

Passivization of Transitive Verbal Nouns in Korean: Factors that Facilitate Passivization in the VN-*cwung* Construction

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This paper investigates whether transitive verbal nouns (VNs) can appear passivized without *-toy* ‘become’ and, if so, what factors are pertinent. We have demonstrated, based on the results of internet search and questionnaire, that some transitive VNs, particularly agentive ones, can appear passivized when followed by the aspectual element *cwung* ‘during’ in Korean, as in Japanese. We have also argued that passivization of a transitive VN is possible only with a light verb lacking agent-orientation, which is determined in terms of whether a light verb has an agentive heavy counterpart. Agent-oriented light verbs like *ha-* ‘do’ never allow such passivization.

Keywords: verbal nouns, light verb, passivization, telic/atelic, agent-orientation, Korean

1. Introduction

Verbal Nouns (VNs) in Korean and Japanese have been noted to assign ‘verbal cases’ (Iida 1987) to their arguments when followed by light verbs, *ha(-ta)(K)/su(-ru)(J)* ‘do’ and *toy(-ta)(K)* ‘become’, or an aspectual elements such as *cwung(K)/tyuu(J)* ‘during’ (for Korean see Ahn 1991, Choi 1988, Han 1988, Jun 2003, Jung 1997, Karimi-Doostan 2005, Kim 1991, Lee 1991, O’Grady 1992, Pak 2000, Park 1992, Sato 1993, Suh 1975; for Japanese see Miyamoto 1999, Saito and Hoshi 2000, Sato 2008, and references cited there), as shown below. (VNs in question will be, hereafter, highlighted in small capitals for ease of refer-

ence. (K) stands for Korean, and (J) for Japanese.

(1) Transitive VN followed by *ha-* or *su-* 1

- a. *Kyengchal-i pemín-ul CHEYPHO-(lul) hay-ess-ta.* (K)
 police-Nom culprit-Acc arrest-Acc do-Pst-Dec
- b. *Keisatu ga hanmin o TAIHO-si-ta.* (J)
 Police Nom culprit Acc arrest-do-Pst
 ‘The police arrested the culprit.’

(2) Transitive VN followed by the aspectual element *cwung* or *tyuu*

- a. *Kyengchal-i pemín-ul CHEYPHO-cwung-ey, ku*
 police-Nom culprit-Acc arrest-during-at that
sako-ka na-ss-ta. (K)
 accident-Nom happen-Pst-Dec
- b. *Keisatu ga hanmin o TAIHO-tyuu ni*
 police Nom culprit Acc arrest-during at
ziko ga oki-ta. (J)
 accident Nom happen-Pst
 ‘While the police was arresting the culprit, that accident happened.’

In the realization of arguments in the syntax, transitive VNs, e.g., *cheypho*(K)/*taiho*(J) ‘arrest’ when followed by *ha*-(K)/*su*-(J) must follow the hierarchy of argument structure proposed, for example, by Grimshaw and Mester (1988), agent > experiencer > ... theme, unless they are followed by *toy*-(K) or the passive morpheme *rare* (J). This insures, for example, that, if a VN has both an agent and a theme in its argument structure, the former, the agent, is favored for subject over the latter, the theme. The sentence in (3), hence, can only be construed as the culprit arresting someone, never as the culprit being arrested.

(3) Transitive VN followed by *ha-* or *su-* 2

- a. *Pemin-i CHEYPHO-(lul) ha-yess-ta.* (K)
 culprit-Nom arrest-Acc do-Pst-Dec
- b. *Hannin ga TAIHO-si-ta.* (J)
 culprit Nom arrest-do-Pst
 ‘The culprit arrested (someone).’/*‘The culprit was arrested.’

Transitive VNs, referred to as such in this paper, are different from VNs of the alternating type, e.g., *hwakcang* ‘expansion’, which allow their theme argument to occur either in the accusative as in (4a) or in the nominative as in (4b). There is some semantic difference between these two types of VNs (Jacobsen 1992).

- (4) a. *Cwuiin-i* *kekey-lul* *HWAKCANG-ha-yess-ta.*
 owner-Nom shop-Acc expansion-do-Pst-Dec
 ‘The owner expanded his shop.’
- b. *Kekey-ka* *HWAKCANG-ha-yess-ta*
 shop-Nom expansion-do-Pst-Dec
 ‘The shop (was) expanded.’

A question arises as to whether ‘demotion’ of an agent will ever happen with a transitive VN in Korean, realizing its theme (instead of its agent) as subject, as reported for Japanese, aside from the case of passivization by *toy-*. Kageyama (1993) and Ono (1997) have noted that Japanese transitive VNs cooccur with nominatively marked themes as well as accusatively marked ones, when they are followed by an aspectual element, as shown in (5b) and (6b) (See also Sato 2008 and references cited there).

- (5) a. *Purozyekutotiimu* *ga* *iseki* *o* *SYUUHUKU*
 project-team Nom ruins Acc restoration
tyuu *da*
 during Cop
 ‘The project team is restoring the ruins.’ (Ono’s (24a), 1997: 160)
- b. *Iseki* *ga* *SYUUHUKU* *tyuu* *da*
 ruins Nom restoration during Cop
 ‘The ruins are being restored.’ (Ono’s (24b), 1997: 160)
- (6) a. *Sizuoka-kenkei* *ga* *satuzinhan* *o* *TAIHO*
 Shizuoka-police Nom murderer Acc arrest
no *sai, ...*
 Gen occasion
 ‘When the Shizuoka Prefectural Police arrested the murderer,...’

