A Formal and Corpus-based Analysis of Grammaticalization of \( ik \) ‘go’ in Japanese

Fumihito Arai
Kobe Shoin Graduate School of Letters
February 23, 2015

1 Introduction

This formal and corpus-based study on the grammaticalization process of Japanese \( ik \) ‘go’ considers i) the interrelationship among \( yuk \) ‘go’, V-yuk ‘V-go’, and V-te-yuk ‘V-Con-go’, and ii) the cause of phonetic reduction in V-te-yuk. I will argue i) that the grammaticalization of Japanese \( ik \) is characterized by semantic bleaching of both \( yuk \) and \( te \), reanalysis of V-te-yuk, and renewal from V-yuk to V-te-yuk, and ii) that phonetic reduction in V-te-yuk is conditioned by linguistic and extralinguistic factors.

\textbf{Yuk, V-yuk, & V-te-yuk}

(1) \begin{itemize}
\item a. \textit{yuk (\( ik \)) ‘go’ (full verb)}
  \begin{verbatim}
  Ken-ga yamamiti-o \( yuk-u \).
  Ken-Nom mountain.road-Acc go-Pres
  ‘Ken goes along a mountain road.’
  \end{verbatim}
\item b. \textit{V-yuk ‘V-go’ (the infinitival form)}
  \begin{itemize}
  \item i. \textit{Ken-ga yamamiti-o hasiri-yuk-u kookee}
    \begin{verbatim}
    Ken-Nom mountain.road-Acc run-go-Pres scene
    ‘The scene of Ken running along a mountain road’
    \end{verbatim}
  \item ii. \textit{Hana-ga kare-yuk-u kookee}
    \begin{verbatim}
    flower-Nom die-go-Pres scene
    ‘The scene of a flower going to die’
    \end{verbatim}
  \end{itemize}
\item c. \textit{V-te-yuk (V-te-\( ik \)) ‘V-Con-go’ (the -te conjunctive form)}
  \begin{itemize}
  \item i. \textit{Ken-ga yamamiti-o hasit-te-yuk-u.}
    \begin{verbatim}
    Ken-Nom mountain.road-Acc run-Con-go-Pres
    ‘Ken runs along a mountain road.’
    \end{verbatim}
  \item ii. \textit{Hana-ga kare-te-yuk-u.}
    \begin{verbatim}
    flower-Nom die-Con-go-Pres
    ‘A flower is going to die.’
    \end{verbatim}
\end{itemize}
\end{itemize}
Phonetic reduction in **V-te-yuk**

(2) *Ensoku-e takusan okasi-o* \{*mot-te-ik-u/mot-te-k-u*\}.  
excursion-Dat many snack-Acc have-Con-go-Pres  
‘I am going to bring a lot of snacks on school excursion.’

**Overview of Grammaticalization of Yuk**

Table 1: An overview of the grammaticalization process of *yuk*.

<table>
<thead>
<tr>
<th>Old/Middle Japanese</th>
<th>Modern Japanese</th>
<th>Present-day Japanese</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>yuk</em></td>
<td><em>yuk/ik</em></td>
<td><em>yuk/ik</em></td>
</tr>
<tr>
<td><strong>V-yuk</strong></td>
<td><strong>V-yuk</strong></td>
<td><strong>V-yuk</strong></td>
</tr>
<tr>
<td>(productive)</td>
<td>(less productive)</td>
<td>(near-extinction)</td>
</tr>
<tr>
<td><strong>V-te-yuk</strong></td>
<td><strong>V-te-yuk/-te-ik</strong></td>
<td><strong>V-te-ik/-k</strong></td>
</tr>
<tr>
<td>(less productive)</td>
<td>(productive)</td>
<td>(reduction)</td>
</tr>
</tbody>
</table>

**Frameworks of Analysis**

1. Formal framework (Chapters 4 & 6)  

2. Corpus-based framework (Chapter 5)  

**Organization of Dissertation**

   Chapter 1  Introduction  
   Chapter 2  Previous Research and Locus of Problems  
   Chapter 3  Methodology  
   Chapter 4  Formal Analysis of Grammaticalization Process of *yuk* ‘go’  
   Chapter 5  Corpus-based Analysis of Phonetic Reduction in *V-te-yuk* ‘V-Con-go’  
   Chapter 6  Semantic Bleaching and Reanalysis in Grammaticalization of *yuk* ‘go’  
   Chapter 7  Conclusion
2 Previous Research and Locus of Problems

Deicticity of ik and its Difference from ku

- Ik denotes movement from the speaker towards a non-speaker, while ku ‘come’ denotes movement towards the speaker (Morita 1968: 75).

- The choice between ik and ku is based on the speaker’s “empathy”, the speaker’s identification with x participating in the event denoted by the sentence (Kuno 1978, 1987).

  \[ \text{Ik: } E(\text{agent of movement, the person at the starting point}) \geq E(\text{person at the arriving point}) \]
  \[ \text{Ku: } E(\text{person at the arriving point}) > E(\text{agent of movement, the person at the starting point}) \]

  (Kuno 1978: 253–254)

(5) a. Taroo-ga kinoo koko-ni ki-ta/*it-ta.
   Taro-Nom yesterday here-Dat come-Past/go-Past
   ‘Taro came/went here yesterday.’

b. Taroo-wa kinoo koko kara sikenzyoo-ni (*)ki-ta/*it-ta.
   Taro-Top yesterday here from test.site-Dat come-Past/go-Past
   ‘Taro*came/went to the test site from here.’

   (Kuno 1978: 254)

Auxiliarization of ik & Ambiguity in V-te-ik

- The varying degrees of auxiliarization of ik is due to the semantic relationship between ik and the preceding verb (Yoshikawa 1976, Teramura 1984).

- Lexical meaning of the preceding verb makes V-te-ik ambiguous (Morita 1968, 1994).

(8) a. Movement:
   i. Sequentiality of activity:
      \text{atume-te-ik ‘collect-Con-go’, oi-te-ik ‘put-Con-go’}
   ii. Simultaneity of activity and movement:
      \text{okut-te-ik ‘send-Con-go’, hakon-de-ik ‘carry-Con-go’}
   iii. Manner of motion:
      \text{arui-te-ik ‘walk-Con-go’, hasit-te-ik ‘run-Con-go’}
   iv. Single activity denoted as a result of compounding:
      \text{agat-te-ik ‘ascend-Con-go’, ori-te-ik ‘descend-Con-go’}


c. Disapperance: \text{usinaw-are-te-ik ‘lose-be-Con-go’, kie-te-ik ‘disappear-Con-go’}

d. Change in state: \text{ake-te-ik ‘dawn-Con-go’, usurai-de-ik ‘fade-Con-go’}

   (Morita 1994)
Formal Accounts of Semantics & Syntax of *ik* & *V-te-ik*

- Three elements crucial for the semantics of *ik* (Nakatani 2004, 2008, 2013)
  1. Directionality relative to the speaker’s location
     → *Ik* denotes movement from the speaker towards a non-speaker
  2. Entailment of the reaching event
     → The reaching event is not linguistically entailed. → cf. (20) and (21)
  3. Lexical encoding of the departure event
     → The departure event is lexically encoded. → (23)

(20) a. *Kare-wa koozi-genba-ni ki-1a.*
    he-Top construction-site-Dat come-Past
    ‘He came to the construction site.’

    b. *Sikasi, totyuu-de ziko-ni makikom-are, genba-ni itar-u koto-ga deki-nakat-ta.*
    ‘However, he couldn’t reach the site because he was caught up in an accident.’
    (Nakatani 2013: 202)

(21) a. *Kare-wa koozi-genba-ni itta.*
    he-Top construction-site-Dat go-Past
    ‘He went to the construction site.’

    b. *Sikasi, totyuu-de ziko-ni makikom-are, genba-ni itar-u koto-ga deki-nakat-ta.*
    ‘However, he couldn’t reach the site because he was caught up in an accident.’
    (Nakatani 2013: 202)

(23) a. *Sono gakusee-wa go-zi-ni undoozyoo-ni itta.*
    that student-Top five-o’clock-at playground-Dat go-Past
    ‘That student went to the playground at five o’clock.’

    → ‘He left at five.’ or ‘He arrived at five.’

    b. *Sono gakusee-wa go-zi-ni undoozyoo-ni ki-1a.*
    that student-Top five-o’clock-at playground-Dat come-Past
    ‘That student came to the playground at five o’clock.’

    → ‘He arrived at five.’ but not ‘He left at five.’
    (Nakatani 2013: 203)

- Nakatani’s (2013) semantic representation of *ik*

(24) \[
\begin{array}{c}
\text{ik ‘go’} \\
\lambda y, x: \begin{bmatrix}
  x: \text{human} \\
y: \neg \text{speaker-territory}
\end{bmatrix} \\
\text{TELIC} = \tau^e \text{at}(e_2, x, y) \\
\text{QUALIA} = \begin{bmatrix}
  \text{FORMAL} = \tau^e \text{depart}(e_1, x) \\
  \text{AGENTIVE} = - -
\end{bmatrix}
\end{array}
\]
    (Nakatani 2013: 204)
The STRETCH function is proposed by Nakatani (2013) to explain the semantics of \( V\text{-}te\text{-}ik \). This function makes \( ik \) compatible with a “diffusing”, open-ended event in the theme-eventified cases.

(19) a. \( \text{Boku-wa tomodati-ni tugitugito tegami-o okut-te it-ta.} \)
    I-Top friends-Dat one after another letter-Acc send-Con go-Past
    ‘I sent a letter to friends of mine, one after another.’

(Nakatani 2013: 202)

Syntactic structure of \( V\text{-}te\text{-}ik/\text{ku} \) proposed by Nakatani (2013: 123–126)

\( Te \) is considered the head of TP (\( Te \) is an allomorph of the past-tense marker, \(-ta\)). \( V \), \( mot \) ‘hold’, undergoes head-movement (V-to-T movement). The subject \( T\text{aro}\) is raised from Spec\( vP \) to SpecTP\(_1\), and to SpecTP\(_2\).

(26) a. \( \text{Taroo-ga gakkoo-ni hon-o mot-te ki-ta.} \)
    Taro-Nom school-Dat book-Acc hold-Con come-Past
    ‘Taro brought the book to school.’

b. 

(Nakatani 2013: 123–126)
Diachronic Difference in Productivity of V-\textit{yuk}

- V-\textit{yuk} used to be productive in Old and Middle Japanese, but has become less productive in Modern Japanese (Lin 1996, Kojima 1998; 2001, Hyakutome 2003).

Table 3: Change from V-\textit{yuk} to V-\textit{-te-ik}.

<table>
<thead>
<tr>
<th>Texts</th>
<th>Time</th>
<th>V-\textit{yuk}</th>
<th>V-\textit{-te-ik}</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{Man'yōshū}</td>
<td>755–759</td>
<td>52</td>
<td>18</td>
</tr>
<tr>
<td>\textit{Genji Monogatari}</td>
<td>Beginning of 11th C</td>
<td>34</td>
<td>4</td>
</tr>
<tr>
<td>\textit{Kōshoku Ichidai Otoko}</td>
<td>1682</td>
<td>19</td>
<td>23</td>
</tr>
<tr>
<td>\textit{Ukiyoburo}</td>
<td>1809–1813</td>
<td>0</td>
<td>39</td>
</tr>
</tbody>
</table>

(Shibatani & Chung 2007: 29)

Gradience in the Degree of Grammaticalization of V-\textit{-te-ik}

- Constraint of semantic congruity proposed by Shibatani (2007)

  Less grammaticalized (Semantically more congruous)

  \begin{itemize}
  \item Manner + Motion (e.g. \textit{arui-\textit{-te-ik}/ku} ‘walk-Con/go/come’)
  \item Location change + Motion (e.g. \textit{de-\textit{-te-ik}/ku} ‘exit-Con/go/come’)
  \item Action + Motion (e.g. \textit{tabe-\textit{-te-ik}/ku} ‘eat-Con/go/come’)
  \end{itemize}

  More grammaticalized (Semantically less congruous)

Figure 1: Cline of grammaticalization of V-\textit{-te-ik}/\textit{ku} in Japanese.

(Shibatani (2007: 31) with modification)

Locus of Problems in the Context of Grammaticalization

1. The interrelationship among \textit{yuk}, V-\textit{yuk}, and V-\textit{-te-yuk}

   - Meaning overlap between V-\textit{yuk} and V-\textit{-te-yuk}
   - Reasons for the overlap (syntactic or semantic, or both?)

2. The characteristics of V-\textit{yuk}

   - Its semantics and syntax
   - Motivations for the replacement by V-\textit{-te-yuk}

3. The cause of phonetic reduction in V-\textit{-te-yuk}
3 Methodology

Hypothesis

Table 6: Hypothesis about the grammaticalization process of yuk.

