Constructionalization of the Japanese addressee-honorification system

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1 Introduction

- The Japanese addressee-honorific construction (henceforce AH), as defined in (1), underwent a major change in the 20th century, as seen in the contrast between (2) and (3).
 - (1) **Addressee-honorific construction**: the form-meaning pair of $\langle X(form), AH(meaning) \rangle$, where the form X is associated with the allocutive honorificity (Yamada 2019).
 - (2) The early 20th-century Japanese (Kawaguchi 2014; Yamada 2019; Ogawa et al. 2020)

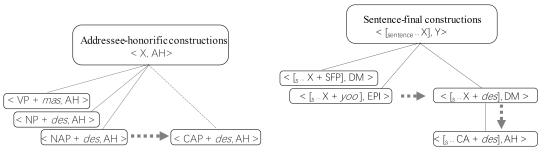
a.	VP	b. NP	c. AP_{na} (NAP)	d. AP_i (CAP)
	tobi- mas -u.	inu des -u.	kanrei des -u.	*tumetai des -u.
	fly-AH-PRS	dog COP.AH-PRS	cold COP.AH-PRS	cold COP.AH-PRS
	'(I) fly.'	'(It) is a dog.'	'(It) is cold.'	'(It) is cold.'

(3) The 21st-century Japanese

a.	VP	b. NP	c. AP_{na} (NAP)	d. AP_i (CAP)
	tobi- mas -u.	inu des -u.	kanrei des -u.	tumetai des -u.
	fly-AH-PRS	dog COP.AH-PRS	cold COP.AH-PRS	cold COP.AH-PRS
	'(I) fly.'	'(It) is a dog.'	'(It) is cold.'	'(It) is cold.'

- The canonical adjective used to be disallowed in this construction; instead, the variant in (4) was recommended by prescriptive grammarians (Kawaguchi 2014; Yamada 2019).
- In fact, the conflict in the old grammar is still observed with the plain form, as shown in (5).
 - (4) tumetoo gozai-mas-u. (5) *tumetai da. coldly exist.AHU-AH-PRS cold COP '(It) is cold.' (It) is cold (intended).'
- Within the framework of Diachronic Construction Grammar (Traugott & Trousdale 2013), this study advocates an indirect extension model in (6)b in place of a direct extension in (6)a.
 - (6) a. **Hypothesis 1**: Direct extension from AH constructions

b. **Hypothesis 2**: Indirect extension mediated by sentence-final constructions



2 Previous literature: Constructionalist view of language change

- (7) Construction: a sign (i.e., a form-meaning pair).
- (8) Language change: a change in a sign (Traugott & Trousdale 2013: 1; Noël & Colleman 2021)
 - a. Constructional changes: "[c]hanges that affect features of an existing construction"
 - b. **Constructionalization**: "[t]he creation of a form_{new}-meaning_{new} pairing."
- (9) Criticism of a linear unidirectional change: Constructional Convergence Hypothesis & Construction Network Reconfiguration Hypothesis (Torrent 2015)

3 Analysis

- **Prediction under H1**: If H1 is on the right track, it is predicted that formal properties of the other construction nodes are also shared by the CAP + *des*.
- **Key observation**: The prediction is not borne out; unlike the other uses of *des*, the one with an CA appears in sentence-periphery.

Test 1: te-clause

- The des with NP or NAP can be embedded within a te-clause.
 - (10) musuko-wa [mada [NP hiyokko] desi-te] yononaka-no koto-o nani-mo son-TOP still young child AH-te world-GEN thing-ACC anything-also siri-mas-en.

know-AH-NEG

'My son, being a young child, does not know anything about the world.'

(11) toohoo-wa [[NAPomonaga] desi-te], meiku-demo kakus-e-nai baai-ga I-TOP long-faced COP.AH-te make-up-with conceal-can-NEG case-NOM yoku ari-mas-u.

often exist-AH-PRS.

'As I am long-faced, makeup cannot hide a long face.'

- In contrast, the *des* with CAP cannot be embedded within a *te*-clause.
 - (12)*kanozyo-wa [[CAPutukusi(i)] desi-te], moderu-o si-tei-mas-u. she-TOP beautiful COP.AH-te model-ACC do-PRG-AH-PRS. 'She, being beautiful, is a model. (intended)'

Test 2: Order relative to the past tense suffix

- Unlike NP or NAP, CAP cannot be followed by *desi-ta*, but it must be used with *ta des-u* (e.g., *omosiro kata des-u*).
 - (13) a. {orenzi/ondan} desi-ta. orange/warm COP.AH-PST '(It) was orange/warm.'
- b. *omosiro(i) desi-ta.interesting COP.AH-PST'(It) was interesting. (intended)'
- **Proposal** (H2): Alternative to H1, this paper proposes the following hypothesis.
 - First, in its syntax, CAP *des-u* differs from the other two in that *des* is placed a sentence-peripheral region; since it is the outermost element, (i) it cannot be embedded, or (ii) be followed by the past tense suffix.
 - Second, in its historical development, it is not directly derived by the NP/NAP+des constructions. Rather, it is sanctioned and affected by the sentence-final element construction (hereafter, SFC).
 - * In Japanese, sentence-final elements are used to manipulate the relation between the speaker and the addressee. A sentence-final particle is one such example:
 - (14) ookii ne.

big SFP

'(It is) big, isn't it?'

