



TEXAS A&M UNIVERSITY CENTRAL TEXAS

POLI 5300: Political Science Research Methods Section 110 (Fall 2021) 6 PM - 9 PM Wed in FH 212



Dr. Jeffrey Dixon

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Office Hours: 4:15 PM – 5:45 PM Mon-Wed or
by appointment

Catalog Description

Learn the elements of research design and statistical analysis. Topics covered include hypothesis-testing, reliability and validity, measures of association, linear regression, and maximum likelihood estimation.

Course Overview

Understanding Social Science Research is designed to enable students to understand quantitative research in political science and other social sciences. It begins with the essential principles of research design and hypothesis-testing and then proceeds to the interpretation of the statistical tools most commonly used in quantitative political science research. The emphasis is on preparing students to read and understand sophisticated research.

Course Objectives, Learning Outcomes, and Assessment

Upon completion of this course, the student will be able to:

1. Distinguish between independent and dependent variables, as well as antecedent, intervening, and alternative variables
2. Identify the types and tests of measurement reliability and validity
3. Find the central tendency of any variable
4. Distinguish between variables which are normally distributed and those which are not
5. Describe and evaluate difference of means tests
6. Identify the proper measure of association between two variables to use given the data
7. Distinguish between significance of individual variables and the goodness-of-fit of the model as a whole
8. 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
9. Identify the statistically significant independent variables and their direction of effect when given results of a logit or probit (of the binary, ordered, or multinomial varieties), at least one duration (hazard or survival analysis) model, and at least one multistage model (such as a two-stage or zero-inflated regression)

10. Interpret such quantitative social science research and communicate that interpretation in speech and writing
11. Identify weaknesses in existing quantitative research and construct a research design that addresses at least some of those weaknesses

Homework exercises assess Outcomes 1-9. In addition, the quantitative literature review and presentation assess Outcomes 8-10. Outcome 11 is assessed using the assigned research design. Finally, the course final exam assesses Outcomes 1-10, save for the “speech” part of Outcome 10.

Required Readings

The following books are 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.

Gary King, Robert Keohane, and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton, NJ: Princeton University Press. ISBN: 9780691034713 (Hereafter referred to as **KKV**)

William E. Wagner and Brian Joseph Gillespie. 2019. *Using and Interpreting Statistics in the Social, Behavioral, and Health Sciences*. Thousand Oaks, CA: SAGE. ISBN 9781526402493.

The other required readings may be found on Canvas.

Course Delivery

This course meets face-to-face in a classroom, with supplementary materials provided on Canvas:

Logon to Texas A&M-Central Texas Canvas [<https://tamuct.instructure.com/>] or access Canvas through the TAMUCT Online link in myCT [<https://tamuct.onecampus.com/>]. You will log in through our Microsoft portal. Username: Your MyCT email address. Password: Your MyCT password

Additional requirements:

- Everything is tested using the free Google Chrome web browser, but should also work with most modern web browsers (e.g. Firefox). However, Internet Explorer is not supported by Canvas.
- You may, in the event that we have to cancel an in-person session of class, need the ability to watch a streaming video lecture on Canvas, which requires broadband internet access. This does not require you to install specific video software -- if you can watch videos on sites like YouTube, you should be able to watch the course videos without issue.
- You will need to be able to open Portable Document Files (for readings posted on Canvas). Adobe Reader can do this for free.
- You may want to be able to view the Microsoft PowerPoint files which provide the basis for most lecture material. If you cannot gain access to a program which can open these, I can post them in pdf format as well.

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 (preferably using Canvas itself, but email will also work, albeit perhaps not as quickly).

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): [http://hdc.tamu.edu]

Please let the support technician know you are an A&M-Central Texas student.

Student-Instructor Interaction

During the semester, the instructor will be checking email at least once per day from Monday-Friday. Expect a response within 24 hours during the week, *if you request one* in your email. Weekend responses may take longer. Practice professionalism (full sentences, spelling, etc) in your electronic correspondence.

Writing Requirements

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 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

Grading (90/80/70/60, rounded to the nearest percentage):

- Academic Integrity Exercise: This consists of watching a brief lecture online, 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 successfully completed this exercise in another one of my courses, then you need not complete it again to get the credit.

*****Completing the Academic Integrity Exercise is a prerequisite to passing this course.*****

- **Rubric: You will fail the course if you have not completed the Academic Integrity Exercise in this or another of my courses.** Of course, if you have done so for another of my courses, you need not complete the exercise again.

Homework Assignments (32% total -- 4% each). All homework assignments should be *typed* and submitted in person before class begins on the due date. In the event that you need to email an assignment due to printer issues or having to miss class, be sure to bring a paper copy for me to grade the next session. Assignments and rubrics (where not incorporated into the assignments themselves) are attached at the end of this syllabus.

Research Design (35%). Enterline (2007) provides some really useful tips for writing papers in graduate political science courses. You can find his guide in the Writing Resources folder under Files on Canvas.

1. Research Design Stage I (30 points):

- a. Students must type up an introduction about their research question, clearly identifying the dependent variable and the importance of the question. 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 ideas for your research question is attached to the syllabus; they can serve as jumping-off points for studying what interests you.
- b. Students must then type a list of at least twelve (12) academic articles or books that study their dependent variable (or a closely-related variable) using quantitative statistical analysis. Provide a full APSA citation for each source. After each citation, the student should identify the dependent variable(s), explanatory variable(s), and statistical model(s) used by the author(s) in one or two sentences. 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 zero-inflated negative binomial, OLS, GLS, probit (binary, ordered or multinomial), logit/logistic (binary, ordered, or multinomial), Cox, Weibull, ANOVA, Poisson, etc. The purpose of this requirement is to help you filter the articles for the next stage of the research design – 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.

2. Research Design Stage II (40 points): Students will be required to type 2000-5000 words interpreting, evaluating, and synthesizing the results from at least ten (I suggest no more than twelve) peer-reviewed articles or books from academic presses that include bivariate or multivariate statistical analyses to see what others have discovered that may be relevant to their question. You do not have to use the ones from Stage I. This preliminary literature review should be typed, double-spaced, with page numbers and use of APSA citations in text. The following steps should be part of your Stage II:

- 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 brief categorization of the research on that question -- a claim that the research can be divided into several categories (each with its own approach to the question). This should not take more than a paragraph, since it is just previewing the structure of the rest of the literature review.
- d. Now review 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 with a paragraph or two comparing the literature you’ve just reviewed, suggesting a theory of what might explain changes in the dependent variable, and how you might go about testing that theory.
- f. Attach a properly-formatted APSA-style works cited page.

3. Research Design (First Full Draft – 80 points, Final Draft – 200 points). Students will be required to type 3500-7000 words reviewing the relevant quantitative literature on their puzzle, identifying common shortcomings of existing studies, and designing a new study, with a theory that explains the puzzle, a description of independent (both explanatory and control) variables (to include operationalization and

measurement specification for each), and hypotheses that connect the explanatory variables to the dependent variable (which should also be operationalized and have some measure). The research design should be typed, double-spaced, with page numbers and use of APSA citations in text. The following steps should be part of your research design:

- a. Create a cover page. Come up with a title other than “research design” or the like; add your name and institutional affiliation (presumably, Texas A&M University – Central Texas).
 - b. Begin the research design by establishing your question and its importance. This should take a paragraph or two. Then provide your thesis about the question, to be expanded in the theory section of the paper.
 - c. Then provide your revised literature review, taking care to emphasize common themes and/or common weaknesses in existing research designs and statistical results.
 - 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 strengths and weaknesses of the author’s approach and what knowledge we gain from the study (if any).
 - e. Provide a theory of what leads to changes in the dependent variable of interest, consistent with at least some of the prior research. If prior research contradicts your theory, explain how that research differs from your own proposal.
 - f. Provide 3-8 testable hypotheses, with explanatory and dependent variables that follow from your theory.
 - g. Describe how you plan to conduct your study, including a full discussion of each variable, its operationalization and measurement, and which statistical technique(s) are most appropriate for testing the hypotheses.
 - h. Describe what findings would be inconsistent with your hypotheses and how any likely measurement errors would either not bias the study or at worst bias the study *against* your hypotheses.
 - i. Write an abstract describing the main arguments of your theory and research design as filling a gap in the extant literature. It should be about 100-200 words. Either place it at the bottom of your title page, or insert it on its own page between the title page and main text of the paper
 - j. Attach a properly-formatted APSA-style works cited page.
4. Research Design Presentation. Students should prepare a presentation of about 13 minutes (10-16 minutes are the outer limits, so practice and rewrite until it fits) on the most salient parts of their research design (puzzle, previous findings, theory, and measurement). A PowerPoint presentation or physical handout must be used to communicate the statistical information in at least one of your articles to your listeners. For example, you can compare two or more of the articles in your literature review, 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. The key to the presentation is demonstrating that you can take a puzzle in quantitative social science and explain your proposed solution to others who have some quantitative training. (50 points)

In-Class Exercises (8%). These participation-focused 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 or not the test tends to disconfirm the theory.

Final Exam (20%). The final exam will consist of approximately 50 questions, the majority of which will present the student with a table of statistical results from a journal article and ask the student to interpret these results. See the exam preparation guide on Canvas for sample questions of the general type asked on the final exam.

Overall POLI 5300 Rubric

Item	Points	Percent of Grade
Academic Integrity Exercise	Required to pass the course	N/A
Homework Exercises	8 @ 40 points each = 320 points	32%
Research Design Stage I	30 points	3%
Research Design Stage II	40 points	4%
Research Design First Full Draft	80 points	8%
Research Design Final Draft	200 points	20%
Research Design Presentation	50 points	5%
In-Class Exercises	80 points (equally distributed)	8%
Final Exam	200 points	20%
TOTAL POSSIBLE	1000 Points	100%
<i>895+ = A 795-894=B 695-794=C 595-694=D 594 or lower = F</i>		

Course Policies

Attendance and Excused Absences

Attendance is required. In the case of foreseeable absences, students must inform the instructor *prior to the absence*. Send me an email or Canvas Inbox message stating the dates(s) you will be missing and the reason(s). Failure to contact the instructor *prior to class* will normally rule out any sort of make-up, but in the case of documented emergencies, the absence may be excused if the emergency is reported as soon as is reasonably possible.

Make-Up Work, Late Work, and Incompletes

- Late work loses 10% of the credit it would otherwise receive for each day (*not* each session) or portion thereof that it is late. No late work will be accepted after the final exam.
- For every excused absence, the missed participation must be made up. Just request a copy of the in-class work from the instructor, complete it yourself, and return it within a week of receiving it.
- There will be no incompletes in this class, barring actual hospitalization or unforeseen deployment after the withdrawal deadline has passed. By university policy, incompletes must be finished in the subsequent semester or they automatically revert to grades of F.

Regrades

The instructor is not perfect, and if you believe part or all of a written assignment has been graded incorrectly, you need only return it **within one week** of receiving it back from the instructor with a *brief* note specifying the part(s) to be regraded. The specified parts will be compared to the key again. After a week has passed, I can no longer be sure that you will be graded to the same standards as those used for all the other students, so work will not be regraded after this period.

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. A&M-Central Texas expects its students, Dixon – POLI 5300: Political Science Research Methods – Fall 2021

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. Any deviation by students from this expectation may result in a failing grade for the assignment and potentially a failing grade for the course. All academic misconduct concerns will be referred to the Office of Student Conduct. When in doubt on collaboration, citation, or any issue, please contact your instructor before taking a course of action. For more [information regarding the Student Conduct process](#), see the following link: [<https://www.tamuct.edu/student-affairs/student-conduct.html>].

If you know of potential honor violations by other students, you may [submit a report](#), at [https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout_id=0].

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

- *Violations:* Some common violations of academic integrity that I have observed while teaching similar classes at TAMUCT are
 - 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 memos 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.
 - 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.
 - Paraphrasing another person's words without citing the source
- *Penalties:*
 - 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 no further action in the case of clearly inadvertent violation.
 - The (a) outright purchase, download, or completion by others of an exam, 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 expulsion to the TAMUCT administration.

