# POLI 571A (001) Methods of Political Analysis: Oualitative Research and the Problem of Causal Inference

# 2020-2021 Winter Session Term 2

Professor Alan M. Jacobs

Office hours: TBD

Email: <u>alan.jacobs@ubc.ca</u>

# **Land Acknowledgement**

UBC's Point Grey Campus is located on the traditional, ancestral, and unceded territory of the Musqueam people. The land on which we are learning has always been a place of learning for the Musqueam people, who for millennia have passed on their culture, history, and traditions from one generation to the

#### **COURSE OVERVIEW**

This seminar explores the logic and methods of qualitative political research. The aim of the seminar is to prepare graduate students to be both thoughtful designers of their own research projects and careful consumers of a wide range of social-scientific literature. Students will also learn how to defend – and spot the limitations of – the qualitative research strategies they may employ. Among the questions we will address are: What are the goals of empirical political research? What makes for a good research question or hypothesis? When we do qualitative research, what are we looking for, and where do we look for it? How do we assess the evidence we find?

The course is oriented toward two broad research goals. First, throughout the course, we will be primarily focused on the empirical study of *causation* in the political world. Though political scientists have made crucial contributions to knowledge through description, criticism, and interpretation, most empirically oriented scholars have tended to be drawn, at least in part, to questions of a causal nature: why particular things have happened in the past, under what conditions they will happen again, what their consequences were or will be, through what mechanisms they are produced, or what political actors today should do to produce the consequences they want. We will thus devote most of our attention to the methodological challenges posed by causal inference and explanation.

Second, while this is a course in empirical methods, one of its chief goals is learning how we can contribute to *theoretical development*. By this I mean that we will consider empirical methods not just for what they can tell us about the particular cases under examination, but also for their ability to help develop, test, and refine more general propositions – i.e., theories – about politics. An interest in theory does not imply that we are necessarily in search of sweeping, universalistic claims about the world or grand unifying frameworks; nor does it mean that we are uninterested in explaining specific important outcomes. Rather, it means that, along with our concern with particular cases, we are also interested in uncovering patterns, mechanisms, or causal regularities that to some degree travel across space or time.

While we will address a wide range of methodological issues, three broad themes will emerge:

- 1.) At the core of empirical social science lies an attitude of self-skepticism. As social scientists, our task is not to go looking for evidence that we are right. Rather, it is to constantly ask ourselves, "How do I know if I'm right?" and "What evidence can I find that I might be *wrong*?"
- 2.) Research design is about making tradeoffs: most methodological approaches, well executed, have both benefits and costs. Thoughtful research design requires paying close attention to these tradeoffs, choosing those techniques that are best suited to our particular research goals. Moreover, once the research has been completed, we must take seriously the limitations of our choices knowing what conclusions our methods will and will not allow us to draw. In this course, we will pay close attention to the distinct advantages of small-n research, its drawbacks as compared with large-n quantitative methods, and the strengths and weaknesses of alternative qualitative tools.
- 3.) Drawing inferences about cause-and-effect in the social world is hard. We will examine both the challenges to causal inference and the main strategies that political scientists use to address those challenges. A key concern will be figuring out how case-study-based strategies of causal inference differ from strategies based on correlations across cases.

#### LEARNING OBJECTIVES

In this course, you will learn about:

- Common understandings of causation in the social sciences, including the potential outcomes and counterfactual frameworks
- The broad intellectual goals to which causal analysis is typically directed, including explanation, theory-generation, and theory-testing.
- The differences among of the logics of causal inference most commonly used in the social sciences
- How to weigh the advantages and disadvantages of different inferential approaches, in light of research goals and other aspects of the research situation

- How to conduct process tracing, including via the use of Bayesian reasoning
- How to select cases for process tracing
- How to write up the results of qualitative research in the form of a journal article

#### **READINGS**

Readings for the course consist of a mixture of methodological writings and substantive illustrations of alternative approaches, drawn from across the discipline of political science. You will find the readings in three locations.

First, there is one **required book**, available for purchase at the UBC Bookstore (price available on bookstore website):

King, Gary, Robert O. Keohane, and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press. (Referred to below as "KKV.")

