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Professor: Tenured Faculty, Department of Psychology, Carnegie Mellon University
Scientific Director: Program for Translational Brain Mapping, U. of Rochester Medical Center
Co-Founder, Chief Science Officer: MindTrace Technologies Inc.
Co-Editor-in-Chief: Cognitive Neuropsychology, Taylor and Francis

Publications: Google Scholar
Extramural Lab Funding: NSF1349042 | R21NS076176 | R01NS089609 | R01EY028535 | 2R01NS089609
Extramural Funding to MindTrace: NSF2213231 | 1R44MH135726 | NSF2444804

Educational/Outreach: Journal of Visualized Experiments: Awake Brain Mapping
Community Building: Rochester Head for the Cure 5k Walk/Run

Education

- **PhD, Psychology, 2009. Harvard University**. 'The representation of everyday objects in the brain' Committee: Alfonso Caramazza (Mentor); Marc Hauser, Alex Martin, Ken Nakayama.
- **BS, Cognitive Neuroscience, 2002. Harvard University**. Magna Cum Laude with Honors. Thesis Committee: Alfonso Caramazza (Mentor); Susan Carey; David Caplan; Jesse Snedeker

Appointments | Employment

2025 – Present
- Full Professor (with tenure), Department of Psychology, Carnegie Mellon University
- Full Professor, Neuroscience Institute, Carnegie Mellon University

2020 – Present
- Co-Founder, Chief Technology Officer, MindTrace Technologies, Inc

2018 - Present
- Associate Professor (with tenure), Department of Psychology, Carnegie Mellon University
- Associate Professor, Neuroscience Institute, Carnegie Mellon University
- Visiting Associate Professor, Department of Neurosurgery, University of Rochester
- Visiting Associate Professor, Department of Neurological Surgery, University of Pittsburgh

2016 – Present
- **o** Scientific Director, Program for Translational Brain Mapping, University of Rochester
- *o* Co-Editor-In-Chief, *Cognitive Neuropsychology*

2017 – 2018
- Associate Professor, Department of Brain and Cognitive Sciences, University of Rochester
- Associate Professor, Department of Neurosurgery, University of Rochester Medical Center
- Secondary Appointments, Ctr for Visual Science, Ctr for Language Science, Dept Neurology, U of Rochester

2011– 2017
- Assistant Professor, Department of Brain and Cognitive Sciences, University of Rochester
- Assistant Professor, Department of Neurosurgery, University of Rochester
- Secondary Appointments, Ctr for Visual Science, Ctr for Language Science, Dept Neurology, U of Rochester

2009 – 2010
- Post-Doctoral Fellow, Department of Brain and Cognitive Sciences, University of Rochester.

2006 – 2009

o Research Fellow, Center for Mind/Brain Sciences, University of Trento, Rovereto, Italy
2003 – 2004
o Fulbright Research Fellow (Fulbright Full Grant), Department of Psychology, University of Barcelona

Awarded Extramural Grants and Awards

- **2025-2027. NSF SBIR Phase II:** A cognitive dashboard to support clinical decision-making in neurosurgery. Max Sims (lead), Bradford Z. Mahon (Co-I). $1,018,600. MindTrace Technologies Inc.
- **2025-2028. The Chuck Noll Foundation for Brain Injury Research.** Proposal, entitled "Measuring clinical silent injury in contact sports using in vivo measures of strain concentration". 2025-2028. $125,000.
- **2024-2028 R01-NINDS** 2R01NS089609**.** Representational similarity spaces for objects and actions before and after brain surgery. Lead PI on MPI Grant: Bradford Mahon; MPI Webster Pilcher; MPI Costas Hadjipanayis. $2,550,790
- **2022-2024**. **SBIR Phase I,** Award 2213231**.** A cognitive dashboard to support clinical decision making in neurosurgery. PI Max Sims, CEO MindTrace Technologies; Co-I Bradford Mahon, CSO MindTrace. $276,000.00.
- **2023-2025 (Under NCE). NIH Direct to Phase II SBIR R44.** 1R44MH135726-01. Development of an innovative neurosurgical planning tool for awake craniotomy. PI Max Sims, CEO MindTrace Technologies; Co-I Bradford Mahon, CSO MindTrace. $1,900,000.
- **2019-2020. NSF I-Corps.** *StrongBrain: An Integrated Hardware/Software System to Predict Cognitive Outcome in Neurosurgery Patients*. Fall San Francisco Cohort. Entrepreneurial lead: Max Sims; PI/Technical Lead Bradford Mahon; Industry Mentor: Jamie Cole. $50,000.
- **2019-2024. R01 NEI** EY028535. *Access to parietal action representations after stroke lesions in visual cortex*. Lead PI on Multi-PI grant, Bradford Mahon; MPI at Rochester: Bogachan Sahin. $1,708,580 ($1,439,660 direct)
- **2015-2020. R01-NINDS.** NS089609. Cortical organization of action knowledge before and after brain surgery. PI Bradford Mahon. $1,794,507.00 ($1,174,812.00 direct).
- **2014-2017. NSF Linguistics, BCS**. "Mechanisms of word retrieval in spoken language production." PI Bradford Mahon; Co-PIs: Drs. Eduardo Navarrete and Francesca Peressotti, University of Padova. $230,158.
- **2012–2014. R21-NINDS** "Cortical organization of object knowledge before and after brain surgery". PI Bradford Mahon. $420,750 (275,000 Direct).

Intramural Grants and Awards

- **2017-2018. Wilmot Cancer Institute** grant to spur NCI funding. Pilot study to demonstrate feasibility and preliminary efficacy of advanced MRI mapping in improving outcome in patients with Glioblastoma. PI Bradford Mahon; Co-I: Dr. Kevin Walter $50,000
- **2016-2019. Department of Neurology and Department of Neurosurgery** grant for FLOURESCE (Fluoxetine for visual recovery after acute ischemic stroke). PI Bogachan Sahin, Co-I Bradford Mahon. $60,000
- **2015-2017. Schmitt Program on Integrative Brain Research** (University of Rochester). "A randomized pilot trial of fluoxetine in acute stroke." PI Bogachan Sahin, Co-I Bradford Mahon $50,000.
- **2014-2015. Schmitt Program on Integrative Brain Research** (University of Rochester). "Visual and haptic representations of objects." PI: Robert Jacobs, Co-I Bradford Mahon. $40,000.
- **2014-2015. University of Rochester – Pump Primer II. "**Visual, Haptic, and Visual-Haptic Object Perception." PI: Robert Jacobs, Co-I Bradford Mahon. $30,000.
- **2014-2015 Rochester Center for Brain Imaging.** PI Jacobs, Co-I Bradford Mahon. $10,000.

Grants and Awards (as a trainee)

- **2009-2010. Post-doctoral Kirschstein-NRSA** (Institutional Training Grant, Department of Brain and Cognitive Sciences, University of Rochester).
- **2009. Graduate Students Present Award**, Cognitive Neuroscience Society
- **2008–2009. Harvard University Eliot Dissertation Fellowship** (Competitive grant for dissertation research)
- **2006-2009. Fondazione Cassa di Risparmio di Trento e Rovereto** (Center for Mind/Brain Sciences, Italy) Competitive fellowship providing a full stipend, for functional magnetic resonance imaging research.
- **2004–2007. National Science Foundation Graduate Research Fellowship**. Competitive grant to support PhD research ("The organization of object knowledge in the brain")
- **2003–2004. Fulbright Grant.** Barcelona, Spain (Universitat de Barcelona, with Dr. Albert Costa)
- **1999–2002. Harvard College Research Program Grant** (5 times). Competitive undergraduate research grants.

Intellectual Property

- **Mahon, B., Parkins, K., Sims, M., Chernoff, B. and Angulo-Orquera, H.,** Carnegie Mellon University, 2025. *Data processing system for generating predictions of cognitive outcome in patients*. U.S. Patent 12,437,878.
    - This patent has also been granted in Australia, the European Union, and Canada

- **Mahon, B. and Hirad, A.** Carnegie Mellon University, 2022. System for estimating brain injury. US Patent US12178591B2.

