

Tanya Whyte

CONTACT INFORMATION

Ph.D. Candidate
Department of Political Science
University of Toronto
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RESEARCH INTERESTS

Canadian politics: Parliament and parliamentary debate, accountability and representation, polling and elections
Quantitative methods: Bayesian statistics, machine learning, text mining, natural language processing, topic modeling, experimental methods, computational social science (Python, SQL, R)

EDUCATION

University of Toronto, Toronto, ON

Ph.D., Political Science, Expected Fall 2017

- Dissertation: *Measuring Collective Accountability in the Canadian House of Commons, 1922-2016: A Computational Model of Parliamentary Debate*
- Adviser: Professor Grace Skogstad
- Major Field: Canadian Politics
- Minor Field: Public Policy

University of Alberta, Edmonton, AB

M.A., Political Science, June 2010

- Thesis: *The Political Economy of Canadian Oil Export Policy, 1949-2002*
- Co-Adviser: Professor Gordon Laxer
- Co-Adviser: Professor Ian Urquhart
- Field: Canadian Politics

B.A., Political Science, June 2008

- 3.9 GPA
- Thesis Topic: *Canadian Economic Nationalisms, Past and Future: The Political Economy of the Canadian Pacific Railway and the Trans-Canada Pipeline*
- Double Major in Sociology

RESEARCH EXPERIENCE

University of Toronto, Toronto, ON

Lead Web Developer, Researcher:
Lipad Project

September 2014 to Present

- Full stack developer of lipad.ca, a repository and search engine for Canadian parliamentary debates with >1500 users per month. Built with Django and PostgreSQL; public source available on GitHub.
- Developed text and data processing solutions for digitization and enrichment of historical parliamentary debates from raw scans to database schema, using R and Python.
- Collaborated with an interdisciplinary team of computer scientists, historians, and political scientists.
- Performed data analysis for dissertation research using machine learning and topic modeling algorithms, in R and Python.

Contract Researcher:

Higher Education Quality Council of Ontario (HEQCO) **October 2015 to October 2016**

- Designed and performed a machine learning text analysis of news media coverage of postsecondary education in Canada, using R and Python.
- Communicated and visualized results for a general practitioner audience, both in live presentations and in a written policy report.

Research Assistant:

Prof. Ed Schatz, Prof. Peter Loewen

Various 2013 to 2015

- Deployed and customized the Ruby on Rails package *hroot* for managing behavioural lab experiments.
- Developed Python code to design, randomize, and typeset survey experiment conducted in Tajikistan and Kazakhstan, using \LaTeX for Cyrillic languages.

Research Assistant:

Prof. Grace Skogstad

September 2012 to December 2013

- Designed, performed, and presented content analysis of Canadian House of Commons debates using Python and NVivo.
- Hired, trained, and directed team of undergraduate research assistants.

University of Alberta, Edmonton, AB

Research Assistant:

Alberta Land Settlement Infrastructure Project

October 2011 to July 2012

- Collaborated with other assistants to design, test, and document a database for digitized homesteading records.
- Digitized historical documents and forms.
- Performed exploratory quantitative analysis of data using Python and SPSS.

Research Assistant:

Political Ecology and Governance of Alberta

November 2008 to February 2009

- Authored a conference proceedings report including complete transcription.

Research Assistant:

Parkland Institute

Various 2008 to 2013

- Reported on Canadian energy and environmental policy issues as an intern and contract research assistant.

PUBLICATIONS

- [1] Asaf, Zain, Karol Czuba, Adrienne Davidson, Maxime Héroulx-Légault, Matt Lesch, Alesha Porisky, and Tanya Whyte. 2017. *Advancing the Study of Political Cleavages through Experimentation: Revisiting Regionalism and Redistributive Preferences in Canada*. *Regional and Federal Studies*. Print version forthcoming.
- [2] Beelen, Kaspar, Timothy Alberdingk Thijm, Christopher Cochrane, Kees Halvemaan, Graeme Hirst, Michael Kimmins, Sander Lijbrink, Maarten Marx, Nona Naderi, Ludovic Rheault, Roman Polyakovsky, Tanya Whyte. 2017. *Digitization of the Canadian Parliamentary Debates*. *Canadian Journal of Political Science*. Print version forthcoming.
- [3] Whyte, Tanya, Kaspar Beelen, Alex Mierke-Zatwarnicki, Christopher Cochrane, and Peter Loewen. 2016. *What's the Story? National Media Coverage of Higher Education in Canada*. Toronto: Higher Education Quality Council of Ontario. (Non-refereed publication.)

[4] Skogstad, Grace, and Tanya Whyte. 2015. Power, Authority Contests, and Policy Paradigm Change: Explaining Developments in the Grain Marketing Policy in Prairie Canada. *Canadian Journal of Political Science* 48(1): 79-100.