All other readings are available via the Library Online Course Reserve (LOCR) system at:

https://courses.library.ubc.ca/c.ZzVcrg

# **COURSE REQUIREMENTS**

In addition to reading assigned texts, class members will learn about qualitative methods through discussion, analytical writing, and the design their own qualitative research projects. Detailed assignments will be distributed as the term unfolds. Due dates may, in consultation with the class, be shifted if unforeseen developments make it difficult to maintain the dates listed here.

- **1. Reading:** Course members are expected to come to class each week having completed all of the assigned readings, and having thought about them carefully.
- **2.** A short response paper on a process-tracing article, due March 12 via Canvas: Each student will write a short paper based on readings that employ process-tracing. A detailed assignment will be distributed later in the term.
- **3. Research design:** Each member of the class will write a proposal for a research project on a research question of her/his own choosing. The research proposals should reflect careful thought about the methodological issues and tradeoffs we will have read about and discussed during the term. While they will require some limited secondary research on the chosen topic, I will be looking less for substantive mastery of the specific subject matter than for considerations of research design.

The proposal will be handed in in two stages:

Stage I: Causal theories. Due Feb 5. 1 via Canvas. For this assignment, each member of the class will choose a pair of causal theories that their proposed research project will be intended to test against each other as explanations of cases. The theories must be causal in nature. The theories must also be derived from existing studies.

Stage II: Pre-analysis Plan. Due April 19 via Canvas. The pre-analysis plan will lay out the competing theories, and a specific strategy for testing these theories against one another.

- **4.** Crystallization memo (group work, once during term): Once during the term, it will be your responsibility, together with a partner, to write a memo for the class that crystallizes the core ideas from the week's readings, in a manner that helps *teach* those ideas to the rest of the class. You and your partner will submit a draft of your memo to me on the Tuesday at 9am before our Friday class; you will meet with me on the Tuesday afternoon to discuss your memo; and then you will revise the memo and post on Canvas for the rest of the class by Thursday at 12pm. I will likely also ask you to take on a bigger-than-usual role in speaking to these ideas during the Friday class. A more detailed assignment will be distributed.
- **5.** Weekly class participation. As a seminar, this course depends on the active participation of its members. I expect each member of the class to attend, and make thoughtful contributions to, the seminar each week. Useful comments will draw on and assess arguments and concepts from the readings, and will also try to engage with other students' contributions. Even a good question asking for clarification of an issue can help move the discussion forward and constitutes high-quality participation. Quality is more important than quantity, though I expect each member of the class to contribute regularly in some way.

As part of participation in this online environment – and being "present" – I generally expect all students to have their cameras on throughout the class. The main reason is that it is especially difficult in the online environment to create a sense of intellectual community. If we are all looking at black boxes on our screens, that will be all the more difficult. Seeing each other's faces as we talk and listen is crucial to how we interact. Having our cameras on is also a way of keeping ourselves "honest," making sure everyone is in fact sitting at their computers. If you have privacy concerns about using your camera, I recommend using a Zoom background, which will block out any view of the room behind you. If you have privacy concerns that cannot be managed via a Zoom background, then please let me know, and we will make an alternative arrangement.

Given the technical nature of much of the material, some classes will include short (or, occasionally, longer) lectures. Asking clarifying questions during these lectures can be extremely useful in ensuring that everyone is following the material. (If you are unclear on an issue, others probably are as well.)

# **Summary schedule of assignments**

Feb. 5 Stage I Paper: Causal theories

March 12 Process-tracing response paper

April 19 Stage II: Pre-analysis plan

Once during the term (sign up)

Crystallization memo

## **Grading weights**

Total course grade	100%		
Stage I paper Stage II paper Crystallization memo Participation	20% 30% 15% 20%		
		<b>Process-tracing response paper</b>	15%

#### **Penalties for lateness**

Assignments handed in after the deadline will lose **2 points** on a 100-point scale for **each day**, including weekend days. The first day's penalty will be incurred by papers that come in on the right day but after the time at which they are due.

