< V[AG $\square$ *ni* α] >]
 - b. [AG +, GOV< V[AG *i-*] >]

³It has been argued that the verb *ha-* with psych verbs (‘act like, show signs of some emotion’) carries an agentive meaning (cf. Yoo 2002: 1029).

Looking more closely at the lexicon of the verb *ha-*, when the verb *ha-* combines with the psych verb that exhibiting an [AG *i-*] value, it retains its inherent agentive property, thus satisfying the lexical entry given in (11b). So, as shown in (12), the second argument is realized as an accusative object, as the predicate is agentive. In contrast, as shown in (13), when the verb *ha-* combines with a verb exhibiting value [AG *ni±*], the AG value may be shared. In such cases, the value is inherited from the embedded verb's value [AG *ni-*], resulting in the second argument being marked with the nominative case marker *-i/ka*. This is specified in (11a).

- (12) *nay-ka* {**paym-i* / *paym-ul*} *mwuse-we* *ha-n-ta*.
 I-NOM snake-NOM snake-ACC be.afraid-CONN do-PRS-DECL
 ‘I am afraid of a snake.’

<i>nay-ka</i>	<i>paym-ul</i>	<i>mwuse-we</i>	<i>ha-n-ta</i> .
	ACC	[AG <i>i-</i>]	[AG +]

(from Yoo 2002: 1031)

- (13) *ku-nun* {*pam-i* / **pam-ul*} *twulyep-key* *toy-ko*
 he-TOP night-NOM night-ACC be.scared-CONN become-CONN
siph-e *ha-n-ta*.
 want-CONN do-PRS-DECL
 ‘He wants to be scared of the night.’

<i>ku-nun</i>	<i>pam-i</i>	<i>twulyep-key</i>	<i>toy-ko</i>	<i>siph-e</i>	<i>ha-n-ta</i>
	NOM	[AG <i>i-</i>]	[AG <i>ni-</i>]	[AG <i>ni-</i>]	[AG <i>ni-</i>]

(from Yoo 2002: 1031)

According to the lexicon proposed in Yoo (2002), when the verb *ha-* combined with a psych verb, it is assigned an agentive value. However, it remains unclear whether constructions in which the verb *ha-* combines with a psych verb truly exhibit agentive properties. To assess the property of agentivity, one can examine it with structures such as *kyelsim-ha-* ‘decision-do-’ or *nolyek-ha-* ‘effort-do-’ which clearly describe agentive or voluntary actions ⁴. As shown in (15), sentences involving complex predicates formed

⁴Moreover, the compatibility of an event with the adverb intentionally can serve as an additional diagnostic, as demonstrated in examples (i) and (ii) (cf. Dowty 1991: 553–555; Verhoeven 2010: 224–227).

- (i) *Hyenwu-ka yeksa-lul uytocekulo/ilpwule kongpwu-hay-ss-ta*.
 Hyenwu-NOM history-ACC intentionally study.N-do-PST-DECL
 ‘Hyenwu intentionally studied English.’
- (ii) ??*Hyenwu-ka holangi-lul uytocekulo/ilpwule mwuse-we hay-ss-ta*.
 Hyenwu-NOM tiger-ACC intentionally be.scary-CONN do-PST-DECL
 ‘Hyenwu was intentionally scared of the tiger.’

by the verb *ha-* and a psych verb appear incompatible with such agentive structures, unlike the sentences with the verb *ha-* and verbal nouns as shown in (14). Given this contrast, it can be assumed that constructions involving the verb *ha-* with psych verbs are perceived as lacking agentivity, or at least displaying a lower degree of agentive properties compared to the verb *ha-* combined with verbal nouns. Thus, it is assumed that the verb *ha-* does not always serve the same function or exhibit the same semantic properties. Rather, it depends on the type of embedded predicate.

- (14) a. Hyenwu-ka yeksa-lul kongpwu-ha-lyeko
 Hyenwu-NOM history-ACC study.N-do-CONJ
 nolyek-hay-ss-ta.
 effort-do-PST-DECL
 ‘Hyenwu made an effort to study history.’
- b. Hyenwu-ka yeksa-lul kongpwu-ha-kilo
 Hyenwu-NOM history-ACC study.N-do-CONJ
 kyelsim-hay-ss-ta.
 decision-do-PST-DECL
 ‘Hyenwu decided to study history.’
- (15) a. ?? Hyenwu-ka holangi-lul mwuse-we ha-lyeko
 Hyenwu-NOM tiger-ACC be.scary-CONN do-CONJ
 nolyek-hay-ss-ta.
 effort-do-PST-DECL
 ‘Hyenwu made an effort to be scared of a tiger.’
- b. ?? Hyenwu-ka holangi-lul mwuse-we ha-kilo
 Hyenwu-NOM tiger-ACC be.scary-CONN do-CONJ
 kyelsim-hay-ss-ta.
 decision-do-PST-DECL
 ‘Hyenwu decided to be scared of a tiger.’

