

TAMARA NICOL MEDINA, PH.D.

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Current Position

Post-Doctoral Visiting Scholar (2011-present), Post-Doctoral Fellow (2007-2011)

Institute for Research in Cognitive Science, University of Pennsylvania, Philadelphia, PA

Faculty supervisors: John Trueswell, Lila Gleitman

- Demonstrated that learners acquire words through moments of insight into a word's meaning rather than performing statistical analysis over multiple possible meanings across word-learning contexts (Medina et al., 2011, *PNAS*). Found that the informativity of a word-learning context depends upon the timing of speaker cues (Medina et al., 2009, *SRCD*), and that vocabulary size at four years old is predicted by the quality of these contexts in child-directed speech at 14-18 months (in preparation).

Education

Ph.D., Cognitive Science

2007

Johns Hopkins University, Baltimore, MD

Faculty supervisors: Barbara Landau, Géraldine Legendre, Paul Smolensky

Dissertation: *Learning which verbs allow object omission: Verb semantic selectivity and the implicit object construction*

- Combined approaches from formal linguistics and experimental psychology to model the relative acceptability of the English implicit object construction ("John ate ____") as a probabilistic ranking of semantic and aspectual constraints within the linguistic framework of Optimality Theory. Demonstrated that children as young as 2 yrs 6 mos have learned verbs' selectional preferences and can successfully restrict implicit objects in their own speech accordingly.

M.A., Cognitive Science

2002

Johns Hopkins University, Baltimore, MD

Faculty supervisor: Géraldine Legendre

Thesis: *Sentential negation and clause structure*

- Analyzed variation in the placement of the sentential negation marker ("John did *not* read the book") cross-linguistically as competition between tense and negation for clausal scope within the linguistic framework of Optimality Theory.

B.S., Psychology

1996

Trinity College, Hartford, CT

Faculty supervisor: Sarah Raskin

Thesis: *Retraining executive functioning using verbal mediation.*

- Developed and administered executive re-training tasks for patients with traumatic brain injury.

Teaching

Interests: General Psychology, Developmental Psychology and Advanced Developmental Psychology, Cognitive Psychology, Psychology of Learning, Psychology of Language, Experimental Psychology, Introduction to Statistics, Advanced Statistics, senior seminar on language (such as Language Acquisition, Language and Thought, and Language and the Mind/Brain), supervised reading and studies, and individual research projects and senior theses

As a Teaching Assistant for the following undergraduate and graduate level courses, facilitated class discussions, gave lectures, led review sections, created and graded exams, and graded papers.

Introduction to the Syntax of Natural Languages	2004
<i>Johns Hopkins University</i> , about 20 undergraduate majors and graduate students	
▫ Introduction to cross-linguistic analysis in contemporary syntax.	
Language and Mind	2000, 2003
<i>Johns Hopkins University</i> , about 60 undergraduate majors and non-majors	
▫ Introduction to the study of language as a component of the mind/brain.	
Language and Thought	2003
<i>Johns Hopkins University</i> , about 20 undergraduate majors and graduate students	
▫ Seminar exploring the relation between language and thought.	
Structure of English	2002
<i>Johns Hopkins University</i> , about 30 undergraduate majors	
▫ Introduction to morpho-phonology and syntax of contemporary and historical English.	
Cognitive Neuroscience: Exploring the Living Brain	2002
<i>Johns Hopkins University</i> , about 60 undergraduate majors and non-majors	
▫ Introduction to the physiological bases of how mental processes are carried out by the human brain.	
Introduction to Cognitive Development	2001
<i>Johns Hopkins University</i> , about 60 undergraduate majors and non-majors	
▫ Introduction to the development of human cognition.	
Cognitive Psychology with Laboratory	1995
<i>Trinity College</i> , about 30 undergraduate majors and non-majors	
▫ Introduction to theory and research of human cognition.	
Introductory Biology Laboratory	1995
<i>Trinity College</i> , about 30 undergraduate majors and non-majors	
▫ Laboratory exercises exploring the anatomy, physiology, and evolution of plants and animals.	

As an Instructor in various settings, provided job skills training and language instruction to adults with developmental disabilities and adult immigrants.

Office Skills Instructor 1998

Contemporary Guidance Services, about 30 adults

- Taught basic office skills to high-functioning adults with developmental disabilities in a classroom setting. Coordinated Individualized Plans for Employment with staff psychologists and NY State VESID counselors.

Job Coach 1997

Contemporary Guidance Services, about 10 adults

- Supported employment of low-functioning adults with developmental disabilities by providing on-site assistance with maintenance and acquisition of job skills, counseling, social/behavioral training, advocacy and other individualized interventions.

English as a Second Language Instructor 1995 –

Various locations in Hartford, CT, New York, NY, and Queens, NY 1997

- Taught English to adult immigrants in classroom settings and in private sessions.

