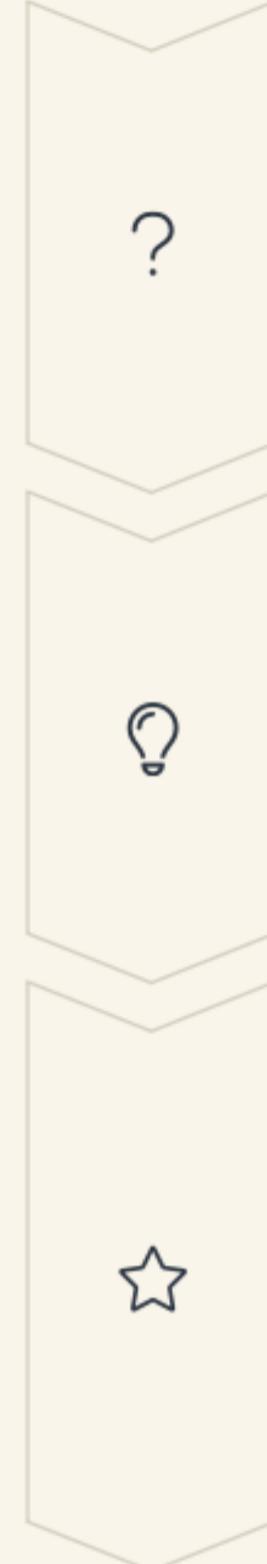


Modeling Linguistic Variation and Adaptation: Insights for Environmental Sensitivity Research

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Motivation and RQ



Research Gap

While environmental sensitivity's impact on emotional outcomes is well-documented, its **influence on language use and communicative adaptation** remains **under-explored** in contemporary linguistic research.