An experiment was conducted to determine whether both types of the verb *ha-* constructions exhibit the property of agentivity. The following section provides a detailed discussion of this experiment.

3 Testing agentivity with the verb *ha-*

In this section, I introduce the experiment that was conducted to test the hypotheses discussed earlier. This paper assumed that the verb *ha-* exhibits different behaviors depending on whether it combines with a verbal noun or a psych verb. Building on the discussions in Section 2, I designed a repeated-measures acceptability judgment study using a 1–5 Likert scale (where 1 indicates “very awkward” and 5 indicates “perfectly acceptable”).

This experiment aimed to determine whether the verb *ha-* functions in the same way across constructions with verbal nouns and psych verbs.

The goal of the experiment was to investigate how native Korean speakers perceive these constructions. Specifically, the study addressed the following questions:

- Do speakers perceive these constructions as equally agentive?
- If not, what factors influence their perception?

To address these questions, I conducted an experiment examining the acceptability of sentences in which the verb *ha-* constructions were modified by the adverb *uytocekulo* ‘intentionally’, as shown in (16) and (17). The experiment was designed with two factors. The first factor was the type of embedded predicates that the verb *ha-* selects: verbal nouns & psych verbs. The first factor, Combined Element Type, distinguished whether the verb *ha-* combines with a verbal noun (e.g., *kongpwu-ha-* ‘study.N-do’) or a psych verb (e.g., *mwuse-we ha-* ‘be.scary-CONN do-’). When the verb *ha-* combines with a verbal noun, it is natural to imagine an AGENT intentionally performing the action. In contrast, the agentivity of the verb *ha-* in constructions with psych verbs is less transparent and may be perceived as weaker.

- (16) Hyenwu-ka yeksa-lul uytocekulo kongpwu-ha-n-ta.
 Hyenwu-NOM history-ACC intentionally study.N-do-PRS-DECL
 ‘Hyenwu intentionally studies history.’
- (17) ?? Hyenwu-ka holangi-lul uytocekulo mwuse-we
 Hyenwu-NOM tiger-ACC intentionally be.scary-CONN
 ha-n-ta.
 do-PRS-DECL
 ‘Hyenwu is intentionally scared of a tiger.’

The second factor, Subject Person Type, manipulated whether the subject of the sentence was first-person or third-person. This factor is motivated by the Agentivity-Based NP Hierarchy (cf. Silverstein 2016: 163–170), which ranks noun phrases according to their typical association with agentive roles. In general, first- and second-person pronouns occupy the upper tier of the hierarchy, as they directly refer to the speaker or hearer and have a strong tendency to serve as agents. Otherwise, third-person NPs, including proper names and common nouns, occupy the lower tier. Since they are generally outside the immediate speech situation, they are less strongly associated with agentive roles.⁵

⁵In some languages, ergative marking may be used to highlight Agentivity (cf. Merchant 2006: 10).

According to this hierarchy, first-person subjects can be expected to be rated as slightly more acceptable than third-person subjects in sentences modified with the adverb *uytocekulo* ‘intentionally’, particularly in constructions with psych verbs.⁶ Although both conditions may be somewhat unacceptable, the difference in ratings would reflect the stronger association of first-person subjects with agentive roles, as represented in (18) and (19).

- (18) ?? *nay-ka holangi-lul uytocekulo mwuse-we hay-ss-ta.*
 I-NOM tiger-ACC intentionally be.scary-CONN do-PST-DECL
 ‘I was intentionally scared of a tiger.’
- (19) * *Hyenwu-ka holangi-lul uytocekulo mwuse-we*
 Hyenwu-NOM tiger-ACC intentionally be.scary-CONN
hay-ss-ta.
 do-PST-DECL
 ‘Hyenwu was intentionally scared of a tiger.’
- (with psych verbs)

To test these predictions, this experiment employed a 2×2 design with two factors: COMBINED ELEMENT TYPE (verbal nouns vs. psych verbs) and SUBJECT PERSON TYPE (1st vs. 3rd). The dependent variable was the acceptability of sentences that could be modified with the adverb *uytocekulo* ‘intentionally’. Ten instances of the verb *ha-* with verbal nouns and ten with psych verbs were used as target items, as illustrated above.⁷ These items included the second factor, SUBJECT PERSON TYPE, together with an

⁶When the verb *ha-* combines with verbal nouns, sentences with both first- and third-person subjects are expected to be acceptable.

