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From the ears to the eyes: using pupil size to explore the perceived appeal of languages

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Abstract

Are some languages more appealing than others? And do specific linguistic features, such as phonetic or prosodic characteristics, contribute to this perceived beauty? Previous studies have been inconclusive, mostly because they primarily relied on subjective ratings prone to social desirability biases. To overcome this limitation, we explore a novel approach, using pupil size as a proxy for linguistic appeal. Pupil dilation has been linked to pleasurable stimuli, such as music and environmental sounds, suggesting similar reactions for appealing languages. In our experiment, participants listened to artificial languages modeled on the phonetic structures of real languages, while their pupil size was measured. By combining this eye-tracking data with traditional ratings, we demonstrate that (a) eye-tracking is a reliable method for investigating phonaesthetic appeal and (b) languages with different linguistic characteristics vary in their perceived attractiveness. This interdisciplinary approach sheds light on the cognitive processes underlying the aesthetic perception of languages.