

Bilingualism and attrition

Monika S. Schmid & Barbara Köpke

RIJKSUNIVERSITEIT GRONINGEN, THE NETHERLANDS/LABORATOIRE DE
NEUROPSYCHOLINGUISTIQUE “JACQUES LORDAT” (OCTOGONE), UNIVERSITÉ DE
TOULOUSE - LE MIRAIL, FRANCE

“I believe in the fundamental interconnectedness of all things.”

Douglas Adams, *Dirk Gently's Holistic Detective Agency*

At the heart of virtually all research on bilingualism, if not on language in general, is the recognition that the acquisition and knowledge of a first language occupy a privileged status in the human mind. There is great speculation on why this may be the case: are the reasons biological and, if so, is the difference between L1 and L2 acquisition due to the fact that the human brain contains something that is specifically equipped to acquire and hold a first language, or do certain biological properties of the brain change in the process of maturation? Is there such a thing as Universal Grammar and, if so, is it (wholly or partly) available to L2 learners? Such controversies notwithstanding, it is unanimously recognized in linguistic science that the L1 is different in many ways from any other abstract system of knowledge human beings possess, and different in specific ways from any language learned later in life. However, for a long time, the differences between L1 and L2 were viewed and researched in a somewhat biased way: L1 was assumed to be the stable and unchanging baseline from which acquisition, knowledge and use of the L2 deviated in some ways. The proficiency of L2 learners was compared to that of native speakers, and was perceived to fall short of the target (Cook 2003). Under such a perspective, what is of interest to linguistic research is the transfer from L1 that L2 learners, and particularly those in the early stages of acquisition, experience on all linguistic levels (Fig. 1).

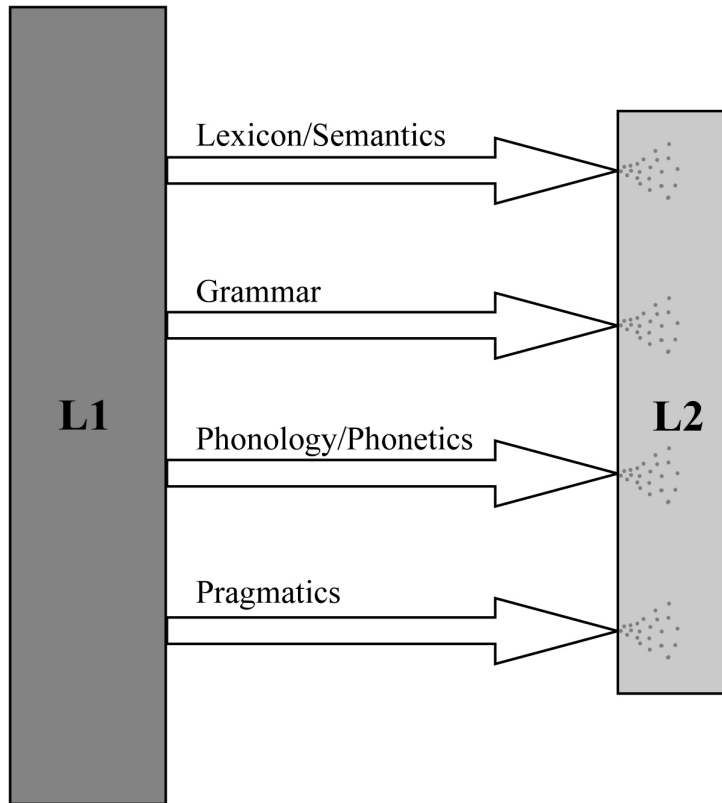


Fig. 1: L1 influence on L2 in SLA

During the ongoing process of L2 acquisition, this traffic from L1 is reduced as far as possible. This may be easier on some levels than on others, but the general observation is that, as the learner becomes more advanced, the overall level of L1 influence decreases. Investigations of bilingualism and SLA have typically sought to describe what this reduction process looks like, and explain it in terms such as access to UG in SLA, the stability of phonetic systems after the so-called Critical Period, psycholinguistic models of speech production, etc.

Similarly, in L1 attrition, the traditional idea is that, as the L2 becomes prevalent in everyday usage and dominant in the speaker's mind, what is of interest to research is traffic which goes the other way (see Fig. 2).

