

Department of Politics Senior Thesis Poster Session

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Poster Session Description

At the end of spring semester, the Department of Politics Senior Thesis Poster Session provides an opportunity for graduating seniors to present the results of your senior thesis. While the complete senior thesis provides a comprehensive account of your topic, the poster allows you to present your theoretical arguments and empirical results and get valuable feedback from colleagues and professors. Preparing and presenting a poster is a **requirement** for all Politics seniors.

This year, the poster session will be held virtually. This handout provides you with key information on relevant dates, requirements, and evaluation criteria of the poster session. Later pages include guidelines and tips for better social scientific communication.

Key dates

- Monday, **April 12 at 4:00 pm EDT** - Senior Thesis Due.
- Friday, **April 23 at 12:00 pm EDT** - Deadline to Submit Poster.¹
- Wednesday, **April 28, 1:30-3:30 pm EDT** - Poster Session.

¹ This is a hard deadline. Failure to meet it will result in steep penalties: 2/3 of a letter grade for the first 24-hour period, and 1/3 for each additional 24-hour period.

Requirements

- **Submitted by 12:00 pm on April 23** via the online submission system accessed **here**.²
- Submitted in **PDF format**.
- All posters must be landscape in orientation, with the **exact dimensions of 24 × 36 inches**.³

² https://polthesisposters.princeton.edu/student_login.php

³ Prior to submitting, please open the PDF file and confirm its dimensions.

Evaluation criteria

- Information is accurate and includes an explanation of key concepts and theories, as well as a clear description of the results and the importance of the results.
- The content is clearly and concisely written with a logical progression of ideas and supporting information.
- The abstract describes the basic components of the thesis.⁴
- Graphics are easily viewed and related to the topic, making the material easy to understand.
- Fonts are easily read and appropriate for headings and text.⁵
- Presenter demonstrates full knowledge of the material, can explain and elaborate on content, and competently answers questions.

These criteria are adapted from Texas Tech University Center for Active Learning and Undergraduate Engagement.

⁴ What problem did you study and why is it important? What methods did you employ? What did you find and what does that mean for the study of politics?

⁵ The use of italics, bold and indentations can enhance readability.

Building the poster

You may never have made a scientific poster before. Fortunately, there are many online resources to help you do this and many example posters are available online. You can use whatever tools you are familiar with –powerpoint, L^AT_EX, rmarkdown, etc– to make your poster. Searching for templates on google or overleaf for “scientific poster powerpoint template” will get you most of the way. Below we list some resources, a presubmission checklist and a short guide that may be helpful as you undertake this task, but please feel free to reach out to Ben at bcrisman@princeton.edu if you have any questions that aren’t answered here.

Basic elements of a poster

Your poster should probably include the following information:

- **Title/Author/Affiliation:** Featured in an easy to find location.
- **Abstract:** In 150 words, summarize your research.⁶
- **Body:** What background does the audience need? Provide some additional detail on your methodology.
- **Data/Empirics:** These might include figures, tables, or other visual aids to communicate your results.
- **Conclusion(s):** What should a visitor to your poster take away?
- **References:** Include basic references that are cited in the poster itself. This should not really be more than four or five.⁷

Poster making resources (links)

- A great video on making better scientific posters by Mike Morrison.
- Write up of the above video by Inside Higher Ed.
- Most recent .pptx template, again by Mike Morrison.
- An R Package for reproducible poster design in RMarkdown by Brent Thorne.
- A LaTeX Template by Rafael Bailo.

Resources at Princeton

- Stokes Viz Hub for individual consultations on quantitative and qualitative data visualization.
- McGraw Center’s learning consultations can provide help in developing public speaking skills or on the thesis itself.
- Firestone’s Data and Statistical Services (DSS) can help with data cleaning and analysis.



Under normal circumstances, the department would provide a printed copy of your poster. However, the session will be virtual and hosted entirely online this year.

⁶ What problem did you study and why is it important? What methods did you employ? What did you find and what does that mean for the study of politics?

⁷ And certainly not everything you cite in your thesis.

Don’t forget that your advisor can often connect you to additional resources should you need them.

Pre-submission checklist*Identify your audience*

- I have thought of specific people who would be interested in my research and how they could make use of it in their own research or lives.
- I have solicited feedback from some of these individuals.
- I have included the necessary background for my audience to understand the main points of my research.

Distill key Concepts

- The text is written without jargon and in simple sentences.
- I can understand the main conclusions at a glance.
- It is clear where I would need to go to get more information.
- I've asked a roommate or friend to read over my poster and explain to me what they think it is about.