<table>
<thead>
<tr>
<th>Phase I</th>
<th>Phase II</th>
<th>Phase III</th>
<th>Phase IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>Old Japanese</td>
<td>Old Japanese</td>
<td>Middle Japanese</td>
</tr>
<tr>
<td>yuk</td>
<td>V-yuk</td>
<td>V-te-yuk</td>
<td></td>
</tr>
<tr>
<td>↓ Movement Aspect</td>
<td>↓ Movement Aspect</td>
<td>↓ Movement Aspect</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yuk−→gradual decline−→V-yuk</td>
<td>Yuk−→gradual increase−→V-te-yuk</td>
<td></td>
</tr>
</tbody>
</table>

Formal Framework: Generative Lexicon Theory

- Conventional definition of qualia for verbs

\begin{align*}
(45) & \text{a. FORMAL:} \\
& \text{the type of eventuality of the verb (activity, state, process, transition)} \\
\text{b. CONSTITUTIVE (CONST):} \\
& \text{the Lexical Conceptual Structure of the verb} \\
\text{c. TELIC:} \\
& \text{the purpose/goal/function which the verb entails} \\
\text{d. AGENTIVE:} \\
& \text{the presupposition/frame (i.e. situation/background circumstances) which} \\
& \text{makes the verb come into being} \\
& \text{(Kageyama 2005: 83–84)} \\
\end{align*}

\begin{align*}
(46) & \text{sagas ‘look for’} \\
\text{QUALIA} = \begin{bmatrix}
\text{FORMAL:} & \text{process} \\
\text{CONST:} & \text{\{\}CONTROL [GAZE-OF-\{\}MOVE [Route \{}]} \\
\text{TELIC:} & \text{\textbf{find} (x, y)} \\
\text{AGENTIVE:} & \text{\textbf{not-have} (x, y)}
\end{bmatrix} \\
& \text{(Kageyama 2005: 85)}
\end{align*}
Proposal

(47) \[ \text{lexeme} \]
\[ \text{ARG} = \text{Syntactic arguments} \]
\[ \text{QUALIA} = \begin{bmatrix} \text{Truth-conditional Section (TS)} \\
\text{FORMAL: Temporal feature,} \\
\text{Distance function (DIS),} \\
\text{Point-of-view function (POV)} \\
\text{CONST: Lexical Conceptual Structure} \\
\text{Non-truth-conditional Section (NTS)} \\
\text{TELIC: The resultative state in which the verb entails} \\
\text{TRIGGER: The external factors in bringing it about} \end{bmatrix} \]

(The division of qualia between TS and NTS is employed from Hidaka (2012))

Temporal feature

- Three temporal points which define the verb’s aspektual property
  (Igarashi & Gunji 1998, Gunji 2004)

  \[ \begin{align*}
  s & : \text{the start time of the event} \\
  f & : \text{the finish time of the event} \\
  r & : \text{the reset time at which the individual goes back to the original state} \\
  \end{align*} \]

  (48)  
  a. \( ki: s < f < r < \infty \) (recoverable transitional activity)
  b. \( aruk: s < f = r < \infty \) (non-transitional activity)
  c. \( sin: s = f < r = \infty \) (nonrecoverable transitional achievement)

  (Gunji 2004: 25)

Point-of-view function (POV)

- \text{POINT}: the point which the point-of-view holder (\( p \)) looks at in the event (\( e \))
- \text{VIEW}: the range of the whole event which \( p \) assumes

\[ \text{POINT}(e) = Loc(e, s') \]
\[ \text{VIEW}(y) = \langle s, f \rangle \]

Figure 2: POV of yuk ‘go’. 
Distance function (DIS)

• The spatial/psychological distance between \( p \) and the point in the event which \( p \) looks at

• **DIS of yuk**: \( \text{DIS}(p, \text{Loc}(e, s')) < \text{DIS}(p, \text{Loc}(e, f)) \)
  
  \( (p \) is nearer to the point of the event which she looks at than to the endpoint of the event.\)

\[ \begin{align*}
  \text{Loc}(e, f) \\
  \Downarrow
\end{align*} \]
\[ \begin{align*}
  \text{Loc}(e, s') \\
  \Downarrow
\end{align*} \]
\[ s' \]
\[ \Downarrow
\]
\[ \text{DIS}(p, \text{Loc}(e, s')) \]

(nearer)

\[ p \]

(= point-of view holder)

\[ \Downarrow
\]
\[ \text{DIS}(p, \text{Loc}(e, f)) \]

(farther)

Figure 3: **DIS** of yuk ‘go’.

• **POV** and **DIS** is necessary to capture the fact that the point-of-view (POV) holder of yuk can be either the speaker or the speaker’s empathy focus.
  
  \( (Kuno & Kaburaki 1977, Kuno 1987) \)

(49) a. **POV** holder = speaker

\[ \text{Taro-ga yukimiti-o yuk-u kokei-o mi-ta.} \]

\[ \text{Taro-Nom snow.road-Acc go-Pres scene-Acc see-Past} \]

‘[I] saw the scene of Taro having gone along a snowy road.’

b. **POV** holder = Mary (= speaker’s empathy focus)

\[ \text{Mari-ga Taro-ga yukimiti-o yuk-u kokei-o mi-ta.} \]

\[ \text{Mary-Nom Taro-Nom snow.road-Acc go-Pres scene-Acc see-Past} \]

‘Mary saw the scene of Taro having gone along a snowy road.’

Corpus-based Framework: Variationist Sociolinguistics

• A corpus-based analysis for examining how phonetic reduction in V-te-yuk occurs

  – Linguistic variation = “orderly heterogeneous” (Weinreich et al. 1968, Labov 1982)
  – Modeling the simultaneous, multi-dimensional factors affecting speaker’s choice of one variant from the others (Labov 1969, Cedergren & Sankoff 1974)
Data

2. Japanese Text Initiative (University of Virginia and University of Pittsburgh 2006)

Table 7: Historical texts in chronological order.

<table>
<thead>
<tr>
<th>Old Japanese (- 800 A.D.)</th>
<th>Middle Japanese (800–1600)</th>
<th>Modern Japanese (1600–)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kojiki Kayô (『古事記歌譜』 (712))</td>
<td>Tosa Nikki (『土佐日記』 (935))</td>
<td>Kôshoku Ichidai On’na (『好色一代女』 (1686))</td>
</tr>
<tr>
<td>Nihonshoki Kayô (『日本書紀歌譜』 (720))</td>
<td>Kagerô Nikki (『蜻蛉日記』 (975))</td>
<td>Kôshoku Gonin On’na (『好色五人女』 (1686))</td>
</tr>
<tr>
<td>Man’yôshû (『万葉集』 (-759))</td>
<td>Makuranošishi (『枕草子』 (996))</td>
<td>Ugetu Monogatari (『雨月物語』 (1776))</td>
</tr>
<tr>
<td>(『源氏物語』 (1001))</td>
<td>Genji Monogatari (『源氏物語』 (1001))</td>
<td>Ukimuyo (『浮雲』 (1889))</td>
</tr>
<tr>
<td>Izu mishikibû Nikki (『和泉式部日記』 (1007))</td>
<td>Murasakishikibû Nikki (『紫式部日記』 (1010))</td>
<td>Kokoro (『こころ』 (1914))</td>
</tr>
<tr>
<td>Sarashina Nikki (『更級日記』 (1059))</td>
<td>(『方丈記』 (1212))</td>
<td></td>
</tr>
<tr>
<td>Hôjôki (『海道記』 (1223))</td>
<td>Kaiidôki (『平家物語』 (1230s?))</td>
<td></td>
</tr>
<tr>
<td>Heike Monogatari (『平家物語』 (1230s?))</td>
<td>Tokan Kikô (『東閑紀行』 (1242))</td>
<td></td>
</tr>
<tr>
<td>Izayoi Nikki (『十六夜日記』 (1283?))</td>
<td>Tsurezuregusa (『徒然草』 (1330?))</td>
<td></td>
</tr>
</tbody>
</table>

Table 8: The distribution of V-te-ik and V-te-k.

<table>
<thead>
<tr>
<th>V-te-ik</th>
<th>V-te-k</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>73.8%</td>
<td>26.2%</td>
<td>100%</td>
</tr>
<tr>
<td>(2,972/4,029)</td>
<td>(1,057/4,029)</td>
<td>(4,029/4,029)</td>
</tr>
</tbody>
</table>
4 Formal Analysis of the Grammaticalization Process of yuk ‘go’

In the grammaticalization process of Japanese yuk, renewal took place in transition from V-yuk to V-te-yuk; as a result, V-yuk has been replaced by V-te-yuk and the former is on the verge of extinction in present-day Japanese. I will argue that reanalysis of V-te-yuk made this form equivalent to V-yuk in both semantic and syntactic levels, hence the replacement took place.

Phase I: The Emergence of V-yuk ‘V-go’

Lexical yuk

(52) iza kwodomo nwobiru tumi ni piru tumi ni sva ga yoku miti no kagupasi
now child wild.leek pick-Dat leek pick-Dat I-Nom go road-Gen fragrant

‘Now children, let’s pick wild leek. The fragrant citrus tachibana along the road we go…’

(Kojiki Kayô.43)

Semantics of the lexical yuk

(53) [yuk ‘go’
ARG = [ ARG1: x, ARG2: y, P-ARG: p ]

<table>
<thead>
<tr>
<th>Truth-conditional Section (TS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FORMAL: [ s &lt; f, DIS(p, Loc(e, s')) &lt; DIS(p, Loc(e, f)), POV(p) = ⟨POINT(e) = Loc(e, s'), VIEW(y) = ⟨s, f⟩⟩ ]</td>
</tr>
<tr>
<td>QUALIA = [ ]</td>
</tr>
<tr>
<td>CONST: GO (x, VIA (y)) Non-truth conditional Section (NTS)</td>
</tr>
<tr>
<td>TELIC: BE-AT (x, zplace) ]</td>
</tr>
</tbody>
</table>

• The temporal feature: s < f (activity) (Kindaichi 1950, Nakazawa 2002)

(54) Taroo-wa ima sotira-e it-te-ir-u.
Taro-Top now there-towards go-Con-be-Pres
‘Taro is heading towards there.’ or ‘Taro is now there.’

• GO (x, VIA (y)) for CONST: path-orientation of yuk (Kageyama & Yumoto 1997)

(55) a. Kare-wa kono miti-o {arui/samayot}-ta.
he-Top this road-Acc {walk/wander}-Past
‘He walked/wandered along this road.’
b. *Kare-wa itizikan {aruî/samayot}-ta.*
   he-Top one hour {walk/wander}-Past
   ‘He walked/wandered for one hour.’

(56) a. *Kare-wa kono miti-o it-ta.*
   he-Top this road-Acc go-Past
   ‘He went along this road.’

   b. *Kono miti-o itizikan ik-u to, mokutekiti-ni tuki-mas-u.*
      this road-Acc one hour go-Pres Comp destination-Dat arrive-Hon-Pres
      ‘[You] will arrive your destination by going along this road for one hour.’

• P-ARG: *p*: the point-of-view (POV) holder which is introduced in light of the arguments concerning speaker’s empathy focus (Kuno & Kaburaki 1977, Kuno 1978; 1987)

(60) a. *Ken-ga yamamiti-o yuk-u kookei-o mi-ta.*
    Ken-Nom mountain.road-Acc go-Pres-scene-Acc look-Past
    ‘I looked at the scene of Ken going along a mountain road.’

   b. *Mari-ga Ken-ga yamamiti-o yuk-u kookei-o mi-ta to it-ta.*
      Mary-Nom Ken-Nom mountain.road-Acc go-Pres-scene-Acc look-Past Comp say-Past
      ‘Mary said that she looked at the scene of Ken going along a mountain road.’

Syntax of the lexical *yuk*

(57) a. *Ken-ga yamamiti-o yuk-u kookei*
    Ken-Nom mountain.road-Acc go-Pres scene
    ‘The scene of Ken going along a mountain road’

   b. 
   
   DeixP
   
   Spec
   pro_p
   Deix'
   VP
   Deix
   yuk
   Spec
   V'
   Spec
   Ken-ga
   Spec
   yamamiti-o
   NP
   V
   (yuk)
• The path of *yuk*: an incremental theme (Dowty 1991) which can be modified by phrases denoting gradual change (Ueno & Kageyama 2001)

(58) a. Watasi-wa keeki-o mittu tabe-ta.
I-Top cake-Acc three eat-Past
‘I ate three cakes.’

b. Watasi-wa yamamiti-o nizyukkiromeetoru arui-ta.
I-Top mountain.road-Acc twenty.kilometer walk-Past
‘I walked a mountain road for twenty kilometers.’

(Ueno & Kageyama 2001: 57–58)

this road-Acc [one.hour/five.kilometer] go-Pres as
‘As [you] go along this road [for an hour/for five kilometers], . . .’

• *Prop* in SpecDeixP: the POV holder of *yuk* identical with P-ARG (*p*) in semantics. This can be identified with the speaker or her empathy focus (Nishigauchi 2014) (See (60)).

**V-yuk as Movement**

Two readings of V-*yuk* as movement

1. Movement after V (successive-event reading) → (62a)
2. Movement while V (simultaneous-event reading) → (62b)

(62) a. 阿良多麻能 登斯賀岐布禮婆 阿良多麻能 都紀波 岐聞由久
aratamano tosi ga ki-pure ba aratamano tukwi pa ki-pe-yuku
epithet year-Nom come-pass if epithet moon-Top come-pass-go
‘As time goes by, the moon comes and then leaves.’

(Kojiki Kayô.28)

b. 鳥智箇多能 阿遼邏麻菟麽邏 摩菟邏弭珥 和多利喻祇低
wotikata no arara matubara matubara ni watari-yuki te
across-Gen thin pinetree.forest pinetree.forest-Dat cross-go Prtcl
‘The pinetree forest across [the river]. [We] approach the pinetree forest to fight . . .’