⁷Regarding the reviewer’s question about the selection of the 10 verbal nouns and 10 psych verbs, the selection criteria and full lexical lists are provided below. For the verb *ha-* with verbal nouns, items were chosen that clearly denote agentive and controllable actions in everyday contexts. The items have comparable phonological length (mostly 2–4 syllables) to minimize lexical bias. The items consisted of:

- *kongpwu-ha-* ‘study-do-’, *yoli-ha-* ‘cook-do-’, *chotay-ha-* ‘invitation-do-’, *yenkwu-ha-* ‘research-do-’, *yensup-ha-* ‘practice-do-’, *cosa-ha-* ‘investigate-do-’, *cwunpi-ha-* ‘prepare-do-’, *pangmwun-ha-* ‘visit-do-’, *enkup-ha-* ‘mention-do-’, *sanchayk-ha-* ‘take.a.walk-do-’

For the verb *ha-* with psych verbs, lexical bases encoding distinct emotional reactions were selected to ensure broad semantic coverage. These predicates also fall within a comparable syllable range. The items for psych verbs consisted of:

- *mwusep-* ‘be scary’, *twulyep-* ‘be scary’, *culkep-* ‘have fun’, *pwukkulep-* ‘feel ashamed’, *sulphe-* ‘feel sad’, *anthakkap-* ‘feel regret’, *aswip-* ‘feel disappointed’, *selep-* ‘feel sorrowful’, *nollap-* ‘be surprised’, *oylop-* ‘feel lonely’

additional 20 filler sentences.⁸ The experiment was presented online on IBEX.

The expectations were as follows: (a) Regarding the first factor COMBINED ELEMENT TYPE, when the verb *ha-* combines with a psych verb, it would be more difficult to fully accept that the subject can act intentionally. This factor is expected to result in lower sentence acceptability ratings. (b) The second factor SUBJECT PERSON TYPE is expected to affect acceptability ratings in such a way that first person subjects would be more likely to allow the sentence to be modified with the adverb *uytocekulo* ‘intentionally’.

A total of forty-nine native Korean speakers ($n = 49$) participated in the study, including 21 females and 28 males. The average age of the participants was 27.5 years and all participants lived in South Korea. Figure 2 for the acceptability of sentences modified with the adverb *uytocekulo* ‘intentionally’ shows that the second factor, the subject type, does not have an impact on the acceptability of sentences. From this result, it is supposed that the structure with the verb *ha-* combined with verbal nouns and psych verbs is not influenced by whether the subject is in the first- or third-person.

However, Figure 3 shows⁹ the frequency distribution of the scores indicates a significant difference in acceptability with respect to the first factor, COMBINED ELEMENT TYPE. With verbal nouns, sentences exhibit higher acceptability, as evidenced by an average value of 4.2. In contrast, those with psych verbs demonstrate lower acceptability, with an average value of 2.4. This reveals that this factor plays a significant role in determining the acceptability of sentences.¹⁰

To sum up, the experimental results suggest that the verb *ha-*, when

⁸Regarding the filler items, information on their properties is provided. Filler sentences were included to prevent participants from focusing solely on the core experimental factor and to reduce potential strategy effects. These fillers were designed to be similar to the experimental items in length and syntactic complexity, ensuring a balanced comparison. Representative examples of the filler sentences used in the experiment are shown in (i) and (ii). Some fillers contained agentive verbs, but they were independent of the core agentivity manipulation. These examples illustrate that the fillers closely matched the experimental sentences while maintaining independence from the main experimental condition.

- (i) na-nun chwukha insa-ka ilpwule/uytocekulo kippu-ta.
I-TOP congratulatory message-NOM intentionally pleasing-DECL
(Literally) ‘The congratulatory message is intentionally pleasing to me.’
- (ii) na-nun sakwa-lul ilpwule/uytocekulo mek-nun-ta.
I-TOP apple-ACC intentionally eat-PRS-DECL
‘I intentionally eats an apple.’

⁹Given that no significant difference between first- and third-person, it was assumed that the first factor does not affect sentence acceptability. Thus, the data in Figure 3 were analyzed without distinguishing between the subject types.

¹⁰The results indicated a substantial difference between the two groups. The calculated t-statistic was 24.521, reflecting a large difference between the group means, and the corresponding *p*-value was $< 2.2\text{e-}16$.

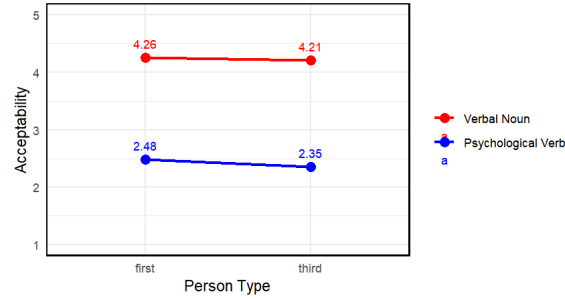


Figure 2: Acceptability of sentences with the adverb *uytocekulo* ‘intentionally’ (95% C.I.)

