HUMBOLDT-UNIVERSITÄT ZU BERLIN

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

Jieun Oh
Institut für deutsche Sprache und Linguistik
Sprach- und literaturwissenschaftliche Fakultät
Humboldt-Universität zu Berlin

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(1) a. Hyenwu-nun pan-eyse kongpwu-lul ceyil cal-ha-n-ta.
Hyenwu-TOP classroom-LOC studying-ACC most well-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.'

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- psych verbs

(2) 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 verb *ha-*

- It can be combined with verbal nouns and psych verbs.
  (cf. Jung 2002b: 24–39, 2002a: 61–71; Jung 2016: 103–108, a.o.)
- with verbal nouns

(3) a. Hyenwu-ka yeksa-lul kongpwu-ha-n-ta.
Hyenwu-NOM history-ACC studying-do-PRS-DECL
'Hyenwu studies history.'

b. na-nun sahoy kakchung lite-tul-ul chotay-ha-n-ta.
I-TOP social classes leader-PL-ACC invitation-do-PRS-DECL
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Hyenwu-NOM tiger-ACC be.scary-CONN do-PRS-DECL
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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.'

Hypothesis:

- The verb *ha-* as a general verb has agentive properties (e.g., (5)).

(5) emma-ka pap-ul ha-lyeko kyelsim/nolyek-hay-ss-ta.
mother-NOM rice-ACC do-CONJ decision/effort-do-PST-DECL
'Mom decided/tried to cook rice.'

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- However, when the verb *ha-* is combined with some elements, agentive property depends also on them.

- The verb *ha-* has multiple functions.
  - The verb *ha-* with verbal nouns keeps the property of agentivity (e.g., (6)).
  - In contrast, the verb *ha-* with psych verbs does not display agentivity (e.g., (7)).

(6) Hyenwu-ka yeksa-lul kongpwu-ha-lyeko kyelsim/nolyek-hay-ss-ta.
Hyenwu-NOM history-ACC studying-do-CONJ decision/effort-do-PST-DECL
'Hyenwu decided/tried to study history.'

(7) * Hyenwu-ka holangi-lul mwusewe-ha-lyeko kyelsim/nolyek-hay-ss-ta.
Hyenwu-NOM tiger-ACC be.scary-do-CONJ decision/effort-do-PST-DECL
(Literally) 'Hyenwu decided/tried to be scared of a tiger.'

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- An experiment is introduced to investigate these issues.
- A new classification and analysis of the verb *ha-* in complex predicates is proposed within HPSG (Pollard & Sag 1994; Müller et al. 2021).
- Furthermore, it also considers cases where the complex predicate with *ha-* is followed by the auxiliary verb *siph-* 'want'.

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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 -].

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'Hyenwu studies history'

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Hyenwu-TOP tiger-NOM be.scary-DECL
'A tiger is scary to Hyenwu.'

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- When an auxiliary verb (e.g., *anh-* 'not') is combined with a verb, the case of arguments remains consistent (e.g., (10)),

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I-TOP tiger-NOM be.scary-DECL
'A tiger is scary to me.'

b. na-nun holangi-ka mwusep-ci anh-ta.
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- However, the auxiliary verb *ha-* 'do' may influence case assignment in complex predicate constructions (e.g., (11)).

(11) nay-ka {*holangi-ka / holangi-lul} mwuse-we ha-n-ta.
I-NOM tiger-NOM tiger-ACC be.scary-CONN do-PRS-DECL
'I am scared of a tiger.'

Yoo (2002)

(12) *ha-*

a. $\left[\text{AG } \boxed{1}, \text{GOV}\langle\ \text{V[AG } \boxed{1} ni\alpha\text{]}\ \rangle\right]$

b. $\left[\text{AG } +, \text{GOV}\langle\ \text{V[AG } i-\text{]}\ \rangle\right]$

[1] The agentivity hierarchy classifies the value of agentivity into agentive and non-agentive. The agentive is divided into inherently (*i*+) and non-inherently (*ni*+), while the non-agentive includes inherently (*i*−) and non-inherently (*ni*−) (cf. Yoo 2002: 1025-1026).