(Nihon Shoki Kayô.28)

Semantic composition of *ki-pe-yuk* (movement after V)

(63) \[ \begin{align*}
\text{ARG} = & \begin{bmatrix} \text{ARG1: } x, \text{ ARG2: } y, \text{ ARG3: } z, \text{ P-ARG: } p \end{bmatrix} \\
\text{TS} = & \begin{bmatrix} s < f, \\
\text{DIS}(p, \text{Loc}(e, s')) > \text{DIS}(p, \text{Loc}(e, f)), \\
\text{POV}(p) = \langle \text{POINT}(e = \text{Loc}(e, f), \\
\text{VIEW}(y) = \langle s, f \rangle) \\
\text{CONST} = & \text{CAUSE ([GO (x, VIA (y)), [BE-AT (x, z_{place})]])} \end{bmatrix} \\
\text{QUALIA} = & \begin{bmatrix} \end{bmatrix} \end{align*} \]
(64) $pe$ ‘pass’
ARG = [ ARG1: x, ARG2: y ]
QUALIA = [ TS
FORMAL: $s < f$
CONST: GO (x, VIA (y)) ]

(65) $ki-pe$ ‘come-pass’
ARG = [ ARG1: VP [ ARG1: x, ARG2: y, ARG3: z, \textbf{VIEW} $\langle s_1, f_1 \rangle$ ] ]
QUALIA = [ TS
FORMAL: $s_1 < f_1 < s_2 < f_2$
CONST: CAUSE ([GO (x, VIA (y)]), [BE-AT (x, $z_{\text{place}}$)]) \wedge GO (x, VIA (y)] )

(66) $ki-pe-yuk$ ‘come-pass-go’
ARG = [ ARG1: VP [ ARG1: x, ARG2: y, \textbf{VIEW} $\langle s_2, f_2 \rangle$ ], P-ARG: p ]
QUALIA = [ TS
FORMAL: $s_2 < f_2 < s_3 < f_3$,
\hspace{1cm} \textbf{DIS}(p, Loc(e, s'_3)) < \textbf{DIS}(p, Loc(e, f_3)),
\hspace{1cm} \textbf{POV}(p) = \langle \textbf{POINT}(e) = \text{Loc}(e, s'_3),
\hspace{1cm} \textbf{VIEW}(y) = \langle s_3, f_3 \rangle \rangle
\hspace{1cm} \text{CONST: GO (x, VIA (y))}
\hspace{1cm} \text{NTS}
\hspace{1cm} \text{TELIC: BE-AT (x, $z_{\text{place}}$)} ]

Semantic composition of \textit{watari-yuk} (movement while V)

(67) $watar$ ‘cross’
ARG = [ ARG1: x, ARG2: y ]
QUALIA = [ TS
FORMAL: $s < f$
CONST: GO (x, VIA (y)) ]

(68) $watari-yuk$ ‘cross-go’
ARG = [ ARG1: VP [ ARG1: x, ARG2: y ], P-ARG: p ]
QUALIA = [ TS
FORMAL: $s_1 = s_2 < f_1 = f_2$,
\hspace{1cm} \textbf{DIS}(p, Loc(e, s'_2)) < \textbf{DIS}(p, Loc(e, f_2)),
\hspace{1cm} \textbf{POV}(p) = \langle \textbf{POINT}(e) = \text{Loc}(e, s'_2),
\hspace{1cm} \textbf{VIEW}(y) = \langle s_2, f_2 \rangle \rangle
\hspace{1cm} \text{CONST: GO (x, VIA (y))}
\hspace{1cm} \text{NTS}
\hspace{1cm} \text{TELIC: BE-AT (x, $z_{\text{place}}$)} ]

Syntax of V-yuk as movement

(69) a. \textit{Ken-ga} \textit{yamamiti-o hasiri-yuk-u kookei}
Ken-Nom mountain.road-Acc run-go-Pres scene
‘The scene of Ken running along a mountain road’
b. DeixP

```
  Spec     Deix'
    pro_p   Deix
      VP 2
        Spec
          VP 1
            Spec
              (Ken_xt-ga)
            V 1
              (Ken_xt-ga)  V 2
```

Ambiguity in readings of V-yuk as movement

- Underdevelopment of verbal compounds in ancient Japanese: the way the verbs are sequenced was flexible (Ide 1971, Sannoumaru 2009).
- Assuming from the morphological resemblance between V-yuk and other V-V compounds —V 1 connects to yuk or V 2 in renyoo-kei form—, few semantic strategies exist to synthesize V and yuk for a particular reading, hence ambiguity in readings of V-yuk as movement.

(71) a. 二人行けぬ          去過難寸          秋山乎
puta-ri yukedo  yuki-sugwi-kata-ki akiyama wo
  two-person go.through  go-pass-difficult  autumn.mountain Acc
如何君之          獨越武
  ika ni ka kimi ga  pito-ri kwoyu ramu
  how to Prtcl you Nom one-person go.across Prtcl

'How can you go across the autumn mountain alone, even though it is hard to do so by two people.'

(Man’yôshû.2.106)
b. …於仗都奈美 多可久多知伎奴 与曾能未爾 見都追須疑由仗 …

oki tu nami taka-ku tati-ki-nu yoso nomwi ni mitutu sugwi-yuki
offshore wave high rise-come-Perf out only Prtcl watch. while pass-go

‘As the offshore waves rose high, [I] go while watching the waves from afar.’

(Man’yōshū.15.3627)

V-yuk as Aspect

(72) b. 一年従 七夕耳 相人之 戀毛不違者
pitotose ni nanuka no yowo nomwi apu pito no kwopwi mo sugwi ne ba
one. year in seven. day-Gen night only meet human-Gen love Prtcl pass not if
夜深性久毛
yowo pa puke-yuku mo
night-Top deepen-go Prtcl

‘Once a year on July 7th. Though Vega and Altair haven’t met yet, the night deepens.’

(Man’yōshū.10.2032)

Semantics of the aspectual yuk

(73) [yuk ‘go’ (aspect)
ARG = [ ARG1: VP [ ARG1: x ], P-ARG: p ]
QUALIA =
[ Ts
FORMAL: s < f,
DIS(p, Loc(e, s')) < DIS(p, Loc(e, f)),
Pov(p) = ⟨POINT(e) = Loc(e, s'), VIEW(e) = ⟨s, f⟩) ]
CONST: ϕ
NTS
TELIC: BEIdent-AT (x, zstate)
]

Semantic composition of puke-yuk (aspectual V-yuk)

(74) [puke ‘deepen’
ARG = [ ARG1: x ]
QUALIA =
[ Ts
FORMAL: s < f < r
CONST: GOIdent (x, VIA-TO DEEPENED) ]
]

(75) [puke-yuk ‘deepen-go’
ARG = [ ARG1: VP [ ARG1: x ], P-ARG: p ]
QUALIA =
[ Ts
FORMAL: s1 = s2 < f1 = f2 < r1,
DIS(p, Loc(e, s')) < DIS(p, Loc(e, f2)),
Pov(p) = ⟨POINT(e) = Loc(e, s'), VIEW(e) = ⟨s2, f2⟩) ]
CONST: GOIdent (x, VIA-TO)
NTS
TELIC: BEIdent-AT (x, DEEPENED) ]

16
Syntax of the aspectual *yuk*

(76) a. *Hana-ga kare-yuk-u kookei*
    flower-Nom die-go-Pres scene
    ‘The scene of a flower going to die’

b. DeixP
    Spec Deix’
    pro
    Spec VP Deix
    V yuk
    *hana, ga kare-

Ambiguity in V-*yuk* between movement and aspect

- Ambiguity arises because the concept of space and time was undivided in ancient Japanese (Yamaguchi 2004, Hyakutome & Hyakutome 2008).

(77) a. *sakurada pye, tadu naki-wataru ayutigata sipo pwi-ni-kye rasi*
    cherry.blossom.field towards crane cry-cross Atsuchigata lagoon tide ebb would
    ‘Cranes flow singing to the field where cherry blossoms are planted. The tide seems to have ebbed away in the Atsuchigata Lagoon. Cranes flow singing.’
    *(Man’yōshū.3.271)*

b. *ari-sarite noti mo apa-mu to omope koso tuyu no inoti mo tugtitutu watare*
    pass.Con late too meet would think even dew Gen life Gen succeed.while cross
    ‘Because [I] want to meet [you] even after passing time in this way, my fragile life like a dew is kept.’
    *(Man’yōshū.17.3933)*
    *(Yamaguchi 2004: 63)*
Phase II: The Emergence of V-te-yuk ‘V-Con-go’

Two readings of V-te-yuk as movement

1. Movement after V (successive-event reading) → (79a)
2. Movement while V (simultaneous-event reading) → (83b)

(79) a. oğık-te-ika ba imo ba makanasi moti-te-yuku adusa no yumi no
       put-Con-go if you-Top Prfx-sad have-Con-go Japanese.cherry.birch-Gen bow-Gen
       yutuka ni moga mo handgrip Prtcl would
       ‘I feel sorry for you, my wife, if I leave you here and go away. I wish you were the handgrip of
       bow, so you can go with me.’

       (Man’yoshū.14.3567)

(83) b. kwopwi sina ba kwopwi mo sine to ka wagimokwo ga wagipyne no kadwo wo
       love die if love also die Prtcl Prtcl
       sugwi-te-yuku ramu
       pass-Con-go would
       ‘My sweetheart will go passing the gate of my house as if she wishes to die even though she falls
       in love with me.’

       (Man’yōshū.11.2401)

Semantic composition of øki-te-yuk (movement after V)

(80) [ok ‘(lit.) put’

  ARG = [ ARG1: x, ARG2: w ]

  QUALIA = [ [ TS

             FORMAL: s = f

             CONST: CAUSE ([ACT ON (x, w)], BE-AT-BY (w, x)) ] ]

(82) [øki-te-yuk ‘put-Con-go’

  ARG = [ ARG1: TP [ ARG1: x, ARG2: w ], ARG2: p ]

  QUALIA = [ [ TS

             FORMAL: [ s1 = f1 < s2 < f2,

             DIS(p, Loc(e, s′ 1)) < DIS(p, Loc(e, f2)),

             POV(p) = ⟨POINT(e) = Loc(e, s′ 1),

             VIEW(y) = (s2, f2)⟩

             CONST: CAUSE ([ACT ON (x, w)], [BE-AT-BY (w, x)]) \∧ GO (x, VIA (y))

             NTS

             TELIC: BE-AT (x, zplace) ] ]

18
Semantic composition of *sugwi-te-yuk* (movement while V)

(84) \[
\begin{align*}
\text{ARG} &= \left[ \text{ARG1: } x, \text{ ARG2: } y \right] \\
\text{QUALIA} &= \left[ \begin{array}{c}
\text{TS} \\
\text{FORMAL: } s < f \\
\text{CONST: GO (x, VIA (y))}
\end{array} \right]
\end{align*}
\]

(86) \[
\begin{align*}
\text{ARG} &= \left[ \text{ARG1: TP [ ARG1: } x, \text{ ARG2: } y \right], \text{ ARG2: } p \right] \\
\text{QUALIA} &= \left[ \begin{array}{c}
\text{TS} \\
\text{FORMAL: } s_1 = s_2 < f_1 = f_2, \\
\text{DIS} (p, \text{Loc}(e, s'_2)) < \text{DIS} (p, \text{Loc}(e, f_2)), \\
\text{POV} (p) = \langle \text{POINT} (e) = \text{Loc}(e, s'_2), \\
\text{VIEW} (y) = \langle s_2, f_2 \rangle \rangle \\
\text{CONST: GO (x, VIA (y))} \\
\text{NTS} \\
\text{TELIC: BE-AT (x, z_{place})}
\end{array} \right]
\end{align*}
\]

Syntax of *V-te-yuk* as movement

(87) b. Ken-ga *yamamiti-o* hasit-te-yuk-u.
    Ken-Nom mountain.road-Acc run-Con-go-Pres
    ‘Ken runs (and goes) along a mountain road.’
Phase III: Reanalysis of V-te-yuk ‘V-Con-go’

Reanalysis of V-te-yuk

Before: [ V-te ]-yuk (movement after V / movement while V)
After: V-[ te-yuk ] (aspect)

(91) a. その頃は あの日の 話して行く せわしない 秋に， 誰も
those days-Top those daytime-Nom talk-Pres be busy while V
注意を 惹かれる 肌寒の 季節であった．
attention.Acc attract-Pssv-Pres chilly season-Past

‘[It was when everyone was attracted] by the bustle of autumn, with daytime becoming shorter.’

