

***Education***

**Ph.D.:** Science and Technology Studies / *Track: Philosophy of Science and Technology*  
**Virginia Polytechnic Institute and State University**, 2004 - 2011.

Dissertation: *Experimental Knowledge in Cognitive Neuroscience: Evidence, Errors, and Inference*  
Committee: Deborah Mayo (Chair), Richard Burian, Lydia Patton, Aris Spanos

**M.A.:** Psychology. **University of Iowa**, 2000 - 2003.

**B.A.:** Psychology. **Koc University**, 1995 - 1999.

***Research Interests***

Evidence and Inference in Neuroimaging, Cognitive Psychology of Reasoning, Human Memory, Philosophy of Cognitive Science, Philosophy of Experimentation and Statistics.

***Academic Employment***

2014 – 2023: Assistant Professor – Dept. of Psychology, **Ozyegin University**

2012 – 2013: Adjunct Instructor – Dept. of Psychology, **Ozyegin University, Koc University**

2009 – 2011: Instructor – Dept. of Philosophy, **Virginia Polytechnic Institute and State University**

***Publications***

1. **Aktunc**, M.E., Hazar, C., Baytimur, E. (2021) "Error Rates and Uncertainty Reduction in Rule Discovery." *Review of Philosophy and Psychology*, 12, 435–452. doi: 10.1007/s13164-020-00494-6
2. **Aktunc**, M.E. (2019) "Productive Theory-Ladenness in fMRI" *Synthese: Special Issue on Neuroscience and Its Philosophy*. doi: 10.1007/s11229-019-02125-9
3. **Aktunc**, M.E. (2014) "Severe tests in neuroimaging: What we can learn and how we can learn it." *Philosophy of Science*, 81, (5), 961-973. doi: 10.1086/677691
4. **Aktunc**, M.E. (2014) "Tackling Duhemian Problems: An Alternative to Skepticism of Neuroimaging in Philosophy of Cognitive Science." *Review of Philosophy and Psychology*, 5, 449-464. doi: 10.1007/s13164-014-0186-3
5. Gupta, P. Lipinski, J., **Aktunc**, E. (2005) "Reexamining the phonological similarity effect in immediate serial recall: The roles of type of similarity, category cuing, and item recall." *Memory & Cognition*, 33, (6), 1001-1016. doi: 10.3758/BF03193208
6. Gupta, P. Lipinski, J., Abbs, B. Lin, P., **Aktunc**, E., Ludden, D., Martin, N., Newman, R. (2004) "Space aliens and nonwords: Stimuli for investigating the learning of novel word-meaning pairs." *Behavior Research Methods, Instruments, & Computers*, 36, (4), 599-603. doi: 10.3758/BF03206540
7. Gulgoz, S., Kumkale, G.T., **Aktunc**, M.E., & Eskenazi, T.T. (1999) "Designing Learnable Texts: The Effectiveness of Revisions Based on a Text Processing Model." *Document Design:*

### **Conference Proceedings**

1. **Aktunc**, M.E. & Karsilar, H. (2020) "Uncertainty Reduction and Reaction Times in Wason's Rule Discovery Task." *Abstracts of the Psychonomic Society, Vol. 25*.
2. **Aktunc**, M.E., Baytimur, E., Uysal, B., Hazar, C., Erengin, T. (2018) "Choice Blindness in Different Experimental Settings." *Abstracts of the Psychonomic Society, Vol. 23*.
3. **Aktunc**, M.E. (2017) "Error Probabilities and Uncertainty in Inductive Reasoning" *IV. Symposium on Experimental-Cognitive Psychology*, September, 14-15, *Ege University*, Izmir, Turkey.
4. **Aktunc**, M.E., Hazar, C., Baytimur, E. (2016) "Error Rates vs. Uncertainty Reduction: What Works Better in a Rule Discovery Task?" *Society for Judgment and Decision Making, The 37th Annual Conference, Program and Abstracts*. Boston, MA.
5. **Aktunc**, M.E. (2014) "Öğrenileni/Ölçüleni Belirlemek: Bilişsel Nörobilim'de Kanıt ve Çıkarım." [Determining What is Being Measured/Learned: Evidence and Inference in Cognitive Neuroscience.] *Nöropsikiyatri Arşivi: Yüzdüncü Yıl Özel Sayısı*, 51, 1, S35-S36. [journal of the Turkish Neuropsychiatry Association]
6. **Aktunc**, M.E., & Poremba, A. (2002) "Effects of amygdala lesions on spatial reference memory using an eight-arm radial maze with differential rewards." *Soc. Neurosci. Abstr.*, 84.8.
7. Gülgöz, S., **Aktunc**, M.E., Şenol, D., & Van, H. A. (2000) "The effects of testing and delay on recall and learning of information from texts." *Proceedings of the Tenth Annual Meeting of the Society for Text and Discourse*, 140-141, Universite Lumiere Lyon 2.
8. Gülgöz, S., **Aktunc**, M.E., & Eskenazi, T.T. (1999) "Recall of text information in two languages by bilinguals." In A. Vandierendonck, M. Brysbaert, & K. Van Der Goten (Eds.), *Eleventh Conference of the European Society for Cognitive Psychology Proceedings*. Gent: ESCOP/Academia Press.

