

A Variationist Approach to a Grammaticalized Motion Verb of Japanese*

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1. The aim of the study

Phonetic reduction is a salient phenomenon showing a certain morpheme being in course of grammaticalization, in which two forms (unreduced and reduced) coexist as variants. Japanese *-te* conjunctive constructions, too, have undergone such a linguistic variation. However, research on the cause of the variation has not been fully conducted thus far.

This study focuses on the grammaticalized motion verb construction *-te-iku* ‘-CON-go’, and aims at a) showing that three different effects (stylistic, linguistic, and psychological ones) govern the contraction of this morpheme, and b) arguing that the bimoraic foot constraint underlies the bimoraic verbs’ preference for the contracted variant *-te-ku*. Taking both linguistic and social factors into account, this variationist analysis shows that the contraction is largely governed by morphological and phonological factors rather than by the semantic congruity hypothesis as maintained in Shibatani (2007a,b).

2. The *-te-iku/-te-ku* variation

The linguistic variable in question is (*-te-iku*), the grammaticalized form of the motion verb *iku* ‘go’ of Japanese. There exist two different variants for this variable as in (1). Judging from Matsumura’s (1998) description, *-te-iku* in (1a) is the conservative variant and *-te-ku* in (1b) is the innovation.

- (1) a. Kiri-ga hare-te-iku to, Fujisan-ga araware-ta.
fog-NOM disperse-CON-go as, Mt. Fuji-NOM appear-PAST
‘As the fog is dispersing, Mt. Fuji came out.’
- b. Kiri-ga hare-te-ku to, Fujisan-ga araware-ta.
fog-NOM disperse-CON-go as, Mt. Fuji-NOM appear-PAST
‘As the fog is dispersing, Mt. Fuji came out.’

3. Previous studies and their problems

Notwithstanding rich studies on the grammaticalized form at issue (Morita 1968, Yoshikawa 1976, Imani 1990 and others), the process of its grammaticalization has been outside their scope. Relevant studies are Shibatani (2007a,b) and Yoshida (2012), which I discuss below.

Shibatani (2007a,b) states that semantic congruity plays a crucial role in the grammaticalization of motion verbs. Specifically, *-te-iku* following a manner-of-motion verb (e.g., *arui-te-iku* ‘walk-CON-go’) is less grammaticalized, while the one following an action verb (e.g., *tabe-te-iku* ‘eat-CON-go’) is more grammaticalized. The *-te* conjunctive form which follows a location-change verb (e.g., *de-te-iku* ‘exit-CON-go’) locates in between these two (2a-c). His Google-based survey result confirms this line of argumentation and the rate of contraction increases accordingly (Table 1). Yoshida (2012) also supports this argument.

- (2) a. Taro-ga gakkô e arui-te-it-ta.
 Taro-NOM school to walk-CON-go-PAST
 ‘Taro walked to school.’
- b. Taro-ga gakkô-o de-te-it-ta.
 Taro-NOM school-ACC exit-CON-go-PAST
 ‘Taro went out of school.’
- c. Taro-ga kêki-o tabe-te-it-ta.
 Taro-NOM cake-ACC eat-CON-go-PAST
 ‘Taro ate the cake (and went away).’

<i>arui-te-iku=to</i>	328,000	<i>de-te-iku=to</i>	58,200	<i>tabe-te-iku=to</i>	17,400
<i>arui-te-ku=to</i>	956	<i>de-te-ku=to</i>	637	<i>tabe-te-ku=to</i>	751
‘walk-go=when’	0.003%	‘exit-go=when’	0.01%	‘eat-go=when’	0.04%

Table 1: Contraction of *-iku* to *-ku* (adopted from Shibatani (2007a: Table 6))

However, Shibatani (2007a) has two problems. First, it is doubtful that the rate of contraction and advancement of grammaticalization are in proportion, since the re-survey by the present author differs from his, showing that contraction becomes most preferable in the *-te-iku* with a location-change verb which should be intermediate in terms of their grammaticalization (Table 2). This inconsistency proves the Internet-based survey to be unreliable as Tanomura (2000) and Hattori (2004) warn, and calls for the re-examination with a more systematic database.

