

**Political Analysis 2 (QStep 2):**  
The Political Analysis Component of  
Comparative Government (201)  
International Relations (214)  
Political Sociology (220)

**Course staff:**

Co-conveners:

Professor Andrew Eggers	<a href="mailto:andrew.eggers@nuffield.ox.ac.uk">andrew.eggers@nuffield.ox.ac.uk</a>
Professor Andrea Ruggeri	<a href="mailto:andrea.ruggeri@politics.ox.ac.uk">andrea.ruggeri@politics.ox.ac.uk</a>

Lab instructors:

Giacomo Arrighini	<a href="mailto:giacomo.arrighini@lmh.ox.ac.uk">giacomo.arrighini@lmh.ox.ac.uk</a>
Gerda Hooijer	<a href="mailto:gerda.hooijer@politics.ox.ac.uk">gerda.hooijer@politics.ox.ac.uk</a>
Anna Petherick	<a href="mailto:anna.petherick@politics.ox.ac.uk">anna.petherick@politics.ox.ac.uk</a>
Jeffrey Wright	<a href="mailto:jeffrey.wright@nuffield.ox.ac.uk">jeffrey.wright@nuffield.ox.ac.uk</a>

**Goals of the course**

The study of politics requires assessing claims about the relationships among political actors, political institutions, and societal outcomes. This course will help students critically assess claims made in academic literature and build the skills necessary to analyze these relationships themselves.

The course is designed as a complement to three core papers in Politics: Comparative Government (201), International Relations (214), and Political Sociology (220). Each of these papers asks students to critically evaluate empirical evidence; for example, recent exams have asked students to assess the effects of federalism (CG), the mass media (PS), and globalization (IR). Our main goal is to give students the tools to engage critically with the evidence they encounter in their core papers in Politics, which will help them make better assessments of quantitative evidence both in exam questions like these and in a much broader set of circumstances after their degree is completed.

*Note: while the goals of the course are the same as last year, the structure and assessment have changed.*

## Structure of the course

There will be a lecture on Tuesday of Week 1 (11 October, 1-2pm). Thereafter, there will be no lectures.

In weeks 2-8, students attend weekly one-hour lab sessions, to be held each afternoon from Tuesday to Friday. (Sign-up takes place on Weblearn.) All lab sessions cover the same material. The labs on Tuesday and Wednesday will adopt a slightly slower pace; in practice, this means that the lab sessions on Thursday and Friday will aim to finish all exercises on the lab worksheet, while the lab sessions on Tuesday and Wednesday will expect to leave some of the lab worksheet for homework.

## Assessment

Students may choose between two forms of assessment. In either case, the assignment should be submitted via Weblearn by noon on Friday of Week 2 of Hilary Term.

### *Option 1: Take-home exam*

The take-home exam consists of specific questions about the content taught in the lab sessions. For example, students may be given a dataset and asked to run some analysis and interpret the results. The take-home exam will be distributed in Week 8 of Michaelmas Term.

### *Option 2: Essay based on data analysis*

Students pursuing this option will write an essay of no more than 2,000 words in which they report the results of original data analysis. This option is designed to allow students the freedom to pursue a topic or question that they find interesting, with the possibility that their analysis could be the first stage of a dissertation project.

Because this option allows students freedom to choose a topic, we ask that students pursuing this option send their lab instructor a **consultation email** by the end of week 9 (9th of December). The consultation email should specify what data the student plans to analyze and roughly what kind of analysis the student hopes to carry out. Lab instructors will try to give useful feedback by email in response to consultation emails. Students who fail to send a consultation email by the deadline may still pursue Option 2, but they may not have the benefit of email feedback from their lab instructor.

