

Part I **Survey studies**



1 The study of first language attrition: an overview

HERBERT W. SELIGER AND ROBERT M. VAGO

1 Introduction

The primary concern of the present text is the disintegration or attrition of the structure of a first language (L1) in contact situations with a second language (L2). Bilingualism, under which we include the more general case of multilingualism, is a natural setting for the unraveling of native language abilities; pathological states such as aphasia and senile dementia are further contexts for attrition effects. Attrition phenomena develop in bilingual individuals as well as bilingual societies, in both indigenous and immigrant communities. At its extreme, attrition leads to what has come to be known as ''language death'' (cf. Dorian 1981; Schmidt 1985).

The articles brought together in this volume approach first language attrition from diverse angles. The survey studies in Part I draw general conclusions from empirical evidence presented in the literature, while the articles in Parts II and III discuss specific properties of L1 attrition based on the analysis of data they present. The group studies of Part II investigate attrition in societal bilingualism or in groups of bilingual individuals, while the case studies of Part III concentrate on single bilingual subjects, both children and adults. These works employ a wide range of data gathering methodologies: direct response requests such as untimed grammaticality judgement and fill-in tasks, translations, story telling prompted by pictures, paradigm elicitation, as well as free conversations (indirect). Attrition in bilingual aphasic individuals is discussed by de Bot & Weltens; Obler & Mahecha; and Dressler; in moribund languages by Schmidt and by Dressler.

In the following sections of this chapter we wish to highlight some fundamental issues raised by the study of first language attrition, with a view toward setting a background to the general topics addressed in this volume. We caution that space limitations force us to be selective; the reader is advised to consult the individual contributions and their references for details.



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2 Psycholinguistic and sociolinguistic aspects of first language attrition

The languages spoken by the bilingual may be said, metaphorically, to coexist in a state of competition for a finite amount of memory and processing space in the mind of the speaker. Except for the case of the so-called balanced bilingual, the languages of the bilingual develop patterns of dominance or strength, usually in relation to the domains in which the languages are used (Fishman 1972). That is, not all the languages known to the bilingual can be said to have equal strength in all contexts of language use. In particular, the domain relationships of the languages can change such that the host or first language is weakened by the increasing frequency of use and function of the second language.

The diminished role of L1 in use and function, exacerbated by separation from the L1 speaking community in the case of immigrants, is one of the significant sociolinguistic variables in the advent and sustenance of first language attrition. Several authors address this issue in the present volume: Sharwood Smith & van Buren; de Bot & Weltens; de Bot, Gommans & Rossing; Silva-Corvalán; Schmidt; Huffines; Maher; Olshtain & Barzilay; Dressler; and Seliger.

Another important sociolinguistic factor is the subordination or recessivism of L1 to L2 in the affective domains of language, such as prestige, social status, attitude, and degrees of acculturation; cf. the articles in this volume by Olshtain & Barzilay; Schmidt; and Dressler. Dressler also argues that in severe cases of language decay, social, sociolinguistic, and linguistic norms are relaxed and style differentiations tend to be reduced and neutralized into casual, informal types (cf. also Maher's article in this volume concerning the latter point).

The beginnings of first language attrition can be traced to advanced stages of bilingualism or second language acquisition. Figure 1.1 shows the changing relationships between the grammars of the bilingual's languages and the role Universal Grammar (UG) plays at three stages in bilingual development. These stages should be construed as major reference points along a more complex continuum; the sociolinguistic justification for assuming a continuum of bilingual stages is discussed in this volume by Silva-Corvalán, Schmidt, and Dressler.

At the first stage, **compound I**, the speaker is just beginning the process of acquiring an additional linguistic system (L2). A number of studies in second language acquisition have drawn attention to the fact that at this incipient stage of bilingualism, the learner utilizes the knowledge of the acquired or established language (L1) as a source for hypotheses about



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the target language (L2); cf. for example Gass (1979). Another source of linguistic knowledge which the learner may draw upon is UG, assuming that these universals are valid for the target language (Flynn 1987; Chomsky 1981; Cook 1984; Hyltenstam 1987). In order to simplify the present discussion we will ignore any other contributing sources for hypothesis formation.

At this first stage in bilingual development, both grammars are served by a common base of knowledge from L1, as evidenced by language learner performance in L2, demonstrating that transfer is a primary processing and acquisition strategy. However, also at this first stage there are a number of forms in the interlanguage of the second language acquirer whose sources are not in L1. Many of the same kinds of errors are found in a particular interlanguage even though they may be produced by speakers of different first languages. This has led a number of researchers to hypothesize that these errors are the result of innate principles for the acquisition of language which are independent of a specific first language.

