Book Review

Exploring L1-L2 relationships: The impact of individual differences

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The subject of individual differences (IDs) has enjoyed continued popularity for more than half a century. Factors affecting language learning such as foreign language aptitude, motivation or language anxiety have been analyzed by most distinguished researchers in countless contexts and various constellations (Albert & Csizér, 2022; Resnik et al., 2022; Wen et al., 2023a). Nonetheless, few researchers have attempted to investigate IDs from the perspective of the first and the second language (L1-L2) relationships, with longitudinal studies in this regard being even less frequent. Richard Sparks' latest publication *Exploring L1-L2 Relationships: The Impact of Individual Differences*, which summarizes 30 years of his research in the field of SLA, perfectly bridges this gap. The author is the proponent of the linguistic coding deficit hypothesis (LCDH) (Sparks et al., 1989), later modified as the linguistic coding differences hypothesis (Sparks, 1995), which is one of the most cited theories in the context of research into foreign language aptitude (Sparks, 2012; Sparks, 2023).

Comprised of seven sections, each organized under one overarching theme, the volume allows you to navigate through the content and find selected

information. Each of the first five parts, preceded by an introduction, contains three research articles written in the past by the author and his first collaborators (Ganschow, Patton, Humbach, Javorsky and Luebbers), arranged in chronological order. Part VI is a new essay reviewing the extensive literature on the correlation between IDs in L1 and L2 ability and discussing the role of IDs in L1 and L2 skills, whereas Part VII is an epilogue.

The chapters are proceeded by a foreword written by two outstanding scholars in the field of foreign language aptitude, that is, Edward (Zhisheng) Wen and Peter Skehan, Richard Sparks' colleagues and collaborators, whose opinion on the book is the best recommendation: "Richard has presented to us a clear, up-to-date and comprehensive account of the relationships between L1 and L2, buttressed with extensive empirical evidence from systematic research programs, with the most rigorous designs, conducted by himself and colleagues, in particular the late Leonore Ganschow. In this sense, the contributions that this book makes to applied linguistics and language education are unique and extensive!" (Wen & Skehan, 2022, p. xiv). Being not only a reader of the book, but also a researcher honored to cooperate with the author (Wen et al., 2023b), I wholeheartedly subscribe to this opinion.

In *Introduction and Overview* the author introduces the reader to the beginnings of the LCDH theory, which was based on an intuitive assumption that native-language skills in the fields of phonology, orthography, grammar and semantics operate as the basis for L2 learning. Consequently, any problems with these language aspects will have a negative impact on both L1 and L2 learning. Then he goes on to outline the gradual development of this theory and discusses the parallel research in the relationship between L1 and L2 abilities and achievement, language learning difficulties and the role of affective factors in L2 learning.

Part I presents papers covering the history and evolution of the LCDH and explains the bases for the theory. An introduction to this section outlines its foundational premises and focuses on how IDs in L1 ability are related to IDs in L2 aptitude and L2 achievement. The first two chapters contain previously published articles explaining the LCDH theory and Chapter 3 explores how different individual factors are related to more and less successful L2 learning. Part II presents the results of three studies based on the theory described in Part I that provided empirical support for connections between L1 and L2 skills and for cross-linguistic transfer from L1 to L2. Chapters 4, 5 and 6 all present the results of longitudinal studies and deal with the notion of long-term cross-linguistic transfer of L1 skills to L2 skills. Part III aggregates findings related to L1-L2 associations and L2 aptitude. Specifically, the focus is on IDs in L1 development and ability and their relationship to L2 aptitude and L2 achievement. Sparks elucidates that there are substantial differences in early L1 ability (5-6 years of age), which affect later

