

Interlanguage Prosody in English Dialogs and Narratives: An L1 Transfer Issue

英語の会話および物語にみる中間言語の韻律 —母語の転移—

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1. Introduction

Second language (L2) learners experience difficulty at interfaces between the modules of Grammar (Nakayama & Yoshimura, 2015). According to the Interface Hypothesis, an external interface between syntax and pragmatics or syntax and discourse is more vulnerable than an internal syntax-semantics interface (Belletti et al., 2007; Tsimpli & Sorace, 2006). This study is concerned with prosodic focus marking in L2 English at the syntax-pragmatics-phonology interface, and examines whether Japanese-speaking learners of English are affected by L1 transfer in acquiring the prosodic focus marking in English dialogs and narratives.

The paper is organized as follows. Section 2 introduces how focus is encoded in English and Japanese, and then reviews some studies on L2 acquisition of English focus marking. Section 3 explains the methodology of our experiments. Sections 4 and 5 show and discuss the results of the experiments. Section 6 concludes this paper.

2. Background

2.1 Focus and prosody

In this study we deal with information focus in an utterance. This type of focus is an answer to the *wh* constituent in a *wh*-question, which is a non-presupposed part, and the most important and prominent constituent of a sentence (Zubizarreta, 1998). Information focus is encoded phonologically in English, and its placement is flexible and context-dependent. In (1b), for example, the object noun *cake* is an answer to the *wh* constituent *what* in (1a), and is assigned the prosodic prominence. Likewise, in (2b), the subject noun *John* is in focus as a response to the *wh* constituent *who* in (2a), thereby receiving the prosodic prominence.

- (1) a. What did John eat?
b. He ate the [cake]_F.
- (2) a. Who ate the cake?
b. [John]_F ate it.

In Japanese, information focus can be encoded morphologically with a case marker *ga* (Kuno, 1973; Heycock, 2008). In (3b), for example, *Taroo* is a non-presupposed part of the sentence as a response to *dare* ‘who’ in the question in (3a), and the focused noun is identified as such with the morphological marker *ga*.

- (3) a. (Kyodai-no naka de) dare-ga dokushin desu ka
(Among your brothers), ‘who is single?’
b. [Taroo]_{F-GA} dokushin desu.
‘Taro is single.’

Regarding prosody in Japanese, the highest pitch tends to be placed on the sentence-initial word by default and the pitch goes down towards the end of a sentence. In the case of (3b), this “downstepping” (H*L) contour overlaps with the sentence-initial word in focus. However, the contour is observed on the left edge of the sentence, regardless of whether the sentence-initial word is the most important or prominent constituent in an utterance (Kubozono, 1993; Pierrehumbert & Beckman, 1988; Sugito, 2012). In (4a), for instance, the contour appears on the sentence-initial word which is a topic but not an information focus.

- (4) a. oba^{H*L}asan wa sono momo o hirotte ie e kaerimasita (Japanese)
 old.woman TOP that peach ACC pick home to returned
 ‘The old lady picked up the peach and went home with it.’
 b. She [picked up]_F the peach and went home with it. (English)
 (Sugito, 2012: 103-104)

In short, how focus is encoded differs in English and Japanese. English focus is marked prosodically and its placement depends on the context, whereas Japanese focus is marked morphologically and prosodic prominence tends to occur at the leftmost element of a sentence.

2.2 L2 studies

A few studies have been conducted on the acquisition of English prosodic focus marking by L2 learners. Nava (2008) investigates ten L1 Spanish-L2 English participants’ (five at advanced and the other five at intermediate proficiency level) oral production in a question and answer experiment. In Spanish, information focus appears with prosodic prominence at the right edge of the sentence, as shown in (5b).

- (5) a. ¿De qué te ríes?
 at what you laugh-PRS-PROG
 ‘What are you laughing at?’
 b. ¡Un pingüino está [bailando]_F!
 a penguin be-PRS-3SG dance-PROG
 ‘A penguin is dancing.’ (Nava, 2008: 158)

If an L1 transfer effect occurs, it is predicted that the participants would incorrectly put prosodic focus on the final word in the L2 utterance. The results show that Spanish learners of both high and low proficiency preferred placing prosodic prominence sentence-finally in L2 English, as shown in (6b).

