

Annexe 1

Table 1. Studies reviewed in this paper that have examined backward transfer in the domain of phonetic production, using perceptual and acoustic analyses of L1 productions.

Study	L1/L2	L2 AoA (age in years)	Learning context	Length of experience with L2/residence in L2-speaking country	Remarks	Factors tested	Confounded factors	Outcome for L1 phonetic production
Antoniou et al., 2011	Greek/English	on average at 3.5	at school and in immersion	on average 23.5 years of immersion	code-switching affects L2 (assimilation to L1) but not L1	testing conditions (code-switching or not)	amount of L1 use, experience with L2	does not differ from monolinguals
Barlow et al., 2013	Spanish/English	before the age of 3	not specified	on average 1.7 years of experience	L2 assimilation to Spanish in the onset context (i.e., the same /l/ for English and Spanish), but not postvocally	number of spoken languages	L2 experience, amount of L1 use, possibly immersion and AoA	does not differ from monolinguals
Barlow, 2014	Spanish/English	on average at 2.4	at school	on average 18 years of experience		AoA, phonetic context	immersion, amount of L2 use, AoA and L2 experience, and L2 proficiency	no difference in L1 phonetic production

		on average at 8.3		on average 12 years of experience	the English allophonic velarization rule was transferred to the Spanish phonological system			L2 phonological rules are used to produce L1 speech sounds
Chang, 2012	English/Korean	on average at 22 years	novice learners, language course in L2 country	6 weeks of language course, 4 hours per day	changes are systemic	immersion, L2 experience	not specified	drift toward L2 similar sounds
Chang, 2013	English/Korean	from 0 to 20	at home or school	from 40 class hours to 20 years	drift is less important in experienced than in novice learners	immersion, L2 experience	L2 experience, AoA, L2 proficiency	drift toward similar L2 sounds
De Leeuw et al., 2007	German/Dutch or German/English	between 14 and 22	immersion	on average 36 years of immersion	L1 is more accented if less contact with the L1; no differences in L1 (German) between the German/Dutch and German/English bilinguals	amount of L1 use (L1 contact), age of immigration, length of residence	length of residence, AoA and L2 experience	drift, L1 speech is perceived as L2-accented

De Leeuw et al., 2010	German/Dutch or German/English	after 20	immersion	on average 37 years of immersion	L1 is more accented if language-mixing occurred more and/or the L2 was used more frequently	amount of L1 use (L1 contact), age of immigration, length of residence	length of residence, AoA and L2 experience	drift, L1 speech is perceived L2-accented
Flege, 1987	English/French	after 15-18	at school and 9 months in immersion	on average 7 years of experience	they were tested 3-6 months after immersion period	amount of	amount of L2 use, experience with the L2 and immersion in L2-speaking country (length of residence)	does not differ from monolinguals
						formal education in L2, length of residence in an L2-speaking environment, frequency of L2 use in the period preceding the study.		

		after 15-18	at school, and in particular immersion	on average 11.7 years of immersion	the L2 is used dominantly; greater L1 drift in more proficient L2 speakers			drift toward L2 similar sounds
Flege & Eefting, 1987a	Dutch/English	at 12	at school	6 years at school and more years at university	their production in L2 was judged as native-like (highly proficient)	L2 proficiency	L2 experience and L2 proficiency	deflection from similar L2 sounds
				on average 6 years	they stopped studying English after the six years required in high school.			does not differ from monolinguals
Flege & Eefting, 1987b	Spanish/English	between 5 and 6 years	at private school and in immersion	on average 7.1 years at school	differences between similar L1 and L2 sounds are nevertheless maintained	AoA, L2 experience	Immersion, L2 experience and amount of L2 use	deflection from L2 similar sounds

				on average 9.7 years of immersion in L2 speaking country and 6.4 years at school	differences between similar L1 and L2 sounds are larger than those of speakers with less experience			deflection from similar L2 sounds
				on average 3.5 years at school	these are children, deflection from monolingual norms is bigger than in adult bilinguals			deflection from similar L2 sounds
Fowler et al., 2008	French/English	simultaneous	in bilingual communities	mean age of the participants was 25.6 years	differences between similar L1 and L2 are nevertheless maintained	AoA, language proficiency	amount of language use and proficiency	drift toward similar L2 sounds