Extramural Grants and Awards to Trainees

Frank Garcea. **2010**. Psi Chi Undergraduate Research Grant. **2014**. NIH Grant 5T32EY007125-24. U Rochester Ctr for Visual Science Fellowship.
Alena Stasenko. **2014**. National Science Foundation Graduate Student Research Fellowship
Elon Gaffin-Cahn. **2014**. National Science Foundation Graduate Student Research Fellowship
David Paul. **2016**. National Cadbury Award for Academic and Volunteer Achievements
Colleen Schneider. **2018**. Neurovascular and Neuroplastic Contributions to Visual Recovery in Stroke (F30)
Adnan Hirad. **2016**. National Center for Advancing Translational Science Pilot Funding. **2016**. Burroughs Wellcome Fund Interdisciplinary Pilot Award
Arka Mallela. **2022**. Exploring the expressive language function of the supplementary motor Area (F32)
Raouf Belkhir. **2018**. 5T32GM081760-14. Behavioral Brain (B2) Research Training Program; **2025** F30 (intention to fund)
Emefa Akwayena. **2023**. 5T32GM081760. Behavioral Brain (B2) Research Training Program. **2024**. Carnegie Prize Student Fellowship

Broader Impacts: Academic Research

- **Wired.** Adnan Hirad and Brad Mahon (2019) The NFL's Helmet Tests Are Brainless.
- **The New York Times.** Football May Take a Toll on the Brain, Even Without Concussions
- **Science Friday.** A new look at concussion research.
- **NPR. All Things Considered**. NPR Health: This music teacher played his saxophone while in brain surgery
- **NBC Health News**. Musician plays sax during brain tumor surgery
- **Democrat and Chronicle.** Still on operating table, patient plays sax to show surgery was success
- **People Magazine.** Music teacher played his sax during brain surgery after surgeons save his music function
- **New Atlas.** Mid-surgery sax solo sounds success for retaining musical ability
- **Carnegie Mellon University.** Study Finds Routine Hits From Playing Football Cause Damage to the Brain
- **Patients we have worked with:** [Video] Dan's Story | [Video] Gabe's Story | [Video] Greyson's Story

Broader Impacts: MindTrace Technologies

- **Carnegie Mellon University**. MindTrace' software will predict outcome from surgery.

- **StartUp Health.** MindTrace Is Improving Brain Surgery Outcomes Through Behavioral Mapping.
- **Next Pittsburgh.** MindTrace's work on brain surgery tops class at Pittsburgh Life Sciences Accelerator.
- **Pittsburgh INNO.** Startups to Watch: MindTrace Technologies
- **Our Region's Business.** [Video] MindTrace.

Grants Under Review

- **NIH R01**. Mapping Strain Concentration and TBI Injury Loading in the Human Brain with MRI. Bradford Z. Mahon (lead PI) Adnan Hirad (MPI)
- **NIH R01**. Functional and neural bases of word retrieval deficits and their recovery after temporal lobe surgery. Jorge Gonzalez-Martinez (lead); Bradford Z. Mahon (MPI).
- **NIH SBIR Phase I:** Development of a neurosurgical planning tool to improve clinical outcomes in epilepsy surgery. $695,390. MindTrace Technologies Inc.

Manuscripts Under Review

- **Hirad, AA, Mix, D, Meyers, SP, Venkataraman, A, and Mahon**, BZ. Strain concentration drives the anatomical distribution of injury in acute and chronic traumatic brain injury. *NeuroImage Clinical*. Under review. bioRxiv: https://doi.org/10.1101/2024.05.22.595352 [bioRxiv PDF]
- Gray matter stiffness predicts biomechanically stratified cortical injury after concussion. **Hirad, AA, Meyers, SP, Venkataraman, A,** Alshareef , A, **Mix, D, and Mahon**, BZ. *Journal of Neurotrauma*. Under Review.
- *o* **Grigsby, EM, Tang, LW, Damiani, A, Ho, JC, Montanaro, I, Noduri, S, Trant, S. Constantine, T, Adams, GM, Franzese, KM, Mahon, BZ, Fiez, J, Crammond, DJ, Stipancic, KI, Gonzalez-Martinez JA, Pirondini, E.** Targeted deep brain stimulation of the motor thalamus improves speech and swallowing motor functions after cerebral lesion. *Under Review.*
- **Garcea, F.E., Strawderman, E.L., Burns, W., Cotroneo, M., Meyers, S.P., Schmidt, T., Walter, K.A., Pilcher, W.H., Mahon, B.Z.** Visual processing of manipulable objects in the fusiform gyrus is modulated by inputs from parietal action systems. *Brain*, *In Revision.*

Peer Reviewed Publications

- **Belkhir, JR, Garcea, FE, Navarrete, E, Chernoff, BL, Sims, MH, Haber, S, Reedy, E, Smith, SO, Hintz, EB, Malella, A, Pease, M, Walter, K, Schmidt, T, Gonzalez-Martinez, J, Amankulor, N., Pilcher, WH, Mahon, BZ.** Parametric Causal Mapping of Language Processing using Direct Electrical Stimulation during Awake Brain Surgery. In Press, *Science Advances*
- **Strawderman, E.L., Garcea, F.E., Tivarus, M.E., Meyers, S.P., Hirad, A.A., Burns, W., Walter, K.A., Schmidt, T., Pilcher, W.H., Mahon, B.Z.** (2025) Left-hemisphere glioma drives patterns of contralesional functional connectivity. *Brain Communications*, 7, 5, fcaf349. [Article PDF]
- **Caglar, LR, Walbrin, J, Almeida, J, Mahon**, BZ (2025). Object-directed actions are componentially built in parietal cortex. *Proceedings of the National Academy of Sciences.* 122 (34) e2421032122. doi.org/10.1073/pnas.2421032122. [Article PDF]
- **Jamie Reilly, M Diaz, L Pylkkänen, E Jefferies, D Poeppel, G Zubicaray, L Connell, D Mirman, C Sandberg, Marc Brysbaert, V Borghesani, D Kemmerer, J Cantlon, G Hickok, B Mahon**, … What we mean when we say semantic: A consensus statement on the nomenclature of semantic memory. *Psychonomic Bulletin & Review*, 1-38
- **Kwiatkowski, A, Weidler, C, Habel, U, Coverdale, NS, Hirad, AA, Manning, KY, Rauscher, A, Bazarian, JJ, Cook, DJ, Li, DKB, Mahon, BZ, Menon, RS, Taunton, J, Reetz, K, Romanzetti, S, and Huppertz, C.** Uncovering the Hidden Effects of Repetitive Sub-concussive Head Impact Exposure: A Mega-Analytic Approach Characterizing Seasonal Brain Microstructural Changes in Contact and Collision Sports Athletes. *Human Brain Mapping* 45 (12), e26811
- **Mahon, BZ and Almeida**, J. (2024). Reciprocal Interactions between Parietal and Occipito-Temporal Representations Support Everyday Object-Directed Actions. *Neuropsychologia*, 198. [Article PDF]
- **Schneider, CL, Prentiss, EK, Busza, A, Williams, ZR, Mahon, BZ, Sahin, B.** (2023). Journal of Neuro-Ophthalmology. FLUORESCE: A pilot randomized clinical trial of fluoxetine for vision recovery after acute ischemic stroke. *Journal of Neuro-Ophthalmology*. 43, 2, 237-242. [Article PDF]

