



GENDERED SPEECH, GENDERED MACHINES:

Human-AI Interaction as a Sociolinguistically Structured Communicative Act

Research proposal by Maria Nightingale

AGENDA

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02 Research questions

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OVERVIEW

WORKING TITLE: Gendered Speech, Gendered Machines: Human-AI Interaction as a Sociolinguistically Structured Communicative Act

A robust and growing literature documents a persistent ~20% gender gap in AI adoption, identifying institutional and network friction as primary barriers — yet leaving unexplored how gender-structured communicative norms may themselves shape the quality, depth, and nature of AI interaction.

We propose shifting the lens: not how women prompt, but how the communicative act with AI works for them. Sixty years of sociolinguistics establish that gender shapes not just what people say, but how they frame requests, negotiate authority, express uncertainty, and position themselves in asymmetric relational exchanges (Lakoff, 1975; Tannen, 1990). Applied to human-AI communication — where this framework has yet to travel — it promises both a new perspective on emerging human behaviour and concrete implications for AI design and adoption.

02

RESEARCH QUESTIONS

01

Do measurable differences exist in how women and men structure communicative acts when interacting with AI — in terms of linguistic markers, request framing, hedging, directness, and relational positioning?

02

To what extent are these differences predicted by gender-structured social norms, rather than technical literacy or demographic variables?

03

What are the implications of gendered communicative patterns for AI system design, inclusivity, and adoption strategy?

THEORETICAL FRAMEWORK (STARTING POINT)

<u>Anchor</u>	<u>Scholar(s)</u>	<u>Application</u>
Speech Act Theory	Austin (1962); Searle (1969)	Prompting as illocutionary act with performative dimensions
Gendered Language	Lakoff (1975); Tannen (1990)	Hedging, politeness, indirectness as gendered communicative strategies
Social Shaping of Technology	Bijker & Law (1992); Wajcman (2004)	Adoption patterns as socially and institutionally structured
Feminist STS	Haraway (1991); Wajcman (2007)	Technology as gendered artifact; feedback loops in design
Frame Analysis	Goffman (1974)	How users position themselves relationally in asymmetric exchanges

PROPOSED METHODOLOGY - OVERVIEW

Phase 01

Hypothesis development (qualitative)
to surface potential gendered
communicative patterns

Phase 03

Hypothesis validation via modeling of
linguistic features of the corpus
against gender and social variables

Phase 02

Corpus construction and analysis
(quantitative/computational)

[More details in next pages>>](#)

Tools

4–6 gender-stratified focus groups
15–20 in-depth interviews

Goal

Surface communicative patterns and social reasoning; generate testable hypotheses on gendered speech acts in AI interaction

Primary route

Crowdsourced anonymized AI chat logs (opt-in participants); and/or data partnership with LLM providers (OpenAI research data program; EU AI Act compliant data sharing frameworks)

Secondary route

Social media corpus (Reddit, X/Twitter) — sentiment analysis and linguistic pattern coding by gender, using validated computational sociolinguistics methods

Unit of analysis

linguistic features of prompts (hedging markers, question framing, directness, register, relational cues)

Hypotheses validation

Quantitative testing of Phase 1 hypotheses against corpus data
Statistical modeling of linguistic features against gender and social variables
Interpretive loop back to qualitative findings

Data Ethics

All data collection will be designed in compliance with GDPR (EU 2016/679) and French national data protection standards (CNIL). Chat log collection will operate on explicit informed consent with full anonymization prior to analysis.

No personally identifiable information will be retained. Social media data will be collected under platform research terms and processed in aggregate. Ethical review will be sought through the host institution's IRB-equivalent body (Comité d'éthique) prior to Phase 1 fieldwork. Where LLM provider data partnerships are pursued, formal data sharing agreements will govern access, use, and disposal. The research design explicitly excludes any data that cannot meet these standards.

EXPECTED CONTRIBUTION

01

First empirical framework treating human-AI interaction as a gendered communicative act, distinct from adoption behavior

02

Methodological bridge between sociolinguistics, gender studies, and human-computer interaction

03

Practical design implications for AI systems aiming at inclusive adoption

04

Theoretical extension of speech act theory into computational communication contexts

WHAT I'M LOOKING FOR FROM YOU:

- 01 Feedback on the research framing — does it resonate with your current work?
- 02 A 20-minute conversation to explore potential fit and supervision
- 03 A pointer — if this isn't your area, who in your network should I be talking to?

APPENDIX

01

BIO: MARIIA NIGHTINGALE

Contact: marianightingale.ai@gmail.com

Maria Nightingale is a practitioner-researcher at the intersection of communication theory, gender studies, and human-AI interaction. She holds a Specialist degree in Philology and Theory of Communication from Lomonosov Moscow State University (2012), where her research examined fanfiction as participatory narrative — an early engagement with how users reshape and co-author communicative systems through their own inputs, a dynamic structurally analogous to human-AI prompting. She subsequently completed an MSc in Marketing Management at Plekhanov Russian University of Economics (2019), and holds additional engineering certification positioning her for quantitative, cross-disciplinary research design.

Her professional trajectory spans over a decade in analytically demanding roles: brand strategy and communications; educational services; and ten years of business transformation consulting at Boston Consulting Group, where she led data-intensive cross-sectoral projects across EMEA, NA and LATAM, designed large-scale qualitative and quantitative research programs. She is a published novelist and communicator with a demonstrated public readership, and is fluent in English, Russian and French.

Her research focus addresses a significant gap in existing literature: the absence of a communicative and sociolinguistic lens on gender differences in human-AI interaction — specifically, how gender-structured social norms shape the act of communicating with AI, beyond adoption metrics.

02

ONE-PARAGRAPH RESEARCH APPROACH

My research sits at the intersection of communication sciences, gender studies, and human-AI interaction. While the gender gap in AI adoption is well-established at ~20% — documented, for example, in a recent meta-analysis across 76 sources and 100+ countries (Cranney et al., HBS WP 25-023, 2024) — it is treated as behavioral or attitudinal. I believe it can be deepened through a sociolinguistic lens: specifically, how gender structures the communicative act of interacting with AI itself. My proposal reframes human-AI prompting as a speech act shaped by gendered social norms around authority, responsibility, hedging, and relational positioning, drawing on speech act theory, Tannen and Lakoff's gendered language frameworks, and feminist STS. The methodology I have in mind combines qualitative hypothesis development (focus groups and in-depth interviews) with corpus analysis of anonymized AI interaction data — building toward a mixed-methods contribution with both theoretical and design implications. I hold a degree in Philology and Communication Theory (Lomonosov MSU) and an MSc in Marketing Management, and bring over a decade of experience in data-intensive research and cross-sectoral strategic analysis. I would welcome the opportunity to discuss alignment with your current work.