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**SECOND LANGUAGE ACQUISITION 7**

Series Editor: David Singleton, *Trinity College, Dublin, Ireland*

# **Age, Accent and Experience in Second Language Acquisition**

**An Integrated Approach  
to Critical Period Inquiry**

Alene Moyer

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**Dedicated to my loving family, my sons Martin and Joseph  
and my husband Aviel, whose encouragement and support  
have made all the difference**

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# Contents

Acknowledgments . . . . .	vii
<b>1 Contextualizing Critical Period Inquiry. . . . .</b>	<b>1</b>
The Problems of Scope and Classification . . . . .	1
Contextualizing SLA: Germany as an Empirical Framework . . . . .	4
The Current Empirical Study . . . . .	7
The Structure of the Book . . . . .	8
Conclusion . . . . .	11
<b>2 Accounting for Universal and Individual Factors in Ultimate Attainment: Focus on Phonology . . . . .</b>	<b>14</b>
Introduction: Differences in Child and Adult Language Learning . . . . .	14
Ultimate Attainment in L2 Phonology . . . . .	22
Modular and Universal Perspectives on Phonological Abilities . . . . .	24
Cognitive Considerations in L2 Phonological Development . . . . .	29
Social and Psychological Issues in L2 Phonology . . . . .	38
Conclusion . . . . .	42
<b>3 Verifying the Relative Strength of Maturation, L2 Experience and Psychological Orientation: The Quantitative Findings . . . . .</b>	<b>50</b>
Introduction: Purpose and Approach to the Current Study . . . . .	50
Descriptive and Statistical Analysis of Non-Linguistic Data . . . . .	55
Results of the Linguistic Performance Data . . . . .	68
Discussion of Statistical Analysis Results. . . . .	82
Conclusion: Theoretical Implications . . . . .	86
<b>4 Understanding Identity, Intention, and Opportunities for L2 Contact: The Qualitative Findings . . . . .</b>	<b>98</b>
Instruments and Procedure . . . . .	99
Thematic Presentation of Results. . . . .	100
An Exceptional Learner . . . . .	118
Conclusion . . . . .	124

<b>5</b>	<b>Conclusions and Proposals for Future Research . . . . .</b>	<b>138</b>
	Putting Age Effects in Context . . . . .	138
	Individual and Universal Predictions for Phonological Attainment in SLA . . . . .	140
	Re-thinking the Ultimate Attainment Construct for Future Research. . . . .	143
	<b>Appendix 1: Umfrage/Survey . . . . .</b>	<b>149</b>
	<b>Appendix 2: Linguistic Tasks . . . . .</b>	<b>152</b>
	<b>Appendix 3: Rater Survey . . . . .</b>	<b>154</b>
	<b>Appendix 4: Rating Feedback Sheet . . . . .</b>	<b>155</b>
	<b>Appendix 5: Semi-Structured Participant Interview . . . . .</b>	<b>156</b>
	<b>References . . . . .</b>	<b>157</b>
	<b>Index . . . . .</b>	<b>175</b>

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## Chapter 1

# Contextualizing Critical Period Inquiry

*Coming into contact with a foreign language means hardship which usually brings euphoria quickly to an end, making it a short episode for the individual – and also for groups and nations.*  
Konrad Ehlich, 1994

*[A second] language emerges through necessity ... because I want it, urgently want it, and because I urgently attend to it.*  
Peter Bichsel, 1995 [translation mine]

### The Problems of Scope and Classification

The field of second language acquisition (SLA) has long sought relevant factors to explain differential attainment for early and late learners. Since the appearance of Lenneberg's *Biological Foundations of Language* (1967), the idea of a critical period for language learning has guided a great deal of the research on second language acquisition.<sup>1</sup> Though Lenneberg made little specific mention of SLA, his critical period hypothesis has evolved into a full-blown theory for the field, often assumed to be a 'unitary account of non-native like outcomes' (Birdsong, 1999: 9). Still, the question remains why late language learners typically perform in notably 'non-native' ways. In the search for answers, we too rarely recognize the highly individual and complex nature of the endeavor. This is an especially salient issue given that SLA is most often an uninstructed, i.e. non-classroom, process among immigrants to foreign lands who face harsh social and economic conditions, possibly remaining culturally isolated for years.

