

# Sean Devine

PHD STUDENT

McGill University, 2001 McGill College, H3A 1G1, QC, Canada

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## Summary

- PhD Student at McGill University
- Research interests: Cognitive effort, real-world decision-making, computational modelling
- Other interests: Meta-science, deep learning

## Education

### McGill University

DOCTOR OF PHILOSOPHY IN EXPERIMENTAL PSYCHOLOGY

Montreal, Canada

2020-Present

### Concordia University

MASTER OF EXPERIMENTAL PSYCHOLOGY

Montreal, Canada

2020

### Concordia University

BACHELOR OF PSYCHOLOGY

Montreal, Canada

2018

## Awards and Grants

**Total value:** \$207 050

### Student Ambassador Award

IN RECOGNITION OF: FUNDING FOR COMMUNITY OUTREACH PROJECT TO PROMOTE SCIENCE AMONG UNDERREPRESENTED GROUPS.

NSERC

2021

- Value: \$1 000

### Postgraduate Scholarship-Doctoral

IN RECOGNITION OF: DOCTORAL STUDENTS' ACADEMIC SUCCESS AND RESEARCH POTENTIAL.

NSERC

2021

- Value: \$63 000

### Graduate Excellence Award

IN RECOGNITION OF: ACADEMIC EXCELLENCE AT THE GRADUATE LEVEL.

McGill University

2020

- Value: \$2 550

### Bourses de Doctorat en Recherche

IN RECOGNITION OF: DOCTORAL STUDENTS' ACADEMIC SUCCESS AND RESEARCH POTENTIAL.

FRQNT

2020

- Value: \$84 000

### Canada Graduate Scholarship-Master's Program

IN RECOGNITION OF: NEW MASTER'S STUDENTS' ACADEMIC SUCCESS AND RESEARCH POTENTIAL.

SSHRC

2019

- Value: \$17 500

### Bourses de Maîtrise en Recherche

IN RECOGNITION OF: NEW MASTERS' STUDENTS' ACADEMIC SUCCESS AND RESEARCH POTENTIAL.

FRQNT

2019

- Value: \$17 500 [declined]

### Graduate Special Entrance Award

IN RECOGNITION OF: INCOMING MASTERS' STUDENTS ENTERING THE PROGRAM WITH FEDERAL OR PROVINCIAL FUNDING.

Concordia University

2019

- Value: \$6 000

### Undergraduate Research Award

IN RECOGNITION OF: STUDENTS' ACADEMIC SUCCESS AND RESEARCH POTENTIAL.

NSERC

2018

- Value: \$7 125 (+ 2000 FRQNT supplement)

### Undergraduate Research Award

IN RECOGNITION OF: STUDENTS' ACADEMIC SUCCESS AND RESEARCH POTENTIAL.

Concordia University

2017

- Value: \$5 625

**Dr. Alex Vincent Scholarship in Psychology**

IN RECOGNITION OF: PSYCHOLOGY STUDENTS' ACADEMIC EXCELLENCE AND COMMITMENT TO THE FIELD.

• Value: \$750

## Articles

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### UNDER REVIEW

**Devine, S.**, Vassena, E., & Otto, A. R. (2022). More than a Feeling: Physiological Measures of Affect Index the Integration of Effort Costs and Rewards During Effortful Decision-Making. *Psychological Science*. <https://doi.org/10.31234/osf.io/nmwyx>

**Devine, S.**, Otto, A. R., Uanhoro, J. O., & Flake, J. K (under review). A Tutorial for Quantifying Within- and Between-Participant Variance in Multilevel Logistic Models. *Advances in Methods and Practices in Psychological Science*. <https://doi.org/10.31234/osf.io/v68wb>

### 2022

Otto A.R., **Devine, S.**, Bornstein, A.M., & Louie, K. (2022). Context-dependent choice and evaluation in real-world consumer behavior. *Scientific Reports*, 12, 17744.

**Devine, S.**, Neumann, C., Levari, D., Wilson, R., Eppinger, B. (2022). Human Ageing is Associated with More Rigid Concept Spaces. *Psychonomic Bulletin, & Review*. <https://doi.org/10.3758/s13423-022-02197-8>.

**Devine, S.**, Germain, N., Ehrlich, S., & Eppinger, B. (2022). Changes in the Prevalence of Thin Bodies Bias Young Women's Judgments About Body Size. *Psychological Science*, 33(8), 1212-1225. <https://doi.org/10.1177/09567976221082941>

**Devine, S.**, & Otto, A. R. (2022). Information about task progress modulates cognitive demand avoidance. *Cognition*, 225, 105107. <https://doi.org/10.1016/j.cognition.2022.105107>

### 2021

**Devine, S.**, Neumann, C., Otto, A. R., Bolenz, F., Reiter, A., Eppinger, B. (2021). Lifespan Age Differences in the Effects of the Opportunity Cost of Time on Cognitive Control. *Cognition*, 216, 104863. <https://doi.org/10.1016/j.cognition.2021.104863>.

