# D-6     Grammaticalization of motion verbs in Japanese: *iku* and *kuru* revisited[i]

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**Abstract**. As a result of grammaticalization two Japanese constructions containing a ventive (*kuru*) or an andative (*iku*) auxiliary verb have developed a wide range of usage types. The goal is to test a hypothesis that the more grammaticalized usage types appeared in the language earlier than the less grammaticalized ones. The results of a questionnaire survey and diachronic corpus analysis show that as far as each verb is considered separately the most grammaticalized usage types are the newest ones; however, if the two verbs are put into the same category the diachronic hypothesis does not hold. This indicates that the two verbs must have developed independently despite the fact that in certain usage types they can be viewed as members of a paradigmatic opposition in contemporary Japanese.

## 1. Introduction

Since the 1960s linguists of various backgrounds have intensively studied the Japanese constructions *te-iku* and *te-kuru* at several levels including phonetics (Arai 2013), morphosyntax (Shibatani 2007, 日高 2018), semantics (中山 2010) and pragmatics (澤田 2009) (to name but a few). Particular attention has been given to the grammaticalization of these constructions as it is reflected in contemporary Modern Japanese (cNJ henceforth). However, little is known with respect to their historical development and usage at earlier stages of the language. The only exceptions I am aware of are 井上 (1962) and 小島 (1998) who analyzed usages of the two verbs in Manyōshū and Genji Monogatari, respectively. Also, a research on the historical pragmatics of *iku* and *kuru* was recently conducted by 澤田 (2016). The present study combines synchronic and diachronic approaches in order to fill this lacuna.

The purpose of the research is to test whether there is a correlation between the approximate age of a certain usage type of *te-iku* and *te-kuru* on the one hand and the degree of its grammaticalization (as reflected in cNJ) on the other. In particular, it is expected that the more grammaticalized usage types should be the newer ones. The hypothesis is based on such well-known cases of grammaticalization as the verb *will* which in contemporary English can be used both as an auxiliary and a lexical verb, but the degree of its grammaticalization differs depending on the function it fulfils. To test this hypothesis the following steps will be taken. In the next section I will determine the degree of grammaticalization for four usage types (spatial deixis, durative, distributive and inverse). In order to compare them I will explore the acceptability of *-(r)are-* honorification of the two auxiliaries using a questionnaire survey (Section 2). After that I will compare these constructions with diachronically related ones in Old (OJ, 700–800), Early Middle (EMJ, 800–1200), Late Middle (LMJ, 1200–1600) and Modern (NJ, 1600–) Japanese. The data is collected from the Corpus of Historical Japanese (CHJ) and earlier studies on the subject matter (Section 3). In the Conclusion (Section 4) I will compare the results of the questionnaire survey and corpus analysis.

## 2. Questionnaire survey

### 2.1. Diagnostic test

As is well known, grammaticalization of an item is often accompanied by the reduction of its morphological paradigm, with full or partial loss of its inflectional forms. In Japanese the category of social deixis, also known as *exaltation* (Frellesvig 2010: 369), is traditionally viewed as an inflectional one. Indeed, most Japanese verbs have regular honorific (*sonkeigo*) and depreciative (*kenjōgo*) forms (just like forms for tense and mood). This allows us to consider them as part of the verbal paradigm. Both honorific and depreciative meanings can be expressed by suppletive stems and/or special affixes.

One way to build honorific forms of *iku* and *kuru* is by attaching the suffix *-(r)are-* to their irrealis stem (*mizenkei*). As implied in Ono (2000: 69), these forms are possible in all auxiliary usages of these verbs. However, according to 日高 (2018: 30), honorification of *iku* and *kuru* is more acceptable in their spatial usages, whereas in non-spatial ones it is the main verb which is more likely to undergo honorification. Given that grammatical acceptability is a continuum it should be expected that *-(r)are* honorification of *iku* and *kuru* will be less acceptable in more grammaticalized usage types of these auxiliaries. The detailed argumentation for employing this morphological operation as a diagnostic test is given in Kuznetsov (2020: 59–73).