<i>arui-te-iku=to</i>	17,900,000	<i>de-te-iku=to</i>	8,610,000	<i>tabe-te-iku=to</i>	2,680,000
<i>arui-te-ku=to</i>	295,000	<i>de-te-ku=to</i>	535,000	<i>tabe-te-ku=to</i>	117,000
‘walk-go=when’	1.65%	‘exit-go=when’	6.21%	‘eat-go=when’	4.37%

Table 2: Google-based re-survey of Table 1 (retrieved on Dec. 7, 2012)

Secondly, it has been argued that the choice of a variant is subject to multiple (i.e. linguistic and social) factors (Weinreich, Labov and Herzog 1968); thus, an analysis that only considers the preceding verb’s lexical type can miss capturing the whole picture of the variation in question. This study aims to elucidate the nature of the *-te-iku/-te-ku* variation by taking both linguistic and social factors into consideration using a variationist approach.

4. Data and Method

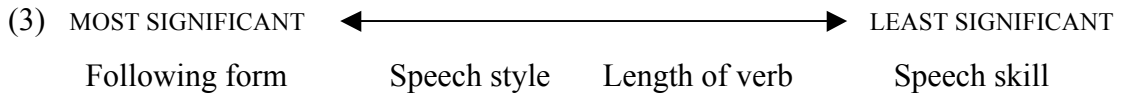
1,527 tokens (1,253 of *-te-iku* and 274 of *-te-ku*) analyzed in the present study were amassed from the Simulated Public Speech (SPS) of Tokyo Japanese speakers in Corpus of Spontaneous Japanese (NIJL 2004). SPS is a relaxed type of speech in the corpus and the speakers talk on a few topics (e.g., ‘What was the happiest event in your life?’) for 10-15 minutes each, providing a large amount of data for sociolinguistic analyses. Rich annotation both on linguistic and social factors makes a multi-faceted analysis possible. Three linguistic factors (length of verb, lexical type of verb, following form) and six social factors (gender, age, spontaneity of speech, speech style, speech skill, speech experience) were analyzed using a mixed-effects model using Rbrul (Baayen 2008, Johnson 2009), with verb and speaker as the random effects. The overall distribution of variants in question are shown in Table 3.

<i>-te-iku</i>	<i>-te-ku</i>	N
82.1%	17.9%	100.0%
(1,253/1,527)	(274/1,527)	(1,527/1,527)

Table 3: The overall distribution of variants in the present data

5. Result

The logistic regression analysis selected four statistically significant factors: length of verb, following form, speech style, speech skill. In contrast with Shibatani (2007a,b), the lexical type of the preceding verb turns out to be statistically insignificant, when treating verb as a random effect other things being equal (See Table 4 in Appendix). The effect magnitude of these four significant factors is as follows in (3). I will examine the relative strength of the factors within each factor group in turn.



5.1. Following form

The most significant factor found was the form of the verb ending. Of the two distinct verb endings, the *-ku* form (normal) and the *-masu* form (formal), it was found that the former was more likely to occur with the contracted variant *-te-ku*, than the conservative variant. Or stated differently, the vowel /i/ is more likely to be omitted with the normal verb ending, *-te-iku* ‘-CON-go’, than with the formal verb ending, *-te-iki-masu* ‘-CON-go-HON’ (Figure 1). This suggests that the innovative variant is more compatible with the informal style of speech.

