# 第二言語における再帰代名詞の局所条件と形態的構造
## ——日本人英語学習者のデータから——

## The locality condition and morphological structure of L2 reflexives :
## Some data from Japanese learners of English

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## Abstract

In this paper, I report on a pilot study conducted to explore the acquisition process of reflexive-binding by Japanese learners of English. Recent linguistic analyses have recognised the importance of morphological types of reflexives in their interpretation. The morphologically complex reflexive as *himself* in English allows only local binding, while the morphologically simple reflexive as *zibun* in Japanese allows long-distance binding. While it has been observed in the literature that long-distance binding is a possible option for some second language (L2) learners of English, there is limited data showing the relationship between the morphological status of reflexives and the locality of binding. Japanese learners of English in different proficiency levels were given a translation task and a multiple-choice comprehension task. The former was to see if the learners had learned AGR morphology, the latter was to elicit their knowledge of reflexive binding in English. The results of this study support the theoretical claim on cross-linguistic typology of reflexives, and its relevance in L2 acquisition.

## 1. Introduction

L2 knowledge of anaphors has attracted a number of L2 researchers' attention. The main reasons for this lie in the fact that interpretation of anaphors requires highly syntactic knowledge, and the same result cannot be achieved by a strategy based on surface word order. Moreover, while it is highly unlikely that L2 learners receive explicit instructions on binding conditions on anaphors, they seem to acquire the principle to a large extent.

A considerable number of studies have been conducted within the framework of the principles and parameters approach, and on the Governing Category Parameter (GCP) posited by Wexler & Manzini (1987) in particular. However, few L2 studies to date incorporate more recent theoretical accounts for cross-linguistic differences in reflexive binding (see below).

In the present study, Japanese learners of English (JLEs) in different proficiency levels were tested on their knowledge of the agreement morphology and locality condition of English reflexives.

This paper is structured as follows. First, some widely discussed theoretical accounts for interpretation of anaphora and its cross-linguistic variations are discussed. Second, relevant L2 studies are reviewed. Third, the methodology and procedure of the present study are discussed, followed by presentation of the results and discussion. Some implications of this study for SLA theory and directions for further research are suggested in the concluding section.

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## 2. Theoretical background

Before discussing L2 acquisition of reflexive binding, let us briefly review some influential theoretical accounts of anaphora. Consider the following sentences:

(1) a. John$_i$ sold Paul$_j$'s picture of himself$_{*i/j}$.

　　 b. John$_i$ told George$_j$ about a picture of himself$_{i/j}$.

　　 c. John$_i$ thinks that George$_j$ sold a picture of himself$_{*i/j}$.

　　 d. John$_i$ thinks that Paul$_j$ hates himself$_{*i/j}$.

To account for this distribution of interpretations of the English reflexive, Chomsky (1981) introduced the Binding Theory, which determines the structural domains in which a possible antecedent for the anaphor can occur.

(2) Binding Theory

　　 (A) An anaphor is bound in its governing category

　　 (B) A pronominal is free in its governing category

　　 (C) An R-expression is free　　　　　　　　　　　　　　　(Chomsky, 1981: 188)

In this paper, I confine my discussions to the principle (A). Being in the "governing category" in principle (A) roughly means that both an anaphor and its antecedent must be in the same clause or a complex NP (i.e., minimal governing category (MGC): Chomsky, 1986:169).[1] Although Chomsky's principle (A) successfully accounts for the distribution of reflexives in English, it is not the case with other languages. Consider the following Japanese sentences which roughly correspond to English examples in (1a) to (1c) respectively. The square brackets represent the governing domains defined in (2).

(3) a. John$_i$-ga　[Paul$_j$-no　zibun$_{i/j}$-no e]-o　　　utta (koto)

　　　 John-NOM　[Paul-GEN self-GEN picture]-ACC　sold (COMP)

　　　 "John sold Paul's picture of himself."

　　 b. John$_i$-ga　[Paul$_j$-ga　zibun$_{i/j}$-o kira-tteiru] to　　omou (koto)

　　　 John-NOM [Paul-NOM　self-ACC hate-Pres.] COMP think (COMP)

　　　 "John thinks that Paul hates himself."

　　 c. John$_i$-ga　George$_j$-ni　zibun$_{i/*j}$-no　e　　nituite　hanashita (koto)

　　　 John-NOM George-DAT self-GEN　picture about　　told (COMP)

　　　 "John told George about a picture of himself."

