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研究成果の概要(和文)：帰無仮説は、神戸市・愛媛県・山形県、宮崎市で行われた調査から得られた結果が、予想されるターゲットアウトプットから逸脱しないということであった。有意ではないが、ノルムからかなりずれていた肌寒い、左利き、形作っている、焼け死に、トラブル隠し、コーヒー茶碗という6個の連濁ターゲット意外、帰無仮説通りという結果であったので、連濁において、方言グループ別の有意な差は認められない。しかしながら、上述した6個の連濁ターゲットの中で4個については、若年齢層がやや高めの連濁率を示した。それは、高例年層が低めの連濁率を示していると、太田なたび太田 & 山下の先行研究で明らかになった傾向を裏付ける結果になるのである。

研究成果の概要(英文)：Our null hypothesis was that the results obtained from the four surveys conducted in Kobe, Ehima, Yamagata and Miyazaki would not deviate from those of the expected target output. Apart from six individual rendaku targets whose results deviated appreciably (though not significantly) from the norm (hada.zamui, hidari.kiki, katati.dukuQteiru, yake.jini, toraburu.kakusi, koohii.jawan), this was indeed the case. No significant differences in rendaku across dialect groups was evident. For four of the six rendaku targets mentioned above, however, it was the younger age cohort which showed the higher rendaku rates. This corroborates the trends uncovered in previous research by Ohta (2010, 2011) and Ohta & Yamashita (2012), who found that, in nearly all the compounds they surveyed, rendaku rates for rendaku were lower in older age cohorts.

研究分野：言語学

科研費の分科・細目：言語学・日本語学

キーワード：言語学 日本語学 音韻論 形態論 連濁 フィールドワーク 方言

1. 研究開始当初の背景

Rendaku, or sequential voicing, is a morphophonological alternation found in Japanese, whereby the initial voiceless obstruent of a non-initial element in a compound may be voiced, as in:

t ~ d:	<i>inu+toši</i>	>	<i>inu.doši</i>
	dog+year		'year of the dog'

A number of different factors (quasi-)systematically dampen or block rendaku, including Motoori-Lyman's Law, the right branch condition, dvandva, and lexical stratum. Despite the factors just cited, the unsystematicity of rendaku has helped maintain persistent scholarly interest in the phenomenon. Although no (quasi-)systematic restricting factors apply, a non-initial element may still fail to voice:

t ~ t:	<i>han+toši</i>	>	<i>han.toši</i>
	half+year		'six months'

One possible explanation for this unsystematicity, or at least an as yet unquantifiable portion of it, is dialect diffusion or mixing. The examples above reflect so-called 'standard Japanese' (SJ) pronunciation, a sociolect based on the speech of the middle and upper-middle classes of central Tokyo and regarded as the *de facto* standard in literature, the legal system, broadcasting and education. Hitherto, most research on rendaku has – with extremely few exceptions – also focused on SJ. Although dialectology has a long and rich tradition in Japan, constituting some of the earliest known sociolinguistic literature anywhere in the world, research on rendaku across dialects has been remarkable for its scarcity. While

Okumura (1964) considers rendaku in Kyōto dialect for Sino-Japanese+*suru* verbs and Hōjō (1966) rendaku in the Azuma dialect of Old Japanese, it was not until Miyara's (1996) theoretical examination of rendaku in Shuri dialect that any wide-ranging treatment was published. These studies have since been followed by Sasaki (2008), Tamaoka & Ikeda (2010), Ōta (2010, 2011), Vance et al. (in print) and Miyashita et al. (forthcoming). In all, only eight papers out of the approximately 220 published on rendaku since the late 19th century have treated, to any extent, the phenomenon outside SJ.

2. 研究の目的

This paper reports on a research project whose aim was to begin the long task of filling in this lacuna. The authors' initial intention was to employ dialect dictionaries, of which the rich tradition of dialectology mentioned above has supplied the researcher with an abundance. What appeared at first glance to be a treasure trove soon, however, proved illusory. Japanese dialect dictionaries are rarely bilingual, in the sense that a list of SJ headwords provides the word for *x* in dialect *y*. Instead, headwords are listed in dialect *y* – for which the SJ form *x* is generally provided – and, crucially, these headwords are restricted to those the editor(s) elected to include for, in most cases, reasons of cultural, regional or linguistic significance or, in a few cases, reasons which appear opaque and were likely wholly subjective. The overwhelming majority of compounds susceptible to rendaku do not fall into these categories and consequently do not appear in dialect dictionaries.

The authors had thus no recourse but to turn to fieldwork, in the form of rendaku dialect surveys, for data.

