

# Lynda Joy Gerry

## MA, Cognition & Communication

Researcher and developer employing psychological experimental designs and cognitive neuroscience methods to test the impacts of embodied interfaces in virtual environments on learning, cooperation, and empathy.



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**Blog:** [WhatsExperience.com](http://WhatsExperience.com)

## EDUCATION

AUG 2015 – SEP 2017      **UNIVERSITY OF COPENHAGEN**  
M.A., Cognition & Communication (Copenhagen, DK)



**Thesis:** [Virtual Reality as a Tool to Facilitate Empathy: Embodied Simulations and Perspective Taking in the Body of Another](#) (Advisor: Adrian Alsmith)

**Coursework:** Empirical Research Methods in Cognitive Neuroscience, Cognition and Audiovisual Media, Interdisciplinary Neuroimaging, Neuroscience of Consciousness, Central Topics in Phenomenology, Summer School in Phenomenology and Philosophy of Mind, Cognitive Science

2007 - 2011      **KNOX COLLEGE**, B.A., Psychology and Neuroscience (Galesburg, IL, US)



**Honors:** Phi Beta Kappa member, Transfer Scholarship recipient, Dean's List

## RESEARCH EXPERIENCE

SEP 2017 – PRESENT      **VISITING STUDENT RESEARCHER**, [Empathic Computing Lab](#)  
University of South Australia (Adelaide, SA, AU)

- Record neural time signature data using 16-channel EEG system in AR/VR environments
- Measure implicit and explicit knowledge in expert-novice and empathy-enhancing AR/VR
- Develop an augmented reality version of [The Machine to Be Another](#) body swap.
- On November 17, 2016, demoed Brain-Computer Interface (BCI) that adaptively responds to users' cognitive load during a VR visual search task in the HTC Vive at ICAT 2017 (Co-Investigator: Barrett Ens).



SEP 2016 – PRESENT      **DEVELOPER**, [Paint With Me: Expert-Novice Skills Transmission Software](#)  
(Copenhagen, DK)

- Create stereoscopic 360 videos in which users see and hear from the perspective of painters dictating their process.
- Track user hand and paintbrush position and velocity relative to the painter's movements.
- Program interaction design to deliver feedback to user when movements are not synchronous.



MAR 2016 – PRESENT      **RESEARCH PARTNER**, [BeAnother Lab \(BAL\)](#)  
(Helsinki/Barcelona/Copenhagen/Paris/Berlin)

- Facilitate in running [The Machine to Be Another](#) body swap.
- Conduct and analyze VR survey questionnaires and participant interviews.
- Statistically analyzed the impact of presence on breathing, heart rate, and subjective reports of feeling calm in a mediation VR simulation.



<sup>1</sup> Note that all text in blue font is a hyperlink.

JUL 2017 – SEP 2017 **PRE-PHD TRAVEL AWARD STUDENT RESEARCHER**, *Social Cognition Lab*  
Berlin School of Mind and Brain

- Used foveated imaging to indicate visual attention in 360 degree videos of group conversations to train gaze following behavior and more accurate social cues detection in autistic adolescents.
- Created an adapted version of Isabel Dziobek's Movie for the Assessment of Social Cognition (MASC) measurement in VR with questions about the intentions, gestures, expressions, and behaviors of participants within a round table conversation



## AWARDS/FUNDING

- SEP 2017 – PRESENT **VISITING STUDENT RESEARCHER SCHOLARSHIP**  
*Empathic Computing Lab*, University of South Australia (Adelaide, SA, AU)  
**Project Title:** *Using EEG to Measure Empathy in AR and VR Environments*  
**Supervisor:** Mark Billingham
- JUL 2017 – SEP 2017 **PRE-PHD STUDENT RESEARCHER TRAVEL AWARD**  
*Social Cognition Lab*, Berlin School of Mind and Brain (Berlin, DE)  
**Project Title:** *Seeing through the eyes of another: Using first-person embodied simulations to train gaze and motor coordination in high-functioning Autism Spectrum Disorder (ASD) adults*  
**Supervisor:** Isabel Dziobek
- JUN 2017 **2017 SUMMER RESEARCH INSTITUTE (SRI) TRAVEL SCHOLARSHIP**  
*Mind and Life Institute US SRI 2017* (Garrison, NY)
- NOV 2016 **INTERNATIONAL SYMPOSIUM FOR CONTEMPLATIVE STUDIES (ISCS) HERSHEY SCHOLARSHIP**  
*Mind and Life Institute ISCS 2017* (San Diego, CA)
- APR 2010 **RICHTER MEMORIAL GRANT FOR UNDERGRADUATE RESEARCH**  
*Knox College Psychology Department* (Galesburg, IL)  
**Project Title:** *Social Influences on Personal Recall for Shared Experiences*