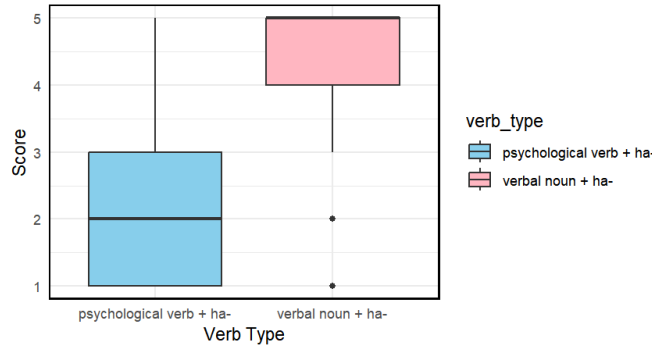


Figure 3: Frequency distribution of scores (95% C.I.)

combined with verbal nouns or psych verbs, exhibits distinct functions in each construction, regardless of the subject person type. When combined with verbal nouns, the verb *ha-* allows the subject to be interpreted as an AGENT. In contrast, when combined with psych verbs, the verb *ha-* does not contribute to agentivity, and these sentences describe emotional state¹¹.

¹¹A reviewer pointed out that it remains unexplained why the complex predicate, the verb *ha-* with a psych verb differs from a typical non-agentive stative verb (e.g., *mwusep-* ‘be scary’, *sulphe-* ‘feel sad’). I will briefly clarify this point. I assume that there is indeed a distinction between the verb *ha-* with a psych verb and ordinary non-agentive stative verbs. As shown in (i), the present tense marker *-(nu)n* and the so-called progressive auxiliary verb *-ko iss-* can attach to the complex predicate formed with the verb *ha-* and a psych verb, whereas such combinations are generally not available with non-agentive stative verbs, as shown in (ii). This asymmetry indicates that the complex predicate does not simply encode a stative meaning. Rather, it describes the onset of an emotion and its persistence over time. Furthermore, in (i.b), the marker *iss-* does not introduce a progressive meaning, but instead denotes a continuous emotional state (cf. Lee 2006: 705–707). For this reason, the combination of the verb *-ha* with a psych verb can occur with the marker *iss-*; when it does, the construction denotes a state that continues over time, rather than a progressive event. Whereas a non-agentive stative psych verb denotes

Moreover, subject person type did not significantly affect acceptability ratings, suggesting that the syntactic and semantic behavior of the verb *ha-* is primarily determined by the type of embedded element rather than by the person of the subject. These findings support a typological classification of the verb *ha-* and provide the basis for the theoretical analysis presented in the next section.

4 An HPSG-based analysis of the Korean Verb *ha-*

Based on the experimental results, this section proposes an analysis of the verb *ha-* when it combines with verbal nouns and psych verbs.

Let us first consider the argument structure of verbal nouns. In constructions where the verb *ha-* combines with a verbal noun, the verb *ha-* itself does not determine the argument structure. Rather, the argument structure depends on the verbal noun. The following sentences illustrate this point. In (20a), the second argument is realized as a PP, while in (20c), the dative case marker is attached to the second argument. In this latter example (20c), three arguments are realized : a nominative NP, an accusative NP, and a PP. These examples demonstrate that the verb *ha-* does not influence the argument structure. Instead, it is determined by the verbal noun (Grimshaw & Mester 1988, Chae 1997, 2004, Jun 2006, Kim et al. 2007)).

- (20) a. Hyenwu-ka Yuna-lang kyelhon-hay-ss-ta.
 Hyenwu-NOM Yuna-with marriage-do-PST-DECL
 ‘Hyenwu married Yuna.’
 b. Hyenwu-ka Yuna-eykey cenhwa-hay-ss-ta.
 Hyenwu-NOM Yuna-DAT call-do-PST-DECL
 ‘Hyenwu called Yuna.’

a pure state, the complex predicate formed with the verb *ha-* and a psych verb denotes the initiation of an emotional response and its temporal continuation.

- (i) a. Hyenwu-ka kangaci-lul mwuse-we ha-n-ta.
 Hyenwu-NOM puppy-ACC be.scary-CONN do-PRS-DECL
 ‘Hyenwu is scared of a puppy.’
 b. Hyenwu-ka kangaci-lul mwuse-we ha-ko iss-ta.
 Hyenwu-NOM puppy-ACC be.scary-CONN do-CONN be.cont-DECL
 ‘Hyenwu is scared of a puppy.’
 (ii) a. *Hyenwu-nun kangaci-ka mwusep-nun-ta.
 Hyenwu-TOP puppy-NOM be.scary-PRS-DECL
 b. *Hyenwu-nun kangaci-ka mwusep-ko iss-ta.
 Hyenwu-TOP puppy-NOM be.scary-CONN be.cont-DECL

- c. Hyenwu-ka Yuna-lul myengtan-ey chwuka-hay-ss-ta.
 Hyenwu-NOM Yuna-ACC list-to.LOC addition-do-PST-DECL
 ‘Hyenwu added Yuna to the list.’

Furthermore, the verb *ha-* can be omitted, as shown in (21). However, when the verbal noun is omitted, the sentence becomes ungrammatical. In other words, the verbal noun is obligatory. This observation supports the claim that verbal nouns in Korean possess their own argument structure, independent of the verb *ha-*.

