

Do Japanese learners distinguish prosodic levels in French?

Rachel Albar, Hiyon Yoo

UMR 7710 Laboratoire de Linguistique Formelle, Paris Diderot University (France)

rachel.albar@univ-paris-diderot.fr, yoo@linguist.univ-paris-diderot.fr

French is generally described as a phrase language, with at least two prosodic levels above the word: AP (accentual phrase) and IP (intonational phrase) (among others, [1], [2], [3]). Michelas [4] argues the need for an intermediate phrase (*ip*) between the AP and the IP, containing more than two APs and corresponding to some specific syntactic boundaries. She shows that a pitch reset occurs at the end of the *ip* while the final stressed vowel is statistically longer compared to a simple AP position, and that these differences are perceptually distinguished.

One question that arises is how learners deal with these different prosodic levels. The aim of this study is to focus on the production and the perception of these prosodic levels by L2 learners whose mother tongue's prosodic structure is quite different. Indeed, Japanese, unlike French, is a language with a tonal accent [5]. The prosodic structure has only APs and IPs, related to the presence of a tonal accent, since an AP carries the tonal accent while an IP is mostly characterized by downstepping [6]. The prosodic IP level corresponds to the XP syntactic category [7] which is similar to the French *ip*. [8] Moreover, in Japanese there is no notion of continuation at prosodic boundaries since each AP generally ends with a low tone [9]. If the notion of continuation lacks, and if the prosodic structure is different in the two languages, are Japanese learners able to deal with the prosodic structure of French?

Our main hypothesis is that Japanese learners will not be able to distinguish the *ip* unlike native speakers. Our second hypothesis is that despite this difficulty, learning these prosodic levels is possible and that learners with a higher level of French will obtain better results.

In order to test our hypotheses, we built a sentence completion task, based on Michelas [4]. This task highlights, among other things, the use of phonological structures during the syntactic analysis of a sentence [10]. In our experiment, it shows subjects' ability to perceive the difference between the AP and the *ip* prosodic boundaries, and to associate the corresponding syntactic structure. After listening to the beginning of a statement, participants were asked to select the sequence of words they thought most likely to follow what they had just heard from two options (see Figure 1). 9 stimuli for each prosodic condition (AP and *ip* boundary) and 18 fillers were constructed by taking account that participants were learners (use of accessible vocabulary). Stimuli were recorded by native speakers of French and were truncated at the end of the second AP.

38 Japanese learners of French and 12 native French speakers (as a control group) participated in this experiment. Results were analysed using a generalised linear mixed model (GLMM) with proficiency and type of prosodic boundary as fixed factor, item and subject as random effects. They show that learners' score is significantly lower than French participants in the sentence completion task. However, contrary to our initial hypothesis, there is no correlation between the learners' level and their rate of correct answers.

In fact, for Japanese learners, associating different continuous contours to a specific syntactic structure seems to be a difficult task. Prosody is not taught, and a possible explanation for the lack of improvement in results with language level could be that their exposure to French takes place almost exclusively in the classroom and would not be sufficient for the acquisition of subtle prosodic parameters. We plan to repeat the experiment with learners living in France for a significant period of time, in order to show whether immersion in the L2 context gives better results in distinguishing this intermediate prosodic level.

The sentence completion task was complemented with the analysis of production read data of Japanese speakers. We analysed the prosodic parameters of F0 rise and syllable duration in a corpus that consisted of the production of small excerpts of texts (4 texts ~50 words per text). 17 Japanese learners were recorded and we used pre-existing recordings of the same texts read by 5

