

## SOCI 6002: Advanced Methodology

Time: Wednesdays 11:30am-2:15pm  
Location: Room 429, Sino Bldg, CUHK

**Instructor: Professor ZHU Ling**

*Office Hours:* Wednesdays 3:00 – 4:00 pm    *Room:* Sino Bldg 435B

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*Zoom:* <https://cuhk.zoom.us/j/6658604122>

### COURSE DESCRIPTION

The course is an introduction to the central methodological issues involved in social science research. Contrary to the common focus of a methodological course, this course covers both *theoretical* and *empirical* methods that are essential ingredients of the analytic competence of a social scientist. These methods are inherently intertwined in empirical research because of the nontrivial demand of adequate theory construction and the perennial challenge of bringing empirical data and findings to bear on the testing of theoretical ideas. This course is a preparatory course for empirical social research, qualitative and quantitative alike.

#### *Learning objectives*

- (1) Conceptual/Philosophical Understanding—Master a set of fundamental and advanced issues of explanatory and evidential adequacy for social science disciplines.
- (2) Tools—Jumpstart a professional social scientist’s toolkit with widely applicable explanatory mechanisms, path diagrams, and the counterfactual paradigm to causality in empirical design. (Specialized method courses will add to the empirical toolkit.)
- (3) Skill Development:
  - a. to hone the skills for identifying and critiquing the *theoretical* and *evidential* logic of a social science study;
  - b. to practice effective professional communication.
- (4) Proposal: Draw on all of the above to develop and present a research proposal. The objective is to demonstrate that you can fruitfully apply the skills and tools learnt. Hence, it does not matter whether the topic is appropriate for your thesis research.

Students are encouraged to construct a personalized mental map of explanatory mechanisms. To facilitate the systematic building of a toolkit, major categories of social mechanisms are distinguished: e.g., social structural, instrumental, and cultural. The lectures and discussions will be based on an analytic survey of a diverse substantive and empirical literature devoted to the study of social science phenomena. The literature will span subfields such as stratification, education, social network, political science, health & well-being, economic & organizational studies.

Class discussions and requirements are designed to promote skills through learning-by-doing—the opportunity to practice thinking and speaking like a professional social scientist, e.g., as the critic or advocate of a theory, the audience or proponent of a research idea, and the interpreter or participant in a debate. Inability to participate would be costly to the final grade.

## ***Assessment***

Evaluation will have three components.

- (1) 20% is based on in-class participation: The participant component is the demonstration of understanding and mastery of the methods through contribution to regular in-class discussion based on assigned readings and writing assignments. Readings will be provided via blackboard or email one week before the class.
- (2) 50% is based on short-paper assignments: Five short-paper assignments will be disseminated about every other week. Each paper assignment requires students to apply what they have learned in class to theory construction and empirical research design based on self-chosen topics. The short-paper assignments are serious evaluation of learning achievement. Although the topics for these short-paper assignments are determined by students themselves, they must satisfy specific requirements very closely. Thus, some slipshod topics are highly discouraged and will lead to low scores.
- (3) 30% is based on research proposal & presentation: The proposal-and-presentation component consists of (1) a comprehensive research proposal and (2) in-class presentation of this proposal. The research proposal is based on self-chosen topics and should apply theory and empirical methods taught in this class.

<b><u>Grade</u></b>	<b><u>Descriptors</u></b>
A	Outstanding performance on all learning outcomes.
A-	Generally outstanding performance on all (or almost all) learning outcomes.
B	Substantial performance on all learning outcomes, OR high performance on some learning outcomes which compensates for less satisfactory performance on others, resulting in overall substantial performance.
C	Satisfactory performance on the majority of learning outcomes, possibly with a few weaknesses.
D	Barely satisfactory performance on a number of learning outcomes.
F	Unsatisfactory performance on a number of learning outcomes, OR failure to meet specified assessment requirement.

## ***Accommodations***

If you need accommodations for any physical, psychological, or learning disability, or if you want to inform me about a medical situation, please email me or speak to me after class or during office hours. All paper or writing assignments can be finished at home.

## WEEKLY SCHEDULE

(Subject to change)

### ***Week 1: Introduction to Class***

#### *Readings*

Popper, Karl. "Science: Conjectures and Refutations." Pp. 19-27. *Ibid.*

Klemke, E.D. 1988. "Science and Nonscience: Introduction." Pp. 11-18 in *Introductory Readings in the Philosophy of Science*.

