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Heritage languages: A new laboratory for empirical linguistics

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Research on heritage language speakers is an emergent field, and much of the published work in the area is either purely descriptive or focusses primiarily on topics such as language education and maintenance, which are of primary interest to applied linguists. Benmamoun, Montrul and Polinsky's fine paper makes a very convincing case that it is an area of central interest to theoretical linguistics as well. Their article makes two main contributions. First, they identify some specific grammatical constructions which are particularly problematic for heritage language speakers and make inferences about grammatical modules which may not be fully developed in such speakers. Secondly, they point out that the fact that heritage language speakers' grammars are incomplete and/ or divergent from those of "normal" native speakers has important implications for theories of language acquisition, and in particular, the nature and duration of a putative critical age for the acquisition of grammar and the role of input in acquisition.

While both of these are extremely interesting issues, it is, perhaps, somewhat premature to draw inferences about the specific "modules" which may be affected in heritage language speakers. The "weakest links" which Benmamoun, Montrul and Polinsky have identified – some aspects of inflectional morphology, complex grammatical constructions such as passives and object relatives – may simply be the most difficult aspects of grammar, and hence most vulnerable to disruption in all speakers who have problems with language – L1 and L2 learners, children with Specific Language Impairment (SLI), adults with aphasia, less educated adults, or even normal adults processing language under stress (see Blackwell and Bates 1995 on inducing agrammatic profiles in normal adults under cognitive resource limitation). There is some evidence that this may be the case: passives and object relatives are known to be problematic for all these groups;

and inflectional morphology is an area of particular difficulty for L2 learners, SLI speakers, and aphasics. On the other hand, there may well be differences. For example, Benmamoun, Montrul and Polinsky point out that the nominal inflections tend to be affected more than verbal inflections in heritage language speakers, while some researchers have argued that children with SLI have particular problems with tense/agreement marking; in fact, Rice and Wexler (1996) have proposed that tense marking can be treated as a clinical marker for SLI). However, SLI manifests different profiles of grammatical strengths and weaknesses in different languages (Bedore and Leonard 2001, Dromi et al. 1999), so we would need to compare SLI and heritage speakers of the same language. This is difficult, because most heritage language researchers study small minority languages, while the majority of research on SLI has focussed on major languages such as English.

For this reason, in this commentary I will concentrate on a set of issues related to the theoretical implications of incomplete acquisition in heritage language speakers, specifically, the role of quality and quantity of input and reasons for incomplete acquisition.

1 Quantity of language input

According to some (though by no means all) generative linguists, input plays only a triggering role in acquisition: as Chomsky famously claimed, "mere exposure to the language, for a remarkably short period seems to be all that the normal child requires to develop the competence of the native speaker" (1962: 529). Research on the acquisition of heritage languages clearly shows that this is not the case. The language learners described by Benmamoun, Montrul and Polinsky are normal children exposed to the heritage language during the critical period; yet many of them have failed to attain native-like competence. The obvious question is why.

One reason may be simply the amount of input. Although children become productive with the basic grammatical constructions of their language relatively early, they often go through a relatively long period of inconsistent performance. Consider the English past tense. Monolingual children acquiring English typically start producing past tense inflections at the age of about 2;4, and start using them productively (as evidenced by overgeneralization errors) a few months later. However, they supply the inflection unreliably: in about 50% of obligatory contexts at age 3;0, and about 90% of the time by 4;0. It is not until age 5;0 or later that marking rates approach 100% (Rice et al. 1998, Marchman et al. 1999). Thus, even for a relatively simple and frequent construction, the time lag between emer-

gence and full mastery is quite substantial; for more complex constructions such as the passive, it is considerably longer (Maratsos et al. 1985, Meints 1999, Street and Dąbrowska 2010). During this protracted period of development, which continues well into late childhood and even adolescence, the learner's grammar is gradually optimized and proceduralized (Dąbrowska 2010, Karmiloff-Smith 1992), which results in a stable resilient system capable of the fast and highly accurate performance characteristic of native speakers.

Heritage language learners are exposed to two languages early in development, with the majority language typically becoming dominant in late childhood/early adolesence, and thus may not obtain enough input in the L1 to fully proceduralize their system. As a result, the heritage language remains fragile and susceptible to attrition, and linguistic performance is slower, more effortful, and more prone to error – similar in many ways to the grammatical systems of adult L2 learners (cf. Montrul 2008).

2 Role of formal education and literacy

Another way in which the linguistic experience of most heritage language learners differs from that of typical native speakers is the fact that they typically have little or no education in the heritage language, and consequently little exposure to written language. Does this matter? The general opinion among theoretical linguists is that it does not: most linguists believe that spoken (or signed) forms of language are primary, and writing is merely a representation of speech; moreover, it is a relatively recent cultural invention, and is acquired in a different way from spoken language; thus, studying written language and the development of writing has little to tell us about speakers' mental grammars.

