Studies in Bilingualism (SiBil)

Volume 28
First Language Attrition: Interdisciplinary perspectives on methodological issues
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John Benjamins Publishing Company
Amsterdam / Philadelphia

L2 influence and L1 attrition in adult bilingualism

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Introduction

The goal of this paper is to examine the relationship between first language (L1) attrition and second language (L2) influence on the first in individual adults. I will argue that L2 influence on L1 is a phenomenon in its own right and cannot always be taken as evidence of L1 attrition (for an up-to-date treatment see Cook 2003). My discussion will be organised around a classificatory Crosslinguistic Influence (CI) framework, proposed earlier (Pavlenko 2000). This framework differentiates between five processes in the interaction between two languages:

1. *borrowing*, or addition of L2 elements to the L1 (e.g., lexical borrowing);
2. *restructuring*, or deletion or incorporation of L2 elements into L1 resulting in some changes, substitutions, or simplifications (e.g., syntactic restructuring or semantic extensions);
3. *convergence*, or creation of a unitary system, distinct from both L1 and L2 (e.g., production of consonants that are situated at a mid point between the L1 and L2 values);
4. *shift*, or a move away from L1 structures or values to approximate L2 structures or values (e.g., a shift in typicality, category boundaries, or consonant values);
5. *attrition*, i.e. loss of some L1 elements, seen in inability to produce, perceive, or recognise particular rules, lexical items, concepts, or categorical distinctions due to L2 influence.

This list does not aim to be final nor exhaustive, rather I propose this framework in the spirit of scholarly discussion and discovery. In illustrating the processes, I will draw on my research with Russian L2 users of English (Pavlenko 2002, 2003a, b), on other scholarly investigations, and on personal narratives of adult bilinguals. The discussion below will be limited to L2 influence on L1 in adults and will leave out childhood bilinguals, as well as interactions between three or more languages. It is theoretically grounded in Grosjean's (1998) and Cook's (1991) view of bilinguals or L2 users as people with unique linguistic competence, which Cook (1991) terms multicompetence. This perspective emphasises the dynamic nature of bilingual competence whereby speakers' use of their linguistic and conceptual repertoires is influenced both by their interlocutors and the linguistic and social context of the interaction.

1. Borrowing

The first process in the CI framework is borrowing of new elements, which is most visible in the lexicon, but can also surface in pragmatics or in rhetoric. Oftentimes, lexical borrowing is used as one of the indicators of L1 attrition. Sometimes this indeed could be the case, yet I want to bring up two caveats with regard to borrowing as a sign of L1 attrition.

Firstly, research indicates that some – although clearly not all – lexical borrowing in the L2 context stems from the need to name new objects and new types of relationships, or recognise new conceptual distinctions (cf. Andrews 1999). For instance, Russian L2 users of English in the US use phonologically and morphologically assimilated lexical borrowings, such as *intruzivnost'* 'intrusiveness', *dauntaun* 'downtown', *lendlord* 'landlord', *apointment* 'appointment', or *boifrend* 'boyfriend', all of which correspond to concepts non-existent in Russian culture (Andrews 1999; Pavlenko 2003a; Pavlenko & Jarvis 2002). While this is not the only kind of borrowing possible, I argue that if the lexical item does not have an L1 translation equivalent, we cannot take the use of the item as a sign of L1 attrition – rather, from a multicompetence perspective, it signifies an enrichment of the bilingual's linguistic and conceptual repertoire.

