DOCUMENT RESUME

ED 297 569 FL 016 826

AUTHOR Vago, Robert M.
TITLE Paradigmatic Errors in First Language Attrition.
PUB DATE 86
NOTE 13p.; Paper presented at the Annual Meeting of the Linguistic Society of America/American Association for Applied Linguistics (New York, NY, December 27-30, 1986).
AVAILABLE FROM CUNY Forum, PhD Program in Linguistics, CUNY Graduate Center, 33 W. 42nd St., New York, NY 10036.
PUB TYPE Reports - Research/Technical (143)
JOURNAL CIT CUNY Forum; v12 p204-214 1986

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Bilingualism; Code Switching (Language); Discourse Analysis; Error Analysis (Language); *Hebrew; *Hungarian; *Language Maintenance; Language Patterns; *Language Skill Attrition; Language Usage; *Morphophonemics; Oral Language; Retention (Psychology); Second Language Learning; Uncommonly Taught Languages

ABSTRACT

An ongoing research project into the dissolution or attrition of native language structure under the influence of bilingualism analyzed certain paradigmatic changes in the first language of a Hungarian-Hebrew bilingual speaker. Data were collected over a 2-year period from an Israeli woman who was born in Hungary and immigrated to Israel at 6 years of age. Her primary language was Hebrew, although she used Hungarian on a daily basis (principally with her parents). A paradigm elicitation method was used; the subject was asked to produce regular and irregular nominal paradigms in the rich inflectional system of Hungarian. Examination of the data revealed interesting structural deviations in the subject's first language which may be termed errors. These errors were changes in the rule component of the language, specifically, rule simplification, rule loss, and rule reordering. Illustrative examples of these errors are presented. Paradigmatic coherence appears to play a significant role in the attrition of first language systems. (CB)

PARADIGMATIC ERRORS IN FIRST LANGUAGE ATTRITION

by Robert M. Vago

Paper presented at the Annual Meeting of the LSA/AAAL/ADS (New York, NY, December 27-30 1986).

PARADIGMATIC ERRORS IN FIRST LANGUAGE ATTRITION

Robert M. Vago

Queens College and The Graduate Center, CUNY

1. Introduction

This paper reports on some preliminary findings of an ongoing research project into the dissolution or attrition of native language structure under the influence of bilingualism.[1] Such is typically the case with immigrant speakers who have been using their second language as the primary means of communication for an extended period of time.[2] The present study will present an analysis of certain paradigmatic changes in the first language of a Hungarian-Hebrew bilingual speaker. In relation to Standard Hungarian, the structural deviations may be termed errors. I will use Vago (1980) as a point of reference for the structure of Standard Hungarian.

The data were collected in 1983-84 from a 36 year old Israeli woman who was born in Hungary and immigrated to Israel at age 6. Her primary language was Hebrew; she used Hungarian on a daily basis, principally with her parents. The method used in the study was paradigm elicitation. The subject was asked by the present investigator to produce re ular and irregular nominal paradigms in the rich inflectional system of Hungarian. Although this form of data elicitation has its limitations, it nevertheless is one of the means by which reliable information can be harnessed concerning underlying language structure, especially when cross-checked with other methods of data collection.

An examination of the data reveals interesting structural deviations in the first language of the subject. Under separate sections I will give some illustrative examples along with analyses within the standard generative phonology framework.[3] From the point of view of the standard language, the subject's deviant forms may be termed errors. I will make the claim that these errors are changes in the rule component of the language, specifically, instances of rule simplification, rule loss, and rule reordering.

2. Rule Simplification

In (1) below I give the possessive paradigms of the stems /bot/ 'stick' and /hazá/ 'home', representing consonant final and vowel final stems, respectively; the suggested underlying representations are given within slashes.[4]

(1)		'stick'	'home'
1sg	/m/	bot-o-m	hazá-m
2sg	/d/	bot-o-d	hazá-d
3sg	/a/	bot-j-a	hazá-j-a
1pl	/unk/	bot-unk	hazá-nk
2pl	/átok/	bot-otok	hazá-tok
3pl	/u+k/	bot-j-u-k	hazá-j-u-k

Throughout the paper, I will adhere to the orthographic convention of Hungarian of indicating vocalic length with diacritic marks.

