Carolyn Baer

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EMPLOYMENT

University of British Columbia
2023-   Postdoctoral Fellow

Kwantlen Polytechnic University
2023-   Postdoctoral Fellow

University of California, Berkeley
2021-2023   Social Sciences and Humanities Research Council of Canada
Postdoctoral Fellow

EDUCATION

University of British Columbia
2015-2020   Ph.D., Psychology
Thesis: *Developing a sense of certainty*
Advisor: Darko Odic

University of Waterloo
2014-2015   M.A.Sc., Development and Communication Sciences
Thesis: *Children's selective transmission of general and specific information*
Advisor: Ori Friedman

2010-2014   B.A., Honours Psychology
Honours Thesis: *Children's correction of learned misinformation*
Advisor: Ori Friedman
Dean's Honours List

FUNDING

2023   **Kwantlen Polytechnic University 0.6% Faculty Professional Development Fund**
Proposal: *Development of Global Confidence* (PI on record: Daniel Bernstein)
Total Amount: $3 500 CAD

2023   **Kwantlen Polytechnic University Student Research Innovation Grant** (Student: Liam Ruel)
Proposal: *Do older adults exhibit more metacognitive hindsight bias than younger adults?*
Total Amount: $2 000 CAD

2023   Kwantlen Polytechnic University Student Research Innovation Grant (Student: Arshnoor)
Proposal: *Confidence and Learning*
Total Amount: $5 497 CAD

2023   Kwantlen Polytechnic University Faculty of Arts Excellence and Advancement Funds
Proposal: *Confidence and Learning*
Total Amount: $3 000 CAD

2022-2023   Berkeley Center for New Media Faculty Seed Grant
Proposal: *Truth, lies, and misinformation during cognitive development* (PI on record: Celeste Kidd)
Total Amount: $1 950 USD

2021-2022   Social Sciences and Humanities Research Council of Canada Postdoctoral Fellowship
Proposal: *How children navigate certainty and social goals when reasoning about conflicting information*
Total Amount: $90 000 CAD

2020-2021   University of British Columbia Arts Graduate Student Research Award
Proposal: *Developing a sense of certainty*
Total Amount: $1 000 CAD

2017-2020   Social Sciences and Humanities Research Council of Canada Joseph-Armand Bombardier Canada Graduate Scholarship
Proposal: *Metacognition and social interaction in children*
Total Amount: $116 667 CAD (including COVID-19 extension)

2016-2020   University of British Columbia Four-Year Doctoral Fellowship
Accepted in title only 2017-2020
Total Amount: $72 800 CAD

2015-2016   Elizabeth Young Lacey Scholarship in Psychology
Total Amount: $17 500 CAD

2014   Quinn Research Award, University of British Columbia Psychology
Funds for Summer Internship with Susan Birch
Total Amount: $5 700 CAD

2013   Natural Sciences and Engineering Research Council of Canada Undergraduate Student Research Award
Funds for Summer Internship with Kiley Hamlin
Total Amount: $4 500 CAD

	2012	Natural Sciences and Engineering Research Council of Canada Undergraduate Student Research Award *Funds for Summer Internship with Ori Friedman* Total Amount: $4 500 CAD
AWARDS & HONOURS	2023	Psychonomics Society/Women in Cognitive Science Networking Award
	2022	Cognitive Science Society Glushko Dissertation Award
	2020	Vision Science Society Elsevier/Vision Research International Graduate Student Travel Award
	2019	University of British Columbia Psychology Graduate Student Travel Award
	2019	Swiss Graduate School for Cognition, Learning, and Memory Summer School Tuition and Travel Grant
	2019	Society for Research in Child Development Graduate Student Travel Award
	2018	Society for Philosophy and Psychology Graduate Student Travel Award
	2017	University of British Columbia Graduate Travel Award
	2017	Society for Research in Child Development Graduate Student Travel Award
	2014-2015	University of Waterloo Graduate Scholarship (x2)
	2014	Development 2014 Student Travel Award
	2014	University of Waterloo President's Research Award *For Research Assistantship with Stephanie Denison*
	2012	University of Waterloo President's Research Award *For Research Assistantship with Ori Friedman*
	2010	University of Waterloo President's Scholarship of Distinction

