

LEARNING HEBREW AS A SECOND LANGUAGE: AN ANALYSIS OF INTERLANGUAGE DEVELOPMENT

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ABSTRACT: Empirical studies on second language development in North America have focused mainly on the learning of English and French. This article reports on the learning of Hebrew in a specific type of trilingual Jewish day school in Canada. The oral performance of children in Grades 1, 2, and 3 was investigated. It was found that there was a significant increase in the quantitative performance, but little improvement in the qualitative performance over the two-year span. The results also suggest four main strategies in second language development: (1) the development of meaning precedes the development of form; (2) invariant and uninflected forms are mastered early; (3) inflections which are semantically based are mastered earlier than inflections which are based on arbitrary grammatical criteria; (4) mother tongue interference is most persistent when the deviant structure can be associated with other second language structures for which transfer from the mother tongue is positive. Similarities between first and second language development are discussed on the basis of these strategies.

In recent years, the topic of second/foreign language learning and teaching has attracted the attention of a great many researchers in various academic fields. In North America, empirical studies pertaining to the acquisition of a second language (hereafter L2)¹ have focused mainly on

1. Some researchers and pedagogues differentiate between "foreign language learning" and "second language learning." There seems, however, to be little consensus on what criteria this distinction should be based. Moreover, a recent study by Seshadri and Allen (1978)

the acquisition of English. In Canada, where both English and French are the official languages, the acquisition of French as L2 has also been investigated. Interestingly, there are practically no studies reporting on the learning of a second (or third) language in contexts which strive to preserve the religio-cultural heritage of a community. A case in point is the learning of Hebrew in Jewish institutions in the diaspora. The purpose of this paper is to describe a research project which was undertaken to investigate the development of Hebrew in a specific type of trilingual Jewish day school in Montreal, Canada. First, however, I shall review some recent developments in psycholinguistic theory in order to place the study within the framework in which the relevant issues will be discussed.

Over the past decade, L2 learning models have emphasized similarities between first language (hereafter L1) acquisition and L2 development. In contrast to the behavioristic model (Skinner, 1957) which viewed language learning as a mechanical process of habit formation, these cognitive models (see for instance Dulay and Burt's creative construction hypothesis, 1973, 1974a) postulate that the learner actively participates in the development of an L2 grammar by formulating hypotheses about the target language which the learner then tests and readjusts. To support the view that L1 and L2 development involve similar processes, some researchers have pointed out analogies between deviant speech pattern produced by L1 and L2 learners (see for example Corder, 1967; Dulay and Burt, 1974b, Ervin-Tripp, 1974; Richards, 1971), while others have tried to show that the acquisition of certain English morphemes follows a hierarchy of difficulty which seems to be independent of the learner's L1 (Dulay and Burt, 1973; 1974a), the learner's age (Fathman, 1975), and the context in which the language is learned (Bailey, Madden and Krashen, 1974). Some investigators (Dulay and Burt, 1974c; Lococo, 1975) have tried to explain L2 development in terms of more universal L1 acquisition strategies such as Slobin's (1973) operating principles.

One aspect of L2 development which, until recently, has remained largely unaccounted for in the cognitive models of L2 development is L1 transfer. One reason for this general lack of interest in investigating more

showed no significant difference in language achievement when the learning of English in countries where English is considered to be a foreign language was compared to the learning of English in countries where it is considered a second language. Hence, the term "second language" or L2 will be used throughout this paper to cover both terms.

For similar reasons, the distinction made by some researchers between "L2 acquisition" and "L2 learning" (see in particular Krashen, 1977) will not be maintained here and these two terms, as well as the term "L2 development," will be used interchangeably.

closely the role of L1 transfer has been the continued view that such transfer is a mechanical process rather than a mental activity. In recent years, however, there seems to be increasing evidence to suggest that transfer from the L1 does not occur automatically. In particular, it has been claimed that the occurrence of L1 transfer is conditioned by (1) the learner's stage of development in the L2, (2) the learner's perception of distance between a particular L2 structure and the corresponding L1 form, and (3) the inherent properties of an L2 structure which may in itself give rise to the error (Kellerman, 1979; Zobl, 1980a & b).

