

BETSY R. LEHMAN, Ph.D.

Department of Cognitive and Learning Sciences (CLS)
Applied Cognitive and Human Factors Program (ACSHF)
Michigan Technological University
1400 Townsend Dr., Houghton, MI 49931
elehman@mtu.edu

EDUCATION

Michigan Technological University, Houghton, MI

Ph.D. Applied Cognitive Science and Human Factors 2019-2024

Dissertation Title: *The Question of Questioning: Studying the Sensemaking Process in Ambiguous Scenarios*

— MTU's Social Sciences nominee for the CGS/ProQuest

Distinguished Dissertation Award 2024

Graduate Certificate: Post-Secondary STEM Education 2020-2022

Competency in teaching and learning in STEM subjects based on current directions in education research.

Northern Michigan University, Marquette, MI

M.S. Psychology (Now Psychological Science) 2018

B.S. Psychology (Now Psychological Science) 2016

Magna cum laude, Dean's list

PROFESSIONAL DEVELOPMENT

1. Summer Institute for Social and Personality Psychology: Self-Regulation and Goal Pursuit course (Columbus, OH) July 2023
— Selected as participant in two week intensive course through SPSP for 100 doctoral students to collaborate and learn from social psychology experts.
Self-regulation course taught by Brandon Schmeichel & Marina Milyavskaya.
2. Stop Justifying Your Sample Size: Optimizing Studies to Detect Real [Publishable] Effects (Columbus, OH) July 2023
— Workshop given through SISPP instructed by Erin Hennes & Sean Lane.

EMPLOYMENT

2019-2023 Graduate Teaching Assistant, Michigan Technological University, Houghton, MI

2019-2023 Graduate Research Assistant, ADVANCE Initiative at Michigan Technological University, Houghton, MI

2018-2019 Office Manager, The Northern Center for Lifelong Learning at Northern Michigan University, Marquette, MI

TEACHING EXPERIENCE

Instructor of Record (Lecturer) – Undergraduate Courses

Michigan Technological University

1. Social Psychology (PSY3720) – online course; 6 students Su22
– Developed and delivered course content
2. Social Psychology (PSY3720) – online course; 15 students Su20
– Developed and delivered course content

Graduate Teaching Assistant – Undergraduate Courses

Michigan Technological University

1. Industrial/Organizational Psychology (PSY3700) – 21 students F23
– Grading
2. Judgment and Decision Making (PSY4750) Spr23
– Grading
3. Critical Thinking (PSY2800) – 32 students Spr21
– Grading
4. Social Psychology (PSY3720) – 40-50 students Sp22, Spr20
– Grading, guest lecturing
5. Cognitive Psychology (PSY4010) – 24 students F20, F21
– Grading, guest lecturing
6. Intro to Psychology (PSY2000) – 200 students F19
– Grading, guest lecturing

Northern Michigan University

1. Intro to Research Methods (PY205) – 20 students Sp18
– Grading, tutoring
2. Social Psychology (PY335) – 15 students F17
– Lecture, content development
– *Experiential*, developed lab component
3. Psychology of Sexuality (PY225) – 20 students Sp16
– Grading, guest lecturing, tutoring

Facilitator

Michigan Technological University's Summer Youth Program

1. Explorations in Health Careers June 2024
– Guided daily and cumulative reflections of weeklong content
2. Designing for People: Engineering Psychology and Human Factors July 2023
– Developed and delivered weeklong, all day course content

Google Scholar: [profile](#)

MANUSCRIPTS IN PROGRESS

1. **Lehman, B.**, & Veinott, E. (2024). *Questioning Your Answers: Counterfactual Thinking Strategies for Questioning a Frame*. In progress.
 - Three experiments testing the effectiveness of three different counterfactual strategies to encourage questioning one's frame of an ambiguous social situation, including a replication. Two strategies were found to effectively increase participants' measures of questioning an initial frame.
2. **Lehman, B.**, & Veinott, E. (2024). *Questioning a Frame in Ambiguous Social Situations*. In progress.
 - Three studies exploring the way people question their frames during the sensemaking process for brief ambiguous social scenarios. Two studies investigate whether people are questioning their frames or not using qualitative analysis, and explore potential factors involved in questioning correlationally. A third study compares two potential conceptual models of the questioning process using path analysis.
3. Colbert, K., **Lehman, B.**, Goltz, S., & Minerick, A. (2024). *Assessment of Advocates & Allies Workshops at a Predominantly White, STEM-Focused Institution*. In progress.
 - Assessment of attendee attitudes before and after a workshop focused on allyship and advocacy for women and underrepresented minority faculty in academia, across five workshop sessions.
4. Maki, K., Mamun, T., **Lehman, B.**, & Veinott, E. (2021). *Caught at the Gate: A Systematic Analysis of Aircraft Maintenance Safety Reports from 2010-2020*. In progress.
 - Archival analysis of the error types, contributing factors, and outcomes of aircraft maintenance errors.