- * A construction like this creates the scheme of $<[_{sentence} ... X], Y_{Discourse} >$.
- * Although neither -mas nor des- appears in sentence periphery, it has a discourse-oriented meaning (i.e., conveying the speaker's respect for the addressee).

- * Due to the similarity in meaning, the aforementioned constructional scheme sanctions the sentence-peripheral use of *des*-, creating a new node in constructional network.
- * Before language change, des had never been used in the X position in [sentence ... X]; likewise, the meaning of allocutivity was not a member of the meaning of $Y_{Discourse}$.
- * In this regard, a new form is analyzed as being paired with a new meaning, hence constructionalization.

4 Verifying the hypothesis

4.1 Qualitative supports

• **Prediction 1**: If H2 is on the right track, it is predicted that members of SFC cannot be embedded as in the case of CAP + *des*-, which is borne out as shown below.

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(15)*[[ookii ne]-te] nagai-ne.
big SFP-te long-SFP
'(It is) big and long, isn't it?'
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4.2 Quantitative supports

- **Prediction 2**: If H2 is on the right track, we should be able to see clear evidence of the SFC's influence on the use of CAP + *des*-.
- In what follows, it is shown that this prediction is also borne out; by examining a historical corpus, this paper points out that the use of CAP + des- is facilitated by the use of sentence-final elements.
- Data: Corpus of Historical Japanese (verstion 2021.3; last accessed Nov 24, 2021)
- Target: The use of CAP + des- (as in (2)d/(3)d) and the use of CAP + gozai mas (as in (4))
 - (16) **Prescriptive form**: POS LIKE "Canonical Adjective%" AND FOLLOWING WORDS: LEXEME *gozar* ON 1 WORDS FROM KEY AND FOLLOWING WORDS: LEXEME *-mas* ON 2 WORDS FROM KEY

(17) **New form**:

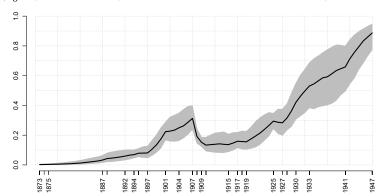
- a. POS LIKE "Canonical Adjective%" AND FOLLOWING WORDS: LEXEME des- ON 1 WORDS FROM KEY
- b. Pos like "Canonical Adjective" and following words: Lexeme *-ta* on 1 words from key and following words: Lexeme *des-* on 2 words from key

• Statistical Model (State-Space Model, Hagiwara 2021):

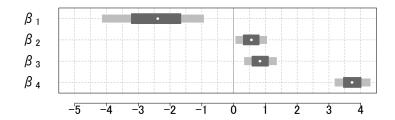
- (18) a. **Textbook** x_1 : Dummy variable taking the value of 1 iff the sample is taken from a textbook, and 0 otherwise. [Fixed-effect]
 - b. **Literature** x_2 : Dummy variable taking the value of 1 iff the sample is taken from the literature, and 0 otherwise. [Fixed-effect]
 - c. **Sentence-final particle** x_3 : Dummy variable taking the value of 1 iff the AH is used with a sentence-final particle, and 0 otherwise. [Fixed-effect]
 - d. **Epistemic model suffix** x_4 : Dummy variable taking the value of 1 iff the AH is used with an epistemic modal suffix -oo, and 0 otherwise. [Fixed-effect]
 - e. **Tense** x_5 : Dummy variable taking the value of 1 iff the AH is used in a past tense, and 0 otherwise. [Fixed-effect]
 - f. **Idiosyncrasies among canonical adjectives** $u_{01}, u_{02}, ..., u_{032}$: The idosyncrasy of the *j*-th adjective, which is assumed to follow $N(0, \tau^2)$. [Random-effect]

(19) Model:
$$y_{ij}^{(t)} \sim \text{Bern}(\pi_{ij}^{(t)}); \ \pi_{ij}^{(t)} \sim \text{logistic}(\eta_{ij}^{(t)}); \ \eta_{ij}^{(t)} = \beta_0^{(t)} + \beta_1 x_{1i}^{(t)} + \beta_2 x_{2i}^{(t)} + \beta_3 x_{3i}^{(t)} + \beta_4 x_{4i}^{(t)} + u_{0j}; \ u_{0j} \sim N(0, \tau^2); \ \beta_0^{(t)} \sim N(\beta_0^{(t-1)}, \sigma_\zeta^2)$$

- **Results**: The prediction is borne out.
 - (20) **Posterior inference on** $\{\beta_0^{(t)}: t \in \{1873, 1874, \cdots, 1947\}\}$: The posterior median of $\beta_0^{(t)}$ (the solid line) and its 95% credible intervals (the shaded gray area) for each year.



(21) Posterior inference on the regression coefficients:



• Interpretations:

- (22) **Extralingusitic variables (Genre)**: The first two are the genre effects (β_1 : textbooks, β_2 : novels): textbooks conservatively favor the old, recommended from, while novels seek to have the new construction.
- (23) **Intralinguistic variables**: The last two variables are our main concern, which suggest that the pattern in CAP+des- is favored when used with a sentence-final particle (β_3) and an epistemic marker (β_4), corroborating the aforementioned prediction.

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