What Can SLI Tell Us About Transfer in SLA?

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1. Developmental versus transfer errors in SLA

A longstanding question in investigations of interlanguage is whether target-deviant structures can be attributed to transfer from the L1, or instead are part of the developmental acquisition sequence for the target language, evidenced by all learners of that language. Even if target-deviant structures in the L2 can *logically* be attributed to the L1, this does not necessarily mean that transfer is the source. How can we identify which target-deviant structures are due to transfer, and which are developmental? Researchers have typically approached answering this question in two ways. One way consists of comparing the use of a target structure in L2 learners from different L1 backgrounds. If the L2 learners appear to have the same interlanguage errors for that target structure, then transfer is not the most likely explanation. Another method for assessing the potential role of transfer is to compare the errors produced by L2 learners with those produced by children acquiring the target language as their L1. Again, if similarities are found, then the source of the errors in the L2 interlanguage is probably not transfer from their L1.

A third method of determining the role of transfer would be to compare L2 interlanguage with the language produced by L1 learners who have specific language impairment (SLI). This method has not been widely used although it has a certain advantage over comparing L2 with normally-developing L1 acquisition. Children with SLI can be as cognitively mature and the same age as L2 children, and yet they have incomplete target language abilities like L2 children. The consideration of cognitive maturity is important when comparing the acquisition of target structures at the discourse-pragmatics interface (i.e., use of pronominalization) because understanding of how to use these structures depends on understanding of the needs of the interlocutor and numerous other contextual variables. It is possible that very young children could not grasp the discourse-pragmatic variables that older children can due to cognitive immaturity. The purpose of the present study is to illustrate the usefulness in comparing L2 children and children with SLI to address the issue of whether interlanguage target-deviant structures are due to transfer from the L1.

2. Object pronominalization in French and English

We will be presenting data on the use of direct object pronominals from English-speaking children learning French as their L2 and French-speaking children with SLI. English and French have contrasting systems for this aspect of morphosyntax. English direct object pronominals (me, you, him/her, it, us, them) distribute syntactically like NPs and appear in postverbal position like lexical direct objects. Direct (me, te, le/la, nous, vous, les) and indirect (lui, leur) object pronominals in French are clitics, that is to say, morphemes of restricted distribution that attach to a verbal host. They cannot be modified, coordinated, dislocated, or appear in isolation. In addition, French canonical word order is SVO, but object pronominal clitics appear preverbally in declaratives and negative imperatives (standard variety), but postverbally in affirmative imperatives. Examples showing the distribution of direct objects and clitics are given in (1).

(1)   a.   Brigitte regarde sa poupée.
                    Brigitte looks-at her doll
                    'Brigitte is looking at her doll'
         b.   Brigitte *la*   regarde.
                    Brigitte DO.CLI:FEM:SG looks-at
                    'Brigitte is looking at it'

     c.   *Brigitte regarde *la*
               Brigitte looks-at DO.CLI:FEM:SG
               'Brigitte is looking at it'

     d.   (ne) *la*   regarde pas
                   DO.CLI:FEM:SG look-at not
               'Don't look at it'

     e.   Regarde *la*.
               look-at   DO.CLI:FEM:SG
               'Look at it'

French also has a series of *pronoms toniques* 'strong pronouns'(moi, toi, lui/elle, nous, vous, eux). These are morphemes that distribute like NPs. They can be complements of prepositions, appear in coordinated and dislocated/doubled structures, and in isolation. Thus, in some respects, this set of pronominals resembles the object pronouns in English, as can be seen from the glosses below in (2).

(2)   a.   Je les   ai   donnés   à *elle*.
               I   DO.CLI:3PL AUX:PAST give:PART   to her
               'I gave it to her'

     b.   Brendan et *moi*, on   va   y   aller.
               Brendan and me   SUBJ.CLI:1PL AUX:FUT LOC.CLI go:INF
               'Brendan and me are going to go there'

     c.   Où   va-t-il,   *lui*?
               Where go-SUBJ.CLI:MASC:SG him
               'Where's he going, him?'

     d.   Qui veut y aller?
               'who wants to go there?'
               Moi.
               'me'

3. Transfer from English to French in bilingual and L2 contexts

The crosslinguistic differences in direct object pronominal forms between French and English predict transfer from English to French (Herschensohn, forthcoming; Müller & Hulk, 2001; White 2001; Zobl, 1980, *inter alia*) for the following reasons. The primary reason is partial structural overlap between the pronominalization systems in the two languages. French has both clitics and strong pronouns, and the latter distribute somewhat like English pronouns. In English, SVO is the canonical order used when either lexical or object pronouns appear, and in French, SVO is the order for sentences with lexical objects and clitics in affirmative imperatives. A secondary reason for predicting transfer to occur is because object pronominalization is at the discourse-pragmatics/syntax interface. It has been hypothesized that transfer is likely to take place in this domain of the grammar (e.g. Müller & Hulk, 2001).