- (6) a. Why are you looking out the window?
 b. Madonna just walked [by]_F! (L1 Spanish-L2 English)
 c. ([Madonna]_F just walked by! (L1 English) (Nava, 2008: (16))

3. Experiments

Given the discrepancies between English and Japanese seen in section 2, Japanese learners of English as a foreign language (JEFL learners) might encounter problems in acquiring English prosodic focus marking. The present study is particularly concerned with

(i) whether there is any L1 effect in interlanguage prosody and (ii) to what extent L1 affects the production of English focus prosody by JEFLL learners.

To examine these research questions, we conducted two production tasks using dialogs and narratives in English. The first experiment was conducted with ten Japanese college students whose English proficiency was at CEFR A2 level (TOEIC average score 418.5). Eight native speakers of English also participated in the experiment as the control group. The participants were given three dialogs in question-answer congruence, as in (7) to (9). They practiced three dialogs aloud in pairs, with no instructions provided.

- (7) Q: Where did you go last Sunday?
A: I went [fishing]_F with my friend [in the river]_F.
- (8) Q: Did you catch any fish?
A: Yes. I caught [three]_F fish.
- (9) (A: I saw your sister in the park this morning.)
Q: Oh, really? What was she doing?
A: She was [running]_F with her friend.

The second experiment was conducted with four native speakers of English and four Japanese undergraduate students whose English proficiency was at CEFR B1 level (their TOEIC scores over 700). They were given a short narrative, as in (10), and asked to read it aloud individually. Note that the dialogs and the narrative used in the experiments were borrowed from a junior high school textbook *Sunshine English Course 2* (Kairyudo) to make sure that the vocabulary and the sentence structures of the test tokens were comprehensible for the participants.

- (10) Some years ago, Mr. Sato had a very kind student in his class. She had a pretty name, Aika. Her classmates liked her very much. Sometimes Mr. Sato saw her at school early in the morning. In her hands she always had very pretty flowers. She picked them from her garden. Everyone in her class loved the colorful flowers.

In both experiments, the participants' utterances were recorded immediately after the practice session, using open source software Audacity. Their speech signals were analyzed in a freeware program Praat. The pitch (Hz) was measured at midpoint of each stressed vowel and the word including the highest pitch was identified in the sentence.¹

4. Results

4.1 Dialogs

Let us first look at the measurement results of the test dialogs. The results show that the majority of the control group placed the highest pitch on the focused word, as shown in table 1.² The mean average accuracy rate on pitch placement for the JEFLL learners was 13%, which was quite low. In examples (7) and (9), in particular, most of the learners placed the prosodic prominence on the subject, but not on the focused word. In example (8), the prominence was also placed on the non-focused word, either the subject pronoun or the verb.

Figure 1 also shows the average prosodic patterns of both groups in token (7). In the utterances of the control group, the highest pitch was placed on the focused word *fishing*,

Table 1 Response distribution in Production Task

Example	Focus	Control (<i>n</i> =10)				JEFL learners (<i>n</i> =10)		
(7)	FISHING	I 20%	went 10%	fishing 70%	I 60%	went 10%	fishing 30%	
(8)	THREE	caught 20%	three 70%	fish 10%	I 40%	caught 60%		
(9)	RUNNING	She 20%	was 30%	running 30%	friend 20%	She 90%	was 10%	

and the secondary prominence appeared on the following content word, either *friend* or *river*. Their pitch range was also wide, from 126.1 to 280.3Hz, which created appropriate English melody. In contrast, the JEFL learners produced the prominence on the sentence-initial word, and their prosodic pattern showed a downstepping contour. Their pitch range was quite narrow relative to the control group's, from 214.3 to 279.3Hz.