- b. ?*Sizuoka-kenkei ni-yotte renzoku-satuzinhan ga*
 Shizuoka-police by serial-murderer Nom
TAIHO no sai, hutari no keikan ga
 arrest Gen occasion two Gen officer Nom
nagaredama de sinda.
 stray-bullet with die
 ‘When the serial murderer was arrested by the Shizuoka Prefectural Police, two officers were killed by stray bullets.’
 (Kageyama’s (126c), 1993: 238, the judgment is his.)

This paper will examine (i) whether the passivization of transitive VNs takes place in Korean as well in a similar structure and, if so, (ii) what factors induce such a syntactic process. To state the conclusion in advance, it will be shown that there are certain properties of transitive VNs and light verbs that facilitate passivization.

The organization of this paper is as follows. Section 2 presents the results from a search on the internet for the use of transitive VNs in a passive pattern and a questionnaire about grammaticality judgments on sentences with VNs including sentences with transitive VNs in a passive pattern. Section 3 discusses what facilitates or inhibits the passivization of transitive VNs. A conclusion is given in section 4.

2. Data

This section demonstrates evidence from search on the internet for the use of passive transitive VNs in Korean similar to those in (5b) and (6b) in Japanese. We will then examine whether the kind of passive constructions with transitive VNs that we have found on the internet can be really considered passives, using tests of passives. The results of a questionnaire survey on Korean sentences including passive transitive VN constructions will be also given to check the results of the internet search.

One may question the reliability of the data found in the internet. Instances of the passive VN-*cwung* construction are available through the existing corpora, e.g., the KAIST Raw corpus (http://semanticweb.kaist.ac.kr/home/index.php/KAIST_Corpus). The KAIST Raw corpus is of the size 70 million phrases, however, from the corpus of this size

only one instance of the passive VN-*cwung* construction was found for the VN *cwunpi* ‘preparation,’ whereas 96 instances were found for the same VN on the internet, as shown later in Table 1. Possible reasons that there were so few data found in the KAIST Raw corpus may be that (i) the passive VN-*cwung* construction has rather marginal grammatical status, (ii) this construction is more likely to be used in a spoken style rather than a written, and (iii) the use of this construction can be seen among younger generations. Although the data on the internet is written rather than spoken, they reflect much of the spoken style and particularly that of younger generations. As stated already, the passive VN-*cwung* construction is rather marginal in its grammaticality, but the Korean examples given below, except for (17), (18) and (20),¹⁾ are all either actually used in the internet or slightly modified from actually found data.

In addition to internet search, we used a questionnaire. This is because (i) we wanted to verify the data obtained from the internet, based on the results from the questionnaire, and (ii) native speakers usually respond in varied ways to marginal constructions for it is difficult to make consistent grammaticality judgments on sentences which are very close to ungrammatical. We collected responses from forty native speakers and obtained mean ratings for different types of the VN-*cwung* construction to make up for variation.

In the following, subsection 2.1 presents the results of the internet search, subsection 2.2 examines the passiveness of the constructions in question, and subsection 2.3 presents the results of a questionnaire and compares them with those of the internet search.

2.1. Actual Use on the Internet

In this subsection, we will look into whether Korean transitive VNs followed by the aspectual element *cwung* cooccur with a nominatively marked theme argument, as in the case of Japanese transitive VNs followed by an aspectual element in (5b) and (6b).

To examine whether Korean transitive VNs would appear passivized

1) The examples (18) and (19) were in fact made from the nonagentive THEME-NOM VN-*cwung* sentences found in the internet by adding an agent phrase or a rationale clause. There were no onagentive THEME-NOM VN-*cwung* sentences found in the internet with an agent phrase or a rationale clause, whereas there were some for agentive THEME-NOM VN-*cwung* sentences.

in the VN-*cwung* construction, a series of searches were conducted, using the Google Search Engine on four types of transitive VNs differing on the dimensions of agentivity and telicity, i.e., (i) agentive atelic, (ii) agentive telic, (iii) nonagentive atelic, and (iv) nonagentive telic VNs, to see if they would appear passivized.²⁾ All the nonagentive VNs used had an Experiencer external argument. A sample of four different types of commonly used transitive VNs was selected from Han's (2001) list *Sangwi pinto 'hata' tongsa mokenok* "The list of high-frequency 'hata' verbs". Of those listed in Han's (2001) the most frequent bisyllabic Chinese-origin transitive VNs whose aspectuality and argument structure were relatively unambiguous were chosen as shown below with their glosses and the numbers of times with which they appeared in the Yonsei Corpus.

(7) Four types of transitive VNs

a. Agentive atelic VNs:

sayong 'use' (5843), *iyong* 'use' (3838), *yokwu* 'urge' (3089), *ywuici* 'preserving' (2276), *pikyo* 'comparison' (2250), *yenkwu* 'research' (2152), *cosa* 'survey' (1844), *swuhayng* 'carrying out' (1451), *chwukwu* 'pursuit' (1408), *kenthoo* 'examination' (1262); Mean frequency (2541)

b. Agentive telic VNs:

inceng 'approval' (3132), *hwakin* 'confirmation' (3083), *kyelceng* 'decision' (2613), *cicek* 'pointing out' (2354), *palphyo* 'presentation' (2230), *ceysi* 'presentation' (2077), *cwunpi* 'preparation' (1942), *senthayk* 'selection' (1870), *phoki* 'abandonment' (1862), *cengli* 'arrangement' (1706); Mean frequency (2287)

c. Nonagentive (Experiencer) atelic VNs

sayngkak 'thinking' (45238), *kamsa* 'thanks' (1302), *kitay* 'ex-

2) As anonymous reviewers noted, there can be various semantic features relevant to passivization other than agentivity and telicity, but here we only focused on these two notions. This is because Ono (1997:163) argued that passibilizable transitive VNs are those with a complex event structure made up of a Process and a resultant State component, bearing the Lexical Semantic Structure of [*x* DO-something] CAUSE [*y* BECOME [*y* BE AT *z*]]. Based on Ono's (1997) argument, we looked at if an agent-induced causation on an affected theme, which takes place in a telic time frame due to its having an end point, would result in passivization, focusing on agentitive as opposed to nonagentive and telic as opposed to atelic. Hollmann (2005) also found the passivizability of English periphrastic causatives subject to causativity and punctuality.

