POLI 3330: Understanding Social Science Research
Section 110 (Fall 2018)
6-9 PM Mon / FH 303

Dr. Jeffrey Dixon
Office: Founder’s Hall 217A
Email: JeffreyDixon@tamuct.edu
Phone: (254) 501-5871 (email preferred)
Office Hours: 4:30 PM – 6 PM MTWR or by appointment

Catalog Description
Prepares students to understand political science research. Topics covered will include hypothesis testing, measurement, formal modeling, and statistical analysis. Statistical concepts covered include central tendencies and statistical distributions, regression, and maximum likelihood estimation.

Course Overview
Understanding Social Science Research is designed to enable students to understand quantitative research in political science. It begins with the essential principles of critical evaluation of sources and the method of hypothesis testing, and then proceeds to the mathematical tools most commonly used in quantitative political science research. The emphasis is on preparing students to read and understand sophisticated research so they can judge controversial – or merely novel – claims about politics and other social-scientific concepts based on the best available research and scholarship. This course meets face-to-face, with supplemental materials made available online through the A&M-Central Texas Canvas Learning Management System [https://tamuct.instructure.com].

Course Objectives and Learning Outcomes
Upon completion of this course, the student will be able to:
1. Derive testable and falsifiable hypotheses from empirical theories of politics
2. Distinguish between normative and empirical questions
3. Distinguish between independent and dependent variables, as well as antecedent, intervening, and alternative variables
4. Identify the types and tests of measurement reliability and validity
5. Evaluate research designs for external validity, internal validity, and construct validity
6. Find the central tendency of any variable
7. Distinguish between variables which are normally distributed and those which are not
8. Describe and evaluate difference of means tests
9. Identify the proper measure of association between two variables to use given the data
10. Distinguish between significance of individual variables and the goodness-of-fit of the model as a whole
11. Identify the statistically significant independent variables, their direction of effect, and the relative magnitude of their effects when given the results of a multivariate linear regression in political science research
12. Identify the statistically significant independent variables and their direction of effect when given results of logit or probit (binary, ordered, and multinomial), duration, count, and at least one multistage models.
13. Interpret such quantitative social science research and communicate that interpretation in speech and writing
14. Evaluate the political biases of sources
15. Master the use of academic technology to find and interpret data to solve problems.

In-class exercises are directed at objectives 1-13. In addition, the quantitative literature review and presentation assesses outcomes 12 and 13. The source evaluation exercise assesses outcome 14. The academic scavenger hunt assesses outcome 15. The hypotheses and variables exercise assesses outcomes 1, 3 and 12. The final exam assesses outcomes 2-12.

**Required Readings**
The following book is required and should be available for purchase at the bookstore. You are under no obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer. Unlike some of my courses, e-books are fine for this one.


Other required readings may be found on Canvas.

**Technology Requirements and Support**
This course will use the Texas A&M-Central Texas Instructure Canvas learning management system. [https://tamuct.instructure.com].

- **To log on:**
  Username: Your MyCT username (everything before the "@" in your MyCT e-mail address)
  Password: Your MyCT password

- **Canvas Support:** Use the Canvas Help link, located at the bottom of the left-hand menu, for issues with Canvas. You can select “Chat with Canvas Support,” submit a support request through “Report a Problem,” or call the Canvas support line: 1-844-757-0953. For issues related to course content and requirements, contact your instructor.

- **Other Technology Support:** For log-in problems, students should contact Help Desk Central.
  24 hours a day, 7 days a week:
  Email: helpdesk@tamu.edu
  Phone: (254) 519-5466
  Web Chat: [http://hdc.tamu.edu]

*Please let the support technician know you are an A&M-Central Texas student*
**Writing-Intensive Course Requirements**

This is a writing-intensive course. That means that one objective of the course is to improve student writing. In concrete terms, all assignments for this course should be considered writing assignments as well as substantive ones. Your submissions should always be typed (although diagrams may be hand-drawn) and in the form of full sentences or paragraphs as appropriate. Grammar and spelling errors will reduce the credit you receive, even for otherwise correct answers. See Canvas for a link to my pet grammatical peeves.

Of course, good writing requires more than correct spelling and grammar, and in longer pieces I’m looking for a thesis, for paragraphs to have topic sentences, and for well-cited and evidence-based argumentation. An argument is complete if it contains a claim (something you are trying to prove), evidence (properly-cited, of course), and a warrant (the evidence logically supports the claim). The citation system we’ll be using in this class is that of the American Political Science Association (APSA), which is a slightly modified form of the parenthetical documentation system in the Chicago Manual of Style (not the note system found in the same volume). A guide to APSA citations is available on Canvas.

**Grading (90/80/70/60, rounded to the nearest percentile)**

**Academic Integrity Exercise.** This consists of watching a brief lecture on Canvas, downloading and taking a quiz, seeing where any mistakes on the quiz came from, and signing a statement. Once you successfully complete this exercise, you will no longer need to do so in future political science courses. If you have previously completed it for me, you do not need to do so for this course.

***Completing the Academic Integrity Exercise is a prerequisite to passing this course. It must be completed by the due date on the syllabus.***

- **Rubric:** You will automatically fail the course if you have not completed the Academic Integrity exercise on or before its due date.

**Homework Assignments (30% total).** There are five homework assignments attached to this syllabus. *All homework assignments should be typed, printed, and submitted in person by the due date.* Assignments may be emailed in the event of an excused absence; bring a hard copy for me to grade when you return. Each assignment is attached at the end of this syllabus, as well as a simple rubric of how many points each element is worth. Note that each grammar/spelling error will reduce your assignment grade by 1%, up to a limit of 20% deducted.

**Quantitative Literature Review (31%) – See Appendix IV for Rubrics**

1. Research Proposal: Students must type one page (approximately 300-400 words) about their research question, clearly identifying why it is important, the dependent variable of interest, and as many independent/control variables as possible. The research question must be an empirical question about politics and fall into one of the following subfields: American politics, comparative politics, or international relations. A list of 108 ideas for your research question is attached to the syllabus; these can serve as jumping-off points for studying what interests you. Any references should be cited using the APSA system (30 points).

2. Annotated References: Students must produce a list of at least seven (7) academic articles or books since 1993—at least three of which should be from 2011 or later -- that study their dependent variable (or a closely-related variable) using their own quantitative statistical analysis. Provide a full APSA citation for each source. After each article, the student should identify the dependent variable studied by the author as well as the statistical model(s) used by the author in one sentence. It is not necessary to understand the statistical model(s) yet, but what does the author call them? Common examples include esoteric acronyms and terms such as OLS, GLS, probit (standard, ordered or...
multinomial), logit (standard, ordered, or multinomial), Cox, Weibull, ANOVA, Poisson, ZINB, negative binomial, etc. The purpose of this requirement is to help you filter the articles for the next stage of the QLR – you’ll want to end up selecting articles that use techniques we cover in class, or that can be understood with the generic method of interpreting unfamiliar statistical techniques that I’ll be teaching you. (40 points)

For example, if I was studying what causes some people to support President Trump more than others (i.e. my dependent variable is support for Trump), I might annotate the following reference:

Grillo, Michael C. 2017. “Nationalist Politics: The Role of Predispositions and Emotions.” In Why Irrational Politics Appeals: Understanding the Allure of Trump, ed. Mari Fitzduff. Santa Barbara, CA: Praeger, pp. 87-106. [This will end up in the Works Cited section of the QLR]

Grillo (2017) uses support for Trump as his dependent variable. He predicts support for Trump using OLS regression.

3. Quantitative Literature Review Draft (70 points). Students will be required to type 2000-5000 words interpreting and reviewing at least five (I suggest no more than 10) peer-reviewed articles or books from academic presses that use quantitative (statistical) analysis, in order to see what others have discovered about their question. You do not have to use the ones from your annotated references. The literature review should be typed, double-spaced, with page numbers and use of APSA citations in text.
   a. Create a cover page. Come up with a title other than “literature review” or the like (you may want to save this part for last, since you may not know your thesis yet); add your name and institutional affiliation (presumably, Texas A&M University – Central Texas).
   b. Begin the literature review by establishing your question and its importance. This should take a paragraph or two.
   c. Then provide a thesis about the research on that question. This could take the form of an answer to the question suggested by the research, a claim that the research can be divided into several categories (each with its own approach to the question), or that the research to date has been inadequate (if so, you should provide an idea -- or several -- for better researching the question near the end of your literature review). This should not take more than a paragraph, and the thesis itself should be a single sentence.
   d. Now establish your thesis through a review of each piece of the literature – its dependent variable, its theoretical approach (answer) to the question, its research design, its statistical methods, and your interpretation of the statistical results (which may well differ from the author’s own interpretations). Conclude your discussion of each piece of literature by examining the weaknesses of the author’s approach and what knowledge we gain from the study (if any).
   e. Conclude by comparing the literature you’ve just reviewed, taking care to provide the necessary warrants that connect the studies to your thesis. Suggest a path for future researchers to follow.
   f. Attach a works cited page in APSA format.

4. Quantitative Literature Review (130 points). Make revisions in response to the feedback from the instructor and resubmit your final literature review.

5. QLR Presentation. Students should prepare a presentation of about 10 minutes (8-12 is the limit) on the findings from their QLR. A PowerPoint presentation or physical handout must be used to
communicate the statistical information in at least one of your articles to your listeners. You can opt to present a single article as if it were your own research, addressing the question, the theory used to answer that question, the hypotheses of the study, the statistical support for some or all of those hypotheses, and your evaluation of what research remains to be done on the question. Alternatively, you can compare all five (or more) articles, using a table or other means to show the similarities and differences between their dependent variables, independent variables, statistically significant findings, and any limitations or weaknesses. You could also opt for an approach between these two extremes. The key to the presentation is demonstrating that you can take quantitative social science and explain it to others who have minimal quantitative training. (40 points)

In-Class Exercises (14%). These brief exercises will ask students to solve a problem, usually by interpreting one or more tables of statistical results or graphs. The class can then discuss the real-world implications of the theory being tested, and whether the test tends to disconfirm the theory.

Final Exam (25%). The final exam will consist of a series of problems designed to assess learning outcomes 2-12, listed on the first page of the syllabus. There will be three problems for each outcome except for 12, which will have eighteen problems dedicated to it (three for each type of data: interval, binary, ordinal, nominal, count, and duration). Therefore, the exam will consist of a total of 48 problems. The exam is open-notes and open-book (but electronic devices must remain in airplane mode). You should bring a blue book or two for the exam, for it calls for short answers (often just a word or a number, but sometimes a sentence or two) to the questions. Calculators are permitted, although you should only need them for one or two questions.