*2.2. Experimental design*

The survey was created on Google Forms and conducted among Japanese native speakers. The goal of the experiment is to find out if there is any statistically significant difference in the acceptability of *iku*/*kuru* honorification across 4 usage types, namely, as spatial deixis (*kuru* (1a) and *iku* (1b)), durative (*kuru* (2a) and *iku* (2b)) , distributive (*iku* (3)) and inverse (*kuru* (4)) markers. Thus, each questionnaire contained 6 experimental conditions. In order to minimize irrelevant lexical factors, each condition was represented by 4 stimuli, 24 stimuli per questionnaire in total. In accordance with the number of conditions I created 6 questionnaires with different lexicalizations which were distributed in the Latin square design. Apart from that each questionnaire contained 24 fillers of 3 types: grammatical (8), ambiguous (8) and ungrammatical (8). I did not count the responses of the participants who made mistakes in more than 15% of the unambiguous fillers, i.e. in more than 2 of them.

Thus, in total each questionnaire contains 48 stimuli, which were presented in a unique order to every participant (the randomization was conducted automatically). The participants assessed the acceptability of the stimuli using a 5-point Likert scale. In order to prevent the participants from dividing the scale into unequal intervals, descriptions were only provided for its extreme categories with point 1 described as ungrammatical (*fushizen*) and point 5 as grammatical (*shizen*) (Cowart 1997: 70–71). Before proceeding into the main questionnaire, the participants completed three warm-up tasks. Some examples of the stimuli are given below. The complete list of the experimental stimuli is accessible via the following link (https://github.com/artemiyk83/*iku-kuru*/blob/master/Experiment_stimuli.xlsx).

(1a)　　*sensei-wa*　　　*arui-te-**ko-rare**-mash-ita*
　　　　teacher-TOP　　　walk-CVB-**COME-HON**-RESP-PST
　　　　'The teacher came here on foot.' (spatial deixis)

(1b)　　*sensei-wa*　　　*kissaten-o*　　*de-te-**ik-are**-mash-ita*
　　　　teacher-TOP　　　café-ACC　　exit-CVB-**GO-HON**-RESP-PST
　　　　'The teacher went out of the café.' (spatial deixis)

(2a)　　*sensei-wa*　　　*zutto*　　　*tsutsumashi-ku*　　*iki-te-**ko-rare**-mash-ita*
　　　　teacher-TOP　　　all.the.time　simple-ADV　　　live-CVB-**COME-HON**-RESP-PST
　　　　'The teacher has been always living a simple life.' (durative)

(2b)　　*Yamada-san-wa*　　*zutto*　　　*hitoride*　*iki-te-**ik-are**-ru*　　　　*deshō*
　　　　Yamada-Mr-TOP　　all.the.time　alone　　live-CVB-**GO-HON**-NPST　CONJ.RESP
　　　　'I guess Mr Yamada will go on living by himself.' (durative)

(3)　　　*kōchō-sensei-wa*　　*sotsugyō.shōsho-o*　*tsugitsugito*　　*watash-ite-**ik-are**-mash-ita*
　　　　principle-Mr-TOP　　diploma-ACC　　　one.after.another　hand.in-CVB-**GO-HON**-RESP-PST
　　　　'The principle handed in the diplomas one after another.' (distributive)

(4)　　　*kesa*　　　　*sensei-ga*　　*watashi-ni*　*denwa-o*　　*kake-te-**ko-rare**-mash-ita*
　　　　today.morning　teacher-NOM　I-DAT　　phone-ACC　call-CVB-**COME-HON**-RESP-PST
　　　　'Today morning the teacher called me.' (inverse)

*2.3. Results*

The questionnaire was completed by 64 participants (26 men and 38 women). The youngest of them is 20 and the oldest — 63 years old. The standard deviation from the mean age (29) is 11 years. I did not count the responses of four participants who made mistakes in more than 15% of the unambiguous fillers, one participant whose mean acceptability judgement was 5, and one participant who was not a Japanese native speaker. Thus, in total I counted responses of 58 participants. The mean values of the acceptability judgements are shown in Table 1. For more detailed results see the following link (https://github.com/artemiyk83/*iku-kuru*/blob/master/Experiment%20results%20FV.xlsx).