pectation' (2081), *uysik* 'awareness' (1453), *sangsang* 'imagination' (1396), *uysim* 'doubt' (1316), *kekceŋg* 'worry' (1698); Mean frequency (7783), Mean frequency without *sayŋgak* (1541)

d. Nonagentive (Experiencer) telic VNs:

ihay 'comprehension' (5873), *palkyen* 'discovering' (4590), *kiek* 'memorization' (2200), *phaak* 'grasping' (2152), *insik* 'recognition' (1374), *phantan* 'judging' (1320), *kyenghem* 'experience' (1116); Mean frequency (2661)

As shown in (7), there were ten VNs of the agentive atelic type, ten of the agentive telic type, seven of the nonagentive atelic type, and seven of the nonagentive telic type. The number of nonagentive VNs was smaller than that of agentive ones, because there were not enough nonagentive VNs with frequencies that matched those of agentive ones. The average frequency of each type of VNs was around 2500, except for the nonagentive atelic type, whose mean frequency was 7783 with *sayŋgak*, or 1541 without it.

The search on the internet for the occurrences of a nominatively marked theme argument with the above thirty-four transitive VNs was conducted in February-March, 2013, using the Google Advanced Search Engine, whereby limiting the search to exactly matching. As there are two morphological nominative cases in Korean, i.e., *-ka* and *-i*, the following two kinds of keyword queries were used for search. (* is a wild card symbol, which stands for none or some kind of form. Both patterns in (8) will be hereafter referred to as THEME-NOM VN-*cwung* patterns.)

- (8) a. **ka* VN *cwung**
 b. **i* VN *cwung**

It was examined how many instances of 'results' (returned by a search engine) there were which contained one of the above strings in (8) and could be unambiguously construed as the theme argument of a transitive VN within its first 200 (or less) results, or 100 (or less) results per each nominative case. The following cases, however, were excluded from the counting: (i) if the NP before a nominative case could not be unambiguously construed as the theme argument of a transitive VN, (ii) if a string found did not make sense as Korean, and/or (iii)

if a string appeared after 100 or more results per each nominative case. The results of this search are shown in Table 1.

Table 1. The frequencies of THEME-NOM VN-*cwung* found in the internet

	Agentive		Nonagentive (Experiencer)				
	Atelic	Telic	Atelic	Telic			
1) <i>sayong</i>	90	<i>inceng</i>	2	<i>sayngkak</i>	12	<i>ihay</i>	0
2) <i>iyong</i>	21	<i>hwakin</i>	27	<i>kamsa</i>	0	<i>palkyen</i>	1
3) <i>yokwu</i>	71	<i>kyelceng</i>	7	<i>kitay</i>	58	<i>kiek</i>	0
4) <i>ywuci</i>	112	<i>cicek</i>	0	<i>uysik</i>	0	<i>phaak</i>	9
5) <i>pikyo</i>	3	<i>palphyo</i>	40	<i>sangsang</i>	0	<i>insik</i>	0
6) <i>yenkwu</i>	69	<i>ceysi</i>	2	<i>uysim</i>	3	<i>phantan</i>	0
7) <i>cosa</i>	11	<i>cwunpi</i>	96	<i>kekceeng</i>	5	<i>kyenghem</i>	0
8) <i>swuhayng</i>	73	<i>senthayk</i>	4	Mean freq.	11.1	Mean freq.	1.4
9) <i>chwukwu</i>	0	<i>phoki</i>	0				
10) <i>kemtho</i>	67	<i>cengli</i>	82				
	Mean freq.	51.7	Mean freq.	26			

As shown in Table 1, the order of mean frequencies from top to bottom, is Agentive atelic (51.7) > Agentive telic (26) > Nonagentive atelic (11.1) > Nonagentive telic (1.4). It follows from this that transitive VNs of the agentive and of the atelic type tended to appear passivized, with agentivity playing a more important role than telicity. The number of transitive VNs of each type for which no instances of the THEME-NOM VN-*cwung* patterns were found exhibited the same tendency, that is, in terms of ascending order, Agentive atelic (1) < Agentive telic (2) < Nonagentive atelic (3) < Nonagentive telic (5). The sentence in (9) is an example of a transitive VN found occurring in a THEME-NOM VN-*cwung* pattern.

- (9) *mokswum-ul cwu-n ke-n tangsin-i ani-ciman,*
 life-Acc give-Pst thing-Top you-Nom Neg-Cop-but
cikum-un tangsin-ey-uyhay hyengthay-ka YWUCI-cwung.
 now-Top you-by form-Nom maintaining-during
 ‘it was not you who gave life (to it), but now its shape is being maintained by you.’
 (littlecat2.ivyro.net/zbx/index.php?mid=text&page=2&document_srl=1857, accessed on March 2, 2013)

This subsection has shown that there are some instances of transitive VNs used in THEME-NOM VN-*cwung* patterns on the internet. The aspectuality and argument structure of VNs have had effects on their passivizability, that is, those transitive VNs of the agentive and atelic type are most likely to occur passivized, with agentivity constituting a more deciding factor than telicity.

2.2. Passive Tests

This subsection presents two different kinds of evidence to show that the construction in question, i.e., the THEME-NOM VN-*cwung* pattern, can be considered passive. The first piece of evidence has to do with the object NP of a transitive VN occurring as the subject of a passive sentence (OBJ_{ACTIVE} → SUBJ_{PASSIVE}), and the second has to do with the subject NP of a transitive VN occurring as an adjunct agent phrase, if it appears at all, in a corresponding passive sentence (SUBJ_{ACTIVE} → (ADJUNCT_{PASSIVE})).

