論文の英文要旨

Title	A study on the consonant contrast in the Seoul dialect of Korean －The contrast system of the three phonation types of word-initial consonants－
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This paper aims to elucidate the contrast system of the Seoul dialect of Korean by examining how the obstruents maintain a contrast between the three phonation types of consonants in the word-initial position.

Previous studies have argued that Voice Onset Time (VOT) is longer in the order of "aspirated," "lax," and "tense" (aspirated > lax > tense). In 2000s, studies started to argue that the VOT values of "lax" and "aspirated" were overlapped. There is still a common awareness that the VOT of "tense" is the shortest. As the overlap between the VOT values of "lax" and "aspirated" was argued, the debate on the distinctive features of the two became active. What drew attention there is the fundamental frequency (F0) of a vowel following a word-initial consonant. If the word-initial consonant is "lax," the tones of the first and second syllables are represented as LH, and if it is "aspirated," "tense," or "fricative," they are HH. Based on this fact, it was argued that F0 of the following vowel, instead of VOT, became a distinctive feature in the cases of "lax" and "aspirated," and this argument has been widely accepted.

This paper analyzes the speech of four speakers of the Seoul dialect acoustically and phonetically using the three acoustic parameters: 1) VOT, 2) F0, and 3) intensity of the high-frequency range, and examines how the contrast between the three phonation types of consonants is maintained.

Chapter 1 outlines the background information about this paper. It reviews how the three phonation types of consonants and their distinctive features have been described in the previous studies. It then presents problems of the previous studies, and describes the approach and methods of this paper.

Chapters 2 to 5 describe the results of the speech experiment. Chapter 2 reconsiders the theory of the merger of "lax" and "aspirated." The data of all the subjects demonstrated the following facts: 1) "tense" has a VOT of 25ms or less, 2) while overlap in the distribution, which has been argued in the previous studies, is observed in "lax" and "aspirated," there is a constraint that "aspirated" must have a VOT of 50ms or more, and 3) when the observation was made for each subject, there were some subjects whose VOT difference in the three phonation types of consonants was maintained. Based on the above results, it is argued that there is "overlap" but not "merger" in the distribution of VOTs of "lax" and "aspirated."

Chapter 3 discusses F0 characteristics. The F0 values of the first and second syllables were converted into semitone values, and the type of the slope connecting those and its distribution area

were observed. It was confirmed through the speech experiment in this paper that if the word-initial consonant was “lax,” the slope was realized as LH in all the subjects. However, when the observation is made for each subject, some subjects have their F0 distribution area of “lax” overlapped with those of “aspirated” and “tense” and other subjects do not. Therefore, it is argued that all the subjects do not necessarily show the same aspect. This means that acoustic features that support the contrast between “lax” and “aspirated” are not limited to F0.

Chapter 4 discusses the difference in the intensity of the high-frequency range in a consonant section between “lax” and “aspirated.” The speech experiment demonstrated the intensity of the high-frequency range was higher in “aspirated” than in “lax” (lax < aspirated), and that this had no correlation with VOT. In addition, the fact that the intensity of this frequency range appears differently means that there is a difference in the tone of the consonant itself. Therefore, it is argued that the difference in the intensity of the high-frequency range may possibly be an acoustic feature that supports the contrast between “lax” and “aspirated.”

Chapter 5 compares the coronal consonants: Type T, Type C, and Type S. In other words, the acoustic features that maintain the contrast across manners of articulation such as plosives, affricates, and fricatives are observed. It was demonstrated through the speech experiment that the intensity of the high-frequency range was different between Type T and Type C and between Type C and Type S. Furthermore, it is possible that the intensity of the low-frequency range, not the intensity of the high-frequency range, is important for the contrast between /s/ and /s’/ in Type S. Based on the above, it is suggested that the representation of the friction noise in a consonant section is effective as an acoustic feature that supports the contrast across manners of articulation.

Chapter 6 summarizes the results of the experiments in Chapter 2 to Chapter 5, and discusses comprehensively the acoustic features that support the contrast between consonants. First, the observation of VOT, F0 of the following vowel, and the intensity of the high-frequency range in a consonant section showed the effectiveness for the discrimination of each acoustic feature for each subject. The effectiveness varied among the subjects. Therefore, it is argued that all speakers do not necessarily use the same feature to the same degree and that the contrast between consonants is supported by many acoustic features. This finding would not be obtained from a “generalization” drawn from averaging the data of all the subjects, which is widely used, and shows the importance of individual observation.

Next, the tonogenesis in the Seoul dialect, proposed by Silva, is discussed. Based on the three facts that were demonstrated through the experiments in this study: 1) there are speakers whose VOTs of “lax” and “aspirated” do not overlap, 2) there is a constraint of length for “aspirated” even when VOTs of “lax” and “aspirated” overlap, and 3) the intensity of the high-frequency range is different even when VOTs of “lax” and “aspirated” overlap, it is argued that the acoustic features that discriminate “lax” and “aspirated” are not yet at the “final stage” of the process of change from VOT

to F0.

Then, it is suggested that the contrast between the three phonation types of consonants is not a parallel contrast but a contrast system of combinatory binary oppositions. To be specific, “aspirated” and “other” are in contrast with each other by VOT, “lax” and “other” are by F0, and “aspirated” and “other” are by intensity of the high-frequency range.

Finally, the results of the listening experiment with synthetic speech obtained by splicing the consonant portion and the vowel portion performed in the previous studies were reviewed. As a result, it is pointed out that the subjects possibly listened to the features of the high-frequency range possessed by the consonant portion of “aspirated” to judge consonants.

Chapter 7 summarizes the findings obtained thus far, and describes the future prospect of this study. Approaching a study of Korean dialects from an acoustic perspective by using the three acoustic parameters makes it possible to compare acoustic features that support the three phonation types among dialects. In particular, the correlation/decorrelation between intensity of the high-frequency range and VOT introduced in this paper, and the description of the combination pattern of the acoustic features that are different among dialects contribute to the establishment of the phonetic basis of dialect typology.