Curriculum Vitae

Chuck Bradley, Ph.D.

29A Downey St.
San Francisco, CA 94117 USA
+1 215 630 2838
bradley4@purdue.edu
 https://c-huck.github.io
 https://github.com/C-huck

December 20, 2021

Summary

I am an early career researcher focusing on event representations in silent gesture. I am currently working on the influence of top-down and bottom-up processing in non-signer interpretation of silent gesture, including their identification of event participants. I have three publications submitted and another in preparation. I have given presentations at multiple international peer-reviewed conferences across various disciplines: sign language linguistics, neurolinguistics, and psycholinguistics. I am highly experienced in using experimental and computational methods, including large-scale online linguistic surveys, and custom-built machine learning analyses to answer theoretical challenges. My extensive project management skills are demonstrated through five years of managing the Sign Language & Linguistics Lab at Purdue University, including the execution of lab experiments, and the supervision and mentorship of undergraduate researchers. I am currently an independent researcher working on writing publications. In early 2021, I finished collecting and analyzing silent gesture perception data, and am currently drafting the manuscript for the project.

Education

2013–2019	**Ph.D. in Linguistics**, Purdue University, Linguistics Program.
	Dissertation: *Transparency of transitivity in pantomime, sign language* [PDF]
2010–2013	**M.A. in Linguistics**, Purdue University, Linguistics Program.
	Thesis: *Motion events and event segmentation in American Sign Language* [PDF]
2005–2009	**B.A. (cum laude), Independent Scholar (Linguistics),** Middlebury College.
	Thesis: *A theoretical look at the Person Agreement Marker in German Sign Language*

Employment

2021 - present	**Linguist**, Lexicon Branding, Inc. Sausalito, CA USA
	Use NLP (text generation, sentiment analysis) to create impactful names for new brands, companies and products. Interface with team of international linguists to ensure that brands names (a) follow local naming conventions and phonotactic constrains, and (b) have strong positive connotations in target countries. Launch and analyze massive online market research in service to the above.
2019 - present	**Independent Researcher**, Philadelphia, PA/San Francisco, CA USA
	Use NLP (word embeddings/GLoVE) and machine learning (SVCs) to predict how humans understand non-verbal communication. Present new original research at international conferences. Prepar articles for publication with collaborators from Purdue. Maintain up-to-date theoretical and methodological skill.
2013–2018	**Manager, Sign Language & Linguistics Lab, Purdue University**
	Supervised teams of up to 10 researchers (training, project management, task priority); Involved in researcher recruitment, evaluation and retention; Assisted researchers in developing research projects and writing them up; Managed data collection and storage; Managed ethics compliance
2011–2018	**Teaching Assistant/Instructor of record** (see **Teaching**)
2017	**Research Assistant, Alejandro Cuzo, Purdue University** [website]
	Edited articles and book chapters for publication (non-native English). Designed the Second Language Acquisition Research Lab's website.

Publications and manuscripts

2021		Bradley, C. Structural Iconicity in Silent Gesture. In Kimmelman, V. and Sze, F. (Eds.) *Formal and Experimental Advances in Sign Language Theory, Vol. 4*, p. 38–49, doi:10.31009/FEAST.i4.12.
accepted	a.	**Bradley, C.**, Wilbur, R. (Under revisions). Visual form and event semantics predict transitivity in silent gestures: Evidence for compositionality. *Cognitive Science.* [manuscript] [project on GitHub]
	b.	**Bradley, C.**, Malaia, E., Siskind, J. M. and R. B. Wilbur. (Under final revisions). Visual form of ASL verb signs predicts non-signer judgment of transitivity. *PLoS One.* [manuscript].
submitted		Karabüklü1, S., Wood, S. Sandra , **Bradley, C.**, Wilbur, R. B. , and E. A. Malaia. Sign language learning increases temporal resolution of visual attention. Submitted to *Visual Cognition.* [manuscript]
data collected		**Bradley, C.** & R. B. Wilbur (2020). Non-signers converge on meaning, argument structure when viewing silent gestures (Dataset) [project on GitHub]
diss.		Bradley, C. 2019. Transparency of transitivity in pantomime, sign language. (Doctoral dissertation). Purdue University West Lafayette, IN. [PDF]

