Miriam Hauptman
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Education

2026 (expected) **Ph.D., Psychological & Brain Sciences, Johns Hopkins University**
Advisor: Dr. Marina Bedny

2021-2023 **M.A., Psychological & Brain Sciences, Johns Hopkins University**
Advisor: Dr. Marina Bedny

2015-2019 **B.S., Cognitive & Brain Sciences / German Language & Literature, Tufts University**
Advisors: Dr. Ariel Goldberg, Dr. Saskia Stoessel
Highest thesis honors, *summa cum laude*

Journal publications

1. Lai, M., Abrams, E., Bou Dargham, S., Fallon, J., Gegeura, R., Goldman, E., **Hauptman, M**., Parrish, A., Phillips, S., Reinoso, A., & Pylkkänen, L. (in press). Developmental changes in auditory evoked responses at different levels of linguistic processing: An MEG study. *Neuropsychologia*.
2. **Hauptman, M.*,** Elli, G.*, Pant, R., & Bedny, M. (2025). Neural specialization for 'visual' concepts emerges in the absence of vision. *Cognition*, *257*, 106058. https://doi.org/10.1016/j.cognition.2024.106058
3. **Hauptman, M.,** & Bedny, M. (2024). Inferring illness causes recruits the animacy semantic network. *eLife*, *13*:RP101944. https://doi.org/10.7554/eLife.101944.1
4. **Hauptman, M.,** Liu, Y.-F., & Bedny, M. (2024). Built to adapt: Mechanisms of cognitive flexibility in the human brain. *Annual Review of Developmental Psychology, 6*. https://doi.org/10.1146/annurev-devpsych-120621-042108
5. Goldman, E., Bou-Dargham, S., Lai, M., Guda, A., Fallon, J., **Hauptman, M.**, Reinoso, R., Phillips, S., Abrams, E., Parrish, A., & Pylkkänen, L. (2023). MEG correlates of speech planning in simple vs. interactive picture naming in children and adults. *PLoS ONE, 18*(10), e0292316. https://doi.org/10.1371/journal.pone.0292316
6. **Hauptman, M.,** Blank, I., & Fedorenko, E. (2023). Non-literal language processing is jointly supported by the language and Theory of Mind networks: Evidence from a novel meta-analytic fMRI approach. *Cortex*, *162*, 96-114. https://doi.org/10.1101/2022.03.08.481056
7. **Hauptman, M.***, Blanco-Elorrieta, E.*, & Pylkkänen, L. (2022). Inflection across categories: Tracking abstract morphological inflection in language production with MEG. *Cerebral Cortex, 32*(8), 1721-1736. https://doi.org/10.1093/cercor/bhab309

In prep

1. **Hauptman, M.,** & Bedny, M. (in prep). Signatures of medical expertise in the animacy semantic network.
2. **Hauptman, M.,** Keil, S.+, Landau, B., & Bedny, M. (in prep). Learning visual appearance from language is mediated by causal intuitive theories.
3. **Hauptman, M.*,** Elli, G.*, Lane, C., & Bedny, M. (in prep). A network for encoding social categories.

Peer-reviewed conference proceedings papers

1. **Hauptman, M.,** Keil, S.+, Landau, B., & Bedny, M. (2025). Learning visual appearance from language is mediated by causal intuitive theories. *Proceedings of the 47th Annual Meeting of the Cognitive Science Society.*
2. **Hauptman, M.,** & Bedny, M. (2024). Causal inferencing relies on domain-specific systems: Evidence from illness causality. *Proceedings of the 46th Annual Meeting of the Cognitive Science Society.*

