

Language, Social Stereotypes, and Cognition

Instructors: Dr. Andrea Beltrama (<https://andreabeltrama.com>) and Dr. Lacey Wade (<https://www.laceywade.com>); University of Pennsylvania; Linguistics Department

Target audience: Advanced seminar (300- level)

Length: 4-weeks

Course Description

Social stereotypes – i.e., widely shared beliefs that specific traits or acts are characteristic of particular social groups – play a major role in different domains of human reasoning and behavior, as shown by work across the cognitive sciences (psychology: Cuddy et al. 2003; Fiske 2018; philosophy: Fricker 2007; Davis 2016 i.a.). In a parallel way, linguistic research has illuminated the central role of these social constructs in speech production and perception, as well as in meaning interpretation (Levon 2014; D’Onofrio 2016; Beltrama and Schwarz 2021; Wade 2022).

Yet, since stereotypes often reflect overgeneralized or simply inaccurate beliefs, these are not straightforwardly accounted for under existing cognitive models of language. While several approaches have accounted for social and contextual factors in speech processing and production, these rely heavily on past experience linking linguistic variants to social factors via probabilistic inference (e.g., Kleinshmidt & Jaeger 2015) or through phonetically- and contextually- detailed episodic memory storage (e.g., Johnson 2005). As a result, much remains to be seen on how these social representations should be incorporated in theories concerned with capturing different domains of linguistic communication – e.g., speech processing; pragmatic inferences; identity construction.

This seminar addresses this issue by fostering critical discussion around questions central to our understanding of the link between stereotypes and linguistic (and human) cognition.

- 1) How do listeners map particular social stereotypes onto speakers, and conversely, reason about speakers’ stereotypical traits to process their speech?
- 2) How do people reason about stereotypes in language vs. other domains of behavior (e.g., decision making; credibility ascription)?
- 3) How can the study of stereotypes in linguistic communication lead us to better understand the role of these social constructs in reproducing bias/discrimination towards particular groups?

Students will engage these questions in a variety of capacities. First, they will read – and react to – state-of-the-art primary literature on the emergence and impact of stereotypes on linguistic and non-linguistic behavior – covering a wide range of approaches across linguistics, psychology, and philosophy.

Second, they’ll get in-depth exposure to two concrete, ongoing case studies from our research, concerning the influence of social stereotypes on pragmatic reasoning and phonetic convergence/imitation respectively. Our complementary expertise as two scholars trained in semantics and phonetics respectively – but interested in theoretical question questions that largely overlap at a

broader level – will ensure an ideal balance between depth and breadth, making it possible to consider linguistic phenomena through the prism of different empirical perspectives, while coherently implementing broad empirical coverage of the course.

Third, students will engage in independent work, either in the form of a novel research proposal, or a critical re-analysis of published work in light of the theories and approaches presented throughout the course (see below for details); this will allow them to re-combine and enrich the basic theoretical tools they have acquired in previous coursework, while taking a first step towards applying the insights from this seminar towards building their own research trajectory.

Course Motivation

Recent years have seen an unprecedented integration of the social and cognitive dimensions of language—a trend we’ve actively contributed to. Andrea Beltrama helped establish a *socio-semantics-pragmatics research* area, affording a novel perspective on the close-knit interaction between the the logical, contextual and socio-cultural dimensions of linguistic meaning; Lacey Wade spearheaded novel work intersecting sociolinguistics, psycholinguistics, and phonetics, illuminating how sociolinguistic knowledge is acquired, mentally represented, and utilized in perception/production. As our careers led us to share an office at UPenn, we quickly realized a difficult yet stimulating challenge lay ahead: conceptualizing a model of linguistic cognition that successfully accounts for the wide range of linguistic behavior that is influenced by social information—particularly stereotypes.

We’re thrilled at the idea of sharing insights from our work and the literature that inspired it with the Institute’s exceptionally diverse student body, especially introducing early-stage graduate students to a promising novel research area that may shape their own research trajectories. The course will do so by demonstrating the challenges involved in combining different theories/methods to investigate specific case studies, and—crucially—exemplifying how the study of language yields insights into human behavior and cognition more broadly—in a way that transcends traditional disciplinary boundaries.