PUBLICATIONS   * = undergraduate or post-baccalaureate advisee

Peer-Reviewed Journal Articles   Dramkin, D., Bonn, C.D., **Baer, C**., & Odic, D. (2022). The malleable role of non-numeric features in visual number perception. *Acta Psychologica, 230*, 103737. doi: 10.1016/j.actpsy.2022.103737

Baer, C. & Kidd, C. (2022). Learning with Certainty in Childhood. *Trends in Cognitive Sciences, 26,* 887-896. doi:10.1016/j.tics.2022.07.010

Baer, C. & Odic, D. (2022). Mini Managers: Children strategically divide cognitive labor among collaborators, but have a self-serving bias. *Child Development, 93,* 437-450. doi:10.1111/cdev.13692

Baer, C., *Malik, P., & Odic, D. (2021). Are children's judgments of another's accuracy linked to their metacognitive confidence judgments? *Metacognition and Learning, 16,* 485-516. doi:10.1007/s11409-021-09263-x

Baer, C. & Odic, D. (2020). Children flexibly compare their perceptual certainty within and across perceptual domains. *Developmental Psychology, 56,* 2095-2101. doi:10.1037/dev0001100

Baer, C. & Odic, D. (2020). The relationship between children's approximate number confidence and formal mathematics. *Journal of Numerical Cognition, 6,* 50-65. doi:10.5964/jnc.v6i1.220

Baer, C. & Odic, D. (2019). Certainty in numerical judgments develops independently of the Approximate Number System. *Cognitive Development, 52,* 100817. doi:10.1016/j.cogdev.2019.100817

Baer, C., *Gill, I.K., & Odic, D. (2018). A domain-general sense of confidence in children. *Open Mind: Discoveries in Cognitive Science, 2,* 208-218. doi:10.1162/opmi_a_00020

Baer, C. & Friedman, O. (2018). Fitting the message to the listener: Children selectively mention general and specific facts. *Child Development, 89,* 461-475. doi:10.1111/cdev.12751

Baer, C. & Friedman, O. (2016). Children's generic interpretation of pretense. *Journal of Experimental Child Psychology, 150,* 99-111. doi:10.1016/j.jecp.2016.05.004

Peer-Reviewed Conference Proceedings

Baer, C., Ghetti, S., & Odic, D. (2021). Perceptual and memory metacognition in children. Proceedings of the 43rd Annual Meeting of the Cognitive Science Society, Vienna, Austria. https://escholarship.org/uc/item/30g4w4sc

Under Review & In Preparation

Yang, H.A., Marti, L., **Baer, C.,** Palmeri, H., Granera, A.J., & Kidd, C. (under review). Emergence of certainty representations for guiding concept learning.

Baer, C. & Odic, D. (in preparation: writing). Measuring Metacognitive Confidence in Young Children.

Baer, C., Engelmann, J., & Kidd, C. (in preparation: writing). Children weight relative confidence of multiple people to better infer objective truth.

Baer, C., Ghetti, S., & Odic, D. (in preparation: writing). Perceptual and memory metacognition.

Baer, C., Langenhoff, A. F., Keşşafoğlu, D., Mohtezebsade, W., Kidd, C., Küntay, A, Köymen, B., Engelmann, J. (in preparation: writing). Does Disagreement Affect Source Memory in English-Speaking and Turkish-Speaking Preschoolers?

West, E., **Baer, C.,** Yu, L., & Odic, D. (in preparation: writing). Verbal disfluencies are a reliable index of certainty in children.