Ruel, A., **Devine, S.**, & Eppinger, B. (2021). Resource-rational approach to meta-control problems across the lifespan. *Wiley Interdisciplinary Reviews: Cognitive Science*, 12(5), e1556. <https://doi.org/10.1002/wcs.1556>

## Conference Presentations

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### CONFERENCE PROCEEDINGS AND PUBLISHED ABSTRACTS

**Sean Devine** & A. Ross Otto. Making Progress on the Effort Paradox: Information about task progress modulates cognitive demand avoidance. (2021). In *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society*.

**Sean Devine**, Cassandra Neumann, David E. Levari, Robert Wilson, & Ben Eppinger. (2020). Prevalence-induced concept change in older adults. In *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society*. Montreal, CA. [Contributed Talk].

**Sean Devine**, Cassandra Neumann, David E. Levari, Robert Wilson, & Ben Eppinger. (2020). Prevalence-induced concept change in older adults. Accepted at *Cognitive Ageing 2020*, Atlanta, Georgia, USA.

**Sean Devine**, Florian Bolenz, Joni Shuchat, Ross Otto, & Andrea Reiter. Ageing-related changes in the effects of opportunity costs on cognitive effort (2019). In *The Multi-disciplinary Conference on Reinforcement Learning and Decision Making 2019*. Montreal, QC, Canada.

Ben Eppinger, **Sean Devine**, Florian Bolenz, Joni Shuchat, Ross Otto, & Andrea Reiter. Ageing-related changes in the effects of opportunity costs on cognitive effort. Accepted at *FENS2018*, Berlin, Germany, July 2018.

## POSTER PRESENTATIONS

**Sean Devine**, Eliana Vasenna, Emma Kiedyk, A. Ross Otto. Physiological Measures of Affective Valence and Arousal Index Effort Costs During Decision-Making. Presented at *The Multi-disciplinary Conference on Reinforcement Learning and Decision Making 2022*. Providence, RI, USA, 2022.

Alexa Nordine, **Sean Devine**, Emma Kiedyk, A. Ross Otto. Physiological Measurements of Emotion in Risky Decision-Making: Examining EMG and SCR Responses to Choice Outcome. Presented at *CPA's 83rd Annual National Convention*. Calgary, AB, Canada, 2022.

A. Ross Otto, **Sean Devine**, Aaron M. Bornstein, & Kenway Louie. Context-dependent choice and evaluation in real-world consumer behavior. Presented at the *Society for Neuroeconomics Annual Meeting 2021*. Online, 2021.

**Sean Devine** & A. Ross Otto. Making Progress on the Effort Paradox: Information about task progress modulates cognitive demand avoidance. Presented at *CogSci2021*, Montreal, Canada, 2021.

**Sean Devine**, Nathalie Germaine, Stefan Erhlich, & Ben Eppinger. Changes in The Prevalence Of Thin Bodies Biases Young Women's Judgements about Body Size. Presented at *Canadian Society for Brain, Behaviour and Cognitive Science: Annual Meeting 2021*, Montreal, Canada, 2021.

**Sean Devine** & A. Ross Otto. Making Progress on the Effort Paradox: Information about task progress modulates cognitive demand avoidance. Presented at *Canadian Society for Brain, Behaviour and Cognitive Science: Annual Meeting 2021*, Montreal, Canada, 2021.

**Sean Devine**, Cassandra Neumann, David E. Levari, Robert Wilson, & Ben Eppinger. Prevalence-induced concept change in older adults. Accepted at *Cognitive Ageing 2020*, Atlanta, Georgia, USA, 2020.

**Sean Devine**, Cassandra Neumann, David E. Levari, Robert Wilson, & Ben Eppinger. Prevalence-induced Concept Change in Older Adults. Presented at the *Annual CRDH Conference 2020*, Montreal, Canada, January, 2020.

**Sean Devine**, Florian Bolenz, Joni Shuchat, Ross Otto, & Andrea Reiter. Ageing-related changes in the effects of opportunity costs on cognitive effort. Presented at *RLDM2019*, Montreal, Canada, July 2019.

**Sean Devine**, Florian Bolenz, Joni Shuchat, Ross Otto, & Andrea Reiter. Ageing-related changes in the effects of opportunity costs on cognitive effort. Presented at the *Annual CRDH conference 2020*, Montreal, Canada, February 2019. Winner of the best undergraduate poster presentation award (value: \$100).

**Sean Devine**, Florian Bolenz, Joni Shuchat, Ross Otto, & Andrea Reiter. Ageing-related changes in the effects of opportunity costs on cognitive effort Presented at the *6th FLUX Conference*, Berlin, Germany, August 2018.

Ben Eppinger, **Sean Devine**, Florian Bolenz, Joni Shuchat, Ross Otto, & Andrea Reiter. Ageing-related changes in the effects of opportunity costs on cognitive effort. Presented at the *11th FENS (Forum of Neuroscience)*, Berlin, Germany, August 2018.

## CONFERENCE TALKS

**Sean Devine**, A. Ross Otto, Aaron M. Bornstein, & Kenway Louie. Context-dependent choice and evaluation in real-world consumer behavior. Talk given at *Math Psych 2021*, online. July 2021.