Given this context of great challenge, many fall far short of a native speaker ideal, while others succeed beyond all expectations. By all accounts, we cannot yet explain either extreme of the success scale: entrenched fossilization and exceptional learning. The empirical evidence points to no specific faculty or mechanism in either the neurological or cognitive realm to explain exceptional performance in L2 (Oblor, 1989; Schneidermann, 1991 as cited in Birdsong & Molis, 2001). Why, then, do more learners *not* attain to this level? In a recent review of cognitive research on bilingualism, Gonzalez and Schallert (1999) confirm that language processing is a multi-level task, incorporating knowledge from

structural, semantic, discursive and cultural levels of language. This suggests that barriers to new knowledge reside not only in linguistic transfer, but in negative transfer of cultural knowledge as well. If so, transcending barriers to native-like acquisition requires adaptation on a number of complex levels beyond the neuro-cognitive realm. Narrowly focused explanations for SLA outcomes do little to advance an appreciation for such complexity.

By and large, critical period research has emphasized differences in phonological and morpho-syntactic performance between native and non-native speakers with little reference to the individual learner (Flege *et al.*, 1995; Johnson & Newport, 1989; Olson & Samuels, 1982; Oyama, 1976; Patkowski, 1980; Snow & Hoefnagel-Hoehle, 1982). Production tasks and grammaticality judgments are typically isolated, and language attainment is described in structural terms, i.e. emphasizing explicit errors or grammaticality judgments. Age of onset is then offered as the explanation for non-native attainment, with few notable exceptions (Birdsong, 1992; Bongaerts *et al.*, 1997; Ioup *et al.*, 1994; White & Genesee, 1996). What is striking about this research is what it lacks: an account of individual factors *in context*.

With a legacy of early work on bilingualism in Canada, socio-cultural perspectives in SLA, by contrast, emphasize the importance of contextual factors in understanding second language (L2) development (Clément *et al.*, 1993, Clément *et al.*, 1994; ; Clément & Noels, 1992; Clément & Kruidenier, 1983; Gardner, 1983, 1985b; Gardner & Lambert, 1972; Gardner, *et al.*, 1997; Hamers, 1994; Lambert, 1977; Norton Pierce, 2000; Taylor, 1977). These factors include: identity, assimilation, psychological distance, and even instruction for second language attainment (Clément & Kruidenier, 1983; Gardner, 1983, 1985b; Giles & Johnson, 1981; Labrie & Clément, 1986; Lambert, 1977; Schumann, 1978). A fundamental contribution of this collective work is the understanding of SLA, not as an abstract phenomenon, but as a process that essentially connects the individual to a community, where language is closely tied to one's sense of self – an important consideration for long-term integration both in linguistic and in cultural spheres (Lantolf, 2000; Lantolf & Pavlenko, 1995; Norton Pierce, 2000; see Pavlenko, 2002 for review).

Early work on German as a second language (*Zweitspracherwerb Italienischer und Spanischer Arbeiter, Heidelberger Forschungsprojekt*) also highlights the importance of personal contact with native speakers (Dittmar & Rieck 1977, as cited in Loeffler, 1985; Meisel *et al.*, 1981). While much of this research sets out in search of universal, internally-driven, mechanisms in uninstructed SLA, the range of background factors tested

points to the primacy of interaction as key to developing morpho-syntactic fluency. Similar results come from grammatical-functional research, where pragmatic and semantic processing mode preferences are seen to result from interactive experience (Broeder, 1991; Dietrich, 1995; Dittmar, 1992; Pfaff, 1987, 1992 – see Moyer, in press, for summary). If interactive experience is critical to long-term attainment, then opportunities for such engagement in the target language community must be accounted for.

Equally problematic is the fact that adult language performance is frequently described as substandard, in spite of an early emphasis on creative construction in interlanguage (Ellis, 1985; Selinker, 1972 and 1992). In essence, the focus on documented patterns such as simplification and free variation has perpetuated stereotypes of foreigner talk through an emphasis on reduced interlanguage features. Fennell summarizes the unfortunate result for German as a second language:

... All such [classificatory] behavior, whether exhibited by linguists, pedagogues, officials, or everyday people, serves to ethnicize both the minorities, and concomitantly, the Germans themselves ... Here we return to Bourdieu's contention that the act of naming and classifying is a very strong exercise in power ... Comparing *Gastarbeiter* German with standard German has stacked the cards against foreign workers, begging the labels 'inadequate,' and ultimately 'inferior.' (Fennell, 1997: 92f)

Indeed, it is all too rare to focus on what learners are doing well. Marinova-Todd *et al.* suggest that 'rather than focusing on the low probability that adults will acquire fluency in L2s ... it is more productive to examine the factors that typically lead to native-like proficiency ...' (Marinova-Todd *et al.*, 2000: 10). To this end, the influence of age should be examined in terms of how it may relate to availability of authentic input, instruction, interaction, etc., as well as to the learner's intention to attain to a certain level. These aspects of late language learning can be ascertained only through careful measure of L2 experience.