Table 1. -(r)are- honorification of *iku* and *kuru* in various functions:
mean values of acceptability judgements in 6 questionnaires

| Usage type / Questionnaire | spatial deixis | | | durative | | | distributive | inverse |
|---|---|---|---|---|---|---|---|---|
| | *kuru* | *iku* | average | *kuru* | *iku* | average | *iku* | *kuru* |
| 1 | 3,9 | 4,2 | 4,0 | 4,2 | 3,9 | 4,0 | 4,1 | 3,2 |
| 2 | 3,8 | 3,7 | 3,7 | 4,3 | 3,5 | 3,9 | 3,6 | 2,9 |
| 3 | 4,2 | 3,7 | 3,9 | 4,7 | 3,9 | 4,3 | 3,8 | 3,4 |
| 4 | 3,8 | 3,8 | 3,8 | 3,8 | 3,7 | 3,7 | 3,6 | 2,9 |
| 5 | 3,6 | 3,9 | 3,8 | 4,3 | 4,0 | 4,1 | 3,7 | 3,1 |
| 6 | 4,6 | 3,6 | 4,1 | 3,8 | 3,5 | 3,6 | 3,1 | 2,6 |
| **Average** | **4** | **3,8** | **3,9** | **4,1** | **3,8** | **3,9** | **3,6** | **3** |

This survey was conducted in order to answer the following questions:

(5) Are there any statistically significant differences in the acceptability of -(r)are- honorification between usage types? If so, what are these differences?

(6) Is there a difference between *iku* and *kuru* within the same usage type? If so, what is the difference?

For statistical calculations the JASP software (JASP Team 2020) was used. To answer the questions in (5) I applied the one-way ANOVA test. Before that I transformed the results using the z-score transformation. This was done to avoid the so-called scale bias (Schütze, Sprouse 2013: 43). The test proved the differences between usage types to be significant ($F_{(5, 1386)} = 29,44$, $p = 0,001$). In order to find out which particular usage types are significantly different I conducted a post-hoc analysis with Tukey's HSD test. The results are shown in Table 2.

Table 2. Post-hoc analysis of differences between functions: mean values and d-Cohen effect
(significant differences ($p_{tukey} < 0,05$) are boldfaced)

| Usage types / Mean values | | durative (*kuru*) | spatial (*kuru*) | durative (*iku*) | spatial (*iku*) | distributive (*iku*) | inverse (*kuru*) |
|---|---|---|---|---|---|---|---|
| | | 4,1 | 4 | 3,8 | 3,8 | 3,6 | 3 |
| durative (*kuru*) | 4,1 | | | | | | |
| spatial deixis (*kuru*) | 4 | -0.126 | | | | | |
| durative (*iku*) | 3,8 | **-0.354** | 0.225 | | | | |
| spatial deixis (*iku*) | 3,8 | -0.256 | -0.136 | 0.076 | | | |
| distributive (*iku*) | 3,6 | **-0.459** | **-0.322** | -0.087 | -0.161 | | |
| inverse (*kuru*) | 3 | **1.007** | **0.870** | **0.645** | **0.690** | **0.584** | |

Thus, -(r)are- honorification of the auxiliary in the inverse usage is assessed as least acceptable among all the usage types. The honorification of *iku* in the distributive usage is assessed as significantly less acceptable than in other usages of *iku*. Finally, in the durative usage the honorification of *kuru* is assessed as more acceptable than that of *iku*.

To answer the questions in (6) I applied the two-way ANOVA test. The results show a significant difference between the two auxiliaries ($F_{(1, 924)} = 13,432$, $p < 0,001$) and no difference between the usage types ($F_{(1, 924)} = 0,083$, $p = 0,073$). Although the honorification of *kuru* was assessed as more acceptable than that of *iku* in both spatial and durative usages, a post-hoc analysis shows that the difference is only significant in the latter case ($p_{tukey} = 0,002$).