Drop Policy

If you discover that you need to drop this class, you must complete the [Drop Request](#) Dynamic Form through Warrior Web.

[<https://dynamicforms.ngwebsolutions.com/casAuthentication.ashx?InstID=eaed95b9-f2be-45f3-a37d-46928168bc10&targetUri=https%3A%2F%2Fdynamicforms.ngwebsolutions.com%2Fsubmit%2FForm%2Fst-art%2F53b8369e-0502-4f36-be43-f02a4202f612>]

Faculty 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. Once you submit the completed 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.

Professors are Mandatory Reporters

Texas State Law states that:

- “An employee of a postsecondary educational institution who, in the course and scope of employment, witnesses or receives information regarding the occurrence of an incident that the employee reasonably believes constitutes **sexual harassment, sexual assault, dating violence, or stalking** and is alleged to have been committed by or against a person who was a student enrolled at or an employee of the institution at the time of the incident **shall promptly report the incident** to the institution's Title IX coordinator or deputy Title IX coordinator.”
- Further: “A person **commits an offense** if the person is required to make a report...and **knowingly fails to make the report**. ... A postsecondary educational institution **shall terminate** the employment of an employee whom the institution determines in accordance with the institution's disciplinary procedure to have committed [such] an offense.”

Student Resources

- **UNILERT** (Emergency Warning System for Texas A&M University – Central Texas): UNILERT 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 and text message. By enrolling in UNILERT, university officials can quickly pass on safety-related information, regardless of your location. Please enroll today at <http://www.tamuct.edu/departments/news/unilert.php>
- **University Writing Center**: University Writing Center: Located in Warrior Hall 416, the University Writing Center (UWC) at Texas A&M University–Central Texas (A&M–Central Texas) is a free service open to all A&M–Central Texas students. For the Fall 2021 semester, the hours of operation are from 10:00 a.m.-5:00 p.m. Monday thru Thursday in Warrior Hall 416 (with online tutoring available every hour as well) with satellite hours available online only Monday thru Thursday from 6:00-9:00 p.m. and Saturday 12:00-3:00 p.m.
 - 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!
 - Students may arrange a one-to-one session with a trained and experienced writing tutor by making an appointment via WCOonline at <https://tamuct.mywconline.com/>. In addition, you can email Dr. Bruce Bowles Jr. at bruce.bowles@tamuct.edu if you have any questions about the UWC, need any assistance with scheduling, or would like to schedule a recurring appointment with your favorite tutor by making an appointment via WCOonline at <https://tamuct.mywconline.com/>. In addition, you can email Dr. Bruce Bowles Jr. at bruce.bowles@tamuct.edu if you have any questions about the UWC, need any assistance with scheduling, or would like to schedule a recurring appointment with your favorite tutor.

- **Library Services:** The University Library provides many services in support of research across campus and at a distance. We offer over 200 electronic databases containing approximately 400,000 eBooks and 82,000 journals, in addition to the 96,000 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.
 - 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 virtually through WebEx, Microsoft Teams 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) [http://tamuct.libguides.com/index].
- **Academic Accommodations:** 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, WH-212; or call (254) 501-5836. Any information you provide is private and confidential and will be treated as such.
 - For more information, please visit our [Access & Inclusion](https://tamuct.instructure.com/courses/717) Canvas page (log-in required) [https://tamuct.instructure.com/courses/717]
 - *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 [Student Affairs](https://www.tamuct.edu/student-affairs/pregnant-and-parenting-students.html) [https://www.tamuct.edu/student-affairs/pregnant-and-parenting-students.html]. Students may also contact the institution's Title IX Coordinator. If you would like to read more about these [requirements and guidelines](http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf) 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. A&M-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, on a remote online basis. Visit the Academic Support Community in Canvas to view schedules and contact information. Subjects tutored on campus include Accounting, Advanced Math, Biology, Finance, Statistics, Mathematics, and Study Skills. Student success coaching is available online upon request.

- If you have a question regarding tutor schedules, need to schedule a tutoring session, are interested in becoming a tutor, success coaching, or have any other question, contact Academic Support Programs at (254) 501-5836, visit the Office of Student Success at 212F Warrior Hall, or by emailing studentsuccess@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 online tutoring support at no additional cost. This tool provides tutoring in over 40 subject areas (but not writing support). Access Tutor.com through Canvas.

Amendments

Not all exigencies can be foreseen, especially in the midst of another wave of a pandemic. I reserve the right to amend the syllabus at any time. Any such amendment will be provided to the students in writing by uploading a revised syllabus to the course on Canvas. If I need to do so, I will use the Announcements feature of Canvas to inform students of the change(s).

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

I divide critical thinking skills into three components. First, students must be perceptive readers and listeners. In nearly all courses, there are either sections of the readings, lectures, or class handouts which we discuss and debate, nearly line by line. The point of these exercises is to draw students' attention to the multiple ways in which one might read a phrase or argument. 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?" 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." While informing students is part of my responsibilities, I also 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 even 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 for evaluating its ethical implications. 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 still 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?'**"*

I press 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. For normative questions, I require them to apply their framework to difficult moral questions. In sum, I try to combine the focus on argument dissection that one finds in debate with the focus on puzzle-solving that one finds in science and philosophy.

Writing Skills

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 other courses, speaking) activities that require effective argument. In order to help students proofread their work, I set up a web site illustrating the most common student grammatical errors: word mix-ups, sentence fragments, agreement of subject and verb, and improper comma or apostrophe usage.

Moral Development

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 learning outcomes of the course reflect the knowledge of the subject I expect students to have by the end of the course.

Course Schedule

Session	Unit	Topics	Required Readings	Homework Due
Aug 25	Quantifying Politics	Varieties of Variables	None	None
Sept 1		Evaluating Data: Reliability and Validity	Wagner and Gillespie: Chapters 1, 2 (pp. 9-18, 23-25) KKV: Chapter 1 <i>Also recommended:</i> Donovan and Hoover (Canvas)	Exercise 1 and Academic Integrity Exercise (on Canvas), <i>if</i> not previously completed for me.
Sept 8		Polls, Samples, and Scales as Measurement Techniques	Wagner and Gillespie: Chapters 3, 12 Shiraev and Sobel (Canvas)	Research Design: Stage I
Sept 15	Research Design	Internal and External Research Design Validity	Wagner and Gillespie: Chapter 2 (pp. 18-23) KKV: Chapters 4 and 6 Gigerenzer et al (Canvas)	Exercise 2
Sept 22	Univariate Statistics	Central Tendency and Dispersion	Wagner and Gillespie: Chapter 6 Powner (Canvas)	Exercise 3
Sept 29		Probability Distributions	Wagner and Gillespie: Chapter 4 (pp. 37-51) KKV: Chapter 2	None
Oct 6	Bivariate Statistics	Comparing Means and Variance	Wagner and Gillespie: Chapters 7, 8	Exercise 4
Oct 13		Bivariate Correlation	Wagner and Gillespie: Chapters 4 (pp. 52-58), 5, 9, 10 KKV: Chapter 3	Research Design: Stage II
Oct 20	The Right Tool for the Job	Uncensored Interval Dependent Variables	Wagner and Gillespie: Chapter 11 KKV: Chapter 5 Gujarati (Canvas)	Exercise 5
Oct 27		Binary Dependent Variables	Spicer (Canvas)	Exercise 6
Nov 3		Count and Duration Data as Dependent Variables	Rydberg and Carkin (Canvas) Hoffman (Canvas)	Research Design: First Full Draft
Nov 10		Ordinal and Nominal Dependent Variables	Anderson and Rutkowski (Canvas) Nussbaum (Canvas)	Exercise 7
Nov 17		Censored Dependent Variables	Vance and Ritter (Canvas)	Exercise 8
Dec 1	Integration	Research Symposium	None	Research Design: Presentations Research Design: Final Draft
Dec 8		Final Exam	None	Final Exam

Exercise 1: Hypotheses and Variables

Instructions: Find and read one recent (2012 or later) quantitative research article (one that tests hypotheses using statistics and present the results of that statistical analysis) in a *peer-reviewed political science journal* on some topic of interest to you. *The article must test one or more hypotheses using statistics.* Adding “hypotheses” and/or “significant” as search terms on WarriorQuest, Google Scholar, or Academic Search Complete may help you narrow down your choice.

- I. Download and print the article so you can attach it to your work when you hand in the exercise.
- II. Then answer the following questions. The answers should be typed, but diagrams may be hand-drawn. Remember to use full sentences as answers where possible.
 - A. Questions about the article you chose (8 points each, for 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 most.
 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, assuming that two or more exist.
 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, Weibull, probit, ordered logit/probit, multinomial logit/probit, Poisson, negative binomial or zero-inflated negative binomial/ZINB, Heckman, factor analysis, ANOVA, 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: (1) a person’s intention to vote in an upcoming election, (2) that person’s general interest in politics, and (3) 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. Keep in mind: cause must precede effect (something later in time cannot reach back and influence something earlier in time).
 2. Identify the independent and dependent variables in your hypothesis.
 3. State how you expect the third variable to affect each of the other two variables (if at all).
 4. Draw an arrow diagram including all three variables, consistent with #2 and #3.
 5. Determine whether the third variable is antecedent, intervening, alternative, or irrelevant.

One of the most frequently-used measures in research in the subfields of comparative politics and international relations is the *Polity IV* index of regime types (democracy and/or autocracy) – specifically, its POLITY variable.

Instructions:

1. Use the following table or one like it to code each country’s regime characteristics for the year 2021 using the attached country information and excerpts from the Polity IV coding manual.

	USA	Russia	PRC
XRCOMP (Record the Code, not the Scale Weight)			
XROPEN (Record the Code, not the Scale Weight)			
XCONST (Record the Code, not the Scale Weight)			
PARREG (Record the Code, not the Scale Weight)			
PARCOMP (Record the Code, not the Scale Weight)			
DEMOC (Compute using the scale given)			
AUTOC (Compute using the scale given)			
POLITY (Equals DEMOC-AUTOC)			

2. Type your answers to the following four questions. Most require only a sentence or two.
 - a. How well does POLITY measure the differences between these regimes? That is, are you comfortable with where your analysis using the instrument places each country relative to the other countries on the -10 to 10 scale?
 - b. What elements of democracy are missing from Polity IV’s instrument? That is, what are things a country needs for you to consider it democratic that are not measured by the Polity IV variables?
 - c. Do you think that you probably reached the same POLITY scores, within a point or two, as the rest of the class?
 - d. Is this a biased instrument? If so, what is its bias? Note that bias includes anything that introduces systematic error into the instrument, not just bias introduced by political ideologies.
 - e. Identify one assumption about democracy and/or autocracy made by this instrument. Is the assumption a reasonable one?

Country Descriptions

United States

The President is selected by an Electoral College, which in turn is selected by voters in each state. Although the candidate with the most votes usually wins, sometimes a candidate with fewer votes defeats a candidate with more votes by winning enough electors by a narrow margin in some states to offset his/her opponent having won electors by larger majorities in other states. Any natural-born US citizen aged 35 or older may run for President; the recent success of Donald Trump and near-success of Bernie Sanders demonstrates that even in a two-party system the nomination process is not determined solely by party elites.

The Congress initiates all legislation in the United States; Presidents have no ability to force a vote or even a debate on any proposed measures. Theoretically, the powers of the executive and legislature are about equal, although some argue that one or the other is more powerful (the “Imperial Presidency” and “Two Presidencies” theses, respectively). The president has a strong veto over normal legislation, which requires a two-thirds majority in both houses of Congress to override.

The American two-party system is entrenched in power and various rules in some states make it difficult for a third party to get on the ballot. However, anyone is free to form a party and, given sufficient resources and/or popular support, get that party’s candidates on ballots at all levels of government. The emergence of a credible third party is rare, however, and efforts for political change usually take the form of efforts to gain control over one party or the other’s nomination procedures and contests. This can lead to factions within parties becoming the main method by which groups pursue their goals, as in both parties’ primaries in 2016.