- **McCarty, MJ, Murphy, E, Scherschligt, X, Woolnough, O., Morse, CW, Snyder, K, Mahon, BZ, and Tandon, N.** (2023). Intraoperative cortical localization of music and language reveals signatures of structural complexity in posterior temporal cortex. *iScience* 26 (7) [Article PDF]
- **Fischer, J and Mahon, BZ**. (2021). What tool representation, intuitive physics, and action have in common: The brain's first-person physics engine. *Cognitive Neuropsychology*, 38 (7-8), 455-467 [Article PDF]
- **Paul, DA, Strawderman, E., Rodriguez, A., Hoang, R., Schneider, CL, Haber, S., Chernoff, BL, Shafiq, I, Williams, ZR, Vates, GE, Mahon, BZ**. (2021). Empty sella syndrome as a window into the neuroprotective effects of prolactin. *Frontiers in Medicine* 8, 680602 [Article PDF]
- **Schneider, CL, Majewska, AK, Busza, A, Williams, ZR, Mahon, BZ, Sahin,** B. (2021). Selective serotonin reuptake inhibitors for functional recovery after stroke: similarities with the critical period and the role of experience-dependent plasticity *Journal of Neurology,* 268, 4, 1203-1209. [Article PDF]
- **Belkhir, J.R., Fitch, W.T., Garcea, F.E., Chernoff, B.L., Sims, M.H., Navarrete, E., Haber, S., Paul, D.A., Smith, S.O., Pilcher**, W.H., Mahon, B.Z. (2020). Direct electrical stimulation evidence for a dorsal motor area with control of the larynx. *Brain Simulation*, 14, 110-112. [Article PDF]
- **Mahon, B. Z. & Kemmerer**, D. (2020). Interactions between language, thought, and perception: Cognitive and neural perspectives. Cognitive Neuropsychology, 37, 5-6. [Article PDF]
- **Mahon, B. Z.** (2020). Brain Mapping: Understanding the Ins and Outs of Brain Regions. Current Biology, 30(9), R414–R416. https://doi.org/10.1016/j.cub.2020.03.061 [Article PDF]
- **Chernoff, B. L., Teghipco, A., Garcea, F. E., Belkhir, R., Sims, M. H., Paul, D. A., Tivarus, M, Smith, M, Hintz, E, Pilcher, W., & Mahon, B. Z.** (2020). Reorganized language network connectivity after left arcuate fasciculus resection: A case study. *Cortex*, 123, 173–184. [Article PDF]
  - [Video] Awake Language Mapping of posterior lateral left hemisphere language sites
  - Peoples' Choice Award CNS: https://www.cogneurosociety.org/brain-rewire-after-surgery/
- **Mahon, BZ, Mead, JA, Chernoff, BL, Sims, MH, Garcea, FE, Prentiss, E, Belkhir, R, Haber, SJ, Gannon, SB, Erickson, S, Wright, KA, Schmidt, MZ, Paulzak, A, Milano, VC, Paul, DA, Foxx, K, Tivarus, M, Nadler, JW, Behr, JM, Smith, SO, Li, YM, Walter, K, and Pilcher, WH.** (2019). Translational Brain Mapping at the University of Rochester Medical Center: Preserving the Mind Through Personalized Brain Mapping. Journal of Visualized Experiments, DOI: 10.3791/59592-v. [Article PDF]
  - [Video]. Video Protocol: Translational Brain Mapping at the University of Rochester
- **Mahon, B. Z., & Navarrete, E.** (2019). Adjudicating conflict in speech production—Do we need a central selection mechanism? *Cognitive Neuropsychology,* 1–5. [Article PDF]
- **Hirad, A. A., Bazarian, J. J., Merchant-borna, K., Garcea, F. E., Heilbronner, S., Paul, D., Hintz, E. B., Wijngaarden, E. V., Schifitto, G., Wright, D. W., Espinoza, T. R. & Mahon**, B. Z. (2019). A common neural signature of brain injury in concussion and subconcussion. *Science Advances*, 5(8). [Article PDF] [Supplementary Materials PDF]
  - [Video] Carnegie Mellon Video Abstract.
- **Chernoff, B.L., Sims, M.H., Garcea, Smith, S.O., Pilcher, W.H., & Mahon**, B.Z. (2019). Direct Electrical Stimulation of the Left Frontal Aslant Tract Disrupts Sentence Planning Without Affecting Articulation *Cognitive Neuropsychology*, 36(3-4):178-192 [Article PDF]
  - [Video] Awake Mapping of the Frontal Aslant Tract During Awake Brain Surgery
- **Schneider, C. L., Majewska, A. K., Busza, A., Williams, Z. R., Mahon, B. Z., & Sahin**, B. (2019). Selective serotonin reuptake inhibitors for functional recovery after stroke: similarities with the critical period and the role of experience-dependent plasticity. *Journal of Neurology* [Article PDF]
- **Lee, D., Mahon, B.Z., and Almeida**, J.A. (2019). Action at a distance on category–specific ventral temporal representations. *Cortex,* 117, 157–167. [Article PDF]
- **Mahon, B.Z., Miozzo, M., and Pilcher,** W.H. (2019). Direct Electrical Stimulation Mapping of Cognitive Functions in the Human Brain. Cognitive Neuropsychology, 36(3-4):97-102. (Introduction to Special Issue of the same title) [Article PDF]
- **Busza, A., Schneider, C.L., Williams, Z.R., Mahon,** B.Z., Sahin, B. (2019). Using vision to study post-stroke recovery and test hypotheses about neurorehabilitation. *Neurorehabilitation and Neurorepair*. 33(2), 87–95. [Article PDF]
- **Schneider, C.L., Prentiss, E.K., Busza, A., Matmati, K., Matmati N., Williams, Z.R., Sahin, B., Mahon, B.Z.** (2019). Survival of Retinal Ganglion Cells After Damage to the Occipital Lobe in Humans is

Activity-Dependent. *Proceedings of the Royal Society B: Biological Sciences*. 286: 20182733. [Article PDF] [Supplementary Materials PDF]

- **Prentiss, E.K., Schneider, C.L., Williams, Z.R., Sahin, B., and Mahon, B.Z**. (2018). Spontaneous in-flight accommodation of hand orientation to unseen grasp targets: A case of action blindsight. *Cognitive Neuropsychology, 35,* 343-351. [Article PDF]
  - [Video] Example of individual with cortical blindness showing blindsight in reaching
- **Garcea, F.E., Almeida, J., Sims, M.H., Nunno, A., Meyers, S.P., Li, Y.M., Walter, K., Pilcher, W.H., Mahon, B.Z.** (2018). Domain-specific diaschisis: Lesions to parietal action areas modulate neural responses to tools in the ventral streams. *Cerebral Cortex*, *ePub ahead of print*. [Article PDF] [Supplementary Materials PDF]
- **Almeida, J., Amaral, L., Garcea, F.E., Aguiar de Sousa, D., Xu, S., Mahon, B.Z. & Martins, I.P.** (2018). Visual and visuomotor processing of hands and tools as a case study of cross talk between the dorsal and ventral streams. *Cognitive Neuropsychology*, 35, 288-303 [Article PDF]
- **Shay, E., Chen, Q., Garcea, F.E., & Mahon, B.Z.** (2018). Decoding intransitive actions in primary motor cortex using functional MRI: Toward a componential theory of 'action primitives' in motor cortex. *Cognitive Neuroscience*, 10, 13-19. [Article PDF]
- **Garcea, F.E., Chen, Q., Vargas, R., Narayan, D.A., and Mahon, B.Z.** (2018). Task- and domain-specific modulation of functional connectivity between and within the ventral and dorsal object processing pathways. *Brain Structure and Function*, 223, 2589-2607 [Article PDF] [Supplementary Materials PDF]
- **Chernoff, B.L., Teghipco, A., Garcea, F.E., Sims, M., Paul, D.A., Tivarus, M., Smith, S.O., Pilcher, W.H., Mahon, B.Z.** (2018). A role for the frontal aslant tract in speech planning: A neurosurgical case study. *Journal of Cognitive Neuroscience*, 30, 752-769 [Article PDF]
- **Chen, Q., Garcea, F.E., Jacobs, R.A., and Mahon, B.Z.** (2018). Abstract representations of object directed action in the left inferior parietal lobule. *Cerebral Cortex,* 28, 2162-2174 [Article PDF]
- **Garcea, F.E., Chernoff, B.L., Diamond, B., Lewis, W., Sims, M.H., Tomlinson, S.B., Teghipco, A., Belkhir, R., Gannon, S.B., Erickson, S., Smith, S.O., Stone, J., Liu, L., Tollefson, T., Langfitt, J., Marvin, E., Pilcher, W.H., & Mahon, B.Z.** (2017). Direct electrical stimulation in the human brain disrupts melody processing. *Current Biology*, 27, 17, p2684–2691.e7. [Article PDF]
  - [Video] Video abstract of Garcea and Colleagues
  - [Video] Awake Music Mapping: Stimulation Mapping Disrupts Melody Perception Awake Music
  - [Video] Awake Language Mapping: Speech Arrest Referred via the Arcuate Fasciculus
- **Chen, Q., Garcea, F.E., Almeida, J., & Mahon,** B.Z. (2017). Connectivity-based constraints on category-specificity in the ventral object processing pathway. *Neuropsychologia,* 105, 184 - 196. [Article PDF] [Supplementary Materials PDF]
- **Koopman, S.E., Mahon, B.Z., & Cantlon, J.F.** (2017). Evolutionary constraints on human object perception. *Cognitive Science*, *41,* 2126 - 2148. [Article PDF]
- **Alonso-Diaz, S. Gaffin, E., Mahon, B. Z., & Cantlon, J. F.** (2017). What's in a reach? Domain-general modulations of reach by numerical value. *Journal of Numerical Cognition,* 3, 212-229. [Article PDF]
- **Mahon, B.Z. and Navarrete, E**. (2016). Modeling lexical access in speech production as a ballistic process. *Language, Cognition and Neuroscience*. 31, 521-523. [Article PDF]
- **Mahon, B.Z. and Hickok, G.** (2016). Arguments about the Nature of Concepts: Symbols, embodiment, and beyond. *Psychonomic Bulletin and Review*. 23, 941-958. [Introduction to a Special Issue by the same title, Edited by Mahon and Hickok]. [Article PDF]
  - [Digital event' hosted by Psychonomic Society]
- **Amaral, L., Ganho, A., Osório, A., He, D., Chen, Q., Mahon, B.Z., Gonçalves, O.F., Sampaio, A., Fang, F., Bi, Y. & Almeida, J.** (2016). Hemispheric asymmetries in subcortical visual and auditory relay structures in congenital deafness. *European Journal of Neuroscience*, 44, 2334-2339. [Article PDF]
- **Kristensen, S., Garcea, F.E., Mahon, B.Z., & Almeida, J.** (2016). Temporal frequency tuning reveals interactions between dorsal and ventral visual streams. *Journal of Cognitive Neuroscience*. 28, 1295-1302. [Article PDF]
- **Kersey, A.J., Clark, T.S., Lussier, C.A., Mahon, B.Z., & Cantlon, J.F.** (2016). Development of tool selectivity in the dorsal and ventral visual pathways. *Cerebral Cortex*. 26, 3135-3145. [Article PDF]
- **Vargas, R., Garcea, F.E., Mahon, B.Z., & Narayan, D.** (2016). Refining the clustering coefficient for analysis of social and neural network data. *Social Network Analysis and Mining*, 6:49. [Article PDF]