     The kinds of target-deviant structures that are predicted to occur as a result of transfer are given in (3). The example in (3a) shows an object clitic incorrectly placed post-verbally, in the same position as English direct object pronouns. The example in (3b) shows the incorrect use of a strong pronoun, which distribute more like English pronouns, as a direct object pronominal, also in post-verbal position. The final example in (3c) shows the use of a demonstrative pronominal, *ça*, in a context where a direct object pronoun would be more typical. The use of *ça* could be characterized as an avoidance strategy: This form is an NP and can grammatically be placed in post-verbal position, and so it might be more attractive to English-speaking learners of French because it corresponds more to the English system.

(3)   a.   *Brigitte regarde la.   (direct object clitic in VO)
         b.   *Brigitte regarde elle.   (strong pronoun used as direct object in VO)
         c.   Brigitte regarde ça.   (ça = it/that; avoidance/indirect transfer)

Researchers have investigated the possibility of transfer in L2 French pronominals when learners' L1 is English or a language where object pronouns distribute in a similar fashion to those in English, like Swedish. Structures such as those in (3) have been noted in the research on French SLA, although they are reported to be infrequent in child L2 French. Object omissions in object pronominalization contexts have also been reported as target-deviant forms (Adiv, 1984; Herschensohn, forthcoming, Schylter, 1997; White 1996; Zobl, 1980, *inter alia*). Examples below from both adult and child L2 French show the use of a strong pronoun in postverbal position (4a, 5a, 5b, 5c), a clitic in postverbal position (4b), and the use of *ça* in an atypical context (4c). Thus, the predicted L1 transfer errors have been attested in L2 French.

(4)   a.   Moi va attraper *elle.*
                'I'm going to catch her'
        b.   Moi j'ai trouvé *le.*
                'Me, I found it'
        c.   Le papa-vache fait *ça.*
                'the daddy-cow does that'   (White, 1996: child L1 English)

(5)   a.   Il mange *elle.*
                'he is eating her'
        b.   Ne conaissé pas eh *elle*, grand-mère.
                'don't know her, grandmother'
        c.   Oui, mais, il prend *nous.*
                'yes, but he is taking us'   (Schylter, 1997: adult L1 Swedish)

4. Object clitics in French L1 acquisition, with and without SLI

Recall that target-deviant structures that appear in both the L1 and L2 acquisition of a certain language are important to note in assessing whether transfer from the L1 is the probable source of the L2 errors. In this section, we review the literature on the L1 acquisition of object clitics in French, both with and without impairment.

Productive use of object clitics emerges relatively late in normally-developing children acquiring French - typically between 2;6 and 3;0 - in both monolingual and bilingual children (Clark, 1985; Hamann et al, 1996; Heinen & Kadow, 1990; Hulk, 1997; Kaiser, 1994; Schlyter, 1997). Target-deviant structures like (3a) and (3b) have been noted in both monolingual and bilingual French acquisition, and examples are given in (6). Direct object omissions in transitive verb contexts have also been noted in French acquisition, but the relationship between object omissions and contexts for direct object pronominalization is unknown (Müller & Hulk, 2001).

(6)   a.   deux fois, on avait *lui*.
                'two times, we had it'   (Clark, 1985: French monolingual)
        b.   je prends *la*.
                'I'm taking it'   (Hulk, 1997: Dutch-French)

Object clitics are a particularly problematic area of acquisition in French SLI. Difficulties with the use of object clitics have been reported for children with SLI from 4 to 13 years of age, from both naturalistic and experimental data (Cronel-Ohayan et al, 2001; Hamann et al, 2002; Jakubowicz et al, 1998). Non-clitic structures produced in direct object pronominalization contexts are most commonly full NPs or object omissions. Use of strong pronouns (e.g. 3b) is infrequent in object pronominalization contexts. Examples from an elicitation experiment are presented in (7) showing the use of redundant lexical objects and zero objects in contexts where pronominalization would be expected.

(7)   Q: Que fait Nounours à Kiki?