Research

Interests: First language acquisition of words and syntax; linguistic cues in word learning including (e.g., sentential context, co-occurring words); non-linguistic cues in word learning (e.g., direction of speaker eye gaze and joint attention); cross-situational word learning; socio-economic status and vocabulary development

Research Supervisor to full-time Research Assistant 2010 -
University of Pennsylvania, Philadelphia, PA 2011

- Supervision of full time research assistant investigating the quality and quantity of word learning occasions in families of varying socio-economic status (SES).

Research Mentor for undergraduate senior thesis and independent study projects 2007 –
University of Pennsylvania, Philadelphia, PA 2010

- Mentorship of undergraduate students working on semester-long research projects, including exploration of how learners reach a stable interpretation of a word across contexts, the timing of social-attentional cues to word reference, and the effect of a 2-day delay between word learning occasions.

Research Mentor for undergraduate research assistants 2003 -
Johns Hopkins University, Baltimore, MD 2005

- Mentorship of undergraduate students working on semester-long research projects, including corpus analysis of child-directed speech and children’s speech productions, experimental elicitation of direct objects from young children, and an artificial grammar experiment with adults.

Awards/Funding

Post-doctoral fellowship (funding from National Institutes of Health R01 grant awarded to John Trueswell and Lila Gleitman, co PIs)	2007 - 2011
National Science Foundation (NSF), Integrative Graduate Education & Research Training (IGERT) Fellowship	2000 - 2007

Papers

Medina, T.N., Snedeker, J., Trueswell, J.C., & Gleitman, L.R. 2011. *How words can and cannot be learned by observation. Proceedings of the National Academy of Sciences, Early Edition, May 16, 2011.* doi:10.1073/pnas.11050400108

- Public press for this article includes *TLC Parentables, The Toronto Star, Corriere Della Sera, Today's Science, Penn News, The Daily Pennsylvanian, Medical News Today, and The Buffalo Alternative Medicine Examiner.*
- The *Penn News* press release has been republished online in English on over 45 websites, including *Science Daily, MSN News, Red Orbit, and The Early Childhood Initiative Foundation.*
- Featured and discussed on blog sites and forums including *Rational Skepticism, The Future of the Word, and Isador's Fugue.*

Medina, T.N., Gleitman, L.R., & Trueswell, J.C. (author order to be determined) *Learners do not track cross-situational co-occurrence frequencies: Evidence from the visual world paradigm.* (In preparation.)

Cartmill, E.A., **Medina, T.N.**, Trueswell, J.C., Gleitman, L.R., & Goldin-Meadow, S. *The role of quantity and quality of word learning instances in parental speech directed to 14- and 18-month olds.* (In preparation.)

Talks

Medina, T.N., Hafri, Alon, Trueswell, J.C., & Gleitman, L.R. (2011). *No Evidence that Learners Track Co-Occurrence Frequencies in Cross-Situational Word Learning.* Talk presented at the Society for Research in Child Development (SRCD) Annual Meeting, Montreal, Quebec, Canada, March 31.

Medina, T.N., Trueswell, J.C., Snedeker, J., & Gleitman, L.R. (2009). *Using Extra-Linguistic Cues to Identify Good Word Learning Instances.* Talk presented at the Society for Research in Child Development (SRCD) Annual Meeting, Denver, CO, April 2.

Medina, T.N., Trueswell, J.C., Snedeker, J., & Gleitman, L.R. (2009). *Rapid Word Learning Under Realistic Learning Conditions.* Talk presented at the Linguistic Society of America (LSA) Annual Meeting, San Francisco, CA, January 9.

Medina, T.N., Trueswell, J.C., Snedeker, J., & Gleitman, L.R. (2008). *When the Shoe Fits: Cross-Situational Word Learning in Realistic Learning Environments.* Talk presented at the Boston University Conference on Language Development (BUCLD) 33, Boston, MA, November 2.

Medina, T.N. (2007). *Learning when (and when not) to omit objects in English.* *Psicolingüística e Teoria*

Lingüística: Tentativas de diálogo (Workshop), Departamento de Lingüística, Universidade de São Paulo, São Paulo, Brasil. August 13, 2007.

Medina, T.N. (2007). *Gradient grammaticality of indefinite implicit objects in English*. Departamento de Lingüística, Universidade Estadual de Campinas, Campinas, Brasil. August 15, 2007.

Medina, T.N. (2005). *The Interaction of Verb Selectivity, Telicity, and Perfectivity in the Implicit Object Construction*. Talk presented at the LAGB Satellite Workshop on Perfectivity and Telicity, Cambridge, UK, September 3-4.

Nicol, T. 2005. *Gradient Judgments of the Implicit Object Construction*. Talk presented at the Hopkins, University of Maryland, Rutgers, and University of Massachusetts Graduate Student Conference on Optimality Theory (HUMDRUM), University of Massachusetts, Amherst, MA, April 23-24.

