FOUR: DESIGNING YOUR STUDY

After you thoroughly research relevant scholarly work on your topic, you should answer your question! This is what we call 'Research Methodology'.

There is a great amount of trepidation surrounding the 'Research Methodology'. We spend a lot of time trying to train our students in methodology, including PLS 2051: Introduction to Research Methods and PLS 3055: Advanced Research Methods. Formally defined, research methodology is the approach to answering questions about politics using the scientific method. While our methods courses are quantitatively focused with an emphasis on learning SPSS and statistics, you should think of SPSS/statistics as only *one* method political scientists utilize to answer questions about politics. In reality, there are many different approaches used in our discipline to answer questions.

There are many methods or approaches to research. There are a few common methods used in the discipline of political science. However, research design is as much an "art" as it is a "science". There is no correct, established, "right" path in determining which method is the most appropriate. What follows in this section are pretty extensive, but ultimately, general guidelines in how one should think of and develop their research methodology.

In this section of the project, you have to choose the approach to gathering evidence for your paper. In deciding which methodology to use, the question should *never* be 'which methodology is ***best***?' In fact, the most sophisticated and thoughtful researchers ask 'which methodology is ***appropriate***?' Given your work on the project up until this point, you have to make a choice regarding which method is the most appropriate to gather evidence for your study.

Think of the methodology section as a blueprint. This blueprint is for the collection, measurement, and analysis of evidence to answer the research question and prove your argument. **Most of our students feel remarkably uncomfortable in this portion of this project because you have very little "on-the-ground" experience in doing this kind of work.**

What do I need to do in this section of the paper?

You need to choose **one** research method. From there, you commit to using this research method as the tool that you will use to collect evidence for your argument. You should know how this method sets out general guidelines for *how* to go about this process. This manual covers these guidelines. However, after you settle on your method, you should feel free to deviate from these guidelines to best design your study in hopes of collecting the most appropriate evidence while using this method. Sometimes you will hear "multi-method" studies are ideal. Multi-method studies use more than one method, but this should be reserved for advanced thesis projects.

Most students should have a section in their thesis called "Methodology". This section is roughly 3-5 pages long. In this section, you tell the reader which method you chose, explain why this

method is the most appropriate, and describe (in great detail) how you used this method to collect evidence for your study. In describing how you used this method, the objective is to be able to provide enough detail so that the reader not only understands how you collected your evidence but can also replicate your study. As such, in many papers, you will see that this section often switches in and out of the first-person narrative. You need to describe the "blueprint" for the reader: think about the methods section as writing the different stages or steps in how you collected the evidence. The next section in the thesis paper is usually "Analysis" or "Results", thus before you get there, you need to tell the reader *how* you arrived at the analysis or results.

How do I choose the appropriate research method for my study?

If you have no idea how to choose the most appropriate research method, a useful strategy is to "map out" your argument. As there are multiple ways to provide evidence for the question, mapping out your argument will help you think of what evidence that you can provide. Mapping out your argument is suggested for students who have no idea where to begin in choosing the most appropriate research method. Here is an example of how to map out an argument:

Mapping out the Argument

$$X \qquad \rightarrow \qquad Y$$

Cause	Effect
Increase in news consumption	*Decrease in political participation*

Very simply, mapping out your argument is the visualization of your argument. You should take out a sheet of paper and draw this relationship as best you can. Visualizing your argument is important to help you sort out *exactly* what you will prove. Note in the above example, the cause and effect in the argument are framed in terms of deficits and excesses. You should similarly aim to frame your cause and effect by stating a directional relationship (with key words such as "increase", "decrease", "more", "less", "left", "right", etc.)

The next step in mapping out the argument is to answer a number of key questions about this visualization. The most crucial question is to ask yourself is "in what context could I provide evidence for this argument?" However, even given the work you have already done up until this point, that may be a particularly difficult question to ask. Here are a few ancillary questions you should ask if you are having trouble with the above question:

- What kinds of evidence do other scholars provide in my literature review? Can I provide similar evidence?
- How would I measure each of the major ideas in the hypothesis? How do I measure the cause? How do I measure the effect?
- Who are the actors/agents involved in this puzzle? In what situations could I observe these actors?
- Is this a behavioral or institutional question?

o If behavioral, you are measuring the attitudes and opinions of people. Here, ask yourself if there is a way to measure these attitudes and opinions? Has someone collected this information already? Can you collect this information yourself?

o If institutional, you are measuring trends and patterns in or amongst government or organizational structures. Here, ask yourself does government or organizations provide information about the ideas you're interested in? Can you collect this information yourself?

Although you should always ask yourself how to provide evidence for your argument, a key strategy is to answer these questions directly on the same sheet of paper where you drew out the argument. After you visualize the argument, brainstorm how you will come up with the methodology by answering as many of these questions as possible. When brainstorming, bullet points and incomplete statements are acceptable. This is a strategy for you to think of the many different ways you could potentially answer this question!