<table>
<thead>
<tr>
<th>Overall POLI 3330 Course Rubric</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Item</strong></td>
</tr>
<tr>
<td>Academic Integrity Exercise</td>
</tr>
<tr>
<td>Homework: Fact-Checking Exercise</td>
</tr>
<tr>
<td>Homework: Hypotheses and Variables Exercise</td>
</tr>
<tr>
<td>Homework: Academic Scavenger Hunt</td>
</tr>
<tr>
<td>Homework: Survey Exercise</td>
</tr>
<tr>
<td>Homework: Quantitative Article Review</td>
</tr>
<tr>
<td>QLR: Research Proposal</td>
</tr>
<tr>
<td>QLR: Annotated References</td>
</tr>
<tr>
<td>QLR: Draft</td>
</tr>
<tr>
<td>QLR: Literature Review</td>
</tr>
<tr>
<td>QLR: Presentation</td>
</tr>
<tr>
<td>In-Class Exercises</td>
</tr>
<tr>
<td>Final Exam</td>
</tr>
<tr>
<td><strong>TOTAL POSSIBLE</strong></td>
</tr>
</tbody>
</table>

895+ = A  795-894=B  695-794=C  595-694=D  594 or lower = F

Course Policies

Late/Incomplete Policies for POLI 3330

- There will be no incompletes in this class, barring actual hospitalization or unforeseen deployment after the withdrawal deadline has passed.
- Late homework assignments will receive zero credit. As for the QLR, any late element (except for
the presentation) loses 10% of its possible credit per day (so a week late = only 30% of the credit that would otherwise be earned will remain). Missed QLR presentations may not be made up and will receive zero credit.

Absences and Make-Up Work

• Attendance is required. If absent, let the instructor know in advance if possible and ASAP if some emergency arises at the last minute. Failure to do so will mean an unexcused absence (no participation or homework credit for the day).

• Make-up work is required for any excused absence. It makes up for the inability of the student to participate in the class. I will generally have you complete the group discussion exercise I assigned in class. Note that this is in addition to completing the homework for the missed session – the two are graded separately. When you return from an excused absence, be sure to request the make-up work. It is your duty to ask, not the instructor’s duty to remind you. Make-up work is due one week after it is assigned, or by the last session of the course – whichever is sooner.

Regrade Policy: It is possible for me to make a mistake when grading. If you think that I graded part or all of an assignment incorrectly, you have one week to return it to me for regrading against the rubric or key. You may request that all or only part of the assignment be regraded. I take no offense at this. The same policy applies to the final exam; you have one week from when grades are posted to request a regrade of any questions.

Academic Integrity

University Code of Academic Honesty: Texas A&M University – Central Texas values the integrity of the academic enterprise and strives for the highest standards of academic conduct. It expects its students, faculty, and staff to support the adherence to high standards of personal and scholarly conduct to preserve the honor and integrity of the creative community. Academic integrity is defined as a commitment to honesty, trust, fairness, respect, and responsibility. Any deviation by students from this expectation may result in a failing grade for the assignment and potentially a failing grade for the course. Academic misconduct is any act that improperly affects a true and honest evaluation of a student’s academic performance and includes, but is not limited to, cheating on an examination or other academic work, plagiarism and improper citation of sources, using another student’s work, collusion, and the abuse of resource materials. All academic misconduct concerns will be reported to the university’s Office of Student Conduct. Ignorance of the university’s standards and expectations is never an excuse to act with a lack of integrity. When in doubt on collaboration, citation, or any issue, please contact your instructor before taking a course of action.

Specific guidelines for this course, which supplement and do not replace University policy:

• Violations: There are plenty of ways to cheat listed by the Student Handbook. Some common violations of academic integrity that I have observed while teaching similar classes at TAMUCT are
  o Copying another student’s homework. I encourage study groups, but copying must be avoided.

  Discuss the readings as long as you wish, but don’t “share” the contents of your assignments before they are due. You may not “jointly” complete any of the homework exercises in this course unless otherwise indicated on the assignment; these are to be completed by yourself alone. If you provide another student with a copy of your homework and they copy it, both you and the copier will be deemed to have violated the policy.
o Using direct quotes without quotation marks. Even if you are just using three- or four-word phrases, you need to surround them with quotation marks if you didn’t create them yourself. This is true even if you cite the source! Remember that changing a few words in a sentence does not transform a direct quote into a paraphrase; instead, it transforms one long direct quote into several shorter direct quotes with a word of your own between each. A true paraphrase is the expression of the cited source’s ideas in your own words.

o Paraphrasing another person’s words without citing the source.

• **Penalties:**
  
o The normal penalty for a violation of academic integrity (whether or not it is specifically listed above) in any of my classes is a grade of zero for the work or a deduction of 20% (two letter grades) from your course grade, whichever is greater. The infraction will be reported to the TAMUCT administration, with a recommendation for probation in the case of deliberate violation or remediation in the case of clearly inadvertent violation.
  
o The (a) outright purchase, download, or completion by others of an exam/QLR element, or (b) second or subsequent violation of academic integrity (in this course or other courses) display such serious disregard for academic integrity that either one of them will result in course failure and recommendation for appropriate action to the TAMUCT administration.

**Drop Policy**

If you discover that you need to drop this class, you must complete a [Drop Request Form](https://www.tamuct.edu/registrar/docs/Drop_Request_Form.pdf). Professors cannot drop students; this is always the responsibility of the student. The Registrar’s Office will provide a deadline on the Academic Calendar for which the form must be completed, signed and returned. Once you return the signed form to the Registrar’s Office, you must go into Warrior Web and confirm that you are no longer enrolled. If you still show as enrolled, FOLLOW-UP with the Registrar’s Office immediately. You are to attend class until the procedure is complete to avoid penalty for absence. Should you miss the drop deadline or fail to follow the procedure, you will receive an F in the course, which may affect your financial aid and/or VA educational benefits.

**Student Resources**

• **911Cellular** (Emergency Warning System for Texas A&M University – Central Texas): 911Cellular is an emergency notification service that gives Texas A&M University-Central Texas the ability to communicate health and safety emergency information quickly via email, text message, and social media. All students are automatically enrolled in 911Cellular through their myCT email account.
  
o Connect at [911Cellular](https://portal.publicsafetycloud.net/Texas-AM-Central/alert-management] to change where you receive your alerts or to opt out. By staying enrolled in 911Cellular, university officials can quickly pass on safety-related information, regardless of your location.

• **University Library:** The University Library provides many services in support of research across campus and at a distance. We offer over 200 electronic databases containing approximately 250,000 eBooks and 82,000 journals, in addition to the 85,000 items in our print collection, which can be mailed to students who live more than 50 miles from campus. Research guides for each subject taught at A&M-Central Texas are available through our website to help students navigate these resources. On campus, the library offers technology including cameras, laptops, microphones, webcams, and digital sound recorders.
  
o Research assistance from a librarian is also available 24 hours a day through our online chat service, and at the reference desk when the library is open. Research sessions can be scheduled for more comprehensive assistance, and may take place on Skype or in-person at the library.
Assistance may cover many topics, including how to find articles in peer-reviewed journals, how to cite resources, and how to piece together research for written assignments.

- Our 27,000-square-foot facility on the A&M-Central Texas main campus includes student lounges, private study rooms, group work spaces, computer labs, family areas suitable for all ages, and many other features. Services such as interlibrary loan, TexShare, binding, and laminating are available. The library frequently offers workshops, tours, readings, and other events. For more information, please visit our Library website [http://tamuct.libguides.com/index].

- **Access & Inclusion:** At Texas A&M University-Central Texas, we value an inclusive learning environment where every student has an equal chance to succeed and has the right to a barrier-free education. The Office of Access and Inclusion is responsible for ensuring that students with a disability receive equal access to the university’s programs, services and activities. If you believe you have a disability requiring reasonable accommodations please contact the Office of Access and Inclusion at (254) 501-5831. Any information you provide is private and confidential and will be treated as such. For more information please visit our Access & Inclusion web page [https://www.tamuct.edu/student-affairs/access-inclusion.html]. Any information you provide is private and confidential and will be treated as such.

  - **Important information for Pregnant and/or Parenting Students:**
    - Texas A&M University-Central Texas supports students who are pregnant and/or parenting. In accordance with requirements of Title IX and related guidance from US Department of Education’s Office of Civil Rights, the Dean of Student Affairs’ Office can assist students who are pregnant and/or parenting in seeking accommodations related to pregnancy and/or parenting. Students should seek out assistance as early in the pregnancy as possible. For more information, please visit the Student Affairs web page [https://www.tamuct.edu/student-affairs/index.html].
    - Students may also contact the institution’s Title IX Coordinator. If you would like to read more about these requirements and guidelines online, please visit the website [http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf].
    - Title IX of the Education Amendments Act of 1972 prohibits discrimination on the basis of sex and gender—including pregnancy, parenting, and all related conditions. Texas A&M University-Central Texas is able to provide flexible and individualized reasonable accommodation to pregnant and parenting students. All pregnant and parenting students should contact the Associate Dean in the Division of Student Affairs at (254) 501-5909 to seek out assistance. Students may also contact the University’s Title IX Coordinator.

- **Tutoring:** Tutoring is available to all A&M-Central Texas students, both on-campus and online. Subjects tutored on campus include Accounting, Advanced Math, Biology, Finance, Statistics, Mathematics, and Study Skills. Tutors are available at the Tutoring Center in Warrior Hall, Suite 111.
  - If you have a question regarding tutor schedules, need to schedule a tutoring session, are interested in becoming a tutor, or have any other question, contact Academic Support Programs at (254) 519-5796, or by emailing Dr. DeEadra Albert-Green at deeadra.albertgreen@tamuct.edu.
  - Chat live with a tutor 24/7 for almost any subject from on your computer! Tutor.com is an online tutoring platform that enables A&M-Central Texas students to log in and receive FREE online tutoring and writing support. This tool provides tutoring in over 40 subject areas. Access Tutor.com through Canvas.
University Writing Center: Located in Warrior Hall 416, the University Writing Center (UWC) at Texas A&M University–Central Texas (TAMUCT) is a free workspace open to all TAMUCT students from 10:00 a.m.-5:00 p.m. Monday thru Thursday with satellite hours in the University Library Monday thru Thursday from 6:00-9:00 p.m. This semester, the UWC is also offering online only hours from 12:00-3:00 p.m. on Saturdays.