One item of note is that the United States is a federal system, and over the past 20 years, fewer and fewer of those states have competitive elections – most of them are “red” (Republican party dominates statewide elections) or “blue” (Democratic party dominates statewide elections), leaving few truly competitive “swing” states.

Russia

There are regular elections for the Presidency, but fraud is common and the “United Russia” party, a so-called “party of power” developed around a faction loyal to Vladimir Putin, regularly wins large majorities. In 2018, incumbent Vladimir Putin won reelection for his second consecutive (fourth overall) term in office with 77% of the vote, compared to less than 12% for his nearest competitor. In the previous Presidential election (2012), the results gave Putin 64% of the vote, a Communist Party candidate 17% of the vote, and single-digit results for all other candidates. Rules for the selection of candidates require that they either be nominated by a party represented in the Duma (legislature) or collect 2 million signatures supporting their candidacy. If no candidate were to win a majority on Election Day, there would be a run-off election between the top two candidates in order to ensure that the winner received a majority.

The President appoints the prime minister; the Duma must approve, but the president can dissolve the legislature and call for new elections if this body rejects his/her nominee three times. The Prime Minister can appoint or dismiss Cabinet ministers at will. The president has a strong veto over normal legislation, which requires a two-thirds majority in both houses of the legislature to override. Moreover, the Constitution provides the president sweeping powers to issue decrees on any subject. Such decrees have no time limit and do not require parliamentary approval; they are considered legally binding provided they do not contradict existing law. Since the 2016 Duma elections that gave Putin’s allies a three-fourths majority in the Duma (legislature), United Russia can amend the Constitution at will.

Following the Beslan school hostage crisis in September 2004, President Putin initiated a radical shakeup of the federal system, proposing that the direct elections of regional governors be replaced by appointments from the president himself. These appointments could later be confirmed or rejected by the regional legislatures. The move placed more control over the Federation Council (the upper house of the Duma) by the executive branch, due to laws which stipulate that regional executives have a say in choosing delegates to the Federation council.

Moreover, parties and factions are not recognized in the Federation Council. Russia's judiciary is subject to manipulation by central and local political authorities and seriously impaired by a lack of resources and by high levels of corruption. On the other hand, it has shown signs of limited independence.

Putin has also interfered with the electoral process. Most significantly, the government effectively restricted media freedom. Independent media coverage of the political arena in Russia has been curtailed in recent years by politically-motivated tax audits and libel suits levied against opposition voices as well as the withholding of financial support from government media operations that exercised independent editorial judgment. Putin endorsed a new information security doctrine that implies the need to restrict access by the Russian public to foreign news media. In related developments, NTV, the only independent television station with nationwide broadcast coverage, was taken over in April 2001 by a subsidiary of the state-owned gas company (Gazprom-Media). Many of NTV's journalists moved to TV-6, which was then forced off the air in January 2002 in liquidation proceedings. Both media outlets had been critical of the Putin government and many critics accused the president of moving to maintain control over the media.

Russia has seen the formation of numerous political parties since political pluralism was instituted in the early 1990s. However, few of these parties have been substantial or lasting. In general, Russia's political parties are weak and fluid in nature. In each election cycle, new organizations and blocs are formed, often on a personalist basis, to fight for a leading role and then often just as quickly disappear.

People's Republic of China

The citizens of China cannot change their chief executive through democratic mechanisms. Executive recruitment within China remains occurs within the Chinese Communist Party (CCP), which has had loose factions and interpersonal networks but nothing approaching a democratic primary system. The President is elected by the National People's Congress (NPC), China's highest state body, which at this time contains nearly 3000 delegates – the world's largest national legislature. According to the Organic Law of the NPC, the President is nominated by the NPC Presidium, the Congress's executive organ, and the only requirements are that he or she be . In practice, however, the ruling Communist Party of China reserves the post of President for its current General Secretary. Like all officers of state elected by the NPC, the President is elected from a one name ballot. The current President and General Secretary is Xi Jinping, who ascended to power in 2013.

Since Xi Jinping's ascendance to power, two new bodies of the Communist Party, the National Security Commission and Central Leading Group for Comprehensively Deepening Reforms, have been established, concentrating political power in the "paramount leader" to a greater degree than anyone since Deng Xiaoping, who ruled without challenge until his official retirement in 1990. These bodies were tasked with establishing the general policy direction for national security as well as the agenda for economic reform. Both groups are headed by the General Secretary.

While Mao Zedong and, at times, Deng Xiaoping, were able to stand above the party apparatus, more often than not the CCP as a collective body has retained its ability to limit the powers of its designated chief executive. While the powers of the general secretary of the CCP are vast, nonetheless, the autonomy of the chief executive is often constrained by the institutionalized power of the party apparatus. Xi Jinping has been quite successful at finding or appointing allies in the party hierarchy and a recent constitutional amendment, which repealed the term limits that would have forced him out of power and added "Xi Jinping Thought" to the document. Finally, "supervisory committees" -- appointed by the President and having the ability to remove members of the legislature or bureaucracy -- were instituted. No Chinese President has held such authority since Mao Zedong.

The Standing Committee of the NPC has the power to interpret the laws of the PRC, including its constitution. In contrast to other countries in which *stare decisis* gives the power of both final interpretation and adjudication to a supreme court, within the People's Republic of China constitutional and legal interpretation is considered to

be a legislative activity rather than a judicial one. The Standing Committee (roughly 160 members) also handles all legislative functions in the 50-51 weeks each year that the NPC is out of session.

The 58 million-member CCP continues to restrict all challenges to its nearly 70-year rule. Political threats to CCP hegemony and Chinese (Han-dominated) territorial sovereignty are countered with repression. While eight minor parties are permitted to operate in China, they have no autonomy from the ruling CCP. All independent voices of political and social reform are muzzled by the CCP.

Extracts from the Polity IV codebook:

XRCOMP -- Competitiveness of Executive Recruitment: Competitiveness refers to the extent that prevailing modes of advancement give subordinates equal opportunities to become superordinates. For example, selection of chief executives through popular elections matching two or more viable parties or candidates is regarded as competitive. Three categories are used to measure this concept:

(1) Selection: Chief executives are determined by hereditary succession, designation, or by a combination of both, as in monarchies whose chief minister is chosen by king or court. Examples of pure designative selection are rigged, unopposed elections; repeated replacement of presidents before their terms end; recurrent military selection of civilian executives; selection within an institutionalized single party; recurrent incumbent selection of successors; repeated election boycotts by the major opposition parties, etc.

(2) Dual/Transitional: Dual executives in which one is chosen by hereditary succession, the other by competitive election. Also used for transitional arrangements between selection (ascription and/or designation) and competitive election.

(3) Election: Chief executives are typically chosen in or through competitive elections matching two or more major parties or candidates. (Elections may be popular or by an elected assembly.)

XROPEN -- Openness of Executive Recruitment: Recruitment of the chief executive is "open" to the extent that all the politically active population has an opportunity, in principle, to attain the position through a regularized process. Four categories are used:

(1) Closed: Chief executives are determined by hereditary succession, e.g. kings, emperors, beys, emirs, etc. who assume executive powers by right of descent. **An executive selected by other means may proclaim himself a monarch but the polity he governs is not coded "closed" unless a relative actually succeeds him as ruler.**

(2) Dual Executive–Designation: Hereditary succession plus executive or court selection of an effective chief minister.

(3) Dual Executive–Election: Hereditary succession plus electoral selection of an effective chief minister.

(4) Open: Chief executives are chosen by elite designation, competitive election, or transitional arrangements between designation and election.

Some examples may clarify the coding scheme outlined above. The Soviet Union's (XRCOMP/XROPEN) profile on these variables, since the accession of Khrushchev, was Selection/Open. Victorian Britain's profile was Transitional/Dual Executive–Election, whereas contemporary Britain, along with other modern democracies, is coded Election/Open.

XCONST -- Executive Constraints (Decision Rules): Operationally, this variable refers to the extent of institutionalized constraints on the decision-making powers of chief executives, whether individuals or collectivities. Such limitations may be imposed by any "accountability groups." In Western democracies these are usually legislatures. Other kinds of accountability groups are the ruling party in a one-party state; councils of nobles or powerful advisors in monarchies; the military in coup-prone polities; and in many states a strong, independent judiciary. The concern is therefore with the checks and balances between the various parts of the decision-making process.

A seven-category scale is used.

(1) Unlimited Authority: There are no regular limitations on the executive's actions (as distinct from irregular limitations such as the threat or actuality of coups and assassinations). Examples of evidence:

- i. Constitutional restrictions on executive action are ignored.
- ii. Constitution is frequently revised or suspended at the executive's initiative.
- iii. There is no legislative assembly, or there is one but it is called and dismissed at the executive's pleasure.
- iv. The executive appoints a majority of members of any accountability group and can remove them at will.
- v. The legislature cannot initiate legislation or veto or suspend acts of the executive.
- vi. Rule by decree is repeatedly used.

(2) Intermediate Category

(3) Slight to Moderate Limitation on Executive Authority: There are some real but limited restraints on the executive. Evidence:

- i. The legislature initiates some categories of legislation.
- ii. The legislature blocks implementation of executive acts and decrees.
- iii. Attempts by the executive to change some constitutional restrictions, such as prohibitions on succeeding himself, or extending his term, fail and are not adopted.
- iv. The ruling party initiates some legislation or takes some administrative action independently of the executive.
- v. The legislature or party approves some categories of appointments nominated by the executive.
- vi. There is an independent judiciary.
- vii. Situations in which there exists a civilian executive, but in which policy decisions, for all practical purposes, reflect the demands of the military.

(4) Intermediate Category

(5) Substantial Limitations on Executive Authority: The executive has more effective authority than any accountability group but is subject to substantial constraints by them. Examples:

- i. A legislature or party council often modifies or defeats executive proposals for action.
- ii. A council or legislature sometimes refuses funds to the executive.
- iii. The accountability group makes important appointments to administrative posts.
- iv. The legislature refuses the executive permission to leave the country.

(6) Intermediate Category

(7) Executive Parity or Subordination: Accountability groups have effective authority equal to or greater than the executive in most areas of activity. Examples of evidence:

- i. A legislature, ruling party, or council of nobles initiates much or most important legislation.
- ii. The executive (president, premier, king, cabinet, council) is chosen by the accountability group and is dependent on its continued support to remain in office (as in most parliamentary systems).
- iii. In multi-party democracies, there is chronic "cabinet instability."

PARREG -- Regulation of Participation: Participation is regulated to the extent that there are binding rules on when, whether, and how political preferences are expressed. One-party states and Western democracies both regulate participation but they do so in different ways, the former by channeling participation through a single party structure, with sharp limits on diversity of opinion; the latter by allowing relatively stable and enduring groups to compete nonviolently for political influence. The polar opposite is unregulated participation, in which there are no enduring national political organizations and no effective regime controls on political activity. In such situations political competition is fluid and often characterized by recurring coercion among shifting coalitions of partisan groups.

A five-category scale is used to code this dimension:

- (1) Unregulated: Political participation is fluid; there are no enduring national political organizations and no systematic regime controls on political activity. Political groupings tend to form around particular leaders, regional interests, religious or ethnic or clan groups, etc.; but the number and relative importance of such groups in national political life varies substantially over time.
- (2) Multiple Identity: There are relatively stable and enduring political groups which compete for political influence at the national level—parties, regional groups, or ethnic groups, not necessarily elected—but there are few, recognized overlapping (common) interests.
- (3) Sectarian: Political demands are characterized by incompatible interests and intransigent posturing among multiple identity groups and oscillate more or less regularly between intense factionalism and government favoritism, that is, when one identity group secures central power it favors group members in central allocations and restricts competing groups' political activities, until it is displaced in turn (i.e., active factionalism). Also coded here are polities in which political groups are based on restricted membership and significant portions of the population historically have been excluded from access to positions of power (latent factionalism, e.g., indigenous peoples in some South American countries).
- (4) Restricted: Some organized political participation is permitted without intense factionalism but significant groups, issues, and/or types of conventional participation are regularly excluded from the political process.
- (5) Regulated: Relatively stable and enduring political groups regularly compete for political influence and positions with little use of coercion. No significant groups, issues, or types of conventional political action are regularly excluded from the political process.

