

Why 'What do you like sports?': Evidence for Shallow Structures

Ralph ROSE (Waseda University), Natsuki AMANO (Gunma Prefectural Women's University)

One commonly observed production error by Japanese learners of English as a second language takes the form of (1) where (2) is the target form.

- (1) *What do you like sports?
(2) What sports do you like?

Such errors (hereafter, *split* errors because the wh-constituent has been split) can be explained in generative terms starting with the fact that English and Japanese differ in terms of the allowance of left-branch extraction. While English does not allow extraction to target the left branch of a node (i.e., *what* in *what sports*), Japanese does allow this via quantifier floating as shown in (3).

- (3) ikutu_i Tarou-ga [Ø_i pen-o] kaimashita ka
how-many Tarou-NOM Ø pen-ACC buy.past Q
How many pens did Tarou buy?

According to this account (hereafter, complex structures account), Japanese learners of English transfer the UG parameter settings which allow this in Japanese into their English interlanguage grammar (cf., Yamane, 2003). However, do second-language learners actually compute such complex structures or do they merely produce shallow structures (cf., Clahsen and Felser, 2006) based on memorized chunks? For instance, the learner's representation of (1) could be a simple two-branch structure derived from (4).

- (4) [supootu wa][nani ga suki desu ka] → [What do you like][sports]
sports-TOP what-NOM like be.pres Q

If this explanation is correct, then the synonymous question in Japanese in (5) should lead to fewer split errors because the word order more closely matches that of the English target.

- (5) nanno supootu ga suki desu ka
what sports NOM like be.pres Q

To test this prediction, the present experiment uses a technique in which participants were asked to imagine themselves as Japanese-to-English interpreters and were prompted with a prior discourse consistent with and including either a split form question as in (4) or a control form question as in (5). After hearing the question, participants were given three seconds to interpret the question orally into English. Responses were recorded. 18 prompts were prepared using 6 *nani* questions, 6 *ikutu/ikura* questions, and 6 *doko* questions. After some practice, each participant completed the entire test in approximately six minutes.

Because lower-level learners are believed to make more use of memorized chunks in language production than higher-level learners (cf., upside-down “U” model of second language development; Kellerman, 1985), the participants were apportioned to either a lower level or a higher level group based on their most recent TOEIC scores. Hence, the experiment is a 2 X 2 design pitting CONTEXT (split, control) against GROUP (high, low). The outcome variable is whether or not a split error was produced.

Results (N=53) show a significant main effect of GROUP [subjects, $F(1,51)=2.9$, $p=0.09$; items, $F(1,17)=5.0$, $p<0.05$] and a significant interaction between GROUP and CONTEXT [subjects, $F(1,51)=2.6$, $p=0.11$; items, $F(1,17)=5.7$, $p<0.05$]: In short, low learners made more split errors when the discourse was a split context. The interaction is not predicted by the complex structures account and is more consistent with the shallow structures account. Detailed analyses also show differences among the three wh-words—something also not predicted by the complex structures account.

References

- Clahsen, H. and Felser, C. (2006). Grammatical processing in language learning. *Applied Psycholinguistics*, 27:3-42.
Kellerman, E. (1985). *Input in Second Language Acquisition*. Rowley, MA : Newbury House.
Yamane, M. (2003). On Interaction of First-Language Transfer and Universal Grammar in Adult Second Language Acquisition: Wh-Movement in L1-Japanese/L2-English Interlanguage. PhD. Dissertation. University of Connecticut.