This enrichment is also visible in cases of *loan translation*, or literal translation of compound words, idioms, and lexical collocations from the L2, such as ones produced by the Russian L2 users of English in my studies (Pavlenko 2003a, b):

(1) a. он... мм... вторгается в её одиночество
' he... uhm... invades her solitude'

b. он вторгается в её эмоции, чувства
'he invades her emotions, feelings'

Russian lacks the notion of privacy, and thus in order to describe what they see as an invasion of privacy the participants have to appeal to its closest equivalents in Russian, such as *odinochestvo* 'solitude', and at times violate semantic and morphosyntactic constraints of standard Russian. The participants' self-corrections, hesitations, pauses, and metalinguistic comments indicate that they are aware of lexical retrieval difficulties in on-line speech. Some explicitly admit difficulties in expressing their thoughts in Russian when particular concepts, such as privacy, are involved. The participants are also aware of the fact that in cases like this it is the conceptual differences between their two speech communities, rather than L1 attrition, that lead to difficulties in word choice and self-expression in the first language:

(2) a. Или, например, *privacy*... какая *privacy*?.. по-русски этого нету, я не могу сказать по-русски, знаешь, ну я могу сказать "Я хочу побыть одна", но это звучит слишком драматично, да?.. когда ты говоришь по-английски "*I need my privacy*" это более как ежедневная вещь и никто, никого это не волнует...
'Or take, for instance, *privacy*... what *privacy*?.. in Russian this doesn't exist, I cannot say in Russian, you know, well, I can say "I want to be alone", but this sounds too dramatic, yes?.. when you say in English "*I need my privacy*" this is more like an everyday thing and no one, it doesn't bother anyone...

b. мне пришло в голову понятие, но я не нашел слов в русском языке, чтобы это описать... в общем, пришлось бы достаточно долго и неточно как-то описывать
'A notion came to me, but I didn't find Russian words to describe it... I would have had to describe it for a long time and inexactly'

Secondly, even if there appears to be an L1 translation equivalent, lexical borrowing may take place to emphasise particular conceptual distinctions and the two lexical items may co-exist to signify distinct conceptual entities. In studies conducted with Cuban immigrants in the US, Otheguy and Garcia (1988, 1993) found that these Spanish-English bilinguals do not always find traditional Spanish terms congruent with their new circumstances. For instance, the informants indicated that the rather informal and easy-going *solicitud* 'job application' is not really a translation equivalent of the bureaucratic 'application' and so they adopted the form *aplicacion*. The researchers have found that translation equivalents, such as 'Easter' and *Semana Santa*, *el lunchroom* and *el comedor escolar*, *el bildin* and *el edificio*, involve different visual images and conceptualisations for the study participants. They showed that both sets of words are active in the bilinguals' repertoires and their use is entirely determined by the context of the interaction.

Consequently, I argue that the use of lexical borrowing should not necessarily be taken as a sign of L1 attrition without a close examination of the type of borrowing and the reasons for which particular lexical items have been borrowed. Lexical borrowing is evidence of L1 attrition only in cases where an exact L1 equivalent exists but is no longer available to the speaker in either production or comprehension, even when tested in a monolingual L1 context (or at least, when a retrieval of such an item causes significant difficulty and delay). In all other cases, the use of a borrowed lexical item – especially in an L2 context or with a bilingual interlocutor – should not be taken as a sign of L1 attrition, since it is quite possible that the same bilingual may appeal to the L1 translation equivalent in a different setting. When L1 translation equivalents do not exist, as in the case of *privacy* in Russian, the disfluency in the L2 users' speech is not a sign of L1 attrition but evidence of conceptual/cultural differences between the two speech communities, while lexical borrowings are evidence of expansion of L2 users' conceptual repertoires. Jarvis (2003) makes a similar argument about incorporation of morphosyntactic rules suggesting that in the speech of a Finnish L2 user of English in his study, L1 rules and structures have remained intact, and were augmented rather than replaced by L2 rules, structures, and meanings.

2. Restructuring

The next process, restructuring, typically involves a deletion of certain L1 elements and/or addition of L2 elements into L1. It often occurs in morphosyntax, whereby the L2 rules may be incorporated – perhaps temporarily – into the L1 grammar. To date, morphosyntactic restructuring has been documented in the areas of case-, gender-, and number-marking (Håkansson 1995; Schmid 2002), preposition choice (Jarvis 2003; Py 1986; Schmid 2002), and word-order rules and subcategorisation (Boyd & Andersson 1991; de Bot & Clyne 1994; Py 1986; Schmid 2002; Seliger & Vago 1991; Waas 1996).