It is readily seen that in the first and second person singular forms an epenthetic /o/ appears before the consonant initial suffixes. In the second person plural the initial vowel of the suffix undergoes an independently motivated change. What is of interest to us here is the fact that in the third person singular and plural an epenthetic glide shows up between the stem and the vowel initial suffix. It can be noted that only in these forms is the vowel of the suffix a separate morpheme, so that rule (2) can be postulated, inserting a glide before a morpheme final vowel:

(2) Ø --> j / C + ___ V +

In vowel final stems the initial vowel of the first and second person plural suffixes elides, and again, in the third person singular and plural the glide is inserted.

The subject's possessive paradigms are presented in (3):

(3)	1sg	/m/	bot-o-m	hazá-m
	2sg	/d/	bot-o-d	hazá-d
	3sg	/a/	bot-j-a	hazá-j-a
	1pl	/unk/	bot-j-unk	hazá-j-unk
	2pl	/átok/	bot-j-otok	hazá-j-átok
	3pl	/u+k/	bot-j-u-k	hazá-j-u-k

It is readily observed that the subject inserts a glide before any vowel initial suffix. In particular, epenthesis obtains even before the second person plural and third person

plural suffixes. One obvious way that this could be explained is that she applies a more general version of rule (2), that given below:

(4) Ø --> j / + ___ V

Of course, rule (4) is going to apply before the insertion of the vowel /o/ in the first and second person singular forms, following consonant final stems.

3. Rule Loss

In this section I will describe three cases of rule loss, resulting in the possible restructuring of underlying representations. The first set of facts are presented in (5):

(5) a. /tehr/ 'load'

b. Nominative: teher

Dative: teher-nek

c. 3sg. poss.: terh-e

(5a) gives the underlying representation of a stem that represents a class ending in /h/ plus liquid. In the nominative case, the first form in (5b), a vowel is inserted to break up the final consonant cluster; this rule also applies before a consonant initial suffix, as in the dative inflection, the second form given in (5b). However, in prevocalic positions, as in the third person singular possessive form given in (5c), a metathesis process applies that switches the /h/ and the liquid:

(6) h r --> r h / ___ + V

The subject shows no trace of the metathesis process:

(7) a. /teher/

b. Nominative: teher

Dative: teher-nek

c. 3sg. poss.: teher-e

As seen, the subject's stem shape is invariant. Moreover, she breaks up the final cluster of the stem even before vowel initial suffixes. It is thus reasonbale to assume that she lost the metathesis rule and restructured her underlying form, as indicated in (7a).

The second case concerns the patterning of a class of nouns whose final short vowel plus /v/ alternate with a long vowel:

(8) a. /lov/ 'horse'

b. Nominative: ló

Dative: ló-nak

c. 3sg. poss.: lov-a

In (8a) I give the underlying representation of one pertinent stem. Word finally and before a consonant initial suffix, as shown in (8b), /v/ is dropped and the preceding vowel is lengthened; this process does not take place before vowel initial suffixes, as in (8c). These facts suggest a rule something like (9) that deletes /v/ and compensates for its loss by lengthening

the preceding vowel in word final position and before a consonant initial suffix:

(9) ov --> ó / ___ {#,C}

The subject has innovative forms in which the long vowel shows up even before vowel initial suffixes:

(10) a. /lóv/

b. Nominative: ló

Dative: ló-nak

c. 3sg. poss.: lóv-a

In interpreting the subject's deviant forms, we may say that she has reanalyzed her underlying forms to contain a long vowel, since a long vowel shows up throughout the paradigms, and further, that she has purged the lengthening component of rule (9). If deletion and lengthening are a unitary process, then the present case is, sensu strictu, that of rule simplification; if the two are to be described independently, then we have a genuine case of rule loss.

The final instantiation of rule loss comes from the behavior of the instrumental suffix. In the standard language the underlying representation of this suffix begins with /v/, since this consonant shows up postvocalically. However, the initial consonant of the suffix fully assimilates to a preceding consonant. Cf. (11):

(11) a. /-val/ 'instrumental'

b. hazá-val 'home, instr.'

c. ház-zal 'house, instr.'

fal-lal 'wall, instr.'