Nazzi, T., Barriere, I., Legendre, G., **Nicol, T.**, & Long, S. (2004). *The comprehension of agreement clitics by French speaking 18 and 24 month olds: An intermodal preferential looking study*. Talk presented at the Second Lisbon Meeting on Language Acquisition, Lisbon, Portugal, June 1-4.

Nazzi, T., Barriere, I., Legendre, G., **Nicol, T.**, & Long, S. (2004). *Verb Acquisition in French: Lexical Comprehension and Sensitivity to Subject-Verb Agreement at 18- and 24-Months*. Talk presented at the International Society on Infant Studies (ISIS), Chicago, IL, May 5-8.

Nicol, T., Landau, B., & Resnik, P. (2003). *The Role of Object Typicality in 2- to 4-Year-Old Children's Acquisition of the Implicit Object Construction*. Talk presented at ICCS/ASCS Joint International Conference on Cognitive Science, University of New South Wales, Sydney, Australia, July 13-17.

Nicol, T. (2002). *Sentential negation and clause structure*. Talk presented at the Hopkins, University of Maryland, Rutgers, and University of Massachusetts Graduate Student Conference on Optimality Theory (HUMDRUM), University of Massachusetts, Amherst, MA, April 20-21.

Poster Presentations

Medina, T.N., Hafri, Alon, Trueswell, J.C., & Gleitman, L.R. (2010). *Propose but Verify: Fast Mapping meets Cross-Situational Word Learning*. Poster presented at the Boston University Conference on Language Development (BUCLD) 33, Boston, MA, November 5.

Medina, T.N., Hafri, Alon, Trueswell, J.C., & Gleitman, L.R. (2010). *Fast Mapping Within Cross-Situational Word Learning*. Poster presented at EyeTrackKids III, Philadelphia, PA, May 19.

Medina, T.N. (2008). *Probabilistically Ranked Constraints: Derivation of the Gradient Grammaticality of Implicit Objects*. Poster presented at the LSA Annual Meeting, Chicago, IL, January 5.

Nicol, T. (2004). *Analyzing Negative Markers as Heads*. Poster presented at the Georgetown University Round Table on Languages and Linguistics (GURT), Georgetown University, Washington DC, March 26-28.

Nicol, T., Landau, B., & Resnik, P. (2003). *Discovering the Invisible: Children's Acquisition of the Implicit Object Construction*. Poster presented at the Boston University Conference on Language Development (BUCLD), Boston, MA, October 31-November 2.

Nicol, T. & Raskin, S. (1997). *Retraining executive functions using verbal mediation.* Poster presented at Cognitive Neuroscience Society, Boston, MA, March 23-25.

Professional Service

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| Ad-hoc Reviewer | 2007 – |
| <ul style="list-style-type: none"> ▫ <i>Cognitive Science, Cognition</i>, Boston University Conference on Language Development (BUCLD), Penn Linguistics Colloquium (PLC) | 2011 |
| Coordinator, IGERT Common Ground Seminar | 2007 – |
| <i>University of Pennsylvania, Philadelphia, PA</i> | 2011 |
| <ul style="list-style-type: none"> ▫ Coordinated and facilitated weekly psycholinguistics seminar for graduate students, postdoctoral fellows, and faculty across departments and disciplines. | |
| Organizer, Language Acquisition Reading Group | 2004 |
| <i>Johns Hopkins University, Baltimore, MD</i> | |
| <ul style="list-style-type: none"> ▫ Created and organized weekly meetings for graduate students and faculty to read and discuss classic papers in language acquisition. | |
| Organizer, Verb-Argument Structure Reading Group | 2002 |
| <i>Johns Hopkins University, Baltimore, MD</i> | |
| <ul style="list-style-type: none"> ▫ Created and organized weekly meetings for graduate students and faculty to read and discuss recent research about the relationship between verb semantics and the different sentence structures in which particular verbs can be used. | |
| Organizer, HUMDRUM Graduate Student Conference on Optimality Theory | 2002 |
| <i>Johns Hopkins University, Baltimore, MD</i> | |
| <ul style="list-style-type: none"> ▫ Coordinated conference speakers, scheduling, and communications for linguistics graduate students from Johns Hopkins University, the University of Maryland, Rutgers University, and the University of Massachusetts. | |

Professional Membership

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| Society for Research in Child Development (SRCD) | 2009 –
2011 |
| Linguistic Society of America (LSA) | 2008 –
2011 |
| Society for Language Development (SLD) | 2006 -
2011 |

Technical Skills

R statistical software, SPSS statistical software, MS Excel, MS Word, MS Powerpoint, Visual Basic 6.0, Tobii eye tracking