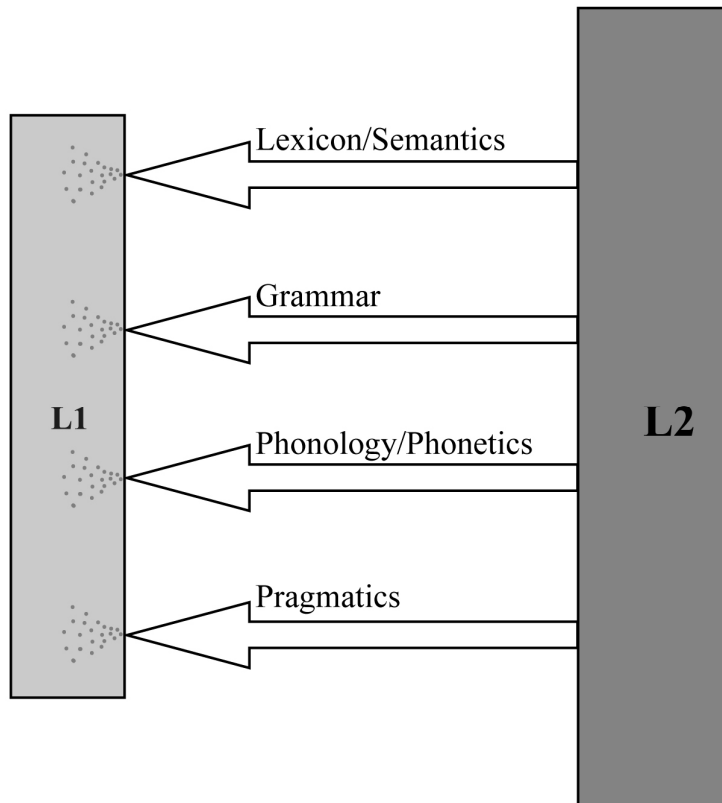


Fig. 2: L2 influence on L1 in attrition

Investigations of L1 attrition therefore typically are not interested in what the attriter's L2 system looks like, and to what extent there still is L1 transfer to be perceived here. Instead, research focusses on the description and explanation of L2 interference on L1 (for an overview of research on L1 attrition see Köpke & Schmid 2004).

Only recently has it been recognized that bilinguals may not have one 'normal' language (in which they are indistinguishable from monolinguals — the L1 in the case of L2-learners and the L2 in the case of L1 attriters) and one 'deviant' one (in which knowledge is less extensive than that of monolinguals, and also tainted by interference from L1 in SLA and from L2 in attrition). Psycholinguistic research has established that bilinguals process language in a way which is fundamentally different from that of monolinguals, in that corresponding lexical items in all language systems are always active to some degree, no matter which language is being used or accessed (e.g. Van Hell & Dijkstra 2002). Similarly, it has been established that bilinguals have an 'in-between' way of processing sentences (Hernandez, Bates & Avila 1994) and of structuring their phonetic space (Cutler, Mehler, Norris & Segui 1989; Flege 1987).

If traffic is always bi-directional, as suggested by these findings, then L1 attrition may not be the special and rare ‘condition’ as which it is often perceived. What is usually assumed is that a number of necessary conditions have to be satisfied in order for L1 attrition to set in: emigration, extensive use of the L2 in daily life, extremely reduced use of the L1 in daily life, plus a fairly long time span (decades). However, it is possible that this particular mix of circumstances brings about a more immediately visible version of a process of change in the L1 that all bilinguals undergo to some degree.

Such a view of L1 attrition is compatible with recent views on overall multilingual language competence which challenge traditional assumptions that traffic between language systems is normally one-way. As Cook (2003) points out, it is probably the case that with the acquisition of an L2 at any point in an individual’s lifetime, the L1 system is also fundamentally and irrevocably changed. That would argue for an integrated view of bilingual development (see Fig. 3)