          'what is Teddy-bear doing to Kiki?'

    a.   A: i brosse *Kiki*

          'he is brushing Kiki'

    b.   A: i Ø passe le mouchoir. (NB: IO)

          'he is handing the handkerchief'   (Jakubowicz et al, 1998)

If object clitics are a problematic area of L1 French acquisition, they might be expected to be a problematic area of L2 French acquisition, regardless of native language. In addition, non-target structures in direct object pronominalization contexts in L2 French might include more variety than the transfer-based structures listed in (3), for example, they might include full NPs or object omissions. Investigating the presence and prevalence of non-target structures used in object pronominalization contexts in French L2 and monolingual French L1 (ND and SLI) could indicate whether transfer from English is the most likely explanation for L2 learners' behaviour. It is possible that the overall pattern of non-target structures in object pronominalization contexts is the same in the acquisition of French across learner contexts.

5. Method

This study included 4 groups of children: 7 year-old normally developing, monolingual French-speaking children (7ND), 7 year-old monolingual French-speaking children with SLI (7SLI), 7 year-old English L1 children learning French as a second language (7L2), and 3 year-old normally-developing monolingual French-speaking children. The 7ND children are an age-matched control group for the children with SLI and the L2 children, demonstrating what the ceiling behaviour can be expected at 7 years of age with object pronominals. The 3ND children provide a language-level comparison group for the 7SLI and 7L2 children. The 7L2 and 7SLI children are closely matched in both age and MLUW, illustrating commonalities in French at a certain stage of developmental language and level of cognitive/mental maturity. Details about group size, ages and MLUWs are in Table 1.

Table 1. Sample Size, Mean Age and MLUW for each Group of Children

children	sample size	mean age	mean MLUW
7ND	10	7;3	5.70
3ND	10	3;3	3.67
7L2	10	6;10	4.09
7SLI	10	7;6	3.98

The normally-developing, monolingual French-speaking children were recruited from summer day camps, community centres and word of mouth in the greater Montreal area. According to parental report, none of the children had displayed any language learning difficulties. The 7SLI children were recruited from special language classes in French elementary schools in the greater Montreal area. Inclusion criteria as children with SLI were as follows: (1) score > 1.5 SD below the mean on Dudley-Delage [standardized test of Québec French], (2) IQ within normal limits, (3) no frank neurological damage, (4) no significant hearing loss, (5) no social-emotional problems, (6) no oral-motor impairments, (7) no severe articulation difficulties. The 7L2 group consisted of English L1 children who started acquiring French as a L2 in kindergarten in French medium schools (not immersion) in the greater Montreal area. All of the children received 2 years exposure prior to the study. According to parental report, none of the children had any language learning difficulties for their mother tongue.

The data used for this study come from spontaneous language production samples from the monolingual children, and language production samples from semi-structured interviews from the L2 children. In both types of samples, numerous contexts for object pronominalization occurred in the discourse. Videotapes (7ND, 3ND and 7SLI) and audiotapes (7L2) were transcribed and coded in

CHAT format and analysed with CLAN (CHILDES project – www.childes.psy.cmu.edu). Discourse contexts where direct object pronominalization [me, te, la/le/les, nous, vous] was possible were identified according to the following criterion: the referent was previously mentioned in near discourse on the same topic (within 5-10 preceding lines of the transcript). Next, what the child supplied in pronominalization contexts was coded: clitic (SOV)[1]; strong pronoun/ ça (SVO); lexical NP (SVO); zero object (SV). Form choice errors were also coded (gender, person, other [= wrong clitic type]). Both transcriptions and coding were checked for reliability. Ten percent of the corpus from each group was transcribed and coded by a different research assistant, then compared with the original. Rates of agreement for both transcription and coding were between 85-95%. Discrepancies were settled through discussion.

6. Results

Scores for suppliance of object clitics in object pronominalization contexts were calculated as percentages of object clitics used out of the total of object pronominalization contexts. Results of this calculation are presented in Figure 1. A one-way between-subjects ANOVA performed on these scores was significant, $F(3,35) = 39.7$, $p < .0001$. Newman-Keuls post hoc pairwise comparisons revealed that the 7L2 and 7SLI children supplied object clitics significantly less than the 7ND and 3ND children. In addition, the 7SLI supplied object clitics at roughly the same level as the 7L2 children, and similarly, the 3ND used object clitics to the same extent as the 7ND children. Note that the 7ND were nearly at ceiling in their use of object clitics in pronominalization contexts. This is important because if this group did not use object clitics the majority of the time in these contexts, then perhaps our criteria for identifying contexts were flawed.