L2 aptitude and L2 achievement. It is worth emphasizing that longitudinal studies of ability and performance are rare in SLA, especially those spanning the period of a few years. A 10-year longitudinal study described in Chapter 8 that determined the best predictors of L2 achievement from among L1 skills, foreign language aptitude measured by the *Modern Language Aptitude Test* (Carroll & Sapon, 1959), and two affective factors, that is, anxiety and motivation, is a notable exception (Sparks et al., 2009). The results of the study, which was published in *Language Learning*, revealed that the score on the *MLAT* was the strongest predictor of L2 achievement, which can counterbalance L1 ability, what is more, it was found that L1 achievement and L2 aptitude tests measure similar language components. Part IV presents probably the most controversial of Sparks' theories, namely, the one relating to L2 anxiety as a causal factor in L2 learning outcomes. The hypothesis that students' L2 learning anxiety is related to their language ability, that is, those with stronger L1 skills and higher L2 aptitude will exhibit lower anxiety and vice versa, challenged the long-standing belief in the role of language anxiety as a cause of failure in L2 learning. Accordingly, Sparks and his team postulated that anxiety is a cognitive rather than an affective factor (cf. Wen et al., 2023b). Chapters 10, 11 and 12 include results from longitudinal studies presenting empirical evidence for the relationship in question, of which the one published in 1991 in the *Modern Language Journal* (Chapter 10) has become the most cited study by Sparks-Ganschow team. Part V focuses on research on L2 reading and literacy. The author presents three research studies aimed at investigating the L1-L2 relationship within the framework of simple view of reading (SVR) model (Gough & Tunmer, 1986) and contends that there are strong relationships between L1 reading skills and L2 reading achievement.

In Part VI, which is a new essay, Richard Sparks provides an overview of research into IDs in L1 and L2 learning and convincingly argues that there are substantial interindividual and intraindividual differences in L1 skills and ability affecting L2 aptitude, and later L2 achievement. Finally, in Part VII *Epilogue and Future Directions*, Sparks proposes a theoretical model of L2 aptitude and makes recommendations for investigating the skills involved in L2 acquisition. His model termed *a strong inference model* is founded on the idea that language aptitude is the product of domain-specific, that is, language-related, and domain-general variables, which are not specific only to language learning and include such ID as working memory, motivation and executive functions. Domain-general factors are capable of providing limited compensation for poor domain-specific factors, and both groups of ID depend on processing speed.

The greatest advantage of the book is collecting and systematizing the author's most valuable research in a comprehensive and at the same time accessible way. This is especially important for readers less familiar with the intricacies of the LCDH theory, who may find themselves lost in the vast variety of research by the Sparks' team. Thanks to systemizing this knowledge, this volume can be a guide to

the studies conducted over the last 30 years. Moreover, it is not restricted to summarizing and commenting on previous research, but proposes new insights such as the theoretical model of L2 aptitude, criticizes long-standing trends and views, and offers recommendations for further research. The author should be appreciated not only for the scientific rigor and reliability in presenting the data, but also for the courage to challenge prevalent "dogmas" in the SLA. An example of a revolutionary, albeit underestimated, theory is the one concerning language anxiety as a cognitive factor resulting from inadequate language skills. Another challenging statement is that of the great variation in L1 ability, which affects both L1 and L2 achievement.

In my view, the book has very few limitations. Among them, I would mention the saturation of the text with information. This is to say that the publication contains a lot of details, and some issues are repeated a few times being described from different angles. This is not a problem for a reader conversant with the subject, but may prove to be a challenge for students or novice researchers looking for basic information. Another shortcoming are relatively lengthy introductions to all parts of the book, including personal reminiscences of the author and very detailed descriptions of the studies. It appears that a short, clear summary of the research accompanied by the author's conclusions would contribute to higher intelligibility of the contents.