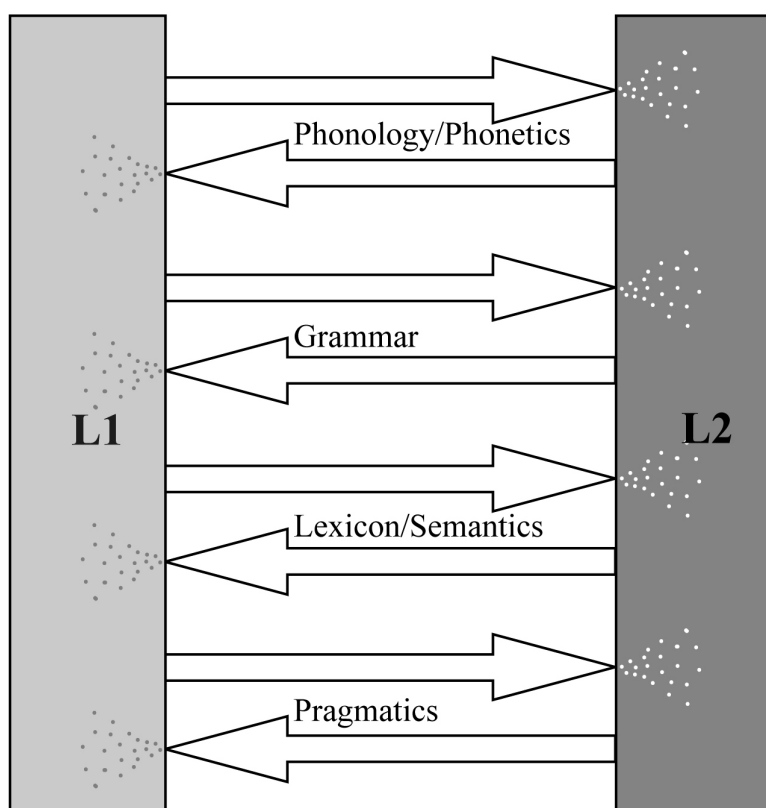


Fig. 3: An integrated view of bilingualism

It should be emphasized that such a view is not inconsistent with the assumption that L1 knowledge and development is different from other knowledge systems. The difference between L1 interference on L2 on the one hand and L2 interference on L1 on the other is perceptible in both SLA and L1 attrition. Moreover, this difference is not a merely quantitative one. While interference phenomena on the level of the lexicon, for example, may look very similar across these two processes, the phonological system of a mature L1 is probably so stable that it is impervious to L2 influence¹ — and, on the other hand, many very advanced L2 speakers still experience phonological traffic from L1.

However, it does follow from an integrated view of bilingual development (such as the holistic view of bilingualism argued for by Grosjean (1992) or what has been referred to as a ‘multicompetence’ perspective, e.g. Cook (2003)) that it makes little sense to study the development of one language system in isolation. We would argue that here the study of changes of the L1 under the influence of L2 can create added value for linguistic research at large. The fundamental difference of the native L1 system from anything else we know can best be explored from a perspective which investigates not only how this system affects others, but also how the L1 itself is subject to influences from outside.

If the objective of the study of bilingual development is to integrate investigations of L1 and L2 development, then the theoretical and methodological challenge is to integrate the research fields of attrition and SLA. In practical terms, this would argue for an approach by which investigations of attrition routinely also investigate the development of the L2, and vice versa. The implications are that investigations of L1 attrition should avail themselves more fully and more fundamentally of the theoretical frameworks that have been formulated with respect to SLA and bilingualism. We see this as one of the major stumbling blocks in current attrition research: significant recent developments (both theoretical and methodological) notwithstanding, the field of attrition is still far less extensive, less theoretically sophisticated, and more descriptively oriented than SLA research.

The problem often appears to lie in the application of theoretical approaches in a way that leads to the formulation of testable hypotheses. There are a considerable number of studies on L1 attrition which provide a solid introduction to a particular theoretical framework, and then proceed to analyse and discuss data in a well-founded way — however, the intermediate and necessary step of arriving at a clearly-stated hypothesis which derives logically from the theoretical framework is often either omitted altogether or taken in a somewhat unsatisfactory manner.

Arguably, the problems involved in re-assessing theories of bilingualism in a way that will lead to principled predictions for language attrition are linked to the bias of second language research pointed out above: where L1 and L2 are taken to be different in any way, L1 is often assumed as the (undescribed) default or baseline. On such a basis, hypotheses can only easily be derived for the deviant or different system, the L2. Turning them around to make predictions for the development of the L1 in a situation of language contact or language dominance reversal is often a problem which proves to be more complex than anticipated.

It is for these reasons that we invited a number of researchers who are experts in particular disciplines of bilingualism to provide an in-depth perspective on L1 attrition which will make the translation of theory to hypothesis easier for future research. The present volume is the result of these efforts.