At the second stage of linguistic evolution for the bilingual, there is a gradual separation of the two grammars of L1 and L2. This is the result of the second language learner's testing transfer hypotheses against L2 data and developing an independent set of L2 rules which are distinct from those of L1. Corder (1978) has referred to two different processes which take place in second language acquisition: "restructuring" and "recreation." Restructuring refers to the adaptation of L1 hypotheses to L2 data, that is, transfer. Recreation refers to the construction of unique rules for the target language without reference to the first language of the learner. This stage may be referred to as the **coordinate** stage of bilingual development because the grammars of the two languages begin to develop independently, even though, as can be seen in Figure 1.1, there is still a role for L1 transfer and universal principles.

The final stage of bilingual development may be referred to as **compound II**; it resembles the first stage, where the two language grammars were intermingled. At this more advanced stage, the bilingual has

Compound I bilingualism	Coordinate bilingualism	Compound II bilingualism
$L1 \rightarrow L2$	$L1 \rightarrow L2$	$L2 \rightarrow L1$
$UG \rightarrow L2$	$L2 \rightarrow L2$	$L2 \rightarrow L2$
	$UG \rightarrow L2$	$L1 \rightarrow L2$
		UG → L2?
		UG → L1

1.1 Compound and coordinate bilingualism and attrition

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become quite fluent in L2, which begins to encroach on the linguistic domains of L1. In other words, the direction of transfer found in the first stage of bilingual development is reversed. In Corder's terms, there is a restructuring of the first language according to grammatical principles found in the second. It is not clear whether universal principles still influence L2 as they did in the previous stages. Rather, it appears that they impact on L1, as suggested in this volume by Silva-Corvalán; Dressler; and Vago. It is at this compound II stage that language attrition is most evident.

The intrusion of L2 elements into L1 is not necessarily indicative of attrition: it could simply be a case of code mixing or code switching. Under normal conditions of bilingual language mixing, relative autonomy is maintained for both language grammars and the bilingual speaker is able to switch to one or the other of the two languages being mixed, depending on such stimuli as topic or interlocutor. That is, while code mixing is a common phenomenon of bilingualism, it occurs within predictable and describable conditions of language variation and can be controlled by the speaker. Within the languages being mixed, autonomy is maintained so that each language is served by its own independent grammar. The degree of autonomy can be examined in various ways. One is to administer metalinguistic tests that require the bilingual to judge the grammaticality of L1 sentences which reflect the intermixing of grammatical rules from L2. The suitability of metalinguistic tasks for testing purposes is discussed in this volume by Altenberg; de Bot, Gommans & Rossing; and Seliger.

Mixing thus may remain an additional communication technique or strategy for the bilingual when in the company of other bilinguals with similar linguistic repertoires, or it may become a precursor stage for gradual language attrition or loss as the bilingual increasingly loses control of the conditions that constrain mixing.

3 Linguistic aspects of first language attrition

A profound understanding of L1 (and L2) attrition must take account of the dynamic changes that take place in linguistic form. Many, though not all, of the linguistic changes attendant to attrition are simplificatory in nature. In what follows, we would like to outline in broad terms the most salient characteristic features. We should like to emphasize that our lists are only a sampling and that any classification system is to be construed not as an end unto itself, but rather as a requisite component to



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attain a higher goal, namely the description and explanation of the attrition process.

The studies referred to and contained in this volume make clear that there are two principal forces bearing on the linguistic forms of attriting L1 grammars. The first one is variously called transfer, interference, convergence, interlingual effects, or crosslinguistic influences: an element (form, construction, etc.) in L1 is patterned on analogy to L2. We might refer to such changes as **externally induced**.

We will illustrate externally induced changes in the L1 grammar with Hungarian (H) and German (G) examples. The cited tokens are culled from our research notes based on data collected in natural speech settings from a native speaker of German and a number of native speakers of Hungarian.² All of our informants used English, their L2, as their primary language and exhibited attrition in their native languages. We omit discussing sociolinguistic background, for it has no effect on our suggested classificatory schemes.

