

## Barbara W. Sarnecka, Ph.D.

<http://www.cogsci.uci.edu/cogdev/sarnecka/index.html>

Department of Cognitive Sciences  
University of California – Irvine  
3151 Social Sciences Plaza  
Irvine, California 92697-5100

[sarnecka@uci.edu](mailto:sarnecka@uci.edu)  
Office: 949- 824-8495  
Lab: 949-824-5492  
Lab fax: 949-824-7235

### **Education**

2004 Ph.D., Psychology, University of Michigan, Ann Arbor  
2001 M.A., Anthropology, 2001, University of Michigan, Ann Arbor  
1992 B.A. with High Distinction, Russian and Japanese, University of Iowa

### **Appointments**

2005-present Assistant Professor, Department of Cognitive Sciences,  
University of California - Irvine.  
2004-2005 Postdoctoral Fellow, Department of Psychology, Harvard University

### **Grants, Fellowships & Awards**

Pending *Preschool Math for English-Language Learners: Spanish, English or Dual-Language Instruction?* U.S. Department of Education, Institute for Education Sciences.  
Pending *NSF CAREER: Early Number-Concept Development in Low-Income English-Language Learners: Observation and Intervention.*  
Pending *Early Number-Concept Development in Bilingual and Monolingual Children.* NIH R01.  
2009-2010 Special Research Grant, UC Irvine Academic Senate Council on Research, Computing and Libraries (CORCL).  
2008-2010 *Number Words and Number Concepts.* NIH R03HD054654.  
2009 *Number Words and Number Concepts* supplemental award.  
2005-2008 *How Do Preschoolers Learn Numerals?* NIH-F32HD050036 (declined).  
2004-2005 NIH-NRSA Post-Doctoral Traineeship, Harvard University.  
2004 NSF-ROLE Post-Doctoral Fellowship, Harvard University.  
2003 Rackham Dissertation Fellowship, University of Michigan.  
2001-2003 US Dept of Education FLAS Fellowship (declined 2<sup>nd</sup> year).  
2000-2001 Culture & Cognition Graduate Fellowship, University of Michigan.  
1997-1999 NIH Graduate Fellowship, University of Michigan.

- 1996-1999 University of Michigan Regents' Fellowship (declined 2<sup>nd</sup> and 3<sup>rd</sup> years).  
1991 Phi Beta Kappa, University of Iowa.

### **Peer-Reviewed Journal Articles**

10. Slusser, E. & **Sarnecka**, B. W. (under review) *Connecting Numbers to Discrete Quantification: A Step in the Child's Construction of Integer Concepts*. Manuscript submitted for publication.
9. Negen, J. & **Sarnecka**, B.W. (under review). *Number-word learning predicts attention and memory for set sizes in young children*. Manuscript submitted for publication.
8. Lee, M.D. & **Sarnecka**, B.W. (under review) *Number-knower levels in young children: Insights from a Bayesian Model*. Manuscript submitted for publication.
7. Negen, J. & **Sarnecka**, B.W. (under review) *Children's Number-Word Learning and General Vocabulary*. Manuscript submitted for publication.
6. Lee, M.D. & **Sarnecka**, B.W. (2010). A model of knower-level behavior in number concept development. *Cognitive Science*, 34, 51-67.
5. **Sarnecka**, B.W. & Lee, M. D. (2009) Levels of Number Knowledge During Early Childhood. *Journal of Experimental Child Psychology*, 103, 325-337.
4. **Sarnecka**, B.W. & Carey, S. (2008) How counting represents number: What children must learn and when they learn it. *Cognition*, 108, 662-674.
3. Gelman, S.A., Goetz, P.J., **Sarnecka**, B.W., & Flukes, J. (2008). Generic language in parent-child conversations. *Language Learning and Development*, 4, 1-31.
2. **Sarnecka**, B.W., Kamenskaya, V.G., Yamana, Y., Ogura, T., & Yudovina, J.B. (2007). From grammatical number to exact numbers: Early meanings of "one," "two," and "three" in English, Russian, and Japanese. *Cognitive Psychology* (55), 136-168.
1. **Sarnecka**, B.W. & Gelman, S.A. (2004). Six does not just mean a lot: Preschoolers see number words as specific. *Cognition*, 92, 329-352.

### **Peer-Reviewed Conference Proceedings & Book Chapters**

3. Negen, J. & **Sarnecka**, B. W. (in press) Young Children's Number-Word Knowledge Predicts Their Performance on a Nonlinguistic Number Task. *Proceedings of the 31st Annual Meeting of the Cognitive Science Society*. Mahwah, NJ: Erlbaum.
2. Carey, S. & **Sarnecka**, B.W. (2006). The development of human conceptual representations. M. Johnson & Y. Munakata (Eds.), *Processes of Change in Brain and Cognitive Development: Attention and Performance XXI*, 473-496.
1. **Sarnecka**, B.W., Kamenskaya, V.G., Ogura, T., Yamana, Y., & Yudovina, J.B. (2004). Language as lens: Plurality marking and numeral learning in English, Japanese, and Russian. In *Proceedings of the 28<sup>th</sup> annual Boston University Conference on Language Development*. Somerville, MA: Cascadilla Press.