PRESENTATIONS

Invited Talks	2023	Department of Psychology, Algoma University
	2023	Department of Psychological and Brain Sciences, UC Santa Barbara
	2022	Autonomous Agents Lab, Stanford University
	2022	Developmental Area, UC San Diego
	2022	Developmental Area, Stanford University
	2022	Institute for Human Development, UC Berkeley
	2022	BE Works Management Consulting
	2022	Glushko Prize Symposium, Cognitive Science Society
	2022	Cognition and Learning Center, Rutgers University
	2022	Cooperation Lab, Boston College
	2022	Confidence Club, École Normale Supérieure
	2022	Department of Psychology, Huron University College
	2022	Leonard Learning Lab, Yale University
	2022	Language and Cognitive Development Lab, UC Berkeley
	2022	Department of Psychology, UW Madison
	2021	Developing Minds Lab, Boston University
	2020	Social Origins Lab, UC Berkeley
	2020	BE Works Management Consulting
	2019	Markman Lab & Social Learning Lab, Stanford University
	2019	Kidd Lab & Computation and Language Lab, UC Berkeley

Conference Talks

Baer, C., *Arshnoor, & Bernstein, D. (March 2024). Children track their success over multiple trials, but are underconfident. Paper to be presented at the Biennial Conference of the Cognitive Development Society, Pasadena, CA.

Baer, C., Engelmann, J., & Kidd, C. (January 2023). Children leverage

confidence to rationally integrate beliefs. Paper presented at the "Truth, lies, and misinformation during cognitive development" workshop at the Budapest CEU Conference on Cognitive Development, Budapest, Hungary.

Baer, C. & Odic, D. (October 2019). Perceptual certainty is domain-general in childhood. Paper presented at the Biennial Conference of the Cognitive Development Society, Louisville, KY.

Baer, C. & Odic, D. (March 2019). Children's weighing of relative certainty in cooperative tasks. Paper presented at the 2019 Biennial Meeting of the Society for Research in Child Development, Baltimore, MD.

Baer, C. & Odic, D. (February 2019). How certainty influences social cognition. Paper presented at the 2019 Northwest Social Cognitive Development Conference, San Juan Island, WA.

Baer, C. & Odic, D. (July 2018). How do children know what they know? Exploring the nature and uses of confidence representations. Paper presented at the Annual Meeting of the Society for Philosophy and Psychology, Ann Arbor, MI.

Baer, C. & Friedman, O. (April 2014). Generic Basis of Pretend Play. Paper presented at Development 2014: A Canadian Conference on Developmental Psychology, Ottawa, ON.

Posters   **Baer C.,** & Bernstein, D. (2023). Global Estimates of Self-Performance in Childhood. Poster presented at the 2023 Annual Meeting of the Psychonomics Society, San Francisco, CA.

Baer, C., Engelmann, J., & Kidd, C. (2023). Children Leverage Confidence to Rationally Integrate Beliefs. Poster presented at the 45th Annual Meeting of the Cognitive Science Society, Sydney, Australia.

Baer, C. & Odic, D. (2022). Is there a common resource for reasoning about confidence in childhood? Poster presented at the Biennial Conference of the Cognitive Development Society, Madison, WI.

West, E., **<u>Baer, C.,</u>** & Odic, D. (2022). The relationship between children's metacognitive judgments of knowledge and verbal disfluency. Poster presented at the Biennial Conference of the Cognitive Development Society, Madison, WI. *(Presenting author underlined)*

Baer, C., Ghetti, S., & Odic, D. (2021). Perceptual and Memory Metacognition in Children. Poster presented at the 43rd Annual Meeting of the Cognitive Science Society, Vienna, Austria.

Baer, C., Ghetti, S., & Odic, D. (2021). Perceptual and Memory Metacognition in Children. Poster presented at the 2021 Biennial Meeting of the Society for Research in Child Development, Virtual Conference.

Baer, C. & Odic, D. (2020). Domain-general representations of confidence throughout development. Poster presented at the Vision Sciences Society Annual Meeting, Virtual Conference.

Dramkin, D., Bonn, C.D., Baer, C., & Odic, D. (2020) The malleable role of non-numeric features in visual number perception. Poster presented at the Vision Sciences Society Annual Meeting, St. Pete Beach, FL. Cancelled due to COVID-19.