Another factor which seems to differentiate between L1 and L2 development is the degree of mastery achieved in the target language. In contrast to young children learning their mother tongue, L2 learners often seem to have a great deal of difficulty in achieving native-like proficiency. Selinker (1972) has postulated that one of the features which characterize L2 development is fossilization. This process is said to occur when the learner no longer readjusts his interim grammar so that deviant target language structures become a permanent feature of the learner's interlanguage.²

As noted above, most of the empirical research supporting these hypotheses pertains to the learning of English and French as second languages. With regard to Hebrew, several studies have been carried out in Israel to examine the L2 production of adult learners studying in *'ulpanim*³ (Blum, 1976; Blum and Levenston, 1980; Chomsky, 1967; Kantor, 1980). However, little information is available on the learning of Hebrew outside Israel where there is little or no contact with native speakers. Schmidt-Reitman (1980) has recently investigated the development of certain grammatical features in the interlanguage of Hebrew L2 learners studying in a Jewish high school in Montreal. She tested two groups of students, each group twice. The first group was tested once at the end of Grade 7 and once at the end of Grade 8; the second group was tested first at the end of Grade 10 and again at the end of Grade 11. She found that there was a significant improvement in performance from Grade 7 to Grade 8, but not from Grade 10 to Grade 11. She concluded that L2 development had reached a plateau in the higher grades and that many of the deviant forms seemed to have fossilized. She noted that the forms which had not yet been acquired pertained predominantly to (1) inflectional suffixes which

2. The term "interlanguage" was coined by Selinker (1969) and is defined as "observable output" resulting from a speaker's attempt to express himself in the second language.

3. *'Ulpanim* (singular *'ulpan*) are Israeli institutions which offer intensive Hebrew second-language instruction to newcomers.

indicate gender and number markings, and (2) errors which seemed attributable to language transfer such as omission of the article *ha-* 'the' in certain contexts, and errors in prepositions. Since the students tested by Schmidt-Reitman had been exposed to Hebrew since kindergarten, it is possible that some of the deviant structures had already fossilized at earlier stages of L2. In this paper, therefore, I have extended the investigation of the learning of Hebrew to the elementary school level. Because the context in which a language is learned is an important factor in L2 development, it is of interest to look first at the school setting itself.

Jewish Day Schools, a Linguistic Perspective

During the past thirty years the curriculum of the Jewish day schools in North America has not only emphasized the teaching of Judaic studies via the medium of Hebrew (Fishman, 1977), but has also stressed the development of communicative skills in the language (Adar, 1977). In most of these schools, half of the daily instructional time is devoted to Hebrew and Judaic studies and the other half to secular academic subjects, all of which are taught through the medium of English, the students' native tongue. In places like Montreal, where the teaching of French to native-English speakers is compulsory, the Jewish day school becomes a trilingual and, in cases where Yiddish is included in the curriculum, a quadrilingual program. In these programs, the multilingual experience starts in the kindergarten. Reading and writing are introduced simultaneously in English, French and Hebrew in Grade 1. The teaching of literary skills in Yiddish (where applicable) is deferred until Grade 2. In addition to these programs, a new type of program, modelled on the French immersion programs⁴ in Canada (Cohen & Swain, 1976; Genesee, 1979; Lambert & Tucker, 1972), has been developed. This French/Hebrew immersion program differs from the above-described "regular" trilingual program in that the two second languages (French and Hebrew) are the sole media of instruction in the lower elementary grades, and the teaching of language skills in the mother

4. An immersion program is a type of bilingual school program in which a language other than the students' native tongue is used as the sole medium of instruction during a certain period. In Canada, the majority of these programs are French second-language programs developed for native English-speaking students. The intensive language "bath" can occur at different grade levels resulting in different types of programs. The most popular ones are (1) early immersion where instruction is totally in French from kindergarten through Grade 2, and (2) late immersion where the intensive French instruction period is in Grade 7 and sometimes in Grades 7 and 8. In each case, the amount of instruction in French is gradually reduced after the intense period to 40 or 50 percent of the instructional time.

tongue (English) is deferred until Grade 3 or Grade 4. In both the regular trilingual program and the French/Hebrew immersion program, the teaching of French and Hebrew is largely informal, especially in the lower grades where the emphasis is on oral communication.

