A Functional Analysis of Two By-passives in Japanese

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1. Introduction

There are two types of by-passives in Japanese, as shown in (1). In (1a), the by-phrase is realized as *ni* and thus (1a) is called the *ni*-passive. On the other hand, (1b) shows an example of the *niyotte*-passive because the by-phrase is realized as *niyotte*.

(1) a. Taro-ga Jiro-ni koros-are-ta.
Taro-NOM Jiro-by kill-PASS-PAST
'Ken was killed by Jiro.'
b. Taro-ga Jiro-niyotte koros-are-ta.
Taro-NOM Jiro-by kill-PASS-PAST
'Ken was killed by Jiro.'

(Imamura 2017: 83-84)

With regard to the functional distinction between *ni*-passives and *niyotte*-passives, many factors have been proposed: thematic roles (Fukuda 2011), subjectivity (Kinsui 1997; Kuroda 1979, 1985; Takami 2011), empathy (Kuno 1986, 1990), markedness (Imamura, Helgason, and Koizumi 2013), and temporality (Yamaguchi 2001), inter alia. Although various factors are related to the usage of two by-passives, their criteria are subjective and it is difficult to measure the strength of their effects on the basis of the corpus analysis. With respect to thematic roles, for instance, there is no clear-cut distinction between theme and patient. Unlike made-up examples, there are many ambiguous actual

examples in the corpus. Therefore, the present study converges on only two factors that are compatible with the corpus analysis: heaviness and animacy.

2. Heaviness

As for the use of English by-passives s, Seoane (2009) found that 70% of passive subjects were shorter than by-phrases (324 out of 463 examples). This fact signifies that the choice of the by-passive is affected by the relative weight of the constituents at least in English. Although heaviness seems to work on the choice between the by-passive and the active in English, it is unclear whether or not by-passives are strongly influenced by heaviness in Japanese. It is possible that heaviness has nothing to do with the syntactic choice of by-passives in Japanese. Although the 'long-before-short' order is more desirable than 'short-before-long' order in terms of processing costs in the Japanese language (Dryer 1980; Hawkins 1994; Imamura 2014, 2015, 2017a,, 2019; Saeki 1960; Yamashita and Chang 2001), this principle may be too weak to affect the use of by-passives. Furthermore, if the effect of heaviness is limited to only linear orders, it will not have a direct impact on grammatical function assignments. Note that grammatical function assignments can be separated from linear orders in Japanese, as pointed out by Tanaka et al. (2011: 321). For example, the grammatical function assignment related to the by-passive can be realized in the canonical sentence (2a) or the scrambled sentence (2b). It is conceivable that by-passives are not affected by heaviness in Japanese, because passivization may be relevant to grammatical function assignments but not to linear orders.

(2) a.ryōshi-ga bōto-niyotte hakob-are-ta.
fisherman-NOM boat-by carry-PASS-PAST
'The fisherman was carried by the boat.'
b.bōto-niyotte ryōshi-ga hakob-are-ta.
boat-by fisherman-NOM carry-PASS-PAST
'By the boat, the fisherman was carried.'

(Tanaka et al. 2011: 321)

Yet, if heaviness works on the level of grammatical function assignments, passivization will be affected by heaviness. Moreover, heaviness may have effects on the choice of by-passives because there is a subtle difference in length between the *ni*-phrase and the *niyotte*-phrase. The choice of by-passives may follow 'long-before-short' principle in order to facilitate the processing. However, heaviness may be at work only when one constituent is extremely heavier than the other one. Since by-passives are marked options (Dixon and Aikhenvald 1997; Givón 1979, 1990; Haspelmath 1990; Imamura, Helgason, and Koizumi 2013; Keenan 1985; Shibatani 1985; Svaltvik 1966), passivization itself is expected to incur the higher processing cost than its canonical counterpart (Gordon and Chan 1995). Recall that heaviness influences linear orders in order to reduce the processing cost (Hawkins 1994). Under these presuppositions, since changing voice requires high processing cost, heaviness only works when its merit offsets the demerit of changing voice.

In sum, it remains obscure so far whether heaviness has an influence on the use of by-passives in Japanese. To the best of my knowledge, there have been no studies on the relation of heaviness to Japanese by-passives. Is heaviness essential for the usage of by-passives in Japanese? Can heaviness contribute to the distinction between the *ni*-passive and the *niyotte*-passive? The present study makes an attempt to address these questions via the corpus analysis.