(Kokoro)
Semantics of the aspectual te-yuk

(93) \[
\text{te-yuk 'Con-go' (aspect)} \\
\text{ARG = [ ARG1: VP [ ARG1: x ], P-ARG: p ]} \\
\text{QUALIA = [ [ TS, FORMAL: } s < f, \text{ DIS}(p, \text{Loc}(e, s')) < \text{DIS}(p, \text{Loc}(e, f)), \text{ POV}(p) = \langle \text{POINT}(e) = \text{Loc}'(e, s'), \text{ VIEW}(e) = \langle s_v, f_v \rangle \rangle ] ] \\
\text{CONST: } \phi \\
\text{NTS} \\
\text{TELIC: BE}_{\text{Ident-AT}} (x, z_{\text{state}}) \]

Semantic composition of tumat-te-yuk (aspectual V-te-yuk)

(94) \[
\text{(hi-no) tumar 'shorten'} \\
\text{ARG = [ ARG1: x (= daytime) ]} \\
\text{QUALIA = [ [ TS, FORMAL: } s < f < r \text{ CONST: GO}_{\text{Ident}} (x, \text{VIA-TO SHORT}) ] ] \]

(95) \[
\text{tumat-te-yuk 'shorten-Con-go'} \\
\text{ARG = [ ARG1: VP [ ARG1: x ], P-ARG: p ]} \\
\text{QUALIA = [ [ TS, FORMAL: } s_1 = s_2 < f_1 = f_2 < r_1, \text{ DIS}(p, \text{Loc}(e, s'_2)) < \text{DIS}(p, \text{Loc}(e, f_2)), \text{ POV}(p) = \langle \text{POINT}(e) = \text{Loc}'(e, s'_2), \text{ VIEW}(e) = \langle s_2, f_2 \rangle \rangle ] ] \\
\text{CONST: GO}_{\text{Ident}} (x, \text{VIA-TO}) \\
\text{NTS} \\
\text{TELIC: BE}_{\text{Ident-AT}} (x, \text{SHORT}) \]

Syntax of aspectual V-te-yuk

(96) \[
\text{DeixP} \\
\text{Spec} \quad p_{\text{op}} \quad \text{Deix'} \\
\quad \text{VP} \\
\quad \text{Spec} \quad h_{\text{i-ga}} \quad \text{V} \quad \text{te-yuk} \\
\quad \text{Deix} \\
\]
Phase IV: Renewal from V-yuk to V-te-yuk

Evidence for the renewal from V-yuk to V-te-yuk

1. Syntactic evidence for the decline of V-yuk → (97–100)

2. Quantitative evidence for the replacement of V-yuk by V-te-yuk → Figure 4

Syntactic evidence for the decline of V-yuk

1. The selectional restrictions on the preceding verb


(Arai & Hidaka 2013)


2. The restricted environments where V-yuk can occur

(99) a. Ken-ga kono miti-o hasiri-yuk-u kokei
Ken-Nom this road-Acc run-go-Pres scene
‘The scene of Ken running along this road’

b. Zyooki-kikansya-ga tekkyoo-o hasiri-yuk-u kokei
steam-locomotive-Nom iron.bridge-Acc run-go-Pres scene
‘The scene of a steam locomotive going on the iron bridge’

c. Hana-ga kare-yuk-u kokei
flower-Nom die-go-Pres scene
‘The scene of a flower going to die’

d. ?*Ken-ga kono miti-o hasiri-yuk-u.
Ken-Nom this road-Acc run-go-Pres
‘Ken runs along this road.’

steam-locomotive-Nom iron.bridge-Acc run-go-Pres will
‘A steam locomotive will go on the iron bridge.’
Quantitative evidence for the replacement of V-yuk by V-te-yuk

![Graph showing chronological change from V-yuk 'V-go' to V-te-yuk 'V-Con-go'.]

Figure 4: Chronological change from V-yuk 'V-go' to V-te-yuk 'V-Con-go'.
5 Corpus-based Analysis of Phonetic Reduction in V-\textit{te-yuk} 'V-Con-go'

Phonetic reduction in V-\textit{te-yuk} is conditioned by both linguistic and extra-linguistic factors, specifically, by verb frequency, context, speaker’s gender, speaker’s place of birth, and speech style.

Procedure & Variable Environments

Procedure for data collection

Step 1
Collect all -te-\textit{ik} and -te-\textit{k} tokens in Simulated Public Speaking (SPS) from Corpus of Spontaneous Japanese (5,564 tokens).

↓

Step 2
Eliminate tokens which lack part of information on speaker’s attributes or speech.

↓

Step 3
Circumscribe the variable contexts by excluding the four environments:
1. -Te-\textit{ik} in which a particle or filler exists between -\textit{te} and -\textit{ik}.
2. Both -te-\textit{ik} and -te-\textit{k} which ends with an honorific suffix -\textit{masu}.
3. Both -te-\textit{ik} and -te-\textit{k} to which a desiderative suffix -\textit{tai} attaches.
4. -Te-\textit{yuk} instances.

↓

Step 4
Eliminate tokens whose token frequency is less than three times when -te-\textit{ik} and -te-\textit{k} combined.

↓

Step 5
Eliminate tokens whose preceding verbs are not listed in the frequency dictionary.

Figure 5: The process of data collection.
Environments excluded from the analysis

1. Cases with an intervening particle or a filler

   notebook-Acc bring-Con-Top-go-Past but pen-Acc forget-Con-Eval-Past
   ‘Although I brought a notebook, I forgot bringing a pen.’

   notebook-Acc bring-Con-Filler-go-Past but pen-Acc forget-Con-Eval-Past
   ‘Although I brought a notebook, I forgot bringing a pen.’

2. Cases with the honorific suffix -masu

(103) a. Taroo-wa gakkoo-ni bentoo-o mot-te-[iki/ki]-masi-ta.
   Taro-Top school-Dat lunch box-Acc bring-Con-go-Hon-Past
   ‘Taro brought his lunch box to school.’

3. Cases with the desiderative suffix -tai

(103) b. Daigaku-de-wa gengogaku-o manan-de-[iki/ki]-tai.
   university-Con-Top linguistics-Acc study-Con-go-Desi
   ‘[I] want to study linguistics at university.’

4. Cases pronounced as V-te-yuk

(104) Kono toori-o arui-te-yuk-u to, eki-ni tuki-mas-u.
   this street-Acc walk-Con-go-Pres if station-Dat reach-Hon-Pres
   ‘If you walk along this street, you can reach the station.’

On Interactions between Factors

- Multicollinearity and interactions between factors were judged by Pearson product-moment correlations coefficients, with the threshold of $\pm 0.4 < |r| \leq \pm 0.7$ (Taromaru 2005, Sano 2011).

- Although the correlations coefficients between Verb Length and Verb Frequency exceed the threshold, the model including Verb Frequency is a better one, hence Table 24.
Table 9: Correlation matrix among independent and dependent variables.

<table>
<thead>
<tr>
<th></th>
<th>Variant</th>
<th>Verb frequency</th>
<th>Verb length</th>
<th>Context</th>
<th>Gender</th>
<th>Birth year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variant</td>
<td>1.000</td>
<td>-.033</td>
<td>-.070</td>
<td>-.033</td>
<td>.089</td>
<td>-.030</td>
</tr>
<tr>
<td>Verb frequency</td>
<td>-.033</td>
<td>1.000</td>
<td>-.718</td>
<td>-.011</td>
<td>.065</td>
<td>.027</td>
</tr>
<tr>
<td>Verb length</td>
<td>-.070</td>
<td>-.718</td>
<td>1.000</td>
<td>-.027</td>
<td>-.018</td>
<td>-.016</td>
</tr>
<tr>
<td>Context</td>
<td>-.033</td>
<td>-.011</td>
<td>-.027</td>
<td>1.000</td>
<td>.003</td>
<td>-.028</td>
</tr>
<tr>
<td>Gender</td>
<td>.089</td>
<td>.065</td>
<td>-.018</td>
<td>.003</td>
<td>1.000</td>
<td>-.065</td>
</tr>
<tr>
<td>Birth year</td>
<td>-.030</td>
<td>.027</td>
<td>-.016</td>
<td>-.028</td>
<td>-.065</td>
<td>1.000</td>
</tr>
<tr>
<td>Geography</td>
<td>.095</td>
<td>-.025</td>
<td>-.001</td>
<td>.011</td>
<td>-.110</td>
<td>-.005</td>
</tr>
<tr>
<td>Education</td>
<td>.066</td>
<td>-.038</td>
<td>.028</td>
<td>.029</td>
<td>-.037</td>
<td>-.041</td>
</tr>
<tr>
<td>Spontaneity</td>
<td>-.072</td>
<td>.032</td>
<td>-.014</td>
<td>-.018</td>
<td>-.116</td>
<td>.061</td>
</tr>
<tr>
<td>Style</td>
<td>.022</td>
<td>.023</td>
<td>-.031</td>
<td>-.001</td>
<td>-.007</td>
<td>.045</td>
</tr>
<tr>
<td>Skillfulness</td>
<td>.031</td>
<td>-.026</td>
<td>-.003</td>
<td>.002</td>
<td>-.082</td>
<td>-.113</td>
</tr>
<tr>
<td>Experience</td>
<td>-.052</td>
<td>-.020</td>
<td>.027</td>
<td>-.038</td>
<td>.064</td>
<td>-.170</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geography</th>
<th>Education</th>
<th>Spontaneity</th>
<th>Style</th>
<th>Skillfulness</th>
<th>Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variant</td>
<td>.095</td>
<td>.066</td>
<td>-.072</td>
<td>.022</td>
<td>.031</td>
</tr>
<tr>
<td>Verb frequency</td>
<td>-.025</td>
<td>-.038</td>
<td>.032</td>
<td>.023</td>
<td>-.026</td>
</tr>
<tr>
<td>Verb length</td>
<td>-.001</td>
<td>.028</td>
<td>-.014</td>
<td>-.031</td>
<td>-.003</td>
</tr>
<tr>
<td>Context</td>
<td>.011</td>
<td>.029</td>
<td>-.018</td>
<td>-.001</td>
<td>.002</td>
</tr>
<tr>
<td>Gender</td>
<td>-.110</td>
<td>-.037</td>
<td>-.116</td>
<td>-.007</td>
<td>-.082</td>
</tr>
<tr>
<td>Birth year</td>
<td>-.005</td>
<td>-.041</td>
<td>.061</td>
<td>.045</td>
<td>-.113</td>
</tr>
<tr>
<td>Geography</td>
<td>1.000</td>
<td>.114</td>
<td>.112</td>
<td>-.049</td>
<td>.038</td>
</tr>
<tr>
<td>Education</td>
<td>.114</td>
<td>1.000</td>
<td>.026</td>
<td>-.065</td>
<td>.106</td>
</tr>
<tr>
<td>Spontaneity</td>
<td>.112</td>
<td>.026</td>
<td>1.000</td>
<td>-.043</td>
<td>.063</td>
</tr>
<tr>
<td>Style</td>
<td>-.049</td>
<td>-.065</td>
<td>-.043</td>
<td>1.000</td>
<td>.024</td>
</tr>
<tr>
<td>Skillfulness</td>
<td>.038</td>
<td>-.026</td>
<td>-.003</td>
<td>.063</td>
<td>1.000</td>
</tr>
<tr>
<td>Experience</td>
<td>-.145</td>
<td>-.171</td>
<td>-.018</td>
<td>-.096</td>
<td>-.219</td>
</tr>
</tbody>
</table>

**Multivariate Analysis**

**Interpretations of Table 24**

- The negative value of Intercept (−3.403) shows that the number of unreduced forms, V-te-ik, is greater than that of reduced forms, V-te-k (cf. Table 8).

- For Estimate (β) (the estimated coefficients), the positive value indicates a favoring effect of phonetic reduction; it turns to be negative if the effect is disfavoring (0 is neutral).

- Factors with asterisks are statistically significant ones for phonetic reduction in V-te-yuk.

- Somers2 $D_{xy}$ shows the goodness of fit of the model. The higher the value is, the more reliable the statistical modeling is. The value of Somers2 $D_{xy}$ ranges from −1 to +1 (Colman 2008).
Table 24: Logistic regression of linguistic and social factors conditioning the phonetic reduction of V-\textit{te-yuk} ‘V-Con-go’.

