



VRS 410 Urban Empirical Research

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- Course Objectives
- Philosophy of Science
- Social Science Research
- Types of Data



VRS 410 Urban Empirical¹₂^Σ₃ Research

Objectives

- Address themes, issues, & concerns associated with social science research
- Develop skills associated with the data collection, description, and analysis of empirical data
- Develop academic writing skills
- Develop and present a written research proposal



Philosophy of Science

- The philosophy of science begins with the questions
 - How do we know what we know?
 - a.k.a. *epistemology*
 - What is valid evidence?
 - a.k.a. *ontology*
- How you answer these questions determines your own personal philosophy of science



Three Basic Trajectories of Science

- Observation & Classification
 - empiricism (empiricism)
- Explanation
 - positivism (logical-positivism, structuralism, Post-structural)
- Understanding
 - humanism (humanist, postmodern)



Broad Paradigms

Empiricist

- direct observation, description, & classification
- simple data collection
 - surveys, field work, single case study

Logical-Positivist

- hypothesis testing of based on empirical evidence
 - statistical modeling, OLS

Humanist

- hermeneutics, experiential
- understanding, meaning
 - participant observation, lurking, observation



Major Differences

- Empirical v. Empiricism
- General v. Specific
- Objective v. Subjective



Philosophical Frame for this Course

- Empirical Observation
 - Objective
- Description & Classification of Data
- Limited Explanation
 - an understanding of why and some how
 - heavy specific, light general



Social Science Research

Inter-