Relevance to the Institute Theme

Our course affords a novel, socially-informed perspective to link the study of language to the study of the human mind. Specifically, by engaging with work from different scholarly traditions, and yet coherently focused on a theme central to human cognition, students will gain a novel perspective on the mechanisms whereby interlocutors integrate different streams of knowledge when exchanging information; and on how, crucially, these mechanisms relate to underlying human reasoning and behavior above and beyond language. As a result, the seminar will afford the opportunity to build bridges not only between different linguistic subfields, some of which have rarely intersected before (e.g., sociophonetics and pragmatics); but also, and most importantly, between linguistics and other disciplines interested in exploring the relationship between social information and cognition – in particular, social psychology and ethics/philosophy. We see this integrative approach as conducive to developing a unique perspective on the “linguistics as cognitive science” enterprise outlined as the institute’s driving intellectual mission, and thus to provide a live demonstration of how the study of language can be framed in the broader endeavor of studying the human mind.

Note on potential overlap with *Topics in Socio/Psycholinguistics*

Some aspects of our proposed course lie at the intersection between socio and psycholinguistics. We have coordinated with Prof. Meredith Tamminga, who is teaching *Topics in Socio/Psycholinguistics*, to ensure no overlap in course content.

Course Schedule

Week 1: Introduction to Stereotypes

Day 1: Intro to stereotypes & social cognition

- Intro to Social Identity Theory and Self-Categorization Theory
- Stereotype formation:
 - McGarty, Spears & Yzerbyt (2002) “Social, Cultural & Cognitive Factors in Stereotype Formation”
 - Hinton (2017) “Implicit Stereotypes and the Predictive Brain: Cognition and Culture in ‘Biased’ Person Perception.”
<https://www.nature.com/articles/palcomms201786#Sec4>
- Stereotype change:
 - Richards & Hewstone (2001) “Subtyping and Subgrouping: Processes for the Prevention and Promotion of Stereotype Change”
https://journals.sagepub.com/doi/abs/10.1207/s15327957pspr0501_4?casa_token=Ts8HZU4KDT0AAAAA:tuZI9ibhi5sk9KiXHZ0dqSpZjWCSDdWdrumjtn_d_oLMydCo_Tti2QRbja-K-BJ_w6Kf6ea6soQ

Day 2: How can stereotypes be modeled? Psychological and philosophical perspectives

The view from social psychology: the stereotype content model

Very influential model built on the idea that there are two core dimensions behind how people make sense of individuals or groups: *warmth* (trustworthiness, friendliness); and *competence* (capability, assertiveness). We draw parallels between this model and the observed status/solidarity tradeoff observed in sociolinguistic matched guise studies.

- Overview: Fiske (2018) “Stereotype Content: Warmth and Competence Endure”
<https://journals.sagepub.com/doi/full/10.1177/0963721417738825>
- Case-Study: Judd et al. (2005) “Fundamental Dimensions of Social Judgment: Understanding the Relations Between Judgments of Competence and Warmth”
<https://doi.org/10.1037/0022-3514.89.6.899>
- Milroy & Preston (1999) (overview of the relation between sociolinguistic and psychological approaches to language attitudes)
<https://journals.sagepub.com/doi/pdf/10.1177/0261927X99018001001>

The view from philosophy: testimonial injustice

How people reason about racial/gender stereotypes to determine how credible, trustworthy, and authoritative someone is, with an emphasis on two mechanisms that are (also) related to language: *credibility deficit*: treating someone as less credible because of their identity; *credibility excess*: treating

someone as *too* credible/expert because of their identity. We will return to these in Week 3 when considering the role of stereotypes in pragmatics.

- Fricker (2007) “Epistemic Injustice: Power and the Ethics of Knowing” (on credibility deficit; selected excerpts) <https://academic.oup.com/book/32817>
- Davis (2016) “Typecasts, Tokens, and Spokespersons: A Case for Credibility Excess as Testimonial Injustice (on credibility excess): <https://onlinelibrary.wiley.com/doi/abs/10.1111/hypa.12251>

Week 2: Sounds

Day 3: How do stereotypes influence language processing?

- Babel (2022) “Adaptation to Social-Linguistic Associations in Audio-Visual Speech” (Accurate stereotypes can facilitate processing; inaccurate stereotypes can inhibit it) <https://doi.org/10.3390/brainsci12070845>
- Levon (2014) “Categories, stereotypes, and the linguistic perception of sexuality” (Stereotypes can enable or block particular social meanings) <https://www.jstor.org/stable/43904598>
- Podesva (2007) “Phonation type as a stylistic variable: The use of falsetto in constructing a persona”. (Ethnographic study on personae in interaction; amenable to being revisited through the lens of social stereotype theory) <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1467-9841.2007.00334.x>
- D’Onofrio (2007) “Personae in sociolinguistic interaction” (Review on the category of persona in Third Wave sociolinguistic theory) <https://wires.onlinelibrary.wiley.com/doi/abs/10.1002/wcs.1543>

Day 4: Case Study 1 – What role does experience play in stereotype formation and change?