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- When the verb *ha-* combines with a verb exhibiting value [AG *ni*±][1], the [AG] value may be shared.
- The value is inherited from the embedded verb's [AG *ni*–] , resulting in the second argument being marked with the nominative case marker *-i/ka*.

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

(from Yoo 2002: 1031)

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b. $\left[\text{AG } +, \text{GOV}\langle\ \text{V[AG } i-\text{]}\ \rangle\right]$

- When the verb *ha-* combines with the psych verb that exhibiting an [AG $i-$] value[2], it retains its inherent agentive property.

(15) 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.'

(from Yoo 2002: 1031)

[2]The agentivity hierarchy classifies the value of agentivity into agentive and non-agentive. The agentive is divided into inherently ($i+$) and non-inherently ($ni+$), while the non-agentive includes inherently ($i-$) and non-inherently ($ni-$) (cf. Yoo 2002: 1025-1026).

- The verb *ha-* with verbal nouns exhibits this agentive property (e.g., (16)).

(16) a. Hyenwu-ka yeksa-lul uytocekulo kongpwu-ha-n-ta.
Hyenwu-NOM history-ACC intentionally studying-do-PRS-DECL
'Hyenwu intentionally studies history.'

b. na-nun sahoy kakchung lite-tul-ul uytocekulo chotay-ha-n-ta.
I-TOP social classes leader-PL-ACC intentionally invitation-do-PRS-DECL
'I intentionally invite leaders from various social classes.'

- However, it is questionable. whether constructions of the verb *ha-* with psych verbs truly show agentive properties (e.g., (17)).

(17) a. ?? Hyenwu-ka holangi-lul uytocekulo mwuse-we ha-n-ta.
Hyenwu-NOM tiger-ACC intentionally be.scary-CONN do-PRS-DECL
'Hyenwu is intentionally scared of a tiger.'

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- When the verb *ha-* combined **with a verbal noun** is followed by the auxiliary verb *siph-* 'want', both a case marker *-ul/lul* and an information structure marker *-i/ka*[3] can be attached to the second argument (e.g., (18)).

(18) Hyenwu-ka {yeksa-lul / yeksa-ka} kongpwu-ha-ko siph-ess-ta.
Hyenwu-NOM history-ACC history-FOC studying-do-CONN want-PST-DECL
'Hyenwu wanted to study history.'

[3]The particle *-i/ka* can function as an information structure marker, for instance, to focus on the argument (cf. Park 2004: 113–114; Kim et al. 2007b: 27–35; Kim 2014: 13–14; Kim 2015: 45–50, a.o.).

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(19) Hyenwu-ka {holangi-lul / *holangi-ka} mwuse-we ha-ko siph-ess-ta.
Hyenwu-NOM tiger-ACC tiger-FOC be.scary-CONN do-CONN want-PST-DECL
'Hyenwu wanted to be scared of a tiger.'

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- It indicates that the verb *ha-* does not exhibit the same functions.

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- When combined with these elements:

(20) Hyenwu-ka yeksa-lul uytocekulo kongpwu-hay-ss-ta.
Hyenwu-NOM history-ACC intentionally studying-do-PST-DECL
'Hyenwu intentionally studied history.'

(with verbal nouns)

(21) ?? Hyenwu-ka holangi-lul uytocekulo mwuse-we hay-ss-ta.
Hyenwu-NOM tiger-ACC intentionally be.scary-CONN do-PST-DECL
'Hyenwu was intentionally scared of a tiger.'