There are some serious problems with this view. It is true, of course, that spoken or signed forms of language are primary in a phylogenetic as well as an ontogenetic sense. However, writing is not merely a representation of speech. Apart from the obvious fact that it represents certain aspects of language which are not present in speech (e.g. spaces between words, punctuation),[1] the existence of writing and a written tradition have a considerable effect on the structure of a language.

Because of the demands of online production, relationships between events are expressed largely by paratactic means in spoken language (Givón 1979, Kroll 1977, Pawley and Syder 1983). On the other hand, writers usually have more time

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1 And, of course, many aspects of speech are not represented in writing.

to edit their output, and as a result, written texts tend to be much more "condensed" and hence syntactically more complex. Over time, this leads to the development of a more syntacticized variety (or rather varieties) with specific features (relatively frequent subordination, more complex NPs, etc. – see Biber 2009, Givón 1979, 1998, Kay 1977, Pawley and Syder 1983). All mature languages have undergone syntacticization, of course, but syntacticization is clearly a matter of degree. Languages of non-literate societies of intimates tend to be less syntacticized (some, for example, appear to lack subordination);[2] while diachronic studies of languages with a long tradition of literacy show clear trends of increasing syntactic complexity (Biber 2009, Givón 1991, 2009).

This process has its ontogenetic parallel in the development of writing in children. In the early stages of literacy, children's spoken language is much more complex than their writing; but eventually writing catches up and overtakes speech in terms of complexity; still later in development, writing may affect speech (Ravid and Tolchinsky 2002). The latter is partly due to the fact that reading exposes the language learner to a much wider variety of grammatical constructions, but partly also to the fact that writing turns an ephemeral speech wave into a permanent object available for inspection and conscious reflection (Scholes and Willis 1987) – in other words, it is a kind of processing crutch that enables language users to understand, learn and produce more complex structures than is possible otherwise.

Thus, languages spoken in modern industrialized societies are, to a considerable extent, products of a long literary tradition, and the mental grammars of speakers of these languages are partly shaped by education and experience with written language. Furthermore, while linguists pay lip service to the idea that spoken language is primary, our linguistic intuitions and views on language are largely shaped by experience with written language (cf. Linell 2005) – to the point of judging some usages which are characteristic of speech and do not appear in written language as ungrammatical (Pawley and Syder 1983). This, of course, distorts our view of language, in that some of the features that we attribute to Language (with a large L) may be features of major standardized languages with a long written tradition.

Benmamoun, Montrul and Polinsky briefly touch on this issue when they ask (in footnote 1 on p. 130) whether education in the relevant language should be

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2 Such claims have been made about several languages (see Berlin 2005), most famously about Pirahã, which, according to Everett (2005, 2012), lacks any kind of recursion. They are controversial, and the disputes are not likely to be resolved any time soon, as in the early stages of grammaticalization it is often difficult to determine if a clause is grammatically dependent or independent, and the distinction is perhaps best regarded as a matter of degree (Cristofaro in press).

part of the definition of a native speaker, and conclude with a tentative *yes*, pointing out that "in countries with high literacy rates, native speakers are educated, and the level of education plays a role in language knowledge and metalinguistic awareness". They go on to point out that literacy in the heritage language counteracts language attrition in children (see also Montrul 2008, Zaretsky and Bar-Shalom 2010). I suggest literacy and formal schooling play a much larger role in language development than most linguists are willing to admit. A number of recent studies have demonstrated the existence of large individual differences in adult monolingual native speakers' mastery of a variety of grammatical constructions, including passives, quantifiers, various types of subordination, and some aspects of inflectional morphologyy (Chipere 2001, 2003, Dąbrowska 1997, 2008, Dąbrowska and Street 2006, Street and Dąbrowska 2010, 2012). Many, though not all, of these differences are related to education, and that that are show a consistent pattern: highly educated speakers perform at or near ceiling, while less educated speakers show a much wider range of performance ranging from chance (and in some cases below chance) to ceiling. It is important to note that these studies were carefully designed to ensure that the observed differences were attributable to differences in underlying linguistic knowledge and not merely a reflection of participants' engagement with the task, cooperativeness, or familiarity with the testing situation (see Dąbrowska 2012 for a summary and further discussion of this point).

It is important to note that the participants in these studies could hardly be regarded as uneducated: all had completed at least 11 years of schooling. To study the language of truly unschooled monolingual speakers, one would have to conduct research in a developing country with a high rate of adult illiteracy – which of course raises a host of practical difficulties (geographical distance, little studied languages, practical difficulties of testing illiterates, finding an appropriate control group, and so on). In this respect, research on heritage languages provides a unique opportunity. The home country varieties of many languages spoken by immigrant minorities are relatively well described, and the participants relatively easy to access and familiar with testing practices. Of course, it poses challenges as well. Since heritage language speakers are bilingual, it will be necessary to control for possible effects of the majority language, and it will not be easy to distinguish between the effects of amount of input on the one hand and type of input (home v. school, spoken v. written) on the other. But with these provisos in mind, it is crucial that we do not regard the language varieties spoken by heritage language speakers as merely deficient versions of the home country language. In some ways, they may be regarded as speakers of the relevant language in its "natural" state.

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