#### Missed classes

Because class participation is a central part of the learning experience, I will ask students who miss a class to write me a 2-3 page, informal memo (can be short bullet points) with their thoughts on two or more of the readings for the week. This memo is due one week after the missed class. The memo is not meant to be an onerous task and will not be marked. It is intended to encourage and demonstrate analytical and critical engagement with the literature like that which we will be pursuing in seminar discussions. It is also highly recommended that students get a copy of notes taken by a fellow class member.

#### **ACADEMIC INTEGRITY**

The University considers plagiarism to be the most serious academic offence that a student can commit. Whether intentional or accidental, instances of plagiarism will have serious academic consequences.

In my experience, many students who believe they know what plagiarism is do not actually have a clear understanding of where the line between proper and improper use of sources lies. I thus encourage you to read the UBC Library's excellent guide at http://learningcommons.ubc.ca/guide-to-academic-integrity/

## ACCOMMODATION, CONCESSIONS, AND OTHER INFORMATION

## Accommodation

The University accommodates students with disabilities who have registered with the Center for Accessibility. The University accommodates students whose religious obligations conflict with attendance, submitting assignments, or completing scheduled tests and examinations. Please let me know in advance, preferably in the first week of class, if you expect to require accommodation on any of these grounds. Students who plan to be absent for varsity athletics, family obligations, or other similar commitments, cannot assume they will be accommodated, and should discuss their commitments with me before the course drop date.

#### **Concessions**

Students who need an <u>in-term concession</u>, such as additional time for an assignment or being excused from attending class, must contact me via email **as soon as the problem arises**. This usually means **before the assignment due date or the missed class**. Requests for accommodation made after an assignment's due date may not be considered. Please include with your request a Student Self-Declaration form, found on the <u>Arts Advising website</u>. If you require a second in-term concession, I may ask for documentation to support the request.

Concessions are generally reserved for <u>unforeseeable</u> events that are <u>outside a student's control</u>. Having multiple papers due in the same week is not grounds for a concession. When you know of such situations ahead of time, it is your responsibility to organize your work for this course so that you can turn in the assignment on time. This may mean getting an early start on a paper. In general, a valid request for concession will fall into one of three categories:

- **Conflicting responsibilities**: if a non-academic responsibility interferes with your ability to fulfill course requirements in a timely manner. This includes the need to care for a family member; religious observance, representing UBC, BC, or

Canada in a competition or performance; military service; court proceedings). Normally, we expect that you will choose your courses in a way that makes it possible to fulfill your academic commitments and other responsibilities that you know that you have. Thus, concessions for conflicting responsibilities will usually be limited to situations in which the new responsibilities arose after you had enrolled in the course. You should, of course, also make sure that the responsibilities that you have to each of your courses do not conflict with one another.

- **Medical reasons:** if an acute medical condition or the emergence/change in a chronic medical condition, including both physical and mental health, interferes with your ability to fulfill course responsibilities in a timely manner.
- **Compassionate reasons:** relating to a traumatic event experienced by you, a family member, or a close friend.

Extensions will usually not be granted for work lost due to computer crashes or the loss of a computer file. The reason for this is that there are simple and free ways of regularly and automatically backing up your work. I recommend that all students subscribe to a free, automatic online backup service. These services will ensure that your files are backed up to a remote server at least once a day, and often continuously or every time you hit "Save". Thus, even if your computer dies, there is no reason you should not be able to retrieve a quite current copy of your work.

IMPORTANT: All accommodations or concessions must be recorded in writing via email. It is the <u>student's</u> responsibility to ensure that there is an email record of any accommodation or concession s/he has received. Thus, even if we have had a face-to-face conversation about an extension, you must send me an email confirming the accommodation. This simply ensures that we have a record of any individualized arrangements that have been made.

Students should retain a copy of all submitted assignments (in case of loss) and should also retain all their marked assignments in case they wish to apply for a Review of Assigned Standings.

#### Meeting with me

I am very happy to meet to discuss any issues or concerns that arise over the course of the term. This includes further discussion of substantive topics in the course, problems you may be having completing requirements, or concerns you have about the way the course is being run. If you cannot make it to my office hours, please see me after class or email me to make an appointment at another time. For issues that can be dealt with electronically, email is usually the fastest way to reach me, and I tend to respond quickly.

