Background
Power, dominance, hierarchy, and status can be seen as a coordinator of social thought, behavior, and emotions (Hall & Coats, 2005). Nonverbal behavior, or any behavior that is not part of formal language, is significant to social interactions which are key to effective communication (Ellison & Dovidio, 1985). Henley (1977) described the link between power and nonverbal behavior as intimate and advantageous.

Research has repeatedly shown correlations between emotional states and various vocal parameters (Scherer, 1989). However, the research focus has largely remained on emotional states. This has left other aspects of interpersonal communication, such as power, unexamined.

Present Investigation
Power has been conceptualized to focus on the impact people have on others rather than influential control over their fate. In this sense, we define communicative power as the degree to which a person can influence the thoughts, feelings, and behaviors of another.

We assessed perceived power, and precise vocal parameters of 105 college-aged participants. Each participant presented 9 statements in a positive, negative, or neutral valence while being video recorded. The content of the statements was controlled for and mimicked everyday phrases.

H1: Several vocal parameters will be strongly correlated with perceived power.

H2: Several vocal parameters will be negatively correlated with perceived power.

Method
Actors were instructed to deliver their lines in such a way to communicate a specific valence for each statement (positive, negative, or neutral) without changing the wording of the statement itself. Valence was randomly assigned for each actor.

Power ratings were given by trained coders for each actor for each of the 9 statements. Average power ratings were calculated across all coders for each statement.

Precise vocal parameters were extracted from each actor’s given statement and run through the sound analysis program Praat.

Examples of vocal parameters:
- Duration unvoiced
- Intensity Max
- 95% Percentile of Intensity
- Correlation
- Voice breaks

As it turns out, the bottom output was rated as more powerful.

This output shows:
1. The number of breaks in regular speech
2. The overall loudness of the participant
3. How much of their voice range was used

Results
The results of this study show several vocal parameters correlate significantly with ratings of perceived power in males across different neutrally worded sentences. These findings partially support the hypotheses. These findings give valuable insight into which characteristics of the voice might be used when judging the communicative power of an individual. Unfortunately, the inter-rater reliability for female power was too low to report results on. However, this would seem to indicate how power is perceived between genders when forming impressions. For example, female power may be more relational and interactional, while the present study focused on power ratings of an individual as they delivered statements to a camera.

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