The examples in (3) show that a Japanese anaphor *zibun* can have its antecedent outside of the governing domain defined in (2). This, and empirical facts from other languages (e.g., Icelandic: Johnson, 1984 cited in Wexler & Manzini, 1987: 50) clearly indicates the failure of Binding Theory at least in its face value.

　In an attempt to account for the apparent cross-linguistic difference in the distribution of anaphors, Wexer & Manzini (1987) posited that the governing category is parameterised.

(4) Governing Category Parameter (GCP)

　　　 $\gamma$ is a governing category for　$\alpha$　if and only if

　　　 $\gamma$ is the minimal category which contains $\alpha$　and

　　　　 a. has a subject, or

　　　　 b. has an INFL, or

　　　　 c. has a TNS, or

　　　　 d. has an indicative TNS, or

　　　　 e. has a root TNS　　　　　　　　　(Wexler & Manzini, 1987: 53)

In this proposal, English reflexive *himself* is associated with the value (a) on one hand, and Japanese *zibun* is associated with the value (e) on the other. Wexler & Manzini also posit the "Proper Antecedent Parameter" to accommodate the cross-linguistic contrast between (1b) and (3c).

(5) Proper Antecedent Parameter (PAP)

    A proper antecedent for α is

        a. a subject β; or

        b. an element β whatsoever             (Wexler & Manzini, 1987: 64)

Though attractive it may be, Wexler & Manzini's parameter-setting approach has been criticised by a number of researchers for both conceptual and empirical reasons (e.g., Hermon, 1992; Reuland and Koster, 1991). As linguistic theory has developed, binding theory itself has come to be viewed in somewhat different ways. The most significant theoretical development in terms of the distribution of anaphors seems to be the one distinguishing morphological structures of reflexives associated with a notion of covert movement of anaphors in Logical Form (LF). In this view, reflexives are classified into two groups according to their X′-status. Namely, "polymorphemic" reflexives (e.g., *himself*) which have the structure of $X^{max}$, and "monomorphemic" reflexives (e.g., *zibun*) which have the status of $X^0$ (e.g., Yang, 1983; Pica, 1987; Battistella, 1989). The core insight of this analysis is that morphologically simplex reflexives are subject to long-distance binding, while morphologically complex reflexives are locally bound.[2] It has been argued that Japanese has both types of reflexives (Katada, 1991). Consider the morphologically complex reflexive in Japanese *kare-zisin*, which is only locally bound (compared with the case of *zibun* in (3)).

(6)   John$_i$-ga    [Paul$_j$-ga  kare-zisin.$_{*i/j}$-o kira-tteiru] to     omou (koto)

      John-NOM  [Paul-NOM himself-ACC  hate-Pres.] COMP   think (COMP)

      "John thinks that Paul hates himself"

In LF-movement analyses, only $X^0$ reflexives such as *zibun* are supposed to be interpreted in INFL (including AGR) by successive cyclic head-to-head movement (Katada, 1991; Battistella, 1989; for a detailed discussion of INFL-to-INFL movement of Chinese *ziji*, Cole, Hermon and Sung, 1990; Cole, and Sung, 1994).[3] As this movement of N (reflexive) to I makes I lexical, hence L-marking VP, both the Head Movement Constraint and Relativized Minimality are observed. Phrasal reflexives as English *himself* and Japanese *kare-zisin*, on the other hand, do not undergo head-movement, hence their binding domains are within the clause or complex NP within which they are contained.[4] The observation that long-distance (LD) reflexives are always subject-oriented (contrast (1b) and (3c)) also follows this assumption, as INFL is always c-commanded by subject not by object. In short, the advantage of this head movement analysis is that we can account for distributional facts of reflexives by interactions of UG principles independently needed for language without having to resort to rather arbitrary parameter values for the governing category and proper antecedent.