CONFERENCE
TALKS

[5] Whyte, Tanya. Oh, oh! Modeling Parliamentary Interruptions in Canada, 1926-2015. In: *2017 Annual Conference of the Canadian Political Science Association*, Toronto, ON, May 27–June 2, 2017.

[6] Whyte, Tanya. Measuring How Ideas Matter: Analysis of Substantive Policy Ideas Using Natural Language Processing and Machine Learning Algorithms. In: *2015 Annual Conference of the Canadian Political Science Association*, Ottawa, ON, June 6–8, 2015.

[7] Whyte, Tanya. Some Honourable Members: A Quantitative Analysis of Parliamentary Decorum in Canada and the United Kingdom. In: *2014 World Congress of Political Science*, Montreal, QC, July 19–24, 2014.

[8] Asaf, Zain, Karol Czuba, Adrienne Davidson, Maxime Héroulx-Légault, Matt Lesch, Alesha Porisky, and Tanya Whyte. Affinity in the Canadian Federation. In: *2014 Annual Conference of the Canadian Political Science Association*, St. Catherine's, ON, May 27–29, 2014.

[9] Whyte, Tanya. Some Honourable Members: A Quantitative Analysis of Parliamentary Decorum in Canada and the United Kingdom. In: *2014 Annual Conference of the Canadian Political Science Association*, St. Catherine's, ON, May 27–29, 2014.

[10] Whyte, Tanya, and Grace Skogstad. The Politics of Regionalism and Transformative Change to the Canadian Wheat Board. In: *2013 Annual Conference of the Canadian Political Science Association*, Victoria, BC, June 4–7, 2013.

[11] Whyte, Tanya, and Grace Skogstad. Electoral Legitimacy and Policy Paradigm Change: The Conservative Government of Canada and the Canadian Wheat Board. In: *P3 Graduate Conference*, Toronto, ON, April 23, 2013.

AWARDS AND
SCHOLARSHIPS

2014:

- SSHRC Doctoral Fellowship (\$105,000)

2013:

- Ontario Graduate Scholarship (\$15,000)

2012:

- Ken Bryden Scholarship in Canadian Government and Politics (\$2000)

2009:

- SSHRC CGS Master's Scholarship (\$17,500)

2008:

- Queen Elizabeth II Graduate Scholarship (\$10,800)
- Walter H. Johns Graduate Fellowship (\$4627)
- Roberta E. McKown Prize (top graduating GPA in Political Science) (\$1000)

2007:

- F.T. Jenner Memorial Prize in Canadian Studies (\$3750)
- Provincial Louise McKinney Scholarship (\$2500)

2006:

- Provincial Jason Lang Scholarship (\$1000)
- University of Alberta Undergraduate Scholarship (\$500)

2005:

- Provincial Jason Lang Scholarship (\$1000)
- Helen Tkachenko Prize in Russian Language (\$500)

2004:

- Provincial Alexander Rutherford Scholarship (\$2500)
- University of Alberta Academic Excellence Scholarship (\$1750)

TEACHING
EXPERIENCE

University of Toronto, Toronto, ON

Teaching Assistant

September 2012 to June 2014

- Tutorial Leader and Grader, POL224: Canada in Comparative Perspective
- Average student evaluation: 4.36/5

University of Alberta, Edmonton, AB

Teaching Assistant

September 2008 to July 2009

- Grader, POL S 220: Canadian National Government and Politics

SERVICE

- Canadian Journal of Political Science, Reviewer. 2015.
- Free Alex Sodiqov campaign. Volunteer web developer. 2015.
- Department of Political Science, Hiring Committee Graduate Representative, University of Toronto Scarborough. 2013.

PROFESSIONAL
MEMBERSHIPS

- International Political Science Association, Member, 2014–present
- Canadian Political Science Association, Member, 2012–present
- Société québécoise de science politique, Member, 2012–present

OTHER RELEVANT
EXPERIENCE

Election Worker/Volunteer

- Federal Elections: 2004, 2006, 2008
- Provincial Elections: 2008, 2012
- Municipal Elections: 2007

COMPUTER SKILLS Data Analysis:

- Quantitative/Computational Social Science
- Bayesian and Frequentist Statistical Methods
- Machine Learning
- Sentiment Analysis
- Data Mining
- Text Mining and Natural Language Processing
- Experimental Methods
(CESS Oxford/Munk Summer School in Experimental Social Science 2015)
- Communication and Visualization of Results

Programming:

- Python (including Django)
- R
- HTML/CSS
- SQL/MySQL/PostgreSQL
- Qualtrics
- XML/JSON

Desktop Editing and Productivity Software:

- T_EX (L^AT_EX, B_IB_TE_X)
- Microsoft Office/Excel/Word, OpenOffice, Google Docs, Adobe Acrobat
- Adobe Photoshop, Adobe Illustrator

Operating Systems:

- Microsoft Windows, Apple OS X, Linux (Administration and IT)

LANGUAGES

English, French