

Individual variation and sound change in the context of first language acquisition

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In our talk, we first explain why we will focus on individual variation in infants and young children, the populations typically associated with the establishment of one's first native language. We note that puberty is not the endpoint of acquisition since even changes in phonology can be statistically detected past this developmental time period. The reason for focusing on the early period, however, is that infancy and early childhood is, according to much evidence, the period during which much of the native perceptual phonology is established, and that the native perceptual phonology may establish the primary bounds to certain aspects of speech processing and production.

Focusing on the literature on infants and children, then, one can say that there are two very different ways in which the concept of individual variation has been approached, roughly as equivalent to *idiosyncratic behavior*, or as *behavior that varies within a distribution*. The former may be viewed as a misnomer; the latter may be criticized because variation in some outcome may not indicate reliable differences but merely noise especially given the high variability found in children at a particular point in time. Particularly within the latter stream of work, no talk on individual variation in the context of childhood can be complete without the admission that a certain proportion of this work probably over- or mis-estimates the importance of individual variation due to uncontrolled repeated significance testing and the use of small sample sizes.

Setting aside these conceptual and empirical criticisms for the moment, we next attempt to review the literature on early acquisition through the prism of what is relevant to sound change. To start, let us posit a very general framework regularly used to conceptualize *acquisition*, namely as the process resulting from the interaction between an “acquirer” system and a set of experiences, the “input”. Within this framework, individual variation (IV) can be attributed to the **acquirer** and/or to the **input**.

We will argue that **IV in the acquirer**, at least in the way that it is currently studied, does not seem to bear on any of the aspects of sound change laid out on the integrative statement (specifically, whether IV in children contributes to a. the pool of possible changes, b. their phonologization, or c. their propagation). Specifically, a host of acquisition research documents idiosyncratic behavior and/or (systematic) variation in the timeline (i.e., ages at which benchmark X is achieved) and time course (i.e., the presence and sequence of benchmarks X, Y, Z). IV in the time course of development appears to be directly irrelevant to sound change as, by definition, for typical development, IV would disappear after a certain point (i.e., if vowels are learned at some point between 6 and 12 months within a given individual, but all individuals have learned their vowels by age 16 months, then it is not important when precisely these representations were set). IV in the time course of acquisition is most salient in the case of delays, disorders, or socially stigmatized speech; and relevantly, the literature in acquisition here mostly treats these cases as being undesirable features, to be remedied. In this sense, then, literature on IV in the time course of acquisition is difficult to read within the lens of sound change.

There is relatively little work on IV in the input, and when one tries to view the literature on this input through the lens of sound change, it is difficult to find examples of acquisition processes that would be relevant to sound change. There are, however, some exceptions; for instance, two recent studies bear on toddlers' perception of geographical variants, studying whether all phonological variants similarly serve word comprehension, or whether only those used by the toddlers' immediate family and/or local context are interpreted. The literature on children's own (re)production of variation present in their input has been researched to a certain extent from a sociolinguistic perspective. Notice that in all of these cases, the key question is to what extent children capture and reproduce IV - as such, such research may not be necessary when attempting to understand and describe sound change if children are not crucial agents in this process.

We therefore end with a reflection, from largely conceptual grounds, on how individual variation in early first language acquisition might relate to sound change. We argue that, by and large, it is extremely unlikely that individual variation among children impacts sound change in any way that would extend to the larger language community. For instance, children are not social hubs and they are not high-prestige speakers, which predicts that they will seldom serve as leaders of change, and thus their variability will have little impact on sound change. This is not to say that children's acquisition never shapes the languages they speak -- on the contrary, we believe that there is ample evidence that general learnability constrains and guides language evolution, probably accounting for many typological tendencies. Instead, we conclude that *individual variation in native acquisition* per se should not be prioritized when reflecting on factors that shape sound change specifically.