

# MEGAN O. KELLY

## CURRICULUM VITAE

*megan.kelly@uwaterloo.ca*

## EDUCATION

---

### GRADUATE EDUCATION (SEP. 2018 TO CURRENT):

PhD candidate – University of Waterloo: Department of Psychology

Program Area – Cognitive Psychology

Degree expected – Dec. 2024

Supervisor – Dr. Evan F. Risko

MA – University of Waterloo: Department of Psychology

Program Area – Cognitive Psychology

Degree awarded – Aug. 2020

Supervisor – Dr. Evan F. Risko

### UNDERGRADUATE EDUCATION (SEP. 2012 TO APR. 2017):

Honours BSc. – University of Guelph

Program Area – Psychology: Brain and Cognition

Degree awarded – June 2017

Undergraduate thesis supervisor – Dr. Pat Barclay

## RESEARCH

---

### INTERESTS:

I focus on how our use of technology allows us to offload or redirect cognitive demands and how this, in turn, influences our memory. My research draws from a variety of subtopics within learning and memory research, such as study effort and study allocation, intentional forgetting, distinctiveness/isolation, production effects, and misinformation/false memory effects. While mostly basic in nature, my research also allows me to consider important applications such as the various qualities of environmental memory supports and how the nature of their use, in turn, affects memory. More recently, I have begun to try to better understand the role of metamemory (metacognition specific to memory) within the context of my research.

### PAPERS PUBLISHED IN REFEREED JOURNALS (13):

**Kelly, M. O.**, Lu, X., Ensor, T., MacLeod, C. M., & Risko, E. F. (2023). Productions need not match study items to confer a production advantage... but it helps. *Experimental Psychology*, in press.

**Kelly, M. O.**, Ensor, T. M., MacLeod, C. M., & Risko, E. F. (2023). The Prod Eff: Partially producing an item modulates the production effect. *Psychonomic Bulletin & Review*, in press.

Risko, E. F., & **Kelly, M. O.** (2023). Thinking in the digital age: Everyday cognition and the dawn of a new age of metacognition research. *Applied Cognitive Psychology*, 37(4), 785-788.

**Kelly, M. O.**, & Risko, E. F. (2022). Study effort and the cost of external store availability. *Cognition*, 288, 105228.

**Kelly, M. O.**, & Risko, E. F. (2022). Revisiting the influence of offloading memory on free recall. *Memory & Cognition*, 50(4), 710-721.

**Kelly, M. O.**, Ensor, T. M., Lu, X., MacLeod, C. M., & Risko, E. F. (2022). Reducing retrieval time modulates the production effect. *Journal of Memory and Language*, 123, 104299.

Park, J., **Kelly, M. O.**, Hargis, M., & Risko, E. F. (2022). Influence of external store reliance on predicted and actual value-directed remembering. *Psychonomic Bulletin & Review*, 29(4), 1367-1376.

Pereira, A., **Kelly, M.O.**, Lu, X., & Risko, E.F. (2022). On our susceptibility to external memory store manipulation: Examining the influence of perceived reliability and expected access to an external store. *Memory*, 30(4), 412-428.

Lu, X., **Kelly, M. O.**, & Risko, E. F. (2022). The gist of it: Offloading memory does not reduce the benefit of list categorization. *Memory*, 30(4), 396-411.

Lu, X., **Kelly, M. O.**, & Risko, E. F. (2020). Offloading information to an external store increases false recall. *Cognition*, 205, 104428. DOI: 10.1016/j.cognition.2020.104428

**Kelly, M. O., & Risko, E. F. (2019).** The isolation effect when offloading memory. *Journal of Applied Research in Memory and Cognition*, 8(4). DOI: 10.1016/j.jarmac.2019.10.001

**Kelly, M. O., & Risko, E. F. (2019).** Offloading memory: Serial position effects. *Psychonomic Bulletin & Review*, 26(4), 1347-1353. DOI: 10.3758/s13423-019-01615-8

Risko, E. F., **Kelly, M. O.**, Patel, P., & Gaspar, C. (2019). Offloading memory leaves us vulnerable to memory manipulation. *Cognition*, 191. DOI: 10.1016/j.cognition.2019.04.023

#### **INVITED CHAPTERS (2):**

Risko, E.F., & Kelly, **M.O.** (under review). Cognitive Offloading and Memory: A Review. *Learning and Memory: A Comprehensive Reference*, 3rd Edition (Eds. J. Wixted & L. Mickes). Elsevier.