<table>
<thead>
<tr>
<th></th>
<th>Estimate (=β)</th>
<th>Std. Error</th>
<th>Wald Z</th>
<th>Prob. of Z</th>
<th>Lower CI</th>
<th>Upper CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-3.403</td>
<td>12.598</td>
<td>-.270</td>
<td>.787</td>
<td>-28.095</td>
<td>21.289</td>
</tr>
<tr>
<td><strong>Verb frequency</strong></td>
<td>.710</td>
<td>.220</td>
<td>3.223</td>
<td><strong>.001</strong></td>
<td>.278</td>
<td>1.142</td>
</tr>
<tr>
<td><strong>Context</strong> (reference level: Affirmative):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>-.910</td>
<td>.263</td>
<td>-3.806</td>
<td><strong>.000</strong></td>
<td>-1.515</td>
<td>-.485</td>
</tr>
<tr>
<td>Speaker’s Gender (reference level: Female):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>.729</td>
<td>.188</td>
<td>3.870</td>
<td><strong>.001</strong></td>
<td>.360</td>
<td>1.099</td>
</tr>
<tr>
<td>Birth year</td>
<td>-.000</td>
<td>.006</td>
<td>-.112</td>
<td>.911</td>
<td>-.013</td>
<td>.012</td>
</tr>
<tr>
<td><strong>Geography</strong> (reference level: East):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North</td>
<td>-.204</td>
<td>.331</td>
<td>-.615</td>
<td>.538</td>
<td>-.853</td>
<td>.445</td>
</tr>
<tr>
<td>West</td>
<td>-.943</td>
<td>.258</td>
<td>-3.650</td>
<td><strong>.000</strong></td>
<td>-1.449</td>
<td>-.437</td>
</tr>
<tr>
<td>Speaker’s Educational Background (reference level: Junior/Senior High school):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under/Postgraduate</td>
<td>-.257</td>
<td>.196</td>
<td>-1.312</td>
<td>.190</td>
<td>-.640</td>
<td>.127</td>
</tr>
<tr>
<td><strong>Speech Spontaneity</strong> (reference level: High):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mid</td>
<td>-.126</td>
<td>.203</td>
<td>-.620</td>
<td>.535</td>
<td>-.524</td>
<td>.272</td>
</tr>
<tr>
<td>Low</td>
<td>-.445</td>
<td>.333</td>
<td>-1.338</td>
<td>.181</td>
<td>-1.098</td>
<td>.207</td>
</tr>
<tr>
<td><strong>Speech Style</strong> (reference level: Formal):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>1.137</td>
<td>.231</td>
<td>4.926</td>
<td>8.39e-07</td>
<td><strong>.685</strong></td>
<td>1.590</td>
</tr>
<tr>
<td>Informal</td>
<td>1.600</td>
<td>.251</td>
<td>6.346</td>
<td>1.96e-10</td>
<td><strong>1.107</strong></td>
<td>2.093</td>
</tr>
<tr>
<td><strong>Speech Skillfulness</strong> (reference level: Skillful):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unskillful</td>
<td>.035</td>
<td>.231</td>
<td>.152</td>
<td>.880</td>
<td>-.418</td>
<td>.489</td>
</tr>
<tr>
<td><strong>Speech Experience</strong> (reference level: Less than 5 times):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than 6</td>
<td>-.041</td>
<td>.307</td>
<td>-.135</td>
<td>.893</td>
<td>-.643</td>
<td>.561</td>
</tr>
</tbody>
</table>

(The goodness of fit of the model: Somers2 Dxy = 0.93)

**Relative Strength of Significant Factors**

- Relative strength is calculated by the odds-ratio of estimate (Exp(β)) in order to examine which factor in a factor group has a more favorable effect than others on phonetic reduction in V-\textit{te-yuk}. Exp(β) is above 1 for a favorable factor, while it is below 1 for an unfavorable one.

**Verb frequency**

- Phonetic reduction doubles with frequently-used verbs (Exp(β) = 2.03).
Table 25: Frequency effect on the phonetic reduction of V-\textit{te-yuk} ‘V-Con-go’.

<table>
<thead>
<tr>
<th></th>
<th>Estimate (= $\beta$)</th>
<th>Std. Error</th>
<th>Wald $Z$</th>
<th>Prob. of $Z$</th>
<th>Exp($\beta$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verb frequency</td>
<td>.710</td>
<td>.220</td>
<td>3.223</td>
<td>.001</td>
<td>2.03</td>
</tr>
</tbody>
</table>

**Context**

- The contextual difference follows Givón’s (1979) constraint on language change: language change is conservative in the negative context.

Table 26: Contextual effect on the phonetic reduction of V-\textit{te-yuk} ‘V-Con-go’.

<table>
<thead>
<tr>
<th></th>
<th>Estimate (= $\beta$)</th>
<th>Std. Error</th>
<th>Wald $Z$</th>
<th>Prob. of $Z$</th>
<th>Exp($\beta$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>-.910</td>
<td>.263</td>
<td>-3.806</td>
<td>.000</td>
<td>.37</td>
</tr>
</tbody>
</table>

**Speaker’s gender**

- Men’s preference for the reduction indicates that women are sensitive to using the innovative variant, similar to the general gender differentiation in linguistic variation (Trudgill 1983, Cameron & Coates 1988).

Table 27: Gender effect on the phonetic reduction of V-\textit{te-yuk} ‘V-Con-go’.

<table>
<thead>
<tr>
<th></th>
<th>Estimate (= $\beta$)</th>
<th>Std. Error</th>
<th>Wald $Z$</th>
<th>Prob. of $Z$</th>
<th>Exp($\beta$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaker’s Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>.729</td>
<td>.188</td>
<td>3.870</td>
<td>.000</td>
<td>2.07</td>
</tr>
</tbody>
</table>

**Speaker’s place of birth**

- Speakers from the western parts of Japan avoid using the reduced form (Exp($\beta$) = .39).
- The geographical difference is due to the difference in preference between vowel and consonant across the country (Mase 1977, Hirayama 1985, Yanagida 1994).
  - Western dialects: vowel preference
  - Eastern dialects: consonant preference
Table 28: Geographical effect on the phonetic reduction of V-te-yuk ‘V-Con-go’.

<table>
<thead>
<tr>
<th>Geography</th>
<th>Estimate (β)</th>
<th>Std. Error</th>
<th>Wald Z</th>
<th>Prob. of Z</th>
<th>Exp(β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>-.204</td>
<td>.331</td>
<td>-.615</td>
<td>.538</td>
<td>.82</td>
</tr>
<tr>
<td>West</td>
<td>-.943</td>
<td>.258</td>
<td>-3.650</td>
<td>.000</td>
<td>.39</td>
</tr>
</tbody>
</table>

Speech style

- Phonetic reduction is more likely to occur in normal/informal style than in formal style.

Table 29: Stylistic effect on the phonetic reduction of V-te-yuk ‘V-Con-go’.

<table>
<thead>
<tr>
<th>Speech Style</th>
<th>Estimate (β)</th>
<th>Std. Error</th>
<th>Wald Z</th>
<th>Prob. of Z</th>
<th>Exp(β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informal</td>
<td>1.600</td>
<td>.251</td>
<td>6.364</td>
<td>1.96e-10</td>
<td>4.95</td>
</tr>
</tbody>
</table>

Effect Magnitude of Significant Factors

- Effect magnitude in Figure 7 illustrates the relative strength among the five statistically significant factors (NB: verb frequency are not included because it is taken in the analysis as a continuous variable.).

```
LEAST SIGNIFICANT
   Gender  (Range = 17)
   Context (Range = 23)
   Geography (Range = 28)
MOST SIGNIFICANT
   Speech style (Range = 33)
```

Figure 7: Effect magnitude of significant factors.
Semantic Bleaching &
Reanalysis in Grammaticalization of yuk ‘go’

There is syntactic evidence supporting the assumption that te and yuk form one lexical item as a result of reanalysis of V-te-yuk (see (90) on p. 20). The difference in syntactic derivation of V-yuk and V-te-yuk between their transitional use and aspeclual use can be accounted for by assuming two syntactic features, case assignment and point of view. These features link to different qualia in semantics, the former to CONST and the latter to FORMAL.

Semantic Bleaching, Reanalysis, and Renewal

Semantic bleaching
The weakening of or a shift of meaning, usually together with changes in phonology and in syntax (Heine & Reh 1984, Hopper & Traugott 2003); the retention of logical meaning and the loss of non-logical meaning (von Fintel 1995, Roberts & Roussou 2003, Roberts 2010)

Reanalysis
A change in constituency, hierarchical structure, category labels, grammatical relations, and cohesion (Harris & Campbell 1995)

Renewal
A widely observed process in the development of tense/aspect forms whereby existing meanings take on new forms (Hopper & Traugott 2003, Smith 2006)

Why Reanalysis of V-te-yuk?

1. Reanalysis is a manifestation of grammaticalization (Heine & Reh 1984, Hopper & Traugott 2003).

2. Restructuring in the V-ni ik construction (Miyagawa 1987)

(110) \[
\text{Taro-ga} \text{ [PRO hon-o kai-ni] it-ta].} \\
\text{Taro-Nom book-Acc buy-for go-Past} \\
\text{‘Taro went to buy a book.’} \] 
(Miyagawa 1987: 273)

(111) a. \[
\text{Taro-ga} \text{ Kanda-ni hon-o zitensya-de kai-ni it-ta.} \\
\text{Taro-Nom Kanda-to book-Acc bicycle-by buy-for go-Past} \\
\text{‘Taro went to Kanda by bicycle to buy a book.’} \] 

b. *\[
\text{Taro-ga} \text{ hon-o zitensya-de kai-ni Kanda-ni it-ta.} \\
\text{Taro-Nom book-Acc bicycle-by buy-for Kanda-to go-Past} \] 
(Miyagawa 1987: 275)

(112) Restructuring in (111a)
\[
s \text{NP} [v \text{VP} [s [s \text{NP} [v \text{NP kai-ni] ik] i] kai-ni ik] i] kai-ni ik] i \] \rightarrow \[s \text{NP} [v \text{NP} [v kai-ni ik] i] kai-ni ik] i \]

3. Cinque’s (2001) question:
“[…] why it [restructuring] should exist at all, and why it should exist with those particular verb classes (modal, aspeclual and motion).”
Tests on Complexity and Simplicity of $V_1$-$te$-$V_2$ Predicates

<table>
<thead>
<tr>
<th>Table 31: Tests of complexity.</th>
<th>Table 32: Tests of simplicity.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention of particles</td>
<td>Ok</td>
</tr>
<tr>
<td>Negation of $V_1$</td>
<td>Ok</td>
</tr>
<tr>
<td>o-$V$-$ni$ nar honorification</td>
<td>No</td>
</tr>
<tr>
<td>NPI-licensing</td>
<td>Ok</td>
</tr>
<tr>
<td>Crossed scrambling</td>
<td>Ok</td>
</tr>
<tr>
<td>Adjunct modification of $V_2$</td>
<td>No</td>
</tr>
</tbody>
</table>

**Intervention of particles (Martin 1975: 510ff)**

- Unlike lexical compounds, the $V_1$-$te$-$V_2$ predicates allow a particle or a filler to intervene between $te$ and $V_2$. This suggests a phrase boundary between them.

(114) Taroo-wa sono hon-o gakkoo-ni mot-te-wa-it-ta ga, . . .
       Taro-Top the book-Acc school-Dat have-Con-Prtcl-go-Past but
       ‘Taro did bring the book to school, but . . .’

(Matsumoto 1996: 242)


(Kageyama 1993: 76)

**Negation of $V_1$ (Nakatani 2013: 109)**

- Since a negative marker $nai$ is considered to be introduced in syntax, negating $V_1$ alone suggests that the $V_1$-$te$-$V_2$ predicates have the complex structure.

(117) a. Taroo-wa atoato-no tameni teki-o tukura-nai-de o-i-ta.
       Taro-Top future-Gen foe the sake enemy-Acc create-Neg-Con put-Past
       ‘For the sake of the future, Taro didn’t make enemies.’

b. Taroo-ga Ziroo-o sikara-nai-de yat-ta.
       Taro-Nom Jiro-Acc scold-Neg-Con give-Past
       ‘Taro didn’t scold Jiro (to Jiro’s benefit).’

(Nakatani 2013: 109)

**The o-$V$-$ni$ nar honorification (Kageyama 1993: 360)**

- Unlike lexical compounds, the $V_1$-$te$-$V_2$ predicates are incompatible with the o-$V$-$ni$ nar honorification. This suggests their complex property.

       Yamada-teacher-Nom that-Acc eat-Con see-Past
       ‘Professor Yamada tried eating it.’

b. *Yamada-sensee-ga sore-o o-[ tabe-te mi ]-ni nat-ta.
(cf. *Yamada-sensee-ga sore-o o-[ tabe ni nat ]-te mit-ta.*)

(Nakatani 2013: 110)

    Yamada-teacher-Nom that-Acc eat begin-Past
    ‘Professor Yamada began to eat it.’

b. *Yamada-sensee-ga sore-o o-[ tabe hazime ]-ni nat-ta.
   (cf. *Yamada-sensee-ga sore-o o-[ tabe-ni nari ]hazime-ta.)

(Nakatani 2013: 110)

NPI-licensing (McCawley & Momoi 1986, Matsumoto 1996)

- **Locality of NPI-licensing and the adjunct islandhood constraint**

    Taro-Top [ anything want-Neg-Past because ] leave-Past
    ‘Taro left because he didn’t want anything.’

    Taro-Top [ anything want-Past because ] leave-Neg-Past

(Nakatani 2013: 111)

- **Assuming te to be the head of an adjunct clause, te constitutes a barrier for NPI-licensing, hence ungrammaticality of (122b).**

- **But it becomes possible for an NPI to be licensed across te in the “concatenated” cases (Nakatani 2013: 111), hence grammaticality of (122c,d).**

  This suggests a simplex property of the $V_1$-$te$-$V_2$ predicates.

    Taro-Top [ anywhere go-Neg-Con ] apple-Acc eat-Past
    ‘Taro didn’t go anywhere and ate an apple.’

    Taro-Top [ anywhere go-Con ] apple-Acc eat-Neg-Past

    I-Top anything eat-Con come-Neg-Past

d. Boku-wa dokonimo it-te ko-nakat-ta.
    I-Top anywhere go-Con come-Neg-Past

(Nakatani 2013: 111)

---

1Nakatani (2013: 10) considers two verbs of the $V_1$-$te$-$V_2$ predicates to be *concatenated* if two eventive predicates jointly determine the eventive/thematic properties of the $V_1$-$te$-$V_2$ predicates, showing signs of unity in morphology, syntax, semantics, and/or phonology.
Crossed scrambling (McCawley & Momoi 1986, Miyagawa 1987, Nakatani 2013)

- Generally, internal arguments of an adjunct clause and the matrix clause cannot be cross-scrambled. (123b) sounds awkward, because the internal argument of mot-te, hon-o, and that of toozyoosu, ofisu-ni, are scrambled and crossed.