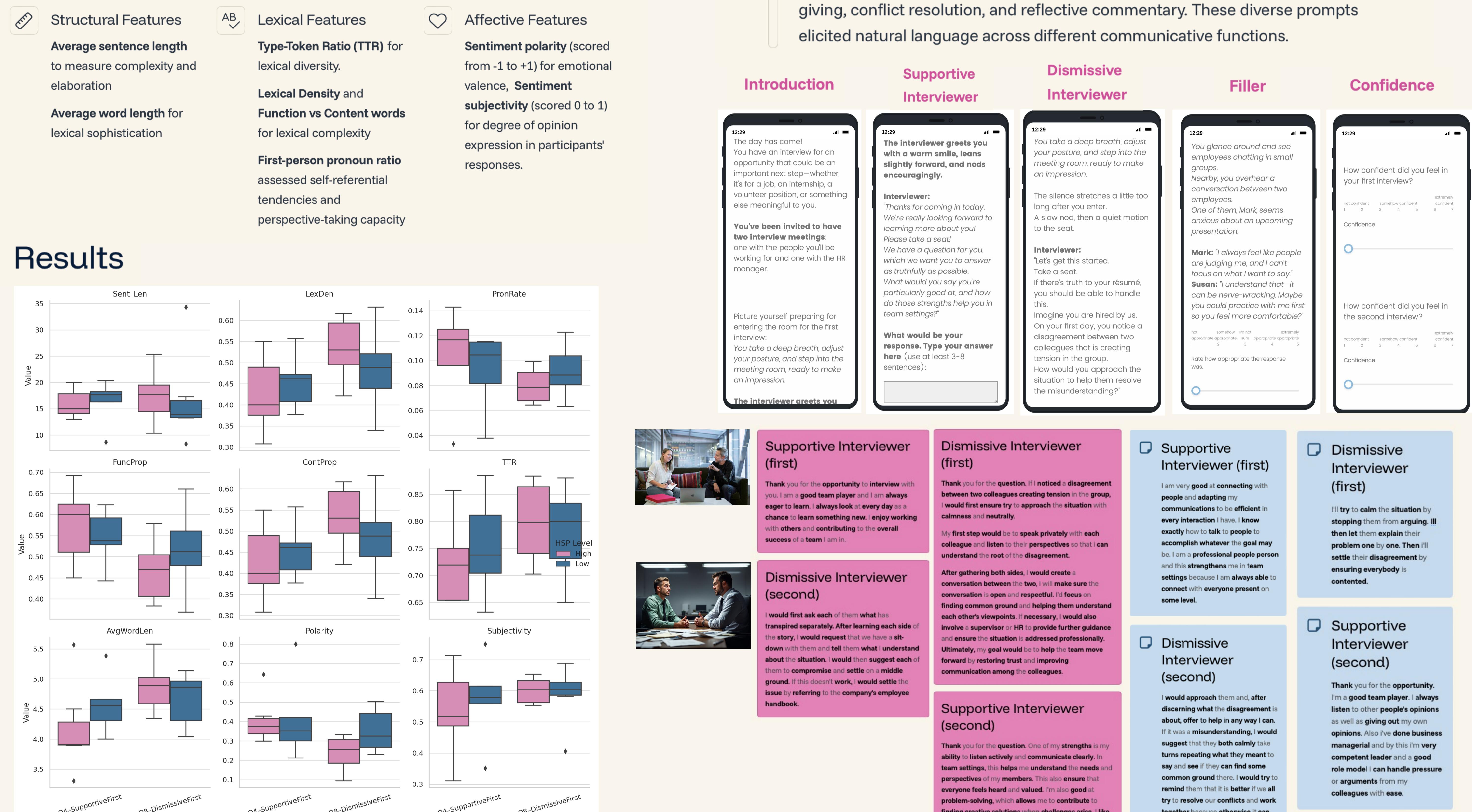
Research Question

Do individuals with high versus low HSP levels demonstrate different **linguistic adaptation patterns** when responding to supportive versus dismissive interview contexts?

Hypothesis

We hypothesized that **high HSP individuals would demonstrate greater communicative flexibility and adaptation**, particularly in challenging (dismissive) environmental contexts that require more nuanced social navigation.