The informal rule given in (12) is therefore welll-justified:

(12) v --> C_i / C_i + ___

Now the subject has lost the /v/ assimilation rule, as evidenced by the fact that the initial consonant of the instrumental suffix stays /v/ after consonant final stems: cf. for example ház-val, fal-val in place of the standard forms in (11c).

4. Rule Reordering

My final example involves the relative ordering of two rules:

(13) [V, +low] --> [+long] / ___ +

(14) h --> Ø / ___ {#,C}

Rule (13) states essentially that a low vowel is lengthened in morpheme, but not word, final position. Thus, as mentioned in footnote 4, the final vowel of the stem for 'home' in (1) is short underlyingly: contrast nominative haza with the inflected forms in (1). Rule (14) accounts for the fact that /h/ cannot occur

word finally and before a consonant initial suffix, that is syllable finally. Thus, the final /h/ of the stem for 'bee' is lost in the nominative and dative cases, but is retained before a vowel initial suffix:

(15) a. /méh/ 'bee'

b. Nominative: mé

Dative: mé-nek

c. 3sg. poss.: méh-e

In Standard Hungarian rules (13) and (14) apply in the order given. Thus for example in the derivation given in (16), the vowel lengthening rule (13) cannot apply to the underlying representation, since the low vowel is not in morpheme final position. Rather, /h/ is deleted by rule (14), yielding a morpheme final short low vowel on the surface:

(16) /cseh+nek/ 'Czech, dative'

(13) N/A

(14) cse +nek

The relevant alternations of this stem are as follows:

(17) a. /cseh/ 'Czech'

b. Nominative: cse

Dative: cse-nek

c. 3sg. poss.: cseh-e

If we now examine the subject's forms, we note that she has both rules (13) and (14): first, she produces alternations like haza 'home, nominative,' hazá-m 'home, 1sg. poss.,' etc. (cf. (1) above), and second, she has the alternations given in (15). But, significantly, she has deviant forms in those cases where the two rules potentially interact:

(18) a. /cseh/ 'Czech'

b. Nominative: cse

Dative: csé-nek

c. 3sg. poss.: cseh-e

The above facts may be explained in terms of reversing the sequencing of the two rules (13) and (14). Rule (14) first deletes syllable final /h/, whose postulation underlyingly is justified by the fact that it alternates with Ø in (18); as a consequence, a context is created in which the low vowel lengthening rule is applicable. E.g:

(19) /cseh+nek/

(14) cse +nek

(13) csé +nek

Incidentally, /e/ is a low vowel in Hungarian: cf. for instance kefe 'brush,' dative kefé-nek.

5. Conclusion

The mechanisms that one particular speaker employed in arriving at innovative paradigmatic forms in the attrition of first language structure are those that are used, as is well known, in language change, namely rule simplification, rule loss, and rule reordering. The motivation for the changes seems to be on the one hand to level out paradigmatic alternations, and on the other to eliminate opacity. Thus for instance, in (3) the glide is epenthesized uniformly before vowels, in (7) the stem has a constant shape, in (10) vowel length alternation is obviated, and the shape of the initial consonant of the instrumental suffix remains constant. In the case of reordering we see a move toward transparency. In the standard language the rules apply in counter-feeding order, the result of which is that the low vowel lengthening rule is opaque, since a short low vowel appears in positions where it should have been lengthened. On the other hand, in the attrited system the rules apply in feeding order, bringing about a transparent low vowel lengthening rule. In sum, paradigmatic coherence appears to play a significant role in the attrition of first language systems.

Footnotes

[1]Research reported on in this paper was supported in part by a City University of New York PSC-BHE Research Award and a 1983-84 Fulbright awar at Tel Aviv University. A preliminary version was read at the 1987 Winter Meeting of the Linguistic Society of America in New York City.

[2]For some specific case studies and general theoretical discussion, see Seliger and Vago (Forthcoming).

[3]The analytical claims raised here will have to be adjusted within current theories of nonlinear phonology. The generative phonology model is used purely for reasons of ease of familiarity.

[4]Actually, the underlying representation of the stem for 'home' is /haza/; the final low vowel lengthens in non-final positions by rule (13) given below.

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