## 2.4. Discussion

The fact that -*(r)are*-honorification of both auxiliaries in spatial and durative usage is highly acceptable indicates that these usage types are the least grammaticalized ones. Despite the fact that the honorification of *kuru* is assessed as more acceptable in the durative than in the spatial usage, the post-hoc analysis shows that this difference is not statistically significant. According to previous studies, it is the spatial usage in which the two auxiliaries demonstrate the lowest degree of grammaticalization (日高 2018: 37; 住田 2011: 112–113). For the sake of brevity, I do not consider the spatial usage hereafter. The most grammaticalized usage types of *iku* and *kuru* (among those analyzed here) are the distributive and inverse ones, respectively. Crucially, the latter demonstrates a higher degree of grammaticalization than the former.

These results, as visualized in Figure 1.1 below (Section 4), are to a large extent consistent with those obtained by 日高 (2018: 37–38) via another morphosyntactic test. T. Hidaka assessed the acceptability of negation markers which, being semantically related to the main verb, are morphologically expressed on the auxiliary *iku* or *kuru*. Hidaka's study suggests that the ability for such "surrogate" negation, as it is called in Ono (2000), can be explained by reanalysis of the constructions which in turn is interpreted as a manifestation of grammaticalization. However, it appears more feasible to explain such phenomena with reference to decategorization of the auxiliary: since Haspelmath (1998) it has been widely accepted that reanalysis is neither necessary nor obligatory for grammaticalization.

These results are also compatible with the semantic analysis proposed by 住田 (2011). T. Sumida compared usage types of *kuru* with regard to the bleaching of three semantic components that constitute the meaning of the lexical verb *kuru*: motional, durative and cislocative. It is claimed that in the durative usage of *kuru* only the motional component is bleached, while in the inverse usage the durational component is also lost. The cislocative component is retained in all usage types.

## 3. Diachronic corpus analysis

### 3.1. The diachronic hypothesis

According to the diachronic hypothesis it is expected that the inverse should be the newest usage type among all, while the durative (*kuru*) should be the oldest non-spatial usage type. The distributive is expected to be the newest usage type of *iku*. Also, the distributive usage type is expected to be somewhat older than the inverse one. This hypothesis was tested by way of diachronic corpus analysis.

### 3.2. Old Japanese (700–800)

To the best of my knowledge, the only study of OJ constructions containing *yuku* and *ku* was conducted by 井上 (1962) who analyzes 201 entries of the two auxiliaries in Manyōshū. H. Inoue proposed five usage types: 1) "Change is gradually gaining momentum" (change); 2) "A situation emerges" (inchoative); 3) "A situation has been continuously developing" (durative); 4) "Continuation of a resultative state" (resultative); 5) "Motion followed or accompanied by another action" (spatial deixis) (井上 1962: 32). Thus, according to Inoue's classification the inverse and distributive usage types are not attested in Manyōshū. The corpus analysis of OJ data has only yielded such results that cannot be considered prototypical examples of the inverse usage types.

(7)  *wa-ga   sekwo-pa/      saki-ku    imasu   to/    kapyeri-**ku**          to/*
    I-GEN   beloved-TOP   safe-INF   be      COMP   return.INF-**COME**   COMP
    *ware-ni   **tuge-ko**-m-u/        pito-mo       **ko**-nu      kamo*
    I-DAT    tell.INF-**COME**-EMD-ADN   someone-FOC   **come**-NEG   Q
    'If only someone came and told me that my beloved is safe and will come back.'
    (Manyōshū, Book 11, song #2384)

The example (7) contains 3 tokens of the verb *ku*: it is used once as a lexical verb (*pito-mo **ko**-nu kamo* 'if only someone came') and twice as an auxiliary (*kapyeri-**ku*** 'come back' and *tuge-**ko**-m-u* 'who will tell me'). The last token is of particular interest: since the arrival of *pito* 'someone' is already expressed by the lexical verb (***ko**-nu kamo*) one might suggest that the function of *ku* in *tuge-**ko**-m-u* is to indicate the direction of the communicative act 'will tell **me**'

rather than spatial deixis 'will **come** to tell'. This might serve as indirect evidence of the inverse being nascent already in OJ, but there are still no prototypical examples of this usage type in Manyōshū.