- **Erdogan, G., Chen, Q., Garcea, F.E., Mahon, B.Z. & Jacobs, R**. (2016). Multisensory part-based representations of objects in human lateral occipital complex. *Journal of Cognitive Neuroscience. 26, 869-881.* [Article PDF]
- **Navarrete, E., Mahon, B.Z., Lorenzoni, A., & Peressotti, F.** (2016). What can written-words tell us about lexical retrieval in speech production? *Frontiers in Psychology, 6,* 1 - 12. [Article PDF]
- **Garcea, F.E., Kristensen, S., Almeida, J., & Mahon, B.Z.** (2016). Resilience to the contralateral visual field bias as a window into object representations. *Cortex*, 81, 14-23. [Article PDF]
- **Chen, Q., Garcea, F.E., and Mahon, B.Z. (2016).** The representation of object-directed action and function knowledge in the human brain. *Cerebral Cortex,* 26, 1609-1618. [Article PDF]
- **Mahon, B.Z. (**2015). What is embodied about cognition? *Language, Cognition and Neuroscience*. 30, 420-429. [Article PDF]
- **Mahon, B.Z**. (2015). Response to Glenberg: Conceptual content does not constrain the representational format of concepts. *Canadian Journal of Experimental Psychology*, *69,* 179-180. [Article PDF]
- **Mahon, B.Z.** (2015). The burden of embodied cognition. *Canadian Journal of Experimental Psychology*, *69,* 172-178. [Article PDF]
- **Almeida, J., He, D., Chen, Q., Mahon, B.Z., Zhang, F., Gonçalves, O.F., Fang, F., & Bi, Y. (**2015). Decoding visual location from neural patterns in the auditory cortex of the congenitally deaf. *Psychological Science, 26, 1771-1782.* [Article PDF] [Supplementary Materials PDF]
- **Stasenko, A., Bonn, C., Teghipco, A., Garcea, F., Sweet, C., Dombovy, M., McDonough, J., and Mahon, B.Z.** (2015). A causal test of the motor theory of speech perception: A case of impaired speech production and spared speech perception. *Cognitive Neuropsychology*, *32,* 38-57. [Article PDF]
- **Navarrete, E., Caccaro, A., Pavani, F., Mahon, B.Z., and Peressotti, F. (**2015). With or Without Semantic Mediation: Retrieval of Lexical Representations in Sign Production. *Journal of Deaf Studies and Deaf Education, 20,* 163-171. [Article PDF]
- **Paul, D. Gaffin-Cahn, E., Hintz, E., Adeclat, G., Zhu, T., Williams, Z.R., Vates, G.E., Mahon, B.Z**. (2014). White Matter Changes Linked to Visual Recovery after Nerve Decompression in Humans. *Science Translational Medicine*, 6, 266ra173. [Article PDF] [Supplementary Materials PDF]
- **Stasenko, A., Garcea, F.E., Dombovy, M., & Mahon, B.Z.** (2014). When concepts lose their color: A case of selective loss of knowledge of object color. *Cortex*, *58,* 217-238. [Article PDF] [Supplementary Materials PDF]
- **Garcea, F.E. & Mahon, B.Z.** (2014). Parcellation of left parietal tool representations by functional connectivity. *Neuropsychologia*, 60, 131-143. [Article PDF]
- **Navarrete, E., Del Prato, P., Peressotti, F., & Mahon, B.Z**. (2014). Lexical retrieval is not by competition: evidence from the blocked naming paradigm. *Journal of Memory and Language*, 76, 253-272. [Article PDF]
- **Almeida, J., Mahon, B.Z., Zapater-Raberov, V., Dziuba, A., Cabaço, T., Marques, J.F., & Caramazza, A.** (2014). Grasping with the eyes: the role of elongation in visual recognition of manipulable objects. *Cognitive, Affective, and Behavioral Neuroscience*, 14, 319-335. [Article PDF]
- **Fintzi, A.R. & Mahon, B.Z.** (2014). A bimodal tuning curve for spatial frequency across left and right human orbital frontal cortex during object recognition. *Cerebral Cortex*, 24, 1311–1318. [Article PDF]
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- **Stasenko, A., Garcea, F.E., & Mahon, B.Z**. (2013). What happens to the motor theory of perception when the motor system is damaged? *Language and Cognition, 5,* 225-238. [Article PDF]
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- **Mahon, B.Z., Kumar, N., & Almeida, J.** (2013). Spatial frequency tuning reveals interactions between the dorsal and ventral visual systems. *Journal of Cognitive Neuroscience*, *25,* 862-871. [Article PDF]
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- **Garcea, F.E., & Mahon, B.Z.** (2012). What is in a tool concept? Dissociating manipulation knowledge from function knowledge. Memory and Cognition, 40, 1303-1313. [Article PDF] [Supplementary Materials PDF]
- Exceptional Publication Award, of Special Interest to Progress in the Field of Psychology
- **Garcea, F.E., Almeida, J., & Mahon, B.Z.** (2012). A right visual field advantage for visual processing of manipulable objects. Cognitive, Affective, and Behavioral Neuroscience. 12, 813-25 [Article PDF] [Supplementary Materials PDF]
- **Navarrete, E. Del Prato, P., & Mahon, B.Z.** (2012). Factors Determining Semantic Facilitation and Interference in the Cyclic Naming Paradigm. Frontiers in Psychology, 3, 38. 1-15. [Article PDF]
- **Mahon, B.Z., Garcea, F.E., & Navarrete, E.** (2012). Picture-word interference and the response exclusion hypothesis: A response to Mulatti and Coltheart. Cortex, 48, 373-377. [Article PDF] [Supplementary Materials PDF]
- **Mahon, B.Z. and Caramazza, A.** (2011). What drives the organization of object knowledge in the brain? Trends in Cognitive Sciences. 15, 97-103. [Article PDF]
- **Mahon, B. Z., Cantlon, J. F.** (2011). The specialization of function: cognitive and neural perspectives. Cognitive Neuropsychology, 28, 147-155. [Article PDF]
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- **Navarrete, E., Mahon, B.Z., & Caramazza, A**. (2010). The cumulative semantic cost does not require lexical selection by competition. Acta Psychologica, 134, 279-289 [Article PDF]
- **Mahon, B.Z. & Caramazza, A.** (2010). Judging semantic similarity: An event-related fMRI study with auditory word stimuli. Neuroscience. 169, 279-286. [Article PDF]
- **Mahon, B.Z., Schwarzbach, J., & Caramazza, A.** (2010). The representation of tools in left parietal cortex independent of visual experience. Psychological Science. 21(6), 764-771 [Article PDF] [Supplementary Materials PDF]
- **Almeida, J., Mahon, B.Z., & Caramazza, A**. (2010). The role of the dorsal visual processing stream in tool identification. Psychological Science. 21(6), 772-778. [Article PDF] [Supplementary Materials PDF]
- **Mahon, B.Z and Caramazza, A.** (2009). Concepts and Categories: A Cognitive Neuropsychological Perspective. Annual Review of Psychology, 60, 27–51. [Article PDF]
- **Mahon, B.Z. and Caramazza, A.** (2009). Why does lexical selection have to be so hard? Comment on Abdel Rahman and Melinger's Swinging Lexical Network Proposal. Language and Cognitive Processes, 24, 734-748. [Article PDF]
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- **Mahon, B.Z., Anzellotti, S., Schwarzbach, J., Zampini, M., and Caramazza, A.** (2009). Category-specific organization in the human brain does not require visual experience. Neuron, 63, 397-405. [Article PDF] [Supplementary Materials PDF]
- **Finocchiaro, C., Mahon, B.Z., & Caramazza, A.** (2008). Gender agreement and multiple referents. Italian Journal of Linguistics, 20, 285-307. [Article PDF]
- **Almeida, J., Mahon, B.Z., Nakayama, K., & Caramazza, A.** (2008). Unconscious processing dissociates along categorical lines. Proceedings of the National Academy of Sciences, 105, 5214–15218. [Article PDF] [Supplementary Materials PDF]
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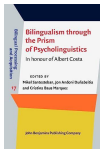
- **Mahon, B.Z. & Caramazza, A.** (2008). A Critical Look at the Embodied Cognition Hypothesis and a New Proposal for Grounding Conceptual Content. Journal of Physiology – Paris, 102, 59-70. [Article PDF]
- **Negri, G.A.L., Rumiati, R.I., Zadini, A., Ukmar, M., Mahon, B.Z., & Caramazza, A**. (2007). What is the role of motor simulation in action and object recognition? Evidence from apraxia. Cognitive Neuropsychology, 24, 795-816. [Article PDF]
- **Mahon, B.Z., Milleville, S., Negri, G.A.L., Rumiati, R.I., Caramazza, A., & Martin, A.** (2007). Action-related properties of objects shape object representations in the ventral stream. Neuron, 55, 507-520. [Article PDF] [Supplementary Materials PDF]