JOURNALS AND REFEREED CONFERENCE PAPERS

1. Roose, K., **Lehman, B.**, & Veinott, E. (2023). *Premortems in Game Development Teams: Impact and potential*. HFES Annual Meeting, Washington, D.C. <https://doi.org/10.1177/21695067231193680>
2. **Lehman, B.**, Colbert, K., Goltz, S., Mayer, A., & Rouleau, M. (2023). Effects of repeated implicit bias training in a North American university. *Journal of Higher Education Policy and Management*, 45(3), 306-322. <https://doi.org/10.1080/1360080X.2022.2145927>
3. **Lehman, B.**, & Veinott, E. S. (2022). Changing Perspectives: Examining Factors Related To Counterfactual Thinking In Ambiguous Social Judgments. *Proceedings of the Annual Meeting of the Cognitive Science Society*, 44. Retrieved from <https://escholarship.org/uc/item/58n9z3fg>

4. **Lehman, B.**, Thompson, J., Davis, S., & Carlson, J. M. (2019). Affective Images of Climate Change. *Frontiers in Psychology*, 10:960.
<https://doi.org/10.3389/fpsyg.2019.00960>
5. Carlson, J. M., **Lehman, B. R.**, & Thompson, J. L. (2019). Climate change images produce an attentional bias associated with pro-environmental disposition. *Cognitive processing*, 20, 385-390. <https://doi.org/10.1007/s10339-019-00902-5>

PRESENTATIONS

1. **Lehman, B.**, & Veinott, E. (2024, February 8-10). *Comparing Two Strategies for Frame Questioning: Providing Counterfactuals is More Effective than Self-Generation*. SPSP Annual Convention, San Diego, CA.
2. **Lehman, B.**, & Veinott, E. (2023, November 17-20). *Questioning in sensemaking: When counterfactual strategies are effective*. SJDM Annual Meeting, San Francisco, CA.
— Also presented at ACSHF Forum Series (2023, November 27), Houghton, MI.
3. **Lehman, B.** & Veinott, E. (2022, October 17). *Counterfactual Thinking as a Strategy for Questioning a Frame: Experimental Results*. ACSHF Forum Series, Houghton, MI.
— Also presented at Computing[MTU] Showcase (2022, October 10), Houghton, MI.
4. **Lehman, B.** & Veinott, E. (2022, May 26-29). *Easy Does It: Ease of Generating Explanations and Ambiguity Increase Questioning One's Frame During Sensemaking*. APS Annual Convention, Chicago, IL.
— Also presented at Computing[MTU] Showcase (2022, April 1) and Graduate Research Colloquium (2022, March 29), Houghton, MI.
5. **Lehman, B.** (2021, April 1-2). *What's Going On? Sensemaking in Information and Social Situations*. Graduate Research Colloquium, Houghton, MI.
— Also presented at ACSHF Forum Series (2021, March 22), Houghton, MI.
6. **Lehman, B.** & Carlson, J. (2018, November 2). *The Psychology of Climate Change Images*. Northern Climate Network Climate@Noon Series, Marquette, MI.
7. **Lehman, B.R.** (2018, April 12-14). *The Affective Images of Climate Change Database*. MPA 2018 Annual Meeting, Chicago, IL.
8. **Lehman, B.** & Carlson, J. (2017, April 17). *The Affective Images of Climate Change Database*. Celebration of Student Scholarship, Marquette, MI.
9. Vargas Harlan, S. & **Lehman, B.** (2017, February 17-19). *What if I'm the Only One: Navigating Trans and Queer Community in Isolated Rural Spaces, Pt 1*. Midwest Bisexual Lesbian Gay Transgender Ally College Conference (MGBLTACC), Chicago, IL.

HONORS, AWARDS

MTU's Social Sciences Nominee for the CGS/ProQuest Distinguished Dissertation Award.	2024
— National award for dissertations submitted between 2022–2024.	
Finishing Fellowship from MTU.	2024
Student Travel Grant from ICC at MTU.	2023
— To present research at the HFES 2023 conference.	
Student Travel Grant from GSG at MTU.	2023
— To present research at the HFES 2023 conference.	
Student Travel Grant from GSG at MTU.	2022
— To present research at the CogSci 2022 conference.	
3 rd Place Poster Session at MTU's Graduate Research Colloquium.	2021
— A yearly graduate conference open to all graduate students across all disciplines at Michigan Technological University.	

PROFESSIONAL AFFILIATIONS

1. Human Factors and Ergonomics Society (HFES)
2. Society for Personality and Social Psychology (SPSP)
3. Society for Judgment and Decision Making (SJDM)
4. Association for Psychological Science (APS)
5. Cognitive Science Society (CSS)
6. American Psychological Association (APA)

ACADEMIC AND UNIVERSITY SERVICE

Michigan Tech University Service

1. Graduate Research Assistant, ADVANCE Initiative (2019-2024)

Northern Michigan University Service

1. Vice President, Queers & Allies student organization (2014-2016)
2. Student Representative, Gender & Sexuality Studies Board (2016)
3. Student Member, Sexual Assault Task Force (2015)

PROFESSIONAL TEACHING DEVELOPMENT

3. APS-STP Teaching Institute (Chicago, IL)	May 2022, 2024
4. ED5470 Issues in STEM Education	Sp22
5. PSY5460 Psychology of Learning	Sp21
6. ED5100 College Teaching (MTU)	Sp20
7. ED5101 Foundations of Online Teaching (MTU)	Sp20