Brehmer, B., & Treffers-Daller, J. (2020) Lost in Transmission: The role of attrition and input in heritage language development. Amsterdam/Philadelphia: John Benjamins Publishing Company. 276 pages. ISBN: 978-90-272-0539-1 (HB)

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Bernhard Brehmer and Jeanine Treffers-Daller stimulating volume Lost in Transmission: The role of attrition and input in heritage language development includes ten articles addressing the heritage language development (HLD) of second-generation (2G) speakers. These bilinguals are a heterogeneous group. As Grosjean (2015) suggests, their minority language is restricted to the home, while their dominant language spreads across public domains. The collection includes contributions from experts in the field of bilingualism. Insights come from the acquisition and attrition of heritage speakers (HSs) language development, two distinct, but interrelated fields. The volume frames the studies within the context of immigration. HLD in Europe and North America are examined. Languages include Spanish, Turkish, Russian, Norwegian, Chinese, German, and Albanian in contact with three varieties of English (American, British, and Canadian). The variety of heritage languages (HL) studied is unique as it attempts to describe and understand the variable endpoints of heritage bilingualism (HB), including the factors that motivate variability. The articles show how language maintenance and change may impact HL acquisition across generations. Finally, since monolingual, bilingual, and foreign language learners are used as control groups in many studies, the book is pertinent for first language acquisition researchers and practitioners interested in foreign language learning and teaching.

The introduction highlights that "only very recently" (Brehman & Treffers-Daller, 2020) have scholars undertaken empirical investigations into HLD. The editors discuss the notion of language attrition, citing Köpke & Schmid (2004, p. 5) and define it as "the non-pathological decrease in a language that had previously been acquired by an individual". By decrease, they mean temporary or

permanent loss of aspects of one's first language resulting from a change in linguistic environment and thus linguistic behavior. Reduced input conditions lead both to reduced HL output and bilingual co-activation which impact HLs across linguistic domains. The authors highlight that the term attrition is controversial since the effects of an L2 on an L1 lie along a continuum. They follow Schmid and Köpke who suggest that bilingual speakers are essentially L1 attritors.

Various definitions of HSs exist, and the editors follow well-known scholars. Indeed, "a heritage speaker is an early bilingual who grew up hearing (and speaking) the heritage language (L1) and the majority language (L2) either simultaneously or sequentially in early childhood" (Benmamoun, Montrul & Polinsky, 2013, p. 133). The focus of HL research is described, including that heritage bilinguals generally do not receive academic support, and that their HLs differ from monolinguals. Crucially, HL input is often provided by heritage bilingual parents. Variability in HL output may be the result of attrited input that has been impacted cross-linguistically, having gone through a diachronic change. Thus, the authors present the "input quality approach" (IQA) (Rothman, 2007; Pires & Rothman, 2009; Pascual y Cabo & Rothman, 2012). It calls for the examination of data from first-generation (1G) immigrants to establish input type when analyzing HSs variable output.

In chapter 1 Aalberse, Andringa, Faber and Lippe tackle the issue of overt marking of definiteness on nouns that refer to previously mentioned referents. Their study is titled "Definiteness in Wenzhounese Chinese in the Netherlands and in China: Evidence for generational change in two locations". The results suggest that demonstrative constructions have increased in use, particularly among second-generation speakers, both in China and in the Netherlands. The overuse of definiteness markers is attributed to a generational effect, so the linguistic phenomena cannot be the strict result of contact with Dutch. The overuse of demonstrative constructions may reflect internally motivated language change and is thus accelerated in the heritage setting. Indeed, 2G HSs in China or the Netherlands receive reduced input, and it affects how definiteness marking is encoded in both locations.

Chapter 2, by Tugba Karayayla, is titled "Effects of first language attrition on heritage language input and ultimate attainment: Two generations of Turkish immigrants in the UK". This cross-generational study considers evidentiality marking in Turkish. The results suggest that the 1G input is not different from the monolingual input. Nevertheless, HSs use of indirect evidential structures does differ from that of monolinguals. Furthermore, heritage bilinguals extend

the use of direct evidentials. This suggests that qualitatively different input cannot be attributed to the output of the heritage speakers. Karayayla concludes by proposing that sufficient L1 input and experience in early childhood is essential for the acquisition and maintenance of evidentials in heritage Turkish.