- Students may arrange a one-on-one session with a trained and experienced writing tutor by visiting the UWC during normal operating hours (both half-hour and hour sessions are available) or by making an appointment via WCONline at [https://tamuct.mywconline.com/]. In addition, you can email Dr. Bruce Bowles Jr. at bruce.bowles@tamuct.edu for any assistance needed with scheduling.
- Tutors are prepared to help writers of all levels and abilities at any stage of the writing process. While tutors will not write, edit, or grade papers, they will assist students in developing more effective composing practices. By providing a practice audience for students’ ideas and writing, our tutors highlight the ways in which they read and interpret students’ texts, offering guidance and support throughout the various stages of the writing process. In addition, students may work independently in the UWC by checking out a laptop that runs the Microsoft Office suite and connects to WIFI, or by consulting our resources on writing, including all of the relevant style guides. Whether you need help brainstorming ideas, organizing an essay, proofreading, understanding proper citation practices, or just want a quiet place to work, the UWC is here to help!
- If you have any questions about the UWC, please do not hesitate to contact Dr. Bruce Bowles Jr. at bruce.bowles@tamuct.edu.

Amendments: Not all exigencies can be foreseen. I reserve the right to amend the syllabus at any time. Any such amendment will be provided to the students in writing (probably by uploading a revised syllabus to the course on Canvas).

Instructor's Personal Statement
(not required reading, but may be of interest)

I strive to provide my students with a liberal arts education. Such an education is intended to expand human potential by emphasizing critical thinking skills, strong writing and oral communication skills, and perceptive responses to others’ arguments. These goals enable students to become lifelong learners, community members, and ultimately to lead rewarding lives. Therefore, under the broad rubric of a liberal arts approach to teaching, I emphasize four objectives in my teaching: development of critical thinking skills, advancement of writing and speaking skills, moral development, and mastery of what in my judgment constitutes the “core” of the area under study. These goals determine how I construct course syllabi, which materials I use, and how I manage the classroom.

Critical Thinking Skills

Students should learn to think critically about the material in the course (primarily readings, but also handouts, lectures and the occasional film). This is a difficult skill to learn, but one that pays dividends in every other class and in the outside world. After all, we want educated and critical citizens.

I divide critical thinking skills into three components. First, students must be perceptive readers and listeners. Even where the course readings consist largely of a standard textbook, I try to model this skill in class discussions by initially responding to many questions with “Are you asking X, Y, or Z?” This isn’t evasion or stalling—rather, understanding the nuances of an argument is a prerequisite to analyzing it.

Second, students should have the ability to challenge and dissect arguments made by the course
materials, fellow students, or myself. There are some students who are looking for “the way it is” to be handed to them from on high. I aim to challenge those students by presenting concrete, unsolved puzzles, and then presenting a number of possible solutions, requiring them to compare the evidence for each. Since the questions I ask in class are usually open questions within the discipline of political science, there are no easy answers. When I open a class discussion, engage with students doing discussion exercises, or grade homework assignments, I play “devil’s advocate” for each student or group, taking a different position as I interact with each student. It is therefore disappointing when students simply parrot back what they believe the professor wants to hear. Their own thoughts count.

Just as important as the ability to analyze an argument is the ability to construct and defend one, choosing one among several imperfect explanations as the “best bet” for explaining a phenomenon or the superior normative framework. There are some students who are very good at critiquing existing explanations, but who then use this skill as an excuse to avoid argument altogether: “None of these explanations are perfect, so it’s all just a matter of opinion.” This is illustrated by Russian dissident Gary Kasparov (2017):

"The point of modern propaganda isn’t only to misinform or push an agenda. It is to exhaust your critical thinking, to annihilate truth. Modern dictatorships have become far more sophisticated in how to achieve their ends. They learned that by constant bombardment, your senses become overwhelmed. You start to doubt, to shrug your shoulders, to tune out, and that makes you vulnerable. Instead of pushing one lie, one fake, they can push a dozen, or a hundred, and that’s pretty good odds against one lonely truth. They win when you say: ‘Who can be sure what really happened?’"

So I do push students to weigh the strengths and flaws of each competing explanation and identify the one which is most likely to be correct. For empirical questions, I require them to devise some way in which their preferred explanation could be tested. In sum, I try to combine the focus on argument dissection that one finds in academic debate with the focus on puzzle-solving that one finds in science and philosophy.

Writing Skills and Quantitative Reasoning

As a former debater and debate coach, I appreciate the importance of being able to write and speak clearly. Of course, one of the most important ways to accomplish this is by assigning writing (and, in some courses, speaking) activities that require effective argument. In order to help students proofread their work, I set up a page on the Canvas course site illustrating the most common student grammatical errors: word mix-ups, sentence fragments, agreement of subject and verb, and improper comma or apostrophe usage. I am then able to simply write the number of the error next to it on the page so that the student can look up the error and the solution. This technique allows me to focus my comments on the thesis, structure, and style of students’ essays.

Political science is indeed a social science, and that means that sometimes we use numbers. Quantitative reasoning is being able to think critically about and explain these numbers. You may or may not be able to do the math yourself, but I seek to teach you to explain what happens in the math to others. Having even the most rudimentary ability to interpret statistics and equations puts you a step ahead of many humanities and even some social science students. Moreover, being a thoughtful participant in politics means being able to learn from quantitative evidence and detect the misuse of the same. In this course, we will learn to interpret tables of statistics to double-check the claims being made by the authors of quantitative studies.

Moral Development

Although this is not a normative political theory class, we will touch on normative matters from time to time, especially the ethics of research and the role of “justice” in evaluating theories and scientific research programs. One goal of a liberal arts education is to render students more capable of self-reflection and positive development. Moral education is essential to this process, yet may be the most difficult task facing an educator. Students must first be convinced that the ethical life is the best life. Fortunately, most students
already have a set of values, albeit sometimes under-examined and often inconsistent ones. The task of the professor is to challenge their moral beliefs in such a manner that students have to choose between competing values and become more consistent in their moral judgments. It is not the task of the professor to ensure that students adhere to a particular value system or ideology; instead, the ideal professor will challenge students of any ideology and make them more consistent in their judgments.

For this to be possible, students need to recognize their own underlying assumptions (often their religious faith, combined with a cynical view of human behavior) that make a system of values possible. They must then be able to defend the connections between those assumptions and their value choices. In short, political science needs to be seen as part of a broader liberal arts curriculum which prepares students to do justice (as students understand it) in the world. Otherwise, we risk training sophists who simply use their skills to manipulate others.

Subject Mastery

Finally, each class I teach has a certain “core” of material I expect students to master. This material is the necessary data for intelligent discussion of the questions posed by the course. Mastery is different than memorization; it means being able to apply the material to an unanticipated question or situation. The nature of these questions determines the type of class presentation. In this class, I rely heavily on lectures and structured in-class exercises. The final exam is based on both the lectures and the readings we discuss, and serves as an incentive to describe, analyze and synthesize the course materials.
<table>
<thead>
<tr>
<th>Session</th>
<th>Unit</th>
<th>Topics</th>
<th>Required Readings</th>
<th>Work Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug 27</td>
<td>Critical Thinking</td>
<td>Source Evaluation and Lying with Statistics</td>
<td>Donovan and Hoover (Canvas)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>KKV, Chapters 1-2</td>
<td>Academic Integrity Exercise and Fact Checking Exercise</td>
</tr>
<tr>
<td>Sept 10</td>
<td>Univariate Statistics</td>
<td>Variables, Descriptive Statistics, Hypothesis-Testing, and Significance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sept 17</td>
<td>Bivariate Statistics</td>
<td>Difference of Means Tests, Cross-Tabulations, and Scatterplots</td>
<td></td>
<td>Hypotheses and Variables Exercise</td>
</tr>
<tr>
<td>Sept 24</td>
<td></td>
<td>Measures of Association and Bivariate OLS Regression</td>
<td>Kellstedt and Whitten (Canvas)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>KKV, Chapter 3</td>
<td></td>
</tr>
<tr>
<td>Oct 1</td>
<td>Multivariate Statistics</td>
<td>Multivariate OLS Regression for Interval Dependent Variables</td>
<td>KKV, Chapter 5 Gujarati (Canvas)</td>
<td>QLR Research Proposal</td>
</tr>
<tr>
<td>Oct 8</td>
<td></td>
<td>Logit and Probit Models</td>
<td>Spicer (Canvas)</td>
<td>Academic Scavenger Hunt</td>
</tr>
<tr>
<td>Oct 15</td>
<td></td>
<td>Models for Duration and Count Dependent Variables</td>
<td></td>
<td>QLR Annotated References</td>
</tr>
<tr>
<td>Oct 22</td>
<td></td>
<td>Multistage Models</td>
<td></td>
<td>Quantitative Article Review</td>
</tr>
<tr>
<td>Oct 29</td>
<td>Evaluating Social Science Research</td>
<td>Critiquing Data Collection</td>
<td>KKV, Chapter 4</td>
<td></td>
</tr>
<tr>
<td>Nov 5</td>
<td></td>
<td>Survey Designs</td>
<td>Shiraev and Sobel (Canvas)</td>
<td>QLR Draft</td>
</tr>
<tr>
<td>Nov 19</td>
<td></td>
<td>Threats to Research Design Validity</td>
<td></td>
<td>Survey Exercise</td>
</tr>
<tr>
<td>Nov 26</td>
<td></td>
<td>Scientific Inference</td>
<td>KKV, Chapter 6</td>
<td>Quantitative Literature Review</td>
</tr>
<tr>
<td>Dec 3</td>
<td>Integration</td>
<td>Research Symposium</td>
<td>Build your visual aid and presentation</td>
<td>QLR Presentations</td>
</tr>
<tr>
<td>Dec 10</td>
<td></td>
<td>Final Exam</td>
<td>See the final exam review guide</td>
<td></td>
</tr>
</tbody>
</table>
POLI 3330
Fact-Checking Exercise

Instructions: For this exercise, students will view alleged factual statements taken from a list of five websites linked on Canvas. For each statement, the student should type a brief summary, containing the following information:

A. What types of evidence does the website use to support the statement? Examples might include research studies, polls and other statistics, statements of opinion or “naked claims,” analogies, interviews, and visual documentation (2 points each)
B. Trace the evidence provided for the statement. Where does the evidence ultimately come from, and are these sources reliable? (2 points each)
C. What kind of political or other agendas might lie behind the website reporting the claim and the ultimate source of the evidence for the claim? (2 points each)
D. Is the claim correct? Specify how you know, emphasizing external evidence. (2 points each)
   1. If yes: Is the claim incomplete or misleading? What is omitted but relevant to the discussion of the claim? (2 points each)
   2. If no: What is the purpose of the false claim – or is it merely a mistake? (2 points each)
E. Attach a complete, APSA-formatted works cited page for the web pages themselves, the other pages and sources you used to fact-check their claims, and any other resources requiring citation in the text. (-10 points if missing)
POLI 3330
Hypotheses and Variables Exercise

Instructions: Find and read one recent (2010 or later) quantitative research article on or related to your QLR topic (you may wish to switch topics if you cannot locate even one recent article on your preferred topic). The article should test one or more hypotheses using statistics. Adding “hypothesis” and/or “significant” as search terms may help you narrow down your choice.