Visualize your process

- My data visualizations are consistent with standard practice for similar data and relationships.
- Each plot and the poster itself has a clear and logical sequence that is apparent on initial inspection.
- The colors used in my poster are few, appropriate, and accessible.
- My prose is limited and the text is high-contrast and legible.

Present your story

- My presentation is consistent with the information in the poster.
- The presentation draws on visualizations to show and not just tell what my research says.
- I draw connections to other research or other cases with which my audience will be familiar.
- I encourage active participation of the audience by inviting people to visualize their expectations, to question their assumptions, or through some other means.

Build the poster

- My poster is in landscape in orientation, with the **exact dimensions of 24 × 36 inches**.
- My poster is in .pdf format.
- I have marked the submission deadline **April 23 at 12:00 pm EDT** in my calendar.

Selling your ideas
An undergraduate's guide to social scientific communication *

As a social scientist leaving undergraduate education, you are entering a marketplace of ideas. In that marketplace, as in any marketplace, the products that gain traction are not necessarily the *best* products. They are the products which have the *best marketing*. When it comes to your ideas and your research, you are the only marketer.

Fortunately, the skills involved in marketing are much the same as those you've been developing over the course of your undergraduate education: understanding your audience; breaking down key concepts; as well as verbal, written, and graphic communication. Making this poster isn't going to teach you how to do those things from scratch, but rather how to apply the skills you already have to sell your ideas to fellow scholars, policymakers, and lay audiences. In doing so, you will hone the following skills:

- **Distillation:**

How do you make detailed, rich, and complex ideas easily digestible to both expert and non-expert audiences? This exercise will teach you how to strip down your argument and findings to the bare essentials, both simplifying the logic and specialized concepts you use to craft your argument and judiciously choosing which aspects of your larger project to emphasize.

- **Visualization:**

How can you transform concepts, theories, and findings into visually appealing and intuitive figures, maps, and diagrams? Making a poster helps you to visualize your argument and determine which kinds of empirical and conceptual visual tools will best communicate your theory and findings. Moreover, effective visualization makes presenting your arguments that much easier.

- **Presentation:**

How do you effectively and confidently explain your project to people unfamiliar with it? How do you get people to engage with your ideas and get excited about your work? This exercise is fundamentally about effectively communicating your research to an academic audience, getting people excited about it, and responding to their questions and comments.

In this guide, we'll remind you what the goals of scientific communication are, what questions you need to ask yourself to deliver on those goals effectively, and how you can use the tools of scientific communication to develop a better senior poster and presentation.

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*These materials were compiled by Benjamin Crisman building off the work of the incredible graduate coordinators who came before me: Sean Luna McAdams, Carissa Tudor, and Elsa Voytas.

Understand your objective

If the goal of social science is to develop systematic understandings of social phenomena, the goal of social scientific communication, broadly, is to effectively share those understandings with your audience. The reasons you might want to communicate those understandings effectively, however, are many. The more you can help people understand your ideas, the more you can:

- **Increase knowledge:** Good communication means that not only will your audience be exposed to your ideas, but they will *remember* them. The more they remember, the more your ideas can be put into practice, advance common knowledge, or be built upon.
- **Change behavior:** Your research probably has some real-world implication. Better communication means that you can be a stronger advocate for specific policies or a more convincing advocate for individual behavior change.
- **Improve feedback:** If you communicate your ideas and research clearly and effectively, it will be easier for your peers and advisors to share relevant feedback and improve your research.

Each of these objectives in some way involve making changes in your audience –in how they view the world, their place in it, or policies which can influence specific aspects of it. Consequently, we need to understand who our audience is, what we are trying to communicate to them, and why it might be important to them. From there, we can work our way backwards from that change through to the original research to figure out how to best advance our goals. The chronological order of events leading up to these objectives often follows the path delineated below.



So, we will start with an exercise designed to help us identify and understand our audience. If we can understand the audience, we can design our presentation and poster to help them better retain relevant information about our research and hopefully use it to improve their research or their lives.

We'll quickly see how achieving this in turn depends on creating accessible and engaging visuals centered around clear concepts. Finally, we'll provide you with some resources to help you construct the digital version of your poster.



As social scientists, we know that we can often work backwards from our end goals to decide our optimal course of action at any given point in a process.

The game theorists among us will recognize this concept as *backward induction*. We'll use that idea here to create the most compelling presentation we can for the audience we have.