PARCOMP -- Competitiveness of Participation: The competitiveness of participation refers to the extent to which alternative preferences for policy and leadership can be pursued in the political arena. *Political competition implies a significant degree of civil interaction, so polities which are coded Unregulated (1) on Regulation of Participation (PARREG) are coded as Not Applicable (1) for PARCOMP. Polities in transition between Unregulated and any of the regulated forms PARREG also are coded Not Applicable (1) on PARCOMP.* A newly enacted right to engage in political activities is most likely a change from category 1 to 2. Competitiveness is coded on a five-category scale:

- (1) Repressed: No significant oppositional activity is permitted outside the ranks of the regime and ruling party. Totalitarian party systems, authoritarian military dictatorships, and despotic monarchies are typically coded here. However, the mere existence of these structures is not sufficient for a Repressed coding. The regime's institutional structure must also be matched by its demonstrated ability to repress oppositional competition.
- (2) Suppressed: Some organized, political competition occurs outside government, without serious factionalism; but the regime systematically and sharply limits its form, extent, or both in ways that exclude substantial groups (20% or more of the adult population) from participation. Suppressed competition is distinguished from Factional competition (below) by the systematic, persisting nature of the restrictions: large classes of people, groups, or types of peaceful political competition are continuously excluded from the political process. As an operational rule, the banning of a political party which received more than 10% of the vote in a recent national election is sufficient evidence that competition is "suppressed." However, other information is required to determine whether the appropriate coding is (2) Suppressed or (3) Factional competition. This category is also used to characterize transitions between Factional and Repressed competition.

Examples of "suppression" are:

- i. Prohibiting some kinds of political organizations, either by type or group of people involved (e.g.,

no national political parties or no ethnic political organizations).

ii. Prohibiting some kinds of political action (e.g., Communist parties may organize but are prohibited from competing in elections).

iii. Systematic harassment of political opposition (leaders killed, jailed, or sent into exile; candidates regularly ruled off ballots; opposition media banned, etc.). This is evidence for either Factional, Suppressed, or Repressed, depending on the nature of the regime, the opposition, and the persistence of political groups.

(3) Factional: Polities with parochial or ethnic-based political factions that regularly compete for political influence in order to promote particularist agendas and favor group members to the detriment of common, secular, or cross-cutting agendas.

(4) Transitional: Any transitional arrangement from Restricted, Suppressed, or Factional patterns to fully Competitive patterns, or vice versa. Transitional arrangements are accommodative of competing, parochial interests but have not fully linked parochial with broader, general interests. Sectarian and secular interest groups coexist.

(5) Competitive: There are relatively stable and enduring, secular political groups which regularly compete for political influence at the national level; ruling groups and coalitions regularly, voluntarily transfer central power to competing groups. Competition among groups seldom involves coercion or disruption. Small parties or political groups may be restricted in the Competitive pattern.

DEMOC is a 0-10 index, starting at zero and modified as follows (zeroes not shown) by the variables listed above:

Authority Coding

Scale Weight

Competitiveness of Executive Recruitment (XRCOMP):

(3) Election	+2
(2) Transitional	+1

Openness of Executive Recruitment (XROPEN):

only if XRCOMP is Election (3) or Transitional (2)

(3) Dual/election	+1
(4) Election	+1

Constraint on Chief Executive (XCONST):

(7) Executive parity or subordination	+4
(6) Intermediate category	+3
(5) Substantial limitations	+2
(4) Intermediate category	+1

Competitiveness of Political Participation (PARCOMP):

(5) Competitive	+3
(4) Transitional	+2
(3) Factional	+1

AUTOC is also a 0-10 scale that begins at zero and modifies the score as follows (zeroes not shown):

Authority Coding

Scale Weight

Competitiveness of Executive Recruitment (XRCOMP):

(1) Selection +2

Openness of Executive Recruitment (XROPEN):

only if XRCOMP is coded Selection (1)

(1) Closed +1

(2) Dual/designation +1

Constraints on Chief Executive (XCONST):

(1) Unlimited authority +3

(2) Intermediate category +2

(3) Slight to moderate limitations +1

Regulation of participation (PARREG):

(4) Restricted +2

(3) Sectarian +1

Competitiveness of Participation (PARCOMP):

(1) Repressed +2

(2) Suppressed +1

POLITY is simply equal to DEMOC - AUTOC. It may range from -10 (most autocratic) to 10 (most democratic).

Instructions: Type your answers in the form of full sentences. For each of the following three cases,

1. List all threats to internal and external validity present in the research design, along with a brief description of how or where each can be found in the design.
2. For each such threat, suggest a way that the design could be improved to overcome the or at least minimize the problem identified.

Cases:

- A. A researcher wants to assess the effectiveness of Head Start. So she compares those going into Head Start with those not going into Head Start by comparing their scores at the beginning of the next school year (kindergarten). She finds that Head Start children score about the same as non-Head Start children and concludes that the program made no difference.
- B. Interstate wars – that is, wars fought between two or more states -- have declined in frequency (the raw number of interstate wars per decade) and severity (the number of battle-deaths per capita in interstate wars) for several decades, despite an increase in the number of interstate dyads in the system. Some researchers attribute the decline in interstate war to the emergence of a *territorial sovereignty norm* – that is, a *de facto* rule that territorial conquest is illegitimate and will not be recognized by the international community. They date the emergence of this norm back to the UN Charter and note how it was enforced by the superpowers during the period of decolonization from the 1950s-1970s, during which national borders were often drawn (or ratified) that bore little resemblance to the distribution of ethnonational groups, particularly in Africa. They argue that the persistence of this norm in the post-Cold War era means that the risk of death by interstate war is likely to continue to decline in the foreseeable future.
- C. An investigator wants to know if repeated and prolonged exposure to “pro-gun” films (ones in which guns are used to effect change for the better) changes opinions about gun control. He draws a *random* sample of 100 people from the community of Sometown and assigns them to one of four groups:
 1. The first 25 men to appear are assigned to this group. Over a period of three days, these 25 male participants view one “pro-gun” film per day.
 2. The rest of the males are assigned to this group. Each day, they watch a film in which no guns are seen or mentioned.
 3. The first 25 females to appear are assigned to this group. Each day, they view one “pro-gun” film.
 4. The rest of the females are assigned to this group. Each day, they watch a film in which no guns are seen or mentioned.

The subjects’ support for various gun control measures is surveyed at the time they are assigned to a group *and* one week after the last treatment has been administered. The two experimental groups (1 and 3) show a decrease in support for gun control, while the two control groups (2 and 4) show no such decrease. The researchers draw two conclusions. First, exposure to popular entertainment can change political opinions; in this case, pro-gun films reduced support for gun control. Second, the effect on men and women was exactly the same.

Exercise 4: Comparison-of-Means Tests

Use the provided tables and figures to answer each of the questions. As always, be sure to type your answers and to answer in full sentences. The first study examines the effects of a major human rights treaty's ratification on actual human rights.

“According to a list prepared by Donnelly (1993: 9), the International Covenant on Civil and Political Rights (ICCPR) protects a total of 27 rights categories. These rights range from the right to life to the right of protection against debtor’s prison, from the right to protection against slavery to the right of special protection for children, and from the right of protection against torture to the right to marry and raise a family” (Keith 1999, 101).

Table I. Tests of the Differences of Means for Parties and Non-Parties of the International Covenant on Civil and Political Rights: 1976–93

<i>International Instrument</i>	<i>Parties</i> ^b	<i>Mean for Non-Parties</i> ^b	<i>Mean Difference</i>	<i>Level of Significance</i>
Freedom House Civil Rights^a				
Covenant on Civil and Political Rights (ICCPR)	4.28 (1315)	3.45 (1523)	0.83	< 0.001
Optional Protocol for ICCPR	5.19 (683)	3.45 (2155)	1.74	< 0.001
ICCPR minus derogators	4.28 (1184)	3.51 (1653)	0.77	< 0.001
Freedom House Political Rights^a				
Covenant on Civil and Political Rights (ICCPR)	4.34 (1315)	3.35 (1523)	0.99	< 0.001
Optional Protocol for ICCPR	5.19 (683)	3.37 (2155)	1.82	< 0.001
ICCPR minus derogators	4.31 (1184)	3.45 (1654)	0.86	< 0.001
Personal Integrity Rights based on State Department Country Reports				
Covenant on Civil and Political Rights (ICCPR)	2.24 (1281)	2.28 (1471)	– 0.04	< 0.21
Optional Protocol for ICCPR	1.98 (676)	2.35 (2076)	– 0.37	< 0.001
ICCPR minus derogators	2.14 (1150)	2.35 (1602)	– 0.21	< 0.001
Personal Integrity Rights based on Amnesty International Reports				
Covenant on Civil and Political Rights (ICCPR)	2.41 (1281)	2.47 (1471)	– 0.06	< 0.07
Optional Protocol for ICCPR	2.13 (676)	2.55 (2076)	– 0.42	< 0.001
ICCPR minus derogators	2.29 (1150)	2.55 (1602)	– 0.26	< 0.001

^a The Freedom House indices have been inverted so that higher scores indicate greater levels of freedom rather than lower levels of freedom.

^b *N* (number of nation-years) is in parentheses.

*Note: Higher scores on Freedom House represent **more** freedom on a seven-point scale, but higher scores on the Personal Integrity Rights measures indicate **worse** human rights performance on its five-point scale.*

1. To what extent do members of the International Covenant on Civil and Political Rights have better human rights records than non-members? Your answer should address both statistical and substantive significance for each of the four measures of human rights.
2. To what extent do members of the Optional Protocol, which provides for an international committee to investigate complaints, have better human rights records than non-members? Your answer should address both statistical and substantive significance for each of the four measures of human rights.

ABSTRACT: Although political views have been thought to arise largely from individuals' experiences, recent research suggests that they may have a biological basis. We present evidence that variations in political attitudes correlate with physiological traits. In a group of 46 adult participants with strong political beliefs, individuals with measurably lower physical sensitivities to sudden noises and threatening visual images were more likely to support foreign aid, liberal immigration policies, pacifism, and gun control, whereas individuals displaying measurably higher physiological reactions to those same stimuli were more likely to favor defense spending, capital punishment, patriotism, and the Iraq War. Thus, the degree to which individuals are physiologically responsive to threat appears to indicate the degree to which they advocate policies that protect the existing social structure from both external (outgroup) and internal (norm-violator) threats.

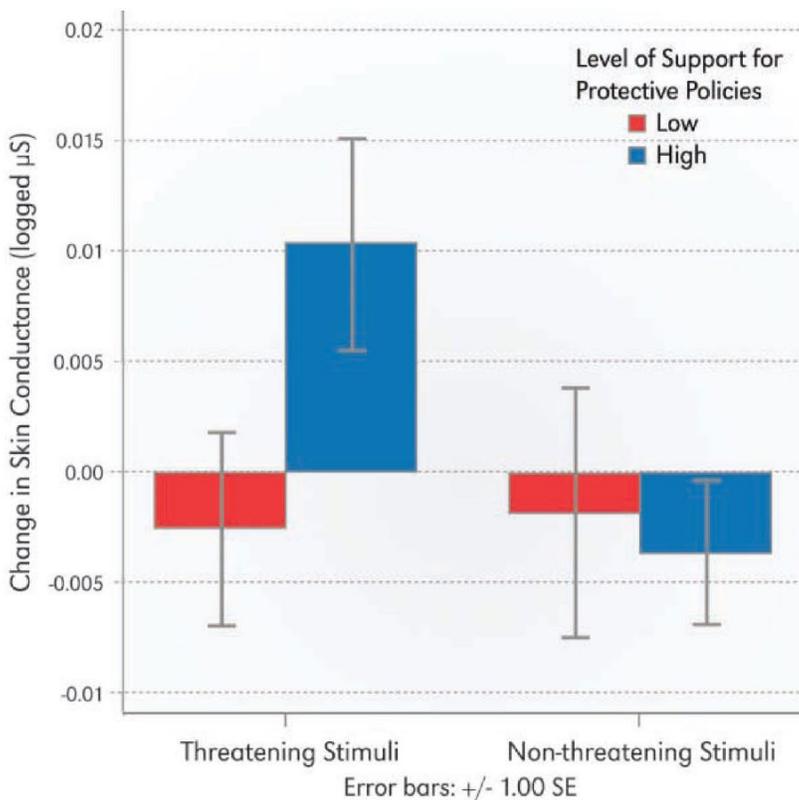


Figure 1. Changes in skin conductance (in microsiemens) resulting from the viewing of threatening and nonthreatening images for high supporters and low supporters of socially protective policies. Difference of means tests: threatening stimuli $t = 1.98, P = 0.05$; non-threatening stimuli $t = 0.284, P = 0.77$, two-tailed tests. All skin conductance data have been logged. Support for policies is measured by self-reported positions on 18 issues relevant to group life (see text), with “high support” including those participants above the median of support and “low support” including those participants below the median.