Selected presentations

1. **Hauptman, M.,** Keil, S.+, Landau, B., & Bedny, M. (forthcoming). Learning visual appearance from language is mediated by causal intuitive theories (poster). *47th Annual Meeting of the Cognitive Science Society*, San Francisco, CA.
2. Kim, M., **Hauptman, M.,** & Liu, S. (forthcoming). Pushing people: the neural basis of social interaction perception (poster). *47th Annual Meeting of the Cognitive Science Society*, San Francisco, CA.
3. **Hauptman, M.,** & Bedny, M. (2025). Neural signatures of expertise in semantic causal knowledge (submitted talk and poster). *Association for Psychological Science*, Washington, DC.
4. **Hauptman, M.,** & Bedny, M. (2025). Amodal living thing network is sensitive to causal information (poster). *Workshop on Concepts, Actions, and Objects*, Trento, Italy.
5. **Hauptman, M.,** & Bedny, M. (2025). Causal knowledge is embedded in semantic networks (data blitz talk and poster). *32nd Annual Meeting of the Cognitive Neuroscience Society*, Boston, MA.
6. **Hauptman, M.,** Keil, S.+, Landau, B., & Bedny, M. (2024). People infer object appearance from communicative and aesthetic intent (poster). *65th Annual Meeting of the Psychonomic Society*, New York, NY.
7. Akshi, **Hauptman, M.,** Sampson, M., Cheng, Q., & Bedny, M. (2024). Fronto-temporal language network highly selective for sign language relative to action semantics, regardless of iconicity (poster). *16th Annual Meeting of the Society for the Neurobiology of Language,* Brisbane, Australia.
8. **Hauptman, M.,** Elli, G., Pant, R., & Bedny, M. (2024). Causal inferencing relies on domain-specific systems: Evidence from illness causality (poster). *46th Annual Meeting of the Cognitive Science Society*, Rotterdam, Netherlands.
9. **Hauptman, M.,** Elli, G., Pant, R., & Bedny, M. (2023). Neural specialization for living things does not require visual experience (poster). *15th Annual Meeting of the Society for the Neurobiology of Language*, Marseille, France.
10. **Hauptman, M.,** & Bedny, M. (2023). Causal inferences are supported by domain-specific semantic networks, not the language network (poster). *15th Annual Meeting of the Society for the Neurobiology of Language*, Marseille, France.
11. **Hauptman, M.,** Blank, I., & Fedorenko, E. (2021). Non-literal language processing is jointly supported by the language and Theory of Mind networks (data blitz talk and poster). *28th Annual Meeting of the Cognitive Neuroscience Society,* presented virtually due to COVID-19.
12. **Hauptman, M.**, Abrams, E., Phillips, S., Parrish, A., Geguera, R., & Pylkkänen, L. (2020). Investigating the spatiotemporal dynamics of speech production in children (poster). *12th Annual Meeting of the Society for the Neurobiology of Language,* presented virtually due to COVID-19.
13. **Hauptman, M.***, Blanco-Elorrieta, E.*, & Pylkkänen, L. (2020). Planning production across morphological contexts, semantic content and syntactic categories (poster). *12th Annual Meeting of the Society for the Neurobiology of Language,* presented virtually due to COVID-19.

14. **Hauptman, M.***, Blanco-Elorrieta, E.*, & Pylkkänen, L. (2020). Planning production: Morphological, semantic and syntactic representations (poster). *27th Annual Meeting of the Cognitive Neuroscience Society,* presented virtually due to COVID-19.
15. Ziegler, J., **Hauptman, M.**, Snedeker, J., & Fedorenko, E. (2018). The neural encoding of thematic roles (poster). *25th Annual Meeting of the Cognitive Neuroscience Society*, Boston, MA.

*=equal contribution, += mentee

Invited talks

2024	"Causal inference relies on domain-specific neural substrates: Evidence from the case of illness causality," Baltimore Brain Series, National Institute on Drug Abuse (NIDA)
2023	"The neural basis of causal reasoning in language: Evidence from illness reasoning," Blanco-Elorrieta Lab, New York University
2017	"The neural encoding of linguistic meaning," Language Learning Lab, Boston College (presentation given with Jayden Ziegler)

Awards

2025	Mary D. Ainsworth Award, Department of Psychological & Brain Sciences, Johns Hopkins University
2024	Walter L. Clark Scholar Award, Department of Psychological & Brain Sciences, Johns Hopkins University
2022	Special Conference Travel Award, Department of Psychological & Brain Sciences, Johns Hopkins University
2022	Howard Hughes Medical Institute Award, Genetics & Neurobiology of Language summer course, Cold Spring Harbor Laboratory
2022	Inclusive Assessment of Multi-Modal Multilinguals summer course, National Science Foundation
2021	National Science Foundation Graduate Research Fellowship Honorable Mention
2019	William Howell Reed Prize in German, Tufts Department of International Literary and Cultural Studies
2018	Rhodes Scholarship National Finalist
2018	Class of 1921 Leonard Carmichael Prize Scholarship, Tufts Department of Psychology
2018	Phi Beta Kappa
2016	Tufts University Career Center Summer Internship Grant
2015	National Merit Scholar

