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研究課題名（和文）Rendaku: Towards a Hierarchy of Blocking Constraints

研究課題名（英文）Rendaku: Towards a Hierarchy of Blocking Constraints

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研究成果の概要（和文）：この研究プロジェクトは、回転＋すし＝回転ずしのように、連濁という現象を取り組んだ。18世紀まで遡ることが出来るその連濁研究の多くは、起こるべきところにはなぜ起こらないのを説明しようとする、～羊が～びつじにならず、後部要素に濁音がある場合連濁が起こらないライマン法則などのような規則を作成するものである。この研究プロジェクトの目標は、未だに説明がつかない規則の例外を説明するには、連濁データーベースの内容に統計テストを行いながら「規則階級制度」を構成することである。時間が足りなかったため、その目標は100%成功しなかったが、予算がなくなってからもこれから研究を引き続き行う予定である。

研究成果の概要（英文）：The phenomenon in Japanese linguistics known as rendaku (e.g. kaiten + sushi = kaitenzushi) is a well-established one, with research going back as far as the late 18th century. Over this time, a number of rules have been formulated most of which have sought to explain why rendaku (which occurs most of the time) fails to do so. These 'constraints' include the famous Motoori/Lyman's Law, where rendaku is blocked by a voiced sound in the second element (e.g. hitsuji never becomes *bitsuji in compounds because of the voiced j), as well as many smaller constraints of varying strength. The goal of this research project was, through running a string of statistical tests on data contained in the Rendaku Database, to construct a 'hierarchy of rules' in an attempt to explain exceptions to rendaku which have previously been inexplicable. In this, the author's were largely, though not completely, successful. More time is required and the research will continue despite the winding up of funding.

研究分野：　linguistics

キーワード：　morphology　phonology　morphophonology　Japanese　rendaku　constraints　linguistics

１．研究開始当初の背景

In Japanese, non-initial elements in compounds may undergo initial voicing under certain conditions: e.g. *asa* + *kasumi* > *asa**g**asumi* ‘morning haze’. This allomorphy is known as rendaku or sequential voicing. The readily apparent irregularities exhibited by rendaku have meant it has undergone extensive research, with descriptions or analyses of rendaku forming some of the earliest extant research on the Japanese language in both Japanese and English. While space precludes a review of all previous work (see Vance in print for a thorough overview), what is worthy of note is the number of statistical analyses of rendaku published in recent years.

Nearly all of these analyses – while offering illuminating and valuable results – have been based, however, on either small corpora or comparatively restricted dictionary searches. This lack of any large-scale rendaku database was finally remedied by the publication of a 34,000+ entry multi-tagged database in Excel spreadsheet format, whose entries are based on two major dictionaries/ The database was compiled with the assistance of the NINJAL ‘The Japanese Lexicon: A Rendaku Encyclopedia’ Research Project Team, headed by Prof. Timothy Vance. It is this database which will provide the core data on which the proposed research project will be based.

２．研究の目的

Over a century of research on rendaku has shown that there are at least five blocking constraints which **transparently** inhibit rendaku: Motoori-Lyman’s Law, copulative compounds, the ‘right-branching condition’, the vocabulary stratum of the non-initial element, and *m* from original *b*. The transparency of these five constraints automatically remove them from any putative hierarchy: should any of them apply to a given compound, the compound question simply fails – in nearly all cases – to undergo rendaku. They thus fall outside the scope of the research project.

Remarked upon since the beginning of the rendaku literature have been cases where rendaku ought, but fails, to be triggered. Many of these cases can be explained by non-transparent or potentially probabilistic blocking constraints, some stronger than others, some appearing to operate in conjunction with others in an as yet unclear fashion, some seemingly blocked when another applies. They include: (1) element length; (2) vocabulary stratum of the initial element; (3) accent of the non-initial element, both in the modern standard language and in the reconstructed Old Japanese form, (4) frequency of the non-initial element; (5) part of speech of either element; (6) final mora of the initial element; and (7) the prosodic structure of the compound as a whole. That there exists at the very least a complex interplay between, and at the very most a transparently rankable hierarchy of, blocking constraints is beyond doubt. Exploration and analysis of the form this may take has, however, been hampered by lack of data. The publication of the rendaku database, outlined in the previous section, now makes this possible.

３．研究の方法

Research was divided into three stages: Stage I ‘Data Input’ (2014), Stage II ‘Statistical Analysis’ (2015) and Stage III ‘Application of Analysis’ (2016).

Stage I: Data Input (2014). At the time of our application, the Rendaku Database was approximately 90% complete. Two sets of tagging remained: (a) vocabulary stratum of the initial element and (b) part of speech of the initial element.

Stage II: Statistical Analysis (2015). In order to determine the minimal model representing the relationships among the numerous categorical variables we have identified as potential non-transparent rendaku blocking constraints, cross-classified data was subjected to hierarchical log-linear analysis. Irrelevant factors and interactions were removed by a process of backward elimination to yield the sparest model that fit the observed data at $p > .05$. Thereafter, partial associations between constituent variable pairs were tested through comparison of the derived model with further reduced variations.

Stage III: Application of Analysis (2016). A statistical anlaysis will be run with the aim of producing a range of potential blocking constraint hierarchies.

In order to ensure the highest possible quality of research, as well as to encourage continual progress towards the project’s ultimate goals, quarterly project team meetings in Yamagata, Tokyo and Osaka were held throughout the three-year period: in October 2014 (Tokyo) February 2015 (Yamagata), May 2015 (Osaka), February 2016 (Yamagata), May 2016 (Osaka) and February 2017 (Yamagata).

４．研究成果

Stage I: Data Input (2014). Approx. 8,000 cells remaining for (a) vocabulary stratum of the initial element and the approx. 7,000 cells for (b) part of speech of the initial element were input in the first three Quarters of FY2014.

Stage II: Statistical Analysis (2015). Preparation for Stage II Statistical Analysis began in Q2 of FY2014, with analysis proper in Q4. Stage II ran until the end of Q2 of FY2015.

Stage III: Application of Analysis (2016). Results of the statistical anlaysis sucessfully produced a range of potential blocking constraint hierarchies. Beginning in Q3 of FY2015, these were explored in detail by the research team, with a description of the major candidate hypotheses presented at the 2nd European Association of Japanese Studies Japan Conference at Kōbe University in September 2016; and at the 12th Phonology Festa, Ritsumeikan University, Kyoto, in March 2017.

５．主な発表論文等
（研究代表者、研究分担者及び連携研究者には下線）

〔雑誌論文〕（計　0　件）

〔学会発表〕（計　2　件）

発表者:Mark Irwin & Paul Lyddon
発表標題：Rendaku and Labial Lenition

学会等名：2nd European Association of Japanese Studies Japan Conference
発表年月日：2016 年 9 月
発表場所：神戸大学

発表者: Paul Lyddon & Mark Irwin
発表標題：The Resistance of Moraic Nasals to Rendaku Inhibitors
学会等名：12th Phonology Festa
発表年月日：2017 年 3 月
発表場所：立命館大学、京都

〔図書〕（計　0　件）

〔産業財産権〕

○出願状況（計　0　件）

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〔その他〕
ホームページ等

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