(123) a. Taroo-wa ofisu-ni hon-o mot-te toozyoosi-ta.
    Taro-Top office-Dat book-Acc hold-Con show_up-Past
    ‘Taro showed up at the office carrying a book.’

b. ??Taroo-wa hon-o ofisu-ni mot-te toozyoosi-ta.
    Taro-Top book-Acc office-Dat hold-Con show_up-Past

(Nakatani 2013: 14)

- The non-concatenated V₁-te-V₂ predicates behave similarly; thus, the crossed scrambling of hon-o of mot-te and gakkoo-ni of ik makes (124c) ungrammatical.

    Taro-Top [ book-Acc hold-Con ] bicycle-with school-Dat go-Past
    ‘Taro went to school by bicycle, holding a book in his hand.’

b. Taroo-wa gakkoo-ni [ hon-o mot-te ] zitensya-de it-ta.
    Taro-Top school-Dat [ book-Acc hold-Con ] bicycle-with go-Past

    Taro-Top [ book-Acc school-Dat hold-Con ] bicycle-with go-Past

(Nakatani 2013: 113)

- For the concatenated V₁-te-V₂ predicates, however, the syntactic operation does not downgrade the grammaticality of the sentence; thus, crossed-scrambling applied to (125) is acceptable.

(125) a. Taroo-wa zitensya-de gakkoo-ni hon-o mot-te it-ta.
    Taro-Top bicycle-with school-Dat book-Acc hold-Con go-Past
    ‘Taro brought a book to school with a bicycle.’

b. Taroo-wa zitensya-de hon-o gakkoo-ni mot-te it-ta.
    Taro-Top bicycle-with book-Acc school-Dat hold-Con go-Past

c. Taroo-wa hon-o zitensya-de gakkoo-ni mot-te it-ta.
    Taro-Top book-Acc bicycle-with school-Dat hold-Con go-Past

(Nakatani 2013: 113)

- To summarize, if crossed-scrambling is acceptable to the V₁-te-V₂ predicates, they have the simplex structure with no boundary between te and V₂.
Adjunct modification of $V_2$ (McCawley & Momoi 1986, Matsumoto 1996, Nakatani 2013)

- The selective modification of $V_2$ by an adjunct is not acceptable for the concatenated $V_1$-te-$V_2$ predicates, suggesting that they have the simplex structure.

- The adjunct, $faasuto-kurasu-de$, cannot selectively modify $ku$ in (126b) because $mot$-te-$k$ is concatenated; in (126b), the adjunct should be construed as modifying the way of $syorui$ being transported as well as of Tanaka’s traveling (cf. (126a) where $mot$-te-$k$ is not concatenated).

(126) a. $Tanaka$-san-wa $syorui$-o $mot$-te $faasuto$-$kurasu$-de $ki$-ta.
   $Tanaka$-Mr-Top document-Acc hold-Con first-class-with come-Past
   ‘Mr. Tanaka held the documents and came using a first-class ticket.’

b. $Tanaka$-san-wa $faasuto-kurasu$-de $syorui$-o $mot$-te $ki$-ta.
   $Tanaka$-Mr-Top first-class-with document-Acc hold-Con come-Past

c. $Tanaka$-san-wa $kuruma$-de $syorui$-o $mot$-te $ki$-ta.
   $Tanaka$-Mr-Top car-by document-Acc hold-Con come-Past
   ‘Mr. Tanaka brought the documents by car.’

(Nakatani 2013: 114)

Syntactic Evidence for Reanalysis of $V$-te-$yuk$

<table>
<thead>
<tr>
<th></th>
<th>Before reanalysis: $[V$-te-$yuk]$</th>
<th>After reanalysis: $V$-[te-$yuk$]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negation of $V_1$</td>
<td>Ok</td>
<td>No</td>
</tr>
<tr>
<td>$o$-$V$-ni nar honorification</td>
<td>No</td>
<td>Ok</td>
</tr>
<tr>
<td>NPI-licensing across boundary</td>
<td>No</td>
<td>Ok</td>
</tr>
<tr>
<td>Crossed scrambling</td>
<td>No</td>
<td>Ok</td>
</tr>
<tr>
<td>Adjunct modification of $V_2$</td>
<td>Ok</td>
<td>No</td>
</tr>
</tbody>
</table>

Negation of $V_1$

- Ungrammaticality of negating $V_1$ of aspectual $V$-te-$yuk$ indicates the simplex structure of $V$-te-$yuk$ in this use, suggesting that $te$-$yuk$ forms one lexical item; in contrast, grammaticality of (129) suggests the complex structure of $V$-te-$yuk$ in transitional use.

(129) Before reanalysis: $[V$-te$]$-$yuk$ (movement after/while $V$)

a. $Ken$-wa siken kaizyoo-ni enpitu-o $mot$-anai-de-it-ta.
   Ken-Top exam site-Dat pencil-Acc have-Neg-Con-go-Past
   ‘Ken went to the venue of examination without any pencils.’
After reanalysis: V-[ te-yuk ] (aspect)
   a. Osanai toki-no omoide-wa Ken-no atama-kara nanihitotu
      childhood-Gen memory-Top Ken-Gen head-from anything
      ‘Memories of his childhood did not disappear from Ken’s mind.’

The o-V-ni nar honorification (See also p. 48ff.)

Before reanalysis: [ V-te ] -yuk (movement after/while V)
      Professor Yamada-Nom classroom-Dat it-Acc have-Con-go-Past
      ‘Professor Yamada brought it to the classroom.’
   a’ . . . sore-o { mot-te-o-iki-ni nat-ta / *o-moti-ni nat-te-it-ta }.

After reanalysis: V-[ te-yuk ] (aspect)
   a. Hitode busoku-nanode, ooku-no syatyo-ga zyuugyooin-o huyasi-te-it-ta.
      labor shortage-because many-of president-Nom laborer-Acc increase-Con-go-Past
      ‘Owing to labor shortages, presidents of many companies have increased the number of laborers.’
   a’ . . . { huyasi-te-o-iki-ni nat-ta / o-huyasi-ni nat-te-it-ta }.

NPI-licensing across boundary

- The fact that NPI-licensing across te is acceptable for aspecual V-te-yuk suggests a stronger morphological integrity between te and yuk in this use than in transitional use.

Before reanalysis: [ V-te ] -yuk (movement after/while V)
   a. Ken-wa syokuba-ni yakkyoku-de kusuri-o morat-te-it-ta.
      Ken-Top office-Dat pharmacy-at medicine-Acc receive-Con-go-Past
      ‘Ken went to his office after having received medicine at a pharmacy.’

After reanalysis: V-[ te-yuk ] (aspect)
      night Prtcl-become-Con temperature-Nom fall-Con-go-Past
      ‘The temperature has fallen as the night approaches.’
   a’ . . . mattaku sagar-anai-de-ik-anakat-ta.

      never fall-Neg-Con-go-Neg-Past
Crossed scrambling

- In transitional use, it is unacceptable to cross-scramble the internal arguments of the te-clause, gyuuuniku-o, and the matrix ik, baabekyuu paatii-ni.

(139) Before reanalysis: [ V-te ] -yuk (movement after/while V)
   a. Ken-wa gyuuuniku-o kat-te densya-de baabekyuu paatii-ni it-ta.
      Ken-Top beef-Acc buy-Con train-by barbecue party-Dat go-Past
      ‘Ken went to the barbecue party after having bought some beef.’

   i. *Ken-wa [ gyuuuniku-o baabekyuu paatii-ni kat-te ] densya-de it-ta.
   ii. ?*Ken-wa densya-de [ baabekyuu paatii-ni gyuuuniku-o kat-te ] it-ta.

- In aspectual use, crossed scrambling is acceptable:

(140) After reanalysis: V-[ te-yuk ] (aspect)
      night-Prtcl become-Con temperature-Nom ten.degrees.Celsius-to fall-Con go-Past
      ‘The temperature fell to ten degrees Celsius as at night.’

   i. Kion-ga zyuudo-ni yoru-ni nat-te sagat-te-it-ta.

Adjunct modification of V₂

- Unacceptability of selective modification of V₂ by an adjunct in aspectual use suggests no boundary between te and yuk in V-te-yuk, showing a morphological unity of them.

(142) Before reanalysis: [ V-te ] -yuk (movement after/while V)

   Ken-ga gakkoo-ni hasit-te {kinoo/yukkuri-to/nonbiri-to/isoi-de/aawate-te} it-ta.
   Ken-Nom school-Dat run-Con {yesterday/slowly/leisurely/hurriedly/hastily} go-Past
   ‘Ken went to school {yesterday/slowly/leisurely/hurriedly/hastily}.’

(143) After reanalysis: V-[ te-yuk ] (aspect)
   a. *Kabuka-ga agat-te
      stock.price-Nom rise-Con
      {kinoo/saikin/zyozyo-ni/kyuugeki-ni/oohaba-ni/kakosaikoo-ni} it-ta.
      {yesterday/recently/gradually/vastly/record-high} go-Past
      ‘Stock prices went up {yesterday/recently/gradually/vastly/to a record-high}.’

Motivations behind Movement of *yuk* & Suppression of Movement

Proposal

(154) *Yuk* lexically has i) case-assignment [assign accusative Case/dative Case] and ii) point-of-view [POV], where the accusative case (marked by o) is to be assigned to a path-argument, and the dative case (marked by ni/e) to a goal-argument.

Case-assignment feature

- Two options for the case-assignment feature: the goal of movement is not an argument but an adjunct when it co-occurs with the path of movement.
- The adjuncthood status of the goal of movement links to the arrival meaning specified in TELIC, a quale in NTS; thus, the dative case is not assigned to it. When it co-occurs with the path of movement, it is understood as the direction of movement.
- In contrast, the path of movement is assigned the accusative case (marked by o), because it is specified as the transitional meaning in CONST in TS.

(155) a. *Ken-ga kono miti-o it-ta.*
    Ken-Nom this road-Acc go-Past
    ‘Ken went along this road.’

b. *Ken-ga gakkoo-ni/-e it-ta.*
    Ken-Nom school-Dat go-Past
    ‘Ken went to school.’

c. ?*Ken-ga kono miti-o gakkoo-ni/-e it-ta.*
    Ken-Nom this road-Acc school-Dat go-Past
    ‘Ken went along this road to his school.’

(156) a. *Ken-ga {kono miti-o/gakkoo-ni/-e/?*kono miti-o gakkoo-ni/-e} hasiri-yuk-u kookei.*
    Ken-Nom [this road-Acc/school-Dat/this road-Acc school-Dat] run-go-Pres scene
    ‘The scene of Ken go running [along this road/to school/along this road to school].’

b. *Ken-ga {kono miti-o/gakkoo-ni/-e/?*kono miti-o gakkoo-ni/-e} hasit-te-it-ta.*
    Ken-Nom [this road-Acc/school-Dat/this road-Acc school-Dat] run-Con-go-Past
    ‘Ken went running [along this road/to school/along this road to school].’

(158) ?*Ken-wa kono yamamiti-o santyoo-ni/-e hatizikan it-ta.*
    Ken-Top this mountain.road-Acc mountaintop-Dat eight.hour go-Past
    ‘Ken went along this mountain road to the mountaintop for eight hours.’

Point-of-view feature

- The point-of-view feature is vital for determining deicticity of *yuk* and links to the point-of-view function (POV) and the distance function (DIS) in FORMAL.
Movement of *yuk* in transitional use

(161)

```
DeixP
   \[ Spec \]
   \[ pro_p \]
   Deix'
     \[ VP_2 \]
     \[ Spec \]
     \[ Ken_xi-ga \]
     \[ NP \]
     \[ yamamiti_y-o \]
     \[ VP_1 \]
     \[ V_2' \]
     \[ Deix \]
     \[ yuk \]
     \[ [POV] \]
```

- *Yuk* is base-generated in $V_2$ and assigns the accusative case to the path of movement (The case-assignment feature is checked).
- *Yuk* undergoes head-movement to Deix in order for checking the point-of-view feature.

Suppression of movement in aspectual use

(162)

```
DeixP
   \[ Spec \]
   \[ pro_p \]
   Deix'
     \[ VP \]
     \[ hana_xi-ga kare- \]
     \[ Deix \]
     \[ yuk \]
     \[ [POV] \]
```

- No case-assignment feature in aspectual use of $V$-*yuk* and $V$-*te-yuk*
- *Yuk* or *te-yuk* is base-generated in Deix in order for checking the point-of-view feature.
Different features to be checked in different positions

• The two features proposed are checked in different positions:
  – The case-assignment feature is to be checked in V.
  – The point-of-view feature is to be checked in Deix.

• This analysis follows the arguments on a syntactic approach to grammaticalization proposed by Roberts and Roussou (1999: 1021):
  “[..] under the move option one lexical item realizes (spells out) more than one feature, that is, two syntactic positions, while under merge a given lexical item spells out one feature.”