- (21) a. Hyenwu-ka chinkwu-lul cip-ulo chotay
 Hyenwu-NOM friend-ACC home-to.LOC invitation
 ‘The invitation Hyenwu made to his house’
 b. Hyenwu-ka chinkwu-lul cip-ulo
 Hyenwu-NOM friend-ACC home-to.LOC
 *(chotay-)hay-ss-ta.
 invitation-do-PST-DECL

The lexical entry for the verb *ha-* when it combines with a verbal noun is presented in (22) (cf. Müller 2002: 85–93, 2013: 241–246, 2019: 4–6).¹² In this construction, the verb *ha-* must combine directly with the verbal noun, since no other constituent can intervene between two predicates. It indicates a strong syntactic unit. Structurally, the verb *ha-* functions as the head of the complex predicate, while its arguments—both the subject and the object—are inherited from the verbal noun with which it combines. Crucially, the subject NP is interpreted as an AGENT. Semantically, as represented in the lexical entry, this construction denotes a *doing* event, clearly expressing agentivity. The subject is interpreted as an AGENT performing an action, which aligns with the patterns observed in the experimental result.

- (22) Lexical entry of the verb *ha-* with a verbal noun:

$$\left[\begin{array}{l} \text{PHON } \langle ha \rangle \\ \text{CAT } \left[\text{ARG-ST } \boxed{1} \langle \text{NP}_{\boxed{3}} \rangle \oplus \boxed{2} \oplus \langle \text{VN} [\text{LEX+}, \text{SUBJ } \boxed{1}, \text{COMPS } \boxed{2}] : [\text{INDEX } \boxed{4}] \rangle \right] \\ \text{CONT } \left[\begin{array}{l} \text{IND } \boxed{5} \text{ event} \\ \text{RELS } \left\langle \left[\begin{array}{l} \text{agent} \\ \text{ARG0 } \boxed{5} \\ \text{ARG1 } \boxed{3} \end{array} \right], \left[\begin{array}{l} \text{do} \\ \text{ARG0 } \boxed{5} \\ \text{ARG1 } \boxed{4} \end{array} \right] \right\rangle \end{array} \right] \end{array} \right]$$

For instance, sentence (23) denotes an event of “doing some studying”, with a clearly defined AGENT. This combination of the verb *ha-* and a verbal

¹²Kim (2016: 121–143) provides a detailed analysis of a verbal noun and the light verb *ha-* constructions, discussing their properties, the role of the light verb *ha-*, and relevant theoretical approaches (see also Ahn 1989; Lapointe 1993; Manning 1993; Chae 1996, 1997; Lee 2011; Park 2013, a.o.).

noun is illustrated in Figure 4. In summary, when combined with verbal nouns, the verb *ha-* functions as an agentive verbalizer, introducing a subject as the AGENT argument and emphasizing the action of doing.

- (23) Hyenwu-ka yeksa-lul kongpwu-ha-n-ta.
 Hyenwu-NOM history-ACC study.N-do-PRS-DECL
 ‘Hyenwu studies history.’

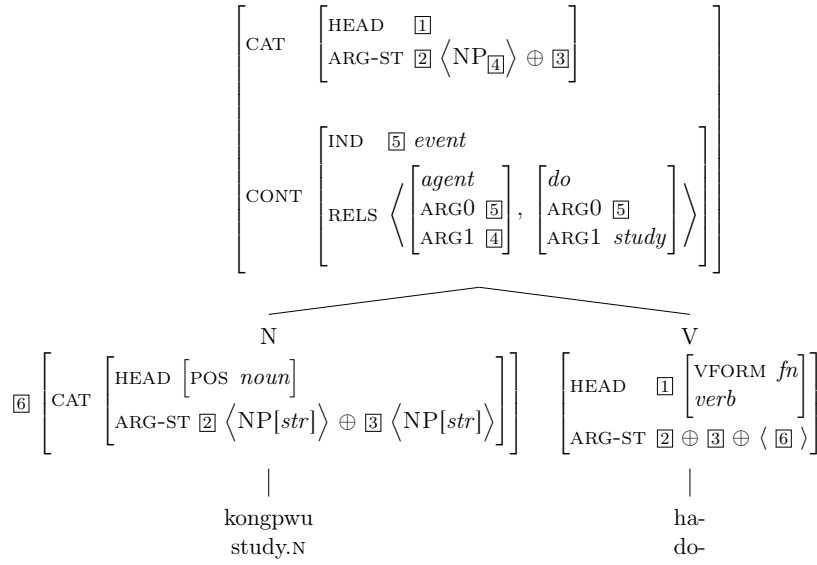


Figure 4: Analysis of the complex predicate, the verb *ha-* and a verbal noun

Now, let us turn to psych verbs. These predicates denote psychological states or emotions (e.g., *mwusep-* ‘be scary’, *sulphu-* ‘be sad’, *kipu-* ‘be glad’). Unlike verbal nouns, psych verbs are canonically classified as verbs, and they inherently possess verbal properties such as argument structure. They can appear as predicates without the verb *ha-*.