3. Given a threatening stimulus, is the difference in mean change in skin conductance (an indicator of physiological stress) between high and low supporters of “socially protective policies” (defense spending, capital punishment, patriotism, and the Iraq War) statistically significant?
4. Given a nonthreatening stimulus, is the difference in mean change in skin conductance (an indicator of physiological stress) between high and low supporters of “socially protective policies” (defense spending, capital punishment, patriotism, and the Iraq War) statistically significant?
5. Is either difference substantively significant?

Instructions: Answer the following questions. As always, be sure to type your answers and to answer in full sentences.

A. Crosstabs

Feb-March 2013 Reason-Rupe Poll – Margin of Error is $\pm 3\%$

Q38: WHICH OF THE FOLLOWING WOULD MOST UPSET YOU?	All	Rep	Dem	Ind
The cancellation of this year's Major League Baseball season	10%	10%	11%	9%
The cancellation of American Idol	2%	3%	3%	2%
The cancellation of the current session of Congress	33%	35%	35%	31%
None of these would upset you?	54%	51%	50%	57%
DK/Refused	1%	<1%	1%	1%
Total	100%	100%	100%	100%

1. Which was more popular – baseball or American Idol?
2. What group seemed to dislike Congress the most?
3. Does Independent seem to fall “between” Democrat and Republican, making Democrat > Independent > Republican an ordinal scale of “liberalism?”

Table 2. Wealth Sharing and Peace, 1946–2006

	Peace		Total
	Stable peace	Peace failure	
No wealth sharing	123	106	229
Wealth redistribution	6	5	11
Resource power allocation	3	3	6
Land reform	4	4	8
Total	136	118	254

4. Make a proper, percentaged cross-tab out of this data. (Hint: the one shown is improperly arranged). The dependent variable is peace.
5. According to your cross-tab, is wealth-sharing in peace agreements associated with more stable peace?

B. Measures of Association

GROUP DIFFERENCES IN APPROVAL OF TAX REFORM, 1988

	Percent Approving	N	Kendall Tau	Cramer's V
<i>Age</i>				
18-24	55	29	.28***	.33
25-34	70	29		
35-44	40	25		
45-54	50	28		
55-64	22	45		
65 +	33	36		
<i>Gender</i>				
Male	48	91	.11	.11
Female	37	102		
<i>Past Family Finances</i>				
Better	59	66	.24***	.25
Same	34	106		
Worse	31	21		
<i>Union Membership</i>				
Yes	29	52	-.16**	.18
No	50	130		
<i>Education</i>				
8th Grade	8	32	-.26***	.31
Some HS	48	20		
HS Graduate	49	78		
Some College	44	29		
College Graduate	49	22		
Post-Graduate	60	37		
<i>Party Identification</i>				
Republican	41	51	-.10	.16
Independent	27	36		
Democrat	48	99		

* $p < .05$

** $p < .01$

*** $p < .001$

Source: The June 1988 Rhode Island Survey

6. What is the dependent variable?
7. How many independent variables are there? Hint: Each variable has several possible values it might take.
8. Which independent variables are significantly and positively associated with the dependent variable?
9. Which independent variables are significantly and inversely associated with the dependent variable?
10. For each independent variable, which is the "better" measure of association with the dependent variable – Kendall's tau or Cramer's V?

Table 1 Correlations between political values, fear sensitivity, and demographics

		Social conservatism	Support gay rights	Anti-immigrant policies	Environmentalism	Antiwar	Support public spending on health and education
Political orientations	Social conservatism	1					
	Support gay rights	-.432**	1				
	Anti-immigrant policies	.206**	-.241**	1			
	Environmentalism	-.209**	.243**	-.226**	1		
	Antiwar	.031	.047†	.099**	.013	1	
	Support public spending on health & education	-.152**	.113**	-.053*	.215**	-.028	1
Fears	Support sin taxes	.070**	.015	-.161**	.221**	-.046	.122**
	Sharp objects	.110**	-.046	.050*	-.014	.033	.002
	Suffocating	.066**	.022	.037	.064*	.042	.041
	Death	.007	.079**	.060*	.025	.030	-.009
	Crowds	.051*	-.011	.075**	-.019	.027	.011
	Swimming alone	.045†	-.011	.018	.061*	.012	.036
	Thunderstorms	.119**	-.023	.146**	.004	.050	-.047†
	Dark	.099**	.042†	.061*	.030	.057*	.002
	Cemeteries	.099**	.053*	.048†	.013	.065*	-.019
	Peeing in public	.153**	.025	.065**	.013	.067**	.006
Demographics	Male	-.072**	-.213**	-.047	-.083**	-.133**	-.018
	Age	-.009	-.249**	.058*	-.033	-.043†	.066**
	Education	-.092**	.147**	-.278**	.111**	-.007	-.025
	Income	-.085**	-.084**	-.106**	-.001	-.086**	-.066*
	Religiosity	.550**	-.285**	-.052*	-.122**	-.073**	-.052*
Personality	Conscientiousness	.049†	-.037	.034	.033	-.011	.103**
	Openness	-.082**	.091**	-.080**	.070**	.034	.026

N = 1,573; **<0.01, * <0.05, † <0.10

All correlations are Pearson's *r*.

11. What types of fear significantly and positively correlate with a person's level of social conservatism?
12. What types of fear significantly and positively correlate with a person's level of environmentalism?
13. Do men appear to be more socially conservative than women?
14. If people hold negative views on immigration, their income is likely to be _____ (lower/higher/about the same as) those who view immigration favorably.
15. What are older people significantly more likely than younger people to support?
- 16-18. For what correlations with social conservatism might Pearson's *r* be a poor measure of association? Find at least three – and for each, name a more appropriate measure of association to use.

Read each chart and answer the questions that follow with typed full sentences.

Table 2 Regression results of specified models

	Dependent variable		
	Mean vaccination rate (%)		Belief that vaccines are unsafe (%)
	OLS		OLS
	(Model 1)	(Model 2)	(Model 3)
Foreign disinformation	-0.793*** (0.215)	-1.932*** (0.578)	-0.091 (0.831)
Social media organisation of offline action			1.437** (0.604)
% Internet penetration	0.001 (0.008)	-0.011 (0.010)	-0.076* (0.043)
Logged per capita GDP	-0.004 (0.123)	0.611*** (0.187)	1.333* (0.711)
Expected years of schooling	0.299*** (0.073)	0.860*** (0.149)	0.236 (0.325)
Lagged mean vaccination rate	0.729*** (0.012)	0.514*** (0.015)	
2008 mean vaccination rate			-0.092 (0.060)
Constant	22.455*** (1.485)	37.048*** (2.795)	3.119 (6.747)
Region FEs	Yes	No	Yes
Country FEs	No	Yes	No
Observations	2902	2902	137
Adjusted R ²	0.707	0.733	0.199
Log likelihood			

*p<0.1; **p<0.05;***p<0.01.

FEs, fixed effects; OLS, ordinary least squares.

The units of analysis are country-years (Models 1 and 2) or countries (Model 3).

1. What is N in models 1 and 2?
2. What are the statistically significant independent variables when it come to predicting the vaccination rates of countries in a given year (i.e., the unit of analysis in Models 1 and 2)?
3. For three such variables, write out the sentence from the notes: "*Holding every other variable constant, an increase of one (unit of the IV) in (name of the IV or X_i) predicts an increase of (β_i) (units of the DV) in (name of the the DV or Y)."*
4. What effect(s) does the Internet appear to have on worries about vaccine safety – does it increase such beliefs, decrease them, or are there no significant effects?
5. About how much of the variance between the mean country-year vaccination rate and the actual vaccination rates for individual country-years was explained by the regression model?

Table 1 Homeland security grant allocation regression estimates

Variable	Coefficient	<i>t</i> -value	<i>p</i> -value
Intercept	13.851	6.08	<.0001
Income	0.512	2.96	0.0051
Electoral votes	1.288	16.69	<.0001
Closeness	-0.002	-0.09	0.3116
Emplaned	0.025	1.82	0.0763
Density	0.040	2.28	0.0276
Nuke	-0.115	-2.25	0.0300
Coast	-0.061	-1.49	0.1439
Border	0.044	1.01	0.3175
<i>N</i>		51	
Adjusted-R ²		0.93	
<i>F</i>		85.33	

Homeland Security Spending is the natural log of per capita homeland security grants allocated to the states and their cities in 2004;

Income is the natural log of per capita state income in 2003;

Electoral Votes is the natural log of electoral votes per capita in that state after the 2000 decennial reapportionment of Congress;

Closeness is the natural log of the absolute difference between the Republican candidate's vote percentage in 2000 and 50 percent by state;

Emplaned is the natural log of persons emplaned per capita by state in 2000;

Density is the natural log of the population density⁷ in 2002 by state;

Nuke is a binary variable for states that have nuclear generation capacity in 2002;

Coast is a binary variable for states with ocean frontage; and

Border is a binary variable for states that share a border with Mexico or Canada.⁸

6. What is the DV?
7. Which three variables are "dummy variables?"
8. Which of the independent variables significantly increased homeland security spending on a state or district in 2004?
9. If a state had at least one nuclear power plant in 2002, then it received _____ less/more (choose) in logged per capita homeland security funds in 2004.

Individualism and political instability: OLS regressions.

	(1)	(2)	(3)	(4)	(5)
Individualism	-0.023*** (0.003)	-0.017*** (0.003)	-0.018*** (0.003)	-0.020*** (0.004)	-0.019*** (0.004)
Latitude		-0.012*** (0.004)	-0.013** (0.005)	0.001 (0.009)	-0.005 (0.009)
Longitude		-0.001 (0.003)	-0.002 (0.003)	-0.001 (0.003)	-0.004 (0.004)
Terrain ruggedness		0.060 (0.068)	0.081 (0.071)	0.093 (0.066)	0.100 (0.067)
Population		0.244*** (0.042)	0.268*** (0.044)	0.278*** (0.045)	0.273*** (0.048)
Population density		0.001 (0.000)	0.001* (0.000)	0.001* (0.000)	0.001 (0.001)
Ethnol. fractionalization			0.180 (0.354)	0.054 (0.365)	0.331 (0.385)
Ethnol. polarization			0.564 (0.352)	0.571 (0.376)	0.393 (0.363)
Genetic diversity			3.072 (2.466)	5.771* (3.236)	6.999* (3.927)
British colony				0.204 (0.291)	0.240 (0.351)
French colony				0.122 (0.309)	0.208 (0.394)
Colony of other countries				0.427 (0.336)	0.537 (0.371)
Common law				0.412 (0.321)	0.324 (0.325)
Civil law				0.312 (0.219)	0.230 (0.228)
Continent dummies	No	No	No	No	Yes
R-squared	0.311	0.560	0.601	0.633	0.657
Observations	71	95	94	94	94

Notes: The dependent variable is in all cases the measure of political instability described in section 3. All regressions include a constant (not shown). Robust standard errors in parentheses. * Significant at the 10% level, ** significant at the 5% level, *** significant at the 1% level.