Baer, C. & Odic, D. (2020). Domain-generality of children's certainty reasoning. Poster presented at the Budapest CEU Conference on Cognitive Development, Budapest, Hungary.

Odic, D. & Baer, C. (2019). Domain-general perceptual certainty in early childhood. Poster presented at the Biennial Conference of the Cognitive Development Society, Louisville, KY. *(Co-presenting authors underlined)*

*McWilliams, B., Baer, C., & Odic, D. (2019). The Role of Number Sense Certainty in Formal and Informal Math Abilities. Poster presented at the 2019 Biennial Meeting of the Society for Research in Child Development, Baltimore, MD. *(Co-presenting authors underlined)*

Baer, C. & Odic, D. (2019). Is Batman good at math? The Self-Distancing Effect on the Approximate Number System. Poster presented at the 2019 Biennial Meeting of the Society for Research in Child Development, Baltimore, MD.

Baer, C., *Malik, P., Odic, D. (2017). Individual differences in confidence monitoring correlate with selective social learning. Poster presented at the Biennial Conference of the Cognitive Development Society, Portland, OR.

Odic, D. & Baer, C. (2017). Domain-general individual and developmental differences in confidence acuity. Poster presented at the 17th Annual Conference of the Vision Sciences Society, Orlando, FL.

Baer, C. & Odic, D. (2017). Individual and developmental differences in children's confidence acuity. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Austin, TX.

Baer, C., *Au, N., & Odic, D. (2017). Team Players: Children cooperatively adjust the difficulty of problems to their partner's skill level. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Austin, TX.

Baer, C. & Odic, D. (2016). Measuring individual and developmental differences in children's sense of confidence. Poster presented at the annual meeting of the Cognitive Science Society, Philadelphia, PA.

Baer, C. & Friedman, O. (2015). Children selectively transmit general information to ignorant listeners. Poster presented at the Biennial Meeting of the Cognitive Development Society, Columbus, OH.

Baer, C. & Friedman, O. (2015). Children selectively transmit general information to ignorant listeners. Poster presented at the Graduate Psychology Discovery Conference, Waterloo, ON.

Baer, C. & Friedman, O. (2015). A Developmental Shift in Preschoolers' Interpretation of Pretense. Poster presented at the 2015 Biennial Meeting of the Society for Research in Child Development, Philadelphia, PA.

Baer, C. & Friedman, O. (2013). Generic Interpretation of Pretend-Play in Preschoolers. Poster presented at the 2013 Biennial Meeting of the Society for Research in Child Development, Seattle, WA.

Baer, C., Tam, C., Nancekivell, S.E., & Friedman, O. (2013). Order and Disorder in Children's Ownership Judgments. Poster presented at the 2013 Biennial Meeting of the Society for Research in Child Development, Seattle, WA.

Supervised Presentations

*Tam, A., *White, R., Baer, C., Engelmann, J., & Kidd, C. (2023). Children use confidence as a metric to rationally integrate beliefs. Poster presented at the 14th Annual California Cognitive Science Conference, Berkeley, CA.

*Tommasi, M., Baer, C., & Bernstein, D.M. (2023). Global confidence judgment in childhood. Poster presented at the 24th Annual Northwest Cognition and Memory Conference, Richmond, BC.

*Ruel, L., Baer, C., Ackerman, R., & Bernstein, D.M. (2023). Memory for past confidence in younger and older adults. Poster presented at the 24th Annual Northwest Cognition and Memory Conference, Richmond, BC.

*Dhillon, R.S., *Bains, J.S., *Bajwa, K., Baer, C., & Bernstein, D.M. (2023). A longitudinal investigation of affective theory of mind. Poster presented at the 24th Annual Northwest Cognition and Memory Conference, Richmond, BC.

*Fai, N., Baer, C., & Odic, D. (2020). Measuring the emergence of metacognition in early childhood. Talk presented at the UBC Multidisciplinary Undergraduate Research Conference, Vancouver, BC.

