

Island Constraints and Japanese Sentence Processing

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Yoshida, Aoshima & Phillips (2004) showed that Japanese speakers are able to use cues from numeral classifiers to anticipate an upcoming relative clause structure and hence avoid the processing difficulty normally associated with relative clauses. As a consequence, they further showed that these same cues are sufficient to block the formation of long-distance dependencies that would violate island constraints on scrambling. Their study showed that the so-called Japanese Filled-Gap Effect (FGE) (Aoshima et al. 2004) is not observed inside the predicted relative clauses. These findings led Yoshida et al. to conclude that the incremental structure building respects island constraints. In this study, I will show that there is a possibility that what appears to be an island constraint effect in online sentence processing is actually derived from some independently motivated property of the parser.

Aoshima, Yoshida and Phillips (2005) reported that the so-called "longer dependency formation" can only be seen if a fronted element is a wh-phrase. They observed that if a sentence initial dative NP is a wh-phrase, FGE is observed at the embedded NP-dat position in (1a), but if it is not a wh-phrase as in (1b), FGE is not observed.

- (1) a. Wh-NP-dat ... [_S Subject [_S Subject ... NP-dat... V] V]
b. NP-da ... [_S Subject [_S Subject ... NP-dat... V] V]

Aoshima et al., argues that this lack of FGE in (1b) suggests that the driving force behind the longer dependency formation is wh-feature satisfaction, rather than thematic role assignment. In other words, the parser tries to satisfy the wh-feature of the fronted wh-phrase as early as possible.

The discovery of the driving force behind the longer dependency formation, however, raises a question on Yoshida et al.'s conclusion that the parser respects island constraints. If wh-feature satisfaction is the sole reason for the longer dependency formation, it is possible that it is avoided not because the predicted domain is an island but because interrogative complementizers cannot appear in the predicted domain. Interestingly, relative clauses in Japanese fall into this pattern, i.e., the embedded verb in a relative clause is not compatible with interrogative complementizers. In Japanese relative clauses, the embedded verbs have to bear a particular form called ad-nominal form (*rentai-kei* in traditional Japanese grammar), and ad-nominal form is not compatible with interrogative complementizers as illustrated in (2b).

- (2) a. [_{RC} Taroo-ga yonda] hon
Taroo-nom read book
"the book that Taroo read."
b. *_{RC} Taroo-ga yonda-ka] hon