First, observe the example in (10) where the Theme argument is marked with a nominative case, rather than with an accusative, which suggests that it now serves as the subject of the sentence. Moreover, the nominatively marked NP at the sentence-initial position in (10) can be construed as being modified by its NQ *hana* ‘one’ in VP. If this sentence is a passive, this nominative theme NP has originated in a position within VP and moved to the current position to receive (nominative) case. The grammaticality of (10) indicates that it has actually been derived that way.

(10) Floated Numeral Quantifier:

<i>Yenkwu</i>	<i>nonmwun_i-i</i>	<i>tayhakwen-sayng-ey</i>	<i>uyhay</i>	<i>i</i>
research	paper-Nom	graduate-student-by		this
<i>sai_ithu-eyse</i>	<i>t_i</i>	<i>hana</i>	<i>PALPHYO-cwung-i-ta.</i>	
site-at	one	presentation-middle-Cop-Dec		

‘One research paper is being presented at this (web)site by a graduate student.’

The reason for this is that, assuming that Korean numeral quantifiers (NQs) without multiple case-marking are subject to the same constraint as Japanese, i.e. a NP and its NQ must have a mutual c-com-

mand relationship (Miyagawa 1989, Miyagawa & Arikawa 2007), unless there is a trace/copy of the sentence-initial nominative NP within VP to be in a mutual c-command relationship with its NQ in VP, the example in (10) is predicted to be ungrammatical. The fact that the nominative NP can be construed as modified by the NQ in (10), despite the presence of a VP- (or vP-) edge element, i.e. the adjunct agent phrase intervening between the two, speaks for the movement from a VP-internal to a VP-external nominative position.

Secondly, as shown in (10), the external argument appears as an agent phrase headed by *-ey-uyhay* 'by', which does support the view that it is passive. In addition, with or without such an agent phrase, the suppressed external argument of a transitive VN in the THEME-NOM VN-*cwung* construction exhibits another phenomenon which is also typical in passives, that is, the suppressed external argument can control the PRO subject in a rationale clause (Jaeggli 1986). Observe the example in (11).

(11) **Rationale Clause:**

Chilyopep-ul kaypalha-ki wihayse haykyel-chayk-i
 treatment-Acc develop-to in-order solution-Nom
yenkwu-cwung-i-ta.

research-middle-Cop-Dec

'A solution is being studied in order to develop a treatment.'

In (11), the PRO argument (i.e., developer) of the rationale clause can be construed as coreferential with the suppressed external argument (i.e., researcher).

This subsection has focused on two well-known phenomena of passives, i.e. (i) movement resulting from case absorption and (ii) the working of an absorbed external argument. The NQ test in (10) shed light on the first characteristic of the THEME-NOM VN-*cwung* construction, and the rationale-clause test in (11) shed light on the second.

2.3. Questionnaire

This subsection presents the results of a questionnaire survey that was conducted to compare with the results of the internet search.

A questionnaire was distributed to forty native speakers of Korean

to solicit their grammatical judgments on eighteen sentences. The eighteen sentences consisted of eleven test sentences with a transitive VN followed by *cwung* and seven distracters; they were ordered randomly to minimize biases and fatigue-based effects. The eleven test sentences are of the six different types in (12). The respondents were asked to rate sentences on the scale of five levels: +2 very natural, +1 slightly unnatural, 0 unable to rate, -1 very unnatural, and -2 completely incomprehensible. The main purpose of this questionnaire was to examine how agentive THEME-NOM VN-*cwung* sentences, as opposed to the nonagentive ones, would be rated by native speakers.

- (12) The types of test sentences ('---' indicates the lack of the category under which it appears, AP an agent phrase, and RC a rationale clause.)

Voice	Agentivity	Telicity	AP	RC	Tokens	Example
a. active	agentive	atelic	---	---	1	(13)
b. passive	agentive	atelic	with AP	with RC	2	(14)
c. passive	agentive	telic	with AP	with RC	2	(15)
d. passive	nonagentive	atelic	---	---	2	(16)
e. passive	nonagentive	atelic	with AP	---	2	(17)
f. passive	nonagentive	atelic	---	with RC	2	(18)

As can be seen from the above table, we did not examine all types of the THEME-NOM VN-*cwung* construction but rather focused on the kinds of types we considered important. For each of the agentive types (agentive atelic and agentive telic), there was only one type, that is, the THEME-NOM VN-*cwung* construction with both a rationale clause and an agent phrase, (12b) and (12c). Our first focus was to see the difference between the ratings for the passive agentive atelic and the passive agentive telic types. The reason we added both a rationale clause and an agent phrase in the test sentences was because we wanted to have test sentences of the both types which were unambiguously passive. Our second focus was to obtain clearer differences, if any, between different types of the nonagentive THEME-NOM VN-*cwung* construction. We examined whether the THEME-NOM VN-*cwung* construction with a nonagentive NP, (12d), would be rated positively, and, if so, whether a THEME-NOM VN-*cwung* construction in a more passive-like disguise, i.e. the one with either an agent phrase, (12e), or a rationale clause, (12f), would be ever rated positively. For the nonagentive

types, we only tested the atelic type, because we knew from the internet search that the nonagentive telic type was unlikely to be rated positively. As our main purpose was to see the difference between agentive and nonagentive THEME-NOM VN-*cwung* constructions, we compared each of the ratings on the agentive passive types, (12b) and (12c), with each of the ratings on the nonagentive passive types, (12d)-(12f). Finally, the active VN-*cwung* construction in (12a) was added to use as a reference point. As the ratings of other passive types were presumably lower than that of the active type, we could compare the former with the latter. All types, except for (12a), each had two tokens. An example of each type of test sentences is shown below. The examples in (13)-(18) were actually used in the questionnaire.