3. Animacy

Theoretically, it has been proposed that animacy has a great influence on the choice between the *ni*-passive and the *niyotte*-passive (Hoshi 1994, 1999; Inoue 1976; Iwasaki 2002; Kuno 1986, 1990; Kuroda 1979; Muraki 1991; Takami 2011; Yamaguchi 2001). Specifically, Inoue (1976) claims that the *ni*-passive demands the animate subject because it reflects the direct influence of the action performed by the agent of the subject whereas there is no such constraint in the *niyotte*-passive. Therefore, the *niyotte*-passive licenses inanimate subjects easily, while the *ni*-passive is normally inconsistent with inanimate subjects. In (3), for example, the animate subject *Tom* is directly influenced by the action conducted by the agent *John*. In consequence, only the ni-passive sentence is acceptable

because the subject is the animate noun.

(3) a. Tom-ga John-ni/*niyotte ke-rare-ta.
Tom-NOM John-by kick-PASS-PAST
'Tom was kicked by John.'

(Yamaguchi 2001: 229)

To summarize the above discussion, the usage of two by-passives in Japanese depends to a large degree on animacy. Yet, there are cases where the animacy constraint makes the wrong prediction about the acceptability of the *ni*- and *niyotte*-passives. Let take a look at the example (4). The passive subject is an inanimate noun *kabin* 'vase', but it is more compatible with the *ni*-passive than with the *niyotte*-passive. Verbs of change of state can form a *ni*-passive even when the subject is an inanimate referent. Note that *kowasu* 'break' belongs to verbs of change of state. Thus, the inanimate subject is allowed in the *ni*-passive in (4).

(4) kabin-ga John-ni/?niyotte kowas-are-ta.
vase-NOM John-by break-PASS-PAST
'The vase was broken by John.'

Yamaguchi (2001: 230)

Although animacy contributes to the distinction between the *ni*-passive and the *niyotte*-passive, there are many crucial counter examples. This fact signifies that animacy constraint is not an absolute factor, showing that multiple factors should be taken into consideration in order to account for the difference between the *ni*-passive and the *niyotte*-passive. The related question is how strongly animacy constraint influences the choice between two by-passives. In order to address this question, the present corpus analysis calculates the strength of animacy constraint on the basis of the frequency.

3.Corpus Analysis of *Ni*- and *Niyotte*- Passives in Heaviness and Animacy

3.1. Basic Purposes

My objective is to calculate the effects of heaviness and animacy on the choice between the *ni*-passive and the *niyotte*-passive. There are three questions related to this analysis. The first question is whether heaviness can be a major determinant of by-passives in Japanese. If heaviness affects the choice of two by-passives, the second question will arise: does heaviness have an influence on the the *ni/niyotte* distinction? The third question is how strongly animacy affects the choice of the by-passives.

3.2. Method

3.2.1. Corpus Data

Balanced Corpus of Contemporary Written Japanese (namely, BCCWJ) is used so as to collect related examples. BCCWJ is designed to be representative of contemporary written Japanese by including 100 million words from various materials. The samples were extracted randomly in order to maximally represent the population of contemporary written Japanese.

3.2.2. Materials

The materials utilized comprise the six conditions: $S_{NOM}NP_{Ni}V$, $S_{TOP}NP_{Ni}V$, $S_{NOM}NP_{Niyotte}V$, $S_{TOP}NP_{Niyotte}V$, $S_{NOM}O_{ACC}V$, and $S_{TOP}O_{ACC}V$.

3.2.3. Procedures

Regarding the measurement of heaviness and animacy, this analysis conformed to the criteria exemplified in Imamura (2019). There were three steps in the present corpus analysis. Firstly, the morae of the passive subjects and the by-phrases (*ni*-phrase or *niyotte*-phrase) were calculated for passive conditions . For the active conditions, the morae of the subjects and the objects were measured. Secondly, both the passive subjects and the by-phrases were classified into animate or inanimate. Thirdly, a series of t-tests were performed for heaviness and Chi-square tests were conducted for calculating the strength

of animacy.

