

Age Is More Than Time: Sound Change at the Edges of the Lifespan

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Apparent-time studies (Labov 1978) have shown that phonetic differences between speakers of different ages can reveal community-level sound changes in progress. But chronological age is not itself an explanation of change. At the lifespan's edges, "age" as a variable in statistical models of sound change conflates physiology, vocal-tract anatomy, motor control and social experiences (Eckert, 1997; Hejná & Jespersen, 2021, 2022). This paper brings together two projects on New Zealand English (NZE) vowels, one which explores preschoolers acquiring a variable vowel system in motion and the other examining vocalic changes later in life, and considers what chronological age can and cannot tell us about sound change.

The preschooler project examines vocalic changes in children aged 3;11 to 5;5 alongside apparent time changes in an adult data set from the same community. The children neither straightforwardly reproduce community targets as they age, nor do they advance ongoing changes. Their vowels are often more conservative than expected and sometimes seem to move against community trajectories. Viewed as a series of separate sound changes, the vowel results appear disparate and random, but viewed as a system, they reveal coordinated hyperarticulation in the children's speech which may reflect developing anatomy and motor control, child-directed speech, or priming from the task itself (Kalashnikova & Burnham, 2018; Ménard et al., 2020). The later-life project combines vowel data from existing corpora of spontaneous NZE, panel data and novel data from AgeTalk, a corpus of New Zealanders aged 65 to 100, to examine changes in vowel space area. Vowel-space area follows a curvilinear trajectory consistent with earlier studies (Gahl & Baayen, 2019; Torre & Barlow, 2009) i.e. it expands into middle age and contracts again in later life, leaving the youngest and oldest adults with the most centralised vowel spaces. However, women show a larger and earlier peak than men which points to both biological and social age-grading (Wagner 2012) acting together.

Across both projects, the same lessons seem to emerge. "Age" is an invaluable variable in our work on sound change, but it is underspecified. Acoustic differences between age groups may index change in the community but understanding sound change at the lifespan's edges requires system-level analysis (i.e. not individual vowel-by-vowel analyses) and data that connect speech to both the speakers' physiological and social lives.

References

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