Passivization of Transitive Verbal Nouns in Korean: Factors that Facilitate Passivization in the VN-\textit{cwung} Construction

Yutaka Sato  
(International Christian University)  
Sungdai Cho  
(State University of New York at Binghamton)


This paper investigates whether transitive verbal nouns (VNs) can appear passivized without \textit{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 \textit{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 \textit{ha- ‘do} never allow such passivization.

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

1. Introduction

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

(1) Transitive VN followed by ha- or su- 1
a. *Kyengchal-i*  *pemin-ul*  *CHEYPHO-(lul)*  *hay-ess-ta*. (K)
   police-Nom  culprit-Acc  arrest-Acc  do-Pst-Dec
b. *Keisatu*  *ga*  *hannin*  *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*  *pemin-ul*  *CHEYPHO-cwung-ey*,  *ku*  *sako-ka*  *na-ss-ta*. (K)
      police-Nom  culprit-Acc  arrest-during-at  that  accident-Nom  happen-Pst-Dec
b. *Keisatu*  *ga*  *hannin*  *o*  *TAIHO-tyuu*  *ni*  *ziko*  *ga*  *oki-ta*. (J)
      Police Nom  culprit Acc  arrest-during at  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)*  *hay-ess-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).

    owner-Nom shop-Acc expansion-do-Pst-Dec
    ‘The owner expanded his shop.’

    b. Kakey-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. Purozyekutotimu 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,…’
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 passivehood 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 theaspectual 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. 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 moknok “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), ywuci ‘preserving’ (2276), pikyo ‘comparison’ (2250), yenkwu ‘research’ (2152), cosa ‘survey’ (1844), swuhayng ‘carrying out’ (1451), chwukwu ‘pursuit’ (1408), kemtho ‘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 passivizable 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 agentive 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), kekceng ‘worry’ (1698); Mean frequency (7783), Mean frequency without saygkak (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 sayngkak, 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

<table>
<thead>
<tr>
<th></th>
<th>Agentive</th>
<th>Nonagentive (Experiencer)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Atelic</td>
<td>Telic</td>
</tr>
<tr>
<td>1) sayong</td>
<td>90</td>
<td>inceng 2</td>
</tr>
<tr>
<td>2) iyong</td>
<td>21</td>
<td>hwakin 27</td>
</tr>
<tr>
<td>3) yokwu</td>
<td>71</td>
<td>kyelceng 7</td>
</tr>
<tr>
<td>4) ywuci</td>
<td>112</td>
<td>cicek 0</td>
</tr>
<tr>
<td>5) pikyo</td>
<td>3</td>
<td>palphyo 40</td>
</tr>
<tr>
<td>6) yenkwu</td>
<td>69</td>
<td>ceysi 2</td>
</tr>
<tr>
<td>7) cosa</td>
<td>11</td>
<td>cwunpi 96</td>
</tr>
<tr>
<td>8) swuhayng</td>
<td>73</td>
<td>senthayk 4</td>
</tr>
<tr>
<td>9) chwukwu</td>
<td>0</td>
<td>phoki 0</td>
</tr>
<tr>
<td>10) kemtho</td>
<td>67</td>
<td>cengli 82</td>
</tr>
</tbody>
</table>

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.’
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 passivizibility, 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 (OBJACTIVE → 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:**

\[
\text{Yenkwu nonnmwun:i tayhakwen-sayng-ey uyhay i research paper-Nom graduate-student-by this}
\]

\[
saithu-eyse ti hana PALPHYO-cwung-i-ta. site-at one presentation-middle-Cop-Dec
\]

‘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:**

\[
\begin{align*}
\text{Chilyopep-} & \text{ul kaypalha-ki wihayse haykyel-chayk-i} \\
\text{treatment-Acc} & \text{ develop-to in-order solution-Nom} \\
\text{yenkwu-cwung-i-ta.} & \text{research-middle-Cop-Dec} \\
\end{align*}
\]

‘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.)