Thagard, Paul. "Why Astrology is a Pseudoscience." Pp. 45-54. *Ibid.*

Kuhn, Thomas S. 1977. "Objectivity, Value Judgment and Theory Choice". In *The Essential Tension: Selected Studies in Scientific Tradition and Change*. University of Chicago Press Chicago.

Feynman, Richard. 1985[1974]. "Cargo Cult Science." *Surely You're Joking Mr. Feynman!* New York: W.W. Norton.

Feyerabend, Paul. "How to Defend Society against Science." Pp. 34-44. *Ibid.*

Note: this week's readings are mostly introductory – they are mainly short essays. The purpose of this week's reading is to inspire you to think about what social "science" research means. Why can social science disciplines, whether it is sociology, economics, political science, or journalism, called as "science"? Be prepared to share your thoughts and reflections in class.

### ***Week 2: Basic Concepts of Theory and Empirical Evidence***

#### *Readings*

Davis, Murray S. 1971. "That's Interesting: Towards a Phenomenology of Sociology and a Sociology of Phenomenology." *Philosophy of the Social Sciences*. 1:309-344.

Hempel, Carl G. "Studies in the Logic of Explanation." Pp. 91-108. *Ibid*

Cohen, Bernard P. 1989. *Developing Sociological Knowledge: Theory and Method*. Chapters 4, 6, 7, 8 and 10

#### *Optional:*

Abend, Gabriel. 2008. "The Meaning of 'Theory.'" *Sociological Theory*. 26:173-199.

Short-paper Assignment 1: In 1~2 pages, formally describe a research question that you will probe in your future career. You need to explain why this question is interesting, and to identify what area this question situates in and who are the major players in this field. The assignment should be submitted before 11:59 pm on Tuesday next week.

### ***Week 3-4: Theory Construction***

#### **Week 3**

##### *Readings*

Firebaugh, Glenn. 2008. *Seven Rules for Social Research*. Princeton University Press. Chapter 1.

Cohen, Bernard P. 1989. *Developing Sociological Knowledge: Theory and Method*. Chapters 12, 13, and 14

#### **Week 4**

##### *Readings*

Stinchcombe, Arthur L. 1968. *Constructing Social Theories*. Chapters 1-3

Short-paper Assignment 2: In about 2 pages, (1) very **briefly** describe the research question that you want to explore, and (2) specify **in detail** the alternative/competing theories (at least two theories) and their propositions in the existing literature. The assignment should be submitted before 11:59 pm on Tuesday next week. Be prepared to discuss your example in class.

*Note:* your research question does not need to be the same as the one you provided in the first writing assignment, but for sure you can continue to use it if you think it fit. The main task of this week's writing assignment is to describe the alternative/competing theories in the existing literature regarding a given research question.

### ***Week 5-7: Graphic Tools to Describe Theoretical Models and To Identify Bias or Traps***

#### **Week 5**

##### *Readings*

Pearl, Judea. 1996. "The Art and Science of Cause and Effect." Pp. 331-358 in *Causality: Models, Reasoning, and Inference*. New York: Cambridge University Press.

Morgan, Stephen L., and Christopher Winship. 2007. "Chapter 1 & Chapter 3." *Counterfactuals and Causal Inference: Methods and Principles for Social Research*. New York: Cambridge University Press.

#### **Week 6**

##### *Readings*

Elwert, F., & Winship, C. 2014. Endogenous selection bias: The problem of conditioning on a collider variable. *Annual review of sociology*, 40, 31-53.

Zhu, L., & Tam, T. 2020. Negative ability bias from conditioning on a confounded mediator: A directed interaction test and case study. *Social Science Research*, 87, 102401.

Short-paper Assignment 3: In about 2 pages, drawing on the methods learned these two weeks, (1) very **briefly** describe the research question that you want to explore, (2) **briefly** provide the alternative/competing theories (at least two theories) in the existing literature, and (3) **use the graphic tool to formally represent** the propositions of these alternative theories (no penalty for longer work if a student needs to express more clearly). The assignment is due before 11:59 pm on Tuesday next week.