3.3. Results

Table 1 Tokens distribution of the NPs in terms of animacy and morae for each sentence type

Sentence Types	Grammatical Functions	Number		Morae	
		Animate	Inanimate	M	SD
SNOMNPNiV	S	64	36	10.39	8.23
	by	63	37	7.49	4.28
STOPNPNiV	S	66	34	8.37	6.87
	by	65	35	8.71	5.28
SNOMNPNiyotteV	S	19	81	14.69	11.01
	by	49	51	12.91	6.23
STOPNPNiyotteV	S	9	91	11.86	9.78
	by	36	64	15.25	7.09
SNOMOACCV	S	83	17	10.68	10.92
	O	9	91	10.33	10.82
STOPOACCV	S	90	10	8,38	5.88
	O	7	93	11.35	8.97

A series of t-tests were conducted for the average values of morae. With regard to the morae within by-passives, passive subjects were significantly longer than by-phrases in SNOMNPNiV ($t(198)=3.13$, $p<.01$) and passive subjects were significantly shorter than by-phrases in STOPNPNiyotteV ($t(198)=2.81$, $p<.01$), but there was no significant difference between passive subjects and by-phrases in STOPNPNiV and SNOMNPNiyotteV.

Regarding the morae of the logical objects, SNOMNPNiyotteV was significantly longer than SNOMNPNiV ($t(198)=3.13$, $p<.01$), SNOMOACCV ($t(198)=2.82$, $p<.01$), and STOPOACCV ($t(198)=2.35$, $p<.05$), but there was no significant difference among SNOMNPNiV, STOPNPNiyotteV, SNOMOACCV, and STOPOACCV. In addition, there were marginal differences between SNOMNPNiV and STOPNPNiV ($t(198)=1.88$, $p=.06$) and between SNOMNPNiyotteV and STOPNPNiyotte ($t(198)=1.92$, $p<.06$). Furthermore, STOPNPNiV were significantly shorter than SNOMNPNiyotteV ($t(198)=4.87$, $p<.01$) and STOPNPNiyotteV ($t(198)=2.92$, $p<.01$). However, there was no significant difference among STOPNPNiV, SNOMOACCV, and STOPOACCV.

Concerning the morae of the logical subjects, SNOMNPNiV was significantly

shorter than SNOMNPNiyotteV ($t(198)=7.19$, $p<.01$), STOPNPNiyotteV ($t(198)=9.40$, $p<.01$), and SNOMOACCV ($t(198)=2.72$, $p<.01$). However, there was no significant difference among SNOMNPNiV, SNOMOACCV, and STOPOACCV. Furthermore, STOPNPNiV was significantly shorter than SNOMNPNiyotteV ($t(198)=5.16$, $p<.01$) and STOPNPNiyotteV ($t(198)=7.42$, $p<.01$). Moreover, SNOMNPNiyotteV was significantly shorter than STOPNPNiyotteV ($t(198)=2.49$, $p<.05$) but significantly longer than STOPOACCV ($t(198)=5.30$, $p<.01$). The difference between SNOMNPNiyotteV and SNOMOACCV was only marginally significant ($t(198)=1.78$, $p<.08$). Finally, STOPNPNiyotteV was significantly longer than SNOMOACCV ($t(198)=3.51$, $p<.01$) and STOPOACCV ($t(198)=7.48$, $p<.01$).

A series of chi-square statistical tests were performed on the distribution of animate and inanimate nouns. Within by-passives, the frequency of animate nouns was significantly higher than that of inanimate nouns in the subject of SNOMNPNiV ($\chi^2(1)=7.84$, $p<.01$) and STOPNPNiV ($\chi^2(1)=10.24$, $p<.01$) and in the by-phrase of SNOMNPNiV ($\chi^2(1)=6.76$, $p<.01$) and STOPNPNiV ($\chi^2(1)=9.00$, $p<.01$). In contrast, the frequency of inanimate nouns was significantly higher than that of animate nouns in the subject of SNOMNPNiyotteV ($\chi^2(1)=38.44$, $p<.01$) and STOPNPNiyotteV ($\chi^2(1)=67.40$, $p<.01$) and in the by-phrase of STOPNPNiyotteV ($\chi^2(1)=7.84$, $p<.01$). However, animate nouns occurred as frequently as inanimate nouns in the by-phrase of SNOMNPNiyotteV ($\chi^2(1)=0.04$, $p=.84$). In terms of the frequency of animate nouns, by-phrases were higher than subjects in SNOMNPNiyotteV ($\chi^2(1)=13.23$, $p<.01$) and STOPNPNiyotteV ($\chi^2(1)=16.20$, $p<.01$) but there was no significant difference between the subject and the by-phrase in SNOMNPNiV ($\chi^2(1)=0.01$, $p<.93$) and STOPNPNiV ($\chi^2(1)=0.01$, $p<.93$). In terms of the frequency of inanimate nouns, subjects were higher than by-phrases in SNOMNPNiyotteV ($\chi^2(1)=6.82$, $p<.01$) and STOPNPNiyotteV ($\chi^2(1)=4.70$, $p<.05$), but there was no significant difference between the subject and the by-phrase in SNOMNPNiV ($\chi^2(1)=0.01$, $p<.91$) and STOPNPNiV ($\chi^2(1)=0.01$, $p<.90$).