Another account maintaining the analysis of $X^0$ v.s. $X^{max}$ distinction of reflexives while assuming no movement is the Relativized SUBJECT analysis proposed by Progovac (1992). In the spirit of Rizzi's (1990) Relativized Minimality, Progovac argued for relativization of SUBJECT (possible binder) in that an $X^0$ reflexive must be bound to $X^0$ antecedent, i.e., AGR, which carries the relevant pronominal features. On the other hand, an $X^{max}$ reflexive can only be bound by a Specifier, i.e., [NP, IP] or [NP, NP]. As in LF-movement analysis, subject-orientation of a simple reflexive is accounted for. As the $X^0$ reflexive is assumed to be bound to AGR, it must be coreferential with the [NP, IP] which is coindexed with AGR.

If we are to claim that L2 acquisition is largely governed by UG principles, which is the innate and domain-specific endowment to humans, the behaviour of L2 grammar must be explained to a considerable extent by the given linguistic theory. This is the specific point that I attempt to explore. Before discussing the details of the present study, let us take a brief look at previous L2 research.

## 3. Previous L2 studies

Early L2 literature on reflexives focused on the availability of the Subset Principle to adult L2 learners (Finer, 1991; Finer & Broselow, 1986; Hirakawa, 1990; Thomas, 1989, 1993). The findings of these L2 studies suggest

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that the Subset Principle is not at work in SLA.

Finer & Broselow (1986) examined the knowledge of reflexive-binding by six adult Korean learners of English.[5] Like Japanese, Korean has both morphologically simple and complex reflexives. Their Korean learners were tested by a picture identification task, where the reflexive was included in finite and non-finite embedded clauses. The results suggested that the Korean learners preferred local interpretation for English reflexive when it was included in a finite clause, such as *Mr. Fat thinks that Mr. Thin will paint himself.* On the other hand, the learners allowed more long-distance binding when the reflexive was included in a non-finite clause, such as *Mr. Fat asks Mr. Thin to paint himself.* This finding led the authors to argue that the learners neither obeyed the Subset Principle nor transferred the L1 GCP value, and that the learners initially assumed the GCP value of (4c) which is intermediate between the L1 and L2.

Finer & Broselow's (1986) results have been repeated elsewhere and used as a basis for the argument that L2 learners have access to UG and their interlanguage grammars are within the limited options licensed by UG (Hirakawa, 1990; Thomas, 1989 amongst others). However, given the arbitrary nature of the GCP discussed above, the explanatory power of L2 acquisition theory based on Wexler & Manzini's (1987) parameterisation of governing category becomes questionable (e.g.: Tomita, 1992). In particular, the often reported difference in L2 learners' responses to reflexives in finite and non-finite embedded clauses (henceforth 'finite-infinite asymmetry," following Yuan, 1994) awaits more articulate explanation, i.e., why do L2 grammars take the "intermediate" value of GCP.[6]

More recently, researchers have attempted to capture the phenomenon of L2 reflexive-binding by incorporating different morphological structures of reflexives (Bennett, 1994; Lakshmanan and Teranishi, 1992, Bennett and Progovac, 1993; White et. al 1997). According to these authors, inappropriate L2 LD reflexive binding may be the result of "misclassification of XP reflexives as $X^0$ reflexives due to transfer of an L1 $X^0$ reflexive" (Bennett and Progovac, 1993: 73). Bennett and Progovac (1993) investigated the interpretations of English reflexives by Serbo-Croatian learners. As both English and Serbo-Croatian have overt morphology of AGR, the learners' performance allowing LD binding could be attributed to their inappropriate morphological status of reflexives (i.e. $X^0$ reflexives). 73 native speakers of Serbo-Croatian were tested with a picture identification task and a multiple choice comprehension task. The results indicated their learners allowed more LD binding with reflexives in a complex NP and those in non-finite clauses. This led the authors to argue that some of their learners assume $X^0$ status for English reflexives and have acquired (or transferred directly from L1) +AGR, hence supporting their Relativized SUBJECT analysis as a possible explanation for L2 acquisition of reflexive binding.

Reporting on a study with Japanese learners of English, Lakshmanan & Teranishi claim that L2 learners with both types of reflexives (i.e., simple and complex) might assume $X^0$ status first and then incorporate the $X^{max}$ status of reflexive to overcome the Subset Principle. This line of analysis of L2 acquisition of reflexive binding seems very attractive in a sense that the problems of language acquisition are reduced to parametric choices with lexicon and functional categories (Chomsky, 1995). To this end, it is feasible to explore the morphological structure of reflexives and acquisition of AGR.[7]

## 4. The pilot study

For the exploratory purpose of the present study, two tasks were devised to be administered to Japanese learners of English: a multiple-choice comprehension task and a Japanese-English translation task.