Figure 1. Percent suppliance of object clitic in direct object pronominalization contexts
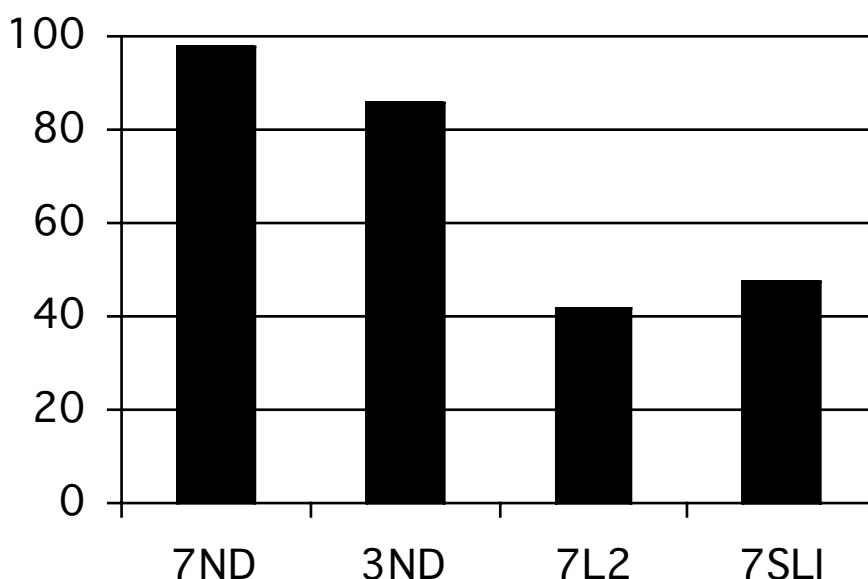
The next analysis performed was an examination of what the children used in object pronominalization contexts when they did not use an object clitic. This analysis was done for the 3ND, 7L2 and 7SLI children only because the 7ND children used object clitics nearly 100% of the time. Even though the 3ND children were not significantly different from the 7ND group in their suppliance scores, the mean is slightly lower and we were interested in investigating what they used instead of

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[1] Cases where a clitic was supplied but placed incorrectly, i.e. SVO, were marginal.

object clitics. The results of this analysis are given in Figure 2. The children used zero objects, strong pronouns/*ça*, or lexical objects in these contexts when they did not use clitics. Strong pronouns and *ça* were used with fairly equal frequency and were put together for this analysis because they are both non-clitic anaphoric forms. The most common non-clitic object type for all three groups was zero objects. Sample excerpts from the transcripts illustrating the use of zero object types are presented in (8). For the second most common non-clitic type, the groups differed. The 7L2 children preferred strong pronouns/*ça*, while the 3ND children used more lexical objects. The 7SLI children used very few of either of these forms and so most of their non-clitic objects were zero objects.

Figure 2. Percent distribution of other objects in direct object pronominalization contexts
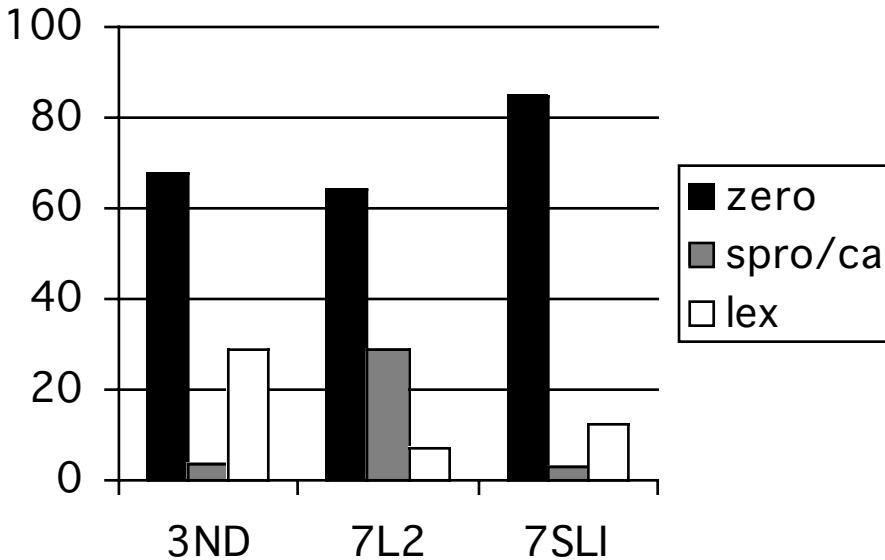
(8) a. zero object: 7SLI

        EXP: ah elle est encore dans ton sac à dos?
              'ah, it is still in your knapsack?'
        CHI: non.
              'no'
        EXP: elle est où?
              'it is where?'
        CHI: ma mère Ø a jeté
              'my mother threw away'

   b. zero object: 7L2

        EXP: qu'est-ce que tu ferais si tu trouvais de l'argent dans la cours
              d'école?
              'What would you do if you found money in the school yard?'
        CHI: je vas, je vas Ø dire au bureau.
              'I 'm going, I'm going to tell to the office'

