

**Bradford Z. Mahon**

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**Current Position**

July, 2009 -

Post-Doctoral Fellow, Brain and Cognitive Sciences, University of Rochester.

**Education**

Sept, 1998-June, 2002

BA, Cognitive Neuroscience, Harvard University, Cambridge, MA., USA

Sept, 2004- June, 2009

PhD, Psychology, Harvard University, Cambridge, MA., USA ('The representation of everyday objects in the brain'). Advisor: Dr. Alfonso Caramazza; Committee members: Drs. Marc Hauser, Alex Martin, Ken Nakayama.

**Employment**

Sept, 2002-August, 2003

Research Associate with Dr. Alfonso Caramazza

Department of Psychology, Harvard University, Cambridge, MA., USA

Sept, 2003-July, 2004

Visiting Fellow in the Department of Psychology, University of Barcelona, with Dr. Albert Costa and Dr. Núria Sebastián-Gallés (Funded by a Fulbright Full Grant).

Sept, 2004-June, 2009

PhD Candidate in the Department of Psychology, Harvard University, with Dr. Alfonso Caramazza

June, 2005-Present

Assistant Editor of *Cognitive Neuropsychology*

August, 2006-May, 2009

Research Fellow at the Center for Mind/Brain Sciences, University of Trento, Italy; with Drs. Jens Schwarzbach and Alfonso Caramazza

July, 2009-Present

Post-Doctoral Fellow in the Department of Brain and Cognitive Sciences.

**Publications (in peer-reviewed journals)**

Mahon, B.Z., Schwarzbach, J., and Caramazza, A. (in press). The representation of tools in left parietal cortex independent of visual experience. *Psychological Science*

Almeida, J., Mahon, B.Z., & Caramazza, A. (in press). The role of the dorsal visual processing stream in tool identification. *Psychological Science*.

Janssen, N. Melinger, A., Mahon, B. Z., Finkbeiner, M., & Caramazza, A. (in press). The word class effect in the picture-word interference paradigm. *Quarterly Journal of Experimental Psychology*.

- 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.
- 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*.
- Mahon, B.Z. and Caramazza, A. (2009). Concepts and Categories: A Cognitive Neuropsychological Perspective. *Annual Review of Psychology*. 60, 27–51
- Mahon, B.Z. (2008). Action Recognition: Is It a Motor Process? *Current Biology*, 18, 22, R1068-1069.
- Almeida, J., Mahon, B.Z., Nakayama, K., and Caramazza, A. (2008). Unconscious processing dissociates along categorical lines. *Proceedings of the National Academy of Sciences*. 105, 5214–15218.
- Mahon, B.Z. and 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.
- Janssen, N., Schirm, W., Mahon, B.Z., and Caramazza, A. (2008). The semantic interference effect in the picture-word interference paradigm: Evidence for the response selection hypothesis. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 34, 249-256.
- Negri, G.A.L., Rumiati, R.I., Zadini, A., Ukmar, M., Mahon, B.Z., and Caramazza, A. (2007). What is the Role of Motor Simulation in Action and Object Recognition? Evidence from Apraxia. *Cognitive Neuropsychology*, 24, 795-816.
- Mahon, B.Z., Milleville, S., Negri, G.A.L., Rumiati, R.I., Caramazza, A., and Martin, A. (2007). Action-related properties of objects shape object representations in the ventral stream. *Neuron*, 55, 3, 507-520.
- Mahon, B.Z., Costa, A., Peterson, R., Vargas, K., and 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.
- 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.
- Mahon, B.Z., & Caramazza, A. (2005). The orchestration of the sensory-motor systems: Clues from neuropsychology. *Cognitive Neuropsychology*, 22, 480-494.

Mahon, B.Z. and 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.

Capitani, E., Laiacona, M., Mahon, B., & Caramazza, A. (2003). What are the facts of category-specific deficits? A critical review of the clinical evidence. *Cognitive Neuropsychology*, 20, 213-261.

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.

Costa, A, Mahon, B.Z., Savova, V., and Caramazza, A. (2003). Level of categorization effect: A novel effect in the picture-word interference paradigm. *Language and Cognitive Processes*, 18, 205-233.

Mahon, B.Z. and Caramazza, A. (2003). Constraining questions about the organization and representation of conceptual knowledge. *Cognitive Neuropsychology*, 20, 433-450.

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.

Mahon, B.Z., and Caramazza, A. (2001). The Sensory/Functional Assumption or the Data: Which do we keep? *Behavioral and Brain Sciences*, 24, 488-9.

