## AKSHINA

# BANERJEE

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July, 2023-Present

### EMPLOYMENT

University of Michigan, Ross School of Business

Position: Assistant Professor of Marketing

EDUCATION

The University of Chicago, Booth School of Business Graduation: June, 2023

PhD Department: Behavioral Marketing

The University of Minnesota - Twin Cities Graduation: May, 2017

Majors: Economics, B.S. (summa cum laude); Linguistics, B.A. (summa cum laude).

Minor: Mathematics; CGPA: 3.98

### RESEARCH INTERESTS

**Theoretical:** The role of language in consumer decisions; Information processing and comprehension; Decision heuristics; Mental accounting

Marketing Contexts: Consumer behavior; Marketers' use of experimentation; Technology; Food choices

**Methodological:** Experimental methods; Natural language processing; Secondary data analysis; Descriptive modeling and machine learning

### PUBLICATIONS

Banerjee, A., & Urminsky, O. (2022). "What you are getting and what you will be getting: Testing whether verb tense affects intertemporal choices." Journal of Experimental Psychology: General. 2022.

(Data publicly available here)

### PAPERS UNDER REVISION/REVIEW

Banerjee, A., & Urminsky, O.," The Language That Drives Engagement: A Systematic Large-scale Analysis of Headline Experiments." Accepted at Marketing Science. Job Market Paper

**Banerjee, A.**, & Urminsky, O.," <u>Associations with the Incomprehensible: Foreign Language Increases Authenticity Perceptions and Preferences.</u>" Invited revision at *Journal of Consumer Psychology*.

### WORKING PAPERS

Chaudhry, S., **Banerjee**, **A.**, Wu, L., Lupoli, M., "Making amends with the audience: Manager use of public apologies and other amends-making strategies."

### RESEARCH IN PROGRESS

- 1. Banerjee, A., Chen, S., Urminsky, O., "Ingredient Jargon in Product Information."
- 2. Banerjee, A., & Urminsky, O., "Does Big-Data Correlational Analysis Predict Causal Effects of Language on Decisions?"
- 3. Banerjee, A., & Urminsky, O., "Heterogeneity in Reader Engagement: Analyzing the Impact of Language-Based Constructs Across Multiple News Types."
- 4. Banerjee, A., & Winet, Y., "Asymmetric Variety Seeking in Hierarchical Choices."

Recipient of the Thaler-Tversky Grant 2020 Recipient of the PhD Program Grant 2021

- 5. Wadhwani, R., Banerjee, A., Aribarg, A., "Politically Polarized Information "Mis" creation."
- 6. Banerjee, A. & Rocklage, M., "The Impact of Confident Language on Sustained Belief in Misinformation."
- 7. Banerjee, A., Sussman, A., & Urminsky, O., "Mental Accounting of Past vs Present Costs."
- 8. Banerjee, A., "Mental Accounting of Ancillary Accounts."

### ABSTRACTS OF SELECTED PAPERS

Banerjee, A., & Urminsky, O.," <u>The Language That Drives Engagement: A Systematic Large-scale Analysis of Headline Experiments</u>." Accepted at *Marketing Science*. **Job Market Paper** 

We use a large-scale dataset of thousands of field experiments conducted on Upworthy.com, an online media platform, to investigate the cognitive, motivational, affective, and grammatical factors implementable in messages that increase engagement with online content. We map from textual cues measured with Natural Language Processing tools to constructs implied to be relevant by a broad range of prior research literatures. We validate the constructs with human judgment and then test which constructs causally impact click-through to articles when implemented in headlines. Our findings suggest that the use of textual cues identified in previous research and industry advice does impact the effectiveness of headlines overall, but the prior research and industry advice does not always provide useful guidance as to the direction of the effects. We identify which textual characteristics make headlines most effective at motivating engagement in our online news setting.

**Banerjee, A.,** & Urminsky, O. (2022). "What you are getting and what you will be getting: Testing whether verb tense affects intertemporal choices." *Journal of Experimental Psychology: General*. 2022.