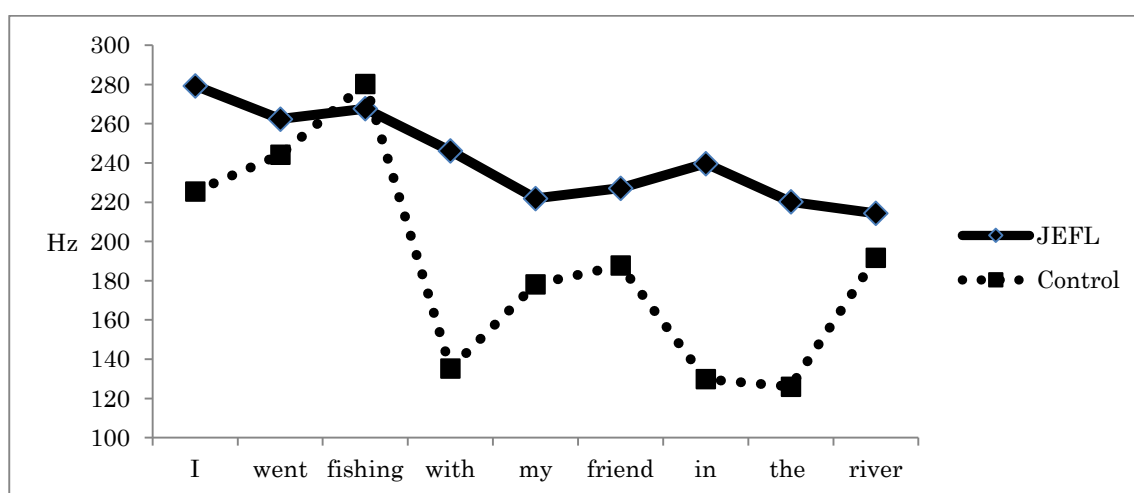


Figure 1 Prosodic patterns of example (7)

4.2 Narrative

Regarding the narrative experiment, a comparison of the two groups revealed that the JEFL learners did not behave like the control group in five out of the seven sentences. More significantly, there were three occurrences in which the highest pitch was wrongly placed on the sentence-initial word. For instance, consider the sentence in (12), the second last sentence in the test narrative (10). Although the preceding context indicates that the subject pronoun *she* is not an information focus in the sentence, three out of four JEFL learners wrongly produced the prosodic prominence on the pronoun while the verb *picked* was focused in three out of four English speakers' utterances, as shown in (12).

- (12) (... In her hands she always had very pretty flowers.)
- a. She [picked]_F them from her garden. (L1 English)
 - b. [She]_F picked them from her garden. (L1 Japanese-L2 English)

Further, the JEFL learners' pitch ranges were much narrower than the native speakers'. The average pitch patterns of both groups in token (12) are summarized in Figure 2. The pitch range of the control group was from 182.6 to 302.4 Hz whereas that of the JEFL learners was from 107.2 to 138.9 Hz.

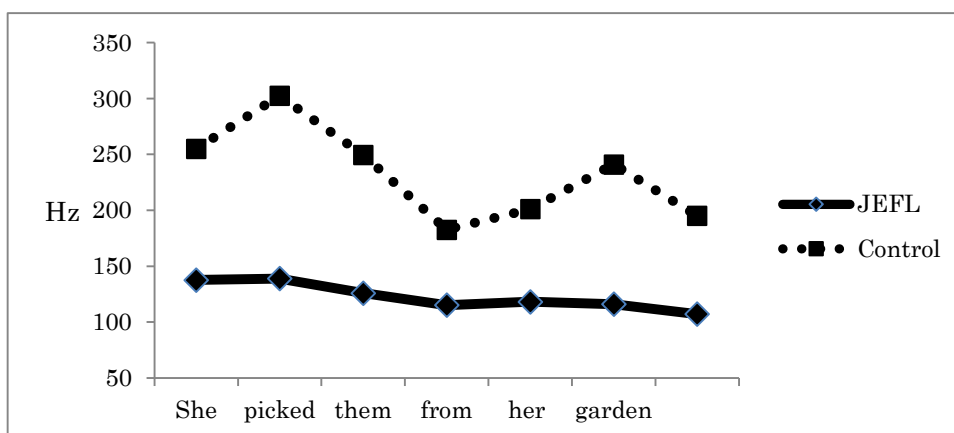


Figure 2 Pitch patterns in the narrative

5. Discussion

Our research questions were (i) whether there are any L1 effects in interlanguage prosody and (ii) to what extent L1 affects the production of English prosody by JEFLL learners. Our experimental results show serious L1 effects with lower-intermediate JEFLL learners in the acquisition of English prosodic focus marking. The learners' pitch patterns show a gradual downstepping contour with the prominence on the left edge of the sentence in both dialogs and narratives. Given these, the present study answers YES to the first research question (see also Fujimori et al., 2014; Yoshimura et al., 2015). As for our second research question, the results show that the JEFLL learners show much narrower pitch ranges than English speakers. These aspects constitute a learning problem for JEFLL learners to overcome in acquiring focus prosody in English.