Comparative evaluations show that proficiency in Hebrew in the French/Hebrew immersion program tends to be equal and sometimes even superior to that in the regular trilingual program (Genesee and Lambert, 1980; Genesee, Lambert and Tucker, 1978). While these evaluations furnish an assessment of global performance, they do not provide an in-depth analysis of the students' linguistic performance. Research into the learning of French in immersion settings at the elementary school level (Grades 1-6) has shown that, although the students in these programs become communicatively competent, there is little progress across the grades with regard to the development of certain grammatical forms (Adiv, 1980 a & b; Spilka, 1976). In some cases (e.g. the development of features pertaining to gender and number), the findings noted here for French are similar to those reported by Schmidt-Reitman (1980) for Hebrew L2 development at the high school level. Moreover, several studies (Hamayan & Tucker, 1979; Kleinmann, 1977; Schachter, 1974) indicate that it is important to investigate whether certain structures are being consistently avoided. Adiv (1980a) and Bongard (1976) have noted that students in immersion classes use personal pronouns less frequently than do native French-speaking children in the lower elementary grades. It is possible that this avoidance of pronominalization is a general characteristic of early stages of L2 development.

The purpose of this study is to examine these issues with regard to the development of Hebrew in an immersion setting. This study focuses on the following questions:

- (1) Does cumulative time affect both the quantitative and the qualitative performance?
- (2) To what extent are L1 acquisition strategies, language transfer and fossilization evidenced in Hebrew L2 development when that language is learned in an immersion setting?

The Study

Subjects

The subjects were 57 native English-speaking children enrolled in a French/Hebrew immersion program in Montreal.⁵ The children were

5. The research presented here is part of a larger study (Adiv, 1980a) in which 114 children participated. Half the children were enrolled in a full French immersion program

studying in Grades 1, 2 and 3 and were selected from two schools situated in geographically different areas of the city. At each grade level, selection of the children was based on the following criteria: (1) the children were "average" students in terms of scholastic achievement; (2) they did not differ significantly from one another in terms of non-verbal ability (according to Raven's (1956) Coloured Progressive Matrices Test); and (3) they spoke no language other than English with either parent. All the children came from middle to upper-middle socio-economic class backgrounds and lived in predominantly English-speaking neighborhoods.

Materials and Testing Procedures

All the children were administered an oral production test in Hebrew. Two testing techniques were used: a short interview and a picture-based test. The interview consisted of a number of questions related to the child's family such as the name and age of siblings. The picture-based test consisted of nine sets of pictures. Each set was constructed so as to form a small story. The stories were introduced by means of a few short sentences followed by a question. In order to induce the children to use adjectives, certain objects of different sizes and colors were used in addition to the pictures. Every child was tested individually, and each test took approximately 15 minutes to administer. The entire session was tape-recorded and later transcribed for further analysis.

In the analysis, five grammatical classes (pronouns, verbs, articles, adjectives and prepositions) were examined. Each grammatical class was further subdivided according to specific grammatical features. The features were chosen so as to include (1) linguistic categories such as gender and number which, as noted above, have been extensively investigated in French immersion settings, and (2) features that seem difficult to acquire because of differences between the relevant Hebrew surface structure and the corresponding L1 form (Chomsky, 1967; Schmidt-Reitman, 1980). These features included the invariant verb particles *yeš* 'there is/are' and *'eyn* 'there isn't/aren't', the full form and the contracted forms of the article *ha-*, and prepositions. Prepositions were further subdivided into: general prepositions; the accusative marker *'et*; and the preposition *le-* in possessive and attributive constructions. The latter refer to those Hebrew sentence structures in which the semantic concepts "agent" and "patient" are expressed grammatically by an indirect (dative case) object, e.g., *le-*

and the other half in a French/Hebrew immersion program. Second-language development in both French and Hebrew was examined; results from the French data analysis have already been reported (see Bulletin of the Canadian Association of Applied Linguistics, 1980, Vol. 2, No. 2:138-152.)

david yeš sefer ‘David has a book’, but literally: ‘to David is a book’; *ham li* ‘I am hot’, but literally: ‘hot is to me’.

A list of the nineteen features analyzed in the present study is shown in Table 1. In the case of the subject pronouns and present tense verbs,

Table 1
List of Grammatical Features

Pronouns

Third person masculine singular subject pronouns

Third person feminine singular subject pronouns

Third person masculine and feminine plural subject pronouns

Object pronouns (except dative case pronouns in possessive and attributive constructions)

Dative case pronouns in possessive and attributive constructions

Verbs

Present tense

—third person masculine singular^a

—third person feminine singular^a

—third person masculine and feminine plural^a

Past tense

—third person masculine singular

—third person feminine singular

—third person plural

Impersonals (*yeš/’eyn*)

Articles

Full form of the article (*ha-*)