(13) Active (atelic agentive) transitive VN

Suweyteyn-un cikum choyko-seyywul-ul 75%-eyse 65%-lo
 Sweden-Top now maximum-tax-rate-Acc 75%-from 65%-to
kkulenayli-nun cakep-ul CINHAYNG-*cwung-i-ta*.
 lower-Prs operation-Acc carrying-out-during-Cop-Dec
 'Sweden is now in the process of lowering the maximum tax
 rate of 75% down to 65%.'

(14) Passive Agentive Atelic transitive VN with an agent phrase and a rationale clause

Pwulmyencung-ul wanhwa-ha-nun chilyopep-ul kaypal-ha-ki
 insomnia-Acc mitigate-Prs treatment-Acc develop-Noml
wyhayse Sewul Uytay-thim-ey-uyhay pwulmyencung
 in-order-to Seoul Med Univ-team-by insomnia
haykyel-chayk-i YENKWU-*cwung-i-pnita*.
 solution-Nom research-during-Cop-Pol
 'In order to develop a treatment that will mitigate insomnia, a
 solution for insomnia has been studied by a team at Seoul
 National University College of Medicine.'

(15) Passive Agentive Telic transitive VN with an agent phrase and a rationale clause

Kwukceyceck-in phyocwun-ul kaypalha-ki wyhayse
 international standard-Acc develop-Noml in-order-to

phyocwunhwa *kikwan-ey-uyhay* *phyocwun-i*
 standardizing organization-by standard-Nom
CWUNPI-cwung-ey *iss-ta.*
 preparing-during-at is-Dec

“In order to develop international standards, standards are being prepared by the standards committee.”

- (16) Nonagentive Atelic type (without an agent phrase or a rational clause)

Suphilpeku *ceycak* *dulama* “Falling Skies”-*ka*
 Spielberg production drama “Falling Skies”-Nom
KITAY-cwung-i-pnita.
 expectation-during-Cop-Pol

‘The drama produced by Spielberg “Falling Skies” is now being looked forward to.’

- (17) Nonagentive Atelic type with an agent phrase

Ku *kaswu-nun* *5-wuy-kwen-ey* *memwul-ko* *isse-se*
 that singer-Top 5th-place-range-in staying is-so
phayn-ey-uyhay *te* *noph-un* *swunwuy-lo-uy* *sangsung-i*
 fan-by more high-Prs rank-to-Gen rise-Nom
KITAY-cwung-i-pnita.

anticipation-during-Cop-Pol

‘That singer has been hanging in the range of 5th place and her ranking higher is anticipated by her fans.’

- (18) Nonagentive Atelic type with a rationale clause

Talu-n *salam-pota* *te* *na-un* *salm-ul*
 other people-than more good life-Acc
sal-ki *wuyhayse* *unthoy* *hwu* *chwungpwunhan*
 live-Noml in-order-to retirement after sufficient
ton-i *nama* *iss-ul-kka-ka* *KEKCENG-cwung-i-ta*
 money-Nom remaining is-Fut-Q-Nom worry-during-Cop-Dec
 ‘In order to live a better life than others, it is worried whether there will be enough money left after retirement.’

The figures in Table 2 below show the mean rating for each type. Note that the active VN-*cwung* sentence with an accusative theme in

(13) is rated 0.95 on average, under (a). The figures under (b) and (c) show agentive (either atelic or telic) THEME-NOM VN-*cwung* sentences with both an agent phrase and a rationale clause; they were rated marginally acceptable, with the former better than the latter type.

Table 2. Ratings of VN-*cwung* constructions by native speakers

Active	Passive	
(a) Agent, Atelic VN	(b) Agent, Atelic VNs	(c) Agent, Telic VNs
0.95	0.58	0.14
Passive		
(d) Experiencer, Atelic VNs	(e) Experiencer, Atelic VNs with an agent phrase	(f) Experiencer, Atelic VNs with a rationale clause
-0.28	-0.7	-0.88

In contrast, nonagentive THEME-NOM VN-*cwung* sentences were all rated negatively. They were rated -0.7 with an agent phrase, (e), -0.88 with a rationale clause, (f), or -0.28 with neither, (d). This shows first that agentive THEME-NOM VN-*cwung* sentences are marginally acceptable, (b) and (c). Although marginal, these passive agentive sentences were rated on the positive side of the scale rather than negative, which should have given rise to occurrences in the internet. The results also show that those instances of nonagentive THEME-NOM VN-*cwung* sentences found used in Table 2 are quite exceptional, as native speakers rated such sentences as very unnatural, (d), (e) and (f).

This subsection has shown the results of a questionnaire survey which showed that THEME-NOM VN-*cwung* sentences were rated marginally acceptable, particularly of the agentive atelic type, by native speakers, whereas those of the nonagentive THEME-NOM VN-*cwung* were all rated negatively.

3. Discussion

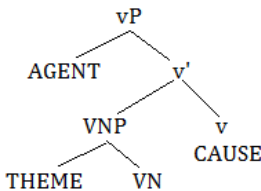
The preceding section has answered the first question whether transitive VNs appear passivized in the THEME-NOM VN-*cwung* pattern. There are such constructions, particularly with the agentive atelic transitive VNs, which native speakers rated acceptable albeit marginally. This section examines the second question addressing what kinds of

factors permit such passivization. The kind of transitive VNs that is likely to be passivized has been discussed briefly in the above, but what about light verbs? Are there any properties that make some light verbs more likely to facilitate or inhibit such passivization than others? Lastly, we will briefly touch upon those instances of nonagentive THEME-NOM VN-*cwung* sentences actually observed in the internet despite the distaste that native speakers had for such sentences. In the following, it will be discussed (i) what kind of light verbs permits transitive VNs to occur passivized in 3.1, (ii) what kind of transitive VNs is likely to occur passivized in 3.2, and (iii) if those occurrences of nonagentive THEME-NOM VN-*cwung* sentences are of the same kind as the agentive counterparts in 3.3.