Features in Syntax and Qualia in Semantics
Logical & non-logical meaning in grammaticalization

• A semantic characterization of grammaticalization (Roberts & Roussou 2003, Roberts 2010):
  – The loss of non-logical meaning = the loss of argument structure
  – The retention of logical meaning = modal meaning that remains in the case of development of modal auxiliaries

(165)  a.  Thelo  na grafo.
        want-1sg prt write-1sg
        ‘I want to write.’
        (Roberts & Roussou 2003: 60)

            b.  Ta rouxa  theloun  plisimo.
                the clothes want-3pl washing
                ‘The clothes need washing.’
                (Roberts & Roussou 2003: 68)

            c.  enas mas the  na skotothei  ki o  rigas tou  tha  xasei.
                one  ours will prt be-killed-3sg and the king  his  prt  lose-3sg
                ‘One of us will be killed and his king will lose.’
                (Roberts & Roussou 2003: 67)

Logical and non-logical meaning of yuk

• Logical meaning: the point-of-view feature ↔ POV and DIS in FORMAL

• Non-logical meaning: the case-assignment feature ↔ CONST

• Semantic bleaching of yuk: losing the non-logical, case-assignment feature while retaining the logical, point-of-view feature
Theoretical Consequences

Semantics of Ku/Kure/Age & V-te-ku/-kure/-age

Semantics of Ku 'come'

(170) \[ ku 'come' (movement) \]
\[
\text{ARG} = \left[ \begin{array}{c} \text{ARG1: } x, \text{ARG2: } y, \text{ARG3: } z, \text{P-ARG: } p \end{array} \right] \\
\text{TS} \\
\text{QUALIA} = \left[ \begin{array}{c} s < f, \\
\text{DIS}(p, \text{Loc}(e, s')) > \text{DIS}(p, \text{Loc}(e, f)), \\
\text{POV}(p) = \langle \text{POINT}(e) = \text{Loc}(e, f), \\
\text{VIEW}(y) = \langle s, f \rangle \rangle \\
\text{CONST: } \text{CAUSE} ([\text{GO}(x, \text{VIA}(y)), [\text{BE-AT}(x, z_{\text{place}})]) \end{array} \right] \\
\]
Semantics of V-te-ku ‘V-Con-come’

(171) a. **Kodomo-wa yama-de ookina tori-no hane-o hiot-te-ki-ta.**
    children-Top mountain-Dat big bird-Gen feather-Acc pick.up-Con-come-Past
    ‘Children came back, having picked up a feather of a big bird.’

b. **Dandan onaka-ga sui-te-ki-masi-ta**
    gradually stomach-Nom hungry-Con-come-Hon-Past
    ‘I am getting hungry.’


(172) te-ku ‘Con-come’ (aspect)

ARG = [ ARG1: VP [ ARG1: x ], P-ARG: p ]

QUALIA = 

QUALIA = 

Semantic composition of (onaka-ga) sui-te-ku (aspect)

(173) (onaka-ga) suk ‘(stomach-Nom) become.hungry’

ARG = [ ARG1: x ]

QUALIA = 

(174) (onaka-ga) sui-te-ku ‘(stomach-Nom) become.hungry-Con-come’

ARG = [ ARG1: VP [ ARG1: x ], P-ARG: p ]

QUALIA = 

QUALIA =
Semantics of Kure/Age ‘give’

(175) a. Kare-ga watasi-ni hon-o kure-ta/*age-ta
    he-Nom I-Dat book-Acc give-Past/*give-Past
    ‘He gave me a book.’

b. Watasi-ga kare-ni hon-o *kure-ta/age-ta
    I-Nom he-Dat book-Acc*give-Past/give-Past
    ‘I gave him a book.’

(Nakatani 2013: 208)

(177) kure ‘give’
    ARG = [ ARG1: x, ARG2: y, ARG3: z, P-ARG: p ]
    TS
    QUALIA =
    FORMAL:
    \[ s = f, \]
    \[ \text{DIS}(p, \text{Loc}(e, s')) > \text{DIS}(p, \text{Loc}(e, f)), \]
    \[ \text{POV}(p) = \langle \text{POINT}(e) = \text{Loc}(e, f), \]
    \[ \text{VIEW}(e) = \langle s, f_e \rangle \]
    \[ \text{CONST: GO (y)} \]
    NTS
    TELIC: BE-AT (y, z)
    TRIGGER: ACT-ON (x, y)

(178) age ‘give’
    ARG = [ ARG1: x, ARG2: y, ARG3: z, P-ARG: p ]
    TS
    QUALIA =
    FORMAL:
    \[ s = f, \]
    \[ \text{DIS}(p, \text{Loc}(e, s')) < \text{DIS}(p, \text{Loc}(e, f)), \]
    \[ \text{POV}(p) = \langle \text{POINT}(e) = \text{Loc}(e, s), \]
    \[ \text{VIEW}(e) = \langle s, f_e \rangle \]
    \[ \text{CONST: GO (y)} \]
    NTS
    TELIC: BE-AT (y, z)
    TRIGGER: ACT-ON (x, y)

Semantic composition of kare-ga watasi-ni hon-o kure (lexical kure/age)

(179) kare-ga watasi-ni hon-o kure ‘he-Nom I-Dat book-Acc give’
    ARG = [ ARG1: [[kare]], ARG2: [[hon]], ARG3: [[watasi]], P-ARG: p ]
    TS
    QUALIA =
    FORMAL:
    \[ s = f, \]
    \[ \text{DIS}(p, \text{Loc}(e, s')) > \text{DIS}(p, \text{Loc}(e, f)), \]
    \[ \text{POV}(p) = \langle \text{POINT}(e) = \text{Loc}(e, f), \]
    \[ \text{VIEW}(e) = \langle s, f_e \rangle \]
    \[ \text{CONST: GO ([[hon]])} \]
    NTS
    TELIC: BE-AT ([[hon]], [[watasi]])
    TRIGGER: ACT-ON ([[kare]], [[hon]])
Semantics of **V-te-kure/-age**

(a) Ken-ga watasi-ni pan-o **tigit-te-kure-ta**.  
Ken-Nom I-Dat bread-Acc break-Con-give-Past  
‘Ken broke off the bread and handed it to me.’

(b) Ken-ga watasi-ni hon-o **yon-de-kure-ta**.  
Ken-Nom I-Dat book-Acc read-Con-give-Past  
‘Ken read me a book.’

**Semantic composition of (pan-o) tigit-te-kure (lexical V-te-kure/-age)**

(a) (pan-o) tigir ‘(bread-Acc) break’

<table>
<thead>
<tr>
<th>ARG</th>
<th>[ ARG1: x, ARG2: y ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUALIA</td>
<td>[ TS\</td>
</tr>
<tr>
<td></td>
<td>FORMAL: s = f</td>
</tr>
<tr>
<td></td>
<td>CONST: CAUSE ([ACT-ON (x, y)], [BE_{ident-AT} (y, BROKEN)])</td>
</tr>
</tbody>
</table>

(b) (pan-o) tigit-te-kure ‘(bread-Acc) break-Con-give’

<table>
<thead>
<tr>
<th>ARG</th>
<th>[ ARG1: VP [ ARG1: x, ARG2: y ], ARG2: z, \</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>P-ARG: p</td>
</tr>
<tr>
<td>QUALIA</td>
<td>[ TS\</td>
</tr>
<tr>
<td></td>
<td>FORMAL: ( s_1 = f_1 &lt; s_2 = f_2, )</td>
</tr>
<tr>
<td></td>
<td>DIS(p, Loc(e, s')) &gt; DIS(p, Loc(e, f)),</td>
</tr>
<tr>
<td></td>
<td>POV(p) = ⟨POINT(e) = Loc'(e, f), VIEW(e) = ⟨s_2, e⟩⟩</td>
</tr>
<tr>
<td></td>
<td>CONST: ACT-ON (x, y) &amp; GO (y)</td>
</tr>
<tr>
<td></td>
<td>NTS</td>
</tr>
<tr>
<td></td>
<td>TELIC: BE-AT (y, broken, z)</td>
</tr>
<tr>
<td></td>
<td>TRIGGER: ACT-ON (x, y)</td>
</tr>
</tbody>
</table>

Semantics of aspectual **V-te-kure/-age**

(a) **te-kure ‘Con-give’**

<table>
<thead>
<tr>
<th>ARG</th>
<th>[ ARG1: VP [ ARG1: x ], ARG2: z, P-ARG: p \</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUALIA</td>
<td>[ TS\</td>
</tr>
<tr>
<td></td>
<td>FORMAL: ( s = f, )</td>
</tr>
<tr>
<td></td>
<td>DIS(p, Loc(e, s')) &gt; DIS(p, Loc(e, f)),</td>
</tr>
<tr>
<td></td>
<td>POV(p) = ⟨POINT(e) = Loc'(e, f), VIEW(e) = ⟨s, f⟩⟩</td>
</tr>
<tr>
<td></td>
<td>CONST: ( \phi )</td>
</tr>
<tr>
<td></td>
<td>NTS</td>
</tr>
<tr>
<td></td>
<td>TELIC: BE_{ident-AT} (e, z)</td>
</tr>
<tr>
<td></td>
<td>TRIGGER: ACT-ON (x, e)</td>
</tr>
</tbody>
</table>

43
Semantic composition of (hon-o) yon-de-kure (aspectual V-te-kure/-age)

(184) 
```
te-age 'Con-give'
ARG = [ ARG1: VP ARG1: x, ARG2: z, P-ARG: p ]

QUALIA =
```
```
TS
FORMAL: 
DIS(p, Loc(e, s')) > DIS(p, Loc(e, f)),
POV(p) = ⟨POINT(e) = Loc'(e, s),
VIEW(e) = ⟨s_e, f_e⟩⟩

CONST: ϕ
NTS
TELIC: BEIdent-AT (e, z)
TRIGGER: ACT-ON (x, e)
```

Morphological Reconfiguration in V-te-kure/-age

Reanalysis holds true not only for the aspectual use of V-te-yuk but also for the aspectual use of V-te-kure/-age, hence the structure like (191).

(191) 
```
DeixP
   Spec
  | prop
Deix'
   VP
```
```
te-ku/te-kure/te-age
```

(185) 
```
(hon-o) yom 'book-Acc) read'
ARG = [ ARG1: x, ARG2: y ]

QUALIA =
```
```
TS
FORMAL: s < f
CONST: ACT-ON (x, y)
```

(186) 
```
(hon-o) yon-de-kure (a book) read-Con-give'
ARG = [ ARG1: VP ARG1: x, ARG2: y, ARG2: z, P-ARG: p ]

QUALIA =
```
```
TS
FORMAL: 
DIS(p, Loc(e, s')) < DIS(p, Loc(e, f)),
POV(p) = ⟨POINT(e) = Loc'(e, s),
VIEW(e) = ⟨s_e, f_e⟩⟩

CONST: ACT-ON (x, y)
NTS
TELIC: BEIdent-AT (e, z)
TRIGGER: ACT-ON (x, e)
```

(187) 
```
(hon-o) yon-de-kure 'book-Acc) read'
ARG = [ ARG1: x, ARG2: y ]

QUALIA =
```
```
TS
FORMAL: s = f,
DIS(p, Loc(e, s')) < DIS(p, Loc(e, f)),
POV(p) = ⟨POINT(e) = Loc'(e, s),
VIEW(e) = ⟨s_e, f_e⟩⟩

CONST: ϕ
NTS
TELIC: BEIdent-AT (e, z)
TRIGGER: ACT-ON (x, e)
```

Morphological Reconfiguration in V-te-kure/-age

Reanalysis holds true not only for the aspectual use of V-te-yuk but also for the aspectual use of V-te-kure/-age, hence the structure like (191).
V-te-ku

(187) V-te-ku (movement)

a. Negation of V₁:
   Ken-wa siken kaizyoo-ni enpitu-o  \[\text{mot-anai-de-ki-ta/} \text{mot-te-ko-nakat-ta}\].
   Ken-Top exam site-Dat pencil-Acc [have-Neg-come-Past/have-Con-come-Neg-Past]
   ‘Ken came to the venue of examination without any pencils.’

b. The o-V-ni nar honorification:
   Yamada sensee-ga kyoositu-ni sore-o
   Yamada professor-Nom classroom-Dat it-Acc
   \[\text{mot-te-o-kosi-ni nat-ta/} \text{o-moti-ni nat-te-ki-ta}\].
   [have-Con-Hon-come-Hon-Past/Hon-have-Hon-Con-come-Past]
   ‘Professor Yamada brought it to the classroom.’

c. NPI-licensing across boundary:
   Ken-wa syokuba-ni yakkyoku-de kusuri-o morat-te-ki-ta.
   Ken-Top office-Dat pharmacy-at medicine-Acc receive-Con-come-Past
   ‘Ken came to his office after having received medicine at a pharmacy.’
   i. Ken-wa syokuba-ni yakkyoku-de \[\text{nanimo moraw-anai-de-}\]ki-ta.
      anything receive-Neg-Con-come-Past
      anything receive-Con-come-Neg-Past

   d. Crossed scrambling:
      Ken-wa gyuuniku-o kat-te densya-de baabekyuu paatii-ni ki-ta.
      Ken-Top beef-Acc buy-Con train-by barbecue party-Dat go-Past
      ‘Ken came to the barbecue party after having bought some beef.’
      i. *Ken-wa \[\text{gyuuniku-o baabekyuu paatii-ni kat-te-}\]densya-de-ki-ta.
      ii. ?*Ken-wa \[\text{densya-de-}\]baabekyuu paatii-ni gyuuniku-o kat-te-\]ki-ta.
      iii. *Ken-wa \[\text{gyuuniku-o densya-de-}\]baabekyuu paatii-ni kat-te-\]ki-ta.

e. Adjunct modification of V₂:
   Ken-ga gakkoo-ni hasit-te \[\text{kinoo/yukkuri-to/} \text{nonbiri-to/isoi-de/} \text{awate-te}\] ki-ta.
   Ken-Nom school-Dat run-Con \{yesterday/slowly/leisurely/hurriedly/hastily\}
   go-Past
   ‘Ken came to school \{yesterday/slowly/leisurely/hurriedly/hastily\}.’