Next, a chi-square test reached statistical significance on the distribution of the logical object ($\chi^2(5)=193.20$, $p<.01$). Therefore, a residual analysis was conducted. Consequently, it was demonstrated that the observed frequency

of the animate nouns was significantly higher than the expected frequency in SNOMNPNiV (r=8.45, $p<.01$) and STOPNPNiV (r=8.93, $p<.01$). In addition, the observed frequency of the animate nouns was lower than expected frequency in SNOMNPNiyotteV (r=-2.41, $p<.05$), STOPNPNiyotteV (r=-4.83, $p<.01$), SNOM OACC V (r=-4.83, $p<.01$), and STOP OACC V (r=-5.31, $p<.01$). Furthermore, the inanimate noun occurred less frequently than the expected frequency in SNOMNPNiV (r=-8.45, $p<.01$) and STOPNPNiV (r=-8.93, $p<.01$). Moreover, the inanimate noun occurred more frequently than the expected frequency in SNOMNPNiyotteV (r=2.41, p<.05), STOPNPNiyotteV (r=4.83, $p<.01$), SNOM OACC V (r=4.83, $p<.01$), and STOP OACC V (r=5.31, $p<.01$).

For the logical subject, a residual analysis was also performed because the results of the chi-square test came out statistically significant ($\chi^2(5)=89.22$, $p<.01$). The observed frequency of animate nouns was significantly lower than the expected frequency in SNOMNPNiyotteV (r=-3.51, $p<.01$) and STOPNPNiyotteV (r=-6.48, $p<.01$). In contrast, the observed frequency of animate nouns was significantly higher than the expected frequency in SNOM OACC V (r=4.27, $p<.01$) and STOP OACC V (r=5.87, $p<.01$). However, there was no significant difference in the number of animate or inanimate nouns between the observed frequency and the expected frequency in SNOMNPNiV and STOPNPNiV.

4. Discussion

4.1. Passivization and Heaviness

In Japanese, there is a preference for long constituents to come before short ones in order to reduce the processing costs. Therefore, if heaviness has an influence on passivization, passive subjects are considered to be generally heavier than by-phrases in Japanese. However, the results of the present corpus analysis have revealed that passive subjects are not heavier than by-phrases as a whole. To begin with, the passive subject was significantly shorter than the *niyotte*-phrase in STOPNPNiyotteV, which shows that the short constituent tends to come before the long one. This fact clearly contradicts the 'long-before-short' principle. Besides, there was no difference in the length between the passive subject and the by-phrase in STOPNPNiV and SNOMNPNiyotteV. Only SNOMNPNiV.

follows this principle. Taken together, the 'long-before-short' principle cannot give a unified account of the two by-passives.

In addition, heaviness seems not to contribute to the distinction between the *ni*-passive and the *niyotte*-passive. There is no general tendency that can distinguish the *ni*-passive from the *niyotte*-passive in terms of heaviness. First, there was no common properties between $S_{NOM}NP_{Ni}V$ and $S_{TOP}NP_{Ni}V$ in terms of morae; the passive subject was significantly longer than the *ni*-phrase in $S_{NOM}NP_{Ni}V$ whereas there was no significant difference between the subject and the *ni*-phrase in $S_{TOP}NP_{Ni}V$. In the same vein, there was no similarities between $S_{NOM}NP_{Niyotte}V$ and $S_{TOP}NP_{Niyotte}V$ in terms of morae; the passive subject was as long as the *niyotte*-phrase in $S_{NOM}NP_{Niyotte}V$, while the passive subject was significantly shorter than the *niyotte*-phrase in $S_{TOP}NP_{Niyotte}V$. Taken together, every by-passive construction behaved differently from each other. Although by-phrases were longer in the *niyotte*-passive than in the *ni*-passive, this result must have derived from the difference in the lengths between *ni* and *niyotte* themselves. Therefore, I conclude that heaviness does not have a direct impact on the choice of by-passives.

