UNIVERSITY OF TORONTO
DEPARTMENT OF POLITICAL SCIENCE
Fall 2023

POL2503H:
Thinking Through Research Design

Prof. Mark S. Manger   **Fridays 10:00am-12:00pm**

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Overview:	This course is designed for MA students. It provides an introduction to the principles of research design and causal inference applicable to qualitative and quantitative empirical research. No background in research methods or design is required. The focus is firmly on empirical research, so it is less suitable for students who want to conduct normative or prescriptive work.
Objectives:	To gain an understanding of research design and the challenges to causal inference as used in political science, to critically evaluate research designs used in the literature, and to develop the foundations to come up with research questions and feasible designs to answer them.
Prerequisites:	None beyond admission the Political Science MA program.
Teaching method:	Weekly two-hour seminar led by the instructor, except for two weeks that are taught in a flipped classroom format, i.e. you are required to watch video lectures online on Quercus and complete the assigned tests on Quercus, followed by a seminar session. Refer to the schedule for details. Please note that there is a make-up date (December 7) in the schedule.
Assignments, Grade Breakdown, and Policy on Absences:	• 8 short analytical notes, marked as complete/incomplete, each worth 2% of the final course grade (16% in total) to be submitted online. The notes are always due at midnight before class.
	• 2 peer reviews of draft research proposals, 7% each (14% in total). Both are due on midnight before our classes on November 24. This is marked as pass/fail to incentivize you to put in your best effort.
	• Completion of the two online quizzes worth 5% each (10% in total) also due at midnight before our class.
	• Class participation (20%) during our seminars. Quantity is greatly encouraged. Political scientists are a loquacious tribe so get used to talking a lot. Contributions on Quercus count toward participation, but you cannot compensate for not showing up for the seminar.
	• Draft research design proposal (10%), due on November 10 at 6pm EST. This should be a short (250-500 word) proposal of an empirical research project. It does not need a literature review but should clearly lay out the puzzle to be explained.
	• Research design proposal (30%), due December 8 at midnight. This is a long (3-4 pages plus references) version of your research design. It

should be written like the first part of an empirical research paper, with an introduction, a literature review that highlights gaps in knowledge or anomalies, the actual research question(s) and/or hypotheses, and a brief description of how you would go about answering or testing these. You do not need to talk about the methodology in any detail. Although some of you will have received feedback earlier than others, those who received feedback later will have had the opportunity to learn from other people's mistakes when revising their draft proposal. To avoid any inequity all proposals are therefore due on the same date.

- The analytical notes and quizzes cannot be submitted late. The proposal assignments incur a late penalty of 5% per day, including weekend days. Extensions can only be granted in cases of medical or family emergencies and require appropriate documentation (e.g. the university-prescribed medical note substantiating that no term work could be undertaken during specific periods of time).

- Two absences are allowed without requiring any further documentation, though I appreciate a notice by email beforehand if you know that cannot attend the session. Other absences require a medical note. Even when absent, you are required to complete the online assignments, unless medical reasons or other emergencies preclude it.

Readings:	You should purchase the following text. The links below will take you to the e-book versions should you prefer those.
	King, Gary, Robert O. Keohane, and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research.* Princeton, NJ: Princeton University Press. This much-loathed, patronizing, yet unsurpassed work is known as *KKV* in the profession.
	The second book is recommended as a how-to manual for conducting your own research and not very expensive.
	Brancati, Dawn. 2018. *Social Scientific Research.* London: SAGE.
	All other readings are available through Quercus and linked below.
Diversity:	A conscious effort has been made to include authors who are minority, LGBTQ+ or members of equity-seeking groups underrepresented among social scientists, without identifying authors as such in the syllabus.
Plagiarism:	Normally, students will be required to submit their course essays to the University's plagiarism detection tool for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the Centre for Teaching Support & Innovation web site (https://uoft.me/pdt-faq)."
	You may use large language models (LLMs) such as ChatGPT to assist you in your writing. Keep in mind that LLMs are not (yet) very good at interpreting mathematical models or tables of statistical results.
Auditing the course:	Not permitted.
Contacting the instructor:	Office hours are listed above, but please confirm by email that I will be holding office hours that day.

Session-Date	Topic	Objectives	Tasks	Readings
1 – Sep 8	Introduction, course overview, and some considerations on the philosophy of science (Seminar – in person)	Introduce the course and the scientific study of politics. Establish a baseline of student knowledge and interests.	Read the syllabus. Try to establish the design features in the second reading and submit analytical note 1 on Quercus.	**Core:** R. O. Keohane (2009), "Political Science as a Vocation", Caprioli and Boyer (2001), "Gender, Violence, and International Crisis".
2 – Sep 15	Counterfactuals and the Potential Outcomes Model (Asynchronous-Quercus plus one-hour review session)	Understand the potential outcomes definition of causality. Appreciate the implications for research in the social sciences.	Read the assigned reading. Watch the lecture on Quercus. Complete the first sets of online quiz questions.	**Core:** Morgan and Winship (2nd edition, 2015), Chapter 2.
3 – Sep 22	Engaging with the literature (Seminar – in person)	Understand the process of identifying relevant research questions through a literature review.	Read core readings. Choose one of the example readings, identify the main research questions in the literature, and submit analytical note 2 on Quercus.	**Core:** Knopf (2006), "Doing a literature review", KKV 1.2, Zinnes (1980) "Three puzzles in search of a researcher". **Examples:** Bernauer (2013), "Climate Change Politics," Franzese (2002), "Electoral and Partisan Cycles in Economic Policies and Outcomes," Hainmueller and Hopkins (2014, "Public Attitudes Toward Immigration," Noury and Roland (2020), "Identity Politics and Populism in Europe."