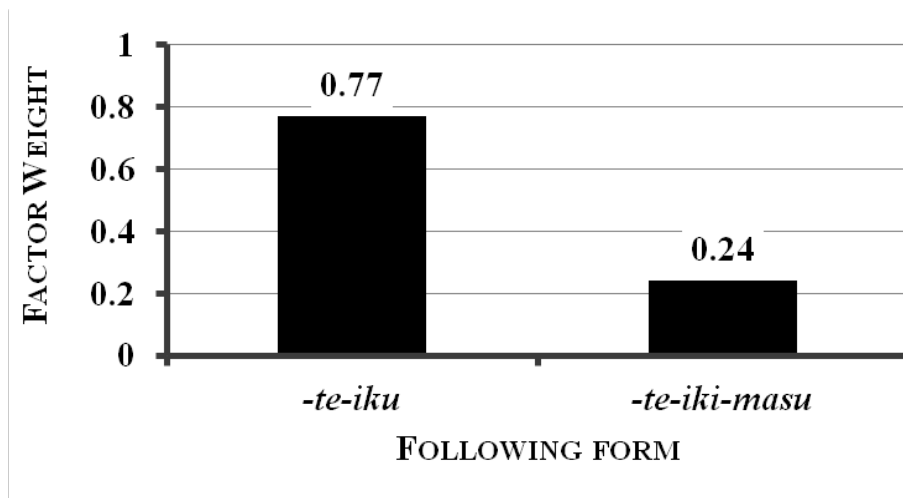


Figure 1: Comparison of factor weight: Following form

5.2. Speech style

Figure 2, showing the high compatibility of the innovative variant with informal speech style, corroborates the finding that contraction is apt to co-occur with the less formal *-te-iku*.

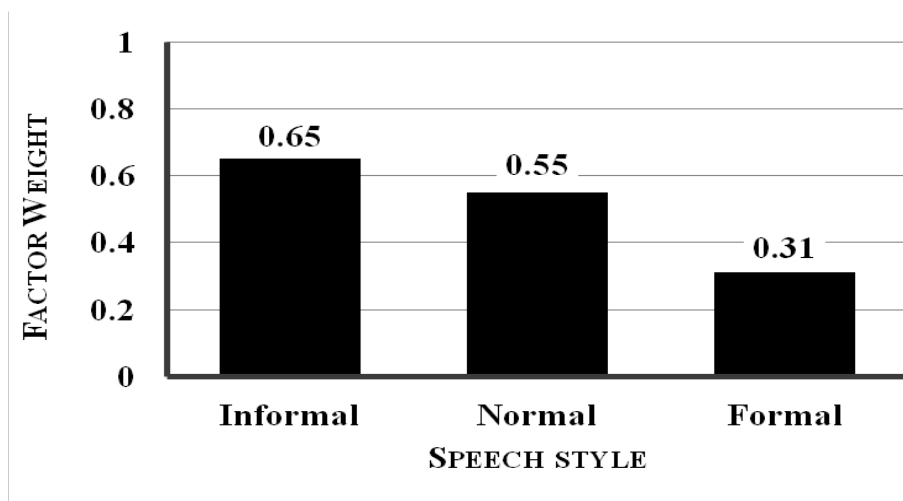


Figure 2: Comparison of factor weight: Speech style

5.3. Length of verb

Length of verb is the only linguistic factor pertinent to the variation in question. The fact that contraction is most likely to co-occur with a bimoraic preceding verb (e.g., *taberu* ‘eat’, *nomu* ‘drink’) which is only the second shortest possible length for a verb stem militates against the hypothesis that language change diffuses from the shorter verbs (Matsuda 1993) (Figure 3). I assume a bimoraic foot template (Poser 1990) underlies the bimoraic verbs’ preference for contraction.