Goldrick et al., 2014	Spanish/English	at average at 6.8	at school	on average 14 years of experience	language-switching affects L2 (assimilation to L1) but not L2; in particular, cognates	cognate status, testing conditions	not specified	L2 does not affect L1 phonetic production
Guion, et al., 2000	Quichua/Spanish	at the age of 6	at school and raised in bilingual communities	from 14 to 19 years of immersion	the amount of L1 use had no effect on the perceived strength of accent in L1 (but it did in L2); the L1 speech is perceived as being identical to monolinguals	amount of L1 use	Amount of L1 use and experience in L2	does not differ from monolinguals
Guion, 2003	Quichua/Spanish	simultaneous	at home	mean age of the participants was 29.4 years		age of L2 acquisition	length of experience with L2 and proficiency in	does not differ from monolinguals

		between 5 and 7	at school	on average 25.4 years of experience	deflection from similar L2 sounds, then L2 category is correctly established		L2	drift toward similar L2 sounds
		between 15 and 25	at school and work	on average 19.5 years of experience	they did not establish L2 categories			does not differ from monolinguals
Kartushina et al., 2015	French/Danish	between 20 and 27	novice learners, phonetic training experiment	1 hour spread over 3 days of training	drift depends on the similarity between L1-L2 sounds: close L1 sounds drifted more	experience with isolated L2 sounds only	not specified	drift toward L2 similar sounds
Lev-Ari & Peperkamp, 2013	English/French	after 15	NA	at least 3 years (range 4-49) of immersion	larger drift in speakers with lower inhibitory skill	speech style, inhibitory skill	immersion, amount of L1 use and L2 experience	drift toward similar L2 sounds
Mack, 1989	English/French and French/English	before 8	at home or school	both languages were used regularly since learning the L2	speakers were dominant in English	L1 and L2 proficiency, AoA	amount of English use and proficiency	does not differ from monolinguals

MacLeod et al., 2009	French/English	between 0 and 4	in bilingual communities	on average 35 years of immersion		number of mastered languages	amount of L2 use and experience with L2	does not differ from monolinguals
Major, 1992	English/Portuguese	between 22 and 36	immersion	between 12 and 37 years of immersion	better L2 proficiency is associated with more L2-accented L1 speech	L2 proficiency, speech style	immersion, length of residence, amount of L2 use and L2 proficiency	drift toward similar L2 sounds; this drift was larger in casual speech (i.e., conversation) than in formal, elicited speech
Mayr, Price, & Mennen, 2012	Dutch/English	between 13 and 18.	immersion at the age of 32	30 years of residence	changes are systemic	immersion in the L2 speaking-country, amount of L2 use	immersion, experience with L2 and amount of L2 use	drift toward similar L2 sounds
Mora & Nadeu, 2012	Catalan/Spanish	after 4 or 5	in bilingual communities	since birth	drift is observed if the L2 is used more frequently than the L1	amount of L2 use, cognate status	amount of language use and proficiency	drift toward similar L2 sounds, in particular in cognates

Mora et al., 2015	Catalan/Spanish and Spanish/Catalan	before the age of 6	in bilingual communities	since birth	drift is larger in bilinguals who used Catalan less	amount of Catalan use	amount of language use and proficiency	drift toward similar Spanish sounds
Sancier & Fowler, 1997	Portuguese/English	at 15	immersion	4-month stay	drift was reversed after 2.5 months of immersion in L1-speaking country	immersion in the L2-speaking country	immersion and amount of language use	drift toward similar L2 sounds
Sundara et al., 2006	French/English	simultaneous	at home and school, and in bilingual communities	on average 24 years of immersion	bilinguals use only a subset of acoustic cues used by monolinguals to differentiate L1/L2 sounds	number of mastered languages	length of experience with L2 and proficiency in L2	does not differ from monolinguals