Service/outreach

2021-present	Mentor, Student Advocacy Workshop Series at Western High School, Baltimore, MD Bimonthly program connecting public high school students with local advocacy initiatives • 2024-2025: Group leader
2022-2024	Scientist pen-pal, Letters to a Pre-Scientist Connects middle and high school students in Title V schools with STEM professionals via snail mail
2021-present	Class representative, Graduate Steering Committee, JHU Psychological & Brain Sciences

2018-present Tufts alumni interviewer, undergraduate admissions

One-time experiences

2025 Visit to Capitol Hill to advocate for federal science funding, Johns Hopkins Science Policy and Diplomacy Group
2025 Exhibitor/community outreach, Baltimore City Association of the Deaf 5th Anniversary Gala
2025 Presenter, Johns Hopkins undergraduate Neuroscience Honor Society journal club
2025 PhD student panelist, career development seminar, JHU Psychological & Brain Sciences
2024 Presenter, Psi Chi Honor Society psychology lab tour for Johns Hopkins undergraduates
2024 Graduate school mock interviewer, NSF REU summer program at Johns Hopkins
2024 PhD student panelist, undergraduate student visit, Johns Hopkins Krieger School of Arts & Sciences Diversity Program
2024 Exhibitor/community outreach, Maryland Regional Braille Challenge, Baltimore, MD
2023 Exhibitor/community outreach, Deaf-opia Convention, Washington, DC
2022 Exhibitor/community outreach, National Federation of the Blind of Maryland State Convention, Towson, MD
2021 One-on-one application mentor and Q&A panelist, JHU Psychological & Brain Sciences, prospective applicant mentorship program
2020 Science demonstrator, PS3 Science Fair, New York, NY
2020 Science demonstrator, Cornelia Connelly Center, New York, NY

Other research experience

2019-2021 Predoctoral research associate/Lab coordinator, **Neuroscience of Language Lab at New York University** (Drs. Liina Pylkkänen and Alec Marantz), New York, NY
2016-2019 Research assistant, **EvLab at Massachusetts Institute of Technology** (Dr. Ev Fedorenko), Cambridge, MA
2016-2019 Research assistant, **Snedeker Lab at Harvard Laboratory for Developmental Studies** (Drs. Jayden Ziegler and Jesse Snedeker), Cambridge, MA
2018 Research assistant, **Kognition & Sprache Labor [Cognition & Language Lab] at Eberhard Karls Universität Tübingen** (Dr. Barbara Kaup), Tübingen, Germany
2016 Research assistant, **Cognition & Development Lab at Washington University in St. Louis** (Dr. Lori Markson), St. Louis, MO

Teaching experience

Johns Hopkins University Teaching Academy Certificate of Completion (2025)

Guest Lectures "Causal inference in the mind and brain," Neurobiology of Human Cognition (2024)
"Introduction to fMRI," Methods for Studying Infant Minds (2023)
"Introduction to music cognition," Introduction to Psychology (2023)
"Statistical inference in MVPA," Advanced Research Design & Analysis (2023)
"Introduction to music cognition," Introduction to Psychology (2022)

- TA challenge: Teach a topic outside of your research focus

Teaching Assistantships	Functional Neuroanatomy (2024) Methods for Studying Infant Minds (2023) Advanced Research Design & Analysis (2023) Introduction to Psychology (2022)
2016-2019	Head tutor/subject tutor, Tufts Academic Resource Center Courses tutored: German 1-6, Statistics for Behavioral Science
2015-2016	Corps Member, Jumpstart (AmeriCorps), Boston, MA (300 hours) Implemented early childhood curriculum promoting language and literacy development

Ad-hoc reviewing

Journals: *Neuropsychologia*, *Psychophysiology, Scientific Data*
Conferences: *Association for Psychological Science*

Skills

Programming Languages	Python, R, C++
Neuroscientific Methods	fMRI, MEG
Experiment Control Software	PsychoPy, Presentation, PCIbex, Gorilla, Prolific, Meadows Research
Analysis Toolkits	FSL, MNE-python, GingerALE, SPM
Natural Languages	English, German (fluent), ASL (beginner/intermediate)

References

Marina Bedny (Johns Hopkins University, marina.bedny@jhu.edu)
Evelina Fedorenko (MIT, evelina9@mit.edu)
Liina Pylkkänen (New York University, liina.pylkkanen@nyu.edu)