On the phonological nature of perceptual categories in L2: (non)acquisition of the /ɑ/ - /ʌ/ contrast by L2 speakers of English with Spanish as L1

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While the L2 phonology literature abounds in examples of phonological acquisition of certain segments by late-learners of a second language, little has been said about the phonological nature of the perceptual representations that these learners create; in fact, the terms used in the literature vary greatly and include abstract-level terms such "phoneme" (e.g. Hayes-Harb 2007), surface-level concepts such as "phonetic category" (Flege 1995), and less specific terms such as "perceptual category" (Escudero 2005). This work is an attempt to explore the phonological nature of these categories, with a focus on the acquisition of the /ɑ/ - /ʌ/ contrast by native speakers of Spanish with different degrees of proficiency in English. These two sounds are initially mapped onto the native category /a/, which causes that minimal pairs in American English such as 'cop' and 'cup' to be perceived as homophones.

Two experiments were conducted. Subjects were divided in three groups: one of native speakers of English (NS), a group of highly proficient nonnative speakers of English with Spanish as L1 (NNS-A), and a group of L1 Spanish speakers with low proficiency in English (NNS-B). The experiments included identification with L1- and L2-like labels, discrimination and rating tasks along synthesised /ɑ - ʌ/ vowel continua (7-step and 5-step). The evidence gathered here suggests that these are phonetic representations that can be discriminable under certain conditions in a manner similar to that of native speakers, but that are nevertheless identified as tokens of the same L1 category, regardless of the non-native subject's experience and proficiency in English.

From these results it can be concluded that while late-learners of L2 English do not create new phonemic categories for /ɑ/ and /ʌ/, they are able to perceive a difference that nevertheless does not seem to be enough to create a category split. These findings have implications for a theory of learnability in SLA, since it suggests that late-learners have partial access to UG insofar as input alone leads to learning within the phonetic domain but not to creation of new phonemic categories.