The volume starts with a set of three papers which consider the impact of determining factors for the process of language attrition, arguing for a more integrated perspective than has previously been taken. Köpke gives an overview of the impact of neurobiological and cognitive processes as well as extralinguistic factors such as language use and attitudes on language acquisition and attrition. Sharwood Smith presents MOGUL, a model for understanding these two processes in an overarching framework with the ability to integrate features that traditionally are the domain of formal linguistics with processing factors. De Bot takes a step further and introduces a perspective from chaos theory. Language, he argues, can best be considered and studied as a Dynamic System which is in constant flux, and within which a large number of diverse factors conspire in complex (and often unpredictable) ways to bring about changes.

The following three papers introduce more established linguistic frameworks and theories, and demonstrate how these can be applied and interpreted with respect to language attrition. Myers-Scotton shows how the 4-M model can account for grammatical aspects of language maintenance of shift in a bilingual Xhosa-English community. Tsimpli introduces the minimalist approach and exemplifies it on the basis of data from near native Greek-English and Italian-English bilinguals. Gürel then presents how data from Turkish-English and English-Turkish bilinguals can be interpreted both on the basis of Government and Binding Theory and within a psycholinguistic framework in the context of Activation Thresholds.

These latter notions are also at the heart of the subsequent papers. Paradis presents an introduction to psycho- and neurolinguistic aspects of bilingualism in general and their impact on L1 attrition in particular. Schmid takes up some of these notions in a data-based approach,

investigating the impact of L1 use and language modes in a corpus of German-English and German-Dutch data.

The following two papers present investigations of L1 attrition in early bilinguals. On the basis of a group of Korean adoptees in France, Pallier demonstrates the case of a first language which has apparently vanished from memory to the degree that neither psycho- nor neurolinguistic techniques are able to detect any trace. He discusses the concepts of maturation and the Critical Period and puts into question Penfield's idea of L1 acquisition leaving indelible traces in the brain. Footnick then presents a startling case-study of a language which had been hidden from conscious memory, but which the speaker (an early Ewe-French bilingual) was able to partly recover through hypnosis. She argues that the inability to access a language may sometimes be triggered by emotional conflicts and presents a 'conflictual hypothesis' to explain this type of attrition.

The concepts of emotions, attitudes and identities are also prominent in the last set of papers. Prescher discusses theories of identity and identification and illustrates these with examples from a corpus of German-Dutch bilinguals. Ben Rafael & Schmid present an example of the different impact of integrational vs. instrumental motivation for language acquisition and its impact on attrition among two different groups of migrants (French-Hebrew and Russian-Hebrew bilinguals). Finally, Jiménez Jiménez, taking a Vygotskian perspective on first language attrition from Sociocultural Theory, introduces the concept of the Stimulated Recall Protocol for attrition research.

Notes

¹ There is some evidence for phonetic attrition, e.g. Major 1992. However, there are no studies which have found any indication of even the most minor restructuring of the phonological system.

References

- Cook, V. (2003). "The changing L1 in the L2 user's mind". In V. Cook (Ed), *Effects of the Second Language on the First* (pp. 1-18). Clevedon: Multilingual Matters.
- Cutler, A., Mehler, J., Norris, D. & Segui, J. (1989). "Limits on bilingualism". *Nature*, 340: 229-230.
- Flege, J. E. (1987). "The production of 'new' and 'similar' phones in a foreign language: evidence for the effect of equivalence classification." *Journal of Phonetics*, 15: 47-65.
- Grosjean, F. (1992). "Another view of bilingualism." In R. J. Harris (Ed.), *Cognitive Processing in Bilinguals* (pp. 51-62). Amsterdam: North Holland.
- Hernandez, A. E., Bates, E. A. & Avila, L. X. (1994). "On-line sentence interpretation in Spanish-English bilinguals: What does it mean to be 'in-between'?" *Applied Psycholinguistics*, 15: 417-446.
- Köpke, B. & Schmid, M. S. (2004) "First language attrition: The next phase." In M. S. Schmid, B. Köpke, M. Keijzer, M. & L. Weilemar (Eds.), *First language attrition: Interdisciplinary perspectives on methodological issues* (pp. 1-43). Amsterdam: John Benjamins.
- Major, R.C. (1992). "Losing English as a first language". *The Modern Language Journal*, 76 (2), 190-208.
- Van Hell, J. & Dijkstra, T. (2002). "Foreign language knowledge can influence native language performance in exclusively native contexts." *Psychonomic Bulletin & Review* 9 (4), 780-789.