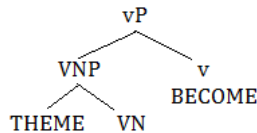
3.1. Light Verbs that Permit Passivization

Before addressing the question of what kind of light verbs permits transitive VNs to occur passivized, let us clarify the syntactic structure that we assume a VN and a light verb occur in. We assume that a Korean light verb and a VN occur in either configuration in (18), following Karimi-Doostan (2005), Folli, Harley and Karimi (2005), and Sato (to appear). The transitive light verb *ha-* occurs in where CAUSE is in (19a), and the unaccusative light verb *toy-* or *ha-* occurs in where BECOME is in (19b). Either light verb merges with an appropriate VN (the matching of a light verb and a VN is checked through a system of causativity feature matching as suggested by Harley and Noyer 2000); if a VN is transitive, a light verb licenses its external argument and assigns accusative case to its direct internal argument in the sense of Chomsky (2001), see Sato (to appear) for the detail.

(19) a. transitive structure



b. unaccusative structure



The light verb *ha-* in (1a) appears at the position of CAUSE in (19a)

and merges with the transitive VN *cheypho*, which appears as a VN and projects a VNP, a verbal noun phrase. The light verb assigns accusative case to *pemin* (where THEME is), and licenses the external argument *kyengchal* (where AGENT is). The exact nature of VN sentences with *cwung*, e.g., (2a), is not clear, but we assume that there is also a light verb, be it overt or covert, that assigns accusative case and licenses an external argument, if a VN is transitive. This is because a VN alone, as shown in (20), cannot assign verbal cases unless it is followed by *ha-*, *toy-*, or an aspectual element like *cwung*.

- (20) **Pemin-ul cheypho-ka elyep-ta.*³⁾
 culprit-Acc arrest-Nom is-difficult-Dec
 ‘Arresting the culprit is difficult.’ (Intended.)

The light verb that appears in VN constructions with *cwung* could be the aspectual element itself, i.e., *cwung*, or a null light verb, which has to be assumed any way for verbs like *ilk-* ‘read’ if we are to assume a light verb for all verbs (and VNs), following Chomsky (2001). Although it is not crystal-clear what functions as a light verb in VN-*cwung* constructions, it certainly is not *ha-*. For the sake of discussion, we assume in this paper that an aspectual element, e.g., *cwung*, can function as a light verb, which can never merge with a verb due to its sub-categorization [N \square], assuming VNs to be a nominal category.⁴⁾

It is, then, already clear from the above what kinds of light verbs allow transitive VNs to passivize. Any light verb other than *ha-* or *su-*, that is, the unaccusative verb *toy-*, an aspectual element like *cwung*, or a copula (in case of Japanese, an example for which will be given

3) An anonymous reviewer pointed out that sentences similar to (20) are treated as grammatical in Jun (2003). VNs sometimes appear to assign accusative case ‘alone’ in cases of (i) elision as in news headlines where VNs are not followed by anything, (ii) complex predicates discussed by Matsumoto (1996), and (iii) meta-linguistically quoted sentence fragments as in (i) below, all of which appeared in Jun (2003). We do not have space to discuss in detail but assume that there are special additional mechanisms at work that license VNs to assign verbal case in these exceptional cases.

(i) ??*Kyengchal-i pemin-ul cheypho’-ka poto-toy-ess-ta.*
 police-Nom culprit-Acc arrest-Nom report-become-Pst-Dec
 ‘Police arrests culprit’ was reported.’

4) Miyagawa (1991:9) assumes that the Japanese aspectual element *tyuu* ‘during’, in (5a), to be ‘an “Aspectual” functional category that takes the nominal clause as its complement.’

shortly), serve to induce passivization. We argue that it is the agent-orientation of *ha-* (or *su-*) that discourages transitive VNs from undergoing passivization. Any light verb whose heavy counterpart requires an agent subject, we assume, is agent-oriented. This is summarized in Table 3. *Ha-* in (b) and *su-* in (c) when merged with a transitive VN can only yield transitive structure, never passive, while *toy-* in (e), *cwung* in (f), *tyuu* in (g) and the Japanese copula in (h) when merged with a transitive VN can yield a passive sentence.

Table 3. How light verbs (LVs) match with NVs in Persian, Korean and Japanese

LV	VN/NV	Transitive VN		Unaccusative VN
		(Transitive NV)	(Passive NV)	(Unaccusative NV)
Agent-oriented LVs		Active	Passive	
(a) Persian LVs		Transitive	---	---
(b) Korean <i>ha-</i> ‘do’		Transitive	---	Unaccusative
(c) Japanese <i>su-</i> ‘do’		Transitive	---	Unaccusative
LVs without Agent-orientation				
(d) Persian LVs		---	Passive	Unaccusative
(e) Korean <i>toy-</i> ‘become’		---	Passive	Unaccusative
(f) Korean <i>cwung</i> ‘during’		Transitive	Passive	Unaccusative
(g) Japanese <i>tyuu</i> ‘during’		Transitive	Passive	Unaccusative
(h) Japanese copula		Transitive	Passive	Unaccusative
LV’s function		CAUSE	BECOME	BECOME

Folli, Harley and Karimi 2005, addressing the relationship between light verbs and their heavy counterparts in Persian, argued that the agentivity of heavy verbs are reflected in that of an event denoted by a complex predicate made up of a light verb and a NV (nonverbal element, which includes a VN, a noun, or a preposition that forms a complex predicate with a light verb). They stated that a light verb determines the agentivity (as well as other things, e.g., eventiveness) of a complex predicate consisting of a light verb and a NV. It follows from this that agentive light verbs, (a) in Table 3, merging with NVs must result in agentive events. The situation in Korean (and Japanese) differs from that of Persian in that the light verb *ha-* (or *su-* ‘do’), (b) and (c) in Table 3, when merged with an unaccusative VN, e.g., *na-kha* ‘fall’, inherits the unaccusativity of the VN and yields an un-

accusative sentence, as shown in Table 3. This shows that the light verbs *ha-* and *su-* have further undergone the process of grammaticalization to a light verb.