Second language experience effectively constitutes a 'black box' for SLA; many of the relevant mechanisms may be unobservable. Yet, in spite of these empirical challenges, the nature of late language acquisition suggests the need to move beyond simplistic analyses and interpretations. To understand how new knowledge is acquired, *we must discover how learners actively participate in the learning process itself*. This requires an appreciation of the socio-psychological aspects of learning approach, including an examination of motives, beliefs, and sense of linguistic and cultural identity (Liebkind, 1999; Norton Pierce, 1995). Even the target language commu-

nity's expectations for non-native speaker assimilation may play a significant role in how the learner engages with available resources and negotiates learning and feedback opportunities against the backdrop of perceived expectations for 'success' (see Genesee *et al.*, 1983; Pavlenko, 2002). These issues deserve deeper investigation in applied linguistics research in general.

The problems of scope and classification may thus be due in part to fundamental incomparability between research on what could be termed 'privileged' learning, typical of classroom foreign language instruction, and that of naturalistic language acquisition. Social, instructional, and psychological conditions cannot be compared for such disparate experiences. The social and political status of immigrants affords them few opportunities to receive supportive feedback on their developing interlanguage (see Norton Pierce, 1998). Moreover, their experience with the target language may accumulate in a somewhat haphazard, or reactive, manner. This is quite another matter for the classroom learner, who is essentially guaranteed a comfort zone for linguistic revision and gradual L2 identity development. These internal and external differences are not addressed by structural descriptions of interlanguage development, much less by isolated statistical analyses. It is therefore necessary to empirically integrate critical period perspectives with data on individual access to input and instruction (see Moyer, 1999).

In this book, I will integrate and critically review current literature on age effects, and add new data to the discussion as I test the biological basis of the critical period hypothesis *relative to the impact of socio-psychological and experiential variables*. This integrated methodology relies on descriptive and statistical analyses of relationships between multiple biological, psychological, and experiential factors. The interpretation of these relationships is then strengthened through ethnographic data on the *individual's perspective* on the process. Accordingly, the significance of these factors becomes clearer as we understand how the learner responds and adapts to the target language and its community *over time*. Given the context for most SLA today, a more holistic understanding of personal and communal opportunities to build L2 experience is appropriate. To this end, the data in this study focus on immigrants to Berlin.

## **Contextualizing SLA: Germany as an Empirical Framework**

For immigrants who must learn a second language, the complex conflation of maturation, socio-psychological orientation, and cultural identity is very real. Present-day Germany provides an excellent empirical basis for

exploring issues of identity and milieu in the SLA process. Currently, Germany claims about 9% (7.3 million) of its population as 'foreign' (not including *Aussiedler*, or ethnic Germans seeking asylum from neighboring Eastern European countries). Fluency in German is critical to the potential of these people for long-term assimilation and acceptance. Skutnabb-Kangas points out that, while the mother tongue may be necessary for psychological, cognitive, and spiritual survival, the official language of the state is needed for 'social, economic, political, and civil rights ...' and may determine further education, job prospects, and participation in wider society (Skutnabb-Kangas, 1999: 58). Acknowledging the juxtaposition of forces toward social integration as well as isolation, the adult immigrant's difficulties with acquiring German go beyond possible cognitive and neurological constraints. By exploring the experience of the learner, we may better understand how language acquisition proceeds, or fossilizes, according to predictable influences.

With this context in mind, the current study (see next section) presents linguistic and non-linguistic data gathered from immigrants to Germany from the US, Britain, France, Russia, Poland, Slovakia, and Turkey. The analysis of language attainment is thus contextualized here through a broad accounting of experiential and socio-psychological influences on language attainment. Furthermore, these immigrants provide an interesting contrast to the uninstructed data presented in earlier studies depicting L2 learners/acquirers, with little or no access to formal, or instructional, experience in the target language. Because of their combination of both formal and informal exposure, these immigrants have had what might be considered an optimal acquisitional experience. They are also well-educated, and as such, social separation is perhaps less dramatic for them than for many *Gastarbeiter* and *Asylbewerber*.<sup>2</sup> They also tend to see themselves as actively engaged with the language and its culture for both personal and professional reasons. Given these potential advantages, these learners may 'defy' the critical period, in the sense that age effects may be weaker when external opportunities (i.e. access to L2) are greater, and internal orientations are relatively positive.

The numerous studies on immigrant language acquisition have revealed surprisingly little regarding such personal and communal issues. The history of *Gastarbeiterlinguistik* goes back to the mid-1970s with the ZISA (*Zweitspracherwerb Italienischer und Spanischer Arbeiter*) and HFP (*Heidelberger Forschungsprojekt*) projects (for discussion, see Fennell, 1997; Larsen-Freeman & Long, 1991).