- **Mahon, B.Z., Costa, A., Peterson, R., Vargas, K., & Caramazza, A.** (2007). Lexical selection is not by competition: A reinterpretation of semantic interference and facilitation effects in the picture-word interference paradigm. Journal of Experimental Psychology: Learning, Memory, and Cognition, 33, 503-535. [Article PDF]
- **Caramazza, A. & Mahon, B.Z.** (2006). The organization of conceptual knowledge in the brain: the future's past and some future directions. Cognitive Neuropsychology, 23, 13-38. [Article PDF]
- **Mahon, B.Z. & Caramazza, A.** (2005). The orchestration of the sensory-motor systems: Clues from neuropsychology. Cognitive Neuropsychology, 22, 480-494. [Article PDF]
- **Mahon, B.Z. & Caramazza, A.** (2004). Heterogeneity is a fact of category-specific semantic deficits. So? Comments on Rosazza, Imbornone, Zorzi, Farina, Chiavari, and Cappa (2003). Neurocase, 10, 78-83. [Article PDF]
- **Mahon, B.Z. & Caramazza, A.** (2003). Constraining questions about the organization and representation of conceptual knowledge. Cognitive Neuropsychology, 20, 433-450. [Article PDF]
- **Costa, A., Mahon, B.Z., Savova, V., & Caramazza, A.** (2003). Level of categorization effect: A novel effect in the picture-word interference paradigm. Language and Cognitive Processes, 18, 205-233. [Article PDF]
- **Capitani, E., Laiacona, M., Mahon, B.Z., & Caramazza, A.** (2003). What are the facts of category-specific deficits? A critical review of the clinical evidence. Cognitive Neuropsychology, 20, 213-261. [Article PDF]
- **Mahon, B.Z. and Caramazza, A**. (2003). There are facts…and then there are facts. Reply to Moss and Tyler. Trends in Cognitive Sciences, 7, 481-482. [Article PDF]
- **Caramazza, A. & Mahon, B.Z.** (2003). The organization of conceptual knowledge: the evidence from category-specific semantic deficits. Trends in Cognitive Sciences, 7, 325-374. [Article PDF]
- **Mahon, BZ & Caramazza, A.** (2001). The sensory/functional assumption or the data: Which do we keep? Behavioral and Brain Sciences 24 (3):488-489. [Article PDF]

Chapters in Edited Volumes

Mahon, B.Z. 2023. Higher order visual object Representations: a functional Analysis of their role in Perception and action. In "APA Handbook of Neuropsychology: Volume 2. Neuroscience and Neuromethods", edited by: Gregory G. Brown, Bruce Crosson, and Kathleen Y. Haaland.

Mahon, B.Z. (2022). Domain-specific connectivity drives the organization of object knowledge in the brain. Handbook of Clinical Neurology, Volume 187, 2022, Pages 221-244



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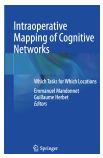

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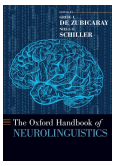
Mahon, B.Z. (2020). The representation of tools in the human brain. In, "The New Cognitive Neurosciences, Sixth Edition" David Poeppel and Michael Gazzaniga (Eds).



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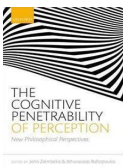
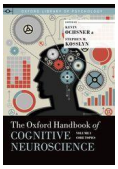
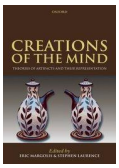
Mahon, B.Z. (2015). Missed connections: A connectivity constrained account of the representation of object concepts. E. Margolis and S. Laurence (Eds), The Conceptual Mind: New Directions in the Study of Concepts, MIT Press.



Mahon, B.Z. & Wu, W. (2015). Cognitive penetration of the dorsal visual stream? John Zeimbekis and Athanasios Raftopoulos (Eds.), The Cognitive Penetration of Perception: New Philosophical Perspectives. Oxford University Press.



Mahon, B.Z, & Caramazza, A. (2014). The Organization of Conceptual Knowledge in the Brain. The Oxford Handbook of Cognitive Neuroscience. Kevin Ochsner and Stephen M. Kosslyn (Eds). Oxford University Press.



Mahon, B.Z, & Caramazza, A. (2007). The organization of conceptual knowledge in the brain: Living kinds and artifacts. E. Margolis and S. Laurence (Eds.), Creations of the Mind: Essays on Artifacts and their Representation. Oxford University Press.

Mahon, B.Z. & Caramazza, A. (2005). Category-specific knowledge, sensory modalities, and features: Clues from neuropsychology and functional neuroimaging. The Encyclopedia of Language and Linguistics, 2nd Edition. Elsevier Science, Amsterdam

Invited Talks [Excluding Guest Lectures]

- Mahon, B.Z. Translational Brain Mapping From Basic Science to Clinical Application (and back again). Rutgers Brain Health Institute. December 5, 2025.
- Mahon, B.Z. Meaning in Action: Rethinking Domain-Specificity. Colloquium, Johns Hopkins University, Psychological and Brain Sciences. Sept 10, 2025.
- Mahon, B.Z. Mapping language function during awake brain surgery. Society for Language Development, Invited Symposium Presentation. November 7, 2024
- Mahon, B.Z. Process mapping with direct electrical stimulation during awake brain surgery. Joint San Diego State University / UCSD Invited Colloquium. Oct 4, 2024
- Mahon, B.Z. Rethinking Domain-Specificity). 1st Seeing and Action Workshop Coimbra, Portugal, September 22, 2023.
- Mahon, B.Z. Meaning in action 30th European Society for Philosophy and Psychology Conference. August 29, 2023
- Mahon, B.Z. What does the 'Translational' in Translational Brain Mapping mean? University of Pittsburgh Department of Neurology Grand Rounds, April 12, 2023
- Mahon, B.Z. Organization of the human visual system through the lens of stroke. University of Pittsburgh, Neurovascular and Neurocritical Care. February 28, 2023
- Mahon, B.Z. What would it look like, if it looked like the brain were organized into innate domain-specific knowledge systems? Beyond Association, Frankfurt, Germany. October 4, 2022

- o Mahon, B.Z. Domain-Specific Diaschesis. (Or: Content-specific modulation of functional networks in the setting of transient and chronic lesions in the human brain). Symposium: Localization of Function in Times of Network Science. Cognitive Neuroscience Society, San Francisco, April 23, 2022.
- o Mahon, B.Z. Constraints on the neural organization of conceptual knowledge in humans (What happens in semantics never stays in semantics). Neurobiology of Language: Key Issues and Ways Forward II. March 16, 2022. Max Planck Institute for Psycholinguistics.
- o Mahon, B.Z. The role of the ventral and dorsal streams in action and perception. New Interdisciplinary Horizons in Psychological Research, University of Coimbra. https://neopsychcoimbra.wordpress.com/
- o Mahon, B.Z. An Update on: The Program for Translational Brain Mapping. Department of Neurosurgery, University of Rochester Medical Center. June 18, 2021
- o Mahon, B.Z. Perception in action. Summer Seminars in Neuroscience and Philosophy. June 2, 2021.
- o Mahon, B.Z. Translational Brain Mapping: From Discovery to Care. Grand Rounds, Department of Neurology. April 2, 2021.
- o Mahon, B.Z. Translational Brain Mapping. Grand Rounds, Epilepsy Center, University of Pittsburgh Medical Center. March 26, 2021.
- o Mahon, B.Z. What happens in semantics never stays in semantics. Invited Colloquium. Modal & Amodal Cognition Research Unit. Tübingen University. December 6, 2021.
- o Mahon, B.Z. "…immense zeal, applied to a great idea. Contribution at the Feschrift of Dr. Gabriele Miceli. October 5, 2021
- o Mahon, B.Z. From understanding to prediction in translational cognitive neuroscience. Department of Communication and Language Sciences, University of Pittsburgh. October, 2021.
- o Mahon, B.Z. Direct electrical stimulation mapping of language pathways during awake brain surgery. Cognitive Neuroscience Society (Virtual), May 2020.
- o Mahon, B.Z. Translational Brain Mapping. University of Rochester Medical School, Symposium on Neuromodulation, Oct 26, 2019
- o Mahon, B.Z. Translational Brain Mapping. Grand Rounds, Department of Neurological Surgery, University of Pittsburgh, PA. May 8, 2019.
- o Mahon, B.Z. The Program for Translational Brain Mapping at the University of Rochester Medical School. The Highlands, Oct 23, 2019
- o Mahon, B.Z. The Neural Representation of Object Concepts. University of Pittsburgh, Center for Philosophy of Science, Feb 22, 2019;
- o Mahon, B.Z. The Neural Representation of Object Concepts. University of Padova, Department of Psychology. January 24, 2019
- o Mahon, B.Z. The Neural Representation of Object Concepts. University of Pittsburgh Cognitive Psychology Brown Bag, October 3rd, 2018.
- o Mahon, B.Z. The Neural Representation of Object Concepts. Northeastern University, Colloquium. September 27, 2018.
- o Mahon, B.Z. The Neural Representation of Object Concepts. Genetics and Neurobiology of Language, Cold Springs Harbor, August 2, 2018.
- o Mahon, B.Z. The representation of tools in the human brain. The New Cognitive Neurosciences, Tahoe Ca. July 9, 2018.
- o Mahon, B.Z. Constraints on the organization of conceptual knowledge in humans. Behavioral and Brain Sciences Symposium, University of Buffalo, June 1, 2018.
- o Mahon, B.Z. The representation of object concepts in the brain. ICM Institute for Brain and Spinal Cord, Paris, France. November 28, 2017.
- o Mahon, B.Z. Beyond Embodiment – Connectivity and Dynamics in the Conceptual System, Society for Neuroscience, November 13, 2017.
- o Mahon, B.Z. What is the difference between concept representation and concept use? Philadelphia Semantics Society, October 26, 2017.