I. Print the article so you can attach it to your work.
II. Then answer the following questions. The answers should be typed, but diagrams may be hand-drawn.

A. Questions about the article you chose (8 points each, or 40% of the assignment grade):
   1. What is the author or authors’ dependent variable of interest? If they have more than one, just pick the one that interests you more.
   2. What are at least three independent variables the author or authors include to predict this dependent variable?
   3. What are the authors’ testable hypotheses about the dependent variable? List at least two of them if more than one exists.
   4. What do the authors call the statistical technique they use to evaluate these hypotheses? If there is more than one technique used, list them. Note that you probably won’t understand what the words mean yet, but you will in time (common ones are logit/logistic regression, OLS, GLS, Cox or Weibull models, probit, ordered logit/probit, multinomial logit/probit, Poisson, negative binomial or zero-inflated negative binomial/ZINB, and so forth).
   5. What are the author or authors’ conclusions regarding the validity of each of the hypotheses you listed?

B. For each of the following hypotheses, identify the dependent variable and any independent variables. (6 points each for 30% of the assignment credit)
   1. State legislatures pass more bills when one party controls both of their houses than when one party controls one house and another party controls the other house.
   2. People around the world are increasingly worried about global climate change.
   3. As battle-deaths rise, public support for wars falls.
   4. Horizontal inequality and anocracy increase the probability of civil war in a given country.
   5. Support for social welfare programs is determined by a person’s income, race, and gender.

C. The following is a list of three variables: a person’s intention to vote in an upcoming election, that person’s general interest in politics, and the expected closeness of the election. Do the following (6 points each for the last 30% of the assignment credit):
   1. Write a hypothesis relating the first two variables to each other in some way.
   2. Identify the independent and dependent variables in your hypothesis.
   3. State how you expect the third variable to affect the hypothesized relationship.
   4. Draw an arrow diagram including all three variables, consistent with what you said in #2 and #3.
   5. Determine whether the third variable is antecedent, intervening, alternative, or irrelevant.
Overview: The research required for this Academic Scavenger hunt and the paper in the course may seem intimidating. Luckily, there are a number of databases that can help you out. The following table simply organizes them by task—i.e. what are you looking for? To access the non-public databases (i.e. most of them), look on the left-hand side of the TAMUCT Library home page (http://tamuct.libguides.com/index) and click either the database (if listed as one of the top five) or A-Z Databases and then pick the one you want to use. If you are working from home you will need to use your myCT username and password (the same ones you use to access other resources such as email) to log in when prompted. Note: you may need access to Microsoft Excel to answer question number 9. It is installed on virtually all university computers.

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Database</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find a peer-reviewed article more than a few years old</td>
<td>JSTOR</td>
<td>It’s often best to only check the Political Science box, but your topic may also involve other disciplines.</td>
</tr>
<tr>
<td>Find a recent peer-reviewed article</td>
<td>Academic Search Complete</td>
<td>Be sure to check the “peer-reviewed” box.</td>
</tr>
<tr>
<td>Find information about an event or particular time in history</td>
<td>America: History and Life (US) or Historical Abstracts (Outside)</td>
<td>You can select a particular time range to search.</td>
</tr>
<tr>
<td>Find a specific journal article</td>
<td>eJournals</td>
<td>If we don’t have the journal for the year needed, try interlibrary loan. Articles are usually sent quickly (within a few days) as pdf files.</td>
</tr>
<tr>
<td>Find a news article from more than a month ago</td>
<td>Lexis-Nexis Academic</td>
<td>Be sure to specify your date range. Remember to search a day before and a day after the event you’re looking for.</td>
</tr>
<tr>
<td>Find a recent news article</td>
<td>Google News (public)</td>
<td>Be sure to check the reliability of the source, since Google News includes blogs and such.</td>
</tr>
<tr>
<td>Find a law review article</td>
<td>Lexis-Nexis Academic</td>
<td>Just be sure to use Advanced Search and check only the Law Reviews box.</td>
</tr>
<tr>
<td>Find a book</td>
<td>WarriorCat or WorldCat or Google Books (public)</td>
<td>If you find something good that we don’t have while using WorldCat or Google Books, interlibrary loan it. It takes 1-3 weeks for an ILL.</td>
</tr>
<tr>
<td>Find a statistic</td>
<td>Wolfram Alpha (public)</td>
<td>Example: I want to find France’s GDP growth in 2009.</td>
</tr>
<tr>
<td>Find a thesis or dissertation on a particular topic</td>
<td>Dissertations and Theses</td>
<td>While dissertations aren’t technically peer-reviewed, they can be used in the QLR.</td>
</tr>
<tr>
<td>If the above don’t generate what you need</td>
<td>WarriorQuest</td>
<td>Warning: Tends to produce lots of results, but it does check many databases and often finds things when other searches fail. You can narrow the search by date, by whether the library has the material, by type of material, etc.</td>
</tr>
</tbody>
</table>
If all else fails...  
Office hours, JeffreyDixon@tamuct.edu or “Chat with a Librarian”  
You can always email me for help. There’s also a 24-hour “Chat with a Librarian” feature on the Research page of the TAMUCT library.

**Instructions:**

A. Answer the following questions with the best, most recent information you can find. Answers should be typed and in the form of full sentences or paragraphs with correct source citations using APSA format. The quality of the underlying data should be clear in your answer (10 points each).

1. Find a recent (2016-2018), peer-reviewed, quantitative journal article (not a book review) to which you have access that examines the statistical relationship between alliances and interstate war. In what manner (if any) do alliances alter the probability of interstate war, according to this article?

2. What is the mean unemployment rate of NATO countries (2017 data)?

3. What was the first full sentence on the second page (numbered p.10) of the first full article in the first issue of Sociometry?

4. How did the global simulation GLOBUS (used chiefly in the 1980s) differ from earlier world simulations? Note that there is more than one model called GLOBUS out there; you are looking for the one used by political scientists to forecast the state of the world over time.

5. North Korea (the DPRK) has been an occasional (but minor) participant in Middle East conflicts over the past 40-50 years. In what month of what year did North Korea first deploy troops to the Middle East?

6. Find a 2017 article assessing whether foreign Muslims who know more about Islam are more or less likely to support Islamic terrorism than foreign Muslims who know less of Islam. What effect does increased knowledge of Islam have on support for terror, and is it the most important determinant of such support?

7. Find a 2017-2018 peer-reviewed, quantitative journal article that claims that “racist resentment” or “racial resentment” increased the likelihood that whites voted for or currently support Donald Trump. How do the author or authors of the article measure the racial resentment variable?

8. Using the two Gallup polls measuring Franklin Delano Roosevelt’s job approval rating closest to Pearl Harbor, what was the net change in his approval rating after the attack? (positive numbers mean an increase in approval and negative numbers mean a decrease in approval)?

9. The Polity IV Project’s data is commonly used to measure levels of democracy and autocracy in states around the world. According to its latest such dataset, (Polity IV Political Regime Characteristics and Transitions, 1800-2017), what was the Democracy score of the United States in 2017 (on a scale from zero to ten)?

B. Attach a works cited page (APSA formatted). (10 points)
POLI 3330
Research Article Critique

1. Find a full-length journal article (not just a research note or review essay) that interests you and uses some quantitative research methods (statistics) to address one or more empirical questions. The article should be published no earlier than 2017 in one of the following top political science journals. You may not choose an article already assigned as required reading in this or any other political science course you have taken or are taking. You may, however, choose an article you intend to use for your quantitative literature review.

Journals that cover multiple subfields:
American Journal of Political Science
American Political Science Review
Journal of Politics
Political Research Quarterly

Journals focused on one subfield or topic:
Political Theory
International Studies Quarterly
International Organization
Comparative Political Studies
World Politics
Political Research Quarterly
Legislative Studies Quarterly
Journal of Conflict Resolution
Journal of Peace Research

2. Critique the article using the following steps. Your critique of the article should be 1000-2000 words long (probably about 3-6 pages of text), typed, double-spaced, with page numbers and use of APSA citations in text and a full works cited page in APSA format attached.

   a. Create a cover page. Come up with a title other than “article critique” or the like (you may want to save this part for last, since you may not know your thesis yet); add your name and institutional affiliation (Texas A&M University – Central Texas).
   b. Begin the critique by establishing the article’s research question and its importance. Presumably it is important, since it interested you -- but why should other political scientists care about it? This should take a paragraph or two. Be sure to identify whether the question is empirical, normative, or mixed.
   c. Then spend about half of the critique summarizing the author’s thesis (their answer to the research question) and the structure and evidence of their argument evaluating that thesis. Elements of empirical articles commonly include a brief literature review (which isn’t your primary focus), a theory and/or a set of hypotheses that follow from the article’s thesis, and some discussion of evidence in favor of or against the theory/hypotheses (e.g. quantitative evidence such as a table of statistical results). Typically, such articles conclude with implications for the field and for further research.
   d. Then provide your thesis about the article -- that is, what it contains of value and what major errors or gaps in the argument or research design exist. This should not take more than a paragraph, and your thesis itself should be a single sentence.
   e. Now establish your thesis through a review of each substantive piece of the article. Common criticisms of empirical studies include unrealistic assumptions in the theory or about the data (although remember that part of science is simplifying causal processes to their bare essentials), insufficiently developed theory (e.g. a theory that doesn’t actually imply the hypotheses tested by the author),
criticisms of how variables are operationalized, criticisms of the validity and reliability of the data or evidence used, and criticisms of the interpretation of that data by the author(s).

f. Conclude by suggesting a path for future researchers studying the research question to follow, given the strengths and limitations of the article.

g. Attach a works cited page in APSA format. You are not obliged to consult other sources for this critique, but it occasionally becomes useful to do so. Be sure to include the full citation of the article you reviewed as well as any outside sources used. Note that you are responsible for the reliability and validity of any outside sources used, so I suggest limiting yourself to peer-reviewed academic work (or other work that you can explicitly defend in the critique).

h. Hand in a paper copy of the article together with your critique of it.
Instructions
Read the Shiraev and Sobel article (Canvas) on critical thinking about surveys. Then type up your answers to each of the following questions. Turn in the attached mini-survey (which need not be typed – it can be taken with a pencil or pen) with your answers. We’ll be comparing the class results for the mini-survey with the public’s (November 2017) results.

Questions
A. Thinking critically about the context of surveys.
   1. Look at the graph below.
      a. Can we conclude that the “gender gap” (Democrats do better among women / Republicans do better among men) is growing? You may need to make your own graph of the size of the gender gap (Men-Women for Republican Presidents and Women-Men for Democratic Presidents) to answer this question.
      b. Is there something special about Trump himself (as opposed to other Presidents) that makes it look like the gender gap as described above is unusually large today? For example, are there other contextual factors that might affect women’s – or men’s – approval of Trump, as opposed to the general gender gap between the major parties?