### 4.1.1 The multiple-choice comprehension task (MCC)

This task was devised to ask the participants to deliberately identify possible antecedent(s) of the reflexive. This included the four types of stimulus sentences presented in the Table 1.[8] Each item of this task took the form of (7).

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Table 1: Types of sentences in the multiple-choice comprehension task (MCC)

| | | |
|---|---|---|
| Type 1 | Complex NP with the subject | *John sells Paul's picture of himself.* |
| Type 2 | Tensed sentential complement | *John thinks [that Paul hates himself].* |
| Type 3a | ECM construction | *John wants [Paul to like himself].* |
| Type 3b | Object-control verb | *John often persuades Mike [PRO to involve himself in club activities].* |
| Type 4 | Pronominal | *John wants Paul to tickle him.* |

(7) John thinks that Paul hates himself.    "Himself" refers to:

A. only John    B. only Paul    C. either John or Paul    D. neither John nor Paul

The participants were asked to indicate what they thought *himself* referred to by circling one of the choices given as a-d.

It is important to notice that the learners could arrive at the correct local interpretations of English reflexives in all sentence types in this task by simply assuming the closest NP to be the antecedent of the reflexive. To detect such a "minimal distance strategy," following Thomas (1993), stimuli with a pronoun (Type 4) were also included in this task.

## 4.1.2 The Japanese-English translation task

The translation task comprised of three Japanese sentences, which the participants were asked to translate into English. For the purpose of increasing the ease of the task, thereby reducing the chances of the participants reflecting their conscious knowledge of subject-verb agreement, persons' names and a few other target English words were provided next to each Japanese sentence. The English version of these sentences (i.e., target sentences) were as follows:

(8) a.    John takes a bus to school.

b.    John and Paul both ride bicycles to school.

c.    Mary believes (that) John has read a lot of books.

The stimulus (8a-b) were both tensed monoclausal sentences.    The overt subject-verb agreement morpheme "-s" was required for (8a), while it wasn't for (8b) as the subject was [plural].    (8c) was a biclausal sentence with the agreement morpheme (-s) required both for the matrix and the embedded clause.

## 4.2 Participants

The participants were students (16-20 years of age) at Fukushima National College of Technology, Japan. Although the participants' amount of exposure to English varied, all of them sat the second and pre-second grades of the STEP English proficiency test. Therefore, these learners were deemed to have at least the minimum L2 knowledge necessary to be tested on the syntactic knowledge in question.

There were 105 participants first, who were grouped according to their STEP scores.[9] The distribution of the participants' scores is illustrated in the Table 2.

Table 2: Distribution of the participants by the scores in STEP exam

| score | 2nd grade | Pre-2nd grade |
|---|---|---|
| 60 and over | 0 | 1 |
| 55-59 | 2 | 2 |
| 50-54 | 3 | 4 |
| 45-49 | 4 | 14 |
| 40-44 | 13 | 13 |
| 35-39 | 17 | 11 |
| 30-34 | 9 | 12 |

The participants with the STEP score of 45-59 of the 2nd grade were assigned as JLE1, those with 30-39 of the 2nd grade were assigned as JLE2, and those with 30-39 of the Pre-2nd grade were assigned as JLE3. The results of the MCC and the translation task of these three groups of learners were analysed.

Additionally, the MCC task was also given to 18 native speakers of English (NSEs), who served as a control group.[10]

## 4.3 Procedure

The two tasks were administered in a paper-and-pencil form, where the translation task was first presented followed by the MCC task. The task sheets were presented to the participants after they had finished the STEP exam. As some researchers have pointed out, the potential ambiguity of the sentences including reflexives could be undermined for L2 learners as a result of the linear order of NPs, or closest-NP strategy (eg., Thomas, 1993). In the hope of increasing the participants' awareness of the potential ambiguity, two practice sentences were included before the MCC task. The participants were instructed to answer one question at a time and not to go back to any previous ones. They were allowed to ask the researcher about the meanings of lexical items used in the stimuli. All participants finished the tasks within 10 to 15 minutes.