### **Book Chapters**

Mahon, B.Z., & Caramazza, A. (2007). The organization of conceptual knowledge in the brain: Living Kinds and Artifacts. To appear in 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.

### **Manuscripts under review or revision**

Finocchiaro, C., Mahon, B.Z., Caramazza, A. Gender agreement and multiple referents.

Mahon, B.Z. and Caramazza, A. Decoding the brain's response to semantic context using event-related fMRI.

Navarrete, E., Mahon, B.Z., and Caramazza, A. The cumulative semantic cost does not require lexical selection by competition

### **Posters and Abstracts**

J. Jovicich, S. Robinson, G. Basso, P. Ferrari, N. Papinutto, B. Mahon, J. Schwarzbach. Human functional neuroimaging at 4T: methods developments and applications in cognitive neuroscience. Italian Bruker Users' Meeting, Milan, June 25, 2008

Almeida, J., Mahon, B.Z., Nakayama, K., & Caramazza, A. Categorical priming: using continuous flash suppression in an object categorization task. Paper presented at VSS — Vision Sciences Society, 8th Annual meeting Naples, FL. 2008

Almeida, J., Mahon, B.Z., Pajtas, P.E., Nakayama, K., & Caramazza, A. Category-specific priming under continuous flash suppression. Concepts, Actions, and Objects: Functional and Neural Perspectives. Rovereto, Italy. April 24-27, 2008.

Mahon, B.Z., Negri, G.A.L., Menichelli, A., Sverzut, A., Caramazza, A., Rumiati, R.I. Dissociations between sensory, motor, and conceptual knowledge of manipulable objects. Cognitive Neuroscience Society, New York, May 5- 8, 2007.

Almeida, J.M.C.B.D.A., Mahon, B.Z., Caramazza, A. Motor facilitation under binocular rivalry: the effect of suppressed motor affordances. Vision Sciences Society, Sarasota, FL. May 11-16, 2007.

Battelli, L., Mahon, B.Z., and Thornton, I. Incidental processing of biological motion in parietal patients. Vision Sciences Society, Sarasota, FL. May 11-16, 2007.

Negri, G.A.L., Mahon, B.Z., Menichelli, A., Sverzut, A., Caramazza, A., and Rumiati, R.I. What is a concept without sensory-motor content? Evidence from apraxia. Poster presentation at the 25<sup>th</sup> European Workshop on Cognitive Neuropsychology. Bressanone, Italy. January, 2007.

Mahon, B.Z., Milleville, S.C., Gilbert, J., Caramazza, A., Martin, A. The Domain-Specific Sensory-Motor Hypothesis. Poster presentation at Cognitive Neuroscience Society. San Francisco, California. April, 2006.

Mahon, B.Z., Costa, A., Shapiro, K., & Caramazza, A. Grammatical Class Constraints on Lexical Selection in Speech Production: Functional and Neuroanatomical Considerations. Poster presentation at Euresco: The Science of Aphasia. Maratea, Italy. June 14-19<sup>th</sup>, 2002.

### **Talks**

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. Department 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 denominazione 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 di riabilitazione 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. Cognitive Neuropsychology: The case of natural kind concepts. Guest lecture for Dr. Fernald. August 2, 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? (see also Manuscript published in: *Proceedings of the 1<sup>st</sup> HUMIT Student Conference in Language Research*).

### **Grants and Awards**

March, 2009

Graduate Students Present Award, Cognitive Neuroscience Society

2008–2009

Harvard University Eliot Dissertation Completion Fellowship. Competitive grant for dissertation research)

2006-2009

Fondazione Cassa di Risparmio di Trento e Rovereto (Center for Mind/Brain Sciences, Italy) Competitive grant for functional magnetic resonance imaging research on the organization of object knowledge in blind humans.

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)

June, 2002

Graduated Harvard University (BA) Magna Cum Laude with Highest Honors in Field.

1999-2002

Harvard College Research Program Grant Recipient (5x). Competitive undergraduate research grants.

### **Conference Organizing**

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>

**Ad hoc reviewer**

Cerebral Cortex

Cognition

Cognitive Neuropsychology

Current Biology

Experimental Brain Research

Human Brain Mapping

Language and Cognitive Processes

Neuroimage

Journal of Experimental Psychology: Learning, Memory, and Cognition

Journal of Physiology – Paris

Journal of the International Neuropsychological Society

Journal of Cognitive Neuroscience