Identify your audience

Thinking about who your audience may be is important at all stages of the research process, but is particularly salient in the production of audience-facing materials like posters, presentations, or blog posts/editorials. Here we present three questions that can help you think about your audience and things you'll need to keep in mind to communicate to them effectively. A good starting point is to ask yourself:

- **Q1.a:** *Whose mind do you want to change with your research?*

They are your ideal audience. If you do not get anywhere with this question, ask yourself:

- **Q1.b:** *Who are the ten people, by name, who will find this research the most useful, enlightening, or remarkable?*

This exercise gives you a starting point for sharing your ideas and getting feedback prior to the poster session. If these are the people who will find your research useful, you're doing them a favor by showing it to them. Even if they have criticisms, you're learning how your project can be improved to better meet the needs of your audience. The process of research is rarely a once-and-done deal.

Asking these questions will also help you identify what points from your research you should emphasize and how you should go about explaining it. Should your presentation be more or less technical? Shorter or longer?⁸ Focused on the research itself or the policy implications?

- **Q2:** *What is the minimum background information my audience will need to understand my research?*

As a social scientist, you also have the burden of providing enough context for your research and this too will vary across audiences. In the poster session you will be presenting to an audience whose technical knowledge is likely high but whose case-knowledge of your specific question is likely lower.⁹

- **Q3:** *What findings from my research will be the most useful to this audience?*

Finally, ask yourself what aspect of your research the audience will find the most useful. This question will help you prioritize which parts of your research you'll want share with your audience. Your poster will be limited in size, but even small posters can include *too much* information which means your audience won't know which parts to take-in. Therefore, we need to simplify and distill our thesis into a few key concepts.



Anyone can find ten people for whom their research would be helpful or to whom you would like it speak. If it isn't helpful for those ten people, it likely isn't helpful to anyone and you may need to revise how you're presenting your research or even the research itself.

If these ten people do find your idea useful, insightful, or in some other way remarkable, they'll likely share it with others who will also be able to provide feedback or connect you with people with shared interests.

⁸ The answer is almost certainly 'shorter.' Remember that for the purposes of the poster session your time will be quite limited.

⁹ There's probably little need to explain how difference-in-difference designs work, but it's important that you cover the quirk of New Zealand parliamentary procedure on which your research design relies.

Distill key concepts

You get one idea. Sometimes two. Three if you're really lucky. People's time, attention spans, and information processing capacity are limited. This means that you need to identify the single most important concept, statement, or finding from your research that you can say with certainty (or with characterized uncertainty, we are scientists after all).¹⁰

Again, this single thing may change with respect to your audience. Policymakers don't care that natural splines may be a consistent way of estimating local treatment effects in regression discontinuity designs. They care that you found a better way of evaluating whether or not their policies are working. For an audience of political methodologists, the reverse is probably true.

So, ask yourself:

- **Q1:** *What is the most important thing for this audience to take away from this interaction?*

Usually that comes in one of two forms. Either, you are reporting the direct results of your research ("Increasing access to X improves Y") or you are using your research to make a point about the world ("The new budget limits access to X and here's why that's important."). In both cases, your research provides the basis for argument, but the emphasis on design and implications is different. For the poster session, it should probably be the former as you're speaking to fellow political scientists.

When you have your one idea, write it in a single easy to understand sentence. Make it as short as possible. Discard adverbs and jargon. For a research presentation like a conference or poster session, this single sentence can often be used as your title.¹¹

Once you have said the thing you want to say, you need to back it up. Naturally, it's taken you fifty pages or more to back it up in your thesis, but you can use the structure of your thesis as a starting point. Conduct a similar exercise for each section of your paper – the background, the methodology, the findings, the limitations– and write a new, single-sentence heading for each section.

- **Q2:** *How would I explain this to my roommate who doesn't study social science?*

A way to validate whether or not you've done this successfully is to show your new outline –composed of single sentences– to a friend who has never read a single political science article would understand. The outcome of this exercise can act as the basis for sequencing your poster and presentation.



¹⁰ When I say 'with certainty' I mean that you should know precisely what it is your research says and not stretch that to say what you would like it to say. Nobody likes a bait and switch and it can undermine your future efforts and those of your fellow social scientists.

¹¹ You can often see some good examples of this type of title among papers published in the Proceedings of the National Academy of Sciences.

Eggers *et al.* (2020) do this well. Consider the outline of a section of their paper:

4. Claims based on facts that are not actually facts

4.1 More votes than voters in the US

4.2 Dominion voting machines do not increase Biden vote share

4.3 Absentee vote counting in Pennsylvania and Georgia did not produce suspicious extra ballots for Biden

4.4 Turnout rates in counties where Republicans alleged fraud were not unusually high

Visualize your process

The purpose of visualization is to help tell the story of how you came to your conclusions. Showing quantitative data is one way. If the audience can *see* that data points line up the way you predict, your argument will be more compelling. If you use a qualitative approach, you can use visualization to illustrate your process.¹²

Visualization can also efficiently provide lots of information to your audience in a structured way. Instead of reading a page of prose on your methodology and interpretation of the coefficients of a regression, an added variable plot provides the audience much of what they need to know about your methodology in a single glance.