Contracted forms of the article (*la-, ba-*)

Adjectives

Masculine singular adjectives

Feminine singular adjectives

Prepositions

General prepositions

The preposition *’et*

The preposition *le-* in possessive and attributive constructions

^aAlthough Hebrew verbs do not differ according to person in the present tense, this additional subclassification was used because only finite verb occurrences with a subject in the third person were examined in this study.

the masculine and feminine plural forms were grouped together because of the small number of contexts in which plural forms were elicited. Both subject pronouns and verbs included only occurrences in the third person (singular and plural). All the subject pronouns had human referents, so that gender was semantically based here. In the qualitative analysis of the verb, only inflectional suffixes related to gender and number were considered.

Following Brown (1973) for L1 and Dulay and Burt (1973) for L2 acquisition, the obligatory contexts (i.e., the contexts in which a given grammatical feature had to be used) were counted, and for each feature the mean number of these contexts was calculated according to grade (Grades 1, 2 and 3). The figures thus obtained constituted the children's quantitative performance. A one-way analysis of variance was used to determine whether there were significant differences between grades.

For the assessment of the qualitative performance, the errors pertaining to each grammatical feature were counted according to grade. Percentages were then calculated by dividing the total number of errors for a given grammatical feature by the number of obligatory contexts provided for that feature and multiplying by one hundred. A chi-square analysis (based on the raw scores) was used to determine significant differences between grades.

Results and Discussion

The analysis of the quantitative performance indicates that the number of obligatory contexts for each of the grammatical features examined increased significantly from Grade 1 to Grade 3 (Table 2). Since the obligatory contexts must be contained within utterances, an increase of such contexts reflects increased production, even though the required form may not have been provided. Thus, the results lead to the conclusion that the children became progressively more verbal as the cumulative time of exposure to Hebrew increased. These findings are in accordance with general expectations in L2 development (Carroll, 1975).

The most noteworthy finding pertaining to the quantitative performance is that the number of obligatory contexts for most of the grammatical features doubled and, in some cases, even tripled from Grade 1 to Grade 2, whereas the increase from Grade 2 to Grade 3 was much less pronounced. Closer investigation of the data revealed that the Grade 1 children often left responses to the tester's questions incomplete. Moreover, statements about what was depicted in the pictures were sometimes reduced to a mere enumeration of objects and people in these pictures. In

Table 2
Mean Number of Obligatory Contexts According to Grade

	Grade 1	Grade 2	Grade 3	F ratio
Pronouns (Total)	0.78	16.83	28.22	54.188***
3rd m. s. subj.	0.00	5.17	8.89	30.576***
3rd f. s. subj.	0.00	3.67	6.17	19.878***
3rd m. & f. pl. subj.	0.00	3.11	6.33	45.267***
obj. pron.	0.00	0.00	1.33	14.316***
pron. poss./att.	0.78	4.89	5.50	14.936***
Verbs (Total)	11.11	35.89	46.67	81.945***
3rd m. s. pres.	2.28	5.00	5.94	16.427***
3rd f. s. pres.	3.44	5.39	6.06	7.834***
3rd m. & f. pl. pres.	1.83	5.28	5.94	28.098***
3rd m. s. past	0.56	4.50	6.33	22.545***
3rd f. s. past	0.11	4.11	6.94	32.740***
3rd pl. past	0.00	0.72	2.06	8.714***
impersonals	2.67	10.06	10.61	14.138***
Articles (Total)	22.17	42.50	47.89	22.504***
full form	16.55	32.39	37.17	20.109***
contr. form	5.61	10.11	10.72	7.794***
Adjectives (Total)	5.56	7.72	9.78	18.337***
adj. m.	3.72	4.61	6.33	9.198***
adj. f.	1.83	3.11	3.44	7.009**
Prepositions (Total)	9.56	23.83	30.83	36.702***
general prep.	4.83	13.39	15.67	22.271***
prep. 'et	1.61	6.83	9.94	29.720***
l _ə in poss./att.	3.11	3.61	5.22	3.334*

*p<.05 **p<.01 ***p<.001

contrast, the children in Grade 2 and especially those in Grade 3 gave a more story-like account of what they saw in the pictures. Furthermore, these children often used a variety of communicative strategies such as paraphrasing, circumlocution and semantic avoidance to express meaning when they did not seem to have the appropriate lexical item, e.g., *hu lo yode'a 'eyfo hassefer* 'he doesn't know where the book is' for *hu məhappés 'et hassefer* 'he is looking for the book'. The results also show that contexts

for third person subject pronouns were simply not provided in Grade 1. Here the analysis of the data reveals that the Grade 1 children frequently used nouns and noun phrases provided by the tester's questions and thus circumvented pronominalization. These findings suggest that the children in Grade 2 and especially those in Grade 3 had developed a certain flexibility in the use of the language which the Grade 1 children were still lacking.