Risko, E. F., **Kelly, M. O.**, Lu, X., & Pereira, A. (2022). Chapter 5: Varieties of offloading memory: A framework. In *The remaking of memory in the age of social media and the Internet*. Oxford University Press.

#### **PAPERS SUBMITTED/UNDER REVIEW/RESUBMITTED (2):**

**Kelly, M.O., & Mandel, D. R. (2023).** The Effect of Calibration Training on the Calibration of Intelligence Analysts' Judgments. Submitted to *Applied Cognitive Psychology*.

Mandel, D. R., & **Kelly, M. O.** (2024). When Half is At Least 50%: Effect of “Framing” and Probability Level on Frequency Estimates.

#### **PAPERS IN PREP (ALL DATA COLLECTED; 5)**

Unal, B., **Kelly, M. O.**, & Benjamin, A. S. (2024). A photo-impairment-effect on conceptual inference: The disruptive effect of taking photos on learning abstract categories.

**Kelly, M. O.**, Budescu, D. V., Dhami, M., & Mandel, D. R. (2024). The Effects of Source Reliability and Information Credibility on Judgments of Information Quality.

**Kelly, M. O.**, Risko, E. F. *Evidence that individuals modulate study effort consistent with the level of anticipated environmental support.*

**Kelly, M. O.**, Karimjee, B., Pereira, A., Lu, X., Risko, E. F. *Does the reliance on an external memory store influence recognition memory?*

**Kelly, M. O.**, Mohammadi Azad, M. & Risko, E. F. *Offloading and external memory manipulation: The effect of delay.*

#### **CONFERENCE PRESENTATIONS (32):**

**Kelly, M. O.**, Mandel, D. R.\* (2024, March). The effect of calibration training on the calibration of intelligence analysts' judgments. Paper presented as a talk at the 2nd Meeting of the North Atlantic Treaty Organization System Analysis and Studies Panel Research Task Group on Anticipatory Intelligence for Superior Decision-making (SAS-189), Madrid, Spain.

**Kelly, M.O.\***, Risko, E.F., & Benjamin, A. S. (2023, November). *Can individuals benefit from partnering with a metacognitively sophisticated nonhuman agent? A test using recognition memory.* Poster presented at the annual meeting of the Psychonomic Society (Psychonomics). San Francisco, CA.

**Kelly, M. O.\***, Risko, E. F. (2023, August). *Get by with a little help: Partial support in the context of offloading memory.* Invited symposium talk presented at the bi-annual meeting of the Society for Applied Research in Memory and Cognition (SARMAC), Nagoya, Japan.

**Kelly, M. O.\***, Risko, E. F., & Benjamin, A. S. (2023, July). *Can a "bit" of help go a long way? Examining how individuals benefit from the metacognitive information of nonhuman agents using recognition memory.* Talk presented at the annual meeting of the Canadian Society for Brain, Behaviour and Cognitive Science (CSBBCS), Guelph, ON.

**Kelly, M. O.\***, Risko, E. F. (2022, November). *Do individuals modulate study effort in accordance with expected environmental support?* Poster presented at the annual meeting of the Psychonomic Society (Psychonomics). Boston, MA.

**Kelly, M. O.\***, MacLeod, C. M., Risko, E. F. (2022, July). *Prod eff: Partial production modulates the production effect.* Invited symposium talk presented at the annual

meeting of the Canadian Society for Brain, Behaviour and Cognitive Science (CSBBCS), Halifax, NS. Placed 2nd in the Student Hebb Award competition for best talk.

**Kelly, M. O.\***, Risko, E. F. (2022, July). Environmental support. Poster presented at the annual meeting of the Canadian Society for Brain, Behaviour and Cognitive Science (CSBBCS), Halifax, NS. Placed 2nd in the Student Hebb Award competition for best poster.

