

## Kristy Lynn vanMarle

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### ACADEMIC APPOINTMENTS

- Aug 2007                      Assistant Professor, Department of Psychological Sciences, University of Missouri - Columbia, Columbia, MO.
- Jul 2004 - Jun 2007      Post-doctoral Associate, Rutgers Center for Cognitive Science (RuCCS), Rutgers University, Piscataway, NJ  
 Sponsors: Drs. Rochel Gelman and Randy Gallistel

### EDUCATION

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|------|--------------------------------------|--|
| 2004 | Ph.D.<br><i>Yale University</i>      | Developmental Psychology<br>Advisor: Dr. Karen Wynn<br><u>Dissertation Title:</u> <i>Infants' Understanding of Number: The Relationship between Discrete and Continuous Quantity</i> |
| 2002 | M.Phil.<br><i>Yale University</i>    | Developmental Psychology<br>Advisor: Dr. Karen Wynn  |
| 2001 | M.S.<br><i>Yale University</i>       | Developmental Psychology<br>Advisor: Dr. Karen Wynn  |
| 1997 | B.A.<br><i>University of Arizona</i> | Psychology   |

### AWARDS/HONORS/GRANTS

- Arts & Science Alumni Organization Faculty Incentive Grant*, University of Missouri, \$1,500.  
 “Infants’ small and large number representations: one mechanism or two?”. Kristy vanMarle, PI.
- Research Board Grant*, University of Missouri (May 2012- May 2013) \$31,890 total costs.  
 “Infants’ small and large number representations: one mechanism or two?”. Kristy vanMarle, PI.
- Research Board Grant*, (Geary, PI) University of Missouri (Aug 2011- July 2012) \$27,510 total costs. “The development of quantitative competencies in preschool children”. Kristy vanMarle, Co-PI.

*Faculty International Travel Grant* (\$1500). Awarded to reimburse cost of international travel to conference. (SRCD 2011, Montreal, Canada)

*Richard Wallace Research Incentive Grant*, University of Missouri (May 2011 – Aug 2011). \$4,000. “Using operant conditioning to investigate infants’ nonverbal quantity representations”. Kristy vanMarle, PI.

*Research Council Grant*, University of Missouri (Jun 1, 2010 – Nov 30, 2010). \$7,500. “Using operant conditioning to investigate infants’ nonverbal quantity representations”. Kristy vanMarle, PI.

*Summer Research Fellowship*, University of Missouri (Summer 2010). \$7,000. “Using operant conditioning to investigate infants’ nonverbal quantity representations”. Kristy vanMarle, PI.

*Research Board Grant*, University of Missouri (Sep 2008- Aug 2010\*) \$6,397 total costs. “Infants’ nonverbal quantity representation”. Kristy vanMarle, PI. \*A one-year extension was awarded.

*Summer Research Fellowship*, University of Missouri (Summer 2008), \$7,000. “Nonverbal quantity representation in infants”. Kristy vanMarle, PI.

*Dissertation Award Fellowship* – Academic year, 2003-04, Yale University.

## **PUBLICATIONS**

**vanMarle, K.** (in press). Different mechanisms underlie infants’ representation of small and large numbers in an ordinal choice task. *Journal of Experimental Child Psychology*.

Hespos, S. J., & **vanMarle, K.** (2012). Everyday Physics: How infants learn about objects and entities in their environment. *WIREs Cognitive Science*, 3, 19-27.

**vanMarle, K.**, & Wynn, K. (2011) Tracking and quantifying objects and non-cohesive substances. *Developmental Science*, 14(3), 502-515.

Yamaguchi, M., Kuhlmeier, V. A., Wynn, K., & **vanMarle, K.** (2009). Continuity in social cognition from infancy to childhood. *Developmental Science*, 12(5), 746-752.

**vanMarle, K.**, & Wynn, K. (2009). "Infants' auditory enumeration: Evidence for analog magnitudes in the small number range". *Cognition*, 111, 302-316.

**vanMarle, K.**, Aw, J., McCrink, K., & Santos, L. (2006). How capuchin monkeys (*Cebus apella*) quantify objects and substances. *Journal of Comparative Psychology*, 120(4), 416-426.

**vanMarle, K.**, & Wynn, K. (2006). 6-month-old infants use analog magnitudes to represent duration. *Developmental Science*, 9(5), F41-F49.

**vanMarle, K.**, & Scholl, B.J. (2003). Attentive tracking of objects vs. substances. *Psychological Science*, 14(5), 498-504.

**vanMarle, K., & Wynn, K. (2002).** Quantitative Reasoning. *Encyclopedia of Cognitive Science*. Nature Publishing Group: Macmillan Publishers Ltd., England.