The question arises here about why heaviness has no influence on the use of by-passives. It has been demonstrated that passives are syntactically marked constructions across languages (Greenberg 1966; Trask 1979). Furthermore, passivization requires higher processing costs than its canonical equivalent (Gordon and Chan 1995). Taken together, passivization is a costly operation because it is a marked option. Recall that the 'long-before-short' order is selected in order to facilitate the processing. Considering these facts, changing voice due to the heaviness is not an efficient choice because passivization itself is a highly costly option.

4.2. Passivization and Animacy

Note that grammatical judgements cannot measure the strength of the interrelation between animacy and passive types with precision. This shortcoming has been overcome in the present study by using the corpus analysis and the degree of animacy effects was captured exactly. First, animate

subjects occurred more frequently in the *ni*-passive than in the *niyotte*-passive. Second, the frequency of inanimate subjects was higher in the *niyotte*-passive than in the ni-passive. These results support the claim that the ni-passive prefers animate subjects and the niyotte-passive favors inanimate subjects. However, it has been demonstrated that the animacy constraint is not an absolute factor because there were many counter examples in my data. For example, the *ni*-passive sentence (5a) licenses the inanimate subject *kono uta* 'this song' , although inanimate subjects are generally incompatible with *ni*-passive sentences. According to Takami (2011:30), when the *ni*-phrase is generic and has no perspective, the *ni*-passive permits an inanimate subject. Since the *ni*-phrase does not have its perspective in such a situation, the *ni*-passive does not violate the empathy hierarchy, which requires the subject to be more empathetic than non-subjects. In (5a), the *ni*-phrase *minshū* 'people' is a generic noun. Thus, the sentence (5a) does not transgress the empathy hierarchy and is hence acceptable. In the same fashion, the *niyotte*-passive sentence (5b) takes the animate noun *mentā* 'mentor' as its subject, although the *niyotte*-passives is considered to be more consistent with inanimate nouns than with animate nouns. The animacy constrains are frequenstic preferences in the usage of by-passives, not predictive principles.

(5) a. kono uta-ga minshū-ni oboe-rare-ta.
this song-NOM people-by remember-PASS-PAST
'This song was remembered by people.'

b. mentā-ga genrōin-niyotte shimekoros-are-ta.
mentor-NOM senate-by strangle-PASS-PAST
'The mentor was strangled by the senator.'

(BCCWJ)

With regard to the animacy of the logical objects, it has been demonstrated that the *ni*-passive is more animate than the *niyotte*-passive and its active counterpart. Note that the number of animate logical subjects in the *ni*-passive sentences SNOMNPNiV and STOPNPNiV (130 out of 200 examples) was higher than in the *niyotte*-passive sentences SNOMNPNiyotteV and STOPNPNiyotteV (28 out of 200

examples) and the active sentences SNOMOACCV and STOPOACCV (16 out of 200 examples). This result also supports the view that the animacy constraint is not an absolute factor that determines the choice between the *ni*-passive and the *niyotte*-passive completely. Rather, there seems to be a one-way restriction from the *niyotte*-passive to inanimate referents. More concretely, if the *niyotte*-passive is selected, the passive subject tends to be an inanimate referent (172 out of 200 examples). However, the inanimate subject does not guarantee that it belongs to the *niyotte*-passive. It can be the subject of the *ni*-passive. These relationships are weak implicational universals, which means that if a language has property X, then it also has property Y, but not vice versa. Considering *niyotte*-passives and inanimate referents from a view point of implicational universals, the *niyotte*-passive is compared to property X and inanimate referents correspond to property Y. In contrast, it seems that the *ni*-passive is freer than the *niyotte*-passive in terms of animacy. In fact, the *ni*-passive subject included 130 animate referents and 70 inanimate referents, while the *niyotte*-passive subject contained 172 animate referents and only 28 inanimate referents. This contrast can partly explain the distinction between the *ni*-passive and the *niyotte*-passive.