Such a light verb *ha-* in Korean, however, has to realize the external argument of a transitive VN. We argue that this comes from the fact that the heavy counterpart of *ha-* always function as agentive, and that such agent-orientation does not allow an external argument to remain suppressed, i.e., not realized in the syntax (Grimshaw and Mester 1988). The same situation can be observed in Japanese, the heavy counterpart of the light verb *su-* is always agentive, and the light verb *su-* cannot not leave the external argument of a VN left unrealized in the syntax. Actually no light verbs with agent-orientation can yield passive sentences, as the bar ‘---’ under *Passive* for (a)-(c) indicates in Table 3. In contrast, all non-agent-oriented light verbs can yield passive sentences when merged with transitive VNs or NVs, as indicated by *Passive* for (d)-(h).

For the system with the configurations in (19) to work, we have to posit two variants of agent-oriented *ha-* (or *su-*), i.e. CAUSE and BECOME variants, to derive a transitive or an unaccusative structure, and also the same two variants of non-agent-oriented *cwung* (or *tyuu*) to derive a transitive, passive, or unaccusative structure. A CAUSE variant yields a transitive sentence with a transitive VN (activating its suppressed external argument), and a BECOME variant yields either an unaccusative sentence with an unaccusative VN or, in case of non-agent-oriented light verbs, a passive with a transitive VN (leaving its external argument suppressed). The kind of variants needed to derive each of three structures, i.e., transitive, passive, and unaccusative, is shown at the bottom of Table 3. In this respect, our argument here may appear to be a simple statement of the facts, as one reviewer noted. But what we claim we have captured here is (i) the absence of *passive* for agent-oriented light verbs, as opposed to its existence for non-agent-oriented ones, as shown in Table 3, and (ii) implicational relationships that hold among the ways light verbs match with NVs, as shown in Table 4.

Table 4. Subset relationships

Agent-oriented LVs	Persian LVs (a)		<i>ha-</i> (b), <i>su-</i> (c)
functions	CAUSE	⊂	CAUSE BECOME
Non-agent-oriented LVs	Persian LVs (d), <i>toy-</i> (e)		<i>cwung</i> (f), <i>tyuu</i> (g), ...
functions	BECOME	⊂	BECOME CAUSE

One of the implicational relationships summarized in Table 4 is that the agent-oriented light verbs in Persian, (a) in Table 3, form a proper subset of the agent-oriented light verbs in Korean and Japanese, (b) and (c), in the sense that the latter, (b) and (c), have two different functions, i.e., CAUSE and BECOME, while the former, (a), only have the CAUSE function. The second implicational relationship is that the Persian non-agent-oriented light verbs, (d), and Korean *toy-*, (e), which only have the BECOME function (yielding unaccusative and passive sentences), form a proper subset of the non-agent-oriented light verbs in (f)-(h), which have both CAUSE and BECOME functions (yielding unaccusative, passive, and transitive sentences).

One way to capture these observations, i.e., (i) the lack of passives for agent-oriented light verbs and (ii) these implicational relationships, formally is to treat the Korean and Japanese agent-oriented light verbs *ha-* and *su-* as polysemous with two functions, CAUSE and BECOME functions, and assume that these two functions are ordered with the CAUSE function as the initial choice and the BECOME function as second. These agent-oriented light verbs are interpreted as BECOME, if and only if the CAUSE function does not work for a VN. The ordering reflects the implicational relationship between (b)(c) and (a) observed across languages, as shown in Tables 3 and 4. This mechanism is required only of *ha-* and *su-* to account for their failure to derive passive sentences.

The above implicational relationships also account for lexical variation. First, the Persian agent-oriented light verbs, (a) in Table 3, only have the CAUSE function. Other agent-light verbs, e.g., *cwung* (b), have the BECOME function in addition to the CAUSE. Secondly, the Persian non-agent-oriented light verbs, (d) in Table 3, and Korean *toy-*, (e), only have the BECOME function. The other Korean and Japanese non-agent-oriented light verbs, (f)-(h), including *cwung* and *tyuu*, have

the CAUSE function in addition to the BECOME, as shown in Table 4. These are lexical idiosyncrasies, but they are regulated by the implicational relationships in Table 4.

It has been argued in this subsection that it is non-agent-oriented light verbs that can yield a passive sentence with a transitive VN, but that agent-oriented light verbs, i.e., light verbs whose heavy counterparts are agentive, cannot let the external argument of a transitive VN remain suppressed and, hence, have to realize it in transitive structure.

3.2. Transitive VNs that Undergo Passivization

This subsection discusses what kinds of transitive VNs are likely to occur passivized. This might appear relatively uncontroversial, that is, as shown in Table 1, transitive VNs of the agentive type and of the atelic type are easier to be passivized than others, with agentivity playing a more important role than telicity. The fact that agentive transitive VNs are more likely to be passivized than nonagentive ones is in keeping with other findings about passivizability in the literature. The fact that atelic VNs are more likely to be passivized than telic ones, however, is not. We focus on the latter point in this subsection.