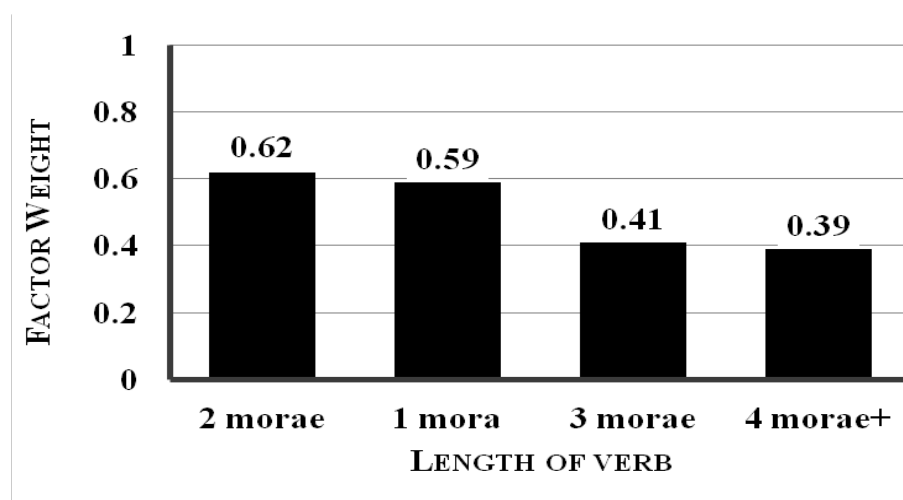


Figure 3: Comparison of factor weight: Length of verb

5.4. Speech skill

Speech skill refers to the speaker’s self-evaluation of him/her making a speech in front of others; i.e., it indicates his/her psychological attitude about speaking. Figure 4 shows that more innovative variants are chosen by those who consider themselves to be skillful speakers. This suggests that the psychological attitude of the speaker toward speaking affects the choice of one variant from another.

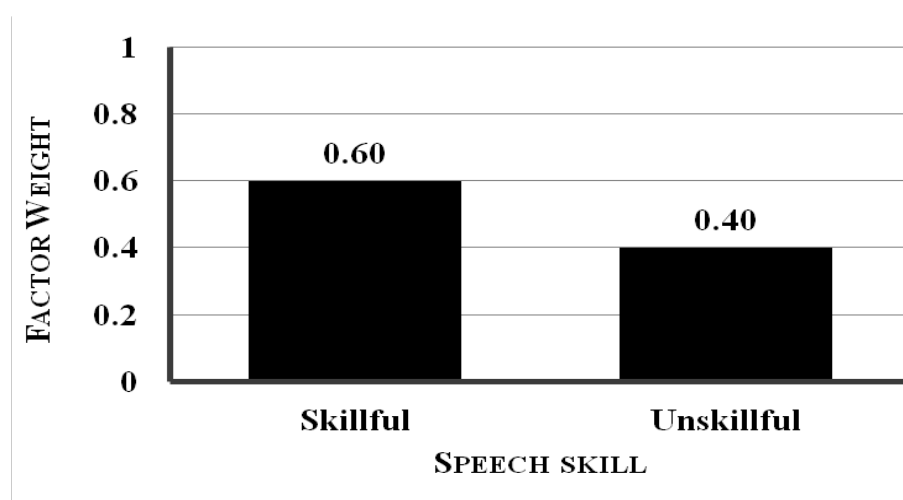


Figure 4: Comparison of factor weight: Speech skill

6. Discussion

The result of the present analysis poses two questions: a) how can the four significant factors be summarized in order to explain the *-te-iku/-te-ku* variation?, b) why does a certain verb length give preference to contraction?

On the first point, the four statistically relevant factors can be categorized into three different effects: stylistic, linguistic and psychological ones. Among them, following form and speech style are interrelated because the verb endings of Japanese reflect formality of discourse. The more formal the discourse becomes, the more likely the honorific *-masu* form appears, and vice versa. The fact that these two factors outrank the others thus means that the stylistic effect plays a major role in this linguistic variation. The statistical relevance of speech skill indicates the speaker's psychological attitude affects this variation as well.