10. What does a *higher* value of the dependent variable signify *more* of?
11. What is the effect of higher individualism scores on political instability within a country, all else being equal?
12. Are more populous countries likely to be *more stable* countries, given the evidence presented here?
13. What effect, if any, does latitude have on political instability, after controlling for colonial status?
14. Why does the R² statistic keep getting larger as we move from model 1 to model 6?

Examine each table to answer the questions that follow. There are three sections to the assignment (one for each class of statistical models covered)

SECTION A. Binary Logit and Binary Probit Models

TABLE 1 Results of Global Analysis of Onsets of Instability

Independent Variables	Full Problem Set		Civil War Onsets		Adverse Regime Change Onsets	
	Coefficient (S.E.)	Odds Ratio (95% CI)	Coefficient (S.E.)	Odds Ratio (95% CI)	Coefficient (S.E.)	Odds Ratio (95% CI)
Regime Type (Full Autocracy as Reference)						
Partial Autocracy	1.85*** (0.47)	6.37 (2.53, 16.02)	1.94*** (0.62)	6.98 (2.05, 23.8)	2.85*** (0.86)	17.32 (3.19, 94.0)
Partial Democracy with Factionalism	3.61*** (0.51)	36.91 (13.5, 101)	3.35*** (0.73)	28.5 (6.86, 118)	5.06*** (1.02)	157.0 (21.1, 1164)
Partial Democracy without Factionalism	1.83*** (0.54)	6.22 (2.17, 17.8)	.981 (0.79)	2.67 (0.57, 12.4)	2.58*** (0.91)	13.23 (2.20, 79.5)
Full Democracy	0.981 (0.68)	2.67 (0.70, 10.2)	.545 (0.92)	1.73 (0.29, 10.4)	1.26 (1.09)	3.51 (0.42, 29.5)
Infant Mortality†	1.59*** (0.35)	6.59 (2.91, 14.9)	1.64*** (0.48)	4.19 (1.82, 9.60)	1.38* (0.58)	4.56 (1.30, 16.0)
Armed Conflict in 4+ Bordering States	3.09*** (0.95)	22.0 (3.42, 142)	2.81*** (0.82)	16.7 (3.36, 83.0)	.091 (1.49)	1.10 (0.06, 20.4)
State-Led Discrimination	0.657* (0.30)	1.93 (1.08, 3.45)	1.17*** (0.36)	3.23 (1.59, 6.55)	-.502 (0.62)	0.61 (0.18, 2.04)
<i>N</i> = Total (Problems, Controls)	468 (117, 351)		260 (65, 195)		196 (49, 147)	
Onsets Correctly Classified	80.3%		80.0%		87.8%	
Controls Correctly Classified	81.8%		81.0%		87.8%	

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. †Odds ratios for continuous variables compare cases at the 75th and 25th percentiles.

1. What are the dependent variables presented in this chart?
2. What variables are significantly and positively correlated with both civil war onsets and adverse regime changes?

From another table in the same article:

B. Tabulation of All Country-years, 1995–2004. Model estimates based on censored data, using only sample data from prior to year of forecast (countries w/population over 500,000, no ongoing conflict, at least two years old)

	Countries with Instability in $t + 2$	Countries Remaining Stable
Predicted for Instability (Top Quintile)	18	233
Predicted for Stability (Not Top Quintile)	3	992
<i>N</i> = 1,246 Percent Classed Correctly	85.7%	81.0%

Number of instability onsets, 1995–2004: 21. Number of instability onsets in top quintile of model scores: 18 (86%).

3. How accurate is simply guessing the mode of the dependent variable?
4. Is the model more accurate than just guessing the mode for every case?

Table 1

Why Women and Men Voted for Trump

	Women	Men	All
Republican	2.25 (0.22)***	2.16 (0.22)***	2.19 (0.15)***
White	1.36 (0.25)***	1.42 (0.27)***	1.38 (0.18)***
No college degree	0.23 (0.23)	-0.09 (0.22)	0.04 (0.16)
Aged 30–44 years	-0.35 (0.35)	0.18 (0.41)	-0.10 (0.27)
Aged 45 or older	0.06 (0.31)	0.65 (0.33)	0.30 (0.23)
Married	0.87 (0.20)***	-0.11 (0.21)	0.41 (0.14)**
Evangelical Prot.	0.86 (0.22)***	0.79 (0.24)**	0.78 (0.16)***
Working Class	-0.04 (0.22)	0.32 (0.21)	0.14 (0.15)
Southern	0.25 (0.21)	0.51 (0.23)*	0.37 (0.16)*
Authoritarianism	0.13 (0.38)	0.58 (0.33)	0.37 (0.25)
Racial resentment	4.19 (0.49)***	3.47 (0.47)***	3.81 (0.34)***
Sexism	4.62 (0.64)***	5.28 (0.73)***	4.90 (0.47)***
Male	—	—	0.12 (0.14)
Constant	-7.28 (0.53)***	-7.25 (0.56)***	-7.25 (0.39)***
Observations	1,277	1,134	2,411
Pseudo R2	0.54	0.51	0.52

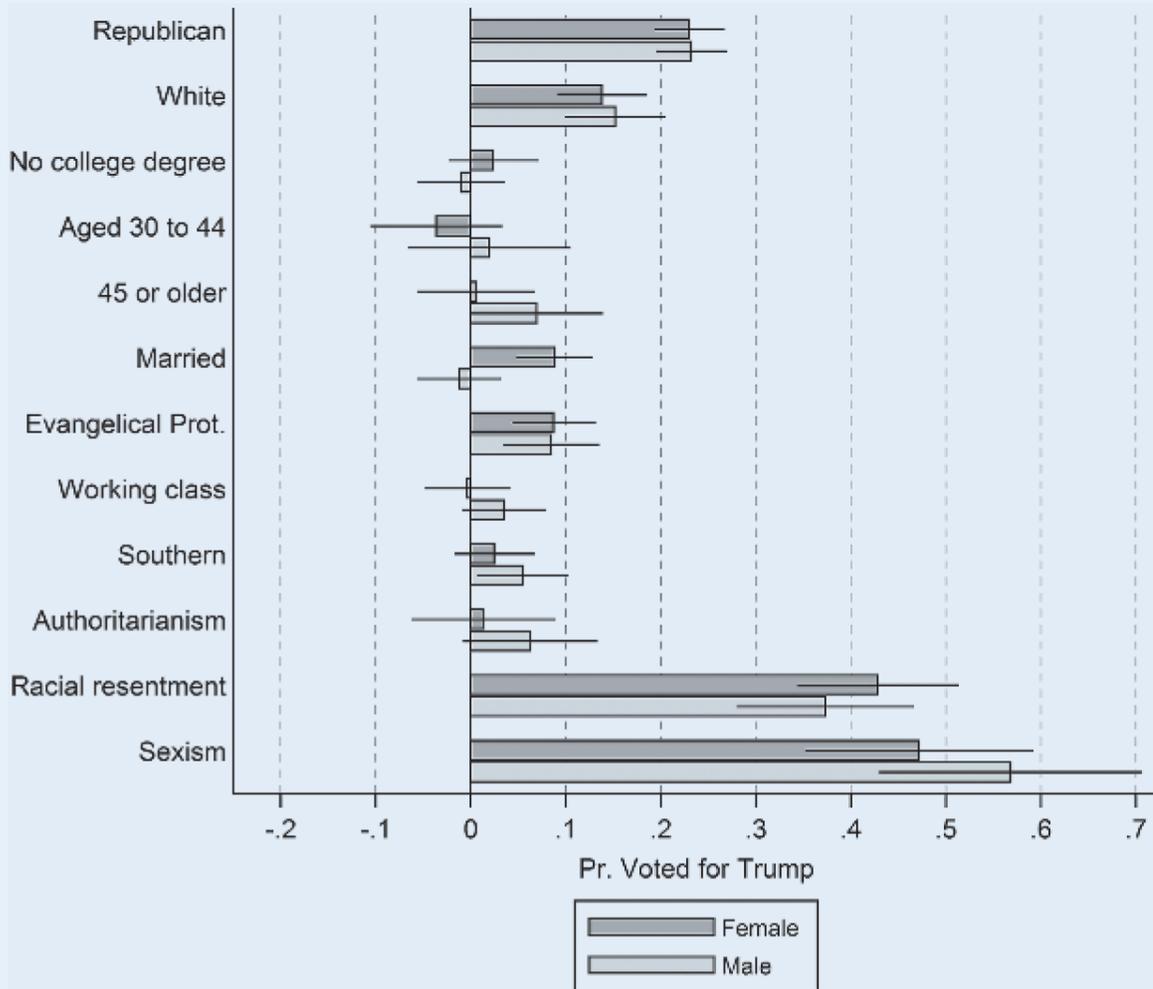
Notes: Cell entries are logistic-regression coefficients, with standard errors in parentheses. The estimates are weighted and adjusted for sample-design effects. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$, two-tailed. Pseudo R-square statistics are approximate and were calculated separately with models using weighted data and robust cluster options.

- Were people who identified themselves as “working class” more likely to vote for Trump in 2016 than people identifying as “other” (mostly middle, but a few lower and upper as well) classes?
- Which independent variable(s) which made one sex significantly more/less likely to vote for Trump in 2016, but did not do so for the other sex?
- After taking into account the other independent variables, to what extent did being male affect one’s decision on whether to vote for Trump in 2016?
- About how much is error reduced in the logit models that include the independent variables versus a logit model including only a constant (e.g. knowing only the mean of the dependent variable)?

The following chart is derived from the coefficients in Table 1 on the previous page.

Figure 1

Change in Predicted Probability of Men and Women Voting for Trump as Predictors Shift from Minimum to Maximum Values



Notes: For authoritarianism, racial resentment, and sexism, the bars plot the differences in the probability of voting for Trump for people with the highest versus the lowest level of these attributes. For other variables, the bars represent differences in the predicted probability of voting for Trump when compared to individuals not in the reference group. The lines indicate 95% confidence intervals, which are weighted and adjusted for sample effects.

- Which variables best predicted voting for Trump in 2016 – party identification, race of the voter, or the voter’s attitudes about race and sex?

SECTION B. Count Models

The following table presents data on news coverage of terrorist attacks in the United States from 2006-2015. The **count** variable is the *number* of news reports and newspaper articles about each of 136 attacks during this period.

Table 2. News coverage by terrorism episode ($N = 136$).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Perpetrator Muslim	1.96*** (0.41) [611%]	1.52*** (0.42) [357%]	1.20** (0.39) [233%]	1.14** (0.41) [214%]	1.47** (0.49) [334%]	1.34** (0.47) [283%]
Perpetrator arrested	-	1.35*** (0.27) [287%]	0.85* (0.36) [135%]	0.96** (0.35) [162%]	1.32*** (0.32) [273%]	1.40*** (0.28) [307%]
Target law enforcement/government	-	1.13** (0.42) [211%]	0.79* (0.36) [121%]	0.77* (0.38) [116%]	1.04* (0.40) [182%]	0.94* (0.41) [156%]
Number killed	-	0.38** (0.12) [46%]	0.34** (0.11) [40%]	0.34** (0.13) [41%]	0.39** (0.14) [48%]	0.40** (0.12) [49%]
Significant date	-	-	0.14 (0.31) [15%]	0.08 (0.33) [8%]	-0.12 (0.34) [-12%]	-0.16 (0.35) [-15%]
Target Muslim	-	-	-0.46 (0.31) [-37%]		-0.40 (0.37) [-33%]	-
Target minority	-	-	-	-0.42 (0.28) [-35%]	-	-0.53**** (0.31) [-41%]
Perpetrator and group unknown	-	-	-1.23** (0.44) [-71%]	-1.16** (0.45) [-69%]	-	-
Perpetrator, group, and motive unknown	-	-	-	-	-0.21 (3.36) [-19%]	-0.30 (0.82) [-26%]
AIC	968.9632	923.6827	919.5945	919.0597	928.4819	926.8268
BIC	977.7011	941.1586	945.8084	945.2736	954.6958	953.0407

Negative binomial regression models. Constants not reported.
Coefficients are presented with bootstrapped standard errors in parentheses.
Percent change in expected count reported in brackets.