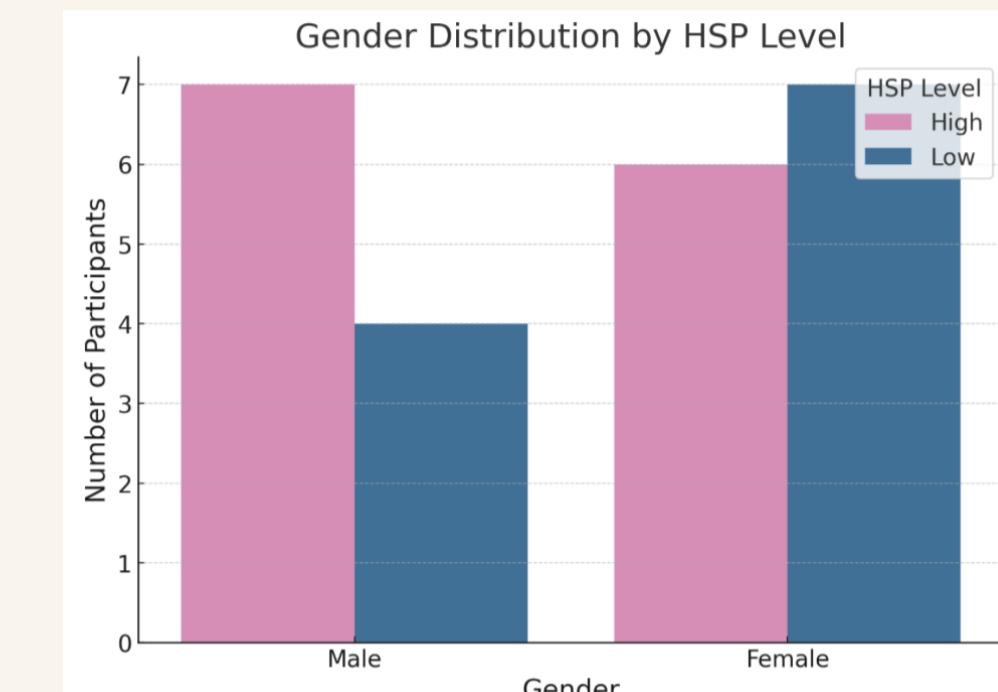
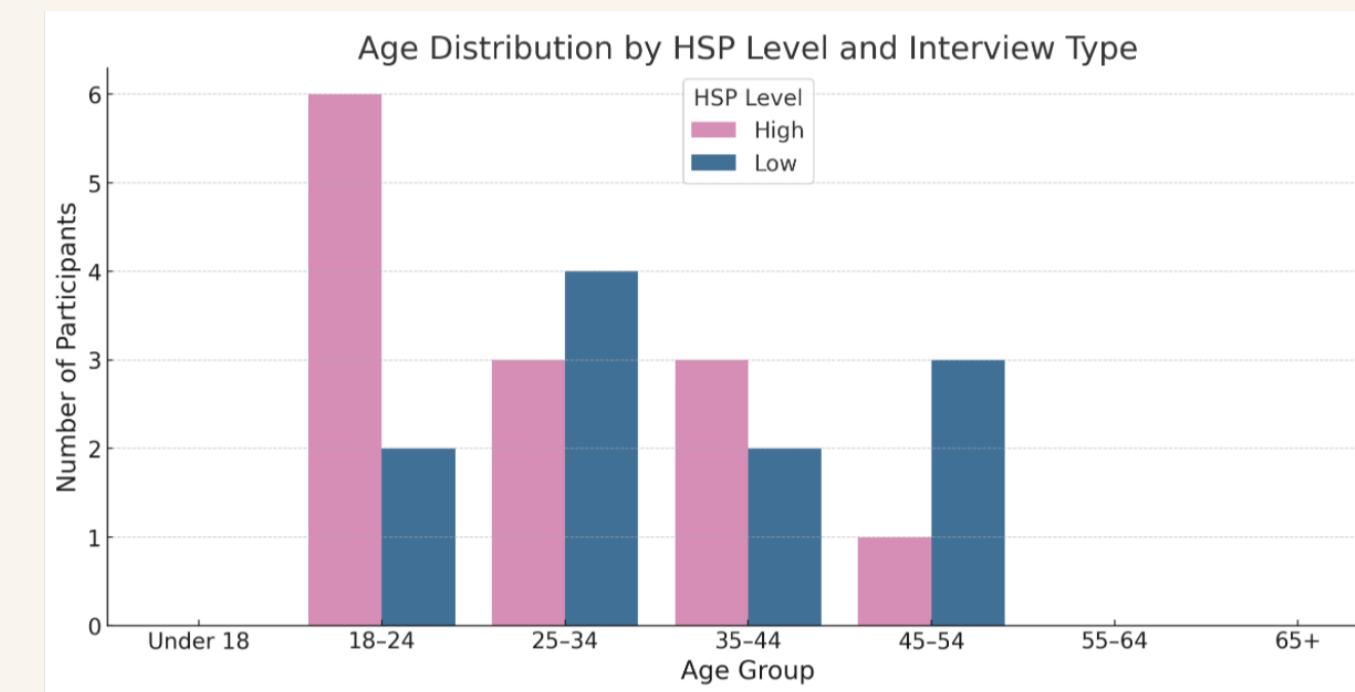
Linguistic Feature Extraction



Methodological Approach

Participant Recruitment

Participants (N=24) were recruited via **Prolific** and completed a validated HSP questionnaire. Based on their scores, they were classified into high or low HSP groups using a median split methodology for comparative analysis.



Experimental Design

Participants engaged in a **story completion interview simulation**, responding to open-ended prompts embedded in either **supportive or dismissive contextual environments** (between-subjects design).

Data Collection

Textual responses were collected across four domains: self-description, advice-giving, conflict resolution, and reflective commentary. These diverse prompts elicited natural language across different communicative functions.

Introduction

The day has come! You have an interview for an opportunity that could be an important next step—whether it's for a job, an internship, a volunteer position, or something else meaningful to you.

You've been invited to have two interview meetings: one with the people you'll be working for and one with the HR manager.

