Writing a Senior Thesis – Memo for Advisees

Defining a Thesis

Research expands the scope of human knowledge by addressing a relevant question through a systematic analysis of data. A research paper is different from an editorial or opinion essay, which simply prevent a point of a view on a topic. A good paper must also go beyond a simple summary of existing research, and contribute new insights through an original research activity and the presentation of novel evidence.

A senior thesis is simply an extended research paper. You have more room and time to expand each element of the project. A good senior thesis often has multiple research components and utilizes a variety of evidence. You may choose to write an extended treatment of one research question, or structure each chapter as addressing different (but linked) questions.

Step 1: Developing a Research Proposal – End of October

The hardest part of research is getting your project off the ground. In general, the basic path to writing a research proposal is to develop a question, review existing literature, state your theory/hypotheses, and develop a research design. In practice, most researchers do not follow this linear path, instead iterating back and forth until they are satisfied with the plan. You may find your original question has already been thoroughly answered by existing research, or that your research design cannot evaluate your hypotheses. You should be willing to throw out and revise your ideas at this stage. It is much better to spend a little more time planning than pursue a flawed project.

Below are the basic substeps in developing your research proposal:

1. *Generate a Research Question* – A good research question must be relevant, ambitious, and answerable. The best questions are interesting to the scholarly audience in your field, as well as the broader public. There are different types of research questions, but in general, scholars of politics and public policy pursue causal questions– "what is the effect of A on B?" We also try to understand the processes or mechanisms through which causal relationships are transferred.

   There is no one "right way" to generate a research question. The standard approach is to read existing research, and identify gaps in the l that you can address. This is fine, but be careful about fixating on a question that is only important to the scholarly audience. The

best ideas often come after reading/watching news about a given topic, which helps ensure that the research is relevant.

A third strategy is to consider what data is available, and then think about what questions you might be able to answer with that data. "I have this great dataset, what can I do with it?" Some scholars are against this approach, and think you must always come up with your question first. I believe having an eye on possible data and research designs early on can help weed out infeasible projects. There is no sense asking a question that is impossible to answer.

Note that you do not need to generate a brand new question– it is perfectly acceptable to take someone else's, and try to improve on their answer in some way with a new approach. The biggest advances in human knowledge generally come from multiple researchers working on the same question.

2. *Review Existing Research* – Before moving too far with your project, you must get a sense of where the existing state of human knowledge lies with respect to your topic and question. Are there existing theories/frameworks that offer answers? What empirical evidence has been provided? What are the weaknesses and gaps in existing work? Are there ways to extend the findings of other researchers, by replicating existing designs in new settings? In reviewing the literature, you should come away with both a sense of where you might make a contribution, as well as some ideas for your hypotheses and research design.

3. *State Your Theory/Hypotheses* – A hypothesis is simply a preliminary answer or answers to your research question. We generally derive hypotheses from a broader theory of how the world works. "If this theory is correct, we should observe relationships A, B, and C in our data." Your theory and hypotheses may be your own, or you may consider the theories in existing research. Often good researchers set up competing theories and hypotheses– "Scholar A says this, Scholar B says this." The goal of your thesis is to accept or reject hypotheses, to evaluate them in light of your data and evidence. If we reject a hypothesis derived from a theory, this should raise doubts as to the merits of the theory itself.

In political science, our shared goal is develop theories that can explain and predict political phenomena. In public policy research, we are less interested in developing and testing theories, and more interested in evaluating the relative merits of different policy options. Public policy research papers may have less of a theoretical framing but should think it terms of hypotheses nonetheless.

4. *Develop a Research Design* – As a researcher, your job is to develop a convincing approach to answer your question and assess different hypotheses. In political science and public policy

research, there are a range of data types and methods of analysis– large N quantitative datasets; case studies and small-N comparisons; survey and field experiments; structured interviews; and even ethnographic techniques. Your method and data should be suitable for the question you are interested in, and feasible given your skills and timeframe.

Because different methods have different strengths, the best projects will often combine multiple approaches to address the same question. This is known as "multi-method research." For example, case studies are helpful in understanding the details and mechanisms behind a causal relationship, but it is difficult to generalize from a single case. A statistical analysis of a large dataset can be used to see whether the relationship holds in the broader population. Experiments can assess whether subjects respond to a stimulus, but we often don't know why subjects respond the way the do. Semi-structured interviews with a subset of participants can clarify and contextualize the experimental results. Some of the most successful theses combine these different data sources– a large-N statistical analysis in one chapter, followed by a case study in the next.

A good research proposal contains the same elements. It should state your question; your motivations for pursuing that question; your hypotheses; and your research design.

