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Phonological feature re-assembly and the importance of phonetic cues

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It is argued that new phonological features can be acquired in second languages, but that both feature acquisition and feature re-assembly are affected by the robustness of phonetic cues in the input.

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In this response to Lardiere's article, I want to focus on the extension of her basic argument to the field of phonology. I am sympathetic to the idea that first language (L1) features can be reconfigured or re-assembled in second language (L2) to acquire new formal representations. The discussion of the work of Brown (2000) is, I believe, appropriate but I would like to illustrate some work which demonstrates that Brown's claims are too strong in the field of phonology (just as Lardiere argues that their analogues are too strong in syntax); people can acquire phonological features that are absent from their L1. Archibald (2004; 2005) discussed some of these examples but I would like to add some new ones. Gonzalez (2008) looks at the acquisition of Yucatec Mayan ejective consonants by speakers of Spanish. Spanish lacks the relevant feature necessary to represent ejectives, and yet the subjects were able to acquire the ability to accurately discriminate these sounds in their L2. There were, however, differences in their performance in onset vs. coda position, which suggest that there is a role of phonetic robustness of the input (see Wright, 2001) when it comes to the acquisition of new contrasts (in this case, the release burst in the onset makes the sounds easier to recover). Larson-Hall (2004) demonstrated that Japanese L1 speakers (whom Brown showed to have difficulty acquiring an English liquid contrast) were

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able to successfully acquire a Russian /r/. Again, it is likely that the trilled nature of the Russian /r/ (hence robust phonetic cue) is linked with its acquisition success. Whatever, feature the Japanese learners lacked when they were trying to learn English /r/, they still lack when they try to learn Russian /r/. Summerell (2007) showed that native speakers of English were able to acquire Japanese long vowels and long consonants (both of which are lacking in English) in both auditory discrimination and lexical access tasks. My position is that the L1 phonological filter can be overridden when either:

- there are robust phonetic cues to the new contrast to be acquired; or
- when the L1 structures and features can be redeployed (or re-assembled) in the L2.

The work of Mah *et al.* (2007), looking at the acquisition of English [h] by francophones, demonstrates how lack of learning can result when the input cues are subtle.

What much of this works makes clear is something that Lardiere also addresses: acquiring new features is a learning problem, not just a noticing problem. Phonological features are units of mental representation whose presence is cued by phonetic features. The key issue is this: the input cues to the implementation of a particular feature may vary cross-linguistically. Even a feature as seemingly transparent as [voice] can be implemented in several different ways, including vocal fold vibration, lengthening of the preceding vowel or a high tone on an adjacent vowel. The learner needs to be able to associate a particular input property with the feature to be acquired. I mention this in association with the claim made in the article that if two languages have fewer formal differences then this may lead to 'easier' acquisition. The degree of learning difficulty may also be influenced by the robustness of the cue to the feature not just by the differences at the phonological level.

The final point I would like to address also rises out of the claims of the Interpretability Hypothesis discussed in the article. Hawkins and Hattori (2006) claim that uninterpretable features are no longer able to be acquired by late L2 learners. Ignoring the fascinating morphological and syntactic data, the question that this raises in my mind is: how does phonology fit in? Hypothesis A would be that phonological features ([voice], [strident], etc.) are interpretable features because a change in meaning is associated with a change in features (e.g. *pat/bat*; *rake/lake*). The data I have presented would, therefore, be consistent with Hawkins' view that only interpretable features are acquirable. Hypothesis B would maintain that phonological features are uninterpretable features because it does not matter how the features are implemented just that there is a contrast. There are no semantic consequences to whether the voicing distinction in a language is spelled out by vocal fold vibration or vowel length. I find Hypothesis B more compelling: phonological features are more like uninterpretable features than they are like interpretable features. Therefore, Lardiere's arguments against the Interpretability Hypothesis are strengthened by the data that emerge when she extends her model to phonological features as well.

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