## **PRESENTATIONS**

- \*\*Mou, Y., & vanMarle, K. (2011-accepted).** “6-month-old infants’ intermodal representations of ratio.” Poster to be presented at the biannual International Conference for Infant Studies (ICIS), Minneapolis, MN in June 2012.
- vanMarle, K. (2011-accepted).** “5-month-old infants discriminate quantities of sand.” Poster to be presented at the biannual International Conference for Infant Studies (ICIS), Minneapolis, MN in June 2012.
- vanMarle, K. (2011-accepted).** “Communication breakdown: Object tracking and analog magnitude representations are incommensurable.” Poster to be presented at the annual International Conference for Infant Studies (ICIS), Minneapolis, MN in June 2012.
- \*Wiese, H., & vanMarle, K. (2011-accepted).** “Discrete and continuous quantities in early math.” Poster to be presented at the Annual Conference of the Midwestern Psychological Association (MPA), Chicago, IL in May 2012.
- \*Johnson-Hafenscher, L., & vanMarle, K. (2011-accepted).** “How demographics relate to children’s quantitative abilities prior to formal schooling.” Poster to be presented at the Annual Conference of the Midwestern Psychological Association (MPA), Chicago, IL in May 2012.
- vanMarle, K. (2011).** “From dessert to desert: Infants’ quantification of nonsolid substances”. Paper presented at the Society for Research in Child Development for 2011 biennial meeting in Montreal, Quebec, CA.
- vanMarle, K. (2011).** “Continuity in object tracking from infancy to adulthood”. Paper presented at the Society for Research in Child Development for 2011 biennial meeting in Montreal, Quebec, CA.
- vanMarle, K. (2011).** “Infants represent and compare large numbers in an ordinal choice task”. Poster presented at the Society for Research in Child Development for 2011 biennial meeting in Montreal, Quebec, CA.
- \*Keyes, J., & vanMarle, K. (2010).** "Infants' quantification of nonsolid substances." Poster presented at the Annual Conference of the Midwestern Psychological Association (MPA), Chicago, IL.
- vanMarle, K. (2010).** "Infants' quantification of non-solid substances." Paper presented at the biannual meeting for the International Conference for Infant Studies, Baltimore, MD.
- Luo, Y., Markson, L., Fawcett, C., **\*\*Mou, Y., & vanMarle, K. (2010).** "Infants' inferences about agents' preferences." Talk presented at the biannual meeting for the International Conference for Infant Studies, Baltimore, MD.
- \*\*Pearson, A. N., & vanMarle, K. (2010).** "Now you see it, now you don't: Preschoolers' sensitivity to spatiotemporal continuity." Poster presented at the biannual meeting for the International Conference for Infant Studies, Baltimore, MD.

\*Gaddis, A., & **vanMarle, K.** (2009). "Infants' sensitivity to statistical properties: representing average area for visual elements." Poster presented at annual conference for Midwestern Psychological Association (MPA), Chicago, IL.

Yamaguchi, M., Kuhlmeier, V. A., Wynn, K., & **vanMarle, K.** (2006, May). "Infant social cognition tasks, not nonsocial tasks, correlate with preschool social cognition." Poster presented at the Annual Conference for the Association for Psychological Science, New York, NY.

**vanMarle, K.** (2005, April). "Tracking and Quantifying Objects and Nonsolid Substances: Do Infants and Adults Possess the Same Mechanisms?" Talk given at the 2005 meeting of the Society for research in Child Development, Atlanta, GA.

**vanMarle, K.,** & Wynn, K. (2004, April). "Can infants choose the larger of two continuous quantities?" Poster presented at the 2004 meeting of the International Conference for Infant Studies, Chicago, Illinois.

**vanMarle, K.,** & Scholl, B. (2003, May). "Attentive tracking of objects vs. substances." Poster presented at the 2003 meeting of the Vision Sciences Society, Sarasota, FL.

**vanMarle, K.,** & Wynn, K. (2002, April). "Young children's sensitivity to magical events." Poster presented at the 2001 meeting of the International Conference for Infant Studies, Toronto, Ontario, CA.

**vanMarle, K.,** & Wynn, K. (2002, April). "7-month-old infants' sensitivity to number in the auditory domain." Poster presented at the 2001 meeting of the International Conference for Infant Studies, Toronto, Ontario, CA.

Wynn, K., **vanMarle, K.,** & DeCoste, C. (2001, April). "Duration discrimination in 6-month-olds: Implications for theories of early numerical cognition." Poster presented at the 2001 meeting of the Society for Research in Child Development, Minneapolis, MN.

**vanMarle, K.,** & Wynn, K. (2001, April). "Preschoolers' detection of magical events." Poster presented at the 2001 meeting of the Society for Research in Child Development, Minneapolis, MN.

