Travis LaCroix | CURRICULUM VITAE

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Information University of California, Irvine

Department of Logic and Philosophy of Science

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CITIZENSHIP Canada

Mila (Québec Artificial Intelligence Institute), Montréal, Québec CAN APPOINTMENTS

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, June 2020 (Expected). GPA: 3.97/4.00

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

Peer-Reviewed Publications **PUBLICATIONS**

> 6. Travis LaCroix. 2020. "Communicative Bottlenecks Lead to Maximal Information Transfer." Journal of Experimental and Theoretical Artificial Intelligence (Accepted).

- 5. Barrett, Jeffrey A. and Travis LaCroix. 2020. "Epistemology and the Structure of Language." *Erkenntnis* (Accepted).
- 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 (Forthcoming). doi.org/10.1007/s10838-019-09481-7
- 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) [R&R from *Philosophy of Science*]

Under Review

"The Correction Game"

"Learning from Learning Machines" (w/ Y. Bengio)

"Polysemy, Role Asymmetry & the Evolution of Compositional Signals"

"Power by Association" (w/ C. O'Connor)

"Selfish Emergent Communication" (w/ M. Noukhovitch, A. Courville)

"What Russell Can Denote"

"Reference by Proxy and Truth-in-a-Model"

CONFERENCE PRESENTATIONS

Refereed Talks

- "Emerging 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.
- "Biology and Compositionality: Empirical Considerations for Emergent-Communication" Neural Information Processing Systems (NeurIPS) 2019 Workshop on Emergent Communication Vancouver, Canada, 8–14 December 2019.

10. "Learning from Learning Machines"

(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" 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 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

Spring 2015

Simon Fraser University

Constructing Questions for Critical Thinking

Jillian McIntosh

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

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

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

Professional Service

Referee. British Journal for the Philosophy of Science; Inquiry: An Interdisciplinary Journal of Philosophy; 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 Teaching Assistant Professional Development Program Fall 2017

al 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 American Philosophical Association Society for Exact Philosophy

Last updated: January 13, 2020