## Re-grading and re-write policy

If you believe that you did not receive the grade that you deserved on a written assignment, you may request that I regrade the assignment. However, you must follow the following procedure. (1.) Period of reflection: It is easy to react with shock or anger to a grade that is lower than what one expected, and this can prevent one from taking in and reflecting on the comments provided. Requests for regrading will not be considered within 5 days of the return of a graded assignment (i.e., you must wait 5 days to make the request). (2.) Written response: You will always receive comments on your written work, accompanying the grade. Before you ask for a regrade, I want to know how you are thinking about the points I have raised. You must thus write a response (may be very brief or more extended) to each comment that I have provided, indicating what you take/learn from the comment and any point on which you disagree and why. The idea here is not for this to be a defense of your work, but part of a dialogue and deliberation in which both of us will be open to the other's reasoning and perspective. (3.) Explanation: Provide a short explanation (max. 150 words) explaining why you think you deserve a different grade. (4.) Regrade: I will then re-read and re-grade the assignment. Note that there is no guarantee that the grade will change. There is also no guarantee that a change will be in your favor; occasionally, a regrade may result in a lower grade if my further engagement with the paper or exam reveals difficulties that I had not initially noticed. I will inform you of the final grade as soon as possible.

Given the substantial amount of time that grading student work requires, I do not accept rewrites of assignments or exams for a new grade.

# **Statement on UBC Values and Support Resources**

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available here (https://senate.ubc.ca/policies-resources-support-student-success)

# **COURSE TOPICS AND REQUIRED READINGS**

# Part I Research goals

#### Session 1. Goals I: Introduction (Jan. 15)

Tannenwald, Nina. 1999. "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use." *International Organization*. 53(3): 433-468.

Immergut, Ellen M. (1992). "The rules of the game: The logic of health policy-making in France, Switzerland, and Sweden." *Structuring Politics: Historical Institutionalism in Comparative Analysis*. S. Steinmo, K. Thelen and F. Longstreth. New York, Cambridge University Press: 57-89.

O'Mahoney, Joseph. 2017. "Making the Real: Rhetorical Adduction and the Bangladesh Liberation War." *International Organization* 71(2): 317-348. **Focus mostly on the ATI annotations.** Read this version, with Annotation for Transparent Inquiry (ATI):

ngladesh liberation war.pdf#annotations:group:zvEVDE2R

https://via.hypothes.is/https://www.cambridge.org/core/services/aop-cambridge-core/content/view/D7396F6DFDE0914CD3C1C8D7A7141BF9/S0020818317000054a.pdf/making the real rhetorical adduction and the ba

# Session 2. Goals II: Questions, answers, theory (Jan. 22)

Przeworski, Adam, and Henry Teune. *The logic of comparative social inquiry*. New York: Wiley-Interscience, 1970, Chapter 1, pp. 17-30.

Popper, Karl R. *Conjectures and refutations: the growth of scientific knowledge*. London: Routledge and K. Paul, 1965, part of Chapter 1, (pp. 33-59).

For examples of theoretical "causal logics," refer to:

Owen, John M. 1994. "How Liberalism Produces Democratic Peace." *International Security* 19(2). **READ ONLY:** 

• pp. 87-101 plus Figure 1: pay particular attention to causal logic on pp. 93-101

Jacobs, Alan M. 2008. "The Politics of When: Redistribution, Investment, and Policymaking for the Long Term." *British Journal of Political Science* 38 (2). **READ ONLY:** 

• pp. 193 to top of p. 208: pay particular attention to causal logic on pp. 203 to top of 208

Ross, Michael. 2008. "Oil, Islam, and Women." *American Political Science Review*. 102(1). **READ ONLY:** 

• pp. 107-110 (skipping short section on South Korea): pay particular attention to causal logic of theoretical argument on pp. 109-110.

# Session 3. Goals III: Causality and causal explanation (Jan. 29)

Marini, Margaret Mooney, and Burton Singer. 1988. "Causality in the social sciences." *Sociological methodology* 18347-409: **ONLY PAGES 347-363**.

Morgan, Stephen L., and Christopher Winship. 2014. *Counterfactuals and Causal Inference: Methods and Principles for Social Research*. 2nd ed. Cambridge University Press, pp. 37-48.