## 5. Results and discussion

Let us first look at the overall results.　The results of the MCC task are illustrated in the Table 3. First, the results indicate that the JLEs do not use the strategy of "the closest NP as the antecedent." If they did apply such a strategy, the proportion of responses with 'B' would be predominantly high over all types of sentences. The responses to the sentence type 4 indicate that this is not the case. Second, as can be seen from the data for all types of stimulus sentences, there is a large difference between the NSEs and JLEs in terms of the interpretations of English reflexives. Third, although the JLEs's performance seems to gradually improve in accordance with their general fluency, the difference among groups was not large for all sentence types. Finally, as the data for the Type 2 and 3 sentences indicate, the "finite-infinite asymmetry" was not clearly identifiable in the aggregate data of these L2 learners.

As has been pointed out in the literature (i.e., Thomas, 1993; Wakabayashi, 1996; Akiyama, 2002), it is important to look at the consistency of each participant's responses in order to investigate L2 linguistic knowledge. Table 4 shows the numbers and percentages of participants of each group who consistently gave local or non-local responses to given sentence types. Following Thomas (1993), I set the criterion of consistency as 2 out of 3 (66%). That is, the participant whose responses were constantly local (i.e. answering "B" 2 or 3 out of 3) were considered to have responded consistently with "Local" interpretation to a given type of sentence.

The local interpretation by the NSEs was almost perfectly consistent for the sentence type 2 to 3b. However, they seem to allow non-local binding for reflexives embedded in a complex NP (Type 1). This supports the argument that logophoric interpretation may be applied when the reflexive is in an A-bar position (Reinhart & Reuland, 1991).

In contrast, the consistency of the three JLE groups was significantly lower. There was no significant difference among the 3 JLE groups for any sentence type. The best approximation of the JLEs to NSEs is the consistency obtained from the JLE1 for the Type 1 sentences. Even this group, however, showed a low consistency of local interpretation for the other sentence types.

As for the "finite-infinite asymmetry", more than 50% of L2 learners in all proficiency levels consistently interpreted the reflexive locally in the Type 2 (finite embedded clause) sentences. On the other hand, the percentages of participants with consistent local interpretation for the reflexives included in the non-finite clause were relatively small. Interestingly, this percentage for Type 3a sentences (i.e., sentences with ECM construction) seemed to improve as the level of proficiency improves. This does not seem to be the case with the sentence Type 3b, however, with object-control construction.

Let us now look at the data in terms of the morphological structure of the reflexive and AGR. The participants were divided into two groups: the ones with local interpretations for Type 1, and those with LD interpretations for Type 1. This categorisation was based on the assumption that the L2 grammar with the $X^{max}$ reflexive would

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Table 3: Distribution of responses to the stimulus sentences by sentence types and groups of participants

| | response | NSEs (N=18) | JLEs 1 (N=9) | JLEs 2 (N=26) | JLEs 3 (N=23) |
|---|---|---|---|---|---|
| Type 1 | A | 8 (14.8%) | 5 (18.5%) | 22 (28.2%) | 24 (34.8%) |
| | B | 30 (55.6%) | 16 (59.3%) | 27 (34.6%) | 25 (36.2%) |
| | C | 16 (29.6%) | 5 (18.5%) | 29 (37.2%) | 19 (27.5%) |
| | D | 0 (0.0%) | 1 (3.7%) | 0 (0.0%) | 1 (1.4%) |
| Type 2 | A | 0 (0.0%) | 8 (29.6%) | 10 (12.8%) | 14 (20.3%) |
| | B | 54 (100.0%) | 13 (48.1%) | 43 (55.1%) | 40 (58.0%) |
| | C | 0 (0.0%) | 6 (22.2%) | 25 (32.1%) | 14 (20.3%) |
| | D | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 1 (1.4%) |
| Type 3a | A | 1 (1.9%) | 7 (25.9%) | 19 (24.4%) | 20 (29.0%) |
| | B | 51 (94.4%) | 14 (51.9%) | 37 (47.4%) | 26 (37.7%) |
| | C | 2 (3.7%) | 6 (22.2%) | 22 (28.2%) | 21 (30.4%) |
| | D | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 2 (2.9%) |
| Type 3b | A | 0 (0.0%) | 5 (18.5%) | 19 (24.4%) | 18 (26.1%) |
| | B | 52 (96.3%) | 14 (51.9%) | 41 (52.6%) | 30 (43.5%) |
| | C | 2 (3.7%) | 7 (25.9%) | 18 (23.1%) | 18 (26.1%) |
| | D | 0 (0.0%) | 1 (3.7%) | 0 (0.0%) | 3 (4.3%) |
| Type 4 | A | 46 (85.2%) | 12 (44.4%) | 31 (39.7%) | 23 (33.3%) |
| | B | 3 (5.6%) | 9 (33.3%) | 19 (24.4%) | 23 (33.3%) |
| | C | 2 (3.7%) | 6 (22.2%) | 20 (25.6%) | 12 (17.4%) |
| | D | 3 (5.6%) | 0 (0.0%) | 8 (10.3%) | 11 (15.9%) |