We must, however, pause first in order to consider a question of great significance: is our corpus indicative of a deeper, systematic erosion, or merely of on-line accessing problems? We will beg this question as far as our specific data are concerned, since for purposes of classification it does not seem to matter which is the case; in particular, the categories we propose appear to be characteristic of both types of deviant forms. In general, though, effects of performance (accessing, processing, control) need to be sorted out from those of competence (tacit knowledge): it is erosion that reaches the level of competence that allows for interesting claims about and meaningful insight into the attrition process. Proper testing procedures are essential in this regard. For discussion, cf. the contributions in this volume by Sharwood Smith & van Buren, and Altenberg.

With respect to the syntax module of grammar, the most common strategy appears to be **rule generalization**: an L2 rule is extended to L1. In the representative samples given below, the L2 (English) rules for agreement, tag question, word order, and preposition preposing are applied, incorrectly, in L1; in these and subsequent examples the correct L1 patterns are indicated in parentheses. Each case is followed by a brief annotation.

(1) (H) Sok állatok (állat) vannak (van) a világon.
''There are many animals in the world.''

The subject and the predicate are pluralized, as in English. However, in Hungarian the quantifier *sok* "many" governs singular number: the correct forms are *állat* "animal" and *van* "is."



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- (2) (H) Ezt nem tudod, tudod?
 'You don't know this, do you?''

The verb *tudod* "you know" is repeated as a tag. Tag questions of this sort are not permitted in Hungarian.

(3) (G) ... daβ du sollst eine Matraze kaufen. (... dass du eine Matraze kaufen sollst.) ''... that you should buy a mattress.''

According to German syntax, the auxiliary *sollst* "should" must be in final position in subordinate clauses.

(4) (G) Alle andere Leute hast du keine Zeit für. (Für alle andere Leute hast du keine Zeit.) ''You have no time for all other people.''

Preposition stranding (für "for") is not allowed in German syntax.

In this volume several syntactic constructions are shown to be subject to attrition: word order (Schmidt; Maher; Huffines; de Bot, Gommans & Rossing), prepositional phrase (Seliger), agreement (Schmidt), subordinate clause (Maher; Schmidt).

The semantic characteristics of L2 impact on L1 in at least two significant ways. One is through **meaning extension**: the meaning of a word in L1 is generalized to include the meaning of another word in L1, on analogy to the range of meaning of the equivalent word in L2. In each of the word pairs listed in (5), meaning oppositions were neutralized in L1: the first word was used in the sense of the second. In each case, the meaning differentiations of L1 are missing in L2 (English).

- (5) a. (H) tud "know how to do something"

 ismer "know somebody" → tud
 - b. (H) *öreg* ''old (animate)'' → *öreg*
 - c. (H) $sz\~{\it 6r}$ ''body hair'' $\rightarrow sz\~{\it 6r}$ $\rightarrow sz\~{\it 6r}$
 - d. (G) *seit* ''since (temporal)''

 weil ''since (causal)'' → *seit*
 - e. (G) Sache ''thing (abstract)''

 Ding ''thing (concrete)'' → Sache

Loan translation (calquing) is another common transfer strategy affecting meaning: an L2 phrase or expression, especially if idiomatic, is trans-



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lated literally into L1, where it is ungrammatical. In the representative examples provided in (6), the calqued L1 expressions are translations of the English glosses.

- a. (H) olajos (zsíros "fatty") haj (6) "oily hair"
 - b. (H) rossz vagy (nincs igazad "you don't have truth") "you are wrong"
 - c. (H) vesz egy tantárgyat (tanul "learns") "takes a subject (in school)"
 - d. (G) Vergiß es (laß es bleiben "let it stay")! "Forget it!"
 - e. (G) den Flug zu machen (erreichen "reach") "to make the flight"
 - f. (G) Man muß am ersten Platz (vom Anfang "from the beginning'') verrückt sein, um Linguistik zu studieren. "One has to be crazy in the first place to study linguistics."

As regards morphology/morphophonemics, two examples will suffice:

(G) ... wenn du das zu mir machst (7) (... wenn du das mir machst) "... when you do it for me"

> The German pronoun mir "to me" is already inflected for dative case. The speaker reinforced the indirect object with the preposition zu "to," on analogy from English.

(G) auf Absicht (absichtlich "intentionally") (8)"on purpose"

> The adverbial suffix -lich was replaced with the preposition auf "on," patterned after the English gloss.

Schmidt mentions a relevant example in this volume: in Dyirbal ergative case marking gave way to the nominative/accusative pattern of L2 (English).

Phonological/phonetic investigations of L1 attrition are scarce, beyond impressionistic observations. Our subjects evidenced externally induced attrition in intonational patterns and in low level rules, such as the allophonic realization of phonemes (e.g. retroflexing /r/, aspirating voiceless stops) and the diphthongization of vowels. In this volume, Dressler and Schmidt discuss transfer effects in relation to allophonic distribution and word stress.



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External influences are also evident in the domain of the lexicon. As any student of bilingualism, language contact, and second language acquisition knows, the lexical items, phrases, and grammatical categories of L1 and L2 can be intermingled within the span of an utterance (see the discussion in Section 2 above). This phenomenon, described under such headings as code mixing, code switching, lexical borrowing, and lexical hybridization (depending on the level of interaction), has been well studied and need not be dwelled upon here. Some cases are described in this volume by Dressler and by Turian & Altenberg.

In addition to structural changes that are explainable in terms of external influences, L1 attrition is characterized also by changes that are **internally induced**: the modification of linguistic forms is either motivated by universal principles or is related to some fact in the particular grammar of L1. The fact that in L1 attrition ''unmarked'' forms are better preserved than and substitute for ''marked'' ones, but not vice versa (Dressler and Seliger, this volume), is an example of the former, and the fact that paradigmatically related allomorphic representations may influence each other's development (Vago, this volume) is an example of the latter. Internally induced attrition phenomena encompass what elsewhere is called generalization, simplification, regularization, naturalness, intralinguistic effects, conceptual/cognitive/innate strategies, and the like. For a general discussion in this volume, cf. the contributions of Sharwood Smith & van Buren; Silva-Corvalán; Dressler; Seliger; and Vago.

We will exemplify internally induced attrition in L1 structures in the realm of morphology/morphophonemics only, since that is where the process manifests itself most profoundly. We will propose four broad subcategories.

We begin with cases of **analogical leveling**, whereby a marked feature or irregular pattern is eliminated and replaced by the unmarked, general, or regular pattern. Three sets of examples, with explanatory notes, follow.

(9) (H) híden (hídon) ''on (the) bridge'' innél (innál) ''you would drink''

Perhaps the most well-known rule of Hungarian phonology/morphophonemics is vowel harmony (cf. Vago 1976, 1980). In a grossly oversimplified statement, but one which is adequate for present purposes, vowel harmony specifies that front vowel roots take front vowel suffixes and back vowel roots take back vowel suffixes. However, there exist some fifty roots with the front vowels *i*, *i*, or *é* which take back vowel suffixes. These roots



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thus constitute surface exceptions to the general patterns of vowel harmony. This irregularity was removed in the above examples: in both cases the suffix vowel agrees with the root vowel in backness. (Superessive $-on \rightarrow -en$; conditional $-n\acute{a} \rightarrow -n\acute{e}$ -.)

- (10) (H) *törőd* (*törődik*) ''cares''

 The regular 3sg present suffix is -ø; however, in a lexically marked subclass of verbs this suffix shows up as -ik. The verb for ''care'' belongs to the ''-ik'' conjugation class: cf. correct *törődik* above. Our subject simplified the underlying representation of this verb: the attrited form *törőd* is explained as the removal of the lexical marking for the irregular conjugation class.
- (11) (G) er wiβt (weiβ) ''he knows''
 er schleichte (schlich) ''he slunk''
 er nimmte (nahm) ''he took''

In each case a lexically marked "strong" verb is regularized on analogy to the unmarked class of "weak" verbs. ("Ablaut" is replaced by 3sg present -t or past -t.)

In this volume, examples of analogical leveling include the removal of lexical markings for noun classification (Schmidt) and irregular verb conjugation (Schmidt; Turian & Altenberg).

Under **paradigmatic leveling** regular alternations of morphemes are reduced, leading to more uniform paradigms. Allomorphy reduction is discussed in this volume by Schmidt for case affixes, by Dressler for pluralization and consonant mutation; for a more detailed discussion, cf. Maher's and Vago's contributions.

Category leveling neutralizes categorical distinctions by extending the domain of one category to another. In incipient stages this process is not systematic, so that substitution is subject to variation; severe cases of decay result in the elimination of the neutralized category from the grammar. Examples discussed in this volume include reductions in verbal derivational morphology (Kaufman & Aronoff), diminished productivity in word formation (Dressler), and decay in both verbal and nominal inflectional systems, especially as regards tense/aspect and case (cf. Maher's article in Part I and most of the articles in Parts II and III).

Our final classification might be called **category switch**: a category is maintained conceptually, but is expressed in a different linguistic form. Thus, Maher (this volume) makes mention of the general tendency to replace synthetic forms with analytic ones; also, prepositions may substitute for affixes (cf. Schmidt, this volume).