Objectives of the many published studies from these, and subsequent, databases include seeking evidence for: (1) universal developmental path-

ways to syntactic and morphological acquisition; (2) the temporary (or permanent) nature of reduced varieties, i.e. so-called Pidgindeutsch or Foreign Worker German; and (3) potential access to Universal Grammar in the acquisitional process. Overwhelmingly, the emphasis has been on structural descriptions of morphosyntactic simplification. A number of studies have led to hypotheses concerning universal routes of development, and the role of instructional intervention (see Jordens, 1996 for discussion). Recent research has focused on areas of transfer from L1 features (Felix, 1980; Kaltenbacher, 1994; Meisel, 1983; Pfaff, 1984), processing strategies, stages in syntactic development and verbal movement patterns (Beck, 1998; Eubank, 1992; Vainikka & Young-Scholten, 1996), and potential access to Universal Grammar for specific features (Clahsen & Muysken, 1986; Felix 1991). More recently, analyses of developmental strategies have focused on possible 'dual mechanisms' for language learning, combining memory and analysis in the acquisition of regular and irregular morphological markers (Clahsen, 1997; Elsen, 1997).

To be sure, this ongoing descriptive and theoretical work has provided rich data and thought-provoking hypotheses concerning the nature of early versus late language learning. However, it acknowledges social and cultural concerns of immigrant learners in minimal ways. Moreover, the resulting theoretical interpretations have been criticized, given the small number of participants in many studies, the relative paucity of methods reporting, and the vastly different access among participants to interactive learning opportunities (see Hudson, 1993; Jansen, 2000; Mellow, 1996; Rogers, 1995).

Alternative studies from sociolinguistic and functionalist perspectives have expanded our understanding of immigrant language acquisition and the social circumstances of guest workers, especially in terms of the purpose and function of their interactions in German (Broeder, 1991; Frischherz, 1997; Jordens *et al.*, 1989; Perdue, 1990; Pfaff, 1985, 1987, 1992; Röhr-Sendlmeier, 1990). Summarizing results from a number of studies, robust patterns emerge across a range of methods. Factors correlating to higher levels of linguistic attainment include: motivation to integrate into German culture; consistent interaction in German beyond survival situations, sustained peer relationships with native Germans, institutionalized integration assistance; and participation in German education programs (Barkowski *et al.*, 1976; Buss, 1995; Esser, 1982; Götze & Pommerin, 1988; Horn, 1996; Lalleman, 1987; Pfaff, 1985; Worbs, 1995). For early German language acquisition (GLA), parental expectations and support for education are correlated to success in language attainment and overall educational achievement (Götze & Pommerin, 1988; Röhr-Sendlmeier, 1990).

These findings confirm that consistency and support in the learner's interactive community are key to ultimate attainment. Such close examinations of opportunities for L2 contact over time are rare in the empirical research.

In this charged socio-political context, explanations for attainment in German arguably go beyond cognitive or neurological explanations (see Moyer, in press). Linguistic development, and its role in social acceptance, must be seen as a highly individualized phenomenon. It is not easily reduced to predictable patterns and outcomes, but depends on myriad social and psychological factors, played out in both public and private spheres.

## The Current Empirical Study

Because of its focus, this work fills an important gap in the critical period research, which has been recently criticized for weak and/or narrow methods and explanations, particularly with regard to non-biological factors (see Bialystok & Hakuta, 1999; Birdsong, 1999; Scovel, 2000). If ultimate attainment is influenced by one's ongoing *opportunities* and *intentions* to build L2 knowledge and abilities, then maturation may have an impact on these levels of engagement in several (unexplored) ways. This assumption is the guiding principle for an exploration of how language acquisition may proceed, plateau, or stagnate on the path to native-like competence.

Empirical evidence in SLA has confirmed a pervasive neuro-cognitive influence, evident in the apparent loss of flexibility for the native-like acquisition of new patterns, especially in the phonological realm. Cognitive and psycholinguistic research have confirmed transfer effects from L1 to L2, similar patterns of development for certain features regardless of L1, and the likelihood of fossilization short of native-like production. At the same time, SLA is characterized by great individual variation. Each learner brings to bear his or her own talents, needs, style, and limits. At this point, the significance of attitude, motivation, and other affective and social-psychological factors is unquestioned in the research. This juxtaposition of individual and universal aspects of acquisition often confounds empirical investigation. Perhaps no other level of language ability demonstrates this juxtaposition more clearly (and consistently) than phonology. Because of its combination of higher- and lower-order functions, i.e. its reliance on both motor and higher analytical skills, it has unique potential to reveal both neurological constraints and individual ability. The oft-cited disparity between production and perception skill underscores how difficult it is to fully account for all operative mechanisms in SLA – a process that is marked by individual approach as well as possibly universal constraints