## PUBLICATIONS

- Gerry, L.J., Ens, B., Hart, J., Norman, M., Dey, A., Piumsomboon, P., & Billingham, M. (Submitted). First-Person Squared: Virtual body sharing encourages moving with another. *SIGGRAPH 2018 Virtual, Augmented, and Mixed Reality*.
- Gerry, L.J., Ens, B., Drogemuller, A., Thomas, B. & Billingham, M. (2017). Levity: A Virtual Reality system that responds to cognitive load. *CHI 2018 Late Breaking Work*.
- Gerry, L.J. (In Review). Brain-Computer Interfaces in Augmented and Virtual Environments: A review of research and development. *Computers & Graphics*.
- Gerry, L.J. (2017). [Paint with me: Stimulating creativity and empathy while painting with a painter in virtual reality](#). *IEEE Transactions on Visualization and Computer Graphics*, 23(4). DOI: 10.1109/TVCG.2017.2657239.
- Høeg, E. R., Gerry, L., Thomsen, L. A., Nilsson, N. C., & Serafin, S. (2017). Binaural Sound Reduces Reaction Time in a Virtual Reality Search Task. In *2017 IEEE 3rd VR Workshop on Sonic Interactions for Virtual Environments (SIVE)*. IEEE.

## POSTERS

- Gerry, L.J. (2017). The Inverted Mask: Embodied simulations enhance educational communication and performance accuracy during first-person perspective taking in painting task. Poster presented at: *3<sup>rd</sup> Workshop on Virtual Social Cognition*, July 6-7, 2017, Bielefeld University, Germany.
- Gerry, L.J. (2017). Embodied learning and linguistic categorization: Remediating the Molyneux Problem in haptic virtual reality. Poster presented at: *III International Colloquium on Colours and Numbers: Ways of enaction*, September 11-13, 2017, Fortaleza, Brazil.

## CONFERENCE PAPERS, PRESENTATIONS, AND WORKSHOPS

- [Paper] *Embodying Creative Expertise in Virtual Reality, Enactivism: Theory and Performance*  
University of Memphis (Memphis, TN) MAR 16, 2018
- [Paper] *Sharing Experiences: How Virtual Environments Enrich Our Access to the Minded Being and Phenomenality of Others. Phenomenology and Virtuality*, Husserl Archives, KU Leuven (Belgium) MAY 30, 2017
- [Workshop] *Perspective Taking Technologies, Empathic Computing, and User Experience Design for 3D User Interfaces and Interactive Virtual Environments, Forsknings Døgn, Enigma Copenhagen* APR 26, 2017
- [Paper] *Stimulating Creativity and Empathy in First-Person Perspective Taking Virtual Reality*  
**IEEE VR 2017** (Los Angeles, CA) MAR 22, 2017
- [Paper] *The Pip and Pop Effect in Virtual Reality*  
**Sonic Interactions in Virtual Environments (SIVE 2017) at IEEE VR 2017** (Los Angeles, CA) MAR 20, 2017
- [Speaker] *Perspective-Sharing While Painting as an Arts Education Platform for Augmented Reality Systems*  
**Augmented Reality World Expo (AWE) EU** (Berlin, Germany) OCT 17, 2016
- [Workshop] *Virtual Reality as a Tool to Facilitate Empathy, CopenX Virtual Reality Conference* SEP 16, 2016
- [Workshop] *Virtual Reality and Social Work, Social Development Centre SUS Workshop* (Denmark) AUG 24, 2016
- [Workshop] *Perspective Taking in Virtual Reality, VR:Lab at Trailer Park Festival iO* (Denmark) JUL 29, 2016
- [Workshop] *This is Your Brain on Virtual Reality, Max Planck Institute Tübingen* (Germany) JUN 21, 2016
- [Workshop] *Virtual Reality and Social Cognition, VR Meets Education Conference* (Denmark) MAY 11, 2016
- [Workshop] *Virtual Reality in Academic Research, Denmark's First Virtual Reality Conference* APR 26, 2016

## RELEVANT WORK EXPERIENCE

AUG 2017 – PRESENT **LEAD RESEARCHER**, *Equal Reality* (Brisbane, Queensland)

- Design, conduct, and analyze psychological experiments using diversity and inclusion training scenarios in the HTC Vive and Oculus DK3.
- Create photogrammetry scans with Google Pixel 6 and AutoDesk.