Risko, E. F.\*, **Kelly, M. O.**, Lu, X., Ensor, T., MacLeod, C. M. M. (2022, July). *Examining the influence of the target production relation on the production effect*. Invited symposium talk presented at the annual meeting of the Canadian Society for Brain, Behaviour and Cognitive Science (CSBBCS), Halifax, NS.

**Kelly, M. O.\***, Risko, E. F. (2021, November). *Effort & strategy in the presence of an external memory store*. Poster presented at the annual meeting of the Psychonomic Society (Psychonomics), online.

**Kelly, M. O.\***, & Risko, E. F. (2021, July). *Effort and strategy in the presence of an external memory store*. Talk presented at the Cognitive Offloading Meeting 2021, online.

Lu, X.\*, **Kelly, M. O.**, & Risko, E. F. (2021, July). *To type or not to type: The cost of offloading memory is unchanged by the act of typing*. Poster presented at the Cognitive Offloading Meeting 2021, online.

Park, J.\*, **Kelly, M. O.**, Hargis, M., & Risko, E. F. (2021, July). *How the availability of an external store affects predicted and actual value-directed recall*. Talk presented at the Cognitive Offloading Meeting 2021, online.

Pereira, A. E.\*, **Kelly, M. O.**, Lu, X., & Risko, E. F. (2021, July). *Influences of perceived reliability and expected access to an external store on vulnerability to external store manipulation*. Talk presented at the Cognitive Offloading Meeting 2021, online.

Park, J.\*, **Kelly, M. O.**, Hargis, M., & Risko, E. F. (2021, July). *The effects of external store availability and value-directed remembering on predicted and actual recall*. Poster presented at The Annual Meeting of the Society for Applied Research in Memory and Cognition (SARMAC), online.

Park, J.\*, **Kelly, M. O.**, & Risko, E. F. (2021, July). *The influence of the ability to rely on an external store on value-directed remembering*. Poster presented at the Annual Meeting of the Cognitive Science Society (CogSci), online.

Pereira, A. E.\*, **Kelly, M. O.**, Lu, X., & Risko, E. F. (2021, July). *The perception of reduced reliability in an external store reduces vulnerability to its manipulation*. Poster presented at the annual meeting of the Cognitive Science Society (CogSci), online.

**Kelly, M. O.\***, Ensor, T., MacLeod, C. M., & Risko, E. F. (2021, July). *Modelling the production effect in recognition memory*. Poster presented at the annual meeting of the Cognitive Science Society (CogSci), online.

**Kelly, M. O.\***, Ensor, T., MacLeod, C. M., & Risko, E. F. (2021, July). *Toward a computational model of the the production effect in recognition memory*. Talk presented at the annual meeting of the Canadian Society for Brain, Behaviour and Cognitive Science (CSBBCS), online.

Lu, X.\*, **Kelly, M. O.**, & Risko, E. F. (2021, July). *Offloading memory does not reduce the benefit of list categorization*. Poster presented at the annual meeting of the Canadian Society for Brain, Behaviour and Cognitive Science (CSBBCS), online.

Park, J.\*, **Kelly, M. O.**, Hargis, M., & Risko, E. F. (2021, July). *Don't take it at face value: The effect of external store availability on predicted and actual value-directed recall*. Poster presented at the annual meeting of the Canadian Society for Brain, Behaviour and Cognitive Science (CSBBCS), online.

Risko, E. F.\*, Lu, X.\*, **Kelly, M. O.\***, & Pereira, A. E\*. (2020, November). *Symposium Introduction: Offloading Overview*. Invited talk presented at the annual meeting of the Psychonomic Society (Psychonomics), online.

Park, J.\*, **Kelly, M. O.**, & Risko, E. F. (2020, October). *The effect of value when offloading memory*. Psychology Discovery Conference, online.

**Kelly, M. O.\***, Lu, X., MacLeod, C., & Risko, E. F. (2020, July). *Reducing retrieval time modulates the production effect*. Poster presented at the annual meeting of the Cognitive Science Society (CogSci), online.

Lu, X.\*, **Kelly, M. O.**, & Risko, E. F. (2020, July). *Cognitive offloading increases false recall*. Poster presented at the annual meeting of the Cognitive Science Society (CogSci), online.

