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研究課題名(和文) Canadian Raising: Evidence for or against Rule Ordering

研究課題名(英文) Canadian Raising: Evidence for or against Rule Ordering

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研究成果の概要(和文)：この研究では、私は、カナディアン レイジング (Canadian Raising) と呼ばれる言語現象に焦点を当てています。私は、この言語現象を正確に解明するため、コーパスと先駆的な研究者の両方のデータを使用しています。カナディアン レイジングはいろいろな要因に影響されています。例えば、音韻要因、性別、教育レベル、年齢などの要因です。従って、私は「variation」と「variable rule」のコンセプトを利用して、カナディアン レイジングのデータを説明します。「variable rule」はルールの範囲内にあるから、この研究成果は順序付けの妥当性を証明すると考えられます。

研究成果の概要(英文)：Phonologists have been entangled in the argument over the tenability of rule ordering for several decades. Canadian Raising (CR) is perhaps a language phenomenon that is most frequently involved with rule ordering discussions. In the present study, I adopt the concept of variation and variable rules and propose to treat CR as variation and explain it in terms of variable rules. I assume that CR, in addition to phonological environments, is as well influenced by many other extra-linguistic factors, such as age, class, education background, style, etc. With such a theoretical background, the application of rules for CR is not either 0 or 1; namely, those rules are not categorical. The same term applies to rule ordering as well. I use chi-square test to examine the correlation between extra-linguistic factors, CR data and rule ordering relation. The test result appears to claim that CR is a piece of evidence for rule ordering and the validity of rule ordering is accordingly strengthened.

研究分野：phonology

キーワード：rule ordering Canadian Raising variation variable rule chi-square test

1. 研究開始当初の背景

Despite numerous discussions in the past decades, the necessity of rule ordering still remains a controversial topic in the field of phonology. Thus, deep exploration into this respect is still in need, which is the reason why I have been focusing on this topic in the past few years. During the first step, I explored into ordering relations of phonological rules in a new phonological theory, Positional Function Theory. After the interpretation of rule ordering in one phonological theory, I moved on to the next step and extended the research to the whole field of phonology, with the support of *The Special Subsidies in Subsidies for Ordinary Expenses of Private Schools from the Ministry of Education, Culture, Sports, Science and Technology 2014* (平成 26 年度大学院高度化推進特別経費). During the second step, I argued for the necessity of rule ordering by use of two principles of Chomsky (1967). And finally, in order to understand rule ordering thoroughly and to search for direct evidence for rule ordering, I refer to Canadian Raising (henceforth CR), the most famous phonological phenomenon entangled with rule ordering.

2. 研究の目的

The main aim of the present proposal is to develop a comprehensive account of CR by use of variable rules and the concept of variation, and finally to arrive at the answer to the question that whether CR is proof or anti-proof for rule ordering.

3. 研究の方法

(1) review previous studies

Available previous studies provided me with the idea that CR might be spelt out as variation and could be accounted for by variable rules. However, rules here are not categorical: the frequencies of application of rules vary from 0 to 1, depending on linguistic environments and also extra linguistic factors (Chafe (1968), Iverson (1995), Mascaró (2011), Sankoff (1979), Vaux (2008)). That is to say, linguistic environments are not the only decisive factors in determining whether a certain rule can be applied or not; other extra linguistic factors will also have their respective influence. The same term applies to rule ordering as well.

(2) gather data

Available data of CR were gathered. And

a close look at the data highlighted two problems. The first problem is that the number of variants for most words is four, instead of two as claimed by previous studies. Thus, a new task is emerging: how to explain the two variants not mentioned in previous studies. The second problem is that, instead of each group of speakers using a different variant, some scholars claim that both groups of speakers use all the four variants. Thus, the claim that there are only two variants and different groups of speakers use different variants do not always conform to phonological facts (Boberg (2014), Hall (2005)). However, later I found that if the concept of *variation* and *variable rules* is accepted, it may be the case that related words are proof for the validity of rule ordering relation. Details are as follows. If the four variants of each word are taken as variation, and the two rules concerned with CR, Canadian Raising Rule (1) and the Intervocalic Voicing Rule (2), are taken as variable rules, then the different ordering relations between the two rules can be taken as evidence for rule ordering validity. Since the Canadian Raising Rule (1) and the Intervocalic Voicing Rule (2) are variable rules, they may not be applied even if their phonological application conditions are met.

(3) analyze data

I take class and style as the main focus and representatives among all potential extra-linguistic factors to explore into the correlation between rule ordering relations and extra-linguistic factors by use of chi-square test.

4. 研究成果

The data and chi-square test result seem to state that ordering relation does exist between the two rules. In particular, the ordering relation of the Intervocalic Voicing Rule (2) earlier than the Canadian Raising Rule (1) is influenced by class and style, with working class and the style of free speech tending to choose it. As a result, the ordering relation between the two rules is not only decided by linguistic factors, but also extra-linguistic factors such as class and style. With one change in linguistic factors or extra-linguistic factors, the rule ordering relation may change too.

And for upper class and the style of reading passage, only the Canadian Raising Rule (1) tends to be activated. Although the application condition of the Intervocalic Voicing Rule (2) is met after the triggering of

the Canadian Raising Rule (1), the Intervocalic Voicing Rule (2) is not applied. It is clear that the inactivation of the Intervocalic Voicing Rule (2) is not due to linguistic factors, but due to extra-linguistic factors as class and style.

Therefore, it seems that the concept of *variation* and *variable rules* can be used to explain the CR data and the ordering relation between the two rules (1) and (2). Namely, it seems reasonable to treat CR as variation and explain it in terms of variable rules. The data appear to state that CR, in addition to phonological environments, is as well influenced by extra-linguistic factors, such as class, style, and so on. And the application frequencies of rules may vary from 0 to 1, with exact frequencies determined both by extra-linguistic factors and internal linguistic factors. The ordering relation between the two rules is as well decided both by linguistic factors and extra-linguistic factors. Variable rules is an extension of rules, thus it appears that CR is a piece of evidence for rule ordering and the validity of rule ordering is accordingly strengthened.

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 6 件)

- ① 劉莎、Canadian Raising: Evidence for or against Rule Ordering, *JELS* 34、査読有、2017 年 2 月、pp. 257-263
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- ③ 劉莎、Stress Clashes in Derived Words: Avoid Them or Not?、*Handbook of PAC 2016: English Melodies*、査読有、2016 年 9 月、pp. 15-16
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[学会発表] (計 5 件)

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- ② 劉莎、Stress Clashes in Derived Words: Avoid Them or Not?、PAC 2016: English Melodies、2016 年 9 月、「Aix-en-Provence (France)」
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- ④ 劉莎、Canadian Raising: By use of Variable Rules、The International Conference on Education and Social Sciences、2016 年 2 月、「Singapore (Singapore)」
- ⑤ 劉莎、Transformational Cycle: Fact or Fantasy、日本音韻論学会音韻論フォーラム 2015、2015 年 8 月、「大阪大学 (大阪府・吹田市)」

[図書] (計 0 件)

[産業財産権]

○出願状況 (計 0 件)

名称：
発明者：
権利者：
種類：
番号：
出願年月日：
国内外の別：

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名称：
発明者：
権利者：
種類：
番号：
取得年月日：
国内外の別：

[その他]
ホームページ等

6. 研究組織

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