- * $p < .05$.
- ** $p < .01$.
- *** $p < .001$.
- **** $p < .10$.

10. Which model fits the data best?
11. Which will garner more news coverage according to the model in the first question – a terrorist attack by a Muslim that kills no people or a terrorist attack by a non-Muslim that kills five people?
12. How does the expected count of media coverage change if the motive of an attack is clear, but its perpetrator and his/her group affiliation are unknown?

Table IV. Zero-inflated Poisson Regression, Victims from Direct Violence Post-9/11

	<i>Coefficient</i>	<i>P> z </i>
<i>Poisson part</i>		
Is in northern region	0.28	.051
Population (log ₁₀)	0.26	.079
Distance to main road (meters, log ₁₀)	0.07	.330
Days start-to-end local hostilities	-0.01	.115
Local airstrike	0.19	.184
Local ground operations	0.34	.048
Had munitions depot	0.26	.246
Direct violence 3 km radius post-9/11 medium	0.03	.875
Direct violence 3 km radius post-9/11 high	-0.07	.698
Mines UXO 3 km radius post-9/11 medium	-0.25	.116
Mines UXO 3 km radius post-9/11 high	-0.48	.044
Direct violence community's own pre-9/11 medium	0.06	.769
Direct violence community's own pre-9/11 high	0.91	<.001
Mines UXO community's own pre-9/11 medium	0.43	.013
Mines UXO community's own pre-9/11 high	0.56	<.001
Constant	1.33	.049
<i>Inflation part</i>		
Is in northern region	-0.66	.017
Population (log ₁₀)	-0.25	.121
Distance to main road (meters, log ₁₀)	-0.23	.046
Days start-to-end local hostilities	-0.01	.545
Local airstrike	0.48	.141
Local ground operations	0.88	<.001
Had munitions depot	-0.16	.672
Direct violence 3 km radius post-9/11 medium	-0.56	.043
Direct violence 3 km radius post-9/11 high	-1.03	.002
Mines UXO 3 km radius post-9/11 medium	-0.89	.015
Mines UXO 3 km radius post-9/11 high	-0.56	.203
Direct violence community's own pre-9/11 medium	-0.37	.267
Direct violence community's own pre-9/11 high	-1.89	<.001
Mines UXO community's own pre-9/11 medium	0.02	.956
Mines UXO community's own pre-9/11 high	0.13	.759
Constant	1.30	.090
<i>Correlation observed vs. predicted; fit</i>		
Spearman's rho	.43	
McFadden's pseudo-R ² adj.	.37	
N	561	

Note: UXO stands for unexploded ordinance – stuff that might still blow up if handled

13. What variables predict the count of civilian fatalities in Afghanistan?
14. What variables predict whether the count is exactly zero?
15. Are the two sets of variables consistent with each other? That is, are there any variables that make zero casualties more likely but also make a higher count of casualties more likely?

Section C. Survival (Duration) Models

The following table examines the duration of interstate rivalries – positional ones (who has more influence in the region or world), spatial ones (who gets what territory), and rivalries that are both positional and spatial.

Table 7. Regression analysis (Cox models) of rivalry termination.

	1	2	3	4	5	6
	All	Purely positional	Purely spatial	Mixed	All spatial	All non-spatial
Dispute	-0.454* (0.226)	-0.354 (0.715)	-0.760* (0.358)	-0.607 (0.364)	-0.493* (0.240)	-0.424 (0.574)
Contiguity	-0.035 (0.232)					
Capability ratio	-0.542 (0.368)	-1.252 (1.069)	0.672 (0.640)	-0.591 (0.639)	-0.331 (0.424)	-1.228 (0.805)
World War	0.616* (0.257)	1.199 (0.864)	-0.152 (0.476)	1.059* (0.420)	0.588* (0.286)	0.568 (0.680)
End of Cold War	1.390** (0.272)	1.627* (0.752)	1.408** (0.422)	1.810** (0.636)	1.593** (0.345)	1.451** (0.524)
Defeat in war	1.911** (0.286)	1.799* (0.764)	1.358* (0.599)	2.012** (0.468)	1.886** (0.328)	1.848** (0.694)
N	5110	957	1684	2302	3986	1151
χ^2	71.48**	14.75*	19.91**	40.42**	55.24**	16.84**

** $p < 0.01$ * $p < 0.05$. Standard errors in parentheses. Any significant violation of the proportional hazard assumption is detected by the Schoenfeld residuals test. Further graphical examinations are shown in Appendix.

16. What is being displayed – coefficients or hazard ratios?

17. Without taking rivalry type into account, what factors increase the duration of interstate rivalries?

18. Without taking rivalry type into account, what factors decrease the duration of interstate rivalries?

Table 2. Cox proportional hazard models

	(1) <i>Twenty-five fatality threshold</i>	(2) <i>Twenty-five fatality threshold</i>	(3) <i>Twenty-five fatality threshold</i>	(4) <i>Twenty-five fatality threshold</i>	(5) <i>One fatality threshold</i>	(6) <i>One fatality threshold</i>	(7) <i>Hundred fatality threshold</i>	(8) <i>Hundred fatality threshold</i>
Preliminary ceasefire	-0.347⁺ (0.09)	-0.649^{**} (0.01)	-0.743^{**} (0.00)		-0.586^{**} (0.00)		-0.742^{**} (0.00)	
Definitive ceasefire	-1.084^{**} (0.00)	-1.490^{**} (0.00)	-1.224^{**} (0.00)	-0.887^{**} (0.00)	-1.019^{**} (0.00)	-0.667[*] (0.04)	-1.337^{**} (0.00)	-0.978^{**} (0.00)
Democracy		-0.821 (0.33)	-0.191 (0.84)	-1.396 (0.27)	0.572 (0.47)	-0.758 (0.54)	-0.077 (0.94)	-1.927 (0.13)
Population (logged)		-0.207⁺ (0.06)	-0.305^{**} (0.00)	-0.043 (0.77)	-0.236[*] (0.01)	-0.038 (0.75)	-0.333^{**} (0.00)	-0.071 (0.68)
GDP per capita (logged)		0.190 (0.25)	0.110 (0.51)	-0.236 (0.13)	0.208 (0.12)	-0.053 (0.73)	0.089 (0.61)	-0.153 (0.41)
Government incompatibility			-0.395 (0.12)	-0.742⁺ (0.06)	-0.121 (0.60)	-0.567[*] (0.04)	-0.439 (0.15)	-0.810⁺ (0.07)
Number of conflicts in state			0.155 ⁺ (0.08)	0.078 (0.70)	0.110 (0.20)	-0.040 (0.78)	0.137 (0.17)	-0.021 (0.91)
Count dyads in conflict			0.366 ^{**} (0.00)	0.205 (0.14)	0.304 ^{**} (0.01)	0.162 (0.27)	0.354 ^{**} (0.00)	0.220 (0.12)
Peacekeeping			0.039 (0.85)	-0.013 (0.96)	0.075 (0.69)	-0.077 (0.75)	0.081 (0.69)	0.000 (1.00)
Number of subjects	214	190	190	103	190	106	190	106
Number of observations	8,682	7,802	7,802	6,025	5,299	4,370	8,783	6,714
Number of terminations/failures	165	147	147	72	162	82	142	69
Time at risk	261,070	234,611	234,611	181,814	158,423	131,436	264,477	202,789
Log likelihood	-774.5	-662.6	-651.1	-285.8	-710.1	-320.1	-630.4	-273.5
Chi-squared	30.00	38.29	299.5	51.03	141.1	50.13	136.7	122.0

Notes: P values in parentheses + $p < .10$, * $p < .05$, ** $p < .01$.

The remaining questions refer to Table 2 (the one on the preceding page). Its dependent variable is the duration of peace after civil conflicts or wars. We will ignore models 5 and 6, since a single fatality is not really a war or even a civil conflict; it may be a politically-motivated homicide, but it's not what we usually mean by civil strife.

19. In general, do cease-fire agreements actually produce significantly longer periods of post-conflict peace?
20. What significant effect, if any, does prosperity (increasing GDP per capita) have on the duration of post-conflict peace?
21. What significant effect, if any, does the deployment of peacekeepers have on the duration of post-conflict peace?
22. In a many-sided civil conflict, there will be many conflict dyads. What is the significant effect of increasing the number of conflict-dyads on the duration of postconflict peace, if any, *after controlling for presence or absence of a preliminary cease-fire agreement?*

Instructions: Examine each table and type up answers to the questions that follow.

Table IV. Ordered Probit Models for the Human Rights Effects of Economic Sanctions

	<i>Physical Integrity Index (1981–2000)</i>				<i>Political Terror Scale (1976–2000)</i>			
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>	<i>Model 8</i>
Economic sanctions (all)	0.13*** (0.05)	–	–	–	0.18*** (0.07)	–	–	–
Human rights sanctions	–	0.15** (0.08)	–	–	–	0.30*** (0.08)	–	–
Non-human-rights sanctions	–	0.15** (0.06)	–	–	–	0.14* (0.08)	–	–
Multilateral sanctions	–	–	0.23*** (0.06)	–	–	–	0.22** (0.11)	–
Unilateral sanctions	–	–	0.10* (0.06)	–	–	–	0.15** (0.07)	–
Sanction years	–	–	–	0.12*** (0.03)	–	–	–	0.11*** (0.04)
GDP per capita	–0.16*** (0.03)	–0.16*** (0.03)	–0.16*** (0.03)	–0.16*** (0.03)	–0.18*** (0.03)	–0.18*** (0.03)	–0.18*** (0.03)	–0.18*** (0.03)
Democracy	–0.013** (0.005)	–0.012** (0.005)	–0.013** (0.005)	–0.013** (0.005)	–0.017*** (0.005)	–0.017*** (0.005)	–0.017*** (0.005)	–0.017*** (0.005)
Civil war	0.53*** (0.10)	0.54*** (0.10)	0.53*** (0.10)	0.54*** (0.10)	0.56*** (0.10)	0.57*** (0.09)	0.56*** (0.10)	0.56*** (0.09)
Interstate war	0.03 (0.10)	0.03 (0.10)	0.06 (0.10)	0.02 (0.11)	0.06 (0.14)	0.09 (0.14)	0.09 (0.14)	0.06 (0.14)
Past practice	0.54*** (0.03)	0.54*** (0.03)	0.54*** (0.03)	0.53*** (0.03)	1.34*** (0.06)	1.34*** (0.06)	1.34*** (0.06)	1.34*** (0.06)
Log-pseudo likelihood	–2,457.208	–2,456.654	–2,455.224	–2,453.388	–1,632.678	–1,630.978	–1,632.073	–1,631.750
Chi-square	906.98	983.38	1011.72	1030.03	794.89	813.50	803.75	788.37
Pseudo r ²	0.29	0.29	0.29	0.29	0.47	0.46	0.46	0.46
N	1,595	1,595	1,595	1,595	1,994	1,994	1,994	1,994

White robust standard errors adjusted for clustering over country appear in parentheses. *** Significant at 1%, ** at 5%, * at 10%. All independent variables are lagged at $t-1$

1. What is the dependent variable?
2. On both measures of human rights, higher is worse (i.e. less physical integrity or more political terror). Do human right sanctions improve human rights?
3. What two independent variables are consistently good for human rights?