King, Gary, Robert O. Keohane, and Sidney Verba. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press, 1994, Sec. 3.1-3.2 (pp. 76-91).

Cartwright, Nancy. 1979. "Causal laws and effective strategies." Noûs. 13(4): 419-437.

# Part II Correlational Approaches to Causal Inference

#### Session 4. The small-n comparative method (Feb. 5)

Mill, John Stuart. 1868. *A System of Logic*. London: Longmans, pp. 425-448, 482-489 [page numbers refer to the specific edition in course pack].

Skocpol, Theda and Margaret Somers (1980). "The Uses of Comparative History in Macrosocial Inquiry." *Comparative Studies in Society and History* 22: 174-97.

@ Immergut, Ellen M. (1992). "The rules of the game: The logic of health policy-making in France, Switzerland, and Sweden." *Structuring Politics: Historical Institutionalism in Comparative Analysis*. S. Steinmo, K. Thelen and F. Longstreth. New York, Cambridge University Press: 57-89.

Posner, Daniel N. "The political salience of cultural difference: Why Chewas and Tumbukas are allies in Zambia and adversaries in Malawi." *American Political Science Review* 98, no. 4 (2004): 529-545.

Lieberson, Stanley. "Small N's and Big Conclusions: An Examination of the Reasoning in Comparative Case Studies Based on a Small Number of Cases." *Social Forces* 70, no. 2 (1991): 307-320.

# Session 5. The logic of statistical analysis (Feb. 12)

KKV, sections 2.6 and 2.7

Sykes, Alan. O. (1993). "An Introduction to Regression Analysis," University of Chicago Law School, Working Paper in Law and Economics No. 20. Available at: <a href="http://www.law.uchicago.edu/Lawecon/WkngPprs\_01-25/20.Sykes.Regression.pdf">http://www.law.uchicago.edu/Lawecon/WkngPprs\_01-25/20.Sykes.Regression.pdf</a>

Fox, William, Social Statistics, pp. 225-232, 257-279.

Boix, Carles. 1999. "Setting the Rules of the Game: The Choice of Electoral Systems in Advanced Democracies." *American Political Science Review* 93 (3): pp. 609-624.

Maoz, Zeev, and Bruce Russett. 1993. "Normative and Structural Causes of Democratic Peace, 1946-1986." *American Political Science Review* 87 (3):624-38.

## Session 6. Challenges of Causal Inference: King, Keohane, and Verba (Feb. 26)

Rohrer, Julia M. 2018. "Thinking Clearly About Correlations and Causation: Graphical Causal Models for Observational Data." *Advances in Methods and Practices in Psychological Science*. 1(1): 27-42.

KKV [Read all except Chapter 4, Section 5.1, and sections previously read. Technical proofs in boxes are optional.]

# Part III Within-Case Causal Inference: Process Tracing

Session 7. The logic of process tracing as causal inference (March 5)

Hall, Peter A. 2003. "Aligning Ontology and Methodology in Comparative Politics." Pp. 373-404 in *Comparative Historical Analysis in the Social Sciences*, edited by James Mahoney and Dietrich Rueschemeyer. New York: Cambridge University Press.

Collier, David, Henry E. Brady, and Jason Seawright. 2010. "Toward an Alternative View of Methodology: Sources of Leverage in Causal Inference." In *Rethinking Social Inquiry: Diverse Tools*, *Shared Standards*, edited by Henry E. Brady and David Collier.

McKeown, Timothy J. 1983. "Hegemonic Stability Theory and 19th Century Tariff Levels in Europe." *International Organization* 37:73-91.

Johnston, Alastair Iain. 1996. "Learning Versus Adaptation: Explaining Change in Chinese Arms Control Policy in the 1980s and 1990s." *The China Journal*: 27-61.

Tannenwald, Nina. 1999. "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use." *International Organization*. 53(3): 433-468.

Jacobs, Alan M. 2008. "The Politics of When: Redistribution, Investment and Policymaking for the Long Term." *British Journal of Political Science*. 38(2): 193-220.