Restructuring has also been documented in the study of the lexicon, where, on the one hand, meanings of L2 translation equivalents may be incorporated into the L1 word in *semantic extension*, and, on the other, certain L1 meanings may be subject to attrition in *semantic narrowing*. An example of semantic extension is the use of the verb *correr* 'to run' in the speech of Cuban immigrants in the US, where, under the influence of English, the verb has acquired the metaphoric meaning of running for office, e.g. *correr para gobernador* 'to run for governor' (Otheguy & Garcia 1988). An example of semantic narrowing is seen in the use of emotion adjectives by Russian L2 users of English in my studies (Pavlenko 2002, 2003a):

(3) a. но ещё была очень как бы... зла на кого-то
'and also [she] was very somehow... angry at someone' (an appropriate lexical choice would be сердита 'cross, angry at the moment')

b. она видит, что её дочь не очень такая... счастливая
'she sees that her daughter is not that... happy' (an appropriate lexical choice would be недовольная 'dissatisfied' or грустная 'sad')

Russian has three translation equivalents of angry – *serdityi* 'cross', 'angry at the moment', *zloi* 'malicious', 'very angry', 'mean' (typically used as a personality characteristic), and *gnevnyi* 'irate', 'in wrath' – each more intense than the preceding one. An analysis of stories elicited by the same stimuli from Russian monolinguals and Russian L2 users of English showed that in descriptions of the same woman, monolinguals favoured the term *serditaia* 'cross/Fem', while some bilinguals inappropriately used the short adjective *zla* 'malicious', 'mean/Fem' (the closest formal translation equivalent of 'angry').

In the second example, the participant similarly misused the adjective (*ne*)*schastlivaia* 'unhappy' which would have been appropriate in English but not in Russian. While in English 'unhappy' could mean 'temporarily displeased' or 'dissatisfied', the Russian translation equivalent typically refers to a more permanent state of unhappiness, sadness, or continuous lack of luck. In both cases, the speakers appear to have collapsed the distinctions between two Russian translation equivalents of an English word and used literal translations of the English terms, inappropriate semantically in these contexts.

Intriguing evidence of restructuring in collocational knowledge is offered by Laufer (2003). In 40% of the cases her study participants, Russian immigrants in Israel, were unable to identify collocations based on the L2 patterns as incorrect. For instance, they now linked the words *telefon* 'telephone' or *televizor* 'TV' to the word 'close', since in Hebrew one 'closes the telephone or TV' while in Russian you put the receiver down (*polozhit' trubku*) and turn off the TV (*vykluchit' televizor*).

To date restructuring has been documented mostly in on-line production and, in a few cases, in metalinguistic judgments. Jarvis' (2003) study offers strong evidence in favour of triangulation of elicitation methods. The Finnish L2 user of English in his study was found to judge some of the structures and uses as inappropriate for conventional Finnish – yet she was heard using the same structures later the same day. Consequently, I suggest that to count as evidence of L1 attrition, restructuring has to be demonstrated in both production and perception/comprehension in at least two ways: (a) through grammaticality or semantic judgments distinct from those offered by monolingual L1 speakers; (b) through processing delays in production and comprehension difficulties. It is also important to examine whether restructuring, and in particular semantic narrowing and extension, are limited to bilingual and L2 contexts or if the L2 users would resort to these rules and items in monolingual L1 contexts as well.

3. Convergence

The third process identified in the CI framework is convergence. Convergence of L1 and L2 values, distinctions, or boundaries, has been best documented in the areas of phonology and conceptual representation. The research paradigm most commonly employed in the studies of bilinguals' phonology is perception and production of stop voice onset time (VOT), which is a sufficient acoustic cue for distinguishing between initial stop consonants in many languages. Even though VOT is just one feature characterising one's production and perception, several studies have confirmed that VOT values are closely correlated with overall judgments on the 'nativeness' or 'accentedness' of one's speech (Flege & Eefting 1987; Major 1992). Convergence of L1 and L2 VOT values was documented by Major (1992, 1993) in the speech of English-Portuguese bilinguals and by Flege (1987) in the speech of French-English bilinguals.

