

Introduction

Political science explores relationships among and within governments, societies, and individuals, both domestically and internationally. In the United States, political science is generally divided into four main fields: American politics, comparative politics, international relations, and political theory/philosophy. Increasingly, some political scientists focus exclusively on research methodologies. Regardless of the specific field you are studying, all writing in political science strives to be objective in its approach, emphasizing clear and logically presented arguments, even-handed consideration of possible counter-arguments, and thorough evaluation of relevant evidence for and against your primary claim. Although there are some differences across disciplines, the following handout should also be useful for other social sciences such as sociology and psychology.

The Writing Studio's handouts on different genres of writing are a good place to look for guidance as you begin a writing assignment. Many of your assignments will be:

- Argument essays
- Responses to articles, texts, or events
- Research papers
- Op-ed pieces

A good political science paper will identify a "puzzle" or interesting question, in response to which you make a clear, concise argument that is supported by well-chosen, relevant evidence. Furthermore, it will consider alternative arguments and evaluate their strengths and weaknesses while justifying why the position you have selected offers a better explanation for your central question.

Given these crucial parts of a political science essay, you should focus on:

- choosing an interesting and narrowly defined topic;
- developing a coherent, concise, and contestable thesis;
- identifying the most important (probably two or three, at most) counterarguments to your position; and
- selecting evidence/arguments to substantiate your thesis.

The Scientific Method and Theory Building

More advanced students will be expected to write research papers, and all students are likely to have to read them, so it is important that you understand what exactly Political Scientists do. The scientific method is a way of discovering general truths about the world we live in. Its primary assumptions are that there is such a thing as objective reality and that it is knowable through a person's faculty of reason. Its primary mechanism is theory testing. This means that a possible explanation of how the world works is tested against the evidence of the real world. In the hard sciences, this is done through repetitive experiments (dropping countless objects of varying mass to see whether they all accelerate downwards at the same rate, for example). In the social sciences, it is usually either impractical or unethical to use

experiments, so we rely on historical data. We test our explanations against the past in the hopes of understanding the present and better predicting the future. What this means in practical terms is that we develop a theory (or thesis) *before* we have seen the evidence, so that we can test it honestly. This is a deductive method, as opposed to an inductive. Briefly, deductive method derives specific claims from general principles, while inductive develops general claims from specific instances. The main problem with inductive method is that, in order to make cause-effect claims, you must be able to show what happens both when the causal factor is present and when it is absent, and inductive method can provide no guarantee of sufficient variation on the presence/absence of the suspected causal factor. You must come up with a best guess answer to your puzzle before you actually know what the evidence says. Only then can you know which evidence to collect in order to make a fair test of your theory.

Many students feel uncomfortable making an answer to a question when they really don't know what the answer is. One of the most difficult tasks a social scientist faces is learning to accept the fact that he might find out that his answer is wrong. This is nothing to be embarrassed about. Philosophy of science has long recognized that it is essentially impossible to prove a theory *right*, but very easy to prove one *wrong*. The process of elimination is therefore also an important part of the scientific endeavor, and you should never be afraid to find out that your answer was wrong. We assume that, since you did your background reading and knew something about the topic, and since you are an intelligent human being, your theory was *reasonable*. It was something that other people might easily have believed. To discover that it is incorrect, then, is very useful information. Everyone thought it was pretty obvious that the world was flat...until someone actually tested a belief that it might be round. Of course it's more exciting to discover that you are on the right track. You should never let the emotions attached to being right vs. being wrong influence how you conduct your research. Dishonesty—including "fixing" your theory when you start to suspect it will be incorrect—is bad science.

Research Methodology

What follows is a description of the steps to take in writing a research paper. (If your assignment is a research design, you go through these steps but stop short of collecting and analyzing evidence/data.)

- **Choosing a Topic:** Look at the title of your course or read through the description in the syllabus to find themes or relevant topics.
- **Background Reading:** Re-read any articles or books from the course that have to do with your topic in order to gain a decent general understanding.
- **Choosing a Puzzle:** Now that you know something about your topic, you are in a position to find a "puzzle": some question about the topic that you think is particularly interesting. Keep in mind that political scientists are interested in relations of cause and effect. This means that, while they consider purely descriptive work to be interesting and useful, they think of it as *data*, and not political science. This means that a question such as "how did the presidency develop through the Kennedy and Johnson administrations?" is not an appropriate puzzle. One example of a puzzle might be: What is the most important factor in whether an incumbent wins re-election?
- **Formulating a Thesis/Theory:** Your thesis/theory is essentially *your general answer* to the puzzle. Having done the background reading, you probably have a guess as to what's most important in winning re-election. In your theory, you state your guess clearly and concisely in terms of *variables*. An example would be: Whether an incumbent can win re-election depends on whether the economy is doing well at the time of the election. The variables are the quality of the

economy (continuous from good to bad) and the incumbent's win or loss (discrete). In the jargon of the discipline, these are called the independent and dependent variables.