3 . 研究の方法

Budget constraints meant that it was possible to carry out *rendaku* dialect surveys in only four sites across Japan. These were chosen as being broadly representative of four major dialect groups: (a) Miyazaki City (Miyazaki Pref.), representative of the Eastern Kyūshū subdivision of the Kyūshū dialect group; (b) Kahoku Town (Yamagata Pref.), representative of the Tōhoku subdivision of the Eastern Japanese dialect group; (c) Matsuyama City & Ōzu Town (Ehime Pref.), representative of the Shikoku subdivision of the Western Japanese dialect group; and (d) Kōbe City (Hyōgo Pref.), representative of the Kinki subdivision of the Western Japanese dialect group.

Surveys were conducted over a 19-month period between December 2011 and July 2013. At the planning stage, it was decided that respondents should be native speakers of Japanese who lived locally, were born locally and had lived the majority of their lives locally. Older speakers were preferred – though not requisite – since it was more likely such speakers would produce conservative dialect features, ‘uncontaminated’ by SJ. Although these criteria made finding suitable respondents no simple task, at all survey sites at least 12 respondents were interviewed. These varied in age from 23 to 93, with an average age of 60. The Kōbe site showed a dramatically lower average age of just 40: the majority of respondents here were university office staff. Since the surveys were conducted weekdays during working hours, the number of female respondents outnumbered males by a ratio of 2:1. The only site to show a reasonably evenly distributed sex ratio of respondents was Kahoku while, on the other hand, in Matsuyama & Ōzu no male respondents were interviewed at all.

The survey itself consisted of 27 sample sentences, each of which contained at least one compound containing a potential *rendaku* site, yielding altogether 32 ‘*rendaku* targets’. Most respondents were informed verbally that the survey was not designed as a test of *kanji* knowledge and requested to read the sentences out loud at normal speed. Respondent output was recorded using the iTalk application for iPhone (sites *b* and *d*), the Voice Memos application for iPhone (site *a*) and a Sony PCM-D50 IC recorder (site *c*). The average respondent took approximately 3 minutes to complete the survey.

The 32 *rendaku* targets were designed to contain a balance of initial voiceless consonants, of personalities (what are, in SJ, *rendaku* lovers, haters, etc.), of parts of speech (nouns, deverbal nouns, adjectives, verbs), and a small number of items from the Sino-Japanese vocabulary stratum.

The null hypothesis was that the results obtained from the survey would not deviate from those of the expected target output.

4 . 研究成果

The raw data is omitted here for reasons of space, but to summarize its main points:

- Expected target output (mirrors overall mean *rendaku* rates (MRR)s: the 19 *rendaku* targets with the highest overall MRR have all + expected output, while the 13 *rendaku* targets with the lowest MRR have all – expected output.
- There is no significant difference in average MRRs across the four sites. Miyazaki and Matsuyama & Ōzu both had average MRRs of 0.57, identical to the overall MRR across all four sites, while Kahoku and Kobe were only

fractionally below (0.55) and above (0.58) this figure.

- Four rendaku targets (8, 13, 21, 25) showed an overall percentage of unclear answers greater than 5%. Answers were tagged as unclear when either: (i) the recording was indistinct or ambiguous; (ii) a respondent inadvertently skipped a sample sentence; (iii) a respondent was unable to parse the orthography and passed over a target; or (iv) a respondent read the compound in an unexpected manner, by assigning a character alternative readings.

Of the 32 rendaku targets, 11 had an average MRR of 1.00 and 5 an average MRR of 0.00. Fig. 1 shows how the MRR of each of the remaining 16 ‘fuzzy’ rendaku targets, as measured across the four survey sites, differed from its respective overall MRR. The *x*-axis shows the rendaku target number, in identical order to Table 3 above, while the *y*-axis indicates the points difference from the overall MRR. Beneath the *x*-axis sits a data table corresponding to the main graph. Only six rendaku targets, clustered in the middle of the graph, show an inter-site difference greater than 0.1 of the overall MRR: numbers 2, 13, 22, 17, 19 and 10. Only these six ‘super-fuzzy’ rendaku targets can be argued to have any relevance for our null hypothesis and their details are summarized in Table 1, sorted in numerical order.