be less likely to allow LD binding out of [NP, NP]. Each group was further divided into two groups: +AGR and −AGR, according to each participant's performance on the translation task. Only the participants who produced correct agreement morphemes for all three sentences were assigned +AGR. Participants who failed to produce the agreement morpheme "-s" for both (8a) and (8c) were assigned -AGR. The rest of the participants were eliminated from this analysis. The results are shown in the Table 5.

Although the data is very limited, 50% to almost 70% of the participants who gave local binding for Type 1 (both +AGR and -AGR) consistently gave local interpretations to the reflexives across all contexts. In contrast, consistency of local binding by the participants with LD binding for Type 1 seems to deteriorate in Type 3 contexts. An exception is the consistent local binding by +AGR participants for Type 3a. This, however, could be a result of the limited number of samples or some effects of ECM construction. Nevertheless, these participants' performance for Type 2 with finite clauses was highly consistent. This conforms to the findings often reported by researchers as "finite-infinite asymmetry" (Akiyama, 2002, Yuan, 1994), hence supports the Relativized SUBJECT account.

Table 4: The numbers and percentage of participants who gave consistent responses

| Sentence types | | NSEs (N=18) | JLEs 1 (N=9) | JLEs 2 (N=26) | JLEs 3 (N=23) |
|---|---|---|---|---|---|
| Type 1 | Local | 11 (61.1%) | 6 (66.7%) | 9 (34.6%) | 8 (34.8%) |
| | Non-local | 7 (38.9%) | 3 (33.3%) | 17 (65.4%) | 15 (65.2%) |
| Type 2 | Local | 18 (100.0%) | 5 (55.6%) | 14 (53.9%) | 16 (69.6%) |
| | Non-local | 0 (0.0%) | 4 (44.4%) | 12 (46.2%) | 7 (30.4%) |
| Type 3a | Local | 17 (94.4%) | 5 (55.6%) | 10 (38.5%) | 7 (26.1%) |
| | Non-local | 1 (5.6%) | 4 (44.4%) | 16 (61.5%) | 17 (73.9%) |
| Type 3b | Local | 18 (100.0%) | 4 (44.4%) | 15 (57.7%) | 10 (43.5%) |
| | Non-local | 0 (0.0%) | 5 (55.6%) | 11 (42.3%) | 13 (56.5%) |

Table 5: Distribution of JLEs with consistent local interpretations
by the responses to Type 1 sentences and AGR

| | Participants with local binding for Type 1 | | Participants with LD binding for Type 1 | |
|---|---|---|---|---|
| | +AGR (N=8) | -AGR (N=16) | +AGR (N=7) | -AGR (N=27) |
| Type 2 | 5 (62.5%) | 11 (68.8%) | 4 (57.1%) | 15 (55.6%) |
| Type 3a | 4 (50.0%) | 8 (50.0%) | 4 (57.1%) | 4 (14.8%) |
| Type 3b | 5 (62.5%) | 10 (62.5%) | 2 (28.6%) | 12 (44.4%) |

In sum, LD binding was clearly a possibility for many JLEs in all proficiency groups. This property may not be attributable to L1, as a similar tendency has been documented by other studies with speakers of other languages whose adult grammars do not allow long-distance binding (e.g., White et. al., 1997; Thomas, 1993). The data showed that the locality of binding was observed more frequently when the reflexive was included in the finite complement clause than in the cases where it was included in the non-finite clause. A closer look at the consistency of learners' performance also suggested that so-called "finite-infinite asymmetry" was most clearly found in the learners who were not likely to have acquired the appropriate morphological structure of English reflexives, i.e., the learners who consistently interpreted reflexives in complex NP as correferential with matrix subjects.