- Wade (2020) Lecture: Re-interprets results of Wade (2020) under a stereotype change analysis. We examine the role of experience in stereotype change, and the influence of stereotype-driven expectation on production.
- Wade, Embick & Tamminga. (under review). “Dialect experience modulates cue reliance in sociolinguistic convergence” (highlights how differences in sociolinguistic experience align with the outgroup homogeneity bias)

Week 3: Pragmatic reasoning & Meaning

Day 5: Case Study 2 – How do stereotypes affect the interpretation of numerical expressions?

Case study on how stereotypes affect comprehenders’ reasoning about the interpretation of numerical expressions, and how, conversely, comprehenders infer stereotypes from the use of numerical expressions.

- Beltrama, Solt and Burnett (2022) “Context, Precision, and Social Perception: a socio-pragmatics study” (How comprehenders extract stereotypes from utterances containing numerals) <https://www.cambridge.org/core/journals/language-in-society/article/context-precision-and-social-perception-a-sociopragmatic-study/F4FCB30443F9AA0DC81BE92E6181634C>

- Beltrama & Schwarz (2021) “Imprecision, personae and pragmatic reasoning” (how stereotypes affect reference computation)
<https://journals.linguisticsociety.org/proceedings/index.php/SALT/article/view/31.007>
- Beltrama & Schwarz (2022) “From identity to interpretation: when looser speakers are treated more strictly (how stereotypes affect credibility calibration)
<https://andreabeltrama.files.wordpress.com/2022/05/socpreccb-46.pdf>

Day 6: Stereotypes, meaning, and ideology: how pragmatic reasoning shapes political affiliation, and vice-versa

Overview of three distinct meaning phenomena – dogwhistles, demonstratives, and complement clause projection – which are similarly affected by information/expectations about the social stereotypes embodied by language users. Window into a recent, fast-growing strand of work at the intersection of sociolinguistics and pragmatics, which is leading us to reconsider meaning making and meaning interpretation under a new light.

- Dogwhistles (How listeners reason about the speaker persona to recover hidden political messages)
Henderson and McCready (2020) “How dogwhistles work”
https://www.rhenderson.net/resources/papers/how_dogwhistles_work.pdf
- Complements of factive verbs (How listeners reason about the speaker’s political orientation to infer whether the complements of factive verbs are true)
Mahler (2020) “The social component of the projective behavior of clausal complement contents”
<https://journals.linguisticsociety.org/proceedings/index.php/PLSA/article/view/4703/4384>
- Demonstratives pronouns (How listeners reason about the speaker identity and their use of demonstrative pronouns and determiners to build affective common ground with the speaker, or to resist building it)
Acton and Potts (2014) “That straight talk: Sarah Palin and the sociolinguistics of demonstratives”
<https://onlinelibrary.wiley.com/doi/full/10.1111/josl.12062>

Week 4: Putting it all together

Day 7: Accounting for stereotypes in models of language cognition

Different approaches to modeling stereotypes and social information: from exemplar-based models to game-theoretic pragmatics and probabilistic inference

- Drager, Katie and M. Joelle Kirtley (2016) “Awareness, salience, and stereotypes in exemplar-based models of speech production and perception”. In Anna Babel (Ed.) *Awareness and Control in Sociolinguistic Research*, Cambridge University Press, 1-24.
- McGowan (2015) “Social Expectation Improves Speech Perception in Noise”
<https://journals.sagepub.com/doi/abs/10.1177/0023830914565191>

- Burnett (2017) “Sociolinguistic interaction and identity construction: The view from game-theoretic pragmatics”
<https://onlinelibrary.wiley.com/doi/full/10.1111/josl.12229>

Day 8: Workshops

In small groups, or with the entire class if size permits, students will informally present their ideas for their final assignment and get feedback before submitting the final paper. This will allow students to hear from and give feedback to classmates as well.¹

Grading

Final Assignment (40%)

- Choose one of the following:
 - **Experiment proposal:** Design an experiment to shed light on some are of cognition and stereotypes
 - **Critical Reanalysis:** Reinterpretation of existing paper/results from the perspective of stereotypes & cognition (potentially give them a few papers to choose from that we think might be amenable to this type of analysis)

Other Assignments (60%)

- 2 Reading Responses (30%)
- Workshop Participation (20%)
- Attendance (10%)

¹ If the number of enrolled students is lower or equal to 8, we plan on having students present individually. If higher, we'll split the class in two (or more, if required) groups, each under the supervision of one instructor.