I will not exaggerate by saying that Richard Sparks is one of the founders of foreign language aptitude theory whose contributions can be put on a par with the works of such renowned researchers as John Carrol, Peter Skehan and Peter Robinson. His groundbreaking LCDH theory has become a milestone in IDs research and continues to inspire many researchers. According to a survey investigating 60 years of research into foreign language aptitude (Chalmers et al., 2021), the number of Sparks' publications in peer-reviewed journals ranks number one among all scholars conducting studies in this area. The reviewed book is particularly valuable for a novice researcher, who may have problems with keeping abreast of such a large amount of research, because it contains a compilation of studies published from 1986 to 2021 selected by the author according to the criteria of the frequency of citations and relevance to the contemporary research, accompanied by newly written commentaries as well as directions for further research. It showcases Sparks' insightful thoughts on theoretical and empirical aspects in different research areas including applied linguistics, psychology and education making it useful for students and researchers in SLA, as well as educational practitioners.

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References

Albert, Á., & Csizér, K. (2022). Investigating individual differences with qualitative research methods: Results of a meta-analysis of leading applied linguistics journals. *Studies in Second Language Learning and Teaching, 12*(2), 303-335. https://doi.org/10.14746/ssllt.2022.12.2.6

Carroll, J. B., & Sapon, S. M. (1959). *Modern Language Aptitude Test (MLAT).* The Psychological Corporation.

Chalmers, J., Eisenchlas, S. A., Munro, A., & Schalley, A. C. (2021). Sixty years of second language aptitude research: A systematic quantitative literature review. *Language & Linguistics Compass*, e12440. https://doi.org/10.1111/1nc3.12440

Gough, P. B., & Tunmer, W. E. (1986). Decoding, reading, and reading disability. *Remedial and Special Education, 7*(1), 6-10. https://doi.org/10.1177/074193258600700104

Resnik, P., Dewaele, J.-M., & Knechtelsdorfer, E. (2022). Differences in foreign language anxiety in regular and online EFL classes during the pandemic: A mixed-methods study. *TESOL Quarterly*. https://doi.org/10.1002/tesq.3177

Sparks, R. (1995). Examining the Linguistic Coding Differences Hypothesis to explain individual differences in foreign language learning. *Annals of Dyslexia, 45*(1), 187-214. https://doi.org/10.1007/BF02648218.

Sparks, R. (2012). Individual differences in L2 learning and long-term L1-L2 relationships. *Language Learning*, 62(s2), 5-27. https://doi.org/10.1111/j.1467-9922.2012.00704.x

Sparks, R. (2023, forthcoming). The Linguistic Coding Differences Hypothesis (LCDH) and L2 learning: A thirty-year retrospective. In Wen, Z. E., Skehan, P., & Sparks, R. (Eds.). *Language aptitude theory and practice.* Cambridge University Press.

Sparks, R., Ganschow, L., & Pohlman, J. (1989). Linguistic coding deficits in foreign language learners. *Annals of Dyslexia, 39*, 79-97. https://doi.org/10.1007/BF02656908

Sparks, R., & Ganschow, L. (1991). Foreign language learning difficulties: Affective or native language aptitude differences? *Modern Language Journal, 75,* 3-16. https://doi.org/10.1111/j.1540-4781.1991.tb01076.x

Sparks, R., Patton, J., Ganschow, L., & Humbach, N. (2009). Long-term relationships among early L1 skills, L2 aptitude, L2 affect, and later L2 proficiency. *Applied Psycholinguistics, 30*, 725-755. https://doi.org/10.1017/S0142716409990099

Wen, E. Z., & Skehan, P. (2022). Foreword. In Sparks, R., *Exploring L1-L2 relationships. The impact of individual differences* (pp. xiii-xvi). Multilingual Matters.

Wen, E. Z., Skehan, P., & Sparks, R. (Eds.). (2023a, forthcoming). *Language aptitude theory and practice.* Cambridge University Press.

Wen, E. Z., Sparks, R., Biedroń A., & Teng, M. F. (Eds.). (2023b, forthcoming). *Cognitive individual differences in second language acquisition: Theories, assessment and pedagogy.* De Gruyter.