論文の内容の要旨

論文題目　　Mandarin Chinese Tone 3 Sandhi as a Prosodic Cue in Lexical Processing

　　　　　　(語彙処理過程における中国語三声変調の役割)

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　　　　This thesis investigates how native listeners use Mandarin tone 3 sandhi (T3S) as a prosodic cue in online lexical processing. Previous research shows that listeners utilize prosodic cues to guide lexical analysis. Hirose and Mazuka (2015, 2017) demonstrated that people make use of the accentual change derived from the Tokyo Japanese compound accent rule (CAR; see Kubozono, 2008, for a review) to anticipate lexical structure. For example, when the lexically determined accent word *mikan* 'tangerine' (high-low-low tone) is pronounced without the accent (low-high-high tone), listeners expect the accentually changed *mikan* to be the modifier of a compound noun such as *mikan-ju:su* 'tangerine juice' (low-high-high + high-low-low tone) rather than an independent single noun.

　　　　T3S is a phenomenon where a T3 syllable becomes a T2 syllable when it precedes another T3 syllable (e.g., *ni3* 'you' [你] + *hau3* 'good' [好] → *ni2 hau3* 'hello'). In other words, the necessary conditions of T3S are that a T3S syllable must be followed by another syllable and that the following syllable must be of the T3 type. Two visual world paradigm (VWP) experiments were employed to address the main questions of this dissertation: (i) whether a T3S syllable helps to anticipate lexical structure, leading listeners to expect a compound noun structure with a following syllable over a single noun

alternative; and (ii) whether a T3S syllable helps to predict the tone type of the following component (i.e., by activating only candidates of the T3 type).

The first VWP experiment (Chapter 5) found that when hearing input including a T3S syllable (e.g., *zhu2 sun3* 'bamboo-shoot' [竹筍] → *zhu2 sun2*…), listeners sent more looks to compound objects (e.g., a picture of a bamboo-shoot and cow combination; *zhu2 sun3 + ru3 niu2* [竹筍 + 乳牛]) and fewer looks to single objects (e.g., a picture of a bamboo-shoot; *zhu2 sun3* [竹筍]) than they did in baseline conditions. Furthermore, the effect appeared before the listeners encountered the head noun. These results suggest that T3S information helps listeners anticipate lexical structure and that the anticipation relies solely on the tonal information itself, not the segmental information of the coming word.

The second VWP experiment (Chapter 6) found no predictive effect of a T3S syllable on upcoming tone type. In an auditory condition with input including a T3S modifier (e.g., *zhu2 sun3* 'bamboo-shoot' → *zhu2 sun2*…), no increase of looks was observed to visual candidates with T3-type head nouns (e.g., a picture of a bamboo-shoot and cow combination; *zhu2 sun3 + ru3 niu2* [竹筍 + 乳牛]) compared to looks to non-T3-type head nouns (e.g., a picture of a bamboo-shoot and butterfly combination; *zhu2 sun3 + hu2 die2* [竹筍 + 蝴蝶]). These results suggest that T3S does not help listeners predict the phonological form of the following component. Together, the results of Experiment 1 and Experiment 2 indicate that listeners treat the computation of lexical structural and the retrieval of lexically stored acoustic information as different types of processes.

The reasons for using T3S in this investigation of lexical processing are two. First, Mandarin T3S can be used to examine predictive effects on the phonological form of an upcoming component while rules like the Japanese CAR cannot (because the CAR applies to a compound word regardless of the original accentual pattern of its head). Second, T3S application does not entail a one-to-one association with its morphosyntactic or prosodic environment (cf. the CAR, which obligatorily applies to every compound structure). That is, T3S application is flexible (i.e., a T3S syllable can precede different types of boundary in different positions) and optional (i.e., an underlying T3 syllable in a T3S environment is allowed to remain unchanged). The lack of one-to-one association causes processing ambiguities, and listeners may avoid using such associations as a cue. However, the study's results contradict this possibility by showing that Mandarin listeners are capable of using T3S as a prosodic cue in lexical processing.