4 – Sep 29 (Seminar)	From Concept to Operationalization	Understand why theory-building is essential for good empirical research. Identify the central concept related to a research question, and come up with an appropriate operationalization.	Read the core readings. Choose one of the example readings from week 3, identify the concept measured, and propose an (alternative) operationalization. Submit as analytical note 3 on Quercus. Make sure you discuss the rationale for your operationalization.	**Core:** Vasquez (1997), [“The Realist Paradigm and Degenerative versus Progressive Research Programs”](#), Adcock and Collier (2001), [“Measurement Validity,”](#) Herrera and Kapur (2007), [“Improving Data Quality.”](#)
5 – Oct 6 (Asynchronous-Quercus plus one-hour review session)	Causal Inference and Causal Graphs	Learn how to use causal graphs to clarify the research design challenges in your own research.	Read assigned core readings. Watch the lecture on Quercus. Complete the second online quiz.	**Core:** KKV 2.6-2.7, 3.1-3.4, Keele (2015), [“The Statistics of Causal Inference”,](#) Morgan and Winship (2nd edition, 2015), [Chapter 3](#).
6 – Oct 13 (Seminar)	Controlled Treatments	Understand the rationale for experiments and the most important strengths and weaknesses.	Read the core readings. Choose one example reading. Identify the design features of the experiment from the study and submit as note 4 on Quercus.	**Core:** KKV 3.1-3.4, McDermott (2002), [“Experimental Methods in Political Science](#),” Hyde (2015), [“Experiments in International Relations: Lab, Survey, and Field](#)”. **Examples:** Tomz (2007), [“Domestic Audience Costs in International Relations](#)”, Malesky, Tran and Schuler (2012), [“The Adverse Effects of Sunshine”](#), Gonzalez-Ocantos et al., (2011) [“Vote Buying and Social Desirability Bias”](#).

7 – Oct 20	Uncontrolled treatments I: Quasi-random assignment (Seminar)	Understand how instances of "as-if random" assignment can be identified. Understand the concept of quasi-experimental research.	Read the core reading. Choose one of the example readings. In analytical note 5, summarize and assess the identification strategy.	**Core:** Jones and Olken, (2009), "Hit or Miss?" **Examples:** Eggers and Hainmueller (2009), "MPs for Sale?", Klasnja and Titinuik (2017), "The Incumbency Curse," Posner (2004), "The Political Salience of Cultural Difference." Hernæs (2019), "Television, Cognitive Ability, and High School Completion."
8 – Oct 27	Uncontrolled treatments II: Instrumental variables (Seminar)	Understand why instrumental variable approaches are useful.	Submit note 6 on Quercus, describing the logic of the identification strategy in Ritter and Conrad and one of the example readings.	**Core:** Ritter and Conrad (2016) "Preventing and Responding to Dissent". **Examples:** Ramsay (2011), "Revisiting the Resource Curse," Hansford and Gomez (2010), "Estimating the Electoral Effects of Voter Turnout," Acemoglu, Johnson and Robinson (2001), "The Colonial Origins of Comparative Development."
9 – Nov 3	Uncontrolled treatments III: Comparative Inquiry without Identification (Seminar)	Understand the limits and strengths of comparative studies, or "conditional ignorability."	Submit note 7 on Quercus, discussing and assessing the research design of one of the example readings in the light of this week's and the past two weeks' core readings.	**Core:** Seawright and Gerring (2008), "Case Selection Techniques in Case Study Research", Sekhon (2009), "Opiates for the Matches: Matching Methods for Causal Inference," Plümper et al. (2019), "Case selection and causal inference in qualitative comparative research." **Examples:** Gray (2017), "Making gender quota mechanics work," Cyr et al. (2012), "Do Electoral Laws Affect Women's Representation?"

Nov 10: Fall Reading Week. No class.				

