

# Kenton de Kirby, PhD

## EDUCATION

PhD **University of California, Berkeley**  
Graduate School of Education, 2017

*Dissertation title:* Idealized Objects and Material Diagrams—a  
Cultural Practice-Approach to Understanding  
Definition Use in Early Geometrical Problem Solving  
Committee: Geoffrey Saxe (chair), George Lakoff, Alan Schoenfeld,  
Laura Sterponi

MA **University of California, Berkeley**  
Graduate School of Education, 2012

BA **University of California, Berkeley**  
Linguistics, 2005

## HONORS AND AWARDS

Spencer/National Academy of Education Dissertation Fellow, 2015-2016

Dean's Normative Time Fellowship, 2015

University of California Berkeley Fellow, 2010-2012

Research in Cognition and Mathematics Education Fellow (RCME),  
2010-2014

## HONORS AND AWARDS (con't)

Conference presentation selected for Awards Panel (“Most Innovative Research”) at UC Davis Symposium on Language Research, May 2015

## PUBLICATIONS

### Neuropsychology and classroom teaching

Ahern, C.A., & de Kirby, K. (2011). *Beyond individual differences: Organizing processes, information overload, and classroom learning*. New York: Springer.

### Sociocultural treatments of cognitive development and numerical thinking

Saxe, G. B., & de Kirby, K. (in press). Analyzing the Evolution of A Digital Technology Intervention: One Laptop Per Child in a Remote Papua New Guinea Community. *Anthropology and Education Quarterly*.

Saxe, G. B., de Kirby, K., Kang, B., Le, M., & Schneider, A. (2015). Studying Cognition through Time in a Classroom Community: The Interplay between “Everyday” and “Scientific Concepts”. *Human Development*, 58(1), 5-44.

Saxe, G. B., de Kirby, K., Le, M., Sitabkhan, Y., & Kang, B. (2015). Understanding learning across lessons in classroom communities: A multi-levelled analytic approach. In *Approaches to Qualitative Research in Mathematics Education* (pp. 253-318). Springer Netherlands.

## PUBLICATIONS (con't)

Saxe, G. B., & de Kirby, K. (2014). Cultural context of cognitive development. *Wiley Interdisciplinary Reviews: Cognitive Science*, 5(4), 447-461.

de Kirby, K., & Saxe, G. B. (2014). Using Geometrical Representations as Cognitive Technologies. *Journal of Cognition and Culture*, 14(5), 401-414.

### Autism, language, and social interaction

Sterponi, L., & de Kirby, K. (2016). What Discourse Analytic Approaches Contribute to the Study of Language and Autism: A focus on Conversation Analysis. *Research on Children and Social Interaction*.

Sterponi, L., & de Kirby, K. (2016). A Multidimensional Reappraisal of Language in Autism: Insights from a Discourse Analytic Study. *Journal of autism and developmental disorders*, 46(2), 394-405.

Sterponi, L., de Kirby, K., & Shankey, J. (2015). Subjectivity in Autistic Language: Insights on Pronoun Atypicality from Three Case Studies. In *The Palgrave Handbook of Child Mental Health* (pp. 272-295). Palgrave Macmillan UK.

Sterponi, L., de Kirby, K., & Shankey, J. (2015). Rethinking language in autism. *Autism*, 19(5), 517-526.

## PRESENTATIONS

### Sociocultural treatments of cognitive development and numerical thinking

- de Kirby, K (2016, April). *Developing a Feel for the Game: Treating Geometric Diagrams as Representations of Idealized Objects*. Poster presented at the annual meeting of the American Education Research Association, San Francisco, CA.
- de Kirby, K (2016, March). *Developing a Feel for the Game: Treating Geometric Diagrams as Representations of Idealized Objects*. Paper presented at National Academy of Education/Spencer Foundation Spring Retreat for Fellowship Recipients, Washington, DC.
- de Kirby, K (2015, October). *Treating Geometric Diagrams as Representations of Idealized Objects*. Poster presented at National Academy of Education/Spencer Foundation Fall Retreat for Fellowship Recipients, Washington, DC.
- de Kirby, K (2015, May). *Material Diagram or Idealized Object*. Poster presented at Social Policy and Research in Cognition and Mathematics Education (SPARCME) conference, Berkeley, CA.
- Saxe, G., de Kirby, K., Le, M., & Kang, B. (2013, April). The co-construction and elaboration of mathematical definitions in mathematical discussions. In M. Gearhart (Chair), *Engagement in Mathematical Discussion: Practices and Outcomes*. Symposium conducted at the Research Pre-session of the Annual Meeting of the National Council of Teachers of Mathematics, Denver, CO.
- de Kirby, K (2013, March). *Learning Mathematics Through Representations*. Paper presented at the annual Studiocode conference, Berkeley, CA.