AUG 2016 – AUG 2017 **COGNITION & COMMUNICATION PROGRAM MENTOR/TUTOR**

*Department of Media, Cognition, and Communication* (University of Copenhagen)

- Organized and conducted program orientation on August 31, 2016.
- Spearheaded reading and study groups for the program and provided mentorship and tutoring to students as needed, especially with research design, implementation, and statistical analyses.

JUL-SEP 2016

**SCIENTIFIC RESEARCHER**

*Makropol VR Film Production House* (Copenhagen, DK)

- Taught *Neuroscience of Consciousness* course to creative team.
- Presented empirical data on neonate neurodevelopment for *The Birth of Ewa*, creating scientific white paper for the film.
- Developed study protocols for empathy education project *Verden Med Nye Øjne* (New Eyes to the World), designed to teach cultural diversity and environmental sustainability to Danish high school children under the UN sustainability initiatives.



FEB-JUL 2016 – **IN-HOUSE RESEARCHER**, *Khora Virtual Reality* (Copenhagen, DK)

- Expert advisor on educational, medical, and therapeutic applications of VR.
- Operated as curatorial design consultant for galleries/exhibits and museums incorporating VR (March – September 2016).
- Wrote evidence-based grant proposal for Khora Cognition (awarded in June 2016 at 1.5 million Danish Kroner) using virtual reality in psychotherapy for eating disorders, anxiety, and depression.
- Demoted an in-store installation of *Paint With Me* leading up to its premiere at Trailer Park Festival I/O on July 29, 2016.



AUG 2013 – OCT 2014    **CONSULTING MARKETING RESEARCH ANALYST**, *Olson Communications* (Chicago, IL, US)

- Composed and analyzed survey questionnaires results with *Toluna Analytics*. Designed data visualizations modeling trends within consumer behavior.
- Prepared report summaries for publications. Research quoted in *Deli Business, Food and Beverage Magazine, Food and Drink Blog, Foodservice Director, Convenience Store Decisions*, and *Prepared Foods*, amongst other publications.

DEC 2009 - JUN 2010    **BOOK RESEARCH ASSISTANT**, *Knox College Psychology Department* (Galesburg, IL, US)

- Assisted Professor Tim Kasser in data collection, scoring, and interpretation for his book on John Lennon, *Lucy in the Mind of Lennon*, published by Oxford University Press in June 2013, and mentioned by name in the book's Preface.

## MEDIA COVERAGE

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MAR 2017    Interviewed as Expert for University of London, Goldsmith's Coursera Course, "How to Create Your First Virtual Reality Game."

Link: <https://www.coursera.org/learn/making-virtual-reality-game/lecture/VsmwC/lynda-joy-gerry>

MAR 2017    Interviewed by Kent Bye for Voices of VR Podcast Episode 596: Researching Empathy in VR with Cognitive Science & Phenomenology,

Link: <http://voicesofvr.com/596-researching-empathy-in-vr-with-cognitive-science-phenomenology>

## SPECIALIZED TRAINING

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NOV 2017    *Bayesian Methods Training*, Australian Cognitive Neuroscience Society UniSA Hub (Australia)

JUN 2017    *Mind & Life Summer Research Institute*, Garrison, NY (US)

MAR 2017    *Spring School in Social Cognition, Joint Action, and Emotions* at University of Bochum (Germany)

JAN 2017    *Micro-phenomenology: Elicitation Interview Training with Claire Petitmengin* (Nemours, France)

SEP 2016    *Center for Interacting Minds Annual Meeting of Minds* at Aarhus University (Denmark)

AUG 2016    *Center for Subjectivity Research Summer School in Phenomenology and Philosophy of Mind* (KU)

JUL 2016    *Interdisciplinary Neuroimaging Summer School* Aarhus University (Denmark)

MAR 2014    *Himalayan Yoga Inst. 200-HR Rajadhi Raja Yoga and Meditation Teacher Training* (Kullu, India)

MAR 2013    *Chicago School of Yoga 200-HR Hatha/Yin/Vinyasa Teacher Training* (Chicago)

## LANGUAGES

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**Native:** English

**Conversational:** German, French, Danish

**Basic:** Spanish

## PROGRAMMING SKILLS

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**Advanced:** Unity, Unreal Engine, Leap Motion, C#, Python, R, MATLAB, EEGLab, PsychToolBox, OpenVibe, HTML 5, JavaScript, CSS, PHP, MS Office Suite, Adobe Suite, SPSS, Toluna Analytics, Final Cut Pro, Houdini, Blender

**Intermediate:** LATEX, Language Inventory and Word Count (LIWC), Elan and Salt Transcription Software, Vuforia, C++

**Beginner:** Natural Language Processing (NLP), Neural Networks, Machine Learning and Deep Learning