Women’s Approval Of Trump Is Historically Low. Men’s, Not So Much.
Donald Trump’s approval rating is historically low, but that figure obscures a wide gender gap. Only 29 percent of women approve of him right now — well outside the norm compared to past presidents’ approval ratings, for either gender, at this point in their presidencies. Meanwhile, men’s approval of Trump, at 43 percent, is about where approval of Bill Clinton at this point in his presidency.

Source: Gallup
Credit: Danielle Kurtzleben/NPR
2. How many Americans support the “alt right?” The following question was asked in the days following violence in Charlottesville, including an incident in which a white supremacist crashed his car into counter-demonstrators, killing one. How do you think the violence might have affected the result? Would you have gotten the same result a few days before or six months after Charlottesville?

3. Have White Evangelical Protestants in the United States become its most tolerant group, at least when it comes to moral failings in private life? Consult the following chart summarizing responses to survey question, “To what extent to you agree or disagree with the following statements…. An elected official who commits an immoral act in their personal life can still behave ethically and fulfill their duties in their public and professional life.” How might contextual factors be influencing Evangelical respondents?

B. Thinking critically about bias
1. Imagine that a researcher wants to know whether Americans are pro-choice, pro-life, or something in between. So the researcher asks the following questions of 2504 randomly-selected respondents:
   a."Do you think abortion should be [READ IN ORDER TO RANDOM HALF OF SAMPLE, IN REVERSE ORDER TO OTHER HALF OF SAMPLE]..."
      i. Legal in all cases
      ii. Legal in most cases
      iii. Illegal in most cases
      iv. Illegal in all cases
      [WHEN VOLUNTEERED ONLY] Don’t Know / Refuse to Answer
b. In politics TODAY, do you consider yourself a Republican, Democrat, or independent?
c. [If answered INDEPENDENT/DON’T KNOW/OTHER/REFUSED to the party question]: As of today do you lean more to the Republican Party or more to the Democratic Party?

What biases in the data might you expect to find, given the wording of the questions?

2. Take the attached mini-survey. Once you have taken it, respond to the following questions:
   a. What agenda might lie behind asking these questions?
   b. Do you think that changing the order of the questions would change people’s responses to them? Why or why not? For example, you might consider the likely effect about asking questions 2-4 before asking question 1.

3. Write two survey questions about how the President is performing his job. The first one should be designed to make the President look popular and the second one should be designed to make the President look unpopular. Try to make the bias subtle so that respondents won’t know the game is rigged. Then write a few sentences about what makes each question biased in the direction that it is.

C. Thinking critically about descriptions of survey results.

1. The following results are from the same post-Charlottesville survey as in A.2:
   a. How many Americans are basically neo-Nazi sympathizers or white supremacists?

      From the same survey:

      7. Do you yourself think it’s acceptable or unacceptable to hold neo-Nazi or white supremacist views? Do you feel that way strongly, or somewhat?

      * * *

      NET Strongly Somewhat NET Somewhat Strongly Strongly opinion

      8/20/17 9 3 5 83 11 72 8

   b. Which of the following headlines are most informative (and accurate), which are only somewhat accurate, and which are most misleading?
      i. “Survey: 9 percent call neo-Nazi views acceptable”
      ii. “Nearly 30 million Americans think it’s okay to have neo-Nazi views”
      iii. “ Majority of Americans think having neo-Nazi views is unacceptable, poll finds”

      (If you are curious, the sources of these headlines are political blog The Hill, liberal blog ThinkProgress, and Canadian news site GlobalNews.ca, respectively).
2. Examine the following three graphs from the abortion survey in B.1:

% of adults who say abortion should be legal/illegal (1995-2017)

% of adults in 2017 who say abortion should be...

% of U.S. adults who say abortion should be legal/illegal, by party identification (2017)
Now assess the accuracy of each of the following (abridged) news stories about the survey (just write a few sentences evaluating each):

   As of 2017, public support for legal abortion remains as high as it has been in two decades of polling. Currently, 57% say abortion should be legal in all or most cases, while 40% say it should be illegal in all or most cases.”

b. “Democrats’ self-inflicted abortion problem
   Over the weekend, Democratic National Committee Chairman Thomas Perez drew a line against supporting any candidates who oppose abortion rights... ‘Every Democrat, like every American, should support a woman’s right to make her own choices about her body and her health,’ Perez said... ‘That is not negotiable and should not change city by city or state by state.’ ... This seems to be mostly a Perez flub. His line in the sand was a highly questionable political strategy from the moment he drew it. Regardless of how you feel about abortion, the fact remains that many Democrats describe themselves as “pro-life.” Pew Research Center polling has generally showed about 3 in 10 Democrats say abortion should be illegal in all or most cases... Perez was basically declaring that a position held by 1 in 5 or 1 in 4 Democrats and lots of blacks and Hispanics is not a valid position in his party.”

c. “Don’t blame Democrats’ problems on support for abortion rights
   Like a steady drip from a broken faucet, a lot of blame has been thrown around since Hillary Clinton’s shocking loss in November. Predictably, and without any evidence, some have begun drawing connections between Clinton’s loss and her support of abortion rights... The reality is that the public is more supportive of abortion rights than ever. In late 2016, polling from Pew Research Center found the highest levels of support for legal abortion since 1995, largely driven by a rise in support among Democratic women. Recent data show a majority of Americans oppose blanket bans on abortion coverage... Here’s what we do know: Abortion is important to voters, and is often used as a metric to judge a candidate’s other values. The most reliably Democratic voters — namely black and Asian American Pacific Islander women, Latinas, unmarried women and educated urbanites — want abortion to be legal and accessible.”

(For reference, these came from the Pew Research Center’s description of its own survey results, an article in the Washington Post column “The Fix” by Aaron Blake, and a Washington Post op-ed by Destiny Lopez, respectively).

2. From the data, are most Americans extremists on the abortion issue, or moderates? Can the way this poll was constructed really get at the amount of moderation in the public’s views of the issue?
Thinking critically about causality in studies of public opinion

Examine the following two surveys: one of scientists and one of the general public. Would teaching more people that scientists have arrived at a consensus in favor of theories of evolution – essentially, correcting the misconception of “no consensus of scientists” held by 29% of the population -- change many minds on the issue of whether evolutionary theories are correct?

**Scientists and beliefs about human evolution**

*% who believe humans and other living things...*

<table>
<thead>
<tr>
<th></th>
<th>... have evolved over time</th>
<th>... existed in present form since beginning</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAAS scientists</td>
<td>98%</td>
<td>2</td>
</tr>
</tbody>
</table>

*% of U.S. adults who say scientists generally agree/do not agree that humans have evolved over time*

<table>
<thead>
<tr>
<th></th>
<th>Scientists generally agree</th>
<th>Scientists do not agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. adults</td>
<td>86%</td>
<td>29</td>
</tr>
</tbody>
</table>


PEW RESEARCH CENTER
POLI 3330/5300
Survey Exercise (Mini Survey)

Instructions: Take the following anonymous survey, most recently administered in November 2017. I will add up the results and we will compare them to the results from the general public and examine how those results were reported.

1. How much do you agree or disagree with the following statements?

   From each according to his abilities, to each according to his need.
   O Strongly disagree  O Somewhat disagree  O Somewhat agree  O Strongly Agree

   A nation will not survive morally or economically when so few have so much, while so many have so little.
   O Strongly disagree  O Somewhat disagree  O Somewhat agree  O Strongly Agree

   A society that puts equality before freedom will get neither. A society that puts freedom before equality will get a high degree of both.
   O Strongly disagree  O Somewhat disagree  O Somewhat agree  O Strongly Agree

   If any would not work, neither should he eat.
   O Strongly disagree  O Somewhat disagree  O Somewhat agree  O Strongly Agree

2. Do you have a favorable or unfavorable opinion of capitalism?
   O Very unfavorable  O Somewhat unfavorable  O Somewhat favorable  O Very favorable  O Not sure

3. Do you have a favorable or unfavorable opinion of socialism?
   O Very unfavorable  O Somewhat unfavorable  O Somewhat favorable  O Very favorable  O Not sure

4. Do you have a favorable or unfavorable opinion of communism?
   O Very unfavorable  O Somewhat unfavorable  O Somewhat favorable  O Very favorable  O Not sure
5. How likely would you be to vote for a presidential candidate who described him or herself as the following?
   Socialist:
   O Not at all likely  O Not very likely  O Somewhat likely  O Very Likely

   Fascist:
   O Not at all likely  O Not very likely  O Somewhat likely  O Very Likely

   Capitalist:
   O Not at all likely  O Not very likely  O Somewhat likely  O Very Likely

   Communist:
   O Not at all likely  O Not very likely  O Somewhat likely  O Very Likely

6. True or false: More people were killed under George W. Bush’s presidency than Joseph Stalin’s leadership.
   O True
   O False

7. True or false: More people were killed under Adolf Hitler’s reign than Joseph Stalin’s leadership.
   O True
   O False

8. Over the past 100 years, how many people do you think communism has killed?
   O Less than 1 million
   O 1 million – less than 25 million
   O 25 million – less than 50 million
   O 50 million – less than 75 million
   O 75 million – less than 100 million
   O 100 million or more

9. What year were you born?
   O Before 1946 (Greatest Generation)
   O 1946-1964 (Baby Boomers)
   O 1965-1981 (Generation X)
   O 1982-1996 (Millennials)
   O 1997 or later (Generation Z)
POLI 3330
Appendix I: 108 Ideas for Quantitative Literature Reviews

A. American Politics

1. When do Presidents go public with policy proposals?
2. When do Presidential appeals enhance the popularity of a policy?
3. When do Presidents use executive agreements in foreign policy rather than treaties?
4. What predicts the outcome of Presidential elections?
5. What influence does partisanship have over Presidential veto decisions?
6. Why do some Presidents issue more executive orders than others?
7. What effect does Presidential partisanship have on economic growth rates?
8. What affects Presidential budgetary proposals (for some specific program, perhaps)?
9. When do Presidents use force unilaterally rather than seeking Congressional authorization?
10. Are Presidents more likely to use force when their popularity ratings/economic growth fall?
11. What effect does economic growth have on Presidential popularity?
12. What effect does defense spending have on economic growth?
13. What effect does the use of military force have on Presidential popularity?
14. Why do some executive agencies have larger budgets than others?
15. What predicts the roll-call votes of members of Congress?
16. What causes the distribution of committee assignments in Congress?
17. What leads to the creation of new committees or subcommittees in Congress (or their elimination)?
18. Why do some Congresses produce more legislation than others?
19. What causes Congressional gridlock?
20. Do campaign donations change policy in Congress/the Presidency/executive bureaucratic agencies?
21. Why has Congressional polarization increased?
22. What predicts the votes of Supreme Court Justices?
23. What predicts whether the Supreme Court will agree to hear a case?
24. What effect do term limits have on policy congruence (public opinion matching policy) in state legislatures?
25. What effect does multiparty competitiveness have on policy in the states?
26. To what extent does public opinion affect policy in the states?
27. What effect does lobbying have on public policy?
28. What affects how people vote?
29. What affects whether people vote?
30. What determines the outcome of House/Senate/gubernatorial/state legislative elections?
31. What issues are people most likely to vote on?
32. What determines which issues the public finds salient?
33. To what extent is political polarization growing in the United States?
34. What causes political polarization in the United States?
35. What effect do political factors have on judicial decisions to impose the death penalty?
36. When does the Supreme Court uphold executive agency decisions?
37. Why do Southerners vote differently than people elsewhere in the country?
38. What predicts partisan affiliation?
39. Are political orientations genetically transmitted?
40. How does descriptive racial/ethnic representation affect trust in government by that racial/ethnic group?