Pilcher, W.H., Marvin, E., and Mahon, B.Z. Mapping music during awake brain surgery. Meliora Weekend 'Mel Talk', University of Rochester. Oct 14, 2017.

- o Mahon, B.Z. Constraints on the neural organization of object concepts. Invited talk at American Psychological Association. May 27, 2017

- Mahon, B.Z. Constraints on the neural organization of conceptual knowledge in humans. Colloquium, Carnegie Mellon University. April 28, 2017.
- Mahon, B.Z. What is the format of thought? Clues from Cognitive Neuropsychology. Preconference on embodiment, Society for Personality and Social Psychology, San Antonio, Texas. Jan 18, 2017.
- Mahon, B.Z. Mapping music during awake brain surgery. Music and Medicine Symposium, Eastman School of Music. Sept 24, 2016.
- Mahon, B.Z. and Sahin, B. The human brain in health and disease -- Insights from the Laboratory and the Clinic. 3 part lecture series, University of Rochester Always Learning at the Highlands, Aug 22, 29, Sept 12.
- Mahon, B.Z. Introduction to Rovereto Workshop in Honor of Alfonso Caramazza. Rovereto IT, May 10, 2016.
- Mahon, B.Z. Functional specialization and neural plasticity. Gordon Research Conference, Neurobiology of Cognition. July 2016.
- Mahon, B.Z. Neural Connectivity and Functional Specialization. Invited faculty lecture at Department of Neuroscience (Univ. of Rochester Medical School) Retreat. April 29, 2016.
- Mahon, B.Z. Toward a new approach for using MRI in a neurosurgical context. Academic Conference, Dept. of Neurosurgery, Rochester NY. December 18, 2015
- Mahon, B.Z. Using functional and structural MRI in neurosurgery patients: basic science and clinical implications. Academic Conference, Dept. of Neurosurgery, Rochester NY. April 17, 2015
- Mahon, B.Z. The new science of human brain mapping. University of Rochester Always Learning at the Highlands. October 21, 2015.
- Mahon, B.Z. Functional Magnetic Resonance Imaging in Neurosurgery Patients. New York State PeriAnesthesia Nurses Association, September, 26, 2015.
- Pilcher, W. and Mahon, B.Z. Human Brain Mapping. Boston, Ma – Sept 10, 2014; Rochester, NY – Oct 8, 2014; Palo Alto, Ca – Nov. 5, 2014; Naples, Fl – January 23, 2015; Washington DC May 5, 2015; RochesterNY (Meliora Weekend), October 2015
- Mahon, B.Z. The new science of human brain mapping. University of Rochester Always Learning at the Highlands. Series of 5 lectures (Feb-March, 2015).
- Mahon, B.Z. The new science of human brain mapping. University of Rochester Always Learning at the Highlands. Oct 1, 2014.
- Mahon, B.Z. Pathways of understanding. Cognitive Neuropsychology Laboratory, Harvard University (Caramazza Lab). September 11, 2014.
- Mahon, B.Z. What is embodied about cognition? 'Debate' style forum with Art Glenberg, Organized by Steve Lupker and moderated by Mike Masson. Canadian Society for Brain, Behaviour, and cognitive Science. July 4, 2014.
- Pilcher, W. and Mahon, B.Z. The new science of human brain mapping. Mini-Med School for an Evening—The University of Rochester Medical Center. May 28, 2014.
- Mahon, B.Z. Objects and actions in the human brain. Grand Rounds, Department of Neurology, University of Rochester. April 18, 2014.
- Mahon, B.Z. and Vates, G.E.V. Using MRI to predict visual recovery after tumor resection. March 11, 2014. UR Clinical and Translational Science Institute's (CTSI) Spring Seminar "Crossing Elmwood: River Campus-Medical Center Research Collaborations."
- Mahon, B.Z. and Pilcher, W. The New Science of Human Brain Mapping. The Rochester Forum, The Memorial Art Gallery, June 20, 2013.
- Mahon, B.Z. Using fMRI to map brain function in neurosurgery patients. Neurosurgery Academic Conference, University of Rochester Medical School. June 14, 2013.
- Mahon, B.Z., How Action Shapes Tool Concepts. Rovereto Workshop on Concepts, Actions, and Objects – Rovereto, Italy. May 23, 2013
- Mahon, B.Z. Action shapes the organization of artifact concepts. Colloquium. Department of Psychology, University of California, San Diego. January 17th, 2012.
- Mahon, B.Z. Action shapes the organization of artifact concepts. Cowan Young Investigator Lecture, Center for the Neural Basis of Cognition, Carnegie Mellon. September 8, 2011.
- Mahon, B.Z. Action shapes the organization of artifact concepts. Invited Speaker, 22nd Perceptual Expertise Network, Vanderbilt University, April 28, 2011.

- Mahon, B.Z. The role of action is shaping the organization of artifact concepts. Colloquium. Department of Psychology, Purdue University, February 23, 2011
- Mahon, B.Z. Connectivity Constrains the Organization of Object Knowledge in the Brain. Colloquium Department of Psychology, University of Western Ontario, Oct 15, 2010
- Mahon, B.Z. The role of action in shaping the organization of artifact concepts. Lake Ontario Visionary Establishment (L.O.V.E. Conference), Niagara Falls, Canada, February 12th, 2010.
- Mahon, B.Z. Form and function in the organization of artifact concepts. NeuroCog Collective, Bocas Del Toro, Panama, January 12th, 2010
- Mahon, B.Z. The representation of object knowledge in the brain. Department of Psychological and Brain Sciences, Dartmouth University. December 3, 2009.
- Mahon, B.Z. Reorganization of cortical networks supporting object use after brain damage. Neurosurgery Grand Rounds, University of Rochester Medical School, Oct 2, 2009
- Mahon, B.Z., Anzellotti, S., Schwarzbach, J., Zampini, M., and Caramazza, A. Category-specific organization in the human brain does not require visual experience. Graduate Student Presents Award. Presentation at Cognitive Neuroscience Society. San Francisco, March 24, 2009.
- Mahon, B.Z. The representation of everyday objects: The distributed domain-specific hypothesis. Research seminar in cognition, brain and behavior, Department of Psychology, Harvard University. March 12, 2009.
- Mahon, B.Z. Concepts and Categories: A Cognitive Neuroscience Approach. Neurosurgery Academic Conference. Depart. of Neurosurgery, University of Rochester Medical Center. September 5, 2008
- Mahon, B.Z. The representation of everyday objects. University of Illinois, February 7, 2008; University of Rochester, February 20, 2008; University of Wisconsin, April 3, 2008
- Navarrete, E., Mahon, B.Z., and Caramazza, A. Il costo cumulativo intracategoriale in compiti di denominzaione di figure. AIP Congress, Padua, Italy. September, 18, 2008.
- Navarrete, E., Mahon, B.Z., Finocchiaro, C. and Caramazza, A. Effetti di Distanza Semantica nella denominazione in blocchi: evidenze contrarie alla Selezione Lessicale per Competizione. AIP Congress, Como, Italy. September, 17, 2007.
- Mahon, B.Z. Apraxia and the Structure of Concepts. VIII Corso diriabilitazione neurologica. Pergine Valsugana (TN). October 6, 2007.
- Mahon, B.Z., Costa, A. and Caramazza, A. Dynamics of Lexical Access: There is no lexical competition. ESCOP, Marseille, France, September 1, 2007
- Mahon, B.Z. Dynamics of Lexical Access. Dipartimento di Psicologia dello Sviluppo e della Socializzazione, University of Padova, Italy. June 14, 2007.
- Mahon, B.Z. Representing object concepts: the ghost in the motor system. Department of Psychology, University of Bologna, Italy. March 23, 2007.
- Mahon, B.Z. & Caramazza, A. Concepts and Actions: The view from where? Discussion of symposium presentations on Concepts and Actions. Bressanone, Italy. January 26, 2007.
- Mahon, B.Z. & Caramazza, A. The Dynamics of Lexical Access. Fondamenti Biologici e Psicologici del Linguaggio: Simposio in Ricordo di Marica De Vincenzi. Chieti, Italy. January 18-19, 2007.
- Mahon, B.Z. & Caramazza, A. The Dynamics of Lexical Access. Center for Mind/Brain Sciences, Rovereto, Italy. January 12, 2007.
- Mahon, B.Z. Action shapes object representations in the fusiform gyrus. Scuola Internazionale Superiore di Studi Avanzati; Cognitive Neuroscience Sector. October 25, 2006.
- Mahon, B.Z. Action shapes object representations in the fusiform gyrus. Center for Mind/Brain Sciences, Rovereto, Italy. September 22, 2006.
- Mahon, B.Z. Stroop-like interference effects: Implications for models of lexical access in speech production. Department of Psychology, Harvard University. Second year talk for PhD program. May 16, 2006.
- Mahon, B.Z.The organization of conceptual knowledge of objects: Clues from cognitive neuropsychology and functional neuroimaging. Department of Psychology, University of Barcelona, June, 2004.
- Navarrete, E. and Mahon, B.Z. La activación de lo que no decimos: ¿Hasta dónde salta la liebre? Bellvitge Hospital. May 5, 2004.
- Caramazza, A. and Mahon, B, The organization of conceptual knowledge. Presentation at Cognitive Neuropsychology conference. Bressanone, Italy. January 25-31, 2004.