Where concepts are concerned, convergence entails a creation of a unitary concept, domain, or system, distinct from both the L1- and L2-based. For instance, Ervin-Tripp (1961) found that colour categories used by Navaho-English bilinguals differed systematically from the monolingual norms in the respective languages. Her findings were confirmed in a study by Caskey-Sirmons and Hickerson (1977) which showed that speakers of several languages who learned English in adulthood mapped larger total colour areas, had less stable colour category boundaries and more variable category foci than monolingual speakers.

At present, more information is needed to decide whether convergence is a temporary or permanent phenomenon, exhibited only in L2 contexts, or also in the L1 environment. If the effects are stable and exhibited systematically in a variety of contexts, they may indeed be evidence of L1 attrition.

4. Shift

The fourth process specified by the CI framework is a shift which is seen as a move away from L1 structures, boundaries or values toward those specified by the L2. This phenomenon is most often evidenced in phonology and in the mental lexicon. In the study of phonology it has been documented by Williams (1979, 1980) who found L2 influence on L1 in both production and perception. In her studies Spanish teenagers shifted from a Spanish-like to an English-like manner in producing both English and Spanish word-initial tokens. What is particularly interesting and important here is that these teenagers also exhibited a gradual shift from a Spanish-like to an English-like pattern in perception, evident in their labelling the VOT series: all discrimination peaks were found close to the area of the English contrast.

In the mental lexicon, studies found evidence of shift in typicality judgments of Spanish L2 users of Hebrew (Shimron & Chernitsky 1995), lexical associations of English L2 users of Spanish (Grabois 1999), and linguistic framing of emotions by Russian L2 users of English (Pavlenko 2002, 2003a; Pavlenko & Jarvis 2002). And in the study of pragmatics, Tao and Thompson (1991) documented a shift in the backchanneling behaviour of Mandarin L2 users of English who made extensive use of American English backchannel strategies in conversations with Mandarin-speaking interlocutors.

Once again, however, these studies were conducted in the L2 context. To decide whether they offer evidence of a temporary shift or of L1 attrition, we need to examine metalinguistic judgments of the bilingual participants and their verbal behaviour in a monolingual L1 context.

5. Attrition

Since I have argued that none of the four processes above could be unproblematically considered evidence of L1 attrition, it is reasonable to ask: what could be taken as evidence? In the view adopted here, L2 influence on L1 is seen as an either temporary or permanent phenomenon which is exhibited predominantly in the L2 or bilingual contexts or in the presence of bilingual interlocutors, but does not signify that corresponding L1 lexical items, rules, or distinctions have been permanently lost. In turn, L1 attrition involves a more or less permanent restructuring, convergence, or loss of previously available phonological and morphosyntactic rules, lexical items, concepts, classification schemas, categorical distinctions, and conversational and narrative conventions, exhibited not only in the L2 but also in a monolingual L1 context, and not only in production but also in perception and comprehension.

In phonology, this means, first of all, that the L2 user would no longer be perceived as a native speaker of his or her L1 when interacting with monolingual speakers of the L1. Anecdotal evidence suggests that this may indeed be the case for some adult bilinguals. For instance, in Latomaa's (1998) study of English L2 users of Finnish, one of the American informants complained: "After five years here in Finland I went back to the States and the neighbours asked which country I am from" (p. 65). Similarly, in my study (Pavlenko 2003a), an 18 year old Russian L2 user of English who had arrived in the US four years previously, mentioned that during his annual summer visits to Moscow people tease him about his Russian: "they say that I have an accent in Russian (laughs)... no, I don't make mistakes, but... I have a bit of an accent..." Hypothetically, attrition in phonology should also imply that some bilinguals – just like foreign language learners – will exhibit perception/decoding delays and problems interpreting L1 intonation patterns.

