# WORKSHOP I: How to Read a Research Paper P.O. 313

## **OUTLINE**

- Key Terms
- Before You Start Reading
- Structure
- Methodologies
- How to "Read" Statistics
- Applying Our Knowledge

#### I: KEY TERMS

- <u>Dependent variable</u>: the outcome that the research explains (Y)
- <u>Independent variable</u>: the factors that the researcher thinks explain the observed outcome (X)
- <u>Hypothesis</u>: A specific statement of what the researcher thinks will happen to the DV if the IV is changed
- <u>Regression</u>: A statistical tool that helps us determine the relationship between X and Y (what happens to Y if X changes incrementally)

#### II: BEFORE YOU START READING

- Note the journal the article appears in
- Determine the purpose/goal of the article
  - title
  - sub-title and headings
  - abstract
- Determine level of applicability to your interests
- Hone your skepticism!

## III: STRUCTURE

- Abstract (200-300 words)
- Introduction/Research Question
- Literature Review
- Hypotheses
- Research design/methodology
- Results
- Conclusion

## **Abstract**

- 200-300 words
- Precis/summary of the piece
- Should present research question, results and conclusion with brevity and efficiency; reading the abstract is a good way to "filter out" articles that won't be relevant to your needs

## Introduction/Research Question

- What is the topic(s) of interest?
- Is this topic *theoretical* or *empirical*?
- Why should we care? Research question should be situated in a larger political/theoretical context
- Is the question causal or descriptive?
  - Descriptive: x is associated/correlated with y; what are observable patterns?
  - Causal: x causes y (the holy grail of social science research); what causes a specific political phenomenon?

## Lit Review

- What is the *general scholarly consensus* of the research question?
- Will never be a complete exposition of previous work, nor should it be
- What is the added value or contribution of the project? (Review should demonstrate the gaps in previous scholarship and, more specifically, what gap the project intends to fill)
- Great place to mine for additional information re: your own research topics!

# Hypothesis/Hypotheses (the what)

- What does the author expect to find?
- Hypotheses will usually be predictive—in other words, what kind of effect will a change in X have on Y, if any?
- Hypotheses will usually be specific, distinguishing them from more open-ended research questions

## Research Design/Methodology (the *how*)

- How has the author gone about finding the answer to her research question/testing her hypothesis?
- Research-design section should answer the following questions:
  - What is the nature of the available data (or of the research question)?
  - How will this data (or the question) be analyzed?
  - Why is this design preferable to all other possible designs?
  - What are the strengths and weaknesses of this design?
  - What are the particulars (control variables, sample size, simulation details, etc)?

# Results/Analysis

- What are the findings?
- Has the hypothesis been confirmed by the evidence?
- What do these results tell us about the larger research question?

## Conclusion

- Should summarize the findings and reiterate why they are significant
- What are the implications for future research? What contributions has this project made and what work still needs to be done? (What other papers will you seek out to answer the lingering questions/ concerns?)

## IV: RESEARCH DESIGNS/METHODOLOGIES

- Research papers can employ one or more of certain modes of analysis to test a hypothesis and answer a research question
- Designs can be qualitative or quantitative
- Examples:
  - Case studies (small or large n)
  - Field research/ethnography
  - Surveys (interviews, focus groups)
  - Regression of observational data
  - Experiments

### V: HOW TO "READ" STATISTICS

- <u>Regression</u>: A statistical tool that helps us determine the relationship between X and Y (what happens to Y if X changes incrementally)
- Different kinds of regression based on the nature of the data (continuous, binary, categorical)
- Positive and negative relationships between variables
- A regression also tells us the *statistical significance* of a relationship between variables
  - a relationship is *significant* if there is less than a 5% chance that the observed relationship was the result of random chance

## WORKSHOP I: How to Read a Research Paper

Table 2.1
Predicting Support for Crime Control over Due Process

Variables	Model I	Model II	Model III	Model	
Age	.02*** (.00)	.02*** (.00)	.01 (.01)	.00 (.01)	
Black	-1.54*** (.15)	-1.81*** (.19)	98*** (.28)	65* —— (.28) ——	coefficient standard
Female	.11 (.11)	.15 (.12)	08 (.18)	02 (.18)	error
Income		.04 (.05)	.04 (.05)	.03 (.05)	
Constant	3.36*** (.17)	4.04*** (.43)	3.70*** (.76)	.95 (.93)	
N	1,424	1,208	556	532	sample size
Adj. R²	.10	.11	.18	.25	one measure the explanato
		***p<.001, **p<.01, *p<.05, #p<.10			

measure of statistical

model

significance

#### VI: APPLYING OUR KNOWLEDGE

#### Remember:

- The burden of proof is on the author(s); her job is to convince you, using the most credible evidence possible, that she is right
- There is no such thing as a flawless research design
- Uncertainty is the nature of all branches of science, but particularly social sciences—always make sure you understand the problems/biases of the design. (This will sometimes be buried in the Appendices!) Are the results still convincing?

### VI: APPLYING OUR KNOWLEDGE

- Devah Pager, "The Mark of a Criminal Record" (American Journal of Sociology 108.5, March 2003)
- Amy Lerman, "The Rights of the Accused" in *Public Opinion and Constitutional Controversy* (Oxford University Press, 2008)