

# [ɪz 'a? 'pa:stə 'ʃɪgə]

## *Phonetic legacies in phonological development: A five-year case study*

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Language variation of the type found in multidialectal environments is frequently overlooked in the language acquisition literature (Sim & Post, 2024), and the development of vowels is considered the 'poor relation' in language acquisition research (Davis & MacNeilage, 1990), yet a close look at the complexities of vowel development in a multidialectal environment can provide insights into the ways in which children process and resolve complex phonological information in the world around them.

This longitudinal case study presents an analysis of the phonological development of a single child growing up in a multidialectal environment in rural North Yorkshire, UK, between the ages of 2;1 and 6;11. The child's parents are both from southern UK counties, therefore their vowel systems differ from the local area, with the site of notable differences being the BATH/PALM/START and FOOT/STRUT lexical sets.

The child was recorded in naturalistic environments at frequent intervals for nearly 5 years, with data being analysed at 5-6 points in each year. His vowels were analysed impressionistically, with acoustic analysis being performed on a subset of data each year to confirm the impressionistic analysis.

The shift from the vowel system heard in the home to a local system was tracked for each lexical set, revealing complex and unexpected patterns of acquisition. Previous research (e.g. Payne, 1980) has proposed that the complexity of difference between a first and second dialect is key in determining successful acquisition of a new accent. Contrary to expectations, here, the acquisition of the local BATH vowel, which was ostensibly relatively complex due to relative low frequency and its lexical distribution, was the most readily acquired, while the apparently simpler job of collapsing the STRUT and FOOT lexical sets into one, as found in local dialects, appears to have been slower and has left behind phonetic traces of the multidialectal environment.

Acquisition of the local variants always happened at sub-segmental level, i.e. adjustments in tongue advancement, jaw position or lip rounding, before a fully local realisation was recorded, resulting in an evolving collection of hybridised vowels in the child's speech.

This analysis indicates that in the first instance, children orient to articulatory gestures rather than phonemes, and that the complexity of relationship between vowel systems in the home and local varieties may not be enough to determine the relative speed of acquisition of new lexical set patterns. A parent's phonological system may also leave a phonetic legacy in a child's system, even after acquisition is otherwise apparently complete.

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