

Delbert (Del) Coburn

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Technical & Research Skills: Interdisciplinary Theory · Python · Multi-agent simulation design · Prompt/agent design · Qualitative research · Qualitative analysis · Quantitative methods · LaTeX · Git/GitHub · Canva/Beamer · Facilitation

Professional Summary

Graduate student and emerging sociologist specializing in interdisciplinary complex systems design at the intersection of sociological theory, political sociology, and AI & society. Graduate Research Fellow with the UTSC Policy Horizons Research Team and Junior Fellow at Massey College, with expertise in multi-agent simulation design, computational social science, and socio-political behavior modeling. Research focuses on AI ethics, public good applications of LLMs, and integration of computational methods with classical sociological theory. Demonstrated excellence in pedagogical innovation through LLM-based educational tools and curriculum development bridging technical implementation with theoretical foundations. Multiple publications in progress spanning research methods, quantitative political science, and AI system architecture. Experienced facilitator and project lead with a decade of frontline service and governance experience; strong record of non-profit leadership, collaborative research, and interdisciplinary theory construction.

Education

MA, Sociology

2025–2026

Toronto, ON

University of Toronto

Sociology of Science and Technology

Political Sociology

Faculty Collaborators: Daniel Silver, Ethan Fosse

Major Research Paper: "A Sociology of Being-Itself: Sociogenesis, Cybernetics, and the Emergence of the Kosmos" (In Progress)

2021–2025

BA (Honours), Sociology

Calgary, AB

Mount Royal University

Thesis: "Epigenesis & Antifinity: A Method of Analysis and the Ethic of Inquiry"

Supervisor: Professor Brant Downey

Community Peace Officer II

2014

Alberta Solicitor General

Emergency Medical Responder (Honours)

2012

Southern Alberta Institute of Technology

Awards & Scholarships

McCall MacBain Regional Scholarship: For graduate studies beginning Fall 2025

Dean's Honour Roll: Mount Royal University, Winter 2025

President's Honour Roll: Mount Royal University, 2024

President's Honour Roll: Mount Royal University, 2023

Research Experience

Collaborative Researcher

2025–Present

Multi-Agent Social Simulation with Professor Daniel Silver

- Designed multi-agent simulations across multiple domains:
 - Medical differential diagnosis experiments and simulated consultation panels
 - Political cleavages in municipal politics
 - Classical sociological and economic theory
- Led tutorial development (transcript close-reading; prompt-engineering) aligning technical steps with sociological theory.

Graduate Research Fellow

2025–Present

UTSC Policy Horizons Research Team

- Designed novel multi-objective machine learning framework for American and Canadian election forecasting.
- Contributed to quantitative research frameworks integrating modular system architectures (Ports & Adapters pattern).
- Developed LLM-based pedagogical tools and assistants for integration into complex educational systems.
- Applied multi-agent frameworks to model socio-political behavior and collective decision-making processes.
- Engaged in interdisciplinary theory construction bridging computational methods, sociological theory, and political science.

Independent Researcher

2023–Present

Antifinity & Quantum Surplus Emergence

- Developed theoretical and computational frameworks at the intersection of sociology, philosophy, and simulation; produced analytic write-ups and code artifacts.

Independent Researcher

2023–Present

Émile (Emergent Interactive Learner) Framework

- Developed multi-agent orchestration platform to run local LLMs and execute dynamic agent generation informed by contextual factors.

- Developed open-source applications to democratize access and use of LLM technology.
- Developing novel approach to artificial intelligence from first principles rooted in sociological theory and phenomenology.

Pedagogy & Curriculum Development

Curriculum & Tutorial Design

SOCB42: Theory I: Discovering the Social

2025–Present

University of Toronto (UTSC)

- Designed and implemented curriculum integrating multi-agent AI systems in pedagogy.
- Developed tutorial materials modeling classical sociological theory through multi-agent simulations.
- Created close-reading and prompt-engineering activities aligning technical implementation with theoretical concepts.

Publications & Presentations

Working Paper

2026

Substrate-QLM: Continuous Entropy Control for Steering LLM-Coupled Autonomous Agents

University of Toronto

- Research paper; to be submitted for academic publication. Draft available on request.

Working Paper

2026

A Sociology of Being-Itself: Sociogenesis, Cybernetics, and the Emergence of the Kosmos

University of Toronto

- Research paper; to be submitted for academic publication. Draft available on request.

Working Paper

2025

Pareto-optimal Predictive Vote Probability

Policy Horizons

- Paper in-progress; to be submitted at CES 2025 Democracy Checkup.

Presentation

2025

Canadian Election Survey (CES) Hackathon

Policy Horizons

- Novel computational framework for Canadian election forecasting; demonstration.

Workshop & Panel

February 2026

AI for the Public Good: Methodologies and Ethics (Working Title)

Massey College

- Panel of Experts facilitation; workshop facilitation; participant research.

Collaborative Research Project

2025–2026

AI for the Public Good: Methodologies and Ethics

Massey College

- Collaborative research project on LLMs and research methods in academia; forthcoming publication.

Available upon request.

Academic Engagements & Service

House Committee Member (Elected)

2025–2026

Massey College

- Governance committee of Junior Fellows representing the fellowship in interactions with the Massey College Board of Directors.

Lionel Massey Fund Committee Member (Elected)

2025–2026

Massey College

- Committee organizing student life activities and events at the college.

Research Team Member

2025–Present

Public Good x AI Research Group

Massey College

- Planning and orchestration of college initiatives and research involving AI for the public good.

Junior Fellow Mentor

2025–Present

Afghan Women's Fellowship Program

Massey College

- Mentor for scholars at risk in Afghanistan who have lost access to educational resources and opportunities.
- Guidance and support for female scholars in the country as they navigate academic and professional development.

Board Director (Volunteer)

2023–Present

The Whole Dyslexic Society

- Governance, bursary adjudication, and program planning for dyslexia, autism, and ADHD support.

Fellowships

Massey College Junior Fellow

2025–2026

Massey College, University of Toronto

Graduate Research Fellow

2025–2026

UTSC Policy Horizons Research Team

Teaching Experience

Teaching Assistant

Fall 2025

SOCB42: Theory I: Discovering the Social

University of Toronto Scarborough

- Curriculum & tutorial design, grading, LLM training, tutorial lecture.
- Designed and facilitated tutorial sessions that bridge lecture theory with multi-agent simulations.

- Developed close-reading and prompt-engineering activities for student engagement.

Professional Experience

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|---|--------------------------------|--------------------------|
| Protective Services Officer / Community Peace Officer | <i>Alberta Health Services</i> | 2014–2023 Calgary, AB |
| • Conflict intervention and multi-agency coordination in acute mental health contexts; direct patient support. | | |
| • Union leadership and supervisory responsibilities. | | |
| Consultant (Freelance) | | 2022–Present |
| <i>Non-profit & Community Projects</i> | | |
| • Secured funding and supported planning for religious, artistic, and social service initiatives; coordinated capital projects. | | |
| Event Director | | 2021–Present |
| <i>Elder Song YYC</i> | | Calgary, AB |
| • Technical and logistical direction for Calgary Seniors Week music festival; year-round planning and budgeting. | | |
| Volunteer Supervisor | | 2020–2021 |
| <i>Calgary Pride</i> | | Calgary, AB |
| • Supervised volunteers at retail points during Pride Week. | | |
| Musician | | 2008–Present |
| <i>West Springs Church</i> | | Calgary, AB |
| • Regular performance and ensemble collaboration. | | |
| Musician | | 2016–2020 |
| <i>Windigo</i> | | Canada |
| • National tours, recordings, media appearances; songwriting and promotion. | | |

References

Daniel Silver, Professor, Sociology, University of Toronto (dan.silver@utoronto.ca)

Ethan Fosse, Associate Professor, Sociology & Associate Director, Data Sciences Institute, University of Toronto (ethan.fosse@utoronto.ca)

Brant Downey, Professor, Mount Royal University (bdowney@mtroyal.ca)