

MAIREAD SHAW

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EDUCATION

Ph.D. in Experimental Psychology

expected August 2025

Area: Quantitative Psychology & Modelling

Dissertation Title: Mapping the Multilevel Modelling Multiverse

McGill University, Montreal, QC

Bachelor of Science in Psychology, with distinction

May 2019

Thesis Title: Hunger and Health Outcomes in Canadian Adolescents

McGill University, Montreal, QC

SCHOLARLY WORKS

Peer Reviewed Articles

Shaw, M., Bergé, C., Pruss, A., & Flake, J.K. (registered report, revise and resubmit). Mapping the Multilevel Modelling Multiverse. *Advances in Methods and Practices in Psychological Science*.

Shaw, M. & Rights, J.D. (under review). Confidence Intervals for R-Squared Effect Sizes in Multilevel Models. *Behavior Research Methods*.

Oshiro, B., McAuliffe, W. H. B., Luong, R., Santos, A. C., Findor, A., ... **Shaw, M.**, ... Flake, J. K. (2024). Structural Validity Evidence for the Oxford Utilitarianism Scale Across 15 Languages. *Psychological Test Adaptation and Development*, 5, 175–191.
<https://doi.org/10.1027/2698-1866/a000061>

Shaw, M. & Flake, J.K. (2023). Digital Module 34: Introduction to Multilevel Measurement Modeling. *Educational Measurement: Issues and Practice*, 42(4), 82-82.
[doi:https://doi.org/10.1111/emip.12585](https://doi.org/10.1111/emip.12585)

Shaw, M., Rights, J.D., Sterba, S.K., & Flake, J.K. (2022). r2mlm: An R package for computing effect sizes in multilevel models. *Behavior Research Methods*.
<https://doi.org/10.3758/s13428-022-01841-4>

Sun, S., **Shaw, M.**, Moodie, E., Ruths, D. (2022). The epidemiological impact of the Canadian COVID Alert App. *Canadian Journal of Public Health*, 113, 519-527.
<https://doi.org/10.17269/s41997-022-00632-w>

Flake, J. K., Luong, R., & **Shaw, M.** (2022). [Addressing a crisis of generalizability with large-scale construct validation](#). *Behavioral and Brain Sciences*, 45, e14.
<https://doi.org/10.1017/S0140525X21000376>

Shaw, M., Cloos, L.J.R., Luong, R., Elbaz, S., & Flake, J.K. (2020). [Measurement practices in large-scale replications: Insights from Many Labs 2](https://doi.org/10.1037/cap0000220). *Canadian Psychology/Psychologie canadienne*, 61(4), 289-298. <http://dx.doi.org/10.1037/cap0000220>

Open-Source Materials

Flake, J.K. & **Shaw, M.** (2022). *Introduction to Multilevel Modelling*. www.learn-mlms.com

Shaw, M., Rights, J.D., Sterba, S.K., & Flake, J.K. (2020). R2mlm: R-Squared Measures for Multilevel Models. R package version 0.3.5. <https://CRAN.R-project.org/package=r2mlm>

Workshops

Shaw, M., Rights, J.D., & Flake, J.K. (2024, June). *Multilevel R-squared Effect Size Measures and Bootstrapped Confidence Intervals* [Conference workshop]. Modern Modelling Methods Conference, Storrs, CT, United States of America.

Shaw, M. (2024, January). *Introduction to R for Psychological Research* [Workshop]. McGill Undergraduate Honours Seminar, Montreal, QC, Canada.

Shaw, M. (2023, March). *Effect Sizes in Multilevel Models* [Workshop]. Quantitative Psychology Methodologies Workshop, Montreal, QC, Canada.

Shaw, M., & Flake, J.K. (2022, June). *Understanding, calculating, and interpreting R-squared in multilevel models* [Conference workshop]. Canadian Psychological Association Conference, Calgary, AB, Canada. **Winner of best student presentation.**

Shaw, M. (2022, March). *Understanding, calculating, and interpreting R-squared in multilevel models* [Workshop]. McGill University Daily Diary Research Methods Group, Montreal, QC, Canada.

Poster Presentations

Shaw, M., & Flake, J.K. (2024, October). *Mapping the Garden of Forking Paths in Multilevel Models* [Poster session]. Society of Multivariate Experimental Psychology Conference, Ithaca, New York, United States of America.

Shaw, M., & Flake, J.K. (2022, July). *Understanding, calculating, and interpreting R-squared effect size measures in multilevel models* [Poster session]. International Meeting of the Psychometric Society, Bologna, Italy.

Shaw, M., & Elgar, F.J. (2019, April). *Is hunger a hidden determinant of adolescent health? Evidence from the Canadian Health Behaviour in School-aged Children Study* [Poster session]. McGill University Psychology Undergraduate Research Day, Montreal, QC, Canada.

Monson, E., Morvannou, A., Arsenault, N., **Shaw, M.**, & Kairouz, S. (2019, May). *Are General and Activity-Specific Problem Gambling Severity Index (PGSI) Scores Consistent?* [Poster session]. Canadian Psychological Association Conference, Halifax, NS, Canada.