*Note*: If your research question and the relevant theories are the same as those provided in the previous writing assignment, then you just need to briefly summarize them here. Yet again, you are welcome to use new research questions and alternative/competing theories if necessary. In that case, you may need more space to describe the question and the theories clearly. The main task of this week’s writing assignment, however, is to exercise your skill in presenting theories using the non-trivial graphic tool. This is not an easy exercise, because it requires you to understand the key propositions in these theories, extract the key concepts precisely and understand their relations clearly.

## Week 7

### *Readings*

King, Gary, Jennifer Pan, and Margaret E. Roberts. 2013. “How censorship in China allows government criticism but silences collective expression.” *American Political Science Review* 107(2): 326-343.

\* *A companion reading for more information*:

King, Gary, Jennifer Pan, and Margaret E. Roberts. 2014. “Reverse-engineering censorship in China: Randomized experimentation and participant observation.” *Science* 345.6199.

Zhou, Xueguang. 2005. “The Institutional Logic of Occupational Prestige Ranking: Reconceptualization and Re-analyses.” *American Journal of Sociology* 111:90-140.

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Note: The readings of this week provide exemplary cases of prestigious research articles that have both well-constructed theory and rigorously designed empirical analysis. You will be randomly assigned to two groups. Your group will prepare a presentation for about 25 minutes on one of the above two papers. Particularly, the presentation should make it clear (1) the research questions, (2) the major relevant theories, (3) the key propositions, and (4) the design of testable hypotheses of the two papers. Moreover, when presenting the theories and propositions, you should use graphic tools to make effective presentation.

## ***Week 8-10: Methodology for Empirical Strength***

### **Week 8: Experimental Designs**

#### *Readings*

#### Methods:

Aronson, Eliot, et al. 1990. *Methods of Research in Social Psychology*. Chap 1.

Mook, Douglas G. 1983. "In Defense of External Invalidity." *American Psychologist*. Pp. 379-387

#### Examples:

*Note:* You will be randomly assigned to one of four groups. Your group will prepare a presentation on one of the below papers using experimental design (very brief presentation in about 15 minutes). While you only need to read closely the research article assigned to you for presentation, you should also skimp through other papers to be able to identify the independent variable and dependent variable for each of the example experiments.

Whitson, Jennifer A. and Adam D. Galinsky. 2008. "Lacking Control Increases Illusory Pattern Perception." *Science*. 322:115-117.

Tiedens, Larissa Z. and Alison R. Fragale. 2003. "Power Moves: Complementarity in Dominant and Submissive Nonverbal Behavior." *Journal of Personality and Social Psychology*. 84:558-568.

Kollock, Peter. 1994. "The Emergence of Exchange Structures: An Experimental Study of Uncertainty, Commitment, and Trust." *American Journal of Sociology*. 100:313-345.

Levine, Mark, Amy Prosser, David Evans, and Stephen Reicher. 2005. "Identity and Emergency Intervention: How Social Group Membership and Inclusiveness of Group Boundaries Shape Helping Behavior." *Personality and Social Psychology Bulletin*. 31: 443-453.

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Short-paper Assignment 4: In about two pages (no penalty for longer work), (1) very **briefly** describe the research question that you want to explore and the alternative/competing theories (at least two theories) in the existing literature, (2) **provide** your own theory/proposition to this question and justify it, and (3) formally **present** your theory using graphic tools and contrast it to the previous theories. The assignment is due before 11:59 pm on Tuesday next week.

*Note:* Again, your research question and the relevant competing/alternative theories do not need to be the same as the ones you provided in your previous writing assignments, but you are welcome to use them if proper (and I recommend it). The main task of this week's writing assignment is to explain your own theory and propositions to the question you raise, and using the graphic tool to formally present it. In particular, you need to clearly explain how your theory is different from the previous ones and how it contributes to the existing literature. You may also

agree with one of the theories, and in that case, you need to point out what's missing for the other theories. In another scenario, you can also just say that all prior theories are relevant, and your research is to evaluate which one is more valid/how they contribute simultaneously to your research question.

## **Week 9: Non-experimental Designs using Quantitative Data**

### *Readings*

Judd, Charles M., Eliot R. Smith, and Louise H. Kidder. 1991. "Quasi- Experimental and Survey Research Designs." *Research Methods in Social Relations*. Orlando: Harcourt Brace Jovanovich. Pp. 101-123

Firebaugh. Chapters 5 and 7. *Seven Rules for Social Research*.