Sato (to appear) pointed out that 68 Japanese transitive VNs that appeared passivized when followed by a copula, as in (21), out of 461 that he examined, almost all of them (98.5%) were agentive, and most of them (86.8%) telic rather than atelic.

- (21) *Keisatu ni-yotte hannin ga taiho da.*
 police by culprit Nom arrest Cop
 “The culprit was arrested by the police.”

Drawing on the transitivity scale of Hopper and Thompson (1980), he captured the above findings by stating that “the more characteristics a transitive VN has that match those illustrated in (9) [= (22)], the easier it is to occur passivized when followed by a copula or an aspectual element.” His characterization is similar to Ono’s (1997), whose generalization, however, was in more absolute formal terms.

- (22) An event in which some agent volitionally does some action which has an end point such that the patient is totally affected

(Hopper & Thompson 1980).

It is interesting, however, to note that Sato (to appear) stated in a footnote that (22) may be too strict for VN-*tyuu* sentences like (5b), presenting an example of passive sentence with an atelic transitive VN. We argue that the occurrence of THEME-NOM VN-*cwung* sentences on the whole follows the transitivity scale proposed by Hopper and Thompson, thus favoring agentive transitive VNs over non-agentive ones, but that the semantics of the aspectual element *cwung* ‘during’ discourages telic VNs from compounding with *cwung*. Note that VN-*cwung* requires the event denoted by a VN to have some duration, i.e., not punctual. For this reason, telic VNs, e.g. *phoki* ‘abandonment’, are rather semantically incompatible with the affix *cwung* due to the difficulty in interpreting the act of abandoning something as having some duration. As passivization alone induces degradation in grammaticality even in the case of atelic transitive VNs (compare 0.58 under (b) with 0.95 under (a) in Table 2), the semantic incompatibility between an aspectual element and a telic VN, on top of marginality that comes from appearing in passive VN-*cwung* patterns, we believe, must have degraded the acceptability of THEME-NOM VN-*cwung* of the telic type.

3.3. Passive Nonagentive VN-*cwung* Sentences in the Internet

Lastly, in this subsection we address those instances of nonagentive THEME-NOM VN-*cwung* sentences in the internet despite the fact that such sentences were rated negatively by native speakers.

It is not very clear to us why there are some occurrences of non-agentive THEME-NOM VN-*cwung* sentences despite native speakers’ negative ratings, but there seem to be some differences between agentive and nonagentive THEME-NOM VN-*cwung* sentences found in the internet, which show that some of the latter type (i.e., nonagentive THEME-NOM VN-*cwung* sentences found), at least, may not be examples of passive sentences. We speculate that some of those non-agentive THEME-NOM VN-*cwung* sentences found are different from their passive agentive counterparts in that the former (the nonagentive THEME-NOM VN-*cwung* ones) can license an Experiencer external argument, while the latter can only have an adjunct agent phrase. That

is, although the external argument of those agentive THEME-NOM VN-*cwung* sentences like (14) remains suppressed and can only be associated with an adjunct agent phrase, there are some pieces of evidence that indicate that the external argument of nonagentive THEME-NOM VN-*cwung* sentences like (16) is actually activated.

First, note the contrast between *chayk-i kitay-cwung* ‘the book is expected’ and *chayk-i sayong-cwung* ‘the book is being used’: the people expecting the book are likely to include the speaker, while its users are unlikely to do so. Secondly, 14 instances (out of 88, 15.9%) of nonagentive THEME-NOM VN-*cwung* sentences were found cooccurring with an external argument, as in (23), while there was only one (out of 777, 0.1%) found with agentive VNs. Thirdly, there was one nonagentive THEME-NOM VN-*cwung* sentence, (24), which had a subject honorific agreeing with the external argument; no such case was found for agentive VNs.

- (23) *Ce-to chayk-i kitay-cwung-i-pnita*
 I-too book-Nom expectation-middle-Cop-Pol
 ‘I am also looking forward to the book.’
http://www.drawinglife.net/hb82/bbs/zboard.php?id=clap-rere&page=62&select_arrange=headnum&desc=asc&category=&sn=off&ss=on&sc=on&keyword=&sn1=&divpage=1&PHPSESSID=94b14e0ecfcf46bfbaf30bc9cf4934b9, accessed on February 23, 2013)

- (24) *Sinhon yehayng-ci-ka kekceng-cwung-i-si-la-kwu*
 honeymoon-trip-site-Nom worry-middle-Cop-Hon-Dec-Quot
 yo?
 Pol
 ‘You mean you are worried about the honeymoon destination?’
 (<http://blog.naver.com/PostView.nhn?blogId=happyhoney1&logNo=80163097534>, accessed on February 27, 2013)

Here we presented a rather speculative interpretation of some of nonagentive THEME-NOM VN-*cwung* sentences found used in the internet despite native speakers’ negative ratings. That is, those nonagentive THEME-NOM VN-*cwung* sentences found used in the internet or at

least some of them are not instances of passives but are instances of transitive sentences with a nominative object and an external argument (Experiencer) activated and realized in the syntax.

4. Conclusion

It has been shown above that there are constructions in Korean where transitive VNs followed by an aspectual element, *cwung*, appear passivized, just like Japanese counterparts. The passivizability of transitive VNs seems to generally follow the transitivity scale of Hopper and Thompson (1980), with agentive VNs more likely to appear passivized than nonagentive ones. Unlike Hopper and Thompson's transitivity scales, however, atelic VNs are more likely to appear passivized than telic ones, which we assume to come from the semantics of the following durative aspectual element, i.e., *cwung* 'during.' We have argued that an agent-oriented light verb, e.g., *ha-* 'do' or *su-* 'do', does not allow transitive VNs to appear passivized. In contrast, a light verb that lacks agent-orientation, such as an aspectual element, e.g., *cwung*, or a copula in case of Japanese, allows a transitive VN to appear passivized.

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