6. Conclusion

The present study showed that JEFLL learners face difficulties in oral production at the syntax-pragmatic-prosody interface in L2 English. Particularly, the results pointed to two serious problems – one in the placement of prominent pitch on the focused constituent and the other in realizing appropriate accenting-deaccenting pitch ranges in English. Given that prosody plays an important grammatical role in telling the interlocutor what is focused in English communication, we need to develop protocols for explicit instruction in intonation for JEFLL learners (Yamane et al., 2015). Fujimori et al. (2015) gave visual instruction to JEFLL learners after confirming their comprehension of focus. The learners saw Praat images of the model speech where pitch curves clearly indicated that the focused words were phonetically salient.

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Notes

¹ The vowel intensity is not taken into account in this study. It does play a role in English prosody but the pragmatically focused word did not always accompany the highest intensity in our measurement (see also Sugito 2012).

² We noticed some variants in the control group's utterances. This is partially due to simple contexts of the test dialogs. After the recording, some native speakers of English pointed out that they could place the prominence on a word other than the expected, as they elaborated the contexts to which they accommodated the test tokens on their own. We need to control for the contexts in our future research.

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References

- Belletti A., Bennati, E., & Sorace, A. (2007). Theoretical and developmental issues in the syntax of subjects: Evidence from near-native Italian. *Natural Language and Linguistic Theory*, 25, 657-689.
- Gass, S., & Selinker, L. (1993). *Language transfer in language learning*. Amsterdam: John Benjamins.
- Fujimori, A., Yoshimura, N., & Shirahata, T. (2014). Acquisition of prosodic focus marking by Japanese ESL learners. *IECE Technical Report*, TL 2014-20, 49-53.
- Fujimori, A., Yoshimura, N., & Yamane, N. (2015). The development of CALL materials for learning L2 English prosody. *Conference Proceedings of ICT for Language Learning*, 8th edition, 249-254.
- Heycock, C. (2008). Japanese -wa, -ga, and information structure. In S. Miyagawa & M. Saito (Eds.), *The Oxford handbook of Japanese linguistics* (pp. 54-83). New York: Oxford University Press.
- Klassen, J. (2013). Second language acquisition of English focus prosody: Evidence from Spanish native speakers. *Proceedings of the 12th Generative Approaches to Second Language Acquisition Conference*, 76-84.
- Kubozono, H. (1993). *The organization of Japanese prosody*. Tokyo: Kurosio Publishers.
- Kuno, S. (1973). *The structure of the Japanese language*. Cambridge, MA: MIT Press.
- Nakayama, M., & Yoshimura, N. (2015). The modularity of grammar in L2 acquisition. In M. Nakayama (Ed.), *Handbook of Japanese psycholinguistics* (pp. 235-270). Berlin: Mouton de Gruyter.
- Nava, E. (2008). Prosody in L2 acquisition, *Proceedings of the 9th Generative Approaches to Second Language Acquisition Conference*, 155-164.
- Pierrehumbert, J., & Beckman M. (1988). *Japanese tone structure*. Linguistic Inquiry Monograph 15. Cambridge, MA: MIT Press.
- Sugito, M. (2012). *Nihongo no akusento, eigo no akusento* [Accents in Japanese and English]. Tokyo: Hitsuji Shobo.
- Tsimpli, I., & Sorace, A. (2006). Differentiating interfaces: L2 performance in syntax-semantics and syntax-discourse phenomena, *Proceedings of the 30th Annual Boston University Conference on Language Development*, 653-664.
- Yamane, N., Yoshimura, N., & Fujimori, A. (2015, August). *Needs of explicit instructions of English prosody for Japanese EFL learners*. Paper session presented at Phonology Forum 2015, Osaka University.
- Yoshimura, N., Fujimori, A., & Shirahata, T. (2015). Focus and prosody in second language acquisition. *Journal of International Relations and Comparative Culture*, 13, 21-36. University of Shizuoka.
- Zubizarreta, M. L. (1998). *Prosody, focus, and word order*. Cambridge, MA: MIT Press.