Since L1 attrition of morphosyntactic competence is widely addressed elsewhere in this volume, I will only mention it briefly, stating once again that convincing evidence of such attrition should include studies of L2 users' spontaneous and elicited production in monolingual L1 contexts and studies of L2 users' perception, comprehension, and metalinguistic judgments of L1 rules and constraints. In the mental lexicon, evidence of attrition, as mentioned earlier, would encompass L2-influenced use of L1 words and expressions in monolingual L1 contexts (given availability of L1 translation equivalents) and difficulties in perception, comprehension, and metalinguistic judgments of the use of L1 lexical items.

Finally, in pragmatics, L1 attrition would involve a loss of pragmatic competence, that is, the inability to interpret particular illocutionary intentions. Anecdotal evidence suggests that this may be the case for some bilinguals. For instance, Kyoko Mori (1997), a Japanese woman who has lived in the US for 20 years since the age of 20, complains that while in the Midwest she can perfectly well distinguish symbolic invitations from the real ones, this is not the case in Japan:

(4) In Japan, there are no clear-cut signs to tell me which invitations are real and which are not. People can give all kinds of details and still not expect me to show up at their door or call them from the train station. I cannot tell when I am about to make a fool of myself or hurt someone's feelings by taking them at their word or by failing to do so. (p. 10)

Another area of loss in pragmatic competence, identified by Mori (1997), concerns the level of politeness in conversation:

(5) I can only fall silent because thirty seconds into the conversation, I have already failed at an important task: while I was bowing and saying hello, I was supposed to have been calculating the other person's age, rank, and position in order to determine how polite I should be for the rest of the conversation. (p. 11)

Similar personal insights are available on the subject of L2 influence on L1 in rhetoric. These insights come from two distinguished linguists, Ulla Connor (1999), a renowned expert on L1 transfer in L2 rhetoric, and Suresh Canagarajah (2001), a well-known scholar working on acquisition of second language and literacy. Connor (1999) tells how she went back to Finland, her native country, after having spent several years in the United States, writing in English. In Finland, she was supposed to co-author a Finnish language manual on writing grant proposals in English. She found the process of collaboration extremely difficult, as her views on organisation of the material differed from those of her Finnish co-authors. When the first draft of the manual appeared incoherent to her, Connor attempted to argue with her colleagues that the main point should be in the beginning of the paragraph, followed by examples supporting the point. At the end, however, the researcher realised the extent of her own Americanisation: the changes she suggested were inappropriate for Finnish rhetoric style. Not surprisingly, no major changes based on her suggestions were included in the final version of the Finnish booklet.

Similarly, Canagarajah (2001) recalls that when he returned to Sri Lanka and attempted to write articles in the local vernacular Tamil, his native language, his papers, structured in the manner of an American expository essay – announcing the thesis, delineating the steps of his argument, and proving the points – disappointed and angered his colleagues. Even some of his own students told him that "the introductory paragraph had sounded a bit too pompous and over-confident" (Canagarajah 2001: 31) and reminded him that in the vernacular tradition one opens the paper with a brief confession of one's limitations and a praise for the knowledge of the audience.

Finally, my own studies documented conceptual attrition that is slowly taking place in the mental lexicon of Russian-English bilinguals (Pavlenko 2002, 2003a, b). In the interview below, Julia, a 25 year old female study participant who arrived in the US 5 years earlier, complains that her Russian is no longer adequate to describe some of her thoughts and feelings:

(6) Что я хочу сказать? Что я чувствую себя все более и более *clumsy*, неловко, когда я говорю по-русски, мне трудно подбирать слова, и очень часто мне кажется, что мне легче выразить это по-английски, даже не потому что я не знаю слов по-русски, а потому что выражение, которое я хочу употребить в данной ситуации, оно настолько английское, и оно настолько... например... что-то очень трудно сделать, да?.. и я не знаю получится у меня или нет, я говорю себе сама по-английски "*I can make it*"... почему – потому что по-русски это не звучит, это не то же самое, и нету такой... уверенности, что ты, да, ты сможешь это сделать, нет такой бравады, нет такого спокойствия, ещё чего-то такого, нет вот этого, нету...
'What do I want to say? That I feel more and more *clumsy*, uncomfortable, when I speak Russian, it is difficult for me to choose words, and very often it seems to me that it is easier for me to express something in English, not even because I do not know Russian words, but because the expression I want to use in a particular situation, it is so English, and it is so... for example... something is very difficult to accomplish, yes? ... and I do not know if I will be able to succeed or not, and I say to myself in English "*I can make it*"... why – because in Russian it doesn't sound right, it is not the same, and there is no such... confidence, that you, yes, you will be able to do this, there is no such bravado, no such calm, and something else, it is not there, no... '

