

Human voice fundamental frequency and intensity in charismatic political speech

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Charismatic political leaders use vocal behavior to persuade their audience, achieve goals, arouse emotional states, and convey personality traits and leadership status. During this seminar, I will show investigations concerning fundamental frequency (f₀) and sound pressure level (SPL) manipulation in female and male French, Italian, Brazilian, and American politicians. Speech corpora were collected from two formal communicative contexts (leaders address followers or other leaders) and one informal communicative context (dyadic interaction), based on the persuasive goals inherent in each context and on the relative status of the listeners and speakers.

During this presentation I will show measurements of f₀ and SPL used in political speech which reveal cross-gender and cross-culture common vocal abilities as well as language- and speaker-specific differences in charismatic political speech. Analyses show cross-gender and cross-language similarities in the manipulation of average f₀ and in f₀ and SPL ranges in all communicative contexts. Patterns of f₀ manipulation were shared across genders and cultures, suggesting this dimension might be biologically based and is exploited by leaders to convey dominance. Ranges for f₀ and SPL seem to be affected by the communicative context, being wider or narrower depending on the persuasive goal. Analyses also show language- and speaker-specific differences in the acoustic manipulation of f₀ and SPL over time. These findings are consistent with the idea that specific charismatic leaders' vocal behaviors depend on a fine combination of vocal abilities that are shared across cultures and genders, combined with culturally- and linguistically-filtered vocal strategies.

Moreover, I will also discuss data concerning the perceptual role of vocal pitch and loudness as cues of the speakers' chronological age and how they are used by listeners to assess political speakers' vocal attractiveness (in terms of both perceived charisma traits and types and emotional arousal).