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This study is a quantitative analysis of the standardization process of the Japanese language, emphasizing on the data from “the Grammar Atlas of Japanese Dialects (GAJ)” edited by the National Institute for Japanese Language.

This study is divided into three parts. Part 1 explains where this study is placed in this field of study as a whole, by providing a brief overview of quantitative analysis using the GAJ data and by presenting some results of the preliminary analysis. Part 2 presents the analysis of the distribution of the standard forms using the GAJ data, which records the Japanese language of the 1920's. Part 3 presents a diachronic analysis combining the GAJ data and some more recent data. An observation of the standardization process over a span of 80 years has been made possible by combining the data of four generations centering in the Tohoku region. This is followed by the conclusion.

Prior to the analysis of the GAJ data in Part 2, the last chapter in Part 1 attempts to examine the standardization process using some data from French dialects. Supposing the standardization process of French in the environs of Paris is taking place, I allotted scores on non-standard forms and determined the degree of standardization of various locations. Cluster analysis and multi dimensional scaling, methods which had been used in a series of studies conducted in Japan by Fumio Inoue, were also employed in this examination.

Part 2 focuses on analyzing the structure of the standardization in GAJ, on which the emphasis is placed in this whole study. Considering that the speakers of GAJ were born around 1911, the analysis of GAJ leads to elucidate the initial stage of the standardization process.
Chapter 4, which is the first chapter in Part 2, provides a description of the nature of the GAJ data and reveals, by the simple analysis of these data, that the rate of standardization is high in the Kanto region, and low in areas in Tōhoku and Kyushu. Vol. 1 is categorized as particle items, and vol. 2 and 3 are categorized as conjugation items. The analysis of these two categories reveals that the standardization of the particle items is more advanced than that of the conjugation forms, and that further analysis will enable a more detailed description of standardization.

In this context, chapter 5 presents an analysis of the particle items by Hayashi's Quantification Method Type III. It is shown here that not much difference is detected between the Kanto region and the Kansai region, and that non-standard areas are Ryukyu, Tōhoku and Kyushu.

Chapter 6 presents an analysis of the conjugation items, which mean the category of the conjugation of mainly verbs and auxiliaries. Through the analysis by Hayashi's Quantification Method Type III, three distribution areas are identified: "the Kanto-centered area," "the Kansai-centered area" and "the peripheral area." It is shown here that the forms used only in the Kanto region, many of which are standard forms, are not used nationally, but on the other hand, the standardization process of the conjugation items is originated in the Kansai region.

Chapter 7 attempts to show the continuum between the standard forms and the non-standard forms with what I call "the standardization rate." As a method to calculate the similarity of various forms, I employ the "Levenshtein distance," which is one of the methods of pattern matching. Applying the distance between phonemes, I conduct the cluster analysis of GAJ vol. 1-3 and show that the peripheral distribution is salient with the particle items, whereas the contrast between the east and the west is salient with the conjugation items. Moreover, the distance between the Ryukyu form and the standard form will be presented here.

In Chapter 8, I attempt to examine how extensively the standard form, the Tokyo dialect and the Keihan (Kyoto-Osaka) dialect have expanded, using an index called the "railway distance." I will show that the range of the Keihan dialect extends widely, while the Tokyo dialect is limited to the Kanto region. Also, I will try to prove that the Keihan dialect has influenced the Tokyo dialect, while the reverse does not hold true.

Part 3 of this study, which starts with chapter 9, presents a diachronic analysis combining the GAJ data and some more recent data from the glottogram survey in the Hokkaido and Tōhoku Pacific region (TH survey). These two data share 30 items. Supposing the GAJ generation (born around 1911) is in their nineties, it is possible to discern the evolution of standardization process with GAJ on the other side of the continuum. The simple analysis of these 30 items shows that the epicenter of standardization has shifted from the regional city in Tōhoku (Sendai) to Tokyo. This is presumably influenced by the development of transportation and the media. The young generation tends to be strongly influenced by Tokyo.
In chapter 10, the standardization process is further examined by multivariate analysis. The analysis, which includes the non-standard forms, examines the distribution patterns of the standard forms and the non-standard forms. The results show clear difference in region and age in axes 1 and 2. This indicates that the two major factors in dialect distribution have been extracted from the data, proving the efficiency of the glottogram. Moreover, axis 3 reflects the generation of a new dialect, distinct from the GAJ, namely “the new dialect.” As models of standardization in the Tohoku region, we can discern the following three directions: the reduction of regional differences, the reduction of variation in non-standard forms, and the decline of change which is peculiar to the region.

In chapter 11, I turn away from GAJ and focus on the TH survey. This survey, which looks into language use in various domains of the informants’ lives, shows that standardization has invaded the private domains as well. Thus, the traditional dialects in the Tohoku region are observed to have been eroded by the standard language and the Tokyo dialect.

Chapter 12 attempts to schematize the process of standardization from all my findings.

1st stage: The situation before the first half of the Edo Era; We can learn about language in this era only from documents. The center of economy and prosperity was still in the Kansai region.

2nd stage: From the latter half of the Edo Era to the beginning of the Meiji Era; The first stage of GAJ. The political authority shifts from Kyoto to Tokyo.

3rd stage: From the Meiji Era to the middle of the Showa Era; The language of “the Tokyo Upper Class” and the “standard language” based on the written language were formed.

4th stage: The latter half of the Showa Era; The standardization process accelerates with the development of the TV. Non-standard forms could still be heard from the elderly. New forms influenced by the standard form generated, which leads to the discovery of “the new dialects” and “the neo dialects.”

5th stage: The present in which the standardization has nearly completed; The concept of “dialects” is now perceived to be almost the same as “the regional standard languages.” In eastern Japan, the Tokyo dialect is used more often in everyday lives, while in western Japan, the Kansai dialect has become influential.

In conclusion, the standardization of Japanese has expanded from Tokyo as the epicenter, but the Kansai dialect has played a great role in advancing this trend. It is presumed that the Tokyo dialect will strengthen its influence in the future, but the Kansai dialect can compete with the Tokyo dialect, not only because of its political and economic influence in the past, but because the Kansai dialect has been firmly incorporated into the modern standard language of Japan during the process of standardization.