For me, this quote functions as a reminder that the inability to express particular meanings in one's native language is not purely a psycholinguistic phenomenon, rooted in the disuse of the L1 or the overuse of the L2. It is not attrition that prevents Julia from expressing herself in Russian, but the fact that certain nuances and shades of meaning are not translatable. This neoWhorfian view of bilingualism and thought (Pavlenko, in press) sees the interaction between two or more languages as a complex phenomenon where linguistic and conceptual enrichment and transformation may be present side by side with attrition. It is up to future inquiry to see if the two phenomena can be sufficiently disambiguated.

References

Andrews, D. (1999). *Sociocultural Perspectives on Language Change in Diaspora: Soviet Immigrants in the United States.* Amsterdam and Philadelphia: John Benjamins.

Bot, K. de, & Clyne, M. (1994). "A 16-year longitudinal study of language attrition in Dutch immigrants in Australia". *Journal of Multilingual and Multicultural Development, 15* (1), 17–28.

Boyd, S., & Andersson, P. (1991). "Linguistic change among bilingual speakers of Finnish and American English in Sweden: Background and some tentative findings". *International Journal of the Sociology of Language, 90*, 13–35.

Canagarajah, S. (2001). "The fortunate traveler: Shuttling between communities and literacies by economy class". In D. Belcher & U. Connor (Eds.), *Reflections on Multiliterate Lives* (pp. 23–37). Clevedon: Multilingual Matters.

Caskey-Sirmons, L., & Hickerson, N. (1977). "Semantic shift and bilingualism: Variation in color terms of five languages". *Anthropological Linguistics, 19*, 358–367.

Connor, U. (1999). "Learning to write academic prose in a second language: A literacy autobiography". In G. Braine (Ed.), *Non-native Educators in English Language Teaching* (pp. 29–42). Mahwah, NJ: Lawrence Erlbaum.

Cook, V. (1991). "The poverty of the stimulus argument and multicompetence". *Second Language Research, 7*, 103–117.

Cook, V. (Ed.). (2003). *Effects of the Second Language on the First.* Clevedon: Multilingual Matters.

Ervin-Tripp, S. (1961). "Semantic shift in bilingualism." *American Journal of Psychology, 74*, 233–241.

Flege, J. (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.

Flege, J., & Eefting, W. (1987). "Cross-language switching in stop consonant perception and production by Dutch speakers of English." *Speech Communication, 6*, 185–202.

Grabois, H. (1999). "The convergence of sociocultural theory and cognitive linguistics: Lexical semantics and the L2 acquisition of love, fear and happiness". In G. Palmer & D. Occhi (Eds.), *Languages of Sentiment: Cultural constructions of emotional substrates* (pp. 201–233). Amsterdam and Philadelphia: John Benjamins.

Grosjean, F. (1998). "Studying bilinguals: Methodological and conceptual issues." *Bilingualism: Language and Cognition, 1*, 131–149.

Håkansson, G. (1995). "Syntax and morphology in language attrition: A study of five bilingual expatriate Swedes." *International Journal of Applied Linguistics, 5* (2), 153–171.

Jarvis, S. (2003). "Probing the effects of the L2 on the L1: A case study". In V. Cook (Ed.), *Effects of the Second Language on the First* (pp. 81–102). Clevedon: Multilingual Matters.