Based on the analysis proposed by Bak (2017), psych verbs in Korean are argued not to take the EXPERIENCER argument directly. Instead, the EXPERIENCER is introduced by a covert predicate such as *feel*. For example, in a sentence (24), the noun *horangi* ‘tiger’ functions as the THEME and the argument of the verb *mwusep-* ‘be scary’. The EXPERIENCER is not directly selected by the verb *mwusep-* ‘be scary’ and introduced by the covert predicate *feel*.¹³

¹³Bak, drawing on Kratzer 1996’s proposal, suggests that psych verbs do not directly take an argument bearing the semantic role of EXPERIENCER. Rather, the EXPERIENCER argument is introduced by a covert predicate such as *feel*. The EXPERIENCER role is not syntactically realized as the subject, but may instead be projected from an covert predicate

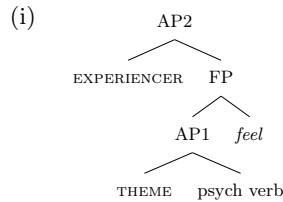
- (24) na-nun holangi-ka mwusep-ta.
 I-TOP tiger-NOM be.scary-DECL
 ‘A tiger is scary to me.’

As shown in (25a), even when the EXPERIENCER is marked with nominative case, the sentence is not acceptable. As indicated in (25b) and (25c), the EXPERIENCER may instead appear as a dative NP or may be omitted altogether. In particular, when the THEME argument is missing, the sentence becomes incomplete (e.g., “What is scary?”). In contrast, when the EXPERIENCER is unexpressed, the sentence remains interpretable. These facts suggest that the EXPERIENCER is not an argument directly selected by psych verbs.

- (25) a. ?nay-ka holangi-ka mwusep-ta.
 I-NOM tiger-NOM be.scary-DECL
 b. na-eykey(-nun) holangi-ka mwusep-ta.
 I-DAT-TOP tiger-NOM be.scary-DECL
 ‘A tiger is scary to me.’
 c. holangi-ka mwusep-ta.
 tiger-NOM be.scary-DECL

Based on the observations and experimental results, the lexical entry of the verb *ha-* when it combines with a psych verb, such as *mwusep-* ‘be scary’ is proposed as represented in (26) (cf. Müller 2002: 85–93, 2013: 241–246, 2019: 4–6). In this construction, the verb *ha-* combines with the psych verb through the connective marker *-e*¹⁴. As in the case of verbal nouns, the verb *ha-* functions as the head of the complex predicate. However, the argument structure differs from that of verbal noun constructions. Specifically, the second argument—originally the subject of the psych verb—is raised to function as the object of the complex predicate. Meanwhile, the EXPERIENCER argument is introduced by the complex predicate *-e ha-*. As a result, the

such as *feel*, as illustrated in (i) (cf. Bak 2017: 50).



¹⁴In the construction with the verb *ha-* and a psych verb, the connective marker *-e* is essential for the combination: without it, the psych verb cannot combine with the verb *ha-*. Therefore, in the lexical entry of the verb *ha-*, the connective marker is explicitly constrained as a required feature, ensuring proper combination with psych verbs.

construction appears syntactically transitive, but its semantic interpretation remains state rather than event.

Crucially, the predicate does not exhibit agentivity. The complex predicate construction does not assign an intentional or volitional role to the subject. Instead, it denotes a psychological state of experience. This observation aligns with the experimental findings that the complex predicate with the verb *ha-* and a psych verb is semantically non-agentive. It describes an EXPERIENCER who undergoes an emotional state.

To sum up, these constructions are argued to be structurally transitive but semantically non-agentive.

(26) Lexical entry of the verb *ha-* with a psych verb:

$$\left[\begin{array}{l} \text{PHON } \langle ha \rangle \\ \text{CAT } \left[\text{ARG-ST } \langle \text{NP}_{[1]} \rangle \oplus [2] \oplus \langle \text{V} [\text{VFORM } -e, \text{LEX+}, \text{SUBJ } [2]] : [\text{INDEX } state] \rangle \right] \\ \text{CONT } \left[\begin{array}{l} \text{IND } [0] \\ \text{RELS } \left\langle \begin{array}{l} \text{experiencer} \\ \text{ARG0 } [0] \\ \text{ARG1 } [1] \end{array} \right\rangle \end{array} \right] \end{array} \right]$$

Figure 5 presents the analysis of a complex predicate in which the verb *ha-* combines with a psych verb, illustrating the transitive syntactic structure and the non-agentive semantic interpretation, in contrast to constructions with verbal nouns where the verb *ha-* functions as an agentive verbalizer.