B. Comparative Politics

1. What factors predict economic development?
2. Does foreign aid promote economic development?
3. When does economic development promote human development?
4. What factors lead to the creation of strong states?
5. Does state strength cause of prevent political violence?
6. What are the most successful forms of democracy?
7. What causes – or reverses – democratization?
8. What causes genocide?
9. What causes civil wars?
10. Why do some civil wars recur?
11. Why do some civil wars end in negotiated settlements while others end only in military victory or stalemate?
12. What leads to differences in crime rates across nations?
13. What predicts how much foreign aid a country will give?
14. What predicts how many effective political parties will exist in a democracy?
15. When do power-sharing agreements work?
16. Why are some countries characterized by more income inequality than others?
17. What causes domestic terrorism?
18. What causes coups d’état?
19. Do campaign finance limitations inhibit or reinforce democracy?
20. Are multiparty systems more likely to survive than two-party systems?
21. What effect does central bank independence have on the economy?
22. What is the relationship between colonialism and modern economic performance?
23. What is the relationship between colonialism and modern democratic performance?
24. What causes ethnonationalist conflicts?
25. Does religious diversity promote conflict/autocracy?
26. Under which forms of government do leaders retain office the longest?
27. How does political culture affect democracy/development?
28. How can we measure changes in political culture over time?
29. Does federalism promote peace/development民主化?
30. Does resource scarcity promote conflict/autocratization?
31. How does trade alter the relative influence of interest groups in societies?
32. Why do some countries adopt fixed exchange rates while other opt to allow their currencies to float on the global market?
33. Does capitalism promote democracy?
34. What leads to more/less respect for human rights?
35. Does foreign direct investment promote development?

C. International Relations

1. What causes interstate war?
2. Why don’t democracies fight each other?
3. Does capitalism promote international peace?
4. Does trade promote international peace?
5. How does the polarity of the international system affect the probability of conflict?
6. What causes general wars?
7. Are countries with different religions more likely to fight than those with the same religion?
8. What types of issues are most likely to lead to war?
9. Why do some crises escalate to war while others are resolved short of war?
10. Is war on the decline in the international system?
11. What effects do arms races have on the probability of war?
12. What effect do outside alliances have on the probability of war?
13. What determines whether two countries share the same allies?
14. Does international trade promote growth?
15. Do free trade agreements promote growth among their members?
16. When do countries follow the laws of war?
17. When do countries resolve disputes through arbitration?
18. Why are some regions of the world more war-prone than others?
19. Is civil war contagious?
20. Are revolutionary governments more aggressive?
21. What promotes trade between two countries?
22. Do capitalist countries fight each other?
23. When do states honor international agreements?
24. Why are some cease-fires more successful than others?
25. What determines where peacekeepers are sent?
26. Does peacekeeping work?
27. What are the political causes of trade?
28. Do international organizations promote peace?
29. What are the causes of international rivalry?
30. Is the United States declining relative to China?
31. What causes nuclear proliferation?
32. Do nuclear weapons produce peace?
33. What counterinsurgency strategies are most effective?
### Appendix II: Glossary of Symbols Commonly Used in Statistics

#### I. Common letters: Letters of the Greek alphabet are just like a, b, c, d, etc but they look more “scientific.” Moreover, in statistics certain symbols mean certain things.

<table>
<thead>
<tr>
<th>Letter (case)</th>
<th>Name (if needed)</th>
<th>Uses in Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>α</td>
<td>alpha</td>
<td>Cronbach’s α (a measure of split-halves reliability), the maximum acceptable value of p (usually .05), or the constant in a regression equation (depends on context)</td>
</tr>
<tr>
<td>B, β</td>
<td>beta</td>
<td>Coefficients or standardized coefficients of independent variables. Note that if β0 exists, it’s probably the constant in a regression equation, while β1, β2, β3, etc are the coefficients of X1, X2, X3, etc.</td>
</tr>
<tr>
<td>Γ, γ</td>
<td>gamma</td>
<td>A measure of association (which tends to be inflated and thus less appropriate than other measures of association)</td>
</tr>
<tr>
<td>d</td>
<td></td>
<td>A measure of association – Somer’s d, or a Durbin-Watson test of autocorrelation (depends on context)</td>
</tr>
<tr>
<td>Δ</td>
<td>delta</td>
<td>Change, e.g. ΔX means “change in X”</td>
</tr>
<tr>
<td>ε</td>
<td>epsilon</td>
<td>Error term, or the number 2.718... (depends on context)</td>
</tr>
<tr>
<td>η</td>
<td>eta</td>
<td>Sometimes used to indicate the population median</td>
</tr>
<tr>
<td>η²</td>
<td>eta-squared</td>
<td>A measure of association</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td>A statistical distribution used to compare variance and assess model significance</td>
</tr>
<tr>
<td>λ</td>
<td>lambda</td>
<td>A parameter of some statistical distributions, like the Poisson distribution</td>
</tr>
<tr>
<td>μ</td>
<td>mu</td>
<td>The mean (of a population)</td>
</tr>
<tr>
<td>N, n</td>
<td></td>
<td>The number of observations/elements in a population or sample</td>
</tr>
<tr>
<td>X̄</td>
<td>x-bar</td>
<td>The mean (of a sample)</td>
</tr>
<tr>
<td>π</td>
<td>pi</td>
<td>The number 3.14..., or probability (depends on context)</td>
</tr>
<tr>
<td>p</td>
<td></td>
<td>The probability that a coefficient, difference, or association is not zero (in a two-tailed test) or is not zero or less/zero or greater (in one-tailed tests). For statistical significance to hold, p ≤ α. Also used as the shape parameter in Weibull</td>
</tr>
<tr>
<td>ρ</td>
<td>rho</td>
<td>A measure of association – Spearman’s rank-order correlation</td>
</tr>
<tr>
<td>r</td>
<td></td>
<td>A measure of association – Pearson’s r</td>
</tr>
<tr>
<td>r²</td>
<td></td>
<td>A measure of proportional reduction in error (PRE)</td>
</tr>
<tr>
<td>s</td>
<td></td>
<td>Standard deviation (of a sample)</td>
</tr>
<tr>
<td>σ</td>
<td>sigma</td>
<td>Standard deviation (of a population)</td>
</tr>
<tr>
<td>s²</td>
<td></td>
<td>Variance (of a sample)</td>
</tr>
<tr>
<td>σ²</td>
<td>sigma-squared</td>
<td>Variance (of a population)</td>
</tr>
<tr>
<td>t</td>
<td></td>
<td>A statistical distribution that equals the normal distribution when the number of observations is infinite, or time (depends on context)</td>
</tr>
<tr>
<td>τ</td>
<td>tau</td>
<td>One of three measures of association: τa, τb, or τc</td>
</tr>
<tr>
<td>Φ, ϕ</td>
<td>phi</td>
<td>A measure of association</td>
</tr>
<tr>
<td>ν</td>
<td></td>
<td>A measure of association (Cramer’s v)</td>
</tr>
<tr>
<td>χ²</td>
<td>chi-squared</td>
<td>A statistical distribution used to assess model significance</td>
</tr>
<tr>
<td>X</td>
<td></td>
<td>The independent variable(s)</td>
</tr>
<tr>
<td>Y</td>
<td></td>
<td>The dependent variable</td>
</tr>
<tr>
<td>z</td>
<td></td>
<td>How many standard errors a coefficient is from zero. If greater than 1.96 or less than</td>
</tr>
<tr>
<td>χ²</td>
<td></td>
<td>The Wald statistic</td>
</tr>
</tbody>
</table>
II. Common Mathematical Symbols

A. Superscripts indicate exponents while subscripts can be used for several purposes. In virtually all of the reading we will do, the **subscripts are just descriptive**. No mathematical operations are performed on the subscripts themselves. For example, we might refer to the fifth observation of the independent variable as $x_5$, which just means “the fifth value of $x$” in that context. We also use them to indicate multiple independent variables ($X_1$, $X_2$, $X_3$, etc).

B. Summation and Multiplication. The capital sigma and pi are used as shortcuts for long strings of pluses or multiplication signs. The italicized $i$ is often used as an index, or subscript. Sometimes $t$ is used instead, especially when representing time. In these notations, the subscripts are purely descriptive — they refer to the first $x$, the second $x$, the third $x$, etc. On the bottom, the first value of $i$ is given (here it is 1). On the top, the final value of $i$ is given (here it is $N$).

\[
\sum_{i=1}^{N} x_i, \quad \prod_{i=1}^{N} x_i.
\]

Sometimes if the range of the subscript is already known, the author will dispense with the index. For example, \( \sum a x_i \) means summing up $a$ times $x$ for all $x$’s in the range $i$.