(with psych verbs)

Experiment: first- & third-person

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- Agentivity-Based NP Hierarchy
  1st person pronoun > 2nd person pronoun > 3rd person pronoun > proper name > human noun > animate noun > inanimate noun

  (cf. Silverstein 2016: 163–167)

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- Agentivity-Based NP Hierarchy
  1st person pronoun > 2nd person pronoun > 3rd person pronoun > proper name > human noun > animate noun > inanimate noun
  (cf. Silverstein 2016: 163–167)
- This hierarchy shows how natural it is for a given noun phrase to serve as the agent of a true transitive verb.
  - Upper tier of the hierarchy:
    - 1st- and 2nd-person pronouns refer directly to speaker and hearer in discourse.
    - They have a strong tendency to serve as agents.
  - Lower tier of the hierarchy:
    - 3rd-person NPs (proper names and common nouns) are outside the speech situation and have lower discourse/cognitive centrality.
    - In several languages, ergative marking may be used.

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I-NOM history-ACC intentionally studying-do-PST-DECL
'I intentionally studied history.'

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(with verbal nouns)

(23) a. ?? 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.'

b. * Hyenwu-ka holangi-lul uytocekulo mwuse-we hay-ss-ta.
Hyenwu-NOM tiger-ACC intentionally be.scary-CONN do-PST-DECL
'Hyenwu was intentionally scared of a tiger.'

(with psych verbs)

- This study employed a 2x2 design with two factors:
  (1) COMBINED ELEMENT TYPE (verbal nouns vs. psych verbs)
  (2) SUBJECT PERSON TYPE (1st vs. 3rd).
- Ten instances of the verb *ha-* with verbal nouns
  and ten with psych verbs were used as target items.
- These items included the second factor, SUBJECT PERSON TYPE together with an additional 20 filler sentences.
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(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.

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(b) The second factor SUBJECT PERSON TYPE is expected to affect acceptability ratings in such a way that first-person subject would be more likely to allow the sentence to be modified with the adverb ‘intentionally’.

Result

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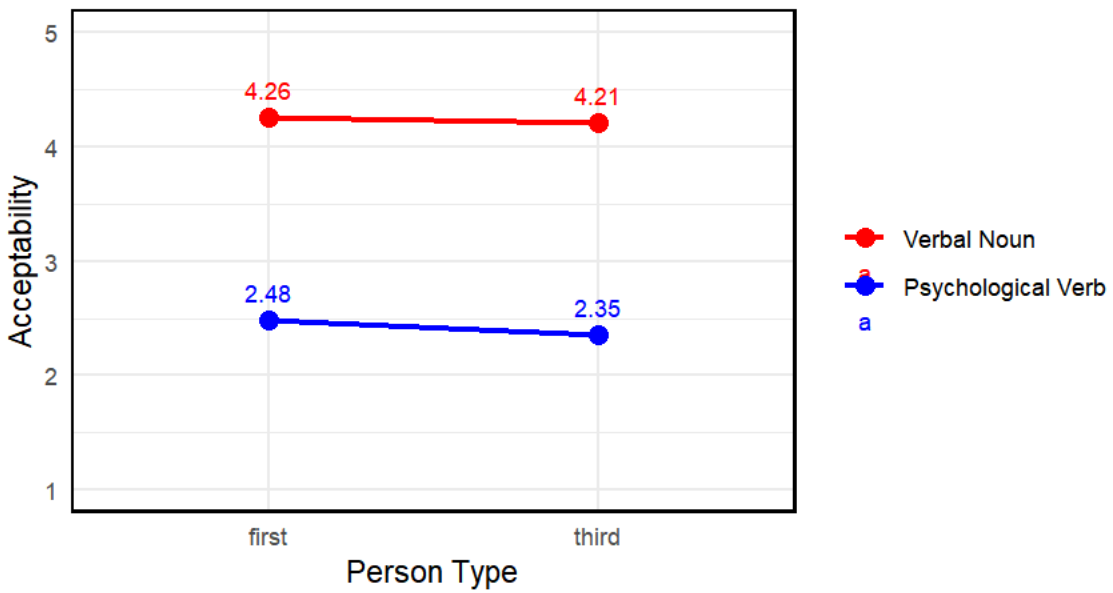

Figure 1: Acceptability of sentences with the adverb ‘intentionally’ (95% C.I.)