- Mahon, B.Z., Costa, A., and Caramazza, A. (2000). Are phonemes represented in terms of their syllabic position? (Manuscript published in: Proceedings of the 1st HUMIT Student Conference in Language Research).

Teaching

- Spring 2026: Instructor, Upper level Seminar, 'How the Brain Makes Meaning'
- Spring 2026, Instructor, Undergraduate Laboratory Course, 'Cognitive Neuropsychology Research Methods'
- Spring 2025. Instructor, Undergraduate Laboratory Course, 'Cognitive Neurosci. Research Methods'
- Spring 2025. Instructor, Upper level Seminar, 'How the Brain Makes Meaning'
- Spring, 2024. Instructor, Undergraduate Research Methods, 84198. Fitts Law in Action.
- Spring 2024. Instructor, Undergraduate Laboratory Course, 'Cognitive Neurosci. Research Methods'
- Spring, 2022. Instructor, Undergraduate Laboratory Course, 'Cognitive Neurosci. Research Methods'
- Spring, 2022. Instructor, Upper Level Seminar, 'How the brain makes meaning'
- Spring, 2021. Instructor, Upper Level Undergraduate Seminar, 'Neuroscience of Concepts'
- Spring, 2021. Instructor, Undergraduate Laboratory Course, 'Cognitive Neurosci. Research Methods'
- Spring, 2020. Instructor, Upper Level Undergraduate Seminar, 'Neuroscience of Concepts'
- Spring, 2020. Instructor, Undergraduate Laboratory Course, 'Cognitive Neurosci. Research Methods'
- Fall, 2018. Instructor, Upper Level Undergraduate Seminar, 'Neuroscience of Concepts'
- Fall, 2017. Instructor, Undergraduate Laboratory Course, 'Cognitive Neuroscience' (BCS 204)
- Fall, 2016. Instructor, Undergraduate Laboratory Course, 'Cognitive Neuroscience' (BCS 204)
- Fall, 2016. Co-Instructor, Graduate Seminar, 'Cognition' (BCS 502)
- Fall, 2015. Instructor, Undergraduate Laboratory Course, 'Cognitive Neuroscience' (BCS 204)
- Fall, 2014. Co-Instructor, Graduate Seminar, 'Cognition' (BCS 502)
- Fall, 2014. Co-Instructor, Graduate Seminar 'Cognitive Neuroscience (BCS 508)
- Fall, 2014. Instructor, Undergraduate Laboratory Course, 'Cognitive Neuroscience' (BCS 204)
- Fall, 2013. Instructor, Undergraduate Laboratory Course, 'Cognitive Neuroscience' (BCS 204)
- Fall, 2012. Instructor, Undergraduate Laboratory Course, 'Cognitive Neuroscience' (BCS 204)
- Fall, 2012. Instructor, Graduate Seminar 'Plasticity' (BCS 508)
- Fall, 2012. Co-Instructor, Graduate Seminar, 'Cognition' (BCS 502)
- Fall, 2011. Instructor, Undergraduate Laboratory Course, 'Cognitive Neuroscience' (BCS 204)
- Fall, 2010. Co-Instructor, Graduate Seminar, 'Cognition' (BCS 502)

Ad hoc reviewer for Peer Reviewed Journals

Bilingualism: Language and Cognition | Brain | Brain Research | Brain and Language | Brain Structure and Function | Cerebral Cortex | Cognition | Cognitive, Affective and Behavioral | Neuroscience | Cognitive Neuroscience | Consciousness and Cognition | Cognitive Neuropsychology | Cortex | Current Biology | Elife | Experimental Brain Research | Frontiers in Neuroscience | Frontiers in Language Sciences | Journal of Neuroscience | Journal of Cognitive Neuroscience | Journal of Cognitive Psychology Journal of Experimental Psychology: LMC | Journal of Experimental Psychology: General | Journal of Experimental Psychology: HPP | Journal of Physiology – Paris | Journal of the International Neuropsychological Society | Human Brain Mapping | Language and Cognitive Processes | Memory and Cognition | Nature Neuroscience | Neuroimage | Neuropsychologia | Neuropsychology Review | Neuroscience and Biobehavioral Reviews | Perceptual and Motor Skills | Perspectives in Psychological Science | Philosophical Psychology | Proceedings of the National Academy of Sciences | Psychological Bulletin and Review | Psychological Science | Quarterly Journal of Experimental Brain Research | Social, Cognitive, and Affective Neuroscience | Visual Cognition

Grant Reviewing

- Ad hoc reviewer for NIH: LCOM, BBBP, HCMF (2021, 2024); NSF; EU;

Editorial Positions

- Cognitive Neuropsychology. Co-Editor in Chief, Oct 2016 – Present.
- Cognitive Neuropsychology. Associate Editor, 2009-Sept 2016
- Cognitive Neuropsychology. Assistant Editor, 2005-2009
- Frontiers of Language Sciences. Action Editor (2010-2012)

Conference Organizing

- 2026, Co-Organizer, Festschrift for Alfonso Caramazza
- 2022, Co-Organizer, International Workshop On Language Production
- 2016, Workshop in honor of Alfonso Caramazza, Rovereto Italy (May 10th-11th, 2016)
- 2007-present, Co-Organizer of CAOs (Concepts, Actions, and Objects): Functional and Neural Perspectives Rovereto Italy. http://www.cimec.unitn.it/events/caos/index.htm
- 2016, Co-Organizer CONTE Symposium, University of Rochester

Administrative Service

- Fall, 2011. Search Committee, UR, BCS Department
- Fall, 2012. Search Committee, UR, BCS Department
- Fall, 2014. Graduate Admissions Committee, UR, BCS Department
- Fall, 2015 – 2018. Graduate Affairs Committee, UR, BCS Department
- Spring, 2016. Search Committee, Dept. of Neuroscience, URMC.
- Fall, 2018- 2019. Search Committee, Dept. of Psychology, CMU.
- Fall, 2018- Present. Steering Committee, PITT/CMU MR Research Center.
- Fall, 2018- Present. Safety Committee, PITT/CMU MR Research Center.
- Fall, 2019. Search Committee, Neuroscience Institute, CMU
- Fall, 2019 -Present. Undergraduate Affairs Committee, Dept of Psychology, CMU
- Fall, 2019-2021. Dept. of Psychology, Space Committee
- 2020-Present Dept. of Psychology, CMU, Colloquium and Chase Award Organizer
- 2021 – 2022. Chair of Search Committee, 2 Visiting Lecturer Positions
- 2021- Present. CMU Psychology MSTP Faculty Representative for Pitt MSTP Program
- 2023-2024. Co-Chair, Joint Search CMU Neuroscience Institute, CMU Dept of Psychology
- 2024-Present. CMU Psychology Graduate Program Committee

Graduate Committees

- **Cory Hussar** (Chair, PhD, 2012). Representation of Visual Motion in Prefrontal Cortex During Memory Guided Discriminations
- **Kevin Deiter** (Completed, PhD, 2013). Influences of Selected Attention during Binocular Rivalry
- **Robert Emerson** (Chair, PhD, 2014). Cognitive Neuroscience of Mathematics: Tuning up the Number System
- **Cory Merkel** (Committee Member, PhD, 2015). Design Neuromemristive Systems for Visual Information Processing
- **Jennifer Merickel** (PhD, 2015). Learning and Processing of Perceptual Confusability and the Mapping of Form to Meaning
- **David Paul** (Primary Mentor, MS, 2014). White matter changes linked to visual recovery after nerve decompression
- **Caleb Strait** (Chair, PhD, 2015). Neural Mechanisms of Reward-Based Choice
- **Keturah Bixby** (Committee Member for MS)
- **Woon Ju Park** (Chair, PhD 2017). A Mechanistic Understanding of Atypical Visual Processing in Autism Spectrum Disorder'
- **Goker Erdogan** (Committee Member, PhD 2017). Shape Perception as Bayesian Inference of Modality-Independent Part-Based 3D Object-Centered Shape Representations
- **Matthew Cavanaugh** (Committee Member, PhD 2017). Mechanisms and limitations of visual recovery In cortical blindness
- **Frank E. Garcea** (Advisor, PhD, 2017). The Organization of Manipulable Object Concepts in the Human Brain
- **Santiago Alonso-Diaz** (Committee Member, PhD, 2017). Number Representation in Perceptual Decisions
- **Quanjing Chen** (Advisor, PhD, 2018). The representation of tool knowledge in the human brain

