

Chuck Bradley, Ph.D.

Quantitative researcher fluent in multiple research modalities

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in LinkedIn

Experienced researcher with a focus on quantitative methods in the social sciences, language, and brand marketing. PhD in Linguistics from Purdue University, focusing on applying machine learning methods to large linguistic datasets. Experienced in all stages of data analysis pipeline, from identifying questions; designing experiments; collecting, cleaning, transforming, and warehousing data; scripting statistical analyses; and communicating results to academic and business audiences. Demonstrated project management and interpersonal skills with over 6 years experience of managing small teams of researchers. Conscientious, respectful of diversity, and eager to collaborate.

Work experience

Linguist, Lexicon Branding

📅 September 2021 - present

📍 Sausalito, CA

- Lead the Research division in designing and conducting quantitative consumer research; Present research to C-suite/decision-makers
- Designed Python-based analysis routines for streamlined data processing, visualization and reporting, reducing overhead costs
- Co-manage Lexicon's global network of linguists and conduct cross-linguistic research on brand naming
- Leveraged 3 years of proprietary market research data to deliver actionable insights
- Conducted original market research based on how linguistic principles affect consumer perception of brand names
- Co-developed marketing plan to increase profits through Lexicon's linguistic research program

Independent Researcher

📅 May 2019 - present

📍 Philadelphia, PA / San Francisco, CA

- Current work focuses on using Natural Language Processing (NLP) and machine learning to predict how humans understand non-verbal communication
- Present new original research at international conferences
- Prepare 1st author articles for publication with collaborators from Purdue University; see §Select Scholarly Output (pg. 2)
- Maintain up-to-date methodological skills, e.g. machine learning techniques
- Prepared three \$200k+ international grants in collaboration with University of Oslo, University of Edinburgh

Manager, Sign Language & Linguistics Lab

📅 Aug 2013 - May 2018

📍 Purdue University, West Lafayette, IN

- Designed data collection and annotation schemes for use in machine learning pipelines; Responsible for data integrity and storage.
- Trained and supervised teams of up to 10 student researchers per semester; 20+ students over entire appointment.
- Mentored students from no research experience to presentation of their research projects at Purdue research fair.
- Worked closely with director in student recruitment, evaluation, retention.

Instructor

📅 May 2015 - May 2018

📍 Purdue University, West Lafayette, IN

- Planned and developed two courses from scratch (5 semesters total): created all learning objectives, assessments, syllabuses, and lectures
- Worked one-on-one with students
- Deployed course through learning management system (Blackboard Learn)

Skills

Data analysis (10+ years)

- Statistical models: (Logistic) regression, ANOVA, Chi2, correlation, A/B testing
- Machine learning: SVM/SVC, Bag-of-words, Clustering, PCA
- Data collection: MTurk, Qualtrics
- MS Excel
- Data mining, data cleaning, data management
- Communication to academic, business and lay audiences
- Creative thinking, problem solving

Coding (9 years)

- Stat analysis: NumPy, SciPy, scikit-learn, statsmodels
- Data structures: pandas, SQL
- Visualization: Matplotlib, seaborn, MS Office
- NLP: SpaCy, GloVe, NLTK, WordNet, FrameNet, VerbNet
- Git

Project management

- Task prioritization
- People management
- Budgeting

Languages:

- Natural: English (native), American Sign Language (4 years), French (reading knowledge)
- Programming: Python, SQL

Education

Ph.D. in Linguistics

📅 Aug 2013 - May 2019

📍 Purdue University, West Lafayette, IN

Dissertation: *Transparency of transitivity in gesture, sign language.*

- Demonstrated that syntactic and conceptual structure are visually linked in American Sign Language and gestures from non-signers
- Used structured elicitation, corpus analysis, and online perception studies
- Machine-learning analysis, coded 100% in Python.

M.A. in Linguistics

📅 Aug 2010 - May 2013

📍 Purdue University, West Lafayette, IN

Thesis: *Motion events and event segmentation in American Sign Language.*

- Demonstrated that the visual form of verbs can be predicted by truth conditions in the real world.
- Conducted semantic fieldwork in ASL.

B.A. in Linguistics

📅 Sep 2005 - Jun 2009

📍 Middlebury College, Middlebury, VT

Thesis: *A theoretical look at the person agreement marker in German Sign Lang..*

- Original research on formal syntax of agreement marker in GSL
- Independent scholar (created my own major)

Select scholarly output

- **Bradley, C.**, Malaia, E., Siskind, J. M. and R. B. Wilbur. (2022) Visual form of ASL verb signs predicts non-signer judgment of transitivity. *PLOS ONE* 17(2): e0262098. ([article](#))
- **Bradley, C.**, Wilbur, R. (*accepted*). Visual form and event semantics predict transitivity in silent gestures: Evidence for compositionality. Submitted to *Cognitive Science*. ([manuscript](#)). ([project on GitHub](#))
- Karabüklü, S., Wood, S. Sandra, **Bradley, C.**, Wilbur, R. B. , and E. A. Malaia (*in prep.*). Sign language learning increases temporal resolution of visual attention. ([manuscript](#))
- **Bradley, C.** (2022). Compositionality in 'Holistic' Pantomime Characterizes a Gesture-First Proto-Language. Talk to be given at *Expression, Language, Music 1* (August 20–22, 2022)
- **Bradley, C.** (2021). Top-down and bottom-up sources of meaning in silent gesture. Talk presented at *AMLaP2021* (September 2–4, 2021) ([abstract](#)) ([presentation](#)).
- **Bradley, C.** (2021). Measuring encyclopedic content in silent gesture: Gesture not as vague as once thought. Poster presented at *AMLaP2021* (September 2–4, 2021). ([abstract](#)) ([presentation](#))
- **Bradley, C.** (2021). Systematicity in gesture production, perception may support sign language emergence. Poster presented at the *CUNY Conference on Human Sentence Processing 34*. Philadelphia, PA, US. ([abstract](#)) ([presentation](#))
- **Bradley, C.** (2019). Transparency of transitivity in pantomime, sign language. (Doctoral dissertation). Purdue University West Lafayette, IN. ([dissertation](#))