C. Modifiers. Sometimes an author needs to distinguish between similar variables. For example, there might be the actual value of $Z$ and the observed value of $Z$. The most common modifier is called the **prime symbol**: $Z'$ is referred to as “$Z$ prime.” You may also see symbols like $Z''$ ($Z$ double prime), $\hat{Z}$ ($Z$-hat), or $Z^*$ ($Z$-star). These are no different from ordinary variables; you could call any variable $A$, $B$, $Z^*$, $\bar{A}$ ($A$-bar) if you wanted and addition, multiplication, etc would all remain exactly the same.
POLI 3330
Appendix III: A Generic Method for Interpreting Most Statistical Tables

For many quantitative articles/chapters, reading the abstract and interpreting the tables gives you most of what you need to get out of the article. Therefore, learning to interpret other people’s statistical results is a huge time-saver. The task is actually much simpler than it might appear. The statistical techniques used have names like Logit, Probit, Cox, Weibull, Heckman, and other arcane terms -- but you don’t need to know all of the differences between them. In the end, statistical work is trying to predict the values of a dependent variable, using one or more independent variables. Changes in the independent variables are hypothesized to cause increases or decreases in the dependent variable. A simple process for reading these tables is to take the following steps:

1. Identify the dependent variable (DV) – what the author is trying to predict. Most authors have this in the title of the table, but sometimes you have to look in the text.
   a. What does an increase in the DV mean in the real world?
   b. There are three types of DV we will encounter in this course: the amount of something (e.g. economic growth), the likelihood of some event (e.g. whether the President vetoes a bill), and the duration of something (e.g. how long war or peace lasts). Be sure you know which of these types describes the author’s DV – you will need it in step 4.
   c. There are two-stage models where the DV in the first part of the table becomes an IV in the second part, or “zero-inflated” models where the first part of the table is the likelihood that the DV is exactly zero while the second part estimates the value of the DV if it is greater than zero. These require careful interpretation, and we’ll cover them in class.
2. Identify the independent variables (IVs) – the predictors of the dependent variable. These are usually listed as rows of the table. The relevant statistics about each IV are usually provided in the same row as the variable’s name. Ignore any row labeled “Constant” or rows labeled “Spline1,” “Spline 2,” etc. Similarly, we usually disregard Time$^2$ and Time$^3$.
3. Often, the bottom rows are various summary statistics for the overall statistical model, not independent variables: “Pseudo-R$^2$,” “N,” “log likelihood,” and so forth. They reflect the model’s performance as a whole, not the significance of any particular independent variables. We’ll learn to evaluate some of them in the course, but they’re not essential for grasping the core findings of the model.
4. Identify the coefficient of each IV (typically the top number in the row, or the one that’s not in parentheses). You are looking for a number which will be called a coefficient, or beta, or β.
5. For each coefficient of each independent variable find its level of significance. The significance level is the probability that one would find results this strong if the independent variable were completely unrelated to the dependent variable – i.e. the probability of stumbling across a coincidence like this. The usual standard for statistical significance in social science is less than a 5% chance that a relationship this strong would be observed by coincidence, where no real relationship existed.
   a. Look for one of the following indicators: $p$ (should be .05 or less), $p<|z|$ (same thing), significance level (same thing), or the use of asterisks (***) to indicate significance at the .05 level or less. In each case, lower numbers are better, since the number is the probability of this relationship being generated by random coincidence.
   b. If no $p$ values are presented, then you can determine whether $p < .05$ by one of two methods:
      i. If raw Z scores are given, then simply look for the IVs with Z scores above 1.96 or below -1.96. These are the significant variables at the .05 level or below.
      ii. If standard errors are provided (often in parentheses below the coefficients in each
row), then you can check to see whether the absolute value of the coefficient (i.e.
dropping any negative sign for now) is greater than 1.96 * the standard error. If so, the
variable is significant at the .05 level or below.
c. You can more or less cross out and ignore the insignificant variables from here on out – they
might actually matter, but the author has failed to prove that they matter. Importantly, the
author has not proven they are irrelevant; he or she has just failed to detect a relationship in
all of the noise.
6. For each significant variable, check the direction of the relationship.
a. If the DV is the amount of something: A positive coefficient for a given IV means more of it
and a negative number means less of it. If this number is positive, then the relationship
between the IV and DV is direct (or positive): increases in the IV increase the value of the DV.
If the number is negative, then the relationship is inverse (or negative): Increasing the IV
decreases the value of the DV.
b. If the DV is the probability of something: Authors can report their findings in one of two ways.
   i. If the author states that he/she is reporting relative risk ratios (RRR), then these are
changes in probability: a 2 means the probability of the DV is doubled when the IV is very
high, while a .2 means the probability of the DV is reduced by four-fifths, to only 20% of
what it would have been otherwise, when the DV is high. In other words, if this number is
greater than 1, then the relationship between the IV and DV is direct (or positive):
increases in the IV increase the probability of the DV. If the number is less than 1, then the
relationship is inverse (or negative): Increasing the IV decreases the probability of the
DV.
   ii. Most authors do not report RRRs. In these cases, a positive coefficient for a given IV
means a higher probability of the DV and a negative number a lower probability of the
DV. The coefficients are not probabilities themselves; they are changes in likelihood
which do not easily translate into probabilities. All you need to know is the sign of the
coefficient. If this number is positive, then the relationship between the IV and DV is
direct (or positive): increases in the IV increase the probability of the DV. If the number
is negative, then the relationship is inverse (or negative): Increasing the IV decreases the
probability of the DV.
   iii. If the DV is the duration of something, then the author usually reports hazard ratios as
coefficients.
      1. The “hazard rate” is the risk of something happening. If we are at peace, it is the
risk of war. So in analyses of the duration of peace, increases in the hazard rate
mean that every year the risk of war is higher. High hazard rates mean a short
duration, while low hazard rates mean a long duration. A hazard ratio is the
ratio of the hazard when the IV is high to the hazard when the IV is low.
      2. So hazard ratios above 1 mean shorter durations, while hazard ratios below 1
mean longer durations. If we are looking at the hazard of peace failing, then ratios
above 1 are dangerous – you might even say “hazardous” – while ratios below 1
are reassuring. In other words, if this number is greater than 1, then the
relationship between the IV and duration (as opposed to the hazard rate itself) is
indirect (or negative): increases in the IV decrease the duration. If the number is
less than 1, then the relationship is direct (or positive): Increasing the IV increases
the duration.
7. Now you need to determine the relative importance of the IVs. Just because a variable is statistically
significant doesn’t mean that it has a large effect on the DV.
a. Some authors include a chart with “predicted probabilities” or “predicted values” of the DV for
different values of the IVs. If so, look at it to see which significant IVs really make a big difference.

b. Of course, if the authors are reporting relative risk ratios or hazard ratios then you know exactly how important each IV is: 1.01 is only a 1% change, 2.00 is a 100% change, and 0.1 is a 900% change!

c. If the author provides neither of these, then you won’t be able to compare them under most circumstances. Raw coefficients are essentially meaningless, except for their sign.

8. (If necessary) Repeat for each “model.” Some tables actually summarize the effects of four or five different combinations of independent variables on the dependent variable. There are usually good reasons for this approach, but it makes it a bit harder to interpret the data. Just proceed with one column, then after finishing it move to the next column, and so forth.

a. Standard procedure is to put each set of IVs into a different column; IVs not included in a model then simply have a blank space on the row of that IV.

b. When you see multiple models, look for any IVs that have significant coefficients (of the same sign, i.e. positive or negative) across all models – usually the author is trying to show you that no matter which approach he/she used, this variable always seemed to be important.

(continues on next page)
Examples (from the civil war literature):
Table II. Logistic regression estimates of popular rebellion onset

<table>
<thead>
<tr>
<th></th>
<th>(1.1)</th>
<th>(1.2)</th>
<th>(1.3)</th>
<th>(1.4)</th>
<th>(1.5)</th>
<th>(1.6)</th>
<th>(1.7)</th>
<th>(1.8a)</th>
<th>(1.8b)</th>
<th>(1.9a)</th>
<th>(1.9b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income Gini</td>
<td>3.276*</td>
<td>3.186†</td>
<td>3.403†</td>
<td>3.372†</td>
<td>3.411†</td>
<td>3.685†</td>
<td>3.076†</td>
<td>29.805*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.482)</td>
<td>(1.817)</td>
<td>(1.846)</td>
<td>(1.859)</td>
<td>(1.939)</td>
<td>(1.901)</td>
<td>(1.781)</td>
<td>(17.568)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income Gini²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30.679</td>
<td>20.945</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(20.945)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education Gini</td>
<td>1.833***</td>
<td>2.330**</td>
<td>2.050*</td>
<td>2.089*</td>
<td>2.341*</td>
<td>2.224*</td>
<td>1.203</td>
<td>11.683*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.494)</td>
<td>(.776)</td>
<td>(.933)</td>
<td>(.914)</td>
<td>(1.133)</td>
<td>(1.138)</td>
<td>(1.022)</td>
<td>(5.458)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education Gini²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.187*</td>
<td>(4.679)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xpolity scores</td>
<td>-0.06</td>
<td>0.109</td>
<td>0.127</td>
<td>0.113</td>
<td>0.106</td>
<td>0.167</td>
<td>0.225</td>
<td>0.388</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.046)</td>
<td>(.245)</td>
<td>(.244)</td>
<td>(.235)</td>
<td>(.253)</td>
<td>(.244)</td>
<td>(.212)</td>
<td>(.203)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xpolity scores²</td>
<td>-0.007</td>
<td>-0.008</td>
<td>-0.007</td>
<td>-0.005</td>
<td>-0.009</td>
<td>-0.014</td>
<td>-0.011</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.014)</td>
<td>(.014)</td>
<td>(.014)</td>
<td>(.015)</td>
<td>(.014)</td>
<td>(.013)</td>
<td>(.012)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP per capita (ln)</td>
<td>0.086</td>
<td>0.053</td>
<td>-0.253</td>
<td>-0.215</td>
<td>-0.054</td>
<td>-0.004</td>
<td>1.203</td>
<td>11.683*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.285)</td>
<td>(.283)</td>
<td>(.267)</td>
<td>(.241)</td>
<td>(.244)</td>
<td>(.226)</td>
<td>(5.458)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP per capita growth</td>
<td>.063</td>
<td>.052</td>
<td>.050</td>
<td>.039</td>
<td>.038</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.044)</td>
<td>(.034)</td>
<td>(.034)</td>
<td>(.037)</td>
<td>(.036)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population size (ln)</td>
<td>.216*</td>
<td>.265***</td>
<td>.265*</td>
<td>.270*</td>
<td>.271*</td>
<td>.266*</td>
<td>.259*</td>
<td>.204*</td>
<td>.202*</td>
<td>214**</td>
<td>.193**</td>
</tr>
<tr>
<td></td>
<td>(.094)</td>
<td>(.060)</td>
<td>(.106)</td>
<td>(.110)</td>
<td>(.111)</td>
<td>(.117)</td>
<td>(.108)</td>
<td>(.104)</td>
<td>(.079)</td>
<td>(.075)</td>
<td></td>
</tr>
<tr>
<td>Peace years</td>
<td>.638</td>
<td>.131</td>
<td>.449</td>
<td>.509</td>
<td>.502</td>
<td>.516</td>
<td>.554</td>
<td>.502</td>
<td>.433</td>
<td>.282</td>
<td>.154</td>
</tr>
<tr>
<td></td>
<td>(.098)</td>
<td>(.322)</td>
<td>(.429)</td>
<td>(.480)</td>
<td>(.474)</td>
<td>(.478)</td>
<td>(.489)</td>
<td>(.430)</td>
<td>(.416)</td>
<td>(.389)</td>
<td>(.412)</td>
</tr>
<tr>
<td></td>
<td>(.1842)</td>
<td>(.1024)</td>
<td>(.2199)</td>
<td>(.2573)</td>
<td>(.2694)</td>
<td>(.3209)</td>
<td>(.3048)</td>
<td>(.2434)</td>
<td>(.4406)</td>
<td>(.1888)</td>
<td>(.2265)</td>
</tr>
<tr>
<td>Wald χ²</td>
<td>18.87</td>
<td>38.24</td>
<td>36.86</td>
<td>29.63</td>
<td>28.89</td>
<td>37.17</td>
<td>38.84</td>
<td>50.29</td>
<td>46.59</td>
<td>29.50</td>
<td>30.29</td>
</tr>
<tr>
<td>N</td>
<td>4,130</td>
<td>6,200</td>
<td>3,682</td>
<td>3,199</td>
<td>3,199</td>
<td>3,149</td>
<td>3,149</td>
<td>3,462</td>
<td>3,462</td>
<td>5,004</td>
<td>5,004</td>
</tr>
<tr>
<td>No. of popular rebellions</td>
<td>36</td>
<td>57</td>
<td>31</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>32</td>
<td>32</td>
<td>46</td>
<td>46</td>
<td></td>
</tr>
</tbody>
</table>

Coefficients (β) with robust standard errors in parentheses. *p < .10; †p < .05; **p < .01; ***p < .001.

