Travis LaCroix, PhD | Curriculum Vitae

CONTACT INFORMATION	⊠ Mila - Québec AI Institute 6666 St Urbain Montréal, QC, H2S 3H1		lacroixt@mila.quebec travislacroix.github.io uci.academia.edu/tlacroix

CITIZENSHIP — Canada

AREAS OF SPECIALISATION
Philosophy of Language & Linguistics
Philosophy of Machine Learning (esp. AI Ethics)

AREAS OF COMPETENCE
Philosophy of Biology & Behavioural Science
Classical & Evolutionary Game Theory
Formal and Social Epistemology
General Philosophy of Science

APPOINTMENTS

Mila - Québec Artificial Intelligence Institute, Montréal, Québec CAN
Computer Science and Operations Research, Université de Montréal

Postdoctoral Fellow - Ethically Aligned Artificial Intelligence, 2020 - 2021

Supervisor: Yoshua Bengio (Mila / UdeM)
Dominic Martin (UQàM)

Mila - Québec Artificial Intelligence Institute, Montréal, Québec CAN

Visiting Researcher / Research Assistant, July 2018 – June 2020

Supervisor: Yoshua Bengio

Concordia University, Montréal, Québec CAN

Coordinator, *Social Justice Centre*, October 2019 – June 2020

EDUCATION

University of California, Irvine, Irvine, California USA

Ph.D, Philosophy, March 2020. GPA: 3.96/4.00
Department of Logic and Philosophy of Science

Dissertation: "Complex Signals: Modularity, Reflexivity, & Hierarchical Structure"
Committee: Jeffrey A. Barrett (Chair)
Brian Skyrms
Simon Huttegger
Cailin O'Connor

M.A., Social Science, March 2018
Institute for Mathematical Behavioral Science

Simon Fraser University, Burnaby, British Columbia CAN

M.A., Philosophy, April 2016. GPA: 4.05/4.33

Thesis Topic: "On Signalling Games and Their Models"
Committee: Nicolas Fillion (Chair), Matt DeVos

University of British Columbia, Vancouver, British Columbia CAN
B.A. (Hons.), Philosophy; English Literature, April 2014. GPA: 81.5/100
First-class standing

Camosun College, Victoria, British Columbia CAN
A.A., English, April 2011. GPA: 8.14/9

PUBLICATIONS

Peer-Reviewed Publications

6. Barrett, Jeffrey A. and Travis LaCroix. 2020. "Epistemology and the Structure of Language." *Erkenntnis* (Forthcoming).
doi.org/10.1007/s10670-020-00225-4

5. Travis LaCroix. 2020. "Communicative Bottlenecks Lead to Maximal Information Transfer." *Journal of Experimental and Theoretical Artificial Intelligence* (Forthcoming).
doi.org/10.1080/0952813X.2020.1716857

4. LaCroix, Travis. 2019. "Using Logic to Evolve More Logic: Composing Logical Operators via Self-Assembly." *British Journal for the Philosophy of Science* (Forthcoming).
doi.org/10.1093/bjps/axz049

3. LaCroix, Travis. 2019. "Biology and Compositionality: Empirical Considerations for Emergent-Communication Protocols." *NeurIPS 2019 Workshop on Emergent Communication: Towards Natural Language.*
arxiv.org/abs/1911.11668

2. LaCroix, Travis. 2019. "Evolutionary Explanations of Simple Communication: Signalling Games & Their Models." *Journal for General Philosophy of Science / Zeitschrift für allgemeine Wissenschaftstheorie* (2020) 51(1): 19–43.
doi.org/10.1007/s10838-019-09481-7

1. LaCroix, Travis. 2018. "On Salience and Signalling in Sender-Receiver Games: Partial Pooling, Learning, and Focal Points." *Synthese* (Forthcoming).
doi.org/10.1007/s11229-018-1766-z

ARTICLES

Papers Under Review
(Drafts available upon request)

Revise & Resubmit Decision Received

"Dynamics of Retraction in Epistemic Networks" (w/ C. O'Connor & A. Geil)
[Conditional Acceptance from *Philosophy of Science*]
"Power by Association" (w/ C. O'Connor)
[R&R from *Ergo*]

Under Review

"Emergent Communication & Conflict of Interest" (w/ M. Noukhovitch, A. Courville)
"Learning from Learning Machines" (w/ Y. Bengio)
"Reference by Proxy and Truth-in-a-Model"
"Reflexivity, Functional Reference, and Modularity"
"What Russell Can Denote"

CONFERENCE
PRESENTATIONS

Refereed Talks

14. "Learning from Learning Machines: Optimisation, Rules, & Social Norms"
(T. LaCroix and Y. Bengio)
Canadian Society for the History & Philosophy of Science
London, Canada, 30 May - 1 June 2020. [*Cancelled due to* COVID-19]

13. "Emergent Communication Under Conflict of Interest"
(M. Noukhovitch, T. LaCroix, and A. Courville)
EvoLang XIII: Evolution of Language International Conferences
Brussels, Belgium, 14–17 April 2020. [*Cancelled due to* COVID-19]

12. "Learning from Learning Machines: Optimisation, Rules, & Social Norms"
(T. LaCroix and Y. Bengio)
Artificial Intelligence and Moral Learning, Symposium at AISB-2020:
Society for the study of Artificial Intelligence and Simulation of Behaviour
London, UK, 6–9 April 2020. [*Cancelled due to* COVID-19]

11. "Biology and Compositionality"
Neural Information Processing Systems (NeurIPS) 2019
Workshop on Emergent Communication
Vancouver, Canada, 8–14 December 2019.

10. "Learning from Learning Machines: Optimisation, Rules, & Social Norms"
(T. LaCroix and Y. Bengio)
Canadian Society for Epistemology
Montréal, Québec, 14–16 November 2019.

9. "Accounting For Role-Asymmetries In the Evolution of Compositional Signals"
Canadian Philosophical Association
Vancouver, Canada, 1–4 June 2019.

8. "Using Logic to Evolve More Logic: Composing Logical Operators via Self-Assembly"
Society for Exact Philosophy
Toronto, Canada, 17–19 May 2019.

7. "Using Logic to Evolve More Logic: Composing Logical Operators via Self-Assembly"
American Philosophical Association, Pacific Division
Vancouver, Canada, 17–20 April 2019.

6. "Less is More: Degrees of Compositionality for Complex Signals"
Philosophy of Science Association
Seattle, USA, 1–4 November 2018. *Symposium Contribution.*

5. "Reference by Proxy and Truth-in-a-Model"
Western Canadian Philosophical Association
Calgary, Canada, 26–28 October 2018.

4. "On The Role of Power in the Evolution of Inequitable Norms"
(T. LaCroix and C. O'Connor)
L'Association Canadienne de Philosophie
Montréal, Québec, 4–7 June 2018.

3. "The Role of Power in the Evolution of Inequitable Norms"
(T. LaCroix and C. O'Connor)
Latin American Association for Analytic Philosophy, and
Colombian Conference on Logic, Epistemology, and Philosophy of Science
Villa de Leyva, Colombia, 16–18 May 2018.

2. "On Salience and Signaling in Sender-Receiver Games"
Western Canadian Philosophical Association
Regina, Canada, 13–15 October 2017.

1. "Signalling Games & Their Models"
Colombian Conference on Logic, Epistemology, & Philosophy of Science
Bogotá, Colombia, 17–19 February 2016.

Commentor

3. "A Pragmatic-Semiotic Defence of Bivalent Logic" (Marc Champagne) CPA/ACP 2019 Annual Congress, University of British Columbia, Vancouver, Canada, 1–4 June 2019.

2. "Responsibility for Saying and Asserting" (Henry Schiller) CPA/ACP 2018 Annual Congress, Université du Québec à Montréal, Montréal, Canada, 4–7 June 2018.

1. "Simplicity and A Priori Probability Principles" (Noa Latham) CPA/ACP 2018 Annual Congress, Université du Québec à Montréal, Montréal, Canada, 4–7 June 2018.

ACADEMIC
EXPERIENCE

Teaching Assistant

University of California, Irvine

Inductive Logic, Simon Huttegger	Spring 2018
Department of Logic and Philosophy of Science (31)	
Department of Philosophy (31)	
Introduction to Linguistics, Arunima Choudhury	Winter 2018
Department of Linguistics (3)	
Acquisition of Language, Lisa Pearl	Fall 2017
Department of Linguistics (51)	
Department of Cognitive Sciences (56)	
Inductive Logic, Simon Huttegger	Spring 2017
Department of Logic and Philosophy of Science (31)	
Department of Philosophy (31)	
Probability and Statistics for Economics I, Kent Johnson	Winter 2017
Department of Economics (15A)	

Simon Fraser University

Critical Thinking (PHIL xx1), Jillian McIntosh	Spring 2016
Critical Thinking (PHIL xx1), Jillian McIntosh	Fall 2015
Critical Thinking (PHIL xx1), Jillian McIntosh	Spring 2015
Introduction to Ethics (PHIL 120W), Evan Tiffany	Fall 2014

Guest Lectures

University of California, Irvine

"Language and Cognition" *Acquisition of Language* (Linguistics/Psychology), 1 Dec. 2017.

Research Assistant

University of California, Irvine

Social Dynamics and Diversity in Epistemic Communities
Cailin O'Connor (NSF Grant 1535139)   2017 – 2019

Simon Fraser University

Constructing Questions for Critical Thinking
Jillian McIntosh   Spring 2015

University of British Columbia

Aristotle's Earlier Logic
John Woods   Summer 2014

GRANTS AND FELLOWSHIPS

Research Awards

Social Sciences and Humanities Research Council, Joseph-Armand Bombardier Canada Graduate Scholarships, Simon Fraser University (CAD 17,500), 2015-2016

Social Sciences and Humanities Research Council, Joseph-Armand Bombardier Canada Graduate Scholarships, University of British Columbia (CAD 17,500), DECLINED, 2014-2015

Academic Awards

University of California, Irvine

Associate Dean's Graduate Fellowship (USD 6,900), 2020, DECLINED.

Chancellor's Club Fund for Excellence Fellowship (USD 12,000), 2019, NOMINATED.

Justine Lambert Graduate Prize in the Foundations of Science, for "On Salience and Signaling: Partial Pooling, Learning, and Focal Points" (USD 1000), 2018.

Social Science Merit Fellowship (USD 257,818), 2016–2022

Simon Fraser University

Graduate Fellowship (CAD 6250), 2015

University of British Columbia

John Alexander Scholarship in Humanities (CAD 1500), 2014

Robert and Kazuko Barker Award (CAD 225), 2014

PROFESSIONAL
SERVICE

Referee. *British Journal for the Philosophy of Science* (2019, 2020); *Inquiry: An Interdisciplinary Journal of Philosophy* (2019); EvoLang XIII: Evolution of Language International Conferences (2020); The Vancouver Summer Philosophy Conference (2019).

Symposium Organiser. "Evolutionary Explanations of Compositional Communication" Philosophy of Science Association 2018 Biennial Meeting, November, 2018.

Chair. The Vancouver Summer Philosophy Conference (19–23 August 2018, Vancouver, CAN); F-SEW: Formal Social Epistemology Workshop (25–26 May 2018, Irvine, USA); The Western Canadian Philosophical Association 54th Annual Meeting (13–15 October 2017, Regina, CAN); The Ninetieth Annual Meeting of the American Philosophical Association, Pacific Division (30 March – 3 April 2016, San Francisco, USA).

SPECIALISED
TRAINING

Concordia University

Sexual Violence Awareness & Prevention Training	Fall 2019

University of California, Irvine

Sex Offense Prevention Training	Fall 2017
Teaching Assistant Professional Development Program	Fall 2016

Simon Fraser University

TA/TM Day: Teaching Orientation Program	2014–2016

LANGUAGES

English (native), French (intermediate)

TECHNICAL
CAPACITIES

Mathematics: ODEs / PDEs, Linear Algebra, Multivariate / Vector Calculus

Logic: Set Theory, Modal Logic, Predicate Logic

Programming Languages: Python, Java, Javascript

Markup: LaTeX, HTML, CSS

Computation and Graphing: R, MatLab, Excel

AFFILIATIONS

Canadian Philosophical Association
Philosophy of Science Association
Society for Exact Philosophy
American Philosophical Association

REFERENCES

Jeffrey A. Barrett
Chancellor's Professor
Logic and Philosophy of Science
University of California, Irvine
Dissertation committee chair; doctoral supervisor; co-author

Joshua Armstrong
Assistant Professor
Department of Philosophy
University of California, Los Angeles
Academic colleague (external)

Cailin O'Connor
Associate Professor
Logic and Philosophy of Science
University of California, Irvine
Committee member; co-author

Simon Huttegger
Professor
Logic and Philosophy of Science
University of California, Irvine
Committee member

Brian Skyrms
Distinguished Professor
Logic and Philosophy of Science
University of California, Irvine
Committee member

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