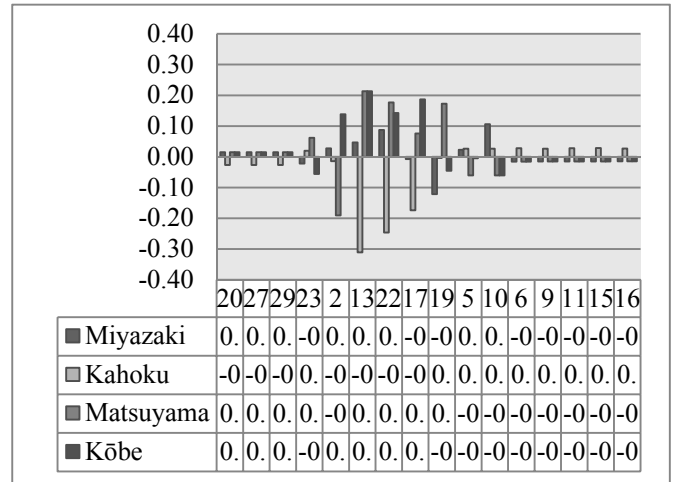


Fig. 1: Fuzzy Rendaku Targets: Difference Between Site MRR and Overall MRR

No.	expected target output	target type	vocab. stratum	Miyazaki MRR	Kahoku MRR	Matsuyama MRR	Kōbe MRR
2	<i>hada.zamui</i>	hater	native	.03	<i>.01</i>	<i>.19</i>	.14
10	<i>hidari.kiki</i>	hater	native	.11	.03	<i>.06</i>	<i>.06</i>
13	<i>kata.či.</i> <i>đuku.čteiru</i>	lover	native	.05	<i>.31</i>	.21	.21
17	<i>yake.jini</i>	lover	native	<i>.01</i>	<i>.17</i>	.08	.19
19	<i>toraburu.</i> <i>kakuši</i>	hater	native	<i>.12</i>	.00	.17	<i>.05</i>
22	<i>koohii.jawan</i>	lover	Sino	.09	<i>.25</i>	.18	.14

Table 1: Super-Fuzzy Rendaku Targets

No pattern is apparent from the data in Table 1: super-fuzzy targets are split 50/50 between lovers and haters, and we see a range of initial voiceless consonants and parts of speech. Only one target from the Sino-Japanese stratum appears, but this reflects the small number of such targets appearing in the survey as a whole. A pattern does become apparent, however, when inter-site MRR differences are examined (positive figures are indicated in bold, negative in italics). While three of the four sites evince predominantly positive MRR differences (all 4/6), Kahoku shows

predominantly negative figures. Its inter-site MRR differences of -.31 for target 13 and -.25 for target 22 are the largest differences anywhere in the entire survey programme. That said, these differences reflect the site's slightly lowered average MRR, are well within the bounds of chance, and ultimately statistically insignificant. When MRRs are compared across survey sites, our null hypothesis, that the results obtained from the survey not deviate from those of the expected target output, holds. No significant differences in rendaku across dialect groups is evident.

When the raw data in is analysed by sex and by age profile, no significant differences are apparent. The overall MRR for males is 0.56, for females 0.57; for under-40s 0.58, for those aged 40 and over 0.56. However, when the same 16 fuzzy rendaku targets analysed in Fig. 1 above are examined for sex and age profile, an interesting picture emerges. Fig. 2 shows how the MRR of each of these 16 targets differs by sex and age. The *x*-axis shows the rendaku target number, while the *y*-axis indicates the points difference between the male and female MRRs (for sex) and between the under-39 and 40-and-over MRRs (for age). Beneath the *x*-axis sits a data table corresponding to the main graph.

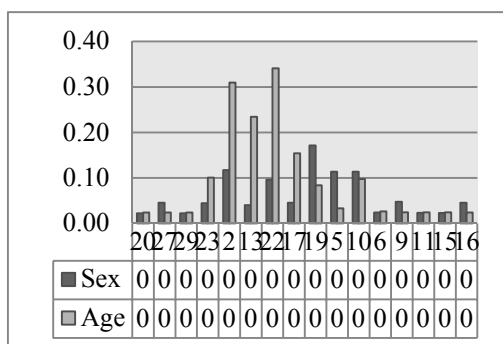


Fig. 2: Fuzzy Rendaku Targets: Difference Between Sex MRR and Overall MRR; Age MRR and Overall MRR

While the sex difference MRR is slightly elevated (> 0.1) for only four rendaku targets (2, 19, 5, 10) clustered in the centre of the graph in Fig. 2, the trend is far starker for the age difference MRR. Here, three rendaku targets (2, 13, 22) evince age difference MRRs greater than 0.2, and six (23, 2, 13, 22, 17, 10) greater than 0.1. For four of these six targets, those clustered right in the middle (2, 13, 22, 17) and showing the most variation in rendaku responses, it is the younger age cohort which has the higher MRR. This corroborates the trends uncovered in previous research by Ōta (2010, 2011) and Ōta & Yamashita (2012), who found that, in nearly all the compounds they surveyed, rendaku rates for rendaku lovers were lower in older age cohorts.

Clearly, with hindsight, it would have been preferable if our survey had contained more fuzzy and super-fuzzy rendaku targets. Knowing which these are, however, is problematic: they are typically listed in dictionaries as headwords either with or without rendaku not, as might be expected, twice in two potential forms. Neither do they have fuzzy MRRs in the rendaku database (Irwin & Miyashita 2013). A careful sifting of the data in order to uncover potential flags for fuzziness will comprise the next phase in our project, to be followed by an enhanced cross-dialectal survey programme focusing solely on fuzzy and super-fuzzy rendaku targets.

5 . 主な発表論文等

〔学会発表〕(計 1 件)

Irwin, Mark & Vance, Timothy. 2014. Rendaku Across Japanese Dialects, 日本音韻論学会春期研究発表会、首都大学東京秋葉原サテライトキャンパス

6 . 研究組織

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