

## Attrition via acquisition: The importance of development in small steps

A Commentary on

“A model for L1 grammatical attrition” by Glyn Hicks and Laura Domínguez

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The keynote article by Hicks and Domínguez (2019) is an interesting and important contribution not only to the field of language attrition, but also to acquisition and multilingualism. The paper presents a model of L1 attrition called ‘Attrition via Acquisition’, which is based on three components: 1) an L1 acquisition model (Lidz and Gagliardi 2015) extended to bi- and multilingual situations that makes a distinction between input and intake (the latter understood as input that is processed by the speaker), 2) a processing component (the so-called inference engine) which may update or change a learner’s grammar when the parsed input cannot be licensed by the current grammar, and 3) a view of grammar as consisting of fine-grained properties/features, not large-scale parameters. The main argument is that the inference engine, which constantly updates the developing grammar in the L1 acquisition process when it is incompatible with new intake, is reactivated when the learner acquires an L2. Thus, the parsed representations of the L2 may cause the inference engine to also update the current grammar state of the L1. The most important aspect of this model, in my view, is the fact that changes in a grammar are typically very small and fine-grained, both in the acquisition and attrition process.

In my view, the paper outlines a very plausible and convincing model of language acquisition and attrition. The focus on processing and constant activation of all grammars of a multilingual means that the model is very timely and fits well with current thinking in linguistics and cognitive science, as a considerable body of work over the last two decades has shown that both languages of a bilingual are always active (see e.g., Kroll, Dussias, Bogulski and Valdes Kroff 2012, Blumenfeld and Marian 2013). Recent psycholinguistic studies also indicate that the L1 and the L2 share the same networks for language processing (see e.g., Cunnings 2017 or Del Maschio and Abutalebi 2019 for overviews). Furthermore, Hicks and Domínguez’ (2019) model predicts that attrition will principally occur “for aspects of the L1 grammar which share featural properties to a significant degree but where differences nevertheless obtain” (p. 23), which is in line with much traditional work on crosslinguistic influence in bi- and multilingualism (e.g., Hulk and Müller 2000 and subsequent work). And finally, the claim that “grammatical attrition ... appears to consist of fluctuation between L1 and L2-based grammatical options rather than the complete loss of L1 forms” (p. 22) is compatible with the Multiple Grammars approach of Amaral and Roper (2014).

The Attrition via Acquisition model also resonates well with my own work on both L1 and L2/L3 acquisition: According to the Micro-cue Model (Westergaard 2009, 2014), the innate linguistic endowment (UG) contains principles and constraints, but crucially no large-scale parameters. This linguistic endowment enables children to *parse the input* and gradually build abstract structures (called micro-cues) in their I-language grammars. This development takes place in small steps, based on positive evidence in the input. Children are also argued to be

conservative learners, typically making errors of omission rather than commission (Snyder 2007), which prevents a process of unlearning and backtracking in cases where there is variation in the input. The Micro-cue Model is currently expanded to account for bi- and multilingual situations, and one result of this is the Linguistic Proximity Model of L3 acquisition (Westergaard, Mitrofanova, Mykhaylyk and Rodina 2017), which argues that crosslinguistic influence in multilingualism is caused by abstract structural similarity with one or both of the previously acquired languages. According to Westergaard (forthcoming), both the L2 and L3/Ln acquisition processes involve *learning by parsing* and development in small steps (like L1 acquisition). Furthermore, the complete grammar of the previously acquired language(s) stay(s) available for parsing the new language input (referred to as Full Transfer Potential), and crosslinguistic influence takes place on a property-by-property basis (see also the Scalpel Model, Slabakova 2017). It seems to me that Hicks and Domínguez' Attrition via Acquisition model would perfectly complement this work to account for crosslinguistic influence in the other direction, i.e., from the L2 to the L1 or from an L3 to one or both of the previously acquired languages.

The aim of the Attrition via Acquisition model is to formalize “some of the mechanisms of attrition within established, viable theories of the grammar and of language acquisition.” While I think Hicks and Domínguez are generally successful at this, I am still left with the impression that there are some crucial parts missing. For example, the authors repeatedly state that an attrition model must be able to account for why L1 attrition of morphosyntax is “apparently so heavily constrained and rarely attested” (p. 1). But it is not clear to me how this Attrition via Acquisition model actually accounts for that, since there is no place in the model for the relative strength of the two languages (in terms of proficiency and use) and the corresponding competition between the L1 and L2 representations. In fact, the authors even state (p. 14) that while it is certainly relevant to the model how language-specific parsing is selected, it is not their aim “to directly address how L1 and L2 processing develops within the individual.” For that reason, I do not see how the model itself (as illustrated in Figure 2 in Hicks and Dominguez' article) can prevent massive attrition of the L1 to take place already from the initial stages of L2 acquisition. In fact, I am also unable to see why the input/intake distinction plays such a critical role here, as L2 input must be processed (i.e., made into intake) in order to be acquired, and it is presumably only when the L2 representations are of a certain strength that they will begin to affect L1 representations to the extent that this results in attrition of morphosyntax. Thus, if the model is to account for the rarity of L1 attrition, I think it needs to build in a component that monitors the amount of intake and use for each language and the corresponding strength of the representations in both (or all) languages of the bi- or multilingual.

A somewhat related issue is that there may be aspects of an L1 grammar that erode due to lack of input and use, where there is no corresponding property in the L2 that could be argued to be the cause of this. An relevant example could be the category of grammatical gender: Studies of several heritage languages with grammatical gender spoken in countries where English is the majority language have attested a certain vulnerability in the gender system of the heritage language, despite the fact that English does not have any grammatical gender category to interfere. Some of these studies could be argued to have reported a situation that is due to incomplete/differential/divergent acquisition (see Montrul 2008, Kupisch and Rothman 2016, Domínguez, Hicks and Slabakova 2019 for a discussion of these terms), e.g., Polinsky (2008) on a reduction/simplification in the Russian gender system of young adult heritage speakers in the USA. However, there are other studies that are more likely to be reporting a situation of attrition, e.g., Lohndal and Westergaard (2016) on old-age Norwegian heritage

speakers in North America (who were monolingual until around school age but extremely English dominant in adulthood), some of whom seem to have an eroded gender system, or Björnsdóttir (2016) on a corpus of letters written by one first-generation Icelandic heritage speaker in Canada over a period of 70 years, finding that while gender agreement corresponded to the baseline during more than half of the studied period, the letters from the last 30 years display some non-target-consistent variation. It does not seem to me that this kind of L1 attrition can be accounted for by the Attrition via Acquisition model in its current form.

Despite these shortcomings, I think that the Attrition via Acquisition model is quite promising, and I look forward to seeing it used in future studies to analyze data from new populations and new linguistic phenomena.

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