On-Line and Off-Line Reflexive Resolution in Japanese Logophoric Sentences

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Accepted March 8, 1995

This study investigates on-line and off-line resolution of a Japanese reflexive, jibun, for logophoric sentences, i.e., complex sentences involving a matrix verb that reflects one's point of view, feelings, or state of consciousness, and for nonlogophoric sentences, i.e., complex sentences involving a subordinate adverbial clause. According to Kuroda's (1973) thesis and Chomsky's (1981) binding principle (for nonlogophoric sentences only), the reflexive in the logophoric sentences can be associated with the subject of both a matrix sentence and a subordinate sentence whereas that in the nonlogophoric sentences can only be associated with the subject of the subordinate sentence. In Experiment 1, 42 students were administered a probe-recognition task in which a probe was given for the subject either of the matrix sentence or of the subordinate sentence immediately after the end of the subordinate clause or at the end of a sentence following the matrix verb. Recognition times were faster for a matrix-subject probe than for a subordinate-subject probe regardless of the sentence type and probe position. In Experiment 2, 40 students were administered an on-line antecedent identification task in which they were required to quickly and accurately identify, when given a probe, the antecedent of the reflexive, with the probe given after the reflexive or at the end of a sentence. Regardless of the sentence type, matrix-subject was judged to be the antecedent of the reflexive more often than subordinate-subject, with the effect of probe position being negligible. An off-line study required 136 students to indicate the antecedent(s) for the two types of sentence given in their entirety. No effect of sentence type was found. Findings indicate that neither Kuroda's thesis nor Chomsky's binding principle is applied when Japanese speakers parse logophoric and nonlogophoric sentences.

1 Part of this study was supported by a Grant-in-Aid for Scientific Research from the Ministry of Education, Science and Culture, No. 05610067. Deep gratitude is due to Professor D. D. Steinberg for reading an earlier version of this paper. Thanks are also due to Ms. S. Ogawa for her help in collecting part of the off-line data.

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There is evidence that a pronoun as well as a reflexive pronoun activates its proper antecedent during on-line processing of sentences (e.g., Chang, 1980; Cloitre & Bever, 1988; Dell, McKoon, & Ratcliff, 1983; McElree & Bever, 1989; McKoon & Ratcliff, 1980; Nicol & Swinney, 1989, pp. 12–14; O’Brien, Duffy, & Myers, 1986). Thus in a probe-recognition task, for example, a probe word given after the pronoun or the reflexive is recognized more quickly when it is the antecedent of the pronoun or the reflexive than when it is a control word not related syntactically to the pronoun or the reflexive.

Nagata (1991) examined the activation of an antecedent triggered by a Japanese reflexive, *jibun,*

in syntactically ambiguous sentences where the reflexive could be associated with the indirect object as well as with the subject of the sentences. He presented two types of probe at two different positions, one immediately after the reflexive and one immediately after the end of a sentence following the verb. The probe given was a noun for the subject or for the indirect object. In the first experiment where a subject word occupied the first position and an indirect object word the second, recognition times were faster for the subject probe than for the indirect object probe irrespective of the probe position. In the second experiment where the position of the subject and indirect object was reversed, recognition times were again faster for the subject probe than for the indirect object probe, although the difference between the two probes was smaller when the probe was given immediately after the reflexive.

Nagata (1991) interpreted the findings as indicating that the reflexive activates the subject word only, even though it could be syntactically related not only to the subject but also to the indirect object. This interpretation was further supported by a subsequent study (Nagata, 1992), showing that there was no difference in recognition time between the two types of probe for either of the probe positions: when the reflexive was replaced with a word of a different word class and when the indirect object preceded the subject. This finding is reasonable since the sentences did not contain the reflexive that activated its proper antecedent.

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4 Throughout this paper we have used the Hepburn system of romanization as we did in our previous studies (Nagata, 1991, 1992). Thus *jibun* instead of *zibun* is used, although other linguistic studies may adopt the latter.

5 However, sentences involving the reflexive are not always syntactically ambiguous. Instead, the reflexive in a simple Japanese sentence is ordinarily associated only with the subject. This contrasts with English where the reflexive, *himself,* can be related to either the subject, *John,* or the indirect object, *Bill,* in *John talked to Bill about himself.* (See Kuno, 1973, p. 191.)

6 A criticism may be offered against the interpretation that a pronoun, for example, au-