<table>
<thead>
<tr>
<th>Voice</th>
<th>Agentivity</th>
<th>Telicity</th>
<th>AP</th>
<th>RC</th>
<th>Tokens</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. active</td>
<td>agentive</td>
<td>atelic</td>
<td>---</td>
<td>---</td>
<td>1</td>
<td>(13)</td>
</tr>
<tr>
<td>b. passive</td>
<td>agentive</td>
<td>atelic</td>
<td>with AP</td>
<td>with RC</td>
<td>2</td>
<td>(14)</td>
</tr>
<tr>
<td>c. passive</td>
<td>agentive</td>
<td>telic</td>
<td>with AP</td>
<td>with RC</td>
<td>2</td>
<td>(15)</td>
</tr>
<tr>
<td>d. passive</td>
<td>nonagentive</td>
<td>atelic</td>
<td>---</td>
<td>---</td>
<td>2</td>
<td>(16)</td>
</tr>
<tr>
<td>e. passive</td>
<td>nonagentive</td>
<td>atelic</td>
<td>with AP</td>
<td>---</td>
<td>2</td>
<td>(17)</td>
</tr>
<tr>
<td>f. passive</td>
<td>nonagentive</td>
<td>atelic</td>
<td>---</td>
<td>with RC</td>
<td>2</td>
<td>(18)</td>
</tr>
</tbody>
</table>

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

Kwukceycek-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-<i>cwung</i> 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-<i>cwung</i> constructions by native speakers

<table>
<thead>
<tr>
<th></th>
<th>Active</th>
<th>Passive</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Agent, Atelic VN</td>
<td>0.95</td>
<td>0.58</td>
</tr>
<tr>
<td>(b) Agent, Atelic VNs</td>
<td></td>
<td>(c) Agent, Telic VNs</td>
</tr>
<tr>
<td>(d) Experiencer, Atelic VNs</td>
<td>-0.28</td>
<td></td>
</tr>
<tr>
<td>(e) Experiencer, Atelic VNs with an agent phrase</td>
<td>-0.7</td>
<td></td>
</tr>
<tr>
<td>(f) Experiencer, Atelic VNs with a rationale clause</td>
<td>-0.88</td>
<td></td>
</tr>
</tbody>
</table>

In contrast, nonagentive THEME-NOM VN-<i>cwung</i> 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-<i>cwung</i> 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-<i>cwung</i> 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-<i>cwung</i> sentences were rated marginally acceptable, particularly of the agentive atelic type, by native speakers, whereas those of the nonagentive THEME-NOM VN-<i>cwung</i> were all rated negatively.

### 3. Discussion

The preceding section has answered the first question whether transitive VNs appear passivized in the THEME-NOM VN-<i>cwung</i> 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 \hspace{1cm} b. unaccusative structure

The light verb *ha- in (1a) appears at the position of CAUSE in (19a)
and merges with the transitive VN *cheypo*, 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-* or *toy-* or an aspectual element like *cwung*.

(20) *Pemin-ul cheypo-ka elyep-ta.*

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 subcategorization [N __]. Assuming VNs to be a nominal category.

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 cheypo’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 “Aspeectual” 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

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

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., nakha ‘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

<table>
<thead>
<tr>
<th>Agent-oriented LVs</th>
<th>Persian LVs (a)</th>
<th>ha- (b), su- (c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>functions</td>
<td>CAUSE</td>
<td>⊂ CAUSE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-agent-oriented LVs</th>
<th>Persian LVs (d), toy- (e)</th>
<th>cwung (f), tyuu (g), …</th>
</tr>
</thead>
<tbody>
<tr>
<td>functions</td>
<td>BECOME</td>
<td>⊂ BECOME CAUSE</td>
</tr>
</tbody>
</table>

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 passivizibility 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 aspec-tual 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
Passivization of Transitive Verbal Nouns in Korean: ~

(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 nonagentive 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 nonagentive 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=claprerre&page=62&select_arrange=headnum&desc=asc&category = &s n = o f f & s s = o n & s c = o n & k e y-
     word=&sn1=&divpage=1&PHPSESSID=94b14e0eccecf46bfbaf
     30bc9cf4934b9, 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 argu-
ment (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 passivizibility of tran-
sitive VNs seems to generally follow the transitivity scale of Hopper
and Thompson (1980), with agentive VNs more likely to appear pas-
sivized than nonagentive ones. Unlike Hopper and Thompson’s tran-
sitivity scales, however, atelic VNs are more likely to appear passiv-
ized 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.

Acknowledgements

We are very grateful to all of those who took the time to answer our ques-
tionnaire and helped us collect their responses. We are also very thankful to
three anonymous reviewers for their valuable comments.

References

Architecture in Korean and English. Doctoral dissertation, University of
Wisconsin-Madison.
Doctoral dissertation, University of Hawaii.


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


Received: October 30, 2013
Revised version received: November 27, 2013
Accepted: November 30, 2013