*Sinclair, E., **Baer, C.**, & Odic, D. (2020). Who should we trust: Does subjective certainty influence children's learning? Talk presented at the UBC Multidisciplinary Undergraduate Research Conference, Vancouver, BC.

*Pardiwalla, T., **Baer, C.,** & Odic, D. (2020). Across-domain certainty in children. Talk presented at the UBC Multidisciplinary Undergraduate Research Conference, Vancouver, BC.

*Weigel, N., **Baer, C.,** & Odic, D. (2019). Can pretending to be Batman help children solve math-related problems? The Self-Distancing Effect on the Approximate Number System. Poster presented at the National Collegiate Research Conference 2019 Annual Conference, Cambridge, MA. *****Third place poster presentation**

*Gill, I., **Baer, C.,** & Odic, D. (2018). A domain-general sense of confidence in children. Talk presented at Connecting Minds 2018, Richmond, BC.

*Gertz, N., **Baer, C.,** & Odic, D. (2018). Children can reason about skill and difficulty in cooperative settings. Poster presented at the UBC Psychology Undergraduate Research Conference, Vancouver, BC.

*Poon, S., **Baer, C.,** & Odic, D. (2018). Children's confidence moderates number acuity and formal math abilities. Talk presented at the UBC Psychology Undergraduate Research Conference, Vancouver, BC.

*Weigel, N., **Baer, C.,** & Odic, D. (2018). Children, skill level, and teamwork: Can children match skill and ability objectively with a good/bad versus neutral skill level prompt. Talk presented at the UBC Psychology Undergraduate Research Conference, Vancouver, BC. *****Winner of 1 (of 2) Best Talk Awards.**

*Ashour, B., **Baer, C.,** & Odic, D. (2017). Children match skill to problem difficulty in a cooperative context. Poster presented at the UBC Psychology Undergraduate Research Conference, Vancouver, BC. *****Honourable mention for best poster presentation.**

*Ashour, B., **Baer, C.,** & Odic, D. (2017). Children match skill to problem difficulty in a cooperative context. Poster presented at the UBC Multidisciplinary Undergraduate Research Conference, Vancouver, BC.

*Au, N., **Baer, C.,** & Odic, D. (2017). Team Players: Children cooperatively adjust the difficulty of problems to their partner's skill level. Poster presented at the National Collegiate Research Conference 2017 Annual Conference, Cambridge, MA.

OTHER	2024	CIRTL Teaching Practicum
TRAINING	2023	Instructional Skills Workshop University of British Columbia
	2019	Summer School 2019: Dealing with Uncertainty Swiss Graduate School for Cognition, Learning, and Memory
	2013	Student Leadership Certificate Program University of Waterloo

TEACHING

University of California, Berkeley, Department of Psychology

2021, 2022	Guest Lecturer (Metacognition Lecture) PSYCH 140: Developmental Psychology
2021	Guest Lecturer (Metacognition Lecture) PSYCH 147: Methods in Cognitive Development

University of British Columbia, Department of Psychology

2024	Guest Lecturer (Cooperation Lecture and Social Development Lecture) PSYC 102: introduction to Psychology
2023	Guest Lecturer (Cognitive Development Lecture) PSYC 301: Infancy
2020	Teaching Fellow PSYC 217: Research Methods (2 sections) Rating: **4.79**/5.00 and **4.85**/5.00
2020	Teaching Assistant PSYC 417A: Psychology of Teaching and Learning Rating: **4.50**/5.00
2018	Guest Lecturer (Gender Development Lecture) PSYC 315: Childhood and Adolescence
2018	Guest Lecturer (Social Development Lecture) PSYC 102: Introduction to Psychology
2015	Teaching Assistant PSYC 319: Applied Developmental Psychology Rating: **4.0**/5.0

University of Waterloo, Department of Psychology

2014-2015	Teaching Assistant PSYCH 211: Developmental Psychology (3 terms)

SUPERVISION   **Visiting Scholars**
Winuss Mohtezebsade (2022, UCB)