Pereira, A. E.\*, **Kelly, M. O.**, Lu, X., & Risko, E. F. (2020, July). *Reducing the perceived reliability of an external store reduces the susceptibility to external store manipulation*. Poster presented at the annual meeting of the Cognitive Science Society (CogSci), online.

**Kelly, M. O.\***, Lu, X.\*, MacLeod, C. M., & Risko, E. F. (2020, June). *Modulating the production effect with reduced retrieval time*. Invited symposium talk presented at the annual meeting of the Canadian Society for Brain, Behaviour and Cognitive Science (CSBBCS; conference cancelled due to COVID-19).

**Kelly, M. O.\***, & Risko, E. F. (2019, November). *External memory manipulation: The effect of delay*. Poster presented at the annual meeting of the Psychonomic Society (Psychonomics), Montreal, QC.

**Kelly, M. O.\***, & Risko, E. F. (2019, September). *Offloading with technology and external memory manipulation*. Poster presented at the annual BEworks Summit, Toronto, ON, Canada.

**Kelly, M. O.\***, & Risko, E. F. (2019, July). *Offloading memory: Serial position effects*. Poster presented at the annual meeting of the Cognitive Science Society (CogSci), Montreal, QC, Canada.

**Kelly, M. O.\***, & Risko, E. F. (2019, June). *The effects of offloading memory*. Talk presented at the annual meeting of the Canadian Society for Brain, Behaviour and Cognitive Science (CSBBCS), Waterloo, ON, Canada.

**Kelly, M. O.\***, & Risko, E. F. (2019, February). *Offloading memory: Serial position effects*. Poster presented at UWaterloo presents W3, Waterloo, ON, Canada.

## **AWARDS AND HONOURS**

---

- Natural Science Engineering Research Council: Post-Doctoral Fellowship (NSERC – PDF; 2025-2027: \$90,000)
- Natural Science Engineering Research Council: Alexander Graham Bell Canada Graduate Scholarship (NSERC – CGS) – Doctoral (2020-2023: \$105,000)
- University of Waterloo President’s Graduate Award (2020-2023: \$35,000)

- Queen Elizabeth II Graduate Scholarship in Science & Technology (2023: \$15,000)
- University of Waterloo President's Graduate Scholarship (2023: \$5,000)
- Natural Science Engineering Research Council: Canada Graduate Scholarship - Michael Smith Foreign Studies Supplement (2022: \$6,000)
- University of Waterloo: International Experience Award (2022: \$2,500)
- Canadian Society for Brain, Behaviour and Cognitive Science (CSBBCS): 2<sup>nd</sup> place for *Best Talk* at the Annual meeting of the CSBBCS (2022: \$100 and free 1-year membership to the society)
- Canadian Society for Brain, Behaviour and Cognitive Science (CSBBCS): 2<sup>nd</sup> place for *Best Poster* at the Annual meeting of the CSBBCS (2022: \$100 and free 1-year membership to the society)
- Ontario Graduate Scholarship and Queen Elizabeth II Graduate Scholarship in Science & Technology (2020: \$15,000 – *awarded in name, declined to accept NSERC CGS-D*)
- University of Waterloo: Arts Senate Graduate Scholarship (2019: \$1,000)

## TEACHING, MENTORING, AND OTHER RELATED ACTIVITIES

---

### INSTRUCTOR OF RECORD:

- PSYCH\*390 – Natural Science Advanced Research Methods Topics: Research Methods in Learning and Memory (Spring 2023)
- PSYCH\*207 – Cognitive Processes (Winter 2023)

### GUEST LECTURES:

- Interactions in Multiple Regression analysis: PSYCH\*492 – Psychological Measurement (Winter 2023: Laura Bianchi)

### TEACHING ASSISTANTSHIPS:

- PSYCH\*391 – Advanced Statistical Analysis (Winter 2020: Dr. James Beck; Winter 2021: Dr. James Beck; Winter 2022: Dr. James Beck)