Step 2: Data Collection and Analysis – Data Collection by end of December, Preliminary Analysis by end of January

With your research proposal in place, it is now time to execute– conduct your interviews, run your survey, collect your dataset, etc. In some instances, it will be helpful to run a pilot or practice study in some way, to avoid mistakes in the full data collection process. If you are conducting research on human subjects, you should make sure your study meets the ethical standards set by Princeton's IRB. You should document your research activities as much as possible (sources, questions, coding decisions) which will allow other researchers to replicate and evaluate the strength of your design. Good data collection and analysis is ethical, transparent, and thorough.

Step 3: Write up Results – End of December through end of March

A good thesis generally has the following sections/chapters, many of which can be expanded from your research proposal.

- Introduction: The introduction states the research question and motivation– why it matters from a substantive and scholarly perspective. You should also summarize your primary ar-

gument and findings, and highlight your contribution. The introduction should close with a road map of the rest of the thesis.

- Literature Review: The literature review summarizes the state of existing research, highlighting weaknesses or contradictions. This section should be brief and can be subsumed into the Introduction or Theory/Hypothesis chapter.

- Theory/Hypothesis: This chapter should describe the theoretical intuitions that motivate the analysis and formally articulate the hypotheses.

- Analysis: The analysis chapters (generally two or three) evaluate the hypotheses for you project. Each chapter should describe your research activities– the data you collected, how you collected it, and the plan for your analysis. If you have a quantitative dataset, you should provide tables of definitions and summary statistics for key variables. If you are conducting a comparison of different cases, describe the case selection strategy. You can then present the findings from your research– figures, tables, interview evidence, case studies, and so forth. At the end of each analysis chapter, the reader should know whether the evidence confirmed or disproved your hypotheses. You should also be transparent about any limitations of the analysis or assumptions you made, and address possible counterarguments or alternative explanations.

- Conclusion: The conclusion summarizes your findings before moving on to the broader implications of your research. You may highlight further research avenues or policy recommendations, if applicable.

Once you finish a draft chapter, the best thing to do is get some distance from it. When you are ready to work on the project again, send it to me, a friend, your parents, or other readers. It make take a couple drafts before feeling a chapter is "done," so give yourself time to revise your work.

Working Together

I find it helpful to set working expectations on both sides. Below on some guidelines on how I work as an advisor:

1. Please send me anything you'd like me to read at least 24 hours in advance of our meeting. Please don't send anything greater than one chapter/paper length, about 30-35 pages.

2. During the work week, I will aim to reply to any email you send within 24 hours. I will be less responsive over the weekend or during breaks.

3. For anything you send me, I will verbal feedback during a one-on-one meeting in office hours or over the phone. I will generally not provide line-by-line feedback on your writing, grammar, or sentence structures. You can utilize the writing center for that.

4. I will meet with you during my office hours as often as you like. In general, we should aim to meet about once per month over the course of the fall, and perhaps once every 2-3 weeks in the spring semester. Each meeting should have a defined objective.

5. You should set your own deadlines but communicate them to me in advance. The cutoff date for me reading or giving feedback will be March 15th.

Grading Standards

The following are the grading standards from the WWS for senior thesis. The standards for Politics are very similar, with the key difference being there is no requirement to engage with policy debates.

A : This thesis is an outstanding work that has all of the following qualities: clear articulation of a research question and hypothesis, engages with existing scholarly and policy debates related to topic, thorough presentation of evidence to assess hypothesis and compare with alternative explanations, demonstrates first-rate research skills and use of sources, intellectually original argument that draws clear conclusions based on analysis and links the contribution of research to a policy debate, high level organization and writing skill

A- : This thesis is a well-conceived work of solid scholarship that meets the first three elements of an A thesis, but falls short in the quality of evidence, originality of argument, or effectiveness of the writing expected for an A effort.

B+ : This thesis is informative and generally well-written, but lacks some elements of originality, sophistication or rigor. It may provide a thorough assessment of a research question but fail to engage with scholarly literature and policy debates and neglect to consider alternative explanations. Theses in this range must be clearly written, but may be less polished writing and more superficial in use of sources for evidence.

B to B- : This thesis is competent but lacks one or more major qualities, such as a compelling research question, a thorough research effort, a persuasive analysis, or a fluid writing style.

C+ to C- : This thesis demonstrates substantial flaws in logic, research, writing or understanding of the issue.

D: This thesis demonstrates a significant lack of effort or substantial defects of quality or clarity. It may describe a topic but fail to present a research question or analysis. A thesis in this range will often be poorly written and rely on a limited range of sources.

F: This thesis demonstrates a complete lack of effort and no redeeming qualities. Factual mistakes and gaps in attention make the thesis incomplete even as a description of the topic. Ineffective writing prevents clear communication of ideas.

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