### 3.3. Early Middle Japanese (800–1200)

As far as I know, the only study of *yuku* and *ku* in EMJ was undertaken by 小島 (1998) who analyzed the usage of the two auxiliaries in Genji Monogatari. To a large extent Kojima's classification resembles the one proposed by Inoue for Manyōshū except for the fact that the former author considered *yuku* and *ku* separately. Although Kojima does not mention either distributive or inverse usages of *iku* and *kuru*, there is a passage in Genji Monogatari that can be interpreted as an example of the inverse.

(8) *onodukara kakar-u    madusi-ki    atari    to      omopi      anadur-ite    ipi-**k**-uru*
    naturally   be.such-ADN poor-ADN    house   COMP    think.INF  despise-CVB   say.INF-**COME**-ADN
    '<…> considering this house to be a poor one, (the collectors) talked down (to the maids) <…>'
    (Genji Monogatari, Ch. 15 "A Waste of Weeds", dan 2)

The passage that immediately precedes the cited fragment tells about collectors **coming** to the house of Prince Hitachi's daughter in order to find out whether any of the furnishings were on sale. Thus, the interpretation of *ku* in *ipi-k-uru* as a spatial deixis marker is highly implausible, since the left context already contains the information that the subject had reached the place where the dialogue was held. Nonetheless it is impossible to rule out the spatial interpretation. A more convincing example of the inverse usage of *kuru* is found in a song from Kokinwakashū.

(9) *makura-yori/    ato-yori      kopi-no/     seme-**k**-ureba/*
    bedhead-ABL     bed.foot-ABL  love-NOM     attack-**COME**-COND
    *se-m-u       kata    na-mi       zo/    toko-naka-ni    or-u*
    do-EMD-ADN   way     absent-NML  FOC    bed-inside-LOC  be-ADN
    'When love strikes (me) from foot to head, I cannot help but lie in my bed.' (Kokinwakashū, song #1023)

Since the subject of *seme-k-ureba* 'when strikes (me)', is an abstract noun *kopi* 'love', here the possibility of spatial motion is fairly low, but there are several reasons to consider (9) an example of the inverse usage type. As advocated in 清水 (2010: 58–61), the inverse is semantically closely related to the inchoative except that it requires an agentive subject. Based on an ambiguous example that can be interpreted both ways, K. Shimizu suggested that the two functions might be diachronically related. At first sight, the abstract nature of the subject in (9) supports the inchoative interpretation 'starts to attack'. However, the verb *sem-u* 'attack' indicates that the subject here is personified and therefore agentive, which provides for an inverse reading. Although this personification also enables the spatial interpretation, there is another argument in favor of the inverse reading. As pointed out in 古賀 (2008: 252), affectedness of the participant corresponding to the deictic center is a characteristic feature of the inverse usage type. Therefore, the patient-like (affected) nature of the deictic center (me) in (9) supports the inverse interpretation. All the above taken into account, it is possible to view (9) as an ambiguous stage of the grammaticalization cline wherein a spatial deixis marker develops an inverse function via metaphorical extension (for similar examples in cNJ see 清水 2010: 56). Interestingly, this poem was repeatedly quoted in later texts such as a kyōgen play from "Toraakirabon Kyōgenshū" and a jōruri play "Yūgiri Awa no Naruto" by Chikamatsu Monzaemon.

### 3.4. Modern Japanese (1600–)

In the Corpus of Historical Japanese, which contains texts from 749 (Manyōshū) to 1947, there are 6 entries that can be unambiguously interpreted as examples of the distributive usage type. Here the term *distributive* denotes such a marker which combines the meanings of iterativity (event plurality) and distributivity (action distributed across multiple participants). The search input was as follows: *ichi_ichi_* OR *tsugitsugi* OR *junban* OR *zokuzoku* (within 7 units from the key word) + V.inf (within 2 units from the keyword) + *iku* OR *yuku* (lexeme, keyword). Words *ichi_ichi_*, *tsugitsugi* etc., meaning 'one after another' or 'in succession', are listed in 中山 (2010) as the adverbials that often occur in the distributive construction. The most recent entry is from an 1895 issue of the women's magazine Jogaku Zasshi.