With verb length being a significant linguistic factor, the fact that the innovative variant *-te-ku* is more compatible with a bimoraic preceding verb can be explained by the bimoraic foot template (Poser 1990). Once contraction occurs in *tabe-te-iku* 'eat-CON-go', for instance, the *-te* conjunctive form becomes *tabe-te-ku* (2 morae *tabe-* + 2 morae *-te-ku*). This 2-morae + 2-morae combination is the most favorable length based on the bimoraic foot template found in similar morphophonological phenomena (hypocoristic formation and compound noun shortening) discussed in Poser (1990) and Kubozono (1998). Thus, the bimoraic foot template in Japanese morphophonology underlies the linguistic effect on the *-te-iku/-te-ku* variation.

7. Conclusion

Contrary to Shibatani's (2007) view, the current research does not recognize that the semantic congruity of *iku* 'go' with the preceding verb affects the contraction at issue. Instead, this variationist analysis of the linguistic variable (*-te-iku*) argues for a diversified view which takes both linguistic and social aspects into account; that is, this study sees the *-te-iku/-te-ku* variation as a result of stylistic, morphophonological and psychological, rather than semantic, factors.

To conclude, I last mention some areas for further research. As the present study was limited to modern Tokyo Japanese, one area to extend this would be to consider the historical/geographical aspects of this variation. Another question to consider is whether the lexical frequency affects the choice of variants. Finally, it would be of interest to investigate the similar variation in other *-te* conjunctive constructions in Japanese. This, it is hoped, would lead to a fuller understanding of perhaps more general principles underlying the converb constructions in Japanese.

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Appendix

Deviance				1182.629
Df				20
Intercept				-2.846
Grand mean				0.179
Factors	Log Odds	Tokens (N)	% of <i>-te-ku</i>	Centered FW
Length of V1 (p=0.00453)	<i>Range: 23</i>			
2 morae	0.481	765	21.4	0.62
1 mora	0.357	231	17.3	0.59
3 morae	-0.381	347	13.5	0.41
4 morae and longer	-0.457	184	12.5	0.39
Lexical type of V1 (p=0.0596)				
Location change	0.399	142	24.6	[0.60]
Manner-of-motion	0.314	47	21.3	[0.58]
Change	0.145	259	17.8	[0.54]
Action	-0.399	438	15.8	[0.40]
Continuous	-0.459	641	17.8	[0.39]
Following form (p=5.71e-08)	<i>Range: 53</i>			
<i>-ku</i>	1.179	1380	19.6	0.77
<i>-masu</i>	-1.179	147	2.7	0.24
Gender (p=0.384)				
Male	0.142	677	21.7	[0.54]
Female	-0.142	850	14.9	[0.47]
Age (p=0.0547)				
60-69	0.730	134	27.6	[0.68]
40-59	-0.156	794	18.5	[0.46]
20-39	-0.574	599	15.0	[0.36]
Spontaneity of speech (p=0.424)				
Normal	0.208	244	13.1	[0.55]
High	0.197	1106	20.9	[0.55]
Low	-0.404	177	6.2	[0.40]
Speech style (p=0.00101)	<i>Range: 34</i>			
Informal	0.626	677	25.0	0.65
Normal	0.187	584	14.6	0.55
Formal	-0.813	266	7.5	0.31
Speech skill (p=0.0349)	<i>Range: 20</i>			
Skillful	0.397	368	21.7	0.60
Unskillful	-0.397	1159	16.7	0.40
Speech experience (p=0.6)				
More than 6 times	0.142	131	20.6	[0.54]
Less than 5 times	-0.142	1396	17.7	[0.47]

Table 4: Logistic regression of linguistic/social factors conditioning *-te-ku* of Tokyo Japanese

* I would like to thank Prof. Kenjiro Matsuda for his help and feedback with this project. I am grateful to the audience at NWA-V-AP2 for their insightful comments. I will need to consider these points in my further research on this morphological variation. Any faults are mine.