Picture yourself preparing for entering the room for the first interview: You take a deep breath, adjust your posture, and step into the meeting room, ready to make an impression.

The interviewer greets you

Supportive Interviewer

12:29 The interviewer greets you with a warm smile, leans slightly forward, and nods encouragingly.

Interviewer: "Thanks for coming in today. We're really looking forward to learning more about you! Please take a seat!"

We have a question for you, which we want you to answer as truthfully as possible. What would you say you're particularly good at, and how do those strengths help you in team settings?

What would be your response? Type your answer here (use at least 3-8 sentences):

Dismissive Interviewer

12:29 You take a deep breath, adjust your posture, and step into the meeting room, ready to make an impression.

The silence stretches a little too long after you enter. A slow nod, then a quiet motion to the seat.

Interviewer: "Let's get this started. Take a seat. If there's truth to your résumé, you should be able to handle this." Imagine you are hired by us. On your first day, you notice a disagreement between two colleagues that is creating tension in the group. How would you approach the situation to help them resolve the misunderstanding?

Filler

12:29 One of them, Mark, seems anxious about an upcoming presentation.

Mark: "I always feel like people are judging me, and I can't focus on what I want to say."

Susan: "I understand that—it can be nerve-wracking. Maybe you could practice with me first so you feel more comfortable?"

Rate how appropriate the response was:

Not appropriate 1 2 3 4 5 6 7

Confidence

How confident did you feel in your first interview?

Not confident 1 2 3 4 5 6 7

How confident did you feel in the second interview?

Not confident 1 2 3 4 5 6 7

Supportive Interviewer (first)

Thank you for the opportunity to interview with you. I am a good team player and I am always eager to learn; I always look at every day as a chance to learn something new. I enjoy working with others and contributing to the overall success of a team I am in.

My first step would be to speak privately with each colleague and listen to their perspectives so that I can understand the root of the disagreement.

After gathering both sides, I will create a conversation between the two, I will make sure the conversation is open and respectful. I'd focus on finding common ground and helping them understand each other's viewpoints. If necessary, I would also involve a supervisor or HR to provide further guidance and ensure the situation is addressed professionally. Ultimately, my goal would be to help the team move forward by restoring trust and improving communication among the colleagues.

Dismissive Interviewer (first)

I would first ask each of them what has transpired separately. After learning each side of the story, I would request that we have a sit-down with them and tell them what I understand about the situation. I would then suggest each of them to compromise and settle on a middle ground. If this doesn't work, I would settle the issue by referring to the company's employee handbook.

Supportive Interviewer (second)

Thank you for the question. One of my strengths is my ability to listen actively and communicate clearly. In team settings, this helps me understand the needs and perspectives of my members. This also ensures that everyone feels heard and valued. I'm also good at problem-solving, which allows me to contribute to finding creative solutions when challenges arise. I like to offer new approaches to different situations and I also like collaborating to refine an idea. I enjoy bringing a constructive mindset to the table. My ability to stay calm under pressure also helps keep the team focused during stressful situations. Overall, I believe my strengths help create a positive, open environment where everyone can work together effectively.

Dismissive Interviewer (second)

I would approach them and, after discerning what the disagreement is about, offer to help in any way I can. If it was a misunderstanding, I would suggest that both calmly take turns repeating what they meant to say and see if they can find some common ground there. I would try to remind them that it is better if we all try to resolve our conflicts and work together because otherwise it can lead to grudges being held and make all of our jobs a lot harder.

A linear mixed-effects model with random intercepts for participants, testing fixed effects of context (Q4 vs Q8), HSP sensitivity, and their interaction.

Feature	Effect Q8 (High HSP)	p-value	Interaction (Q8 × Low HSP)	p-value	Interpretation
Lexical Density	+0.106	0.009	-0.078	0.22	High HSPs adapt more lexically
Function Word %	-0.106	0.003	+0.078	0.051	High HSPs drop function words; Low don't
Pronoun Rate	-0.025	0.000	+0.026	0.19	High HSPs depersonalize in Q8
Content Word %	+0.106	0.009	-0.078	0.22	Mirrors lexical density pattern