# Session 8. Types of Causal Process Observations (March 12)

## \*\*PROCESS TRACING RESPONSE PAPER DUE IN CLASS\*\*

Mahoney, James. 2010. "After KKV: The New Methodology of Qualitative Research." *World Politics*. 62(1): 120-47 – **read only pp. 120-131.** 

Owen, John M. 1994. "How Liberalism Produces Democratic Peace." *International Security* 19 (2):87-125.

Snyder, Jack, and Erica D. Borghard. 2011. "The Cost of Empty Threats: A Penny, Not a Pound." *American Political Science Review* 105 (03):437-56.

Fairfield, Tasha. 2013. "Going Where the Money Is: Strategies for Taxing Economic Elites in Unequal Democracies." *World Development*, 47: 42-57. **Be sure to read Appendix.** 

Jacobs, Alan M. 2011. "Process Tracing and Ideational Theories." In *Process Tracing: From Metaphor to Analytic Tool*. Edited by Andrew Bennett and Jeffrey Checkel. New York: Cambridge University Press.

Jacobs, Alan M. 2009. "How Do Ideas Matter? Mental Models and Attention in German Pension Politics." *Comparative Political Studies*. 42(2): 252-279.

# Session 9. Process tracing as Bayesian analysis (March 19)

Van Evera, pp. 30-34.

Collier, David. 2011. "Understanding Process Tracing." *PS: Political Science and Politics*. 44:4: 823-830. (Easy download at: <a href="http://polisci.berkeley.edu/sites/default/files/people/u3827/Understanding%20Process%20Tracing.pdf">http://polisci.berkeley.edu/sites/default/files/people/u3827/Understanding%20Process%20Tracing.pdf</a>)

This very short introductions to Bayes' rule:

http://www.cs.ubc.ca/~murphyk/Bayes/bayesrule.html

Bennett, Andrew. 2015. "Appendix." In *Process Tracing: From Metaphor to Analytic Tool*. Edited by Andrew Bennett and Jeffrey Checkel. New York: Cambridge University Press.

Fairfield, Tasha and Candeleria Garay. "Redistribution Under the Right in Latin America: Electoral Competition and Organized Actors in Policymaking." *Comparative Political Studies*. 2017;50(14):1871-1906. Focus especially on the Appendix on Bayesian Process Tracing, found in the article's Supplementary Material at: <a href="https://journals.sagepub.com/doi/suppl/10.1177/0010414017695331/suppl\_file/Fairfield\_Garay\_Appendix\_2017.pdf">https://journals.sagepub.com/doi/suppl/10.1177/0010414017695331/suppl\_file/Fairfield\_Garay\_Appendix\_2017.pdf</a>

#### Recommended (and more advanced):

Fairfield, Tasha and Andrew Charman. "Explicit Bayesian analysis for process tracing: Guidelines, opportunities, and caveats." *Political Analysis* 25, no. 3 (2017): 363-380.

Zaks, Sherry. "Relationships Among Rivals (RAR): A Framework for Analyzing Contending Hypotheses in Process Tracing." *Political Analysis* 25, no. 3 (2017): 344-362.

# Session 10. Case Selection for Process Tracing (March 26)

KKV, Chapter 4.

Geddes, Barbara. 1990. "How the Cases You Choose Affect the Answers You Get: Selection Bias in Comparative Politics." *Political Analysis* 2:131-150.

Collier, David, James Mahoney and Jason Seawright. 2004. "Claiming too Much: Warnings about Selection Bias." in *Rethinking Social Inquiry: Diverse Tools, Shared Standards*, edited by Henry E. Brady and David Collier.

George, Alexander L., and Andrew Bennett. *Case Studies and Theory Development in the Social Sciences*. Cambridge, MA: MIT Press, 2005, pp. 120-123.

Lieberman, Evan S. "Nested Analysis as a Mixed-Method Strategy for Comparative Research." *American Political Science Review.* 99(3): 435-452.

# Session 11. Multi-Method Research: Combining Qualitative and Quantitative Causal Inference Strategies (April 9)

Seawright, Jason. 2016. *Multi-Method Social Science*. New York: Cambridge University Press. **Chapters 1, 2, 3, 4, 7, 8.**