### **Other Publications**

7. **Sarnecka, B.W.** (2008) SEVEN does not mean NATURAL NUMBER, and children know more than you think. [Commentary]. *Behavioral & Brain Sciences*, 31, 668.
6. **Sarnecka, B.W.** (2006) [Review of the book *Language development across childhood and adolescence* by Ruth A. Berman, Ed.] *Studies in Second Language Acquisition*, 28, 535-537.
5. **Sarnecka, B., & Cerutti, A.** (2005) *Specificity, direction, and unit-of-one: Piecing together the logic of number words*. [Abstract]. 4<sup>th</sup> Biennial Meeting of the Cognitive Development Society, San Diego, CA. <http://www.cogdevsoc.org/meetings.html>
4. **Sarnecka, B.W.** (2004) *Language as Lens: Plurality marking and numeral learning in English, Japanese, and Russian*. Unpublished doctoral dissertation, University of Michigan.
3. **Sarnecka, B.W.** (2002). [Review of the book *Human language and our reptilian brain: The subcortical bases of speech, syntax and thought* by Philip Lieberman]. *Journal of Cognition and Culture* 2, 161-162.
2. **Sarnecka, B.W.** (2002). [Review of the book *Language and gesture* by David McNeill, Ed.]. *Journal of Cognition and Culture*, 2, 81-82.
1. **Sarnecka, B.W.** (2001). [Review of the book *The neurolinguistics of bilingualism: An introduction* by Franco Fabbro]. *Journal of Cognition and Culture*, 1, 359-360.

### **Conference Presentations**

13. Negen, J. & **Sarnecka, B.W.** (2010, July). *Analogue Magnitudes and Knower-Levels: Re-Visiting the Variability Argument*. Paper to be presented at the Annual Meeting of the Cognitive Science Society, Portland, Oregon.
12. Slusser, E.B. & **Sarnecka, B. W.** (2010, March) Children's Use of Morpho-Syntactic Information to Connect Number Words to Discrete Quantification. Paper given as part of symposium *Early Links Among Number, Plural, and Discrete Objects* (Lisa Cantrell, Chair), International Conference on Infant Studies, Baltimore, MD.
11. Negen, J., & **Sarnecka, B. W.** (2009, July). *Young Children's Number-Word Knowledge Predicts Their Performance on a Nonlinguistic Number Task*. Paper presented at the Annual Meeting of the Cognitive Science Society, Amsterdam.
10. Lee, M.D. & **Sarnecka, B.W.** (2009, May). *A model of knower-level behavior in number-concept development*. Paper presented at the Workshop on Probabilistic Models of Cognitive Development, Banff, Canada.
9. Slusser, E.B., & **Sarnecka, B. W.** (2009, April). *Partial meanings of number words*. Poster presented at the biennial meeting of the Society for Research in Child Development, Denver, CO.
8. **Sarnecka, B. W.** (2007, June) Young children figure out how counting works when they grasp the successor function. In M. Wiser, M. LeCorre & H. Wiese (Chairs), *Symbolic and Conceptual Development in Children's Early Understanding of Number*. Symposium conducted at the annual meeting of the Jean Piaget Society, Amsterdam.

7. Slusser, E. B., & **Sarnecka**, B.W. (2007, April). *When do young children connect number words to discrete quantification?* Poster presented at the biennial meeting of the Society for Research in Child Development, Boston, MA.
6. **Sarnecka**, B.W., Cerutti, A., & Carey, S. (2005, October). *Unpacking the cardinal principle of counting: A last-word rule + the successor function.* Poster presented at the 4<sup>th</sup> Biennial Meeting of the Cognitive Development Society, San Diego, CA.
5. **Sarnecka**, B.W., Kamenskaya, V.G., Ogura, T., Yamana, Y., & Yudovina, J.B. (2005, April). *Plurality marking helps children construct small-number concepts: Evidence from English, Japanese, and Russian.* Paper presented at the biennial meeting of the Society for Research in Child Development, Atlanta, GA.
4. **Sarnecka**, B.W., Kamenskaya, V.G., Ogura, T., Yamana, Y., & Yudovina, J.B. (2003, December). *Plurality marking and numeral learning in English, Japanese, and Russian.* Poster presented at the Kyoto University International Symposium on Self, Cognition, and Emotion, Ann Arbor, MI.
3. **Sarnecka**, B.W., Kamenskaya, V.G., Ogura, T., Yamana, Y., & Yudovina, J.B. (2003, October). *Language as lens: Morphological cues guide children's attention to number.* Paper presented at the Boston University Conference on Language Development, Boston, MA.
2. Yamana, Y., Ogura, T. & **Sarnecka**, B.W. (2003, August). *Suu shi kakutoku no nichibei hikaku* (A study on the acquisition of number words: Comparison of Japanese children and American children). Paper presented at the annual meeting of the *Nihon Kyouiku Shinri Gakkai* (Japanese Educational Psychology Association), Osaka, Japan.
1. **Sarnecka**, B.W. (2003, April). Six does not just mean a lot: Preschoolers see number words as specific. In B. W. Sarnecka (Chair), *Number concepts and number language*. Symposium conducted at the biennial meeting of the Society for Research in Child Development, Tampa, FL.

### **Invited Talks**

Harvard University, Department of Psychology

Massachusetts Institute of Technology, Dept. of Brain & Cognitive Sciences

University of Arizona, Department of Psychology

University of California-Irvine. Department of Cognitive Sciences

University of California-Los Angeles, Department of Psychology

### **Professional Service**

- Ad-Hoc Reviewer: *British Journal of Developmental Psychology; Child Development; Cognition; Cognitive Science; Developmental Science, Experimental Psychology; Proceedings of Foundations of the Formal Sciences VII; Infant and Child Development; Israel Science Foundation; Journal of Child Language; Journal of East Asian Linguistics; Journal of Experimental Child Psychology; Journal of Genetic Psychology; Language Learning & Development; National Science Foundation; Psychological Science, Society for Research in Child Development; Trends in Cognitive Sciences.*

- Co-Founder, *SOCAL Development*. (Cognitive and language development conference held annually in southern California.)
- Consulting Editor, *Journal of Genetic Psychology*
- Advisor, *Early Childhood Research – Integrated Design of Exhibits*, Lawrence Hall of Science, UC-Berkeley.