**Sean Devine**, Cassandra Neumann, David E. Levari, Robert Wilson, & Ben Eppinger. Prevalence-induced concept change in older adults. Speech given at *CogSci2020*, Toronto, Canada, July 2020. [Online due to COVID].

**Sean Devine**, Cassandra Neumann, & Alexa Ruel. Life of the mind: Judgment and decision making in human ageing. Speech given at *First Annual CRDH Webinar Series*, Montreal, Canada, April 2020.

## Research Experience

### Otto Lab

#### PHD STUDENT

- Conceived of, designed multiple experiments and real-world data analysis projects.
- Assisted other lab members in the design of their studies.

McGill University

2020

## Lifespan Decision-Making Lab

MASTER'S STUDENT

- Conceived of, executed, and analyzed data for a Master's research project and two subsequent follow-up projects.
- Provided technical and statistical assistance to other graduate students and lab members in R, Python, and MATLAB.

Concordia University

2019-2020

## Lifespan Decision-Making Lab

RESEARCH COORDINATOR

- Coordinated four ongoing research projects related to decision-making across the lifespan.
- Compiled and submitted a manuscript to a peer-reviewed journal and presented results at international conferences.

Concordia University

2018-2019

# Led Workshops

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## Introduction to Bayesian Statistics

CONCORDIA

March 2022

## Maximum Likelihood Estimation in R

CONCORDIA AND MCGILL

October 2021

## Multilevel Modeling: Basic and Advanced Topics

CONCORDIA, MCGILL, AND TU DRESDEN

June-July 2021

## Programming Experiments Online Using jsPsych

CONCORDIA UNIVERSITY & TU DRESDEN, [ONLINE]

April 2020

## Python for Psychologists

CONCORDIA UNIVERSITY, [ONLINE]

April 2020

## Getting Involved in Research for Psychology

CONCORDIA UNIVERSITY, MONTREAL, CANADA

February 2020

## Designing Psychological Experiments Using PsychoPy

CONCORDIA UNIVERSITY, MONTREAL CANADA

October 2019

# Leadership

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## Journal of Trial and Error

EDITOR OF PSYCHOLOGY

2019-Present

- Edit for an international journal that aims to close the gap between what is research and what is published by highlighting important scientific failures.
- Write and contribute to editorials on the role of failure in psychological science.

## MAPS Committee at Concordia

SENIOR OFFICER

2019-2020

- Senior organizer for a Concordia student committee that transmits knowledge from graduate to undergraduate students.
- Presented numerous workshops (see 'Workshops')

## Concordia Journal of Accessible Psychology

EDITOR

2019-2020

- Review and edit submissions to a student-run journal that aims to promote easily accessible psychological research from Concordia University to the public.
- Promote the journal internally within Concordia University

## Science of Learning Symposium, Berlin, Germany

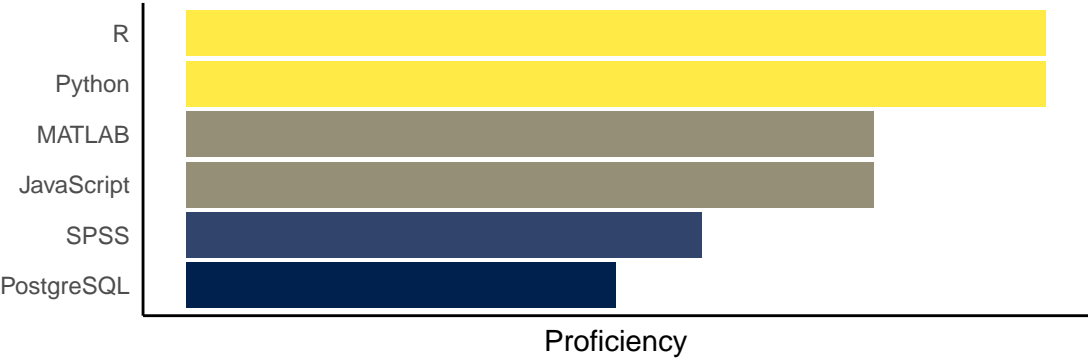
ASSISTANT-ORGANIZER

2018

- Assisted in planning and organization of an international symposium on recent neuroscientific, developmental, and social advancements in learning science.
- Helped compile a post-symposium synopsis.

## Other Professional Skills

### PROGRAMMING LANGUAGES



## Other Work and Extracurricular Experience

### TA POSITIONS

<b>Introduction to Statistics</b>	
McGill University	2021
<b>Introduction to Statistics</b>	
McGill University	2020
<b>Statistical Analysis I</b>	
Concordia University	2020
EDITORIAL ACTIVITIES — REVIEWER	
<b>Cognition</b>	2022
<b>Royal Society for Open Science</b>	2022
<b>Advances in Cognitive Science</b>	2022
<b>Cognitive, Affective, &amp; Behavioural Neuroscience</b>	2020
ADDITIONAL TRAINING	
<b>Deep Learning Summer School</b>	2021
Neuromatch Academy	