One good way to satisfy the requirements of an Option 2 essay is to choose an empirical finding that appears in published research and write an essay that replicates and extends the finding. (This is similar to the essay that you wrote for Political Analysis I about a finding in Lijphart's *Patterns of Democracy*.) Here is a recipe:

- A. Briefly introduce the article and finding you have chosen: explain and highlight the significance of both the main argument of the article and the finding you have chosen.
  - *A (too brief) example: "The article argues that expressive voting is an important aspect of accountability in multiparty systems; the particular finding I examine is significant because it provides a test of competing models of voter behavior."*
- B. Replicate the finding you have chosen as closely as possible. Present a table and/or graph to show the result and describe the analysis clearly.
  - *More specifically, carry out analysis in R that mirrors as closely as possible what the author did, using data that is close as possible to the data the author used. You might provide a side-by-side comparison of the results of your analysis (e.g. regression coefficients and standard errors, or perhaps a figure) and the corresponding results presented in the paper. Explain exactly what you did and note whether there was any discrepancy between your results and the published analysis in the original paper, and where it might have come from. Ideally there would be no discrepancy but it is acceptable if you make a reasonable effort to replicate the original result and explain any discrepancies that remain.*
- C. Suggest an alternative way in which the original analysis in the published paper could reasonably have been carried out. Explain why this alternative approach may be appropriate in light of the research question being asked in the paper.
  - *For example: Is there an additional control variable that should be included in the analysis? Would it make more sense for the dependent variable or independent variable to be in logs (i.e. natural logarithm)? Should a key variable be measured differently? Should variables that are combined into a single index actually be analyzed separately? In making the case that your suggestion is a reasonable alternative approach, you should make reference to the theory/argument/question of the paper. (We don't want you to simply randomly change something and report whether or not this changes the result.)*
- D. Describe (with the aid of a table and/or graph) how the finding changes (if at all) when the analysis is conducted in the alternative way you suggested in C above. How does this affect your confidence in the original finding?
  - *You might again show side-by-side results, either in a table or a graph. Note that any change to the regression equation will change the results somewhat; your essay should assess whether the change you observe is substantial enough to call the original results into question or suggest a different interpretation.*

## **Weekly outline**

### **Week 1: Lecture reviewing QStep1 (Prelims Part C) and previewing QStep2**

*Tuesday, 11 October, 1pm in North Schools*

*Andrew Eggers*

Summary of Lecture: We will review the main themes covered in the first-year course (Prelims Part C) and briefly outline the structure and goals of this course.

#### Outline:

- The research process: from defining the question to presenting results
- Multivariate regression as a way of characterizing relationships among variables
- Review of inference: p-values, standard errors, statistical significance
- Brief outline of topics addressed in QStep2
- Relationship between QStep and your final exams

#### Preparation:

Kellstedt, Paul & Guy D. Whitten. 2009. *The Fundamentals of Political Science Research*, NY: Cambridge University Press.

### **Week 2: Lab sessions on Model Specification**

*Held in Oxford Q-Step Centre lab room in Social Science Library*

*Various times Tuesday-Friday afternoons; sign up on Weblearn*

Summary: How does the result of regression analysis depend on what variables are included in a model?

#### Preparation

Refresh your knowledge of R before the session:

- Review the labsheets from QStep1 (particularly LabSheet 4, which summarizes everything we learned).
- Review the analysis you did for your essay
- Try `swirl` packages
- Try free tutorials on Datacamp, e.g. “data analysis and statistical inference”

*(Hereafter the preparation for each lab session will be discussed in the previous lab session; each lab session is held at the same location and time)*

### **Week 3: Lab sessions on Interaction Effects**

Summary: Sometimes the effect of one variable on another depends on a third variable; for example, the effect of newspaper circulation on government corruption may depend on media freedom. How can we measure this kind of “conditional relationship”?

### **Week 4: Lab sessions on the Analysis of Experimental Data**

Summary: For many questions in social science, it is possible to conduct randomized experiments. What are the advantages and limits of experiments in understanding the political world?

### **Week 5: Lab sessions on Inference**

Summary: In Week 7 of QStep1, we introduced key concepts in statistical inference: margin of error, p-values, standard errors, confidence intervals. In this lab we will help you solidify your understanding with hands-on exercises.

### **Week 6: Lab sessions on Assumptions of OLS**

Summary: Ordinary least squares (OLS) regression depends on some assumptions in order to produce good estimates of coefficients and standard errors. We will see how to check these assumptions and what you can do if there is a violation.

### **Week 7: Lab sessions on Interpretation of Regression Results**

Summary: Many articles report raw regression coefficients, but often there are better ways to present regression results. We will look at some of these.

### **Week 8: Lab sessions on Logistic Regression**

Summary: When the dependent variable in a regression is a binary variable (e.g. did a war occur or not?), researchers often use logistic regression (i.e. binary logit). We will show how to conduct logistic regression analysis and interpret the results.