RESEARCH SUPPORT AND AWARDS

SSHRC Canada Graduate Scholarship – Doctoral (\$105,000)	2022-2025
Fonds de Recherche du Québec – Nature et technologies B1X (\$35,000)	2020-2022
Travel Award, Society for Multivariate Experimental Psychology (\$2,000)	2024
Best Student Presentation, Canadian Psychological Association Conference	2022
Graduate Research Enhancement and Travel Award (\$750)	2022
Association for Psychological Science Small Grant for Teaching (co-lead; \$4,917.20)	2021
Trottier Fellowship (\$5,000)	2020-2021
Canadian Psychological Association Best Article Award (\$1,000)	2021
Psychology Undergraduate Research Award (\$7,000)	2019
Tomlinson Engagement Awardee for Mentoring (\$300)	2018
Sceptre Investment Counsel Limited Scholarship (\$2,000)	2016-2017
Dean's Honour List	2014-2016

TEACHING AND MENTORSHIP

Textbook

Flake, J.K. & **Shaw, M.** *Introduction to Multilevel Modelling*. Chapman & Hall/CRC, forthcoming.

Co-instructor

Multilevel Modelling	Winter 2021
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Graduate Teaching Assistant

Correlational Techniques	Fall 2024
Statistics for Experimental Design	Winter 2024
Introduction to Statistics	Winter 2022, Fall 2023
Multilevel Modelling	Winter 2023

Workshops

Introduction to Programming in R	Winter 2024
Understanding, Calculating, and Interpreting R-squared in Multilevel Models	Summer 2022

Tutorial Development

Introductory Guide to Bash Supervisor: Dr. Joseph Vybihal	Summer 2017
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Abnormal Psychology Summary Project Fall 2016
 Supervisor: Amanda Ravary (teaching assistant)

Undergraduate Teaching Assistant

Cognitive Development, McGill University Fall 2018
 Supervisor: Dr. Kristine Onishi

Mentorship

Students for whom I was the primary mentor for their work on a project.

Graduate Fall 2023 – Summer 2024
 Amanda Pruss

Undergraduate Summer 2024 – Present
 Elizabeth Savchenko
 Célia Bergé Fall 2023 – Summer 2024
 Sasha Elbaz Summer 2019 – Winter 2020

SERVICE AND PROFESSIONAL AFFILIATIONS

Reviewing

Advances in Methods and Practices in Psychological Science
 Auditory Perception
 Motivation Science

Member

Canadian Psychological Association Spring 2022 – Present
 Psychological Science Accelerator Fall 2020 – Present
 Graduate Association for Students in Psychology Fall 2020 – Fall 2022

EMPLOYMENT

Data Science Intern Summer 2024 – Present

Intact Financial Corporation, Montreal, QC

- Conducted psychometric analyses of industry customer satisfaction measures as part of Behavioural Economics Team.

Statistical Consultant Summer 2021

Health Canada, Ottawa, ON

- Reviewed COVID exposure notification apps in other countries, compared efficacy to COVID Alert in Canada.

Analytics Coach

Fall 2021 – Spring 2023

McGill University Martlets Hockey, Montreal, QC

- Tracked and analyzed player data and video to inform strategy during games and practices.

RESEARCH POSITIONS

Research Intern

Summer 2021 – Winter 2022

University of British Columbia, Vancouver, BC

Supervisor: Dr. Jason Rights

Research Assistant

Summer 2019 – Fall 2020

McGill University, Montreal, QC

Supervisor: Dr. Jessica Flake

Research Assistant

Fall 2018 – Fall 2019

McGill University Institute for Health and Social Policy, Montreal, QC

Supervisor: Dr. Frank Elgar

Research Assistant

Summer 2018 – Summer 2020

Université de Sherbrooke, Longueuil, QC

Supervisor: Dr. Eva Monson

Volunteer

Fall 2018 – Winter 2019

Stanford University SPARQ Lab, Stanford, CA, USA

Supervisor: Catherine Thomas (PhD Candidate)

Volunteer

Summer 2018

McGill Infant Development Cluster, Montreal, QC

Supervisor: Dr. Kristine Onishi

CERTIFICATIONS AND SKILLS

Programming: R, Python, Git, SQL, Unix, Bash, HTML**Computing:** Compute Canada, AWS, Travis CI**Software:** RStudio, SPSS, JASP, LaTeX, Visual Studio Code**Languages:** English (native), French (proficient)**Additional Certifications:** YMCA Personal Trainer, CPR-C**FORMAL METHODOLOGICAL TRAINING AND SKILLS**

(a) indicates undergraduate studies, (b) graduate studies

- Calculus I and II (a)
- Computational Psychology (a)
- Computer Science: Algorithms, Runtime, Data Structures (a)
- Discrete Structures (a)
- Introductory Statistics (a)
- Foundational Programming (a)
- Functional Programming (a)
- Linear Algebra and Geometry (a)
- Multilevel Modelling (a)
- Research Methods in Social Psychology (a)
- Software Systems (a)
- Statistics for Experimental Design (a)
- Analysis of Variance (a, b)
- Multivariate Statistics (a, b)
- Regression (a, b)
- Data Science (b)
- Structural Equation Modelling (b)
- Measurement Theory (b)
- Item Response Theory (b)
- Machine Learning in R (b)
- Machine Learning in Python (b)
- Statistical Computing (b)