TABLE 1. The Iraq War, Ordered Logit Analyses

	Model (1)	Model (2)	Model (3)	Model (4)
Experiment Number	1	1	2 & 3	2 & 3
<i>Importance</i>	0.553*** (6.36) ^a	0.490*** (5.56)	1.075*** (20.56)	0.659*** (12.03)
<i>Female</i>	-0.195 (1.05)	-0.104 (0.54)	-0.239** (2.22)	-0.345*** (3.03)
<i>Partisanship</i>	0.856*** (9.66)	0.718*** (7.70)	0.615*** (21.42)	0.493*** (16.18)
<i>Veteran</i>	1.362* (1.95)	1.672** (2.37)	0.219* (1.66)	0.166 (1.17)
<i>Casualty Forecast</i>	0.401** (2.17)	0.735*** (2.76)	0.346*** (3.62)	0.405*** (4.05)
<i>Iraq No Mistake</i>		1.675*** (6.08)		
<i>Information Level</i>		0.080 (1.24)		
<i>Information Effect</i>		-0.153* (1.72)		
<i>Age</i>				0.002 (0.51)
<i>Education</i>				-0.030 (0.78)
<i>Probability of Victory</i>				0.897*** (19.28)
Observations	457	454	1972	1961

^a Two-tailed tests; absolute value of Z statistics in parentheses.

*Significant at 10%; **significant at 5%; *** significant at 1%.

The chart above contains the results of an ordered logit analysis of support for the Iraq War (on a five-point Likert scale) in 2006. From the author (Gartner 2008, 97):

“The study randomly assigned half of the subjects to a positive and half to a negative prompt about the future direction of the war in Iraq. The positive casualty trend treatment says that leaders think the worst is behind us and the situation is likely to improve, whereas the negative treatment says leaders think the costs are likely to get worse before they get better. I create the variable Casualty Forecast, which is coded 1, if the subjects receive the positive, and 0, if they receive the negative casualty trend treatment. ... Importance of the objective (Importance) is measured from 1 (lowest) to 5 (highest). ... I create the variable Female (1 for women, 0 for men). ... The variable Partisanship ranges from 1 (very strong Democrat), [to] 3 (Independent and undecided), to 5 (very strong Republican).”

4. What conditions or characteristics significantly and consistently increased a person’s degree of support for the Iraq War?
5. After controlling for whether they thought the war was a mistake, were veterans more or less likely to support the war than nonveterans?
6. What was the apparent effect of hearing a prediction that the number of US casualties would “get worse before it got better” on support for the war?

TABLE 1
Multinomial Logit Analysis of the Role of Literalism and Time in Shaping Party Identification, by Racial Group

	Anglo		Latino		Black	
	Independent	Democrat	Independent	Democrat	Independent	Democrat
Literal × Year	-0.434 (.266)	-1.218*** (.301)	-1.528*** (.579)	-1.092** (.545)	0.013 (.872)	-0.209 (.797)
Biblical literalism	-0.034 (.147)	0.587*** (.164)	0.602 (.396)	0.475 (.363)	-0.422 (.478)	-0.118 (.435)
Year	-0.398*** (.150)	-0.011 (.171)	1.096*** (.393)	0.075 (.372)	0.125 (.702)	0.125 (.652)
Age	0.390** (.175)	1.357*** (.198)	-0.347 (.592)	1.965*** (.559)	-1.359* (.702)	1.214** (.617)
Education	-0.974*** (.173)	-1.367*** (.198)	-1.257*** (.417)	-0.273 (.384)	2.652*** (.804)	2.633*** (.734)
Female	-0.223*** (.070) ***	0.279*** (.080)	0.157 (.166)	0.711*** (.158)	0.442* (.259)	0.613*** (.233)
Income	-0.538*** (.110)	-0.987*** (.122)	-0.765*** (.293)	-0.274 (.272)	0.085 (.487)	0.001 (.453)
Ideology	-1.709*** (.108)	-2.336*** (.119)	-0.760*** (.226)	-0.562*** (.215)	-0.569* (.344)	-0.604* (.318)
Catholic	0.200** (.081)	0.369*** (.091)	0.072 (.212)	0.446** (.207)	-0.620* (.344)	-0.485 (.305)
Constant	1.597*** (.157)	1.182*** (.173)	0.912** (.398)	0.066 (.390)	0.881 (.553)	1.433*** (.506)
Log-likelihood	-4821.051		-1183.024		-932.572	
Percentage correct	.543		.492		.751	
N	5,121		1,173		1,395	

Source: Pooled Houston Area Study 1983-2003.

Note: Robust standard errors are in parentheses. Identifying as a Republican is the comparison group.

* $p < .05$. ** $p < .01$. *** $p < .1$, two-tailed.

Three multinomial logits were performed to make this chart.

7. What is the reference or comparison group?
8. How did education affect one's likelihood of identifying as Republican, by race/ethnicity?
9. Had people become more likely to identify as independent over identifying as Republican over time?
10. As African-Americans got older, how did their partisan identification tend to change?
11. Explain how being female affected party identification among Anglo respondents.

TABLE 2. Multinomial logit regression results

<i>Dependent Variable = STATE RESPONSE</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
<i>Base Category (Disregard)</i>				
<i>Crowd Dispersal</i>				
CONCESSION COSTS INDEX	.616** (.055)	.624** (.058)	.622** (.052)	.631** (.054)
DISRUPTION COSTS INDEX	-.184** (.035)	-.165** (.035)	-.177** (.033)	-.159** (.032)
PREVIOUS VIOLENCE			.478** (.101)	.441** (.085)
NUMBER OF DEMANDS			-.223 (.124)	-.189 (.140)
POLITY		-.141* (.052)		-.147* (.052)
POLITY SQUARED		.005 (.002)		.005 (.002)
GDP PER CAPITA (LN)		-.109 (.068)		-.085 (.064)
YOUTH BULGE (15–24)		.016 (.026)		.013 (.026)
<i>Constant</i>	-1.59** (.250)	-.239 (.847)	-1.57** (.295)	-.333 (.825)
<i>Accommodation</i>				
CONCESSION COSTS INDEX	-.136* (.058)	-.148* (.054)	-.176* (.058)	-.189** (.054)
DISRUPTION COSTS INDEX	.184** (.047)	.195** (.048)	.184** (.046)	.194** (.047)
PREVIOUS VIOLENCE			.472** (.094)	.336** (.084)
NUMBER OF DEMANDS			.183 (.116)	.242 (.106)
POLITY		-.134 (.072)		-.131 (.071)
POLITY SQUARED		.006 (.003)		.006 (.003)
GDP PER CAPITA (LN)		-.255** (.080)		-.233* (.077)
YOUTH BULGE (15–24)		.023 (.035)		.028 (.035)
<i>Constant</i>	-2.22** (.285)	-.210 (1.23)	-2.52** (.287)	-.778 (1.23)
<i>Coercion</i>				
CONCESSION COSTS INDEX	.889** (.075)	.869** (.073)	.902** (.078)	.887** (.079)
DISRUPTION COSTS INDEX	-.078 (.047)	-.036 (.047)	-.059 (.046)	-.023 (.046)
PREVIOUS VIOLENCE			.819** (.109)	.682** (.097)
NUMBER OF DEMANDS			-.452** (.139)	-.342 (.151)
POLITY		-.082 (.080)		-.088 (.074)
POLITY SQUARED		.001 (.004)		.001 (.003)
GDP PER CAPITA (LN)		-.214 (.140)		-.170 (.130)
YOUTH BULGE (15–24)		.143** (.034)		.140** (.032)
<i>Constant</i>	-3.52** (.384)	-3.67 (1.83)	-3.48** (.378)	-3.91* (1.65)
<i>N</i>	9965	9522	9965	9522
<i>Wald χ^2 (Prob. > χ^2)</i>	247.75 (0.0000)	461.05 (0.0000)	294.92 (0.0000)	556.83 (0.0000)
<i>Country Clusters</i>	160	152	160	152

Notes: Robust standard errors in parentheses clustered by country. Two-tailed significance tests. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

12. The cases represent protest events. What is the dependent variable?
13. How many categories are there in the DV?
14. What is the base/reference/comparison category of the DV?
15. What is the effect of increasing a country's Polity score on the outcomes of protest events?
16. What effect(s) does increasing the concessions cost index have on government responses to protest events?
17. What effect(s) does increasing the amount of previous violence have on government responses to protest events?

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, Congressional, or parliamentary 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 (perhaps for some specific program)?
9. Are Presidents more likely to use force when their popularity ratings/economic growth fall?
10. What effect does economic growth have on a President's approval ratings?
11. What effect does the use of military force have on Presidential approval ratings?
12. Why do some executive agencies have larger budgets than others?
13. What predicts the roll-call votes of members of Congress?
14. What causes the distribution of committee assignments in Congress?
15. What leads to the creation of new committees or subcommittees in Congress (or their elimination)?
16. Why do some Congresses produce more legislation than others?
17. What causes Congressional gridlock?
18. Do campaign donations change policy in Congress/the Presidency/executive bureaucratic agencies (or their state counterparts)?
19. Does campaign spending win elections?
20. Why has Congressional polarization increased?
21. What predicts the votes of Supreme Court Justices?
22. What predicts whether the Supreme Court will agree to hear a case?
23. What effect do term limits have on policy congruence (public opinion matching policy) in state legislatures?
24. What effect does multiparty competitiveness have on policy in the states?
25. To what extent does public opinion affect policy in the states?
26. What effect does lobbying have on public policy?
27. What affects which candidate(s) a voter selects?
28. What affects whether people vote (turnout)?
29. What determines the outcome of House/Senate/gubernatorial/state legislative elections?
30. What issues are people most likely to vote on?
31. What determines which issues the public finds salient?
32. To what extent is political polarization growing in the United States?
33. What causes political polarization in the United States?
34. What effect do political factors have on judicial decisions to impose the death penalty?
35. When does the Supreme Court uphold executive agency decisions?
36. Do Southerners vote for different reasons than people elsewhere in the country?
37. What predicts partisan affiliation?
38. Is whatever determines political orientations genetically transmitted?
39. 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 or 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/democratic consolidation?
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 others 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.

Letter (case matters)	Name (if needed)	Uses in Statistics
α	alpha	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)
B, β	beta	Coefficients or standardized coefficients of independent variables. Note that if β_0 exists, it's probably the constant in a regression equation, while $\beta_1, \beta_2, \beta_3$, etc are the coefficients of X_1, X_2, X_3 , etc.
Γ, γ	gamma	A measure of association (which tends to be inflated and thus less appropriate than other measures of association)
d		A measure of association – Somer's d, or a Durbin-Watson test of autocorrelation (depends on context)
Δ	delta	Change, e.g. ΔX means “change in X”
e		Error term, or the number 2.718... (depends on context)
ε	epsilon	Error term
η	eta	Sometimes used to indicate the population median
η^2	eta-squared	A measure of association
F		A statistical distribution used to compare variance and assess model significance
λ	lambda	A parameter of some statistical distributions, like the Poisson distribution
μ	mu	The mean (of a population)
N, n		The number of observations/elements in a population or sample
\bar{X}	x-bar	The mean (of a sample)
π	pi	The number 3.14..., or probability (depends on context)
p		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, $p \leq \alpha$. Also used as the shape parameter in Weibull duration models.
ρ	rho	A measure of association – Spearman's rank-order correlation
r		A measure of association – Pearson's r
R^2		A measure of proportional reduction in error (PRE)
s		Standard deviation (of a sample)
σ	sigma	Standard deviation (of a population)
s^2		Variance (of a sample)
σ^2	sigma-squared	Variance (of a population)
t		A statistical distribution that equals the normal distribution when the number of observations is infinite, or time (depends on context)
τ	tau	One of three measures of association: τ_a, τ_b , or τ_c
Φ, ϕ	phi	A measure of association
v		A measure of association (Cramer's v)
χ^2	chi-squared	A statistical distribution used to assess model significance
X		The independent variable(s)
Y		The dependent variable
z		How many standard errors a coefficient is from zero. 1.96 or greater $\rightarrow p < .05$ in a two-tailed test.
Z^2		The Wald statistic

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).

$$x_1 + x_2 + x_3 + \dots + x_N = \sum_{i=1}^N x_i,$$
$$x_1 \times x_2 \times \dots \times x_N = \prod_{i=1}^N x_i.$$

Sometimes if the range of the subscript is already known, the author will dispense with the index. For example, $\sum ax_i$ 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 not 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.