- **Adnan Hirad** (Advisor, PhD, 2018). Midbrain Axonal Injury is the Signature Neurotrauma of Subconcussion and Concussion
- **Alyssa Kersey** (Committee Member, PhD 2018). Developmental Continuity in the Neural Representations of Number
- **Sarah Koopman** (Committee Member, PhD 2018). Phylogeny, Ecology, and Algorithms in the Origins of Numerical Cognition
- **Elizabeth Shay** (Advisor for final 2 years of PhD, PhD 2019). Neural Signatures of Compositionality in the Human Brain
- **Aimee Morris** (Committee Member, PhD 2019). Functional Brain Network Structure in Focal Embouchure Dystonia and Related Disorders
- **Benjamin Chernoff** (Primary Advisor, MS 2021)
- **Colleen Schneider** (MSTP MD/PhD, Primary Mentor for PhD, 2020). The post-stroke brain: A comprehensive, longitudinal assessment of vascular, neural, and perceptual changes
- **Jiaming Cao** (Committee Member, PhD 2022). High Spatio-temporal Resolution Noninvasive Neuroimaging using Diffuse Optical Tomography and Electroencephalography
- **Aria Wang** (Committee Member, PhD 2023). Title: Using Task Driven Methods to Uncover Representations of Human Vision and Semantics
- **Nicholas Soures** (Committee Member, PhD 2023). Lifelong Learning in Spiking Networks Through Neural Plasticity
- **Sophie Robert** (Committee Member). Ongoing.
- **Claire Simmons** (Committee Member). Ongoing.
- **Raouf Belkhir** (MSTP MD/PhD, CMU/Pitt, Primary Mentor for PhD, expected 2026)
- **Emefa Akwayena** (Primary Mentor for PhD, expected 2026)
- **Maleah (MJ) Carter** (Primary Mentor for PhD)
- **Jessica Smith** (Primary Mentor for PhD, Starting 2025)
- **Eloise Gacetta** (Committee Member). Ongoing.
- **Jialin Li** (Committee Member). Ongoing.

Undergraduate Honors Thesis Committees

- **Eshin Jolly** (Committee Member, 2010). Testing domain specificity: Conceptual knowledge of living and non-living things
- **Tyia Clark** (Committee Member, 2012). The neural organization of tool knowledge in development
- **Celia Litovsky** (Committee Member, 2012). Evidence for the shape bias in rhesus macaques: Is language important for object categorization?
- **Alisa Litan** (Committee Member, 2011). The Effects of Donepezil on Perceptual Measures of Impairment in Alzheimer's Disease: A Pilot Study
- **Paul Del Prato** (Primary Mentor, 2012). The emergence of short- and long-term semantic effects in picture naming
- **Alena Stasenko** (Primary Mentor, 2012). When zebras have stripes but are blue: A semantic category-specific impairment for object-color knowledge
- **Laurel Raymond** (Committee Member, 2013). Manipulating relevance in scalar implicature generation
- **Emily Prentiss** (Primary Mentor, 2016). The Role of the Parvocellular Visual Pathway in Fast Visuomotor Updating
- **Bram Diamond** (Primary Mentor, 2017)
- **Chenxiao Guan** (Primary Mentor, 2017)
- **Gauri Patil** (Primary Mentor, 2019)
- **Alan Lu** (Primary Mentor, 2020). The Müller-Lyer after-effect as a window into the mechanisms of depth perception: a preliminary investigation
- **Emma Strawderman** (Mentor, Committee Member, spring 2021)
- **Natalia Santiago** (Primary Mentor, 2022). Spontaneous inferences about the centers of mass of common objects
- **Erik Dekhes** (Primary Mentor, 2022). An Investigation of How Traumatic Brain Injury affects a Functional Brain Network Supporting Oculomotor Function

- **Eliza Reedy** (Primary Mentor, 2023). Temporal Alignment of Word Retrieval Processes in Auditory and Visual Naming
- **Marty Bryant** (Primary Mentor, 2023). Object surface processing and effect on object material judgements.
- **Anna Keresztesy** (Primary Mentor, 2024). The structure of lexical semantic representations as revealed by semantic verification
- **Luca Adams** (Primary Mentor, Spring 2025)
- **Lindsay Li** (Primary Mentor, Anticipated Spring 2026)

Research Mentoring of Residents and Post-Doctoral Fellows

Dr. Eric Hintz, Resident, Dept. of Neurosurgery, University of Rochester Medical Center
Dr. David A. Paul, Resident, Dept. of Neurosurgery, University of Rochester Medical Center
Dr. Matthew Pease, Resident, Dept. of Neurosurgery, University of Pittsburgh Medical Center
Dr. Arka Mallela, Resident, Dept. of Neurosurgery, University of Pittsburgh Medical Center
Dr. Hussam (Sam) Abou-Al-Shaar, Resident, Dept. of Neurosurgery, University of Pittsburgh Medical Center
Dr. Leyla Caglar, Post-Doctoral Fellow, Department of Psychology, Carnegie Mellon University
Dr. Julien Dirani, Distinguished Post-Doctoral Fellow, Neuroscience Institute, Carnegie Mellon University

News and Views Arising

- **Strijkers, K. and Costa**, A. (2016). On words and brains: linking psycholinguistics with neural dynamics in speech production. *Language, Cognition and Neuroscience*, 524-535
- **Glenberg, A.M.** (2015a). Few believe the world is flat: How embodiment is changing the scientific understanding of cognition. *Canadian Journal of Experimental Psychology,* 69, 165-171
- **Glenberg, A.M.** (2015b). Response to Mahon: Unburdening cognition from abstract symbols. *Canadian Journal of Experimental Psychology,* 69, 181-182.
- **Roelofs, A., & Piai, V.** (2015). Aspects of competition in word production: Reply to Mahon and Navarrete. *Cortex*, 64, 420-424
- **Mulatti, C. and Coltheart, M.** (2014). Color naming of colored non-color words and the response-exclusion hypothesis: a comment on Mahon et al. and on Roelofs and Piai. *Cortex*, 52, 120-122
- **Mädebach, A. & Hantsch, A.** (2013). Explaining semantic facilitation and interference effects in the picture–word interference task—A rejoinder to Navarrete and Mahon (2013). *Language and Cognitive Processes*, 28, 717-722.
- **Peelen, M.V. and Kastner, S.** (2009). A non-visual look at the functional organization of visual cortex. *Neuron*, 63, 284
- **Abdel Rahman, R. and Melinger, A.** (2009). Dismissing lexical competition does not make speaking any easier: A rejoinder to Mahon and Caramazza (2009). *Language and Cognitive Processes*, 24, 749-760
- **Riesenhuber, M. (2007).** Appearance Isn't Everything: News on Object Representation in Cortex. *Neuron* 55: 341-344.
- **Rosazza, C., Zorzi, M., and Cappa, S.F.** (2004). Heterogeneity is a fact of category-specific semantic deficits. An issue worth considering. Comments on Bradford Z. Mahon and Alfonso Caramazza (2003). *Neurocase*, 10, 84-86.
- **Moss, H.E., Tyler, L.K. (**2003). Weighing up the facts of category-specific semantic deficits. *Trends in Cognitive Sciences*, 11, 480-481
- **Humphreys, G.W. and Forde, E.M.E.** (2001). Hierarchies, similarity, and interactivity in object recognition: "Category-specific" neuropsychological deficits. *Behavioral and Brain Sciences*, 24, 453-509

Business Development Programs (completed)

Accelerator programs and pitch competitions completed by MindTrace Technologies Inc. All programs completed in collaboration with MindTrace Co-Founders Max Sims (CEO) and Hugo Angulo (CTO). Where relevant, investments and monetary awards tied to programs are indicated in USD (excluding dilutive institutional investment in MindTrace by the RK Mellon Foundation, LifeX, and Innovation Works).

Accelerator Programs

VentureWell ASPIRE | Creative Destruction Lab - Health Stream | AlphaLab Health: Allegheny Health Network as part of AlphaLab Health ($50,000) & Innovation Works as part of AlphaLab Health ($50,000) | Edinburgh AI Accelerator ($13,110.91) | LifeX Accelerator | Optum Startup Studio ($25,000) | CNY Biotech Accelerator

Pitch Competitions

TiE Pittsburgh Pitch Competition ($3,000) | PGH Ideathon Pitch Event ($15,000) | Duquense New Venture Challenge Competition ($8,500) | Baylor University Business Competition ($3,000)