

## Linguistic Adaptation and Environmental Sensitivity (poster)

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Linguistic variation enables speakers to adapt to social, cognitive, and contextual constraints, optimizing communicative efficiency. My research, grounded in information theory (Shannon, 1948; Jaeger & Levy, 2007; Piantadosi et al., 2011), examines how variation modulates information transmission. Using surprisal analysis and entropy-based measures, I have modeled linguistic adaptation in response to communicative pressures (e.g., Degaetano-Ortlieb & Teich, 2019, on language change in academic writing; Degaetano-Ortlieb et al., 2021, on women's linguistic adaptation in formal vs. informal contexts). This study extends these insights to explore the role of environmental sensitivity in communication.

Using a within-subjects design, we launch a pilot study where participants engage in two interview scenarios—one with a supportive and one with a skeptical interviewer—allowing us to examine linguistic adaptability through features such as lexical variation, sentence complexity, politeness strategies, and emotional framing. A key focus is whether highly sensitive persons (HSPs) exhibit greater linguistic shifts between conditions, reflecting heightened responsiveness to communicative environments. Additionally, a filler task assesses sensitivity-driven intervention in a public speaking scenario.

To analyze adaptation patterns, we employ regression models and computational text analysis methods, including Kullback-Leibler Divergence, to quantify linguistic shifts. Understanding communicative adaptation in these contexts contributes to broader discussions on how individuals optimize language use under varying social constraints. By connecting sociolinguistic and computational approaches, this study provides a framework for integrating linguistic variation research with environmental sensitivity, offering new insights into how communicative pressures shape individual differences in language production. These findings may inform both theoretical models of communication and practical applications in professional and social interaction.

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