Beyond steady-state models of ultimate attainment

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In their keynote paper, Schmid and Köpke (2017; henceforth S&K) argue that any theory of attrition should be situated in a broader understanding of the bilingual mind, in which languages may influence one another regardless of their status as first or second languages (L1s or L2s). Transfer, or crosslinguistic influence (CLI), can be in either direction, depending on factors such as level of activation of each language as a whole, and the relative robustness of particular representations in each language, determined at least in part by frequency of use and recency of access (p. 637; p. 643). The observation that CLI can involve effects of the L2 on the L1 is, in itself, nothing new, having previously been explored in linguistic approaches to bilingualism (see the collected papers in Cook, 2003; Kecskes & Papp, 2000; Sorace, 2000; Tsimpli, Sorace, Heycock & Filiaci, 2004). However, the restatement of this observation is welcome, because previous proposals in this vein have not affected how many mainstream linguists think about acquisition and attrition; teleological models, involving an idealized endstate, continue to predominate.

Such concepts of endstate are often derived from Chomsky's (1965) hypothetical model of L1 acquisition, involving "an ideal speaker-listener in a completely homogeneous speech community" (Chomsky, 1965, p. 4), who "proceeds from a genetically determined initial state S_0 through a sequence of stages S_1, S_2 …, finally arriving at a 'steady state' S_S which then seems to change only marginally" (Chomsky, 1980, p. 37). This terminology remains very much in use in generative L2 research (e.g., White, 2015, pp. 42, 47). Such a model involves the idealization not only of the native speaker, but of the discrete stages of acquisition and the unchanging steady state. According to Chomsky, such idealizations are justified precisely because they abstract away from messy reality. Chemists study H_2O and not the water in the local river because actual instances of water are only understandable in terms of principles uncovered by studying pure instantiations of elements and molecules (Chomsky-Grosjean interview, cited in Cook & Newson,

2007, p. 222). It seems immediately apparent that the notion of steady state, based on the conceit of the monolingual as "pure case", is inapplicable to studies of the bilingual mind, given what we know about CLI, yet the influence of this idealized model can be seen in approaches to L2 acquisition that invoke the somewhat specious notions of "nativelike competence" and "incomplete acquisition". For example, in Montrul's (2008) well-known model of heritage language learning, speakers are understood to have deviated from the path to an established standard goal, as one language settles into a state of arrested development. As Pascual y Cabo and Rothman (2012, p. 241) make clear, this conceptualization relies on a further idealization, this time of the input. In such cases, the input to heritage learners reflects cross-generational attrition or other effects of language contact, and acquisition should be understood in terms of complete acquisition of the code repertoire to which the speakers were exposed. The only point of contention we have with S&K in this regard is the welding together of theories of innate learning mechanisms and the concept of the steady state (p. 647, footnote 2); a fluid or malleable L1 endstate is, in fact, assumed by most of the generative acquisitionists cited here, and evident in Iverson's (2012) study of Pablo, whose L2 syntactic knowledge has clearly replaced the analogous L1 grammar, despite late exposure to the L2 at approximately twenty-five years old.

The authors discuss feature reassembly (Lardiere, 2009) as a welcome development in formal approaches to L2 research due to its descriptive accuracy and its ability to capture the incremental nature of the acquisition process (S&K, p. 650, 1st paragraph). It should be noted that this approach is also a significant departure from the 'discrete states' model discussed above. On a Principles and Parameters account (Chomsky, 1981), parametric settings are idealized states of aspects of the language faculty, and in earlier acquisitional accounts, it was thought that children might go through one or more settings of a parameter before settling on one in the steady state (e.g., Hyams, 1986). In L2 research, variability in grammar has been conceptualized as "fluctuation" between idealized parameter settings (Ionin, Ko, & Wexler, 2004). However, as S&K note, feature reassembly allows for a more realistic account of variability both in populations and within individuals. Grammatical features can cluster in various constellations on functional heads, with predictable syntactic implications, thus removing the need to invoke language-wide "on-off" switches, and making possible a more explanatory account of both variation and incremental acquisition. A further desirable implication is the abandonment of the idea that certain parameter mismatches could lead to the impossibility of acquisition. On Lardiere's (2009) account, "any feature contrast that is detectable is, in principle, ultimately acquirable" (p. 214).

S&K correctly observe that the preponderance of second language studies are concerned with acquisition of knowledge, not maintenance of such knowledge

(p. 637, 2nd paragraph), and suggest that research on attrition can also shed significant light on the nature of language systems (p. 641, top paragraph). Our own research fully supports this perspective. Rather being considered only as a distinct phenomenon affecting certain populations, attrition can also be thought of as a normal part of the acquisition process, as most learners go through periods in which their use of one language declines followed by periods of re-engagement; moreover, even in periods of continuous use not all aspects of knowledge are regularly exercised, so gains in some areas might accompany simultaneous loss in others (Bardovi-Harlig & Stringer, 2010, p. 39).

A more arguable assertion in this keynote paper concerns the scope of the term *attrition*. S&K (p. 637, 1st paragraph; p. 641, 1st paragraph) provide a particularly loose definition subsuming *any* change in the L1 as a result of co-activation, CLI, or disuse, which appears to collapse distinct phenomena. It seems reasonable to distinguish temporary processing effects (online access problems due to competition between two highly activated languages) and more permanent loss of linguistic knowledge (which might need to be re-acquired, rather than simply reactivated). Only the latter involves loss of language. It also seems desirable to distinguish between cases where knowledge of two languages was always kept distinct (perhaps for typologically unrelated languages, or languages with discrete social functions) and cases where the languages are related, in which case speakers may end up with a single hybrid system (arguably the case for the speakers studied by Iverson, 2012, and Putnam & Sanchez, 2013). The latter might more accurately be described in terms of change rather than loss. That all bilinguals with languages in a state of co-activation show evidence of L2 effects on the L1 appears uncontroversial, but the proposition that "every bilingual is an L1 attriter" (S&K, p. 641, 1st paragraph) is only tenable if the term attrition is extended well beyond its conventional boundaries to encompass effects of bilingualism that do not involve language loss.

The authors are surely right to argue that studies of attrition may shed as much light on the nature of language knowledge as studies of acquisition, and that concepts of development should move beyond simplistic models of stages on a path toward an idealized endstate (S&K, p. 658, 2nd paragraph). This would be self-evident if theories of language development were to more fully incorporate the reality of language use in multilingual, postcolonial societies throughout the world, in which the typical target language is not a monolingual norm but a multilingual code repertoire (Stringer, 2015). However, it seems prudent for the present to maintain a distinction between temporary interference due to co-activation and actual language loss due either to extended CLI or to extended disuse. That the two may be linked, as argued in this keynote paper, remains an intriguing hypothesis. In this regard, potential insight may come from studies of resilience, in contrast to

attrition. It seems to be the case that the most impressive studies of phonological resilience in the face of L1 attrition involve aspects of the sound system that do not enter into competition with the L2, e.g., aspiration as a contrastive feature in L1 Korean but not L2 English (Oh, Au, & Jun, 2009), or tone in L1 Mandarin but not L2 French (Pierce et al., 2014). Such cases lend plausibility to the notion that there may be a direct link between the role of CLI in temporary interference and in long-term attrition.

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