(188) V-te-ku (aspect)

a. Negation of V₁:
   Osanai toki-no atama-kara nanhitotu
   childhood-Gen memory-Top head-from anything
   \[\text{*kie-nai-de-ki-ta/} \text{kie-te-ko-nakat-ta}\].
   [disappear-Neg-Con-come-Past/disappear-Con-come-Neg-Past]
   ‘Memories of his childhood did not disappear from Ken’s mind.’
b. The o-V-ni nar honorification:

Hitode busoku-nanode ooku-no syatfoo-ga zyuugyooin-o
labor shortage-because many-of president-Nom laborer-Acc
{\text{*huyasi-te-o-kosi-ni nat-ta/o-huyasi-ni nat-te-ki-ta}}.
[increase-Con-Hon-come-Hon-Past/Hon-increase-Hon-Con-come-Past]
'Owing to labor shortages, presidents of many companies have increased the number of laborers.'

c. NPI-licensing across boundary:

Yoru ni-nat-te, kion-ga sagat-te-ki-ta.
night Prtcl-become-Con temperature-Nom fall-Con-come-Past
'The temperature has fallen as the night approaches.'

i. *Yoru ni-nat-temo, kion-ga [mattaku sagar-anai-de]-ki-ta.
never fall-Neg-Con-come-Past

ever fall-Con-come-Neg-Past
d. Crossed scrambling:

night-Prtcl-become-Con temperature-Nom ten.degrees.Celsius-to fall-Con-go-Past
'The temperature fell to ten degrees Celsius as at night.'

i. Kion-ga zyuudo-ni yoru-ni-nat-te sagat-te-ki-ta.
e. Adjunct modification of V$_2$:

*Kabuka-ga agat-te
stock.price-Nom rise-Con

{kinoo-kara/saikin/zyozyo-ni/kyuugeki-ni/oohaba-ni/kakosaikoo-ni} ki-ta.
yesterday-since/recently/gradually/drastically/vastly/to a record-high go-Past
'Stock prices have risen [since yesterday/recently/gradually/drastically/vastly/to a record-high],'


V-te-kure/-age

(189) V-te-kure/-age (movement)

a. Negation of V$_1$:

Ken-ga watasi-ni pan-o [tigir-anai-de-kure-ta/*tigit-te-kure-nakat-ta].
Ken-Nom I-Dat bread-Acc [break-Neg-Con-give-Past/break-Con-give-Neg-Past]
'Ken gave me the bread without breaking it.'

b. The o-V-ni nar honorification:

Yamada sensee-ga watasi-ni pan-o
Yamada professor-Nom I-Dat bread-Acc
{tigit-te-o-kure-ni nat-ta/*o-tigiri-ni nat-te-kure-ta}.
[break-Con-Hon-give-Hon-Past/Hon-break-Hon-Con-give-Past].
'Professor Yamada broke off the bread and handed it to me.'
c. NPI-licensing across boundary:

Ken-ga watasi-ni pan-o tigit-te-kure-ta.
Ken-Nom I-Dat bread-Acc break-Con-give-Past

‘Ken broke oﬀ the bread and handed it to me.’

   any break-Neg-Con -give-Past

   any break-Con -give-Neg-Past

d. Crossed scrambling:

Ken-ga pan-o tigit-te te-de watasi-ni kure-ta.
Ken-Nom bread-Acc break-Con hand-by I-Dat give-Past

‘Ken broke oﬀ the bread and handed it to me.’


ii. ?*Ken-ga te-de [ watasi-ni pan-o tigit-te ] kure-ta.


e. Adjunct modification of V₂:

Ken-ga watasi-ni pan-o tigit-te {kinoo/sukosi/kirei-ni/isoi-de/teinei-ni} kure-ta.
give-Past

‘Ken broke oﬀ the bread and handed it to me {yesterday/a little/neatly/hurriedly/politely}.’

(190) V-te-kure/-age (aspect)

a. Negation of V₁:

Ken-ga watasi-ni hon-o { *yom-anai-de-kure-ta/yon-de-kure-nakat-ta }.
Ken-Nom I-Dat bookd-Acc [read-Neg-Con-give-Past/read-Con-Neg-Past]

‘Ken didn’t read me a book.’

b. The o-V-ni nar honoriﬁcation:

Yamada sensee-ga watasi-ni hon-o
Yamada professor-Nom I-Dat bookd-Acc

{ *yon-de-o-kure-ni nat-ta/o-yomi-ni nat-te-kure-ta }.
[read-Con-Hon-give-Hon-Past/Hon-read-Hon-Con-give-Past]

‘Professor Yamada read me a book.’

c. NPI-licensing across boundary:

Ken-ga watasi-ni hon-o yon-de-kure-ta.
Ken-Nom I-Dat book-Acc read-Con-give-Past

‘Ken read me a book.’

   any read-Neg-Con -give-Past

   any read-Con -give-Neg-Past
d. Crossed scrambling:

\[ \text{Ken-ga zyuppeezi hon-o watasi-ni yon-de-kure-ta}. \]

‘Ken read me the book for ten pages.’

i. \( \text{Ken-ga zyuppeezi watasi-ni hon-o yon-de-kure-ta}. \)

ii. \( \text{Ken-ga hon-o watasi-ni zyuppeezi yon-de-kure-ta}. \)

e. Adjunct modification of \( V_2 \):

i. *\( \text{Ken-ga watasi-ni hon-o yon-de} \)

\[ \text{Ken-Nom I-Dat book-Acc read-Con} \]

\[ \{\text{kinoo/saikin/zyozyo-ni/omosiroku/wakariyasuku}\} \text{kure-ta}. \]

‘Ken read me a book \{yesterday/recently/gradually/intriguingly/comprehensively\}.’

ii. \( \text{Ken-ga watasi-ni hon-o} \)

\[ \text{Ken-Nom I-Dat book-Acc} \]

\[ \{\text{kinoo/saikin/zyozyo-ni/omosiroku/wakariyasuku}\} \text{yon-de-kure-ta}. \]

‘Ken read me a book \{yesterday/recently/gradually/intriguingly/comprehensively\}.’

More on the o-V-ni nar honorification (based on Kindaichi (1959) & Kuno (1983))

Kuno (1983)

- Two different o-V-ni nar honorification patterns of \( V_1-i V_2 \) compounds are due to the difference in their syntactic structures. The difference is accounted for by the subject’s controllability of the event.

(192) a. o-V-ni nar honorifies the whole \( V_1-i V_2 \):

\[ \text{o-kaki-hazime-ni nar ‘begin writing’, o-kaki-tuduke-ni nar ‘continue writing’} \]

b. o-V-ni nar honorifies only \( V_1 \):

\[ \text{o-kaki-ni nari-hazime ‘begin writing’, o-kaki-ni nari-tuduke ‘continue writing’} \]

(Kuno 1983: 5–6)

(193) \( \text{Tanaka-ga tegami-o kaki-hazime-ru}. \)

Tanaka-Nom letter-Acc write-begin-Pres

‘Tanaka begins to write a letter.’

(Kuno 1983: (9) on p. 8)

(194) a. \( \text{[s Tanaka-ga [s Tanaka-ga tegami-o kak ] hazime ]} \)

b. \( \text{[s [s Tanaka-ga tegami-o kak ] hazimar ]} \rightarrow \text{[s [s Tanaka-ga . . . ] hazime ]} \)

(Kuno (1983: (10a,b) on p. 8) modified by the author)


(Kuno 1983: (16) on pp. 10–11)


Excl-be group-Gen-guest-Nom already arrive-begin-Past-Prtcl

‘Oh, no! Group guests has just begun arriving.’


(Kuno 1983: (22) on pp. 11–12)

Kindaichi (1959)

- Two patterns of honorification of V-te-ir ‘V-Con-be’ depend on the extent to which ir ‘be’ auxiliarizes. Ir ‘be’ is auxiliarized when honorification is applied to V alone.

(197) a. kai-te-irassyar, kai-te-oideni nar, kai-te-orare

b. o-kaki-ni nat-te-ir

(Kindaichi 1959)

Assumptions from Kuno (1983) & Kindaichi (1959)

1. (from Kuno (1983))

If o-V-ni nar honorifies V alone, yuk, ku, and kure/age behave like an intransitive verb and take a VP-complement headed by V: they take an (uncontrollable) event as a complement.

2. (from Kindaichi (1959))

If V alone is honorified, yuk, ku, and kure/age behave (more) like an auxiliary (as a result of grammaticalization).

(198) a. Yamada sensee-ga kyoositu-ni sore-o

Yamada professor-Nom classroom-Dat it-Acc

{mot-te-o-iki-ni nat-ta/*o-moti-ni nat-te-it-ta}.

{have-Con-Hon-go-Hon-Past/Hon-have-Hon-Con-go-Past}

‘Professor Yamada brought it to the classroom.’
b. Hitode busoku-nanode, ooku-no syatyoo-ga zyuugyooin-o
labor shortage-because many-of president-Nom laborer-Acc
[increase-Con-Hon-go-Hon-Past/Hon-increase-Hon-Con-go-Past]
‘Owing to labor shortages, presidents of many companies have increased the number of laborers.’

(199) a. Yamada sensee-ga kyoositu-ni sore-o
Yamada professor-Nom classroom-Dat it-Acc
(mot-te-o-kosi-ni nat-ta/*o-moti-ni nat-te-ki-ta).
[have-Con-Hon-come-Hon-Past/Hon-have-Hon-Con-come-Past]
‘Professor Yamada brought it to the classroom.’

b. Hitode busoku-nanode ooku-no syatyoo-ga zyuugyooin-o
labor shortage-because many-of president-Nom laborer-Acc
[increase-Con-Hon-come-Hon-Past/Hon-increase-Hon-Con-come-Past]
‘Owing to labor shortages, presidents of many companies have increased the number of laborers.’

(200) a. Yamada sensee-ga watasi-ni pan-o
Yamada professor-Nom I-Dat bread-Acc
[break-Con-Hon-give-Hon-Past/Hon-break-Hon-Con-give-Past].
‘Professor Yamada broke off the bread and handed it to me.’

b. Yamada sensee-ga watasi-ni hon-o
Yamada professor-Nom I-Dat book-Acc
(*yon-de-o-kure-ni nat-ta/o-yomi-ni nat-te-kure-ta).
[read-Con-Hon-give-Hon-Past/Hon-read-Hon-Con-give-Past]
‘Professor Yamada read me a book.’

(201) a. Yamada sensee-wa gengogaku-ga masumasu suki-ninat-te-{it/ki}-ta.
Yamada professor-Top linguistics-Nom more and more like-become-Con-go/come-Past
‘Professor Yamada is becoming fond of Linguistics more and more.’

b. Yamada sensee-wa gengogaku-ga masumasu
Yamada professor-Top linguistics-Nom more and more
[like-become-Con-Hon-go-Hon-Past/Hon-like-become-Con-go-Past]
‘Professor Yamada is becoming fond of Linguistics more and more.’

c. Yamada sensee-wa gengogaku-ga masumasu
Yamada professor-Top linguistics-Nom more and more
[like-become-Con-Hon-come-Hon-Past/Hon-like-become-Con-come-Past]
‘Professor Yamada is becoming fond of Linguistics more and more.’

Yamada professor-Top Ken-Gen say-thing-Acc understand-Con-give-Past
‘Professor Yamada understood what Ken said.’
b. **Yamada sensee-wa** *Ken-no iu-koto-o*
   Yamada professor-Top Ken-Gen say-thing-Acc
   {*wakat-te-o-[kure/age]-ni nat-ta/o-wakari-ni nat-te-{kure/age}-ta*].
   [understand-Con-Hon-give-Hon-Past/Hon-understand-Hon-give-Past]
   ‘Professor Yamada understood what Ken said.’

7 Conclusion

**Conclusion**

- A formal and corpus-based analysis makes it possible to offer a detailed explanation of the grammaticalization process of *yuk* in Japanese.
  
  1. The interplay between semantic change and syntactic reanalysis in grammaticalization
  2. Reasons behind the transition from the older form to a newer grammatical form
  3. The morphophonological change occurring along with the advancement of grammaticalization

**Further research**

- Applicability of the proposed semantic mechanism to other V₁-te-V₂ predicates in Japanese
- The logical/non-logical distinction in the semantics of a lexical item in terms of Generative Lexicon.
- Generality of factors conditioning phonetic reduction in the V₁-te-V₂ predicates in Japanese
References