Latomaa, S. (1998). "English in contact with "the most difficult language in the world": The linguistic situation of Americans living in Finland." *International Journal of the Sociology of Language, 133*, 51–71.
Laufer, B. (2003). "The influence of L2 on L1 collocational knowledge and on L1 lexical diversity in free written expression". In V. Cook (Ed.), *Effects of the Second Language on the First* (pp. 19–31). Clevedon: Multilingual Matters.
Major, R. (1992). "Losing English as a first language." *The Modern Language Journal, 76*, 190–208.
Major, R. (1993). "Sociolinguistic factors in loss and acquisition of phonology". In K. Hyltenstam & A. Viberg (Eds.), *Progression and Regression in Language: Sociocultural, neuropsychological and linguistic perspectives* (pp. 463–478). Cambridge: CUP.
Mori, K. (1997). *Polite Lies: On being a woman caught between two cultures.* New York, NY: Henry Holt.
Otheguy, R., & Garcia, O. (1988). "Diffusion of lexical innovations in the Spanish of Cuban Americans". In J. L. Ornstein-Galicia, G. K. Green, & D. Bixler-Marquez (Eds.), *Research Issues and Problems in U.S. Spanish: Latin American and Southwestern varieties* (pp. 203–242). Brownsville, TX: University of Texas.
Otheguy, R., & Garcia, O. (1993). "Convergent conceptualisations as predictors of degree of contact in U.S. Spanish". In A. Roca & J. Lipski (Eds.), *Spanish in the U.S.: Linguistic contact and diversity* (pp. 135–154). Berlin: Mouton de Gruyter.
Pavlenko, A. (2000). "L2 influence on L1 in late bilingualism." *Issues in Applied Linguistics, 11* (2), 175–205.
Pavlenko, A. (2002). "Bilingualism and emotions." *Multilingua, 21* (1), 45–78.
Pavlenko, A. (2003a). "I feel clumsy speaking Russian": L2 influence on L1 in narratives of Russian L2 users of English". In V. Cook (Ed.), *Effects of the Second Language on the First* (pp. 32–61). Clevedon: Multilingual Matters.
Pavlenko, A. (2003b). "Eyewitness memory in late bilinguals: Evidence for discursive relativity." *International Journal of Bilingualism, 7* (3), 257–287.
Pavlenko, A. (In press). "Bilingualism and thought." In A. De Groot & J. Kroll (Eds.), *Handbook of Bilingualism: Psycholinguistic Approaches.* Oxford: Oxford University Press.
Pavlenko, A., & Jarvis, S. (2002). "Bidirectional transfer." *Applied Linguistics, 23* (2), 190–214.
Py, B. (1986). "Competence and attrition in the native language of immigrants". In E. Kellerman & M. Sharwood Smith (Eds.), *Crosslinguistic Influence in Second Language Acquisition* (pp. 163–172). Oxford: Pergamon Press.
Schmid, M. S. (2002). *First Language Attrition, Use, and Maintenance: The case of German Jews in Anglophone countries.* Amsterdam and Philadelphia: John Benjamins.
Seliger, H. W., & Vago, R. M. (1991). "The study of first language attrition: An overview". In H. W. Seliger & R. M. Vago (Eds.), *First Language Attrition* (pp. 3–15). Cambridge: CUP.
Shimron, J., & Chernitsky, R. (1995). "Typicality shift in semantic categories as a result of cultural transition: Evidence from Jewish Argentine immigrants in Israel". *Discourse Processes, 19*, 265–278.

Tao, H., & Thompson, S. (1991). "English backchannels in Mandarin conversations: A case study of superstratum pragmatic 'interference.' " *Journal of Pragmatics, 16*, 209–223.
Waas, M. (1996). *Language Attrition Downunder: German Speakers in Australia.* Frankfurt: Peter Lang.
Williams, L. (1979). "The modification of speech perception and production in second-language learning." *Perception and Psychophysics, 26*, 95–104.
Williams, L. (1980). "Phonetic variation as a function of second-language learning". In G. Yeni-Komshian, J. Kavanagh, & C. Ferguson (Eds.), *Child Phonology. Volume 2. Perception* (pp. 185–215). New York, NY: Academic Press.