- PSYCH\*261 – Physiological Psychology (Fall 2018: Dr. Chris Lee; Fall 2019: Chanel Larche; Spring 2020: Dr. Dan Smilek)
- PSYCH\*390/PSYCH\*398 – Natural Science Advanced Research Methods Topics/Research in Memory (Spring 2019: Dr. Evan Risko)

#### **MENTORING:**

- Matthew Yeung (Honours thesis student; Jan 2024—current)
- Aisling (Ash) Sampson (Honours thesis student; Dec 2021 – Aug. 2022)
- Batul Karimjee (Co-operative Education Research Assistant; Jan. 2020 – Apr. 2020; Research Assistant; May 2020 – Dec 2020)
- Joyce Park\* (Honours thesis student; May 2019 – Dec 2020)
- Rachel Peaker (UCEP student; Oct. 2019 – Jan. 2020)
- Sarah Schiwiola (Co-operative Ed. Research Assistant; Sep. 2019 – Dec. 2019)
- Mithra Mohammadi Azad (NSERC USRA; Jan. 2019 – Apr. 2019)
- Zayn Dhillon (Co-operative Education Research Assistant; May 2019 – Aug. 2019)

\*Won thesis award

#### **INSTITUTIONS AND ORGANIZATIONS**

- Women in Cognitive Science Society – Canada+ (WiCSC+) – Executive Trainee Board member (2022 – current) – a board comprised of trainees in the cognitive sciences with the goal of providing various resources on the many challenges faced by junior researchers
- Cognitive Area Representative – Graduate Association of Students in Psychology (GASP; 2021 – 2022)
- Organizer and student representative for Healthy Labs Initiative – Department-wide initiative at the University of Waterloo featuring experts on the aspects of a healthy functioning lab (e.g., graduate student wellbeing) (Sep 2021—current)

### **LABORATORY-WIDE TUTORIALS DEVELOPED AND LED:**

- Led a 2-part laboratory-wide tutorial on Signal Detection Theory based on Wickens (2005) (February 2022)
- Led a 12-part laboratory-wide tutorial (spanning 4 months) on computational modelling of Memory with MINERVA2 in R/Rstudio
- Led a 10-part laboratory-wide tutorial on using ggplot2 in R/Rstudio

### **OTHER RESEARCH EXPERIENCE (PAID AND VOLUNTEER)**

---

- Student Defense Scientist at Defence Research and Development Canada (DRDC), Federal Government of Canada – Toronto Research Centre via the Federal Student Work Experience Program (FSWEP) - supervised by Dr. David Mandel (Sep 2023 – Mar 2024 inclusive)
- Research Assistant for Dr. Evan Risko, Dr. Colin MacLeod, and Dr. Jonathan Fugelsang – University of Waterloo (Jun. 2017 – Aug. 2018)
- Research Intern for Dr. Lana Trick - University of Guelph (Jan. 2016 – Apr. 2016)
- Research Assistant for Dr. Pat Barclay – University of Guelph (Sep. 2015 – Dec. 2015)

### **WITHIN THE WIDER COMMUNITY**

---

- Volunteer data and research consultant – Child and Youth Planning Table (CYPT) of Waterloo Region (Feb 2021 – Feb 2023)
  - Part of a team that authored a public document informing local social programs on the wellbeing of local children and youth in Waterloo Region – Paid an honourarium for this work in Dec 2021
- Measurement for Change Task Group, formerly the Wellbeing Shared Measurement Database Task group – sponsored by the Child and Youth Planning Table (CYPT) of Waterloo Region (Sep 2021 – Feb 2023)

- Helped develop a shared measurement database and measurement tool for local programs to access and use in order to better track their impact and areas for growth – Paid an honourarium in August 2022
- “Expert” contact for Waterloo-Wellington Science & Engineering fair (April 2020)
- Placed 2nd in a university-wide data analysis competition addressing real world policy issues (February 2020) – “University of Waterloo Datafest”
- Tutor/Mentor – TutorBright, Kitchener (Apr. 2017 – Aug. 2017)
- Tutor/Mentor - Frontier College (now United for Literacy), Guelph (Sep. 2015 – Jan. 2016) – after school program wherein I tutored elementary school children in various subjects, and helped them with their assignments, as well as worked with them on reading comprehension