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**The acoustic and perceptual bases of diachronic /u:/-fronting in
Standard Southern British**

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In a recent experiment concerned with diachronic /u:/-fronting in Standard Southern British, it was shown both that the /u:/ category boundary was perceptually retracted for older compared with younger listeners of this variety, and that they compensated perceptually to a greater extent for the coarticulatory fronting effects of the preceding consonant on /u:/ in words like *used*. In the present study, these perceptual differences were related to the same speakers' productions of words containing a /u:/ nucleus in a fronting (e.g., '*used*') and non-fronting (e.g., '*swoop*') contexts. The relative acoustic distance of /u:/ between front and back vowels was measured in a three-dimensional space formed by applying the discrete-cosine-transformation to the entire F2-trajectory shape separately for each speaker. Compatibly with their perceptual responses, older listeners had a more retracted /u:/ on this measure and exhibited a greater coarticulatory influence of the preceding consonant. The mechanism of this sound change is considered both from the point of view of a shift in the perceptual compensation for coarticulation and recent developments in episodic models of speech perception