The first two chapters consider data from both the country of origin of the HL and its development in the host country. David Giancaspro in chapter 3 takes a different approach. His study "Not in the mood: Frequency effect in heritage speakers' subjunctive knowledge". Giancaspro argues that lexical gaps rather than morphosyntactic knowledge cause the replacement of lexically selected mood morphology with indicative forms. His results show that even though heritage bilinguals use the subjunctive mood rather accurately, they are nevertheless significantly less accurate than the control group. The claim is that if HSs fail to use the subjunctive mood, then this is due to the lower frequency of triggering verbs in their input.

The second section explores structure frequency and considers the factors that contribute to the acquisition of HLs as related to the input. In chapter 4, "Word order variation in heritage languages: Subject shift and object shift in Norwegian", Anderssen and Westergaard study the way subjects and objects are positioned with negation markers. Their results show that despite differences in frequency in monolingual Norwegian, both subject and object shifts are affected by restructuring in heritage Norwegian, so frequency does not play a critical part. On the other hand, structural similarity between heritage Norwegian and English does produce changes in the heritage language.

Chapter 5, by Jessica Diebowski and titled "Language contact: Gender agreement in Spanish L2 learners and heritage speakers", considers heritage language use, a crucial factor in HL acquisition. The results show that in terms of both oral and written gender accuracy, heritage Spanish speakers perform at ceiling regardless of how frequently they use heritage Spanish. Finally, the author observes that perhaps the fact that all participants were enrolled in Spanish-language classes, though not HL classes, may have played a role in the overall high accuracy of gender assignment and agreement.

"Vocabulary development in the heritage languages Russian and Turkish between ages 6 and 10: How do parental input and socio-economic status account for differences within and between cohorts?" is the title of Chapter 6. In this study, Montanari, Abel, Tschudinovski & Graßer consider how lexical proficiency in children is impacted by the quantity of input and output of the HL, parental socio-economic status and education level, and language dominance when investigating both expressive and receptive vocabulary development. The results showed

a good level of the test items, although expressive command was limited. When comparing different age groups, both showed a moderate development in lexical proficiency. Thus, the authors argue that social factors may generate the variable outcomes of vocabulary acquisition among the two groups of heritage-speaking children.

In chapter 7, "Heritage and non-heritage bilinguals: The role of biliteracy and bilingual education", Andreou, Dosi, Papadopoulo and Tsimpli discuss the role of literacy as a critical source of input for heritage language acquisition. Focusing on grammar and vocabulary development, the authors study heritage Albanian in contact with Greek, both in Greece and in Albania. The most significant finding was that the children's performance in the SRT could not be determined based on their working memory. When comparing the three groups' grammaticality results in Albanian, the study showed no difference. Andreou, Dosi, Papadopoulo and Tsimpliuse use these findings to argue for Cummins's (2001) Interdependence Hypothesis, which states that bilingual children who benefit from bilingual academic support reap both linguistic and cognitive advantages.

In Chapter 8, Elif Krause tackles Sorace and Serratrice (2009) and Sorace's (2011) Interface Hypothesis in her study "High sensitivity to conceptual cues in Turkish heritage speakers with dominant German L2". The author studied optional verb marking in heritage Turkish speakers in Germany and showed that they depend on semantic and pragmatic properties of subject references. Her results indicated that for heritage Turkish speakers, as well as for monolingual controls matched for age and education, awareness of animacy and givenness constraints is different when choosing overt plural verb marking. The results also showed that the pragmatic factor displayed the same trends. Heritage bilinguals applied more precise analysis between the givenness levels as compared to their monolingual controls.

The second section explored structure frequency. The third and final section in this volume considers how L1 attrition can impact HL acquisition by future generations. In Chapter 9, Esther de Leeuw's study "The Frequency Code and gendered attrition and acquisition in the German-English heritage language community in Vancouver, Canada" and focus on attrition of prosody. The author considers pitch level and span. The results showed on average a higher pitch level as well as a wider pitch span across languages for the German L1 speakers. Significantly, lowered pitch levels are expected in the German of these bilinguals because of English influence, especially since pitch level in male monolingual German is higher than in English. The author attributed these findings to theories suggesting that high pitch is equated to friendliness while the opposite is true for low pitch. Thus, social

stigmatization has engendered pitch level raising in an attempt to move away from negative stereotypes.