## 6. Conclusion

In this pilot study, I attempted to explore the relationship between L2 learners' morphological structure of reflexives and their knowledge of AGR in their interpretation of English reflexives. The data showed that the learners who gave local interpretation to the reflexive in a complex NP were likely to observe the locality of reflexives in other contexts. The learners who failed to interpret reflexives locally in a complex NP showed less consistency in other contexts, especially when the reflexive was contained in a non-finite clause. This observation suggests not only the correctness of the theoretical accounts for the cross-linguistic typology of reflexives but also its relevance in L2 acquisition. The data also suggested that L2 acquisition of the locality of reflexive binding largely depended on acquisition of the morphological structure of reflexives.

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## Notes

[1] The example (1b) is to show that a anaphor is not simply bound to the closest NP in a sentence. This example is directly related to another important fact (i.e., whether or not interpretation of an anaphor is subject-oriented or not) found cross-linguistically. For the sake of the clarity of discussion, I do not wish to go into this issue here.

[2] There are some cases where a phrasal reflexive can be LD bound. The reflexives in such cases are arguably logophoric and outside the scope of binding theory (see Reinhart and Reuland, 1991 for a detailed discussion).

[3] Huang & Tang (1991) propose a similar but somewhat different analysis for Chinese LD reflexive, which assumes adjunction to IP.

[4] See Hermon (1992) for an explanation on why phrasal reflexives are banned from moving out of its clause at LF. In short, $X^{max}$ can adjoin to IP, but they cannot move further up the structure.

[5] Finer & Broselow (1986) also examined interpretation of pronouns, which I will not discuss here.

[6] As pointed out by Hirakawa (1990:66), Thomas's (1989) data with Chinese and Spanish learners of English do not support the claim of "intermediate parameter value" by Finer & Broselow (1986), as some learners allowed long-distance binding of reflexives in tensed embedded clauses.

[7] More data should certainly be collected from L2 learners with different L1s and different levels of proficiency. Not only is L2 acquisition of agreement morpheme frequently reported to be relatively late (Eubank,1994), but also there have been discussions on whether L2 grammar lacks appropriate features of a given functional category or they just have some problems with matching surface morphology. See Prévost & White (2000) for further discussion.

[8] In sentences with an ECM verb, the subject of the embedded infinitival clause gets $\theta$-marked by the lower verb while it is assigned Case from the matrix verb. Bennett and Progovac (1993), Bennett (1994) attribute their subjects' local-binding to these properties of ECM sentences. See Bennett (1994) for further discussion.

[9] I thank all the participants for agreeing to let me use their STEP scores for this purpose.

[10] I would like to thank my English-speaking friends and the assistant language teachers (ALTs) working for the Iwaki municipal board of education, who kindly participated in this study.

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## Appendix

Sentences used in the multiple-choice comprehension task (MCC)

| Type | Sentence |
| --- | --- |
| 1 | John sells Paul's picture of himself. |
| 1 | Mary didn't like Linda's comment about herself. |
| 1 | Peter read Mike's letter about himself. |
| 2 | John thinks that Paul hates himself. |

| | |
|---|---|
| 2 | Mary knows that Sue likes herself very much. |
| 2 | Ken says that Paul criticises himself too much. |
| 3a | John wants Paul to know himself better. |
| 3a | Henry expects Mike to put himself on the phone. |
| 3a | Mary wants Linda to describe herself in detail. |
| 3b | John often persuades Mike to involve himself in club activities. |
| 3b | Cathy sometimes asks Jenny to dress herself in the other room. |
| 3b | George often encourages Mike to help himself more efficiently. |
| 4 | John believes that George hates him. |
| 4 | Paul wants John to know him better. |
| 4 | Mike asked John to describe him. |