Honours/Directed Studies Students
Liam Ruel (2023-Present, KPU)
Manhoor Faisal (2022, UBC)
Nicole Gertz (2017-2018, UBC)

Undergraduate Research Assistants
Katie Schmidt (2024-Present, KPU)
Aidan Sammel (2024-Present, KPU)
Seerat Kaur (2023, KPU)
Liam Ruel (2023, KPU)
Marco Tommasi (2023, KPU)
Jasmeen Suri (2023, KPU)
Arshnoor (2023-Present, KPU)
Alex Tam (2022-2023, UCB)
Remy White (2022-2023, UCB)
Sydney Tran (2022-2023, UCB)
Lynn Nguyen (2022-2023, UCB)
Sophia Doerschlag (2022-2023, UCB)
AJ Granera (2021-2023, UCB)
Hope Hawkins (2022, UCB)
Katie Klender (2021-2022, UCB)
Aimee Lutrin (2020-2021, UBC)
Isabella Schoettler (2020-2021, UBC)
Jordan Hassett (2019-2020, UBC)
Tanya Pardiwalla (2019-2020, UBC)
Beatriz Araujo (2019-2020, UBC)
Eliscia Sinclair (2019-2020, UBC)
Nick Fai (2019-2020, UBC)
Leona Cheng (2018-2020, UBC)
Samantha Kwan (2018-2019, UBC)
Katrina Zelko (2018-2019, UBC)
Nicaela Weigel (2017-2019, UBC)
Sally Poon (2017-2019, UBC)
Deveena Basi (2017-2018, UBC)
Puja Malik (2016-2018, UBC)
Bana Ashour (2016-2017, UBC)
Inderpreet Gill (2016-2017, UBC)
Chantane Yeung (2016-2017, UBC)

Natasha Au (2015-2016, UBC)
Stephanie Lee (2015-2016, UBC)

Summer Interns
Sydney Tran (2022, UCB)
Charlotte Aitken (2019, UBC)
Brionne McWilliams (2018, UBC)
Annie Shiau (2018, UBC)
Emilie Kneifel (2017, UBC)
Harris Wong (2017, UBC)
Eunice Ip (2016, UBC)
Inderpreet Gill (2016, UBC)

SERVICE

Peer Review
Grants: NSF Review Panel (2023), NSF Ad Hoc Reviewer (2023)

Journals: Journal of Experimental Child Psychology, Cognitive Development, Cognition, Visual Cognition, Metacognition and Learning, Behavioral and Brain Sciences, Scientific Reports, International Journal of Social Robotics, British Journal of Developmental Psychology, Journal of Vision, Developmental Psychology, PLOS One, Child Development, Child Development Perspectives

Conferences: Cognitive Science Society

Service to the Field
2021-2023 Cognitive Science Society Mentorship Program Mentor
2019   Northwest Social Cognitive Development Conference Grad School Panelist

Departmental Service
2022   Neuroscience Undergraduate Research Conference Judge
2020-2021 Developmental Writing Group Founder and Coordinator
2020   Honours Program Grad Student Panelist
2020   Imagine Day Reddit AMA (Ask Me Anything) Panelist
2020   Graduate Academic Assistant for Teaching Assistant Handbook
2015-2020 Early Development Research Group Community Recruitment Liaison
2019   Psychology Undergraduate Research Conference Judge
2018-2019 Colloquium Committee
2018   Psychology Undergraduate Research Conference Judge
2018   Psychology Student Association Grad School / Research Series Graduate Student Mentor
2015-2018 Developmental Area Representative, Graduate Student Council

2017   Psychology Student Association Grad School / Research Series
              Graduate Student Mentor
2016-2017 Developmental Area Meeting Coordinator
2016-2017 Social Committee, Graduate Student Council

Community of Practice

2023-2024 Qualitative Research and Community-Based Research Community
              of Practice

Public Outreach
2021-Pres. Scientist, Skype a Scientist
2021   Guest Blog Post: "Learning with Confidence", Let's Talk: Youth
              Psychology Blog, McGill University Summer Institute in School
              Psychology