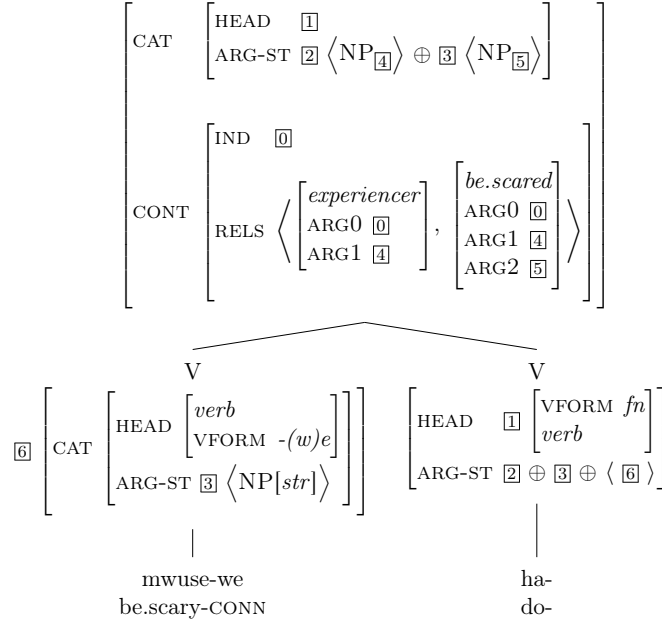


Figure 5: Analysis of the complex predicate, the verb *ha-* and a psych verb

Based on the analysis, this paper propose that there are two distinct types of the verb *ha-*, an agentive verbalizer and a non-agentive transitivizer. Figure 6 illustrates the relationship between these two types. Both derive from a more general the verb *ha-* lexeme, but they differ in their syntactic and semantic functions. The agentive verbalizer type functions primarily to convert a noun into a verb, thereby emphasizing the notion of doing. In this construction, the verb *ha-* transforms a verbal noun into a verb and introduces an agentive subject and the *doing* event. In contrast, the non-agentive transitivizer type introduces an additional argument, rendering the psych verb syntactically transitive. Here, the verb *ha-* does not include the *doing* event. The subject undergoes a psychological state.

In sum, the function of the verb *ha-* depends on the element it combines with. The verb *ha-* in constructions shows distinct syntactic and semantic properties, reflecting its roles as an agentive verbalizer and a non-agentive transitivizer.

5 Conclusion

This paper examined the Korean verb *ha-* in complex predicate constructions, focusing on its combination with verbal nouns and psych verbs. The goal was to clarify the syntactic and semantic functions of the verb *ha-* and to determine whether it contributes agentivity across constructions. Based on prior claims that the verb *ha-* with psych verbs also yields agentive interpretations, this paper hypothesized that the verb *ha-* does not consistently encode agentivity and that its contribution depends on the type of embedded predicate it combines with.

To address this question, an acceptability judgment experiment was conducted, manipulating predicate type (verbal noun vs. psych verb) and subject person (first vs. third). The results revealed that the verb *ha-* does not perform the same function in constructions with verbal nouns and psych verbs. When combined with verbal nouns, the verb *ha-* contributes agentivity to the predicate. That is, the subject is interpreted as an AGENT engaged in an action. In contrast, when combined with psych verbs, the verb *ha-* does not add agentivity. So, the subject functions as an EXPERIENCER of a psychological state, and the resulting complex predicate remains semantically state. This finding suggests that the verb *ha-* does not perform the same function across these constructions.

Based on the experimental results, the paper proposed that the verb *ha-* has two distinct subtypes: an agentive verbalizer, used in constructions with verbal nouns, and a non-agentive transitivizer, used in constructions with psych verbs. The first subtype introduces an AGENT and a “doing” event, whereas in the second subtype, the verb *ha-* does not introduce the event, and its subject functions as an EXPERIENCER. This analysis, formalized within



Figure 6: Type hierarchy for the Korean verb *ha-*

the HPSG framework, provides an account of how the syntactic and semantic behavior of the verb *ha-* varies depending on the type of element it combines with.

Acknowledgements

I am deeply grateful to Stefan Müller, whose encouragement and sustained support made it possible for me to complete this work. I also thank Antonio Machicao y Priemer, Giuseppe Varaschin, and Paola Fritz-Huechante for their invaluable guidance and thoughtful criticism, as well as the anonymous reviewers whose careful reading and constructive critiques significantly strengthened the final version of this paper. Finally, I am grateful to the participants of the 31st International Conference on Head-Driven Phrase Structure Grammar for their insightful comments on earlier versions of this paper.