Result

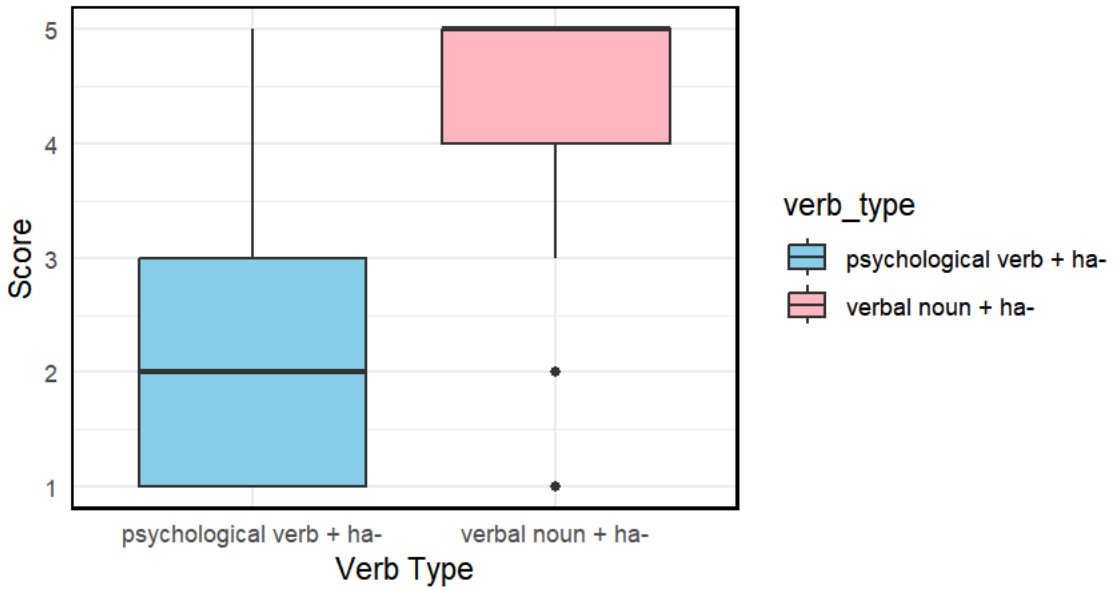

Figure 2: Frequency distribution of scores (95% C.I.)

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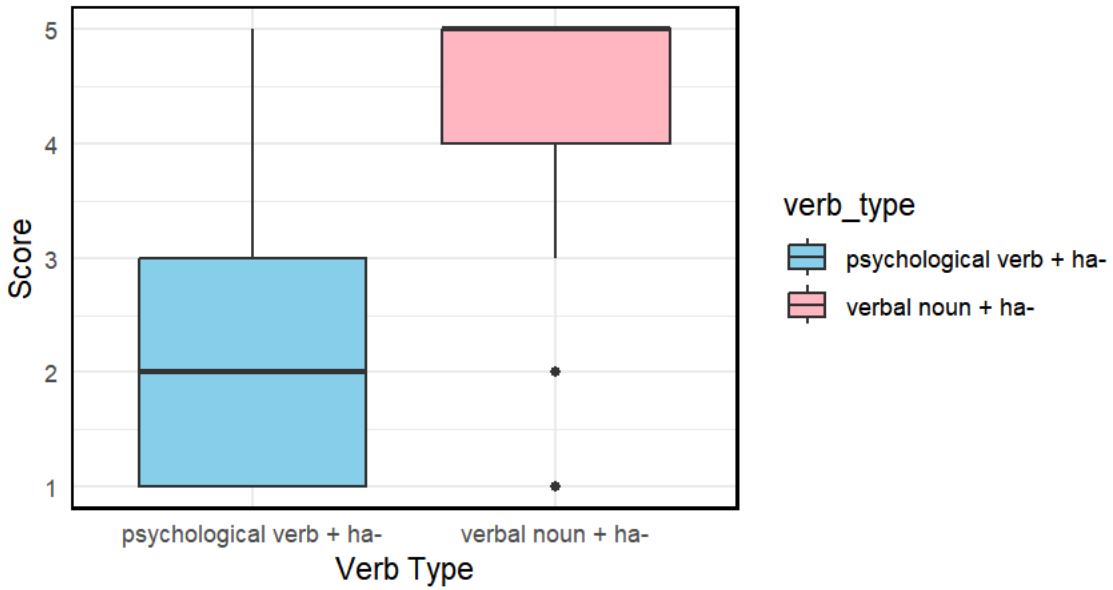