Prior research has shown that the way information is communicated can impact decisions, consistent with some forms of the Sapir-Whorf hypothesis that language shapes thought. In particular, language structure—specifically the form of verb tense in that language—can predict savings behaviors among speakers of different languages. We test the causal effect of language structure encountered during financial decision-making, by manipulating the verb tense (within a single language) used to communicate intertemporal tradeoffs. We find that verb tense can significantly shift choices between options, owing to tense-based inferences about timing. However, the spontaneous use of verb tense when making choices occurs only in the complete absence of other timing cues and is eliminated if even ambiguous or nondiagnostic time cues are present, although prompted timing inferences persist. We test between multiple competing accounts for how verb tense differentially impacts timing inferences and choices. We find evidence for a cue-based account, such that the presence of other cues blocks the spontaneous use of verb tense in making intertemporal decisions, consistent with the "Good Enough" proposal in psycholinguistics.

**Banerjee, A.,** & Urminsky, O.," <u>Associations with the Incomprehensible: Foreign Language Increases Authenticity</u> <u>Perceptions and Preferences.</u>" Invited revision at *Journal of Consumer Psychology*.

Language is pervasive and hence a common factor in people's decision making. Prior research has mostly studied the effects of comprehensible language, language that communicates a literal meaning to consumers – on behavior and attitudes. In this paper, we investigate the potential for language that is incomprehensible to a given consumer to nevertheless impact willingness to pay and choice. In particular, we propose that potentially meaningful incomprehensible language can convey associations beyond literal meaning. Using the domain of foreign language, we demonstrate that adding text in an foreign language unreadable to the consumer to a known native language in the description of foreign food significantly increases perceptions of authenticity, uniqueness, and quality, resulting in higher valuations and greater likelihood of choice, while holding the country of origin constant. Thus, we show that an incomprehensible cue creates consumer value by instilling feelings of intangible experiences and that those feelings impact decisions. We test our framework using secondary field data as well as experiments, including with consequential choices.

Banerjee, A., Chen, S., Urminsky, O., "Ingredient Jargon in Product Information."

We investigate how people incorporate incomprehensible jargon in products - like ingredient information - in their decision-making. Specifically, we focus on the associations people make when they encounter unknown ingredient names (including equivalent names for the same substance) that structurally resemble chemical terms vs natural-seeming words, and how that affects their choices of products. We find that when people are given incomprehensible information, for which they lack literal meaning, they still use perceived associations with grammatical cues to make judgments.

Chaudhry, S., **Banerjee**, **A**., Wu, L., Lupoli, M. "Making amends with the audience: Manager use of public apologies and other amends-making strategies."

What are the building blocks of satisfactory public responses to customer complaints? This project investigates key components for satisfactory public responses to customer complaints using hotel manager responses on TripAdvisor. Managers effectively engage in public relations as third-party observers assess these responses to make lodging decisions. MTurkers code amends-making elements, response satisfaction and future interest in visiting the hotel. We analyze data to pinpoint influential components, highlighting the pivotal role of the "offer of repair" subcomponent in predicting satisfaction. NLP tools further break down language features for managerial guidance.

**Banerjee, A.**, & Urminsky, O., "Does Big-Data Correlational Analysis Predict Causal Effects of Language on Decisions?"

A substantial research literature has used large-scale correlational text analysis to determine how characteristics of language encountered by people predicts (and presumably causes) their subsequent behavior, such as online engagement or donation decisions. These approaches have high external validity, by analyzing large-scale real-world data and behavior, but are causal interpretations of the findings internally valid? Using a novel large-scale dataset containing thousands of headline experiments, we compare the results of correlational analyses (excluding the experimental variation) with causal analyses (solely using experimental variation) to test what factors increase the likelihood of click-through in an online news setting. We find that not only does experimental data provide higher statistical power, but the correlational findings differ in magnitude, and sometimes even in direction, from the causal findings. Our results suggest that big-data correlational analyses may provide poor predictions of causal effects, underscoring the need for marketers to conduct experiments.

**Banerjee, A.**, & Urminsky, O., "Heterogeneity in Reader Engagement: Analyzing the Impact of Language-Based Constructs Across Multiple News Types."

Our paper tests the impact of language on online news engagement, highlighting the significant heterogeneity across news sites. Using ChartBeat's extensive dataset, we uncover minimal correlation with prior predictions, challenging the generalizability of existing theories. This necessitates a nuanced, individual-centric approach in behavioral research to understand digital news consumption dynamics.

Banerjee, A., & Winet, Y., "Asymmetric Variety Seeking in Hierarchical Choices."