10 – Nov 17	Transparency and Replicability (Seminar)	Obtain a good grasp of the need for and challenges to transparency and replicability in Political Science research.	Submit note 8 on Quercus, discussing the challenges of transparency in your own area of research interest. Submit draft short research design proposal on Quercus.	**Core:** Ioannidis (2005), "Why Most Published Research Findings Are False", Monogan (2015), "Research Preregistration in Political Science," Elman and Kapiszewski (2014), "Data Access and Research Transparency in the Qualitative Tradition," Lupia and Alter (2014), "Data Access and Research Transparency in the Quantitative Tradition."
11 – Nov 24	Exploring the frontier of research, Part 1 (Seminar)	Apply the principles and logic of research design learned in the course to offer constructive feedback on your peers' initial proposals.	Submit two peer reviews on Quercus, offering constructive feedback on the research design proposals that have been assigned to you. Be prepared to discuss your own draft proposal with your peers.	Core: Przeworski and Solomon (1988,1995), "The Art of Writing Proposals," Assigned proposals on Quercus.
12 – Dec 1	Exploring the frontier of research, Part 2 (Seminar)	Apply the principles and logic of research design learned in the course to offer constructive feedback on your peers' initial proposals.	Be prepared to discuss your own draft proposal with your peers.	

12 – Dec 7	Make-up session (only if needed)

Detailed Session Description

Session 1 (Sep 8): Course Overview

This introductory week will have mainly logistical objectives and provide a course overview. A first writing assignment gives you an opportunity to begin thinking about research design: Try to identify the "design features" of Caprioli and Boyer (2001). Like all the required analytical notes, this assignment will only be graded as complete/incomplete. Try to put in at least some effort because it is a useful exercise and because you will see your own progress when you look back to it later. The summary should be shorter than 250 words and submitted on Quercus.

Session 2 (Sep 15): Lecture on Causality and the Potential Outcomes Model

The traditional understanding of causality as "regularity" in the social sciences has been superseded by the "potential outcomes" model. This has profound implications for modern research design and empirical research. This lecture introduces the model and spells out some implications. Allocate enough time to this asynchronous part because the material is very technical and among the more abstract you will encounter in Political Science. In departure from the usual approach, you should watch the lecture first and then read the assigned core reading at your own pace, as it should be more accessible after following the lecture.

Session 3 (Sep 22): Engaging with the Literature

The first step after the initial idea for a research project is to survey the literature. It helps you develop and sharpen your ideas and supports your case when you are applying for funding for your research or graduate studies. Writing compelling literature reviews is more craftsmanship than art, so it can be honed. The readings for this week are mostly from the Annual Review of Political Science that asks experts to survey the particular subject area and identify future research avenues.

Session 4 (Sep 29): From Concept to Operationalization

Concept development is one of the mainstays of the social sciences, simply because what we observe is always socially constructed. Empirical research therefore depends crucially on theorizing. Furthermore, even clear concepts are not always easily measured. The step of developing measures for concepts is called "operationalization."

Session 5 (Oct 6): Lecture on Causal Graphs

In this lecture, we will explore one of the most deceptively simple but useful tools in causal inference – directed acyclical graphs. These serve to clarify hypothesized causal links, what variables to condition on, and what might be observable and unobservable in a given research design. Again, in departure from the usual approach, you should watch the lecture first and then read the assigned core reading at your own pace, as it should be more accessible after following the lecture.

Session 6 (Oct 13): Controlled Treatments - Experiments

Controlled experiments are considered the gold standard in science to test hypotheses because if properly done, they allow internally valid conclusions. All other approaches are at least partially trying to solve the problem of not being able to run an experiment. At the same time, experimental approaches are often criticized for having limited real-world relevance. We will discuss a few examples and the specific problems of experiments in Political Science.

Session 7 (Oct 20): Uncontrolled Treatments – Quasi-Random Assignment

If we cannot control and randomly assign treatments, we can try to mimic the approach by identifying instances of "as-if random" assignment and "natural experiments." The approach has obvious limitations because "exogenous variation" may not exist, but when it is available, it can lead to powerful conclusions.

Session 8 (Oct 27): Uncontrolled Treatments – Instrumental Variables

When we can't conduct experiments and without exogenous variation, instrumental variables are the last feasible method to make truly causal claims. In a nutshell, this involves finding a variable that affects our presumed cause and therefore the outcome, but *only* through our presumed cause and only in one direction. Such "instruments" are not always available and come with their own difficulties. The statistical implementation requires sophisticated techniques so that our focus here is on the conceptual idea.

Session 9 (Nov 3): Uncontrolled Treatments – Comparisons and Matching

"Controlled comparisons" are still an important approach in the discipline, but recent research has highlighted their limitations. At the same time, comparison-inspired techniques such as matching that originated in political science and economics have been adopted by many other disciplines, including in medical research. We will discuss the origins and continued relevance for Political Science research and explore recent ideas to improve the ability to make causal claims based on systematic comparisons.

(No class on November 10 – Fall Reading Week)

Session 10 (Nov 17): Transparency and Replicability - Short research design proposals due

In this session, we will briefly discuss the short research design proposals and offer constructive feedback. The required readings for the session are the proposals that will be shared on Monday (18th).

Session 11 (Nov 24): Exploring the Research Frontier I

In this session, we will discuss a sample of the submitted research proposals. Each student will be assigned two research proposals to read. You will then submit a peer review note for each offering constructive feedback on the research design.

Session 12 (Dec 1): Exploring the Research Frontier II

In this session we will discuss the second set of proposals.

(Dec 8): Final research proposals due at midnight.

Your final research proposals are due December 8 at midnight via Quercus.