### **Conference Posters and Talks**

1. **Aktunc**, M.E. & Karsilar, H. (2020) "Uncertainty Reduction and Reaction Times in Wason's Rule Discovery Task." *Psychonomic Society, 61st Annual Meeting, Virtual Psychonomics*. (<https://www.psychonomic.org/page/2020annualmeeting>)
2. **Aktunc**, M.E. (2019) "Productive Theory-Ladenness and Experimental Knowledge in Cognitive Neuroscience." *IV. POND Meeting: Science and Objectivity, September 26-27, Barcelona, Spain*.
3. **Aktunc**, M.E., Baytimur, E., Uysal, B., Hazar, C., Erengin, T. (2018) "Choice Blindness in Different Experimental Settings." *Psychonomic Society 59th Annual Meeting, New Orleans, LA*.
4. **Aktunc**, M.E. (2017) "Error Probabilities and Uncertainty in Inductive Reasoning" *IV. Symposium on Experimental-Cognitive Psychology*, September, 14-15, *Ege University*, Izmir, Turkey.

5. **Aktunc**, M.E. (2017) "An Error-Statistical Approach to Neuroimaging Experiments and Its Theoretical Results: Neurons, Glia, and Cognition." *Düşünbil Academy, IV. Symposium on Mind: Neuroscience and Philosophy*. March, 25-26, Ankara, Turkey.
6. **Aktunc**, M.E., Hazar, C., Baytimur, E. (2016) "Error Rates vs. Uncertainty Reduction: What Works Better in a Rule Discovery Task?" *Society for Judgment and Decision Making, The 37th Annual Conference*. Boston, MA.
7. **Aktunc**, M.E. (2016) "Productive Theory-Ladenness in fMRI." *The 3rd International Symposium on Brain and Cognitive Science*. Yeditepe University, Istanbul, Turkey.
8. **Aktunc**, M.E. (2014) "Determining What is Being Measured/Learned: Evidence and Inference in Cognitive Neuroscience." *Turkish Neuropsychiatry Association, 7th Neuropsychiatry Days & Centennial Symposium*. Istanbul, Turkey.
9. **Aktunc**, M.E. (2012) "Severe Tests in Neuroimaging: What We Can Learn and How We Can Learn It." -- In the Symposium: *Philosophy of Cognitive Neuroscience: Evidence and Inference in Neuroimaging* at the 2012 Meeting of *Philosophy of Science Association*, San Diego, CA -- also symposium organizer.
10. **Aktunc**, M.E. (2011) "Resolving Duhemian Problems in fMRI Experiments." 2011 Meeting of the *Southern Society for Philosophy and Psychology*. New Orleans, LA.
11. **Aktunc**, M.E. (2008) "Ruthless Reductionism: What Are They Reducing?" *The University of Iowa Graduate Philosophical Society, Fourth Annual Conference*. University of Iowa, Iowa City, IA.
12. **Aktunc**, M.E. (2007) "Levels of Hypotheses in Functional Neuroimaging." *Beyond the Borders, Among the Sciences: The Exeter Methodology Workshop in the Sociology and Philosophy of Science*, University of Exeter, Exeter, UK.
13. **Aktunc**, M.E. (2007) Commentary on Brian J. Fiala, "Materialism and the Psychology of Explanation" *Virginia Tech Graduate Philosophy Conference, Virginia Polytechnic Institute and State University*, Blacksburg, VA.
14. **Aktunc**, M.E. (2006) "The Tacking Paradox: A Critique of Bayesian Treatments and an ErrorStatistical Proposal for Its Solution." *The First Symposium on Philosophy, History, and Methodology of E.R.R.O.R\** (Experimental Reasoning, Reliability, Objectivity & Rationality: Induction, Statistics, Modeling) *Virginia Polytechnic Institute and State University*, Blacksburg, VA.
15. **Aktunc**, M.E. & Poremba, A. (2002) "Effects of amygdala lesions on spatial reference memory using an eight-arm radial maze with differential rewards." *Society for Neuroscience Annual Conference*, Orlando, FL.
16. Gülgöz, S., **Aktunc**, M.E., Şenol, D., & Van, H. A. (2000) "The effects of testing and delay on recall and learning of information from texts." The Tenth Annual Meeting of the *Society for Text and Discourse, Universite Lumiere Lyon 2*, France.
17. Gülgöz, S., **Aktunc**, M.E., & Eskenazi, T. (1999) "Recall of text information in two languages by bilinguals." The Eleventh Conference of the *European Society for Cognitive Psychology*, Gent, Belgium.