With regard to the qualitative performance, the results indicate that for most of the grammatical features under investigation, there is little decrease in the percentage of errors from Grade 1 to Grade 3 and, in some cases, there is actually a significant increase in errors across the grades (Table 3). Thus the quantitative performance and the qualitative performance seem to develop in opposite directions, i.e., while communicative competence in the language improves with increased exposure, the development of grammatical accuracy does not seem to be affected by cumulative time. This pattern can be seen to parallel Brown's (1973) hypothesis for first language development, namely that the acquisition of meaning precedes the development of form. Like young children learning their mother tongue, immersion students are primarily concerned with the conveyance of meaning. Hence, they may only attend to form once they feel confident in their ability to communicate in the L2.

Let us now consider the development of grammatical form in some detail. Significant decreases in the proportion of errors occurred in forms pertaining to only four grammatical features: the third person feminine singular subject pronoun; the third person plural subject pronouns; the invariant verb particles *yeš* and *'eyn*; and the accusative marker *'et*. On the other hand, there was regression in the third person feminine singular present-tense verbs and in the general prepositions. Finally, if the 10% error threshold is adopted as an acquisition criterion (see Brown, 1973, for L1 and Dulay & Burt, 1974a for L2) only four of the 19 features examined can be considered acquired at the end of Grade 3. All of these forms were either uninflected (3rd pers. masc. sing. present-tense verbs, 3rd pers. masc. sing. past-tense verbs) or invariant (the verb particles *yeš* and *'eyn*, and the full form of the article *ha-*). The rapid decrease in the proportion of errors pertaining to the accusative marker *'et* suggests that this form is also in the process of being mastered. Moreover, in all three grades the masculine adjectives were produced with a much lower percentage of errors than the feminine ones. Thus the development noted here suggests a pattern whereby invariant and uninflected forms are learned more easily than inflected ones. These findings are in agreement with

Table 3
Number and Percentage of Errors According to Grade^a

	Grade 1		Grade 2		Grade 3		X ²
	Errors	%	Errors	%	Errors	%	
Pronouns	—	—	114	38	126	22	16.289***
3rd m. s. subj.	—	—	14	15	19	13	0.112
3rd f. s. subj.	—	—	33	50	33	30	6.432*
3rd m. f. pl. subj.	—	—	19	33	17	15	6.690**
obj. pron.	—	—	—	—	9	38	—
pron. poss./att.	—	—	48	55	48	48	0.695
Verbs	71	38	224	34	310	37	0.281
3rd m. s. pres.	7	24	4	6	5	6	5.954
3rd f. s. pres.	19	35	53	59	62	62	11.804*** ^b
3rd m. & f. pl. pres.	13	43	31	34	46	44	2.292
3rd m. s. past	—	—	3	4	4	4	0.000
3rd f. s. past	—	—	55	74	76	66	1.075
3rd pl. past	—	—	—	—	23	74	—
impersonals	13	25	20	11	10	5	15.516***
Articles	31	8	30	4	76	4	16.895***
full form	21	8	14	2	44	7	15.681***
contr. form	10	10	16	9	32	17	5.396
Adjectives	25	26	55	40	62	35	4.426
adj. m.	3	4	10	12	17	15	4.618
adj. f.	22	71	45	80	45	73	1.323
Prepositions	75	44	104	24	149	27	16.289***
general prep.	5	6	19	9	48	17	15.309*** ^b
prep. 'et	17	59	25	20	23	13	33.190***
/־ in poss./att.	53	95	60	92	78	83	5.946

^aNo error percentages were calculated if the mean number of obligatory contexts was less than 1 for a given grade.

^bPercentage of errors increased significantly across the grades.