¹² E.g. by providing samples of text from interviews or documents which are representative of key stages of your proposed theory or by drawing a timeline of key events.

Tip 1: There are standard ways to visualize most relationships.

A first step is identifying the right tools for the data you have or the story you want to tell. Below we list some common relations and some potential ways to visualize them. There are many resources online from which to take inspiration (we list some of these below). However, a good starting point for individualized feedback is the Stokes Viz Hub service offered virtually through Stokes library.

For examples relevant to political science, see Kastellec, J. P., & Leoni, E. L. (2007). Using graphs instead of tables in political science. *Perspectives on politics*, 755-771.

Comparison	Grouped bar chart, circular area chart (over time or for many variables), line chart (over time)
Relationship	Scatter plot (two variables), bubble plot (three variables), added variable plot (marginal effect)
Distribution	Histogram, density plot, scatter plot (2 variables), 3d area plot (3 variables)
Composition	Stacked bar chart (relative differences), stacked area chart (absolute differences), pie chart (share of total), waterfall chart (accumulation)
Process	Flow chart, Gantt diagram, decision tree, game tree, timeline, mind-maps

Tip 2: Think about organization and hierarchy

English readers most often read text and images top-to-bottom, left-to-right. However, this can be subverted through variation in size and color. Look at your poster or individual plot and consider which aspects draw your eye first, second, and third. Does this sequence match with the narrative of your presentation and thesis?

Tip 3: Be intentional with style and color

Your color choices should be few, appropriate, and accessible. Too many colors can confuse the audience and create a disconnect between related parts. Colors should try to reflect underlying concepts and build off existing associations.¹³ Also consider whether or not your color choices are accessible to those with colorblindness and limited vision and ensure that text and background colors have high contrast.¹⁴

¹³ E.g. blue for Democrats, red for Republicans.

¹⁴ Relatedly, make sure fonts are consistent throughout and legible.

Present your story

Presenting well is a skill that will serve you well regardless of what you want to do when you leave Princeton. Keep these tips in the back of your mind as you think about designing your poster and how you will present it.



Tip 1: Place the main idea front and center

In both your poster and the presentation, you want to take advantage of the first few moments of the audience's attention. If you only have 30 seconds to explain what you've done and why it's important to them, use it as effectively as possible by telling them what you found and how you found it.¹⁵ You can use the single-sentence summaries you created earlier to guide your hook. Now that you've provided the main idea, the audience has a frame of reference for the rest of your talk on which you can build.

Tip 2: Show, don't just tell

People are much better at remembering pictures compared to words.¹⁶ In addition to walking through your research narratively. It can help to have a single 'visual abstract' or image to which you or the audience can refer. For instance, if your research is based on a regression discontinuity, a single image can help the viewer understand your design, assumptions, and findings.

Tip 3: Draw connections to familiar ideas

In order to help cement ideas in the minds of the audience, make connections between your work and concepts the audience will find familiar.¹⁷ Think of your friend's bad start-up idea: "It's like Uber, for cats." It might not be a good idea, but you know exactly what it does and how it might work because you know what Uber is and how it works. We can do the same for research by tying your paper to the work you cite or by highlighting the applicability of your research to recent news stories.

Tip 4: Encourage active participation

It can be difficult to rouse a sleepy audience. However, people retain information better when they are actively engaged.¹⁸ Use explicit calls to action get your audience engaged. Ask your audience to visualize expectations or question assumptions. Poll the audience on the applicability of your research to their own lives.¹⁹

¹⁵ Probably in that order.

Remember that with a presentation, a poster, or a blog post, interested parties can always follow up and read your actual paper. You don't need to communicate every robustness check in your poster, because you are going to be there to explain that you've done it or to direct people to the full paper that you've spent the better part of a year writing.

¹⁶ Shepard, R. N. (1967). Recognition memory for words, sentences, and pictures. *Journal of verbal Learning and verbal Behavior*, 6(1), 156-163.

¹⁷ Markman, Art. (2015). Getting and Audience to Remember Your Presentation. *Harvard Business Review*.

¹⁸ Pratton, J., & Hales, L. W. (1986). The effects of active participation on student learning. *The Journal of Educational Research*, 79(4), 210-215.

¹⁹ E.g. 'raise your hand if you're registered to vote.'