Stylistic Coherence in Individual Prosodic Variability

Patrick Callier

Georgetown University

The past decade has witnessed an explosion of studies comparing speech rhythm across various language varieties, many using the Pairwise Variability Index (PVI, [6]). This renewal of interest in the cross-linguistic typology of prosodic rhythm has been accompanied by cautions that common acoustic measures of rhythm are highly variable between speakers ([5]). This paper introduces evidence that, far from representing noise or unreliability, such variability is itself meaningful.

Many PVI studies attempt to reduce between-speaker variability with controls on the materials used, and some ([1]) have assessed the relative suitability of different "versions" of the PVI according to their degree of inter-speaker stability. Even the numerous studies that have used the PVI to examine within-language variation, by dialect ([6], [8]), native speaker status ([7]), or other a priori criteria, have paid minimal attention to the meaning of individual differences on rhythmic measures, despite findings from [5], [4] and [2] clearly demonstrating the need for such considerations.

I examine data from three female and three male characters in the (Mandarin) Chinese serial TV drama *Nü ren hua* 'Woman flowers' in order to investigate individual variation in prosodic rhythm. I measured normalized syllabic PVI (nSPVI, [1], [7]), the variation coefficient of ΔS (VarcoS, [3]) and another, non-prosodic, suprasegmental variable, the presence of creaky phonation. Figure 1, below, summarizes the measurements of these variables for female speakers HMR (N = 230 syls), LXL (N = 244 syls), and OYX (N = 280 syls).

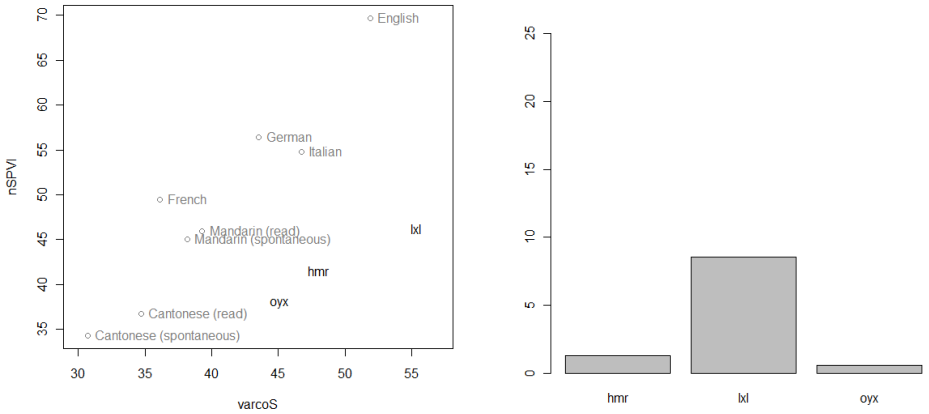

Figure 1. Left, nSPVI plotted against VarcoS for three speakers, compared to values of same measures for several languages ([7]); right, % of creak (secs/sec) per speaker.

I find that variation between the speakers is quite pronounced, and in particular the speaker LXL is more "stress-timed" than OYX and HMR on both measures of durational variability. But this distinction is not random noise: a similar difference emerges between LXL and the others on the unrelated measure of creaky phonation, demonstrating a degree of stylistic

coherence for each speaker and suggesting that PVI variability is patterned even among speakers of almost identical language varieties and may be stylistically meaningful.

References

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