In the first example the DV is the likelihood of popular rebellion onset. The IVs are Income Gini (a measure of income inequality), Education Gini (a measure of educational inequality), Xpolity (a measure of democracy), GDP per capita (a measure of prosperity), GDP per capita growth, Population Size, and Peace Years (presumably, the number of years a state has gone without experiencing a civil war).

First look at which coefficients are significant – associated with a p value of .05 or less. The asterisks tell the story in this table – Income Gini is sometimes significant, Education Gini is usually significant, Education Gini squared is significant (indicating the relationship between educational inequality and popular rebellion risk is not liner but curved), and Population Size is significant. So we look at these four variables only.

Since these are raw coefficients and not RRRs (you can tell because the author doesn’t say they are ratios, and because some of the numbers are negative and negative likelihood/probability doesn’t make any sense), we look at the sign of the coefficient to see the direction of the relationship. Since Income Gini is positive, it makes popular rebellion more likely.

Since Education Gini is positive, it also makes popular rebellion more likely, but the fact that its square is significant means the relationship is non-linear. Finally, since Population Size is positive, it makes popular rebellion more likely (more people means that popular rebellions are more likely – a standard finding for all types of civil war). So we can conclude that inequality (whether income or educational) and population are significantly correlated with the likelihood of a popular rebellion.

(continued on next page)
In the second example, the table is much larger and seems more intimidating, but we follow exactly the same steps. The DV is Civil War Onset, according to the title of the chart. Since this isn’t an amount or duration, it must be a likelihood, like our first example. The independent variables are the rows (not including Constant or n). FIRC stands for Foreign-Imposed Regime Change – when a government is militarily overthrown by some foreign power.

We see that Development reduces the likelihood of civil war onset, because its coefficient is significant across all models and negative. So more developed countries are less likely to experience civil wars. As in the first example, Population increases the likelihood of war. In Model 1, we see that FIRC is dangerous, increasing the likelihood of civil war. In Models 2-5, we see the circumstances under which it is most dangerous. The other independent variable are interpreted in the same fashion.
# Appendix IV: Rubrics for QLR Elements

POLI 3330

### Rubric for QLR Research Proposal

<table>
<thead>
<tr>
<th><strong>Criterion</strong></th>
<th><strong>Points Possible</strong></th>
<th><strong>Points Earned/Comments</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>One page, typed</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Why is the question important?</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>What is the DV of interest?</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>List of possible independent (explanatory or control) variables</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Empirical question in one of the three subfields listed</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Grammar/spelling/failure to use APSA citations</td>
<td>Up to -10</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>30</strong></td>
<td></td>
</tr>
</tbody>
</table>
POLI 3330
Rubric for Annotated References

Each source is worth 5 points. If more than seven are provided, the scores from the top seven (those with the most points) are used.

1 point for a proper APSA citation.
1 point for it being a peer-reviewed academic article or a book from an academic press.
1 point if the author or authors actually conduct a quantitative (statistical) analysis in the article. 1 point identifying the dependent variable of the study.
1 point for identifying the statistical model used.

A total of five points are reserved for style and grammar. Each clear error (e.g. a sentence without a verb, a misspelling, or a strange formatting issue) reduces this credit by one point.
<table>
<thead>
<tr>
<th>Element</th>
<th>Points Possible</th>
<th>Points Received and Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover page</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Establish question and its importance</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Thesis about the research on that question is provided. Remember, the thesis isn’t so much your answer to the question as your summary of how the literature has answered it so far.</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>For 1st academic quantitative study:</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>DV is established</td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>Theory is described – esp. how it answers the research question</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Statistical methods are described</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Statistical tables are interpreted</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td>At least one weakness of the author’s approach (measurement, research design, choice of statistics, etc) is identified</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Knowledge gained is identified</td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>For 2nd academic quantitative study:</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>DV is established</td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>Theory is described – esp. how it answers the research question</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Statistical methods are described</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Element</td>
<td>Points Possible</td>
<td>Points Received and Comments</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-----------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Statistical tables are interpreted</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td>At least one weakness of the author’s approach (measurement, research design, choice of statistics, etc) is identified</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Knowledge gained is identified</td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>For 3rd academic quantitative study:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DV is established</td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>Theory is described – esp. how it answers the research question</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Statistical methods are described</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Statistical tables are interpreted</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td>At least one weakness of the author’s approach (measurement, research design, choice of statistics, etc) is identified</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Knowledge gained is identified</td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>For 4th academic quantitative study:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DV is established</td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>Theory is described – esp. how it answers the research question</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Element</td>
<td>Points Possible</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------</td>
<td></td>
</tr>
<tr>
<td>Statistical methods are described</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Statistical tables are interpreted</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td>At least one weakness of the author’s approach (measurement, research design, choice of statistics, etc) is identified</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Knowledge gained is identified</td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>For 5th academic quantitative study:</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>DV is established</td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>Theory is described – esp. how it answers the research question</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Statistical methods are described</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Statistical tables are interpreted</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td>At least one weakness of the author’s approach (measurement, research design, choice of statistics, etc) is identified</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Knowledge gained is identified</td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>Compare the literature, suggesting paths for future researchers to follow.</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>APSA-formatted Works Cited page</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong> (-1 point per spelling/grammar/style mistake up to 14 maximum points lost):</td>
<td><strong>70</strong></td>
<td>See paper. Any additional revisions needed are listed at the end of your paper.</td>
</tr>
<tr>
<td>Element</td>
<td>Points Possible</td>
<td>Points Received and Comments</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-----------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>Cover page</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Establish question and its importance</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Thesis about the research on that question is provided. Remember, the thesis isn’t so much your answer to the question as how the literature has answered it so far.</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

For 1st academic quantitative study:
- DV is established 20
- Theory is described – esp. how it answers the research question 4
- Statistical methods are described 2
- Statistical tables are interpreted 8
- At least one weakness of the author’s approach (measurement, research design, choice of statistics, etc) is identified 3
- Knowledge gained is identified 2

For 2nd academic quantitative study:
- DV is established 20
- Theory is described – esp. how it answers the research question 4
- Statistical methods are described 2
<table>
<thead>
<tr>
<th>Element</th>
<th>Points Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistical tables are interpreted</td>
<td>(8)</td>
</tr>
<tr>
<td>At least one weakness of the author’s approach (measurement, research design, choice of statistics, etc) is identified</td>
<td>(3)</td>
</tr>
<tr>
<td>Knowledge gained is identified</td>
<td>(2)</td>
</tr>
<tr>
<td>For 3rd academic quantitative study:</td>
<td></td>
</tr>
<tr>
<td>DV is established</td>
<td>(1)</td>
</tr>
<tr>
<td>Theory is described – esp. how it answers the research question</td>
<td>(4)</td>
</tr>
<tr>
<td>Statistical methods are described</td>
<td>(2)</td>
</tr>
<tr>
<td>Statistical tables are interpreted</td>
<td>(8)</td>
</tr>
<tr>
<td>At least one weakness of the author’s approach (measurement, research design, choice of statistics, etc) is identified</td>
<td>(3)</td>
</tr>
<tr>
<td>Knowledge gained is identified</td>
<td>(2)</td>
</tr>
<tr>
<td>For 4th academic quantitative study:</td>
<td></td>
</tr>
<tr>
<td>DV is established</td>
<td>(1)</td>
</tr>
<tr>
<td>Theory is described – esp. how it answers the research question</td>
<td>(4)</td>
</tr>
<tr>
<td>Element</td>
<td>Points Possible</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Statistical methods are described</td>
<td>(2)</td>
</tr>
<tr>
<td>Statistical tables are interpreted</td>
<td>(8)</td>
</tr>
<tr>
<td>At least one weakness of the author’s approach (measurement, research design, choice of statistics, etc) is identified</td>
<td>(3)</td>
</tr>
<tr>
<td>Knowledge gained is identified</td>
<td>(2)</td>
</tr>
<tr>
<td>For 5th academic quantitative study:</td>
<td></td>
</tr>
<tr>
<td>DV is established</td>
<td>(1)</td>
</tr>
<tr>
<td>Theory is described – esp. how it answers the research question</td>
<td>(4)</td>
</tr>
<tr>
<td>Statistical methods are described</td>
<td>(2)</td>
</tr>
<tr>
<td>Statistical tables are interpreted</td>
<td>(8)</td>
</tr>
<tr>
<td>At least one weakness of the author’s approach (measurement, research design, choice of statistics, etc) is identified</td>
<td>(3)</td>
</tr>
<tr>
<td>Knowledge gained is identified</td>
<td>(2)</td>
</tr>
<tr>
<td>Compare the literature, suggesting paths for future researchers to follow.</td>
<td>5</td>
</tr>
<tr>
<td>APSA-formatted Works Cited page</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>130</strong></td>
</tr>
</tbody>
</table>

Spelling/grammar/style (-1 point per mistake up to 14 maximum points lost): As marked in paper.
<table>
<thead>
<tr>
<th>Item</th>
<th>Comments</th>
<th>Points</th>
<th>Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation and Time:</td>
<td>Student has a presentation prepared that actually lasts 8-12 minutes. Presentation follows some logical order.</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Visual Aid:</td>
<td>Student uses PowerPoint or a handout to communicate the statistical information from at least one article.</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Coverage:</td>
<td>Student explains the quantitative sections of the article(s) presented.</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Effective communication:</td>
<td>Student avoids reading directly from a paper or script, makes eye contact with audience, avoids nonfluencies, etc.</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>40</td>
</tr>
</tbody>
</table>

Other comments: