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Preface

As a multilingual speaker, a second language educator and a researcher, I have always been fascinated by the notion of fossilization (Selinker, 1972), that is, cessation of learning in spite of rich exposure to input, adequate motivation to learn, and abundant opportunity for communicative practice. Yet it was not until after I became a student of Larry Selinker at the University of London that I began research in this area. The longitudinal study (Han, 1998) I performed then not only convinced me of the reality of fossilization, but kindled in me an even greater interest in seeking an understanding of its etiology. Why is it that learners suffer fossilization differentially? Why do L2 learners wind up with differential success in learning the L2 under seemingly identical learning conditions? What does the existing constellation of explanations tell us about lack of learning, and about the general understanding of adult second language acquisition (SLA)? Can instruction salvage learners from fossilization? These are some of the issues that have appealed to my attention and that I have tried to address in this book.

With no pretense of offering an exhaustive account of fossilization, the book synthesizes the major research on the topic, provides a conceptual framework for interpreting various manifestations of lack of learning, and explores the relationship between instruction and fossilization, an issue of extensive interest to second language researchers and educators.

In the preparation for this book, I have benefited, in no small measure, from discussions on various issues with the following individuals (in alphabetical order): David Birdsong, William Davies, Robert DeKeyser, Lynn Eubank, Susan Foster-Cohen, Gillies Houghton, Jan Hulstijn, Scott Jarvis, Eric Kellerman, Donna Lardiere, Diane Larsen-Freeman, Mike Long, Brian MacWhinney, Terry Odlin, Bonnie Schwartz, Tom Scovel, Larry Selinker, Mike Sharwood Smith, Rex Sprouse, and Paul Wiita, though I should point out that none of them is responsible for any of the ideas presented in this book.

Many other individuals have also provided valuable support in various forms, and I am grateful to them all. In particular, I am indebted to Joowon Suh, Paula Korsko, Jung-Eun Year, and Amy BaoHan for their

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Last but not least, I wish to thank my students at Teachers College for sharing their second language learning experiences and for never failing to feed me with stimulating questions about the various conundrums of SLA, including fossilization.

It is my hope that this book, albeit limited in breadth and depth and possibly biased in many ways, will stir an interest among SLA researchers, second language teachers, and graduate students in the issue of fossilization and will serve as a springboard onto more substantive research than has been hitherto attempted.

ZhaoHong Han
New York

Chapter 1

Introduction

People marvel at the ease and rapidity with which children acquire their first language. It is generally observed that by the age of five every normal child obtains a full knowledge of the grammar of the language of the community in which they live. This amazing feat is often contrasted with the hopeless failure encountered by adults acquiring a second language (L2):

> The outcome of first language acquisition is success: normal children acquire the grammar of the ambient language. Adult second language acquisition, on the other hand, results in varying degrees of success. Failure to acquire the target language is typical. (Birdsong, 1992: 706)

> It is true that many adults learn to communicate effectively using an L2, and some few appear to have extensive if not perfect knowledge of the grammar of the L2. Nevertheless, the overwhelming majority are not able to achieve anything like the same level of mastery as that achieved by every normal child. (Schachter, 1996a: 160)

> It is much more difficult to learn a second language in adulthood than a first language in childhood. Most adults never master a foreign language, especially the phonology – hence the ubiquitous foreign accent. Their development often 'fossilizes' into permanent error patterns that no teaching or correction can undo. (Schwartz, 1997)

> It has been widely observed that children from immigrant families eventually speak the language of their new community with native-like fluency, but their parents rarely achieve such high levels of mastery of the spoken language . . . Many adult second language learners become capable of communicating very successfully in the language but, for most, differences of accent, word choice, or grammatical features distinguish them from native speakers and from second language speakers who began learning the language while they were very young. (Lightbown & Spada, 1999: 60)

The difference in outcome between the child first language (L1) and adult L2 cases, as Schachter (1996a) puts it, is strong and unambiguous.

As early as 1972, Selinker conjectured that the absolute success in a second language affects a mere 5% of learners.[1] Similarly, Eubank and Gregg (1999: 77) claim that 'with few exceptions adult learners fail, often miserably, to become indistinguishable from members of the ambient L2 speech community'.

If the 5% success rate in L2 acquisition[2] is compared to the success rate in L1 development, the figures appear to be reversed, since in the latter case it is the failure rate that seems to stand at a mere 5%, and this is accounted for exclusively by those with specific language impairments (Eubank, 1997, SLART-L on-line communication; see also Bley-Vroman, 1989; Selinker, 1972; Selinker & Lamendella, 1978).

The overwhelming success surrounding first language acquisition (FLA) begs an important question: *How is acquisition possible*? This question was originally formulated as a logical problem in language acquisition (Hornstein & Lightfoot, 1981) to address the fact that learners' linguistic knowledge or competence transcends the input to which they have been exposed. Child first language acquirers have been noted to be capable of developing a robust and highly generative grammar despite exposure to input that is degenerate, under-determinate and finite. The general explanation given for the logical problem has been that child first language acquisition is driven by an innate language-specific mechanism known as Universal Grammar (UG). As Chomsky (1965: 58) states:

> A consideration of the character of the grammar that is acquired, the degenerate quality and narrowly limited extent of the available data, the striking uniformity of the resulting grammars, and their independence of intelligence, motivation and emotional state, over wide ranges of variation, leave little hope that much of the structure of language can be learned by an organism initially uninformed as to its general character.

Some researchers (e.g., Gregg, 1996; L. White, 1989) maintain that the same logical problem also obtains in second language acquisition (SLA). That is, in SLA there exists a similar gap between input on the one hand and the acquired competence on the other (L. White, 1996). Gregg (1996) argues that insofar as second language grammar (i.e., interlanguage) – however imperfect – is underdetermined by input data, the logical problem obtains.

Other researchers (e.g., Bley-Vroman, 1989; Schachter, 1988, 1996a), however, challenge the straightforward application of the logical problem to SLA, pointing out that SLA is characterized more by failure than by success:

> Few adults are completely successful; many fail miserably, and many achieve very high level of proficiency, given enough time, input, effort and given the right attitude, motivation and learning environment. (Bley-Vroman, 1989: 49)

By presenting a different view on the ultimate attainment of SLA, these researchers suggest an alternative version of the logical problem, namely, *why is complete acquisition impossible*? The explanation sought subsequently is that unlike first language acquirers whose acquisition is guided by UG, adult second language acquirers rely on their general problem-solving capacity for L2 development.

In postulating his Fundamental Difference Hypothesis, Bley-Vroman (1989) underscores nine major characteristics of second language acquisition: (1) lack of success; (2) general failure; (3) variation in success, course and strategy; (4) variation in goals; (5) fossilization; (6) indeterminate intuitions; (7) the importance of instruction; (8) the need for negative evidence; and (9) the role of affective factors. These features set SLA distinctively apart from FLA. In a similar vein, Schachter (1996a: 160–161; see also Schachter, 1988) points out four major dimensions along which SLA differs from FLA: (1) ultimate attainment (i.e., 'the ultimate attainment of most, if not all, of adult L2 learners is a state of incompleteness with regard to the grammar of the L2'); (2) fossilized variation (i.e., 'long after cessation of change in the development of their L2 grammar, adults will variably produce errors and non-errors in the same linguistic environments'); (3) lack of equipotentiality (i.e., 'the adult's knowledge of a prior language either facilitates or inhibits acquisition of the L2, depending on the underlying similarities or dissimilarities of the languages in question'); and (4) the role of prior knowledge (i.e., 'the adult learner's prior knowledge of one language has a strong effect, detectable in the adult's production of the L2').

The debate on the logical problem of SLA continues. Nonetheless, it becomes increasingly clear that unlike in FLA, a monolingual context, where success dominates, in SLA, a multilingual interactive context, success and failure co-exist, with both warranting explication. The logical problem in SLA, therefore, has dual facets, and given so, it is imperative that any theories of SLA that purport to be explanatorily adequate account for both. In other words, an adequate theory of SLA should be capable both of explaining how and why learning occurs and *how and why it fails to occur* (cf. Gass, 1988; Towell & Hawkins, 1994). Such theories, as yet, remain sparse. This theoretical gap is, in my view, attributable to the fact that we still lack a coherent understanding of failure.

Hence, for the ultimate purpose of facilitating the development of

adequate theories, this book offers a preliminary attempt at constructing a systematic account of failure in adult SLA. Failure is here defined as permanent lack of mastery of a target language (TL) despite continuous exposure to the TL input, adequate motivation to improve, and sufficient opportunity for practice.[3] In SLA research, such kind of failure has largely been dealt with under the construct of 'fossilization' (Selinker, 1972).

Over the past 30 years, the SLA literature appears to have documented a considerable bulk of evidence of fossilization across and within adult L2 learners, as well as a rich spectrum of explanations thereof from a myriad of perspectives. Due, however, to the lack of uniformity in the interpretation and application of the construct of 'fossilization', the empirical phenomena that have been designated as fossilization seem widely disparate, and the explanatory accounts rather fragmented, thereby creating more confusion than clarity in the literature. For example, by one researcher, fossilization is associated with slow learning, but by another, it is connected to habitual errors. Then, in one case, fossilization is an empirical phenomenon, but in another, it serves as explanation for other learning phenomena. And so on. Such idiosyncratic application of the construct, among other things, obstructs a systematic understanding of failure, which, as can be speculated, could only be of little help to SLA theory construction.

My goal in this book is therefore three-fold: (1) to take stock of the major theoretical and empirical findings that have accumulated in this area, (2) to introduce a framework for interpreting them, and (3) to offer a principled perspective on adult L2 learners' lack of ability to fully acquire the target language. What I attempt to show also is that research on fossilization offers heuristics that can yield insights into resources for, processes of, and most importantly, constraints on, adult L2 learning. The understanding thereby derived can be central not only to SLA theory but also to second language instruction. In terms of the latter, for instance, a sound understanding of the constraints would enable second language educators to set more realistic goals for adult L2 learning. Moreover, an understanding of what renders linguistic features fossilizable might help educators to better sequence and present the instructional materials. Furthermore, knowledge of factors underlying fossilization may guide educators in search of compensatory strategies to maximize learning opportunities and, in MacWhinney's (2001: 90) words, to 'promote the functioning of neuronal loops for rehearsal, memory and learning' in the classroom, thus reducing the scope of fossilization and simultaneously expanding that of learning.

Prior to proceeding further, I have two caveats. First, in examining failure in L2 learning, I am not oblivious of Cook's (1992, 1995) notion of *multicompentence*, namely that the competence attained by a multilingual speaker is categorically different from that attained by a monolingual

speaker.[4] It is not my intent in this book to suggest that L2 learning should be measured against the competence of a monolingual native speaker (NS), but rather to reveal a reality of adult SLA which, in the general perception, warrants explanation. In fact, as will be seen, the views expressed in this book, to a considerable extent, corroborate with Cook's view that it is unrealistic to expect adult L2 learners to be native-like in all language domains (for recent discussions of the notion of 'native speaker', see Cook, 1999; Davies, 2003; Han, in press).

My second caveat is that while devoting the entire book to a discussion of failure in adult SLA, I am mindful of Larsen-Freeman's (1997: 159) caution that 'an IL must be conceived as the evolving grammar of the learner adapting to an evolving target grammar'. However, I also recognize that despite the natural language dynamism, an interlanguage (IL) can simultaneously exhibit systematicity and fragmentation; permeability and resistance; and variability and premature stability (cf. Selinker & Han, 2001), and thus that studies of its non-dynamic nature make a paramount contribution to an authentic picture of L2 acquisition.

As a point of departure for our discussion, let us briefly review an important concept in SLA: ultimate attainment, in relation to fossilization.

Fossilization and Ultimate Attainment

As has been revealed in the quotes cited towards the beginning of this chapter, L2 ultimate attainment – which, after Birdsong (1999: 10), is understood as 'synonymous with the end state or asymptote of L2A, however close to or far from nativelike that state may be' – has served as a major lens through which researchers observe failure in adult SLA.[5] One contentious issue has been whether L2 ultimate attainment is isomorphic with fossilization.

A cross-learner view of the L2 ultimate attainment indicates that complete success is rare (if not impossible) in post-adolescent L2 acquisition; there are few nativelike attainers (see, e.g., Bongaerts, 1999; Ioup *et al*., 1994; Nikolov, 2000). It is in this sense that L2 ultimate attainment has been seen as characterized by *general failure*. However, in tandem with the latter, as researchers have noted, is *differential success*. Below we will look at each in turn.

General failure

Despite the lack of large-scale and comprehensive studies able to demonstrate the phenomenon scientifically, an impressionistic look at learners in different acquisition contexts produces *prima facie* evidence that the 'majority of adult learners wind up far from the target,' and that 'their