\*graduate student, \*\*undergraduate student

### INVITED TALKS/SYMPOSIA

December 2008 –*Nonverbal quantity representation in human infants*. Developmental Seminar, University of Illinois – Urbana-Champaign, Champaign, IL.

November 2008 –*Nonverbal quantity representation in human infants*. Cognitive Science Talk Series, Southern Illinois University – Carbondale, Carbondale, IL.

October 2007 –*Nonverbal quantity representation in human infants*. Clinical Seminar, University of Missouri - Columbia, Columbia, MO.

September 2007 –*Nonverbal quantity representation in human infants*. Developmental Brown Bag Seminar, University of Missouri - Columbia, Columbia, MO.

- March 2007 -- *Cognitive foundations of nonverbal quantity representation*. Center for Cognitive Neuroscience, Duke University, Raleigh-Durham, NC.
- February 2007 -- *Cognitive foundations of nonverbal quantity representation*, Department of Psychology, Illinois Wesleyan University, Bloomington, IL.
- February 2007 -- *Cognitive foundations of nonverbal quantity representation*, Department of Psychology, Florida Atlantic University, Boca Raton, FL.
- January 2007 -- *Cognitive foundations of nonverbal quantity representation*. Department of Psychological Sciences, University of Missouri - Columbia, Columbia, MO.
- January 2007 -- *Cognitive foundations of nonverbal quantity representation*, Department of Psychology, Grand Valley State University, Grand Rapids, MI.
- December 2006 -- *Cognitive foundations of nonverbal quantity representation*. Institute of Child Development, University of Minnesota, Minneapolis, MN.
- November 2005 -- *Quantity Representation in Human Infants*. Department of Psychology, San Francisco State University, San Francisco, CA.
- June 2005 -- General Participant of the National Academy of Sciences, German-American Frontiers of Science Symposium, Newport Beach, CA.
- February 2004 -- *Quantity representation in human infants*. Developmental Lunch Talk, Yale University, New Haven, CT.
- November 2003 -- *How human infants (and nonhuman primates) represent discrete and continuous quantities*. Rutgers Center for Cognitive Science, Rutgers University - New Brunswick.

## TEACHING

Course instructor for:

- *Developmental Psychology Capstone* (4971, Univ. of Missouri)
- *Developmental Psychology* (2410, Univ. of Missouri)
- *(Lifespan) Developmental Psychology* (330, Rutgers Univ.)
- *Infant & Child Development* (331, Rutgers Univ.)

## ACADEMIC SERVICES

- 2011-2012 – Chair of Distinguished Lecture Series Committee in Dept. of Psychological Sciences, University of Missouri
- 2011-2012 – Member of Psychology Newsletter/Psychology Day Committee in Dept. of Psychological Sciences
- 2008-2011 -- Co-organizer of Distinguished Lecture Series within Dept. of Psychological Sciences at University of Missouri.

- 2008, 2010 -- Invited reviewer for National Science Foundation grant proposals
- 2008-09, 2011-12 – Organizer of Developmental Seminar at the University of Missouri – Columbia.
- Fall 2005 Organizer of the “What is Cognitive Science” talk series at Rutgers Center for Cognitive Science (Rutgers University - New Brunswick).

## **AD-HOC JOURNAL REVIEWING**

*Child Development, Cognition, Cognitive Development, Cognitive Psychology, Cognitive Science, Developmental Psychology, Developmental Science, Frontiers of Comparative Psychology, Frontiers of Psychology, Journal of Educational Psychology, Journal of Experimental Child Psychology, Journal of Experimental Psychology – General, Journal of Educational Psychology, PLoS ONE, Proceedings for the National Academy of Sciences, Psychological Bulletin & Review, Psychological Science*

## **PROFESSIONAL AFFILIATIONS**

*Association for Psychological Science (APS), Society for Research in Child Development (SRCD), International Society for Infant Studies (ISIS), Cognitive Development Society (CDS).*

## **ACADEMIC REFERENCES**

Rochel Gelman, Professor	<i>Rutgers University</i>	rgelman@ruccs.rutgers.edu
C. R. Gallistel, Professor	<i>Rutgers University</i>	galliste@ruccs.rutgers.edu
Karen Wynn, Professor	<i>Yale University</i>	Karen.Wynn@yale.edu
Brian J. Scholl, Assoc. Professor	<i>Yale University</i>	Brian.Scholl@yale.edu
Laurie R. Santos, Asst. Professor	<i>Yale University</i>	Laurie.Santos@yale.edu
Paul Bloom, Professor	<i>Yale University</i>	Paul.Bloom@yale.edu
Frank Keil, Professor	<i>Yale University</i>	Frank.Keil@yale.edu