* $p < .05$ ** $p < .01$ *** $p < .001$

certain hypotheses posited by Slobin (1973) for L1 development. In a similar vein, the finding that forms inflected for gender (verbs and adjectives) were produced with a higher proportion of errors than forms inflected for number (verbs in the present study) seems to conform to one of Slobin's L1 "operating principles," namely that semantically-based functors are acquired earlier than functors which assign arbitrary grammatical categories. This principle seems further supported by the finding that there was a significant decrease in the proportion of errors in the third person feminine singular subject pronouns (all of which, as noted above, had human referents), whereas no such decrease was found in the feminine forms of verbs and adjectives. Practically all the errors in these feminine subject pronouns consisted of the substitution of the masculine form *hu* 'he' for the required feminine form *hi* 'she'. These findings are similar to those noted for French articles and pronouns (Adiv, 1980a & b; Spilka, 1976; Swain, 1976) and for Spanish articles (Cohen, 1976). It would seem that the pattern of overgeneralization of the unmarked form is not restricted to instances where an inflectional suffix distinguishes the marked form from the unmarked one.

Several grammatical features examined here do not fall into this pattern. Furthermore, unlike the invariant forms discussed above, they cannot be considered in the process of being acquired since the percentage of errors for two of them (the contracted forms of the article and the general prepositions) increased across the grades, and for the other two (the dative case nouns and pronouns in possessive and attributive constructions), the proportion of errors remained very high, even in Grade 3. The development of these features merits, therefore, further investigation.

The contracted forms of the article consist of forms such as *ba-* 'in the' and *la-* 'to the' which are derived from *bə+ha-* and *lə+ha-* respectively. Closer examination of the utterances in which these forms appeared reveals that in Grade 1 the only type of error in these forms was the omission of the definite article component, e.g.,

*hayyeled bəbayit	'The boy (is) in (a) house'
(hayyeled babbayit)	'The boy (is) in the house'

This error continued to be produced in Grades 2 and 3. However, in these grades, especially in Grade 3, a new type of error appeared, namely the failure to contract the preposition and the definite article, e.g.,

*hi notenet 'et hamma'il	'She gives the coat
ləhayyeled	to the boy'

(hi notenet 'et hammə'il layyeled)	'She gives the coat to the boy'
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This type of error is common in both L1 (Slobin, 1973) and L2 (Adiv, 1980a & b; Lococo, 1975) development. What is of interest here is that the error was not noted in Grade 1. It is possible that the structure *Prep + Art* is initially internalized as an unanalyzed chunk or prefabricated pattern (Hakuta, 1974), and that errors occur only when the learner has enough knowledge about the L2 to identify the relevant elements of structure. The comparison with data from L1 acquisition (Brown, 1973; Slobin, 1973) points, once again, to the similarity between L1 and L2 development. When the remaining two grammatical features (general prepositions and possessive and attributive constructions) are examined, a different picture emerges. The general prepositions included two types of prepositions: (1) prepositions with semantic content; and (2) prepositions devoid of semantic content. The former referred predominantly to spatial relationships and these were the only prepositions produced in Grade 1. However, in Grades 2 and 3, the children used a greater variety of prepositions, many of which did not denote spatial relationships, e.g.,

*'iš šel šeleg ('iš šeleg)	'a man of snow' 'a snowman'
*habbayit 'al 'eš (habbayit 'ole bə'eš)	'The house (is) on fire' 'The house goes up in fire (flames)'
*hem mistakkəlim bišvil hassefer (hem məḥappəšîm 'et hassefer)	'They are looking for the book'

All of these deviant constructions seem attributable to language transfer (French in the case of the first example and English in the case of the other two). It is of interest to note that it was this type of error which kept increasing across the grades. It is probable that the learner's use of transfer is not syntactically motivated here, but is rather an attempt to express a semantic concept for which the learner has not yet acquired the appropriate lexical form in the L2.

Finally, let us consider the possessive and attributive constructions. Closer examination of the deviant forms produced by the children suggests that, here again, language transfer is at the source of the errors, as can be seen from the following examples:

*hayyalda yeš 'uga.	'The girl has (a) cake'
(layyalda yeš 'uga.)	lit., 'to the girl is (a) cake'
*hu kar.	'He (is) cold'
(kar lo.)	lit., 'cold (is) to him'

On the other hand, these deviant forms could be produced by analogy to other Hebrew constructions in which there is correspondence between the grammatical subject and the semantic concepts "agent" and "patient," e.g.,

hayyalda 'oxelet 'uga	'The girl is eating (a) cake'
hu šame'ah	'He (is) happy'