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- Consequently, based on the experimental results, it is assumed that the verb *ha-*, when combined with verbal nouns and psych verbs, performs specific functions in each construction, regardless of the type of subject person.

Contents

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(24) 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.'

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

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- Verbal nouns independently license their own argument structures.
(Grimshaw & Mester, 1988, Chae, 1996, 2004, Jun, 2006, Kim et al., 2007a)

An argument structure of vernal nouns

- As shown in (25), while the verb *ha-* may be omitted, the omission of the verbal noun is not acceptable. The verbal noun is obligatory. (cf. Kim, 2016: 124))

(25) a. Hyenwu-ka chinkwu-lul cip-ulo chotay
Hyenwu-NOM friend-ACC home-LOC invitation
'Hyenwu invited his friend to his home.'

b. Hyenwu-ka chinkwu-lul cip-ulo *(chotay-)hay-ss-ta.
Hyenwu-NOM friend-ACC home-LOC invitation-do-PST-DECL

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- This supports the idea that the verbal noun has an argument structure.

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

(26)

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

(cf. Müller 2002: 85–93, 2013: 241–246, 2019: 4–6)

(27) Hyenwu-ka yeksa-lul kongpwu-ha-n-ta.
Hyenwu-NOM history-ACC studying-do-PRS-DECL
'Hyenwu studies history.'

An argument structure of psych verbs

- Psych verbs do not directly take an EXPERIENCER argument.

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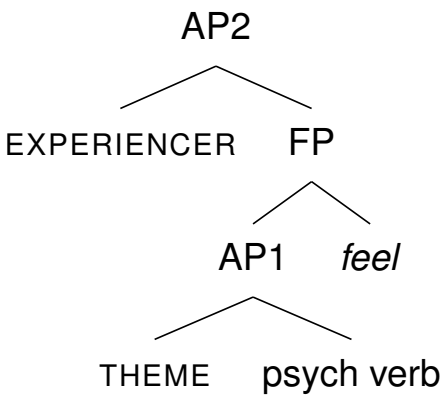
- It is introduced by a covert predicate like *feel*, as in (28).

(28) The structure of constructions with psych verbs



(cf. Bak 2017: 50)

An argument structure of psych verbs

(29) a. na-nun holangi-ka mwusep-ta.
I-TOP tiger-NOM be.scary-DECL
'A tiger is scary to me.'

b. ? nay-ka holangi-ka mwusep-ta.
I-NOM tiger-NOM be.scary-DECL

c. na-eykey(-nun) holangi-ka mwusep-ta.
I-DAT-TOP tiger-NOM be.scary-DECL

d. holangi-ka mwusep-ta.
tiger-NOM be.scary-DECL
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'A tiger is scary (to me).'

(30) a. A: na-nun mwusep-ta. B: mwues-i ne-nun mwusep-ni?
I-TOP be.scary-DECL what-NOM you-TOP be.scary-QUE
(Literally) A: ... is scary to me. B: What is scary to you?

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(Literally) A: ... is scary to me. B: What is scary to you?

- So, psych verbs typically select only a THEME argument.