## PRESENTATIONS (con't)

de Kirby, K. (2013, April). *The development of an idealized number line: Differentiating physical inscription from mathematical object*. Paper presented at the annual meeting of the American Education Research Association, San Francisco, CA.

### Autism, language, and social interaction

de Kirby, K. (2015, May) *Complexifying a Deficit Perspective: A reappraisal of pronoun avoidance and reversal in autism*. Paper presented at the UC Davis Symposium on Language Research, Davis, CA.

Sterponi, L., de Kirby, K., & Shankey, J. (2014, June). *Subjectivity in autistic language: Insights on pronoun atypicality from three case studies*. Paper presented at the International Conference of Conversation Analysis, Los Angeles, CA.

Sterponi, L., de Kirby, K., & Shankey, J. (2013, May). *Toward understanding autistic language as social action and mode of experience*. Paper presented at the annual meeting of the Language, Interaction, and Social Organization, Santa Barbara, CA.

Sterponi, L., de Kirby, K., & Shankey, J. (2013, October). *Subjectivity in autistic language: A reappraisal of pronoun avoidance and reversal*. Paper presented at the annual Language and Social Interaction Working Group, New York, NY.

## RESEARCH EXPERIENCE

Research Assistant, Learning Mathematics Through Representations  
Fall 2010 - Spring 2014

UC Berkeley, Graduate School of Education

Funder: Institute of Educational Sciences

PI: Geoffrey Saxe

LMR is an research-based curriculum for the teaching and learning of integers and fractions in the elementary grades. Participated in conducting a large scale efficacy study to establish the effectiveness of the curriculum, compared to a highly-regarded control curriculum.

Research Assistant, Travel of Ideas (TOI)

Fall 2010 - Spring 2014

UC Berkeley, Graduate School of Education

Funder: Institute of Educational Sciences

PI: Geoffrey Saxe

TOI analyzed the implementation of the LMR curriculum in two case study classrooms. Co-wrote publications that presented a methodological approach for analyzing cognition in classroom communities over time.

Research Assistant, Fieldwork in Remote Region of Papua New Guinea  
Summer 2014

UC Berkeley, Graduate School of Education

Funder: Spencer Foundation

PI: Geoffrey Saxe

In a remote mountainous region of Papua New Guinea, this project investigated mathematical cognition and its relationship to indigenous systems of numerical representation, as well as the implementation of a One Laptop Per Child pilot program. Participated in the design of research methods, data collection, and writing (in progress).

## RESEARCH EXPERIENCE (con't)

Research Assistant, Language and Autism,  
Spring 2012 - Fall 2015  
UC Berkeley, Graduate School of Education  
PI: Laura Sterponi

Using Conversation Analysis, project investigated language use and social interaction among children with autism. Co-wrote multiple publications and delivered numerous presentations.

Staff Research Analyst  
Summer 2006 - Fall 2007  
American Environics, Oakland, California

Worked for public opinion research firm applying the insights of cognitive linguistics to understand the narratives through which the public conceptualizes key social issues (e.g. health care, climate change). Analyzed data and co-wrote reports for clients to help them more effectively communicate their agenda.

Staff Research Associate, Political Cognition  
Summer 2005 - Spring 2006  
Rockridge Institute, Berkeley, California  
PI: George Lakoff

Using methods from Cognitive Linguistics, this Institute investigated the conceptual structures that underlie political cognition and discourse. Co-wrote numerous reports on high-profile social issues such as environmentalism.

## **TEACHING EXPERIENCE**

Co-lead instructor for graduate seminar: Discourse Analysis  
Spring 2017

Co-taught graduate seminar. Course covered theory and methods of discourse analysis, including conversation analysis, micro-ethnography, linguistic anthropology, and critical discourse analysis.

Lead instructor for graduate seminar: Instruction and Development  
Spring 2016

Designed and taught graduate seminar. Seminar surveyed foundational theories in cognitive development, and how these ideas have been extended to the design of innovative and ambitious learning environments through methods of design-based research.

## **SERVICE**

Reviewer for journal *Autism*

## **PROFESSIONAL AFFILIATIONS**

American Educational Research Association