Having a look at two by-passives from a view point of animacy, animate subjects almost always belong to the *ni*-passive (130 out of 158 examples). In other words, if an animate referent is chosen as the passive subject, it tends to be realized as the *ni*-passive, not as the *niyotte*-passive. This relationship is also a weak implicational universal in the sense that there is a one-way restriction from animate subjects to *ni*-passives. By contrast, inanimate referents can be realized as passive subjects both in the *ni*-passive and the *niyotte*-passive relatively freely. Indeed, 70 examples (28.9%) are realized as the *ni*-passive and 172 examples (71.1%) are realized as the *niyotte*-passive. Taking the fact that the *ni*-passive is compatible with both animate and inanimate subjects, the *ni*-passive seems to be affected by pragmatic reasons. As shown in (6), for example, the *ni*-passive is preferable to the *niyotte*-passive because of the following reasons. To begin with, the main verb *appaku* 'press' is transitive but the logical subject *onaka* 'belly' is not a typical agent. Thus, passivization is chosen in order to weaken the transitive meaning. However, the *niyote*-passive

is not allowed when the verb is one with low transitivity. In consequence, the ni-passive is selected although the passive subject is inanimate.

(6) i-ga onaka-ni / ?-niyotte appakus-are-teiru.
istomach-NOM belly-by press-PASS-PROG
'I have a pressing feeling in my stomach.'

(adapted from BCCWJ)

From a view point of markedness, the *ni*-passive seems to be more unmarked than the *niyotte*-passive. The first reason is that 'animate-before-inanimate' order holds of the *ni*-passive in general but is not normally applied for the *niyotte*-passive. Note that there is a preference for animate constituents to come before inanimate ones. The second reason depends on the empathy hierarchies proposed by Kuno (1986, 1990, 2004). Since it is easier to empathize with animate subjects than with inanimate subjects, the *ni*-passive is expected to be more natural than the *niyotte*-passive in terms of empathy. The third reason is based on the historical development of the two by-passives. Kinsui (1997:762) proposed that 'the *ni*-passive is the passive indigenous to Japanese and the *niyotte*-passive arose through the influence of foreign translation'. Because of the above mentioned three reasons, the *niyotte*-passive is considered to be more marked than the *ni*-passive. It has been observed that unmarked constructions can be used appropriately in wider contexts than marked ones (Aissen 1992; Comrie1988; Imamura 2014, 2015, 2017a,b, 2019; Imamura, Sato, and Koizumi 2014, 2016; Kuno 1987, 1995; Koizumi and Imamura 2017; Koizumi et al. 2014). The usage of the *niyotte*-passive is considered to be more severely restricted than that of the *ni*-passive because of its markedness. For example, Kinsui (1997: 764) claims that 'the content of a *niyotte*-passive sentence must be suitable for the solemn style'. There seems to be a stylistic constraint on the use of the *niyotte*-passive. The functional constraints other than animacy will be explored in future works.

5. Conclusion

The present study has scrutinized the effects of heaviness and animacy on

two by-passives in Japanese. The first basic finding is that heaviness does not contribute to the syntactic choice among the active, the *ni*-passive, and the *niyotte*-passive at all. Thus, I conclude that heaviness is not a main determinant of two by-passives. The second finding is that animacy works on the choice between the *ni*-passive and the *niyotte*-passive. To be more concrete, the *ni*-passive prefers animate subjects while the *niyotte*-passive favors inanimate subjects. This result partly verifies the validity of the observation made by previous studies. However, the correlation between animacy and passive types is not absolute. Therefore, I propose that the *ni/niyotte* distinction is affected by multiple factors.

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A Functional Analysis of Two By-passives in Japanese

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On the basis of the corpus analysis, the present study has scrutinized the effects of heaviness and animacy on the *ni/niyotte* distinction in Japanese. In consequence, it has been demonstrated that heaviness does not influence the syntactic choice among the active, the *ni*-passive, and the *niyotte*-passive at all. In contrast, animacy has an impact on the choice between the *ni*-passive and the *niyotte*-passive. More concretely, the *ni*-passive relatively prefers animate subjects whereas the *niyotte*-passive normally favors inanimate subjects. This result partly verifies the validity of the observation made by previous studies. Yet, the correlation between animacy and passive types is not so strong. Based on this fact, I propose that the choice between the *ni*-passive and the niyotte-passive is determined by multiple factors.

Keywords: passive, Japanese, animacy, heaviness, corpus