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

(31)

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

(cf. Müller 2002: 85–93, 2013: 241–246, 2019: 4–6)

(32) a. (na-nun) holangi-ka mwusep-ta.
I-TOP tiger-NOM be.scary-DECL
'A tiger is scary to me.'

b. 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.'

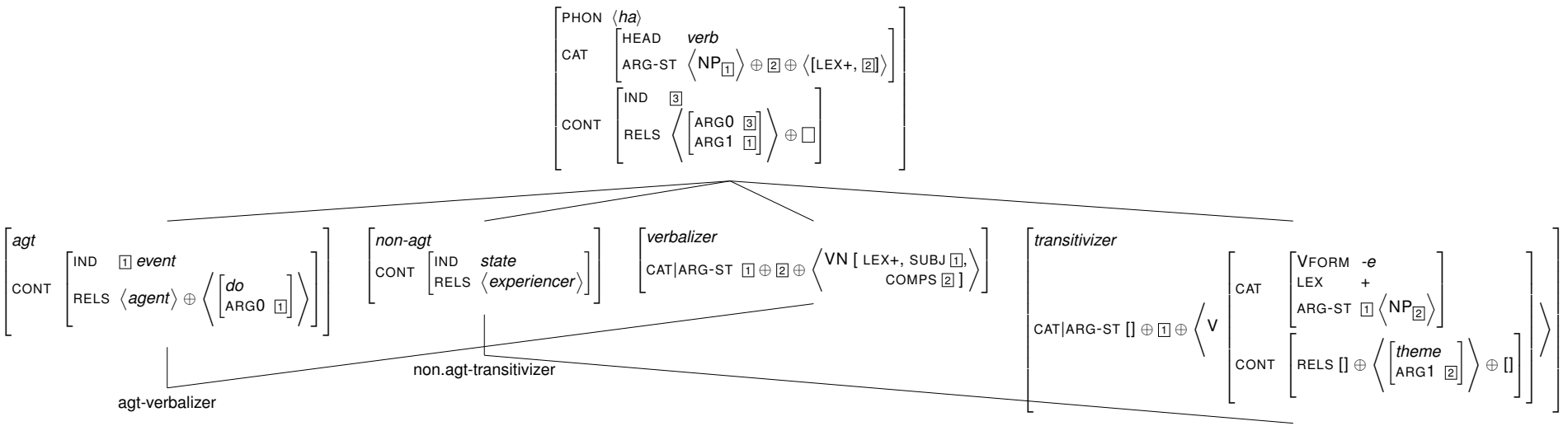

Figure 3: Type hierarchy for the Korean verb *ha-*

(33) Hyenwu-nun {yeksa-lul / yeksa-ka} kongpwu-ha-ko siph-ess-ta.
Hyenwu-TOP history-ACC history-FOC studying-do-CONN want-PST-DECL
'Hyenwu wanted to study history.'

(with verbal nouns)

(34) Hyenwu-nun {holangi-lul / *holangi-ka} mwuse-we ha-ko siph-ess-ta.
Hyenwu-TOP tiger-ACC tiger-FOC be.scary-CONN do-CONN want-PST-DECL
'Hyenwu wanted to be scared to a tiger.'

(with psych verbs)

(33) Hyenwu-nun {yeksa-lul / yeksa-ka} kongpwu-ha-ko siph-ess-ta.
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Hyenwu-TOP tiger-ACC tiger-FOC be.scary-CONN do-CONN want-PST-DECL
'Hyenwu wanted to be scared to a tiger.'