In fact, errors such as **hu kar* 'he (is) cold' have been noted in early stages of L1 acquisition, thus the error may also be the result of inherent properties of Hebrew itself. Further support for this claim can be found in the way possessive constructions are frequently formed in Colloquial Israeli Hebrew, e.g.,

yeš ləxa 'et hassefer šelli?	'Do you have my book?'
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Here we find that the accusative marker *'et* is inserted in front of the grammatical subject. Ziv (1976) has argued that the grammatical subject in these constructions is losing its syntactic properties and is being reinterpreted as a direct object because of its position in the sentence. Thus, both the syntactic-semantic relationship between the subject and the verb and the word order may contribute to the error. Interestingly, the proportion of errors in these constructions was higher when the indirect object consisted of a noun preceded by the preposition *lə-* than when a dative case pronoun was used. It is possible that units such as *yeš li* 'I have' and *yeš lo* 'he has' are often learned *in toto* and, as in the case of the contracted articles, are then produced as prefabricated patterns. Such a strategy is unlikely when the structure is *lə + Noun* since the grammatical class of nouns is not a closed class. It is also possible that the dative case pronouns are both perceptually and semantically more salient than the preposition *lə-*.

Conclusion

The major pattern that emerges from this study is that there is a rapid expansion in communicative competence, but little progress in the devel-

opment of linguistic accuracy over the two-year period examined here. This pattern is very similar to that noted above for the development of French in immersion settings. The finding that the use of Hebrew pronouns was extremely infrequent in Grade 1 also allows us to extend the notion of "pronominalization avoidance" to the early stages of Hebrew L2 development.

The results of the quantitative and qualitative performance suggest four main strategies in Hebrew L2 development: (1) the development of meaning precedes the development of form; (2) uninflected forms are mastered early and without much difficulty; (3) inflections which are semantically based are learned earlier than inflections which are based on arbitrary grammatical criteria; (4) the restructuring of a deviant form is most difficult when the error can be attributed simultaneously to language transfer and inherent complexities in the L2. Anderson (1981) has recently suggested that the occurrence of language transfer is always triggered by a potential for overgeneralization within the L2. The question then arises as to why the other deviant structures which could be attributed to L1 transfer, such as the omission of the accusative marker *'et*, were not persistent. It is possible that factors such as distributional regularity and perceptual saliency, which are also influential in L1 acquisition (Slobin, 1973 and 1978), play a role here. Thus, not only the occurrence of language transfer, but also the extent to which it persists in the learner's interlanguage may be controlled by the formal properties of the L2.

With regard to the issue of fossilization, this study suggests that several of the features examined here could be in the process of becoming permanent features of the learners' interlanguage. The inflectional suffixes related to gender and number and the possessive and attributive constructions seem to fall into this group. The results noted here support Schmidt-Reitman's findings with regard to the inflectional suffixes. On the other hand, omission of the definite article *ha-*, which had been noted by Schmidt-Reitman to be frequent at the high school level, did not seem to cause a major problem to the children in Grades 1, 2 and 3. One of the reasons for this difference may be that the young children tested in this study produced mainly noun phrases which consisted of a noun preceded by its article (e.g., *hayyeled* 'the boy'), whereas the errors noted by Schmidt-Reitman occurred predominantly in noun phrases such as *hayyeled haqqaṭan* 'the little boy', but literally 'the boy the little', where the article *ha-* has to be repeated in front of the adjective. Finally, errors in the possessive and attributive constructions were not noted by Schmidt-Reitman. Thus these errors do not seem to fossilize in spite of their high proportion in the lower elementary grades. It is possible that the more

advanced learner attends to errors of this nature because they constitute what Burt and Kiparsky (1974) have termed "global" errors. Such errors affect the entire sentence structure and therefore, are more likely to cause a breakdown in communication than "local" errors such as the omission of inflectional suffixes. Some researchers (Cohen, 1976; Selinker, Swain & Dumas, 1975) have suggested that the process of fossilization may be emphasized in immersion settings because there is no peer pressure to conform to language norms. The learner may also fail to readjust his or her interim grammar because in the immersion setting there is constant pressure to transmit increasingly more complex semantic content within the limited context of classroom interactions. Thus the learner may not have enough opportunity to integrate the necessary vocabulary into the L2 lexicon and therefore, the learner continues to focus primarily on the expansion of effective communicative skills. These hypotheses suggest that the informal approach to L2 learning in immersion settings may have to be modified in some way so as to compensate for a more natural environment where the language is used in a greater variety of contexts and where there is interaction with native peers.

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