Chapter 10, by Shi Zhang, is the last study in the volume. The pilot investigation is titled "Does extensive L2 exposure trigger L1 attrition of perfective and durative aspect marking in Mandarin Chinese?". To answer this question the perfective marker *le* and the dative marker *zhe*, lexical and grammatical aspect interaction in Mandarin is investigated. The results showed that the bilingual speakers were not going through L1 attrition regarding perfective and durative aspect marking. When considering the results with Sorace's (2011) Interface Hypothesis, the author suggests that aspect marking for these bilingual speakers may not be too challenging since only syntactic and lexical interactions are involved in Mandarin Chinese as opposed to the interaction between syntax and other cognitive domains.

"Lost in Transmission" is an inspiring volume on heritage bilingualism. It is methodologically rigorous in the study of a variety of language pairs. The goal of presenting "the role of attrition and input in heritage development" is achieved, especially in 2G HSs, as well as late sequential bilinguals. However, the title of the book might lead to believe that the subject covered is how attrited input from one heritage generation is being transmitted to the next. Nevertheless, the contributions do address how HLs may be affected, thus expanding our understanding of attrition and input in HLD. The chapters that focus on biliteracy, as well as language use in the classroom, have practical implications.

The volume caters to advanced level researchers and practitioners familiar with heritage bilingualism, but concepts are explained clearly. This is a merit of this volume. For example, the introduction nicely describes the "input quality approach", Chapters 10 and 8 present the "Interface Hypothesis", and in Chapter 7 the "Interdependence Hypothesis" is discussed. One remark is centered on the "input quality approach" that calls for the examination of data from 1G immigrants when analyzing HSs variable output, yet controls included monolinguals, late bilinguals' dominant in their HLs, two HS groups, and advanced English-speaking foreign language learners. While this diversity is a merit on its own, we wonder whether late sequential bilinguals and advanced foreign language learners meet the "input quality approach" criteria. Another question is whether Norwegian in Chapter 4 qualifies as an HL, as well as the Greek of the children returning to Albanian in Chapter 7. Montrul (2016) has suggested a political dimension to describing HLs. Perhaps, these studies would benefit from a brief discussion of the socio-political status of their languages. Nevertheless, an interesting investigation would be to study the Greek language development of the Albanian returnees.

This collection investigated a breadth of languages, but it centered around experimental studies. Only Chapter 4 used a corpus containing transcribed interviews. Not one study used naturalistic data. Thus, the question of attrition and input in HLD based on spontaneous talk-in-interaction remains. While this may seem to be a drawback, the results are a fertile point of departure to investigate the role of attrition and input in HLD from a usage-based perspective that is grounded in naturalistic data.

This volume is a superb contribution to the burgeoning study of heritage bilingual acquisition. It is thought-provoking and engages in theoretical and empirical research and raises questions that only future research and the study of more diverse language pairs will be able to untangle. This work is another significant contribution that helps to understand the variable linguistic outcomes of heritage bilinguals.

References

Benmamoun, E., Montrul, S., & Polinsky, M. (2013). "Heritage languages and their speakers: Opportunities and challenges for linguistics". *Theoretical Linguistics*, *39*, pp. 3-4. doi:10.1515/tl-2013-0009

Cabo, D. P., & Rothman, J. (2012). "The (II)Logical Problem of Heritage Speaker Bilingualism and Incomplete Acquisition". *Applied Linguistics*, *33*(4), pp. 450-455. doi:10.1093/applin/ams037

Grosjean, F. (2015). *Parler plusieurs langues: Le monde des bilingues*. Paris: Albin Michel.

Köpke, B., & Schmid, M. (2004). "Language Attrition. The next phase". In *First language attrition: Interdisciplinary perspectives on methodological issues*. Amsterdam: Benjamins.

Montrul, S. (2016). *The acquisition of heritage languages*. Cambridge: Cambridge University Press.

Pires, A., & Rothman, J. (2009). "Disentangling sources of incomplete acquisition: An explanation for competence divergence across heritage grammars". *International Journal of Bilingualism*, 13(2), pp. 211-238. doi:10.1177/1367006909339806

Rothman, J. (2007). "Heritage speaker competence differences, language change, and input type: Inflected infinitives in Heritage Brazilian Portuguese". *International Journal of Bilingualism*, 11(4), pp. 359-389. doi:10.1177/1367006 9070110040201