(10)   *kono   bunshō  na-ki         shinbunshi-wa   kakki  na-shi*
       such    text       absent-ADN  newspaper-TOP  vigor  absent-FIN
      *zokuzoku-toshite       horobi-**yuk**-u*
      one.after.abother-ADV  die.out.INF-**GO**-NPST
      'Newspapers without such texts are lifeless. They die out one after another.' [CHJ]

Although the language of this otherwise liberal magazine preserves some archaic features of Classical Japanese (which is reflected by the fact that *yuku* attaches to the infinitive rather than the converb form of the main verb *horobi* 'die out'), the usage of *yuku* in the distributive function reflects some novel tendencies in the vernacular language of the time. Remarkably, the campaign for vernacularization of the written language, known as *genbun 'itchi*, had begun in the mid 1880s, i.e. about 10 years before the cited issue of Jogaku Zasshi was published. As a result of the campaign the vernacular form was adopted for most publications (except for official documents and some academic writings) by the 1920s (Frellesvig 2010: 380). This can account for the fact that the remaining 5 examples of the distributive are from a 1925 magazine (2 entries) and a 1945 textbook (3 entries).

## 4. Conclusion

The results of the questionnaire survey (Fig. 1.1) and corpus analysis (Fig. 1.2) partially corroborate the diachronic hypothesis: as far as each verb is considered separately the most grammaticalized usage types prove to be the newest ones (the inverse usage for *kuru* and the distributive usage for *iku*). However, if the two verbs are put into the same category the diachronic hypothesis does not hold: the inverse usage type, which is the most grammaticalized among all, seems to have developed at an earlier stage than the distributive type, which is synchronically less grammaticalized. This indicates that the two verbs must have developed independently despite the fact that in some functions, including the spatial and durative ones, they can be viewed as members of a single category in Modern Japanese.

Fig. 1. Degree of grammaticalization of the two cNJ constructions in various usage types (1) compared to the diachronic order in which these usage types appear in the corpus (2)
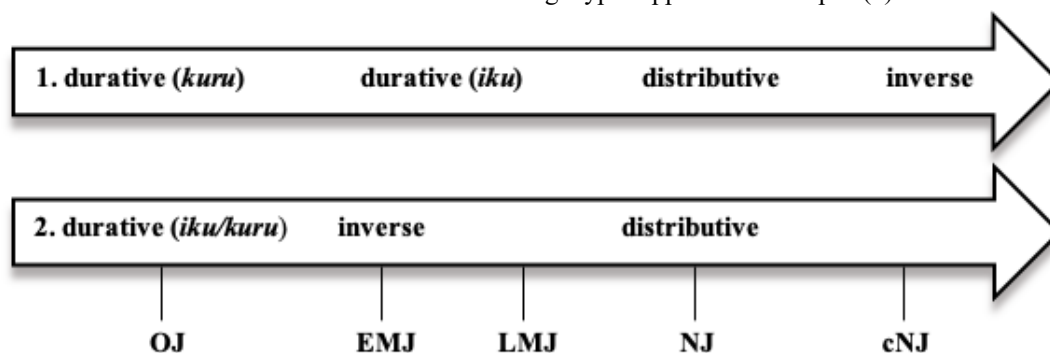


Thus, the present study shows that the synchronic degree of grammaticalization in a certain unit reflects the patterns of its diachronic development, but a paradigmatic relation between several units at a certain stage does not require any parallelism in their historical backgrounds.

## Abbreviations

ABL — ablative; ACC — accusative; ADN — adnominal; ADV — adverbial; COME — ventive; COMP — complementizer; COND — conditional; CONJ — conjectural; CVB — converb; DAT — dative; EMD — epistemic modality; FIN — conclusive; FOC — focal; GEN — genitive; GO — andative; HON — honorific; INF — infinitive; LOC — locative; NEG — negative; NML — nominalizer; NOM — nominative; NPST — nonpast; PL — plural; PST — past; Q — interrogative; RESP — respect; TOP — topic.

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