References

- Ahn, Hee-Don. 1989. On light verb constructions in Korean and Japanese. In Hajime Hoji & Patricia M. Clancy (eds.), *Japanese/korean linguistics 1*, 221–238. Stanford, California, USA: Center for the Study of Language & Information.
- Bak, Jae-hee. 2017. Experiencer argument and the semantic and syntactic structure of the psychological adjective construction in Korean. *The Society of Bangyo Language and Literature* 46. 35–64.
- Chae, Hee-Rahk. 1996. Light verb constructions and structural ambiguity. In *Proceedings of the 11th pacific asia conference on language, information and computation (paclic 11)*, 99–107. Seoul, Korea: Kyung Hee University.
- Chae, Hee-Rahk. 1997. Verbal nouns and light verbs in Korean. *Language Research* 33(4). 581–600.
- Chae, Hee-Rahk. 2004. Passive light verb constructions in Korean. In Susumu Kuno et al. (eds.), *Harvard studies in korean linguistics 10*, 331–344. Seoul: Hanshin.
- Dowty, David. 1991. Thematic proto-roles and argument selection. *Language (Baltimore)* 67(3). 547–619.
- Grimshaw, Jane & Armin Mester. 1988. Light verbs and (theta)-marking. *Linguistic Inquiry* 19. 205–232.
- Jeong, Dae-Sik. 2016. Reconsideration of a light verb in the Korean language. *Linguistics* (76). 87–116.
- Jun, Jong-Sup. 2006. Semantic constraints on the genitive complements of verbal nouns in Korean. *Language Research* 42. 357–397.
- Jung, Dukkyo. 2002a. Light verb just as a little v. *Kansas Working Papers in Linguistics* 26. 59–74.

- Jung, Dukkyo. 2002b. *vP* structure for light verb constructions. *Linguistics* 10(2). 19–42.
- Jung, Hyun Kyoung. 2016. On the verbalizing suffixes in Korean and their implications for syntax and semantics. *Lingua* 179. 97–123.
- Kim, Jong-Bok. 2016. *The syntactic structures of Korean: A Construction Grammar perspective*. Cambridge, UK: Cambridge University Press.
- Kim, Jong-Bok, Kyung-Sup Lim & Jaehyung Yang. 2007. Structural ambiguities in the light verb constructions: Lexical relatedness and divergence. *Linguistics* 15(2). 207–231.
- Kratzer, Angelika. 1996. Severing the external argument from its verb. In Johan Rooryck & Laurie Zaring (eds.), *Phrase structure and the lexicon*, vol. 33 (Studies in Natural Language and Linguistic Theory), 109–137. Springer.
- Lapointe, Steven. 1993. Dual lexical categories and the syntax of mixed category phrases. In *Proceedings of the eastern states conference on linguistics*, 199–210. Cornell University.
- Lee, EunHee. 2006. Stative progressives in Korean and English. *Journal of Pragmatics* 38(5). 695–717. DOI: 10.1016/j.pragma.2005.09.006.
- Lee, Juwon. 2011. Two types of Korean light verb constructions in a typed feature structure grammar. In *Proceedings of the workshop on multi-word expressions: From parsing and generation to the real world*, 40–48. Portland, Oregon, USA: Association for Computational Linguistics.
- Manning, Christopher D. 1993. Analyzing the verbal noun: Internal and external constraints. In Soonja Choi (ed.), *Japanese/Korean linguistics 3*, 236–253. Stanford, California, USA: CSLI Publications.
- Merchant, Jason. 2006. Polyvalent case, geometric hierarchies, and split ergativity. *eng. Papers from the regional meeting of the Chicago Linguistic Society* 42(2). 57–76.
- Müller, Stefan. 2002. *Complex predicates: Verbal complexes, resultative constructions, and particle verbs in German* (Studies in Constraint-Based Lexicalism 13). Stanford, CA: CSLI Publications. <https://hpsg.hu-berlin.de/~stefan/Pub/complex.html>.
- Müller, Stefan. 2013. *Head-Driven Phrase Structure Grammar: Eine Einführung*. 3rd edn. (Stauffenburg Einführungen 17). Tübingen: Stauffenburg Verlag. <https://hpsg.hu-berlin.de/~stefan/Pub/hpsg-lehrbuch.html>.
- Müller, Stefan. 2019. Complex predicates: Structure, potential structure and underspecification. *Linguistic Issues in Language Technology*. DOI: <https://doi.org/10.33011/lilt.v17i.1423>.
- Müller, Stefan, Anne Abeillé, Robert D. Borsley & Jean-Pierre Koenig (eds.). 2021. *Head-Driven Phrase Structure Grammar: The handbook*. Berlin. DOI: 10.5281/zenodo.5543318.
- Park, Chongwon. 2013. Nominal and clausal grounding of Korean verbal nouns. *Linguistics* 51(6). 1361–1995. DOI: 10.1515/ling-2013-0052.

- Pollard, Carl & Ivan A. Sag. 1994. *Head-Driven Phrase Structure Grammar* (Studies in Contemporary Linguistics 4). Chicago, IL: The University of Chicago Press.
- Silverstein, Michael. 2016. Hierarchy of features and ergativity. eng. In *Features and projections*, Originally published 1986, vol. 25, 163–232. Berlin, Boston: De Gruyter.
- Verhoeven, Elisabeth. 2010. Agentivity and stativity in experiencer verbs: Implications for a typology of verb classes. *Linguistic typology* 14(2-3). 213–251.
- Yoo, Eun-Jung. 2002. Auxiliary verbs and structural case assignment in Korean. *Korean Linguistic* 38(4). 1009–1036.