People frequently seek variety when choosing hedonic experiences for themselves (McAlister & Pessemier, 1982; Ratner, Kahn & Kahneman, 1999; Simonson, 1990). However, it is possible that when these choices require navigating through multiple hierarchical levels of a multi-stage decision process, the desire for variety may become increasingly satisfied throughout the decision process. Decision-stage-hierarchy is a novel and understudied element of choice, distinct from categorization. Categorization can be thought of as framing the same product in more general vs. specific terms. For example, more specific category labels (e.g., "pizza") and more general labels (e.g., "Italian food") can be applied to the same product. Hierarchy, instead of describing the same product, describes the location of the choice on a ladder of choices that leads to a final consumption outcome. For example, in choosing what to eat when going out, consumers will typically choose among restaurants, a higher-level choice, and conditional on that decision, will then choose food from the menu, the lower-level choice. We expect diners to seek more variety in restaurant choices (higher-level choice) and less variety in specific dish orders (lower-level choice). Thus, in a multi-stage decision we hypothesize that consumers will tend to be more variety- seeking at higher levels of hierarchy, but more choice concentrated at the lower levels.

### PRESENTATIONS

## "The Language That Drives Engagement: A Systematic Large-scale Analysis of Headline Experiments"

- Haring Symposium, Kelley School of Business, April 2021.
- Association of Consumer Research, Virtual, October 2021.
- Marketing Science Conference, Virtual, June 2022.
- Association of Consumer Research (revised version), October 2023.
- Society for Consumer Psychology, March 2024
- Behavioral Decision Research in Management, June 2024

## "What You Are Getting and What You Will Be Getting: Testing Whether Verb Tense Affects Intertemporal Choices"

- Association of Consumer Research, San Diego, CA, October 2017.
- Cognitive Science Conference (poster), Madison, WI, June, 2018
- Society for Judgment and Decision Making (poster), New Orleans, LA, November, 2018.

## "Associations with the Incomprehensible: Foreign Language Increases Authenticity Perceptions and Preferences"

- Marketing Workshop, Booth School of Business, Chicago, IL, January 2019.
- Society for Consumer Psychology, Huntington Beach, CA, March 2020.
- Association of Consumer Research, Virtual, October 2021.

### "Asymmetric Variety Seeking in Hierarchical Choice"

 Society for Judgment and Decision Making (poster), Virtual, February 2022; Association of Consumer Research, Virtual, October 2021 (presented by co-author).

### "Making amends with the audience: Manager use of public apologies and other amends-making strategies."

- Association of Consumer Research (poster), Virtual, February 2022 (presented by co-author).
- Academy of Management, August 2023.

### "Does Big-Data Correlational Analysis Predict Causal Effects of Language on Decisions?"

- Association of Consumer Research, October 2023.
- Marketing Science Conference, June 2024.

#### "Mental Accounting of Ancillary Accounts"

Association of Consumer Research (poster), Atlanta, GA, October, 2019.

#### TEACHING EXPERIENCE

### "Marketing Core" (Undergraduate)

• Faculty Instructor, Winter 2024

### "Consumer Behavior" (MBA)

• Teaching Assistant for Daniel Bartels and Celia Gaertig, Winter 2018; Winter 2019; Autumn 2019; Winter 2020; Winter 2021; Spring 2021; Summer 2021; Winter 2022.

### "Experimental Marketing" (MBA)

Teaching Assistant for Oleg Urminsky, Spring 2019; Spring 2020; Summer 2020; Winter 2021; Summer 2021; Winter 2022.

- "Data-Driven Marketing" (MBA)
- Teaching Assistant for Günter Hitsch, Spring 2020; Spring 2021; Summer 2021; Spring 2022.
- "Technology Strategy" (MBA)
- Teaching Assistant for Marc Knez, Autumn 2020
- "Microeconomics" (MBA)
  - Tutor

### GRANTS & NOMINATIONS

- AMA-Sheth Doctoral Symposium Fellow, University of Texas-Austin, 2022
- Haring Symposium Fellow, Kelley School of Business at Indiana University-Bloomington, 2021
- Recipient of the PhD Program Grant 2021 for \$4500
- Recipient of the Thaler-Tversky Grant 2020 for \$3000

### ACADEMIC SERVICE

Journal of Consumer Research (JCR), reviewer, Jan., 2024

Journal of Consumer Research (JCR), trainee reviewer, April, 2020

Journal of Consumer Research (JCR), trainee reviewer, Nov., 2019