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Note: You will be randomly assigned to one of five groups. Your group will prepare a presentation on one of the below non-experimental research techniques. While you only need to read closely the research article assigned to you for presentation, you should also skim through other papers to be able to identify the independent variable and dependent variable for each them. Moreover, the presentation should **NOT** focus on the statistical methods used in each study, which is not the key issue in this course, but the various creative empirical designs that tests the theoretical propositions of causal mechanisms of a particular phenomenon.

### Natural Experiment/Exogenous Shock

Kirk, David S. 2009. "A Natural Experiment on Residential Change and Recidivism: Lessons from Hurricane Katrina." *American Sociological Review*. 74: 484-505

### Matching

Harding, David J. 2003. "Counterfactual Models of Neighborhood Effects: The Effect of Neighborhood Poverty on Dropping Out and Teenage Pregnancy." *American Journal of Sociology*. 109: 676-719.

### Regression Discontinuity

Ludwig Jens, and Douglas L. Miller. 2007. "Does Head Start Improve Children's Life Chances? Evidence from a Regression Discontinuity Design." *Quarterly Journal of Economics*. 122: 159-208.

### Fixed Effects

Elwert, Felix, and Nicholas Christakis. 2008. "Wives and Ex-Wives: A New Test for Homogamy Bias in the Widowhood Effect." *Demography*. 45: 851-873

## Difference-in-difference

Card, David, and Alan B. Krueger. "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania." *American Economic Review* 84.4 (1994): 772-93.

## **Week 10: Qualitative Designs**

### *Readings*

### Methods

Firebaugh. Chapter 3. *Seven Rules for Social Research*. [NOTE: read pp. 76-83]

Jerolmack, Colin and Shamus Khan. 2013. "Talk is Cheap: Ethnography and the Attitudinal Fallacy." *Sociological Methods and Research*.

Small, Mario Luis. 2009. "'How Many Cases Do I Need?' On Science and the Logic of Case Selection in Field-Based Research." *Ethnography*. 10:5-38

Becker, Howard S. 1998. "Chapter 4." *Tricks of the Trade: How to Think about Your Research While You're Doing It*. Chicago: University of Chicago Press [NOTE: Pay closest attention to pp.125-128 and 138-141]

### Examples:

Chibber, V. 2002. Bureaucratic rationality and the developmental state. *American journal of sociology*, 107(4), 951-989.

*The Heat Wave Debate between Klinernberg (2002) and Duneier (2006):*

Duneier, M. (2006). Ethnography, the ecological fallacy, and the 1995 Chicago heat wave. *American Sociological Review*, 71(4), 679-688.

A Report: <https://www.chicagotribune.com/news/ct-xpm-2006-08-20-0608200021-story.html>

Short-paper Assignment 5: In about two pages (no penalty for longer work), (1) very **briefly** (in about half a page) describe the research question, the alternative/competing theories (at least two theories) in the existing literature, and your own theory/propositions, and (2) **design** empirical tests for your theory and propositions. The assignment is due before 11:59 pm on Tuesday next week.

*Note:* Again, your research question, the existing alternative/competing theories, and your own propositions do not need to be the same as the ones you provided in your previous writing assignments, but you are welcome to use them. The main task of this week's writing assignment is to design empirical analysis to test your theory and propositions. You need to describe the



method of your empirical tests, whether it is experimental design, quasi-experimental design, longitudinal analysis, or qualitative fieldwork. Moreover, you need to clearly identify your dependent and independent variables, and give your hypotheses&predictions vs. the hypotheses&predictions suggested by previous works. For inspiration, you may draw on the designs of readings of the recent three weeks.

### ***Week 11: Gap Week***

There will be no class in this week. Students can take time to finish the research proposal and prepare for the in-class presentation. All preliminary presentation slides should be submitted on Tuesday next week, before 11:59 pm. The final research proposal is due on Sunday of the 13<sup>th</sup> week, before 11:59 pm.

### ***Week 12-13: Presentations of the final research proposal***

Six students will present in **Week 12**, and seven students will present in **Week 13**. Students should coordinate with the CA before the Sunday in Week 11 to determine whether they would present in the 12<sup>th</sup> or the 13<sup>th</sup> week. While the research proposal can be more extensive and complete, the presentations should be succinct. Specifically, each student will have 15 minutes to present their proposal, accompanied with 5-min Q&A time. Students should follow this time frame to prepare their slides.