- The independent variable (I.V.) is the factor you are arguing *causes* something to happen.
 - The dependent variable (D.V.) is what is *caused by* (depends on) something. In this example, the state of the economy is the I.V., and the incumbent's win or loss is the D.V.
- **Defining Key Terms (operationalizing):** The scientific method requires your work to be very clear so that anyone else could repeat exactly what you did to test your honesty and the reliability of your results. This includes being clear about what complex words mean.
 - Definition simply explains what something is
 - Operationalization explains what something is in terms that can be measured or observed.

In our example, we need to operationalize the I.V. and explain exactly how we measure the relative goodness or badness of the economy. One option might be to combine unemployment levels with inflation rates to produce a score. Since we have a discrete D.V., we need to define *how bad* the economy has to be before the incumbent will lose; in short, we need to identify a "tipping point" on the scale. If both of our variables were continuous, this would not be necessary because we could simply map them onto one another.

- **Formulating Hypotheses:** Where the thesis is general, hypotheses are specific. If you presume that your thesis is correct, then you should be able to make a number of specific statements about how the data (reality) ought to look. The easiest way to think about hypotheses are as if-then statements which take all the possible values of the independent variable as the "if"-side and link the possible values of the dependent variable as the "then"-side. This produces a series of clear, specific statements of *how you expect your data to look*. If your data does not look like this, then your theory has not been supported. For our example:
 - H1: If the unemployment-inflation score is below X, the incumbent will not win re-election.
 - H2: If the unemployment-inflation score is above X, the incumbent will win.
- **Control Variables:** Another feature of the scientific method is the *ceteris paribus* (all other things being equal) clause. This is about holding all the other possibly relevant conditions constant in order to check for a significant causal relationship between the two variables that interest you. Social scientists collect information on more than just the independent and dependent variables so that they can check on the action of the I.V. and D.V. in different pools of information where other conditions were in fact the same. In our example, other possible things that might influence the D.V. (election outcome) are campaign spending, personality, success/failure in foreign policy, and so forth. These are the kinds of things you will want to operationalize and hold constant ("control for") in order to make sure that it is your I.V. alone that is causing the variation in your D.V.
- **Collecting Data:** At this point, you know what data you need to collect: unemployment, inflation, election results, campaign spending, personality ratings, performance in foreign policy crises, etc. You can limit your domain to a particular country, time period, type of election (presidential, gubernatorial, Senate, House), etc. for convenience, but do not limit it so much that you have trouble getting enough data to reach meaningful conclusions. If you don't have enough

data to check all your control variables, then your results will be less convincing. This is where you should seek the help of a reference librarian rather than going straight to the internet.

- **Analyzing Data:** What you want to know is, when the control variables are held constant, how do the economy score and the election results map onto one another? Your hypotheses state that where the economy score is below X, the incumbent should lose, and where the economy score is above X, the incumbent should win, all other things being equal. If this is in fact what you find, then you have supported (not proven!) your theory. If you find incumbents winning even when the score was below X (and vice versa), you have not supported your theory.
- **Concluding:** This is more complicated than simply re-stating your theory and whether it was supported or not. If your theory was not supported, you need to address the various possible reasons for that. Either your theory was wrong, or your operationalization of the economy was not good for some reason, or your hypotheses did not actually derive from your theory, or you collected bad data, or you did your statistics wrong. If your theory was supported, you should explain its usefulness in terms of prediction. No matter whether your theory was supported or not, you should point to anything interesting that came up during your research that you think ought to be given more attention than you gave it. We call this "avenues for future research." If you noticed a pattern that you didn't expect, point it out, even if it tends to weaken your own argument.

Citing Sources

Each professional journal in political science seems to use a different format for citing sources. If your instructor does not specify a particular format, MLA, Chicago, or Turabian are all appropriate. As always, be sure to include all relevant bibliographic information so that a reader can find the sources of your facts, figures, and evidence.

Additional Resources

<http://www.unc.edu/depts/wcweb/handouts/polisci.html>

The University of North Carolina Writing Center handout on writing in the discipline of Political Science.

Elster, Jon. 1989. *Nuts and Bolts for the Social Sciences*. Cambridge: Cambridge U. Press.

King, Gary, Robert O. Keohane, and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton, NJ: Princeton University Press.