(with psych verbs)

(35) The lexical rule for the auxiliary verb *siph-* 'want' with agentive verbs:

$$\left[\text{CAT}\left[\begin{array}{ll}\text{HEAD} & \textit{verb}\\ \text{ARG-ST} & \left\langle \boxed{1}\left[\text{LOC}|\text{CAT}|\text{HEAD}\left[\begin{array}{ll}\textit{noun}\\ \text{CASE} & \textit{str}\end{array}\right]\right], \boxed{2}\left[\text{LOC}|\text{CAT}|\text{HEAD}\left[\begin{array}{ll}\textit{noun}\\ \text{CASE} & \textit{str}\end{array}\right]\right]\right\rangle \oplus \boxed{3} \left\langle \text{V}\left[\begin{array}{l}\text{VFORM } \textit{-ko}, \text{ LEX+}, \text{ SUBJ } \boxed{1},\\ \text{COMPS } \boxed{2}, \text{ INDEX } \textit{agentive}\end{array}\right]\right\rangle\end{array}\right]\right]$$

$$\mapsto \left[\text{CAT}\left[\begin{array}{ll}\text{HEAD} & \textit{verb}\\ \text{ARG-ST} & \boxed{1} \oplus \boxed{2}\left\langle\left[\text{LOC}\left[\begin{array}{ll}\text{CAT} & \left[\begin{array}{ll}\text{HEAD} & \textit{noun}\\ \text{CASE} & \textit{non-str}\end{array}\right]\\ \text{CTXT} & \left[\begin{array}{ll}\textit{infostr}\\ \text{FOCUS} & +\end{array}\right]\end{array}\right]\right]\right\rangle \oplus \boxed{3}\end{array}\right]\right]$$

(cf. Oh, 2024: 145)

(36) Hyenwu-nun {yeksa-lul / yeksa-ka} kongpwu-ha-ko siph-ess-ta.
Hyenwu-TOP history-ACC history-FOC studying-do-CONN want-PST-DECL
'Hyenwu wanted to study history.'

(37) The lexical entry of the complex predicate with the auxiliary verb *siph-* 'want' and the verb *ha-* with the verbal noun *kongpwu* 'studying':

$$\left[\begin{array}{ll} \textsc{phon} & \langle\, \textit{kongpwuhako siph} \,\rangle \\ \textsc{cat} & \left[\begin{array}{ll} \textsc{head} & \textit{verb} \\ \textsc{arg-st} & \left\langle \left[\textsc{loc}|\textsc{cat}|\textsc{head}\ \left[\begin{array}{ll}\textit{noun}\\ \textsc{case} & \textit{str}\end{array}\right]\right], \left[\textsc{loc}\ \left[\begin{array}{ll}\textsc{cat} & \left[\begin{array}{ll}\textsc{head} & \textit{noun}\\ \textsc{case} & \textit{str}\end{array}\right]\\ \textsc{ctxt} & \left[\begin{array}{ll}\textit{infostr}\\ \textsc{focus} & -\end{array}\right]\end{array}\right]\right] \vee \left[\textsc{loc}\ \left[\begin{array}{ll}\textsc{cat} & \left[\begin{array}{ll}\textsc{head} & \textit{noun}\\ \textsc{case} & \textit{non-str}\end{array}\right]\\ \textsc{ctxt} & \left[\begin{array}{ll}\textit{infostr}\\ \textsc{focus} & +\end{array}\right]\end{array}\right]\right] \right\rangle \end{array}\right] \end{array}\right]$$

Contents

To sum up

- This study investigated complex predicates with the verb *ha-*, focusing on verbal nouns and psych verbs.
- An experiment was conducted to investigate the function of the verb *ha-*.

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Regarding the experimental results:

- The verb *ha-* does not function consistently in all constructions.
- With verbal nouns, the verb *ha-* contributes to the agentivity property.
- With psych verbs, the verb *ha-* does not form a ‘doing’ event and lacks the property of agentivity.

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- With psych verbs, the verb *ha-* does not form a 'doing' event and lacks the property of agentivity.
- In construction with the verb *ha-* and the auxiliary verb *siph-* 'want', the distribution of the information structure marker *-i/ka* reflects whether the embedded predicate is agentive or not.

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- This lexical rule is also used to account for the phenomenon observed in the constructions in which the verb *ha-* is followed by the auxiliary verb *siph-* 'want'.

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