        EXP: qu'est-ce que tu ferais si tu trouvais de l'argent dans la cours
              d'école?
        CHI: je vas Ø donner au miss.
              'I'm going to give to the miss'

Scores for form choice correctness were calculated as a percentage of correct forms out of the total of clitic forms used. The errors found in these data were those of person, gender or the wrong clitic (e.g. use of the locative clitic *y* instead of a direct object clitic). The results of this calculation are presented in Figure 3. A one-way between-subjects ANOVA for form choice was significant, $F(3,35)$ = 4.507, $p < .02$. Newman-Keuls post hoc pairwise comparisons showed that the 7SLI were less accurate in form choice than the 3ND and 7ND children; no other significant differences were found.

Figure 3. Percent correct form choice for a clitic when supplied
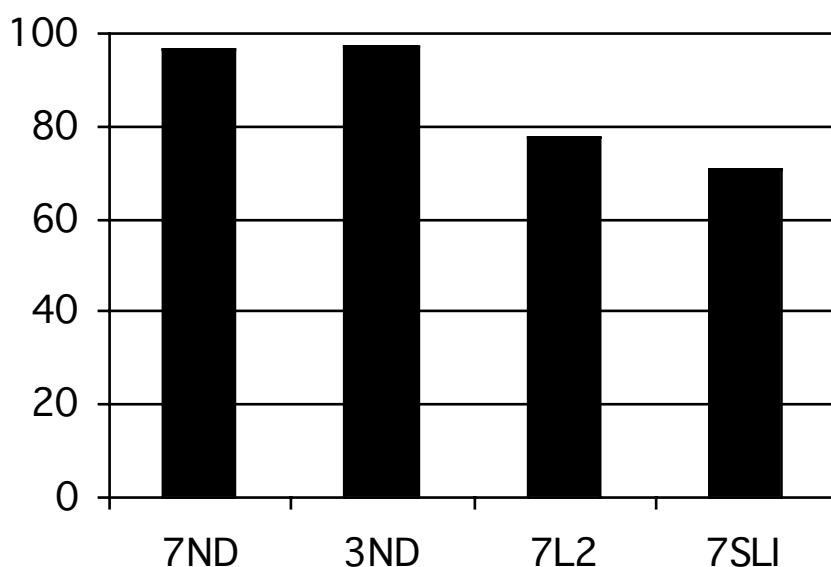
7. Discussion

Our primary interest in this study was to investigate whether children with SLI are an appropriate comparison group for L2 children for the purpose of determining if certain L2 target-deviant structures can be attributed to transfer from the L1. We analysed the use of object pronominals in L2 French and French SLI because this is an aspect of French morphosyntax that is (1) prodigious in both normally-developing and impaired L1, and (2) where transfer from an English L1 has been predicted and found in French SLA.

Our data revealed similarities between monolingual French-speaking children with SLI and age- and language-level peers who were learning French as an L2. The 7SLI and 7L2 groups both used object clitics about 40% of the time in object pronominalization contexts, and zero objects were the most common non-clitic object type used by both these groups in pronominalization contexts. The children with SLI and the L2 children differed from each other as well. The L2 children used more strong pronoun/*ça* objects in clitic contexts than the children with SLI. Also, the children with SLI made more form choice errors with clitics.

Despite the differences, the children with SLI performed more like the L2 children than the 3ND children, which might indicate that the children with SLI provided a more appropriate L1 comparison population for child L2 acquisition. Note that the 3ND children used more lexical objects in pronominalization contexts. This could indicate a lack of understanding of the discourse-pragmatics of anaphora that could be the result of cognitive immaturity.

Transfer from English might be present in our data, for example, in the skew in the error forms for the L2 group. But, transfer from English does not explain the most prevalent error type, zero objects,

and does not explain the SLI-L2 similarities in the overall use of object clitics. The error structures predicted by transfer from English represent a small proportion of the L2 learners' language use.

In sum, the SLI-L2 similarities, together with the L2-3ND differences, point to the usefulness of children with SLI as a monolingual comparative group for SLA research. Overall, our study seems to indicate that object clitics are a vulnerable area in the acquisition of French across learner contexts. The most frequent error form in object pronominalization contexts is zero objects for child learners of French. In the case of L2 French, transfer from the L1 appears to interact with this developmental phenomenon mainly to determine relative distribution of error types.

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