18. Gülgöz, S., Kumkale, T., **Aktunc**, M.E., & Eskenazi, T. (1998) "Text processing models and research as tools for designing learnable texts." *International Conference on Document Design*, Tilburg, The Netherlands.
19. Gülgöz, S., Kumkale, G. T., & **Aktunc**, M.E. (1998) "The effects of text coherence, need for cognition, and prior knowledge on situation models." Eighth Annual Meeting of the *Society for Text and Discourse*, Madison, WI.
20. Gülgöz, S., **Aktunc**, M.E., & Kumkale, T. (1998) "Effects of need for cognition, text coherence, and prior knowledge on learning from text." Tenth Congress of the *European Society for Cognitive Psychology*, Jerusalem, Israel.

### ***Invited Talks***

1. (2019) "Productive theory-ladenness in functional neuroimaging." *Cognitive Science Talks at Bogazici University*, Istanbul.
2. (2017) "Tümevarımsal Akıl Yürütmede Hata Olasılığı ve Belirsizlik." [Error Probabilities and Uncertainty in Inductive Reasoning] *Psychology Seminar Series at Bahcesehir University*, Istanbul.
3. (2015) "Determining the Underdetermined: Evidence and Inference in Functional Neuroimaging." *Monday Seminars, Dept. of Philosophy, Middle East Technical University*, Ankara.
4. (2014) "Bilişsel Nörobilim'de Kanıt ve Çıkarım." [Evidence and Inference in Cognitive Neuroscience.] *Neurology Seminars, Istanbul Medipol University*, Istanbul.
5. (2014) "Useful Theory-Ladenness in fMRI: Errors, Inference, and Knowledge in Cognitive Neuroscience." *Faculty of Engineering Seminars, Istanbul Bilgi University*.
6. (2013) "On Bickle's 'Ruthless Reductionism' in Cellular/Molecular Neuroscience: What Are They Reducing?" *Conference on Neurology, Philosophy of Biology, and Artificial Intelligence, Koç University Philosophy Department*, Istanbul, Turkey.
7. (2012) "Bilişsel Nörobilim'de Kanıt ve Çıkarım." [Evidence and Inference in Cognitive Neuroscience.] *Neurology Seminars, Istanbul College of Medicine*, Istanbul.
8. (2012) "Resolving Duhemian Problems in Cognitive Neuroscience." *Brains, Mind and Language #2: A Philosophy/Cognitive Science Workshop Boğaziçi University*, Istanbul.
9. (2012) "Determining the Underdetermined: Evidence, Inference, and Knowledge in Cognitive Neuroscience." *Philosophy Department Seminars, Boğaziçi University*, Istanbul.
10. (2011) "Assisting Cognitive Neuroscience with the Error-Statistical Philosophy." *Social Science Seminar Series, Koç University*, Istanbul.
11. (2011) "Salmon Thoughts, 'Voodoo Correlations', and Severe Tests: How the Error-Statistical Philosophy Can Help the Science of fMRI." *Human Neuroimaging Lab, Virginia Tech Carillion Research Inst.*, Roanoke, VA.

12. (2010) “‘Voodoo Correlations’, Salmon Thoughts, and the Promised Science of fMRI.”  
Dissertation Seminar. *Dept. of Science and Technology in Society, Virginia Tech.* Blacksburg, VA.

***Book Review***

(2009) “Scientific Pluralism. Minnesota Studies in the Philosophy of Science. Vol. XIX.”.  
*Annals of Science*, 66:2, 299-302.

***Popular Press***

(2013) “Acımasız İndirgemecilik”: İndirgenen Nedir?” [Ruthless Reductionism: What is being reduced?] *Cogito*, 75, 203-217. [Popular philosophy periodical published by Yapı Kredi Publications in Turkey]

***Certificates and Awards***

Online Instructor Certificate: 2009, Institute for Distance and Distributed Learning  
*Virginia Polytechnic Institute and State University.*

Graduate Assistantship: Fall 2004 - Spring 2009, Fall 2010 - Spring 2011  
*Virginia Polytechnic Institute and State University*

Graduate Assistantship: Fall 2000 - Spring 2003  
*University of Iowa*

Vehbi Koç Scholar: Spring 1996 – Spring 1999  
Tuition Remission Scholarship: 1998–1999  
Dean’s Honor Roll: Fall 1995  
*Koc University*