What are my choices for methodology?

Again, you should think of methodology as a chosen acceptable technique that scholars use to collect evidence in the discipline. Evidence should not be haphazardly collected and pieced together. Evidence should be collected in a systematic way. Thus, you should think about the systematic manner in which political scientists have commonly collected data in previous studies. Before getting to these techniques or methods, let's first discuss a distinction between two types of methods:

- **Qualitative methodology:** Methodology that incorporates observations with a small number of cases. The evidence that you collect in this type of study will usually only be a handful (up to a dozen). The aim of qualitative methodology is for the researcher to explore these cases (as few as one) in detail, in hopes to see whether the argument holds to be true. Qualitative methodology is often referred to as *small-n*, meaning there are a small number of observations in the study.
- **Quantitative methodology:** Methodology that incorporates observations with a large number of cases. The evidence that you collect in this type of study is often numerous, in the dozens, hundreds, or even thousands. The aim of quantitative methodology is to prove the argument by statistically proving patterns. Quantitative methodology is often referred to as *large-n*, meaning there are a large number of observations in the study.

Essentially, the distinction between qualitative and quantitative indicates whether or not you will use data analysis.

Again, political scientists most often use a small selection of methodologies. They are organized here as qualitative or quantitative:

Qualitative:
- Case studies
- Observational fieldwork
- Interviews
- Theoretical research

Quantitative
- Data analysis
- Survey research
- Survey experiments
- Content analysis

Thus, the objective should be to choose *one* methodology from this list. In the next chapter, you will see a full set of guidelines for how to go about collecting evidence for that specific methodology.

When is it appropriate to use a multi-method study?

In the past, students have elected to utilize different methodologies in the same study. For example, a student could administer a survey about opinions on fear about terrorism, but also use a content analysis to examine how "fear" in used in presidential speeches. *In the interest of saving your limited time and resources, this is not a recommended approach.* Traditionally, a multi-method study is seen as optimal; a researcher is proving their argument from different vantage points, using different techniques. However, for seniors who are under a deadline, this often leads to creating more work than necessary. Students who are seriously considering completing a multi-method study should consult with their advisor.

Can I do a policy analysis?

Since public administration is a subfield in our department, many students have experience conducting a policy analysis in their coursework. Policy analysis will be covered extensively in the next chapter, but it is not listed a methodology from the previous list. In many universities, *Public Administration* is a standalone department. Additionally, many universities have *Public Policy* as a standalone department. Both *Public Administration* and *Public Policy* are considered to be their own disciplines, outside of *Political Science*.

Academic disciplines distinguish themselves in subject matter, but also in the approaches they prefer in conducting research. However, there is often overlap in the three disciplines of *Public Administration, Public Policy,* and *Political Science*. The overlap is so great, that many departments will have elements of each embedded within their respective programs. This is

evidenced in our own department, as we offer a Masters of Public Administration program. The MPA program has a core faculty, but these faculty members often teach courses in our undergraduate political science program as well.

You should consider policy analysis as its own methodology. The reason why it is not included in the previous list is that many political scientists at other universities are not formally trained to conduct a policy analysis. Nonetheless, you may elect to do a policy analysis for your senior thesis project. Many students have an interest in local government, city administration, or public policy problems that plague our society. You should think of this as its own methodology. Again, you will find more information about policy analysis in the next chapter.

The drawbacks and failures of choosing one methodology

Although we advise that you choose one methodology in the interest of saving you potential headaches, there will *always* be drawbacks to choosing one methodology. Each approach has their own respective flaws, but you should be able to speak to those flaws in your paper somewhat. The major flaw with any study is based on whether the study is qualitative or quantitative:

- **Qualitative drawbacks**: As qualitative involves a small number of cases, it will be difficult to extrapolate the results of your study to other cases you do not explore in the study. The exact results of your study will not be applicable or replicable to other cases you or others might examine in the future. This is referred to as *low external validity*. External validity is defined as the extent to which the research design is able to support the inference about the population of interest. We are unable to do so with qualitative studies.
- **Quantitative drawbacks**: As quantitative involves a large number of cases, it will be difficult to explore your argument or relationship in a great amount of detail. In a quantitative study, you are completely reliant on statistical analysis to prove your argument. The results of your study will be unable to highlight the contours of the relationship under investigation, giving detail as to how the cause and effect actually work. This is referred to as *low internal validity*. Internal validity is defined as the extent to which the research design supports the kind of inference that is needed in proving the relationship.

Perhaps you have figured out that a discussion of the weaknesses of methodology leads to a conversation about their *strengths*. Qualitative methodology has high internal validity: with a small number of cases, we can be certain the detail we provide in our study is strongly supportive of the inference needed to prove the hypothesis. Quantitative methodology has high external validity: with a large number of cases, we can be certain that the findings from our cases under investigation are reflective of the total population. Thus, qualitative methodology has low external validity but high internal validity. Quantitative methodology has low internal validity but high external validity.