Presentations at peer-reviewed conferences

TBD		Compositionality in holistic pantomime characterizes a gesture-first protolanguage. Talk to be given at *Expression, Language, and Music* 1. Hartford, CT, USA. TBD
2021	a.	Top-down and bottom-up sources of meaning in silent gesture. Talk to be presented at *AMLaP2021* (September 2–4, 2021) [Abstract].
	b.	Measuring encyclopedic content in silent gesture: Gesture not as vague as once thought. Poster to be presented at *AMLaP2021* (September 2–4, 2021). [Abstract]
	c.	Structural iconicity in silent gesture. Poster presented at *FEAST* 2021. Hong Kong. June, 2021. [abstract]
	d.	Systematicity in gesture production, perception may support sign language emergence. Poster presented at the *CUNY Conference on Human Sentence Processing 34*. Philadelphia, PA, USA. March, 2021. [abstract]
2020	a.	Evidence for argument structure in the form of pantomime. Poster presented at *Experiments in Linguistic Meaning* 1. Philadelphia, PA, USA. September, 2020.
	b.	Evidence for subunit structure when gesturers communicate in/transitive actions. Poster presented at *The CUNY Conference on Human Sentence Processing 33*. Amherst, MA, USA. March, 2020. [poster]
2018		Can formal features be predicted from form? Using Machine Learning to predict transitivity class from the form of pantomime and ASL classifier constructions. Poster presented at *Formal and Experimental Advances in Sign Language Theory 7*. Venice, IT. June, 2018. [abstract]
2017	a.	with Siskind, J.M., and R. Wilbur. Neural representation of minimal syntactic units. Poster presented at *Cognitive Computational Neuroscience 1*. New York, NY, USA. August, 2017. [abstract]
	b.	with H. Nassar. Rapid processing of ELAN data: Quick and dirty numbers for statistical analysis. Poster presented at *Formal and Experimental Approaches to Sign Language Theory 6*. Reykjavik, Iceland. June, 2017. [abstract]
2010		with V. Lee-Shoenfeld. A theoretical look at the Person Agreement Marker in German Sign Language. Poster presented at *Theoretical Issues in Sign Language Research 10*. West Lafayette, IN, USA.

Select software and projects

2020		**ELAN-overlap** [https://github.com/C-huck/ELAN-overlap]
		Extracts temporal information about annotations on different tiers in ELAN, a video annotation tool. Useful for quantifying simultaneous data, such as gestre+speech (gesture studies), speech+touch (infant word learning studies), manual+non-manual action (sign language studies), among other applications.
2019	a.	**ASL-LEX-iconicity** [https://github.com/C-huck/ASL-LEX-iconicity]
		Simplified analysis showing how to use machine learning techniques to classify lexical category information from a small corpus of ASL signs (ASL-LEX.org). Algorithm infers lexical category information from both visual and lexical information.
	b.	**simple-tracker** [https://github.com/C-huck/simple-tracker]
		Computes Lucas-Kanade optical flow for a user-defined point within a user drawn window. The algorithm attempts to track that point across all frames in the video. The point's total displacement is overlaid on top of the video, as well as the path it traces. Creates a .csv file of displacement information. An arbitrary number of points may be tracked. Useful for determining overall 2D displacement of, e.g., hands across a video. Can also be used to track relative movement (e.g., of one hand with respect to the other).
	c.	**video-segment** [https://github.com/C-huck/video-segment]
		Short heuristic to automatically find and clip gestures/body movement in unsegmented video. Identified clips are then ready for analysis, or inclusion in, e.g., perception studies.

Teaching

as **Primary Instructor**

2016–2018	a.	Syntax and Semantics, Purdue University (3 semesters)
		Created all course materials; Taught all sections; Sole grader
		Sample materials: [syllabus] [slide] [final exam]
2015–2016	b.	Introduction to Linguistics, Purdue University (2 semesters)
		Created all course materials; Taught all sections; Sole grader
		Sample materials: [syllabus] [slide] [final exam]

as **Teaching Assistant**

2011–2015	a.	Introduction to Linguistics, Purdue University (4 semesters)
		Grader; Helped create exams, study guides
	b.	American Deaf Community: Language, Culture, and Society, Purdue University (1 semester)
		Grader; Helped create exams, study guides
	c.	American Sign Language levels 1, 2, and 4, Purdue University(3 semesters; volunteer)
		Grader and proctoring; Occasional guest lecturer

Awards and Grants

2018	Travel Grant, School of Interdisciplinary Studies, Purdue University ($1,000)
	To cover costs of attending FEAST7, Venice, IT
2013–2014	Lynn Fellowship, Interdisciplinary Studies, Purdue University ($45,518.50)
2010–2011	David M. Knox Fellowship, The Graduate School, Purdue University ($48,203.50)

Service

2013–2015	President, Purdue Linguistics Association (PLA) [website]
2012–2013	Secretary, PLA
2013, 2014	Co-chair, 9th & 10th Annual PLA Student Symposium; Co-editor of Proceedings of the 2014 PLA Symposium [proceedings]
2013	Reviewer, 9th Annual PLA Student Symposium

Languages

natural	English (native); American Sign Language (intermediate); Latin, French (reading competency); Mandarin Chinese (beginner)
artificial	Python (data visualization & analysis, corpus work), SQL (corpus work), LaTeX(typesetting for communication/dissemination), HTML/CSS/PHP (web-design for communication/dissemination), Amazon Mechanical Turk (online data collection); MATLAB,

Skills

neuroimaging	Primary operator GE 3T scanners with extensive scanning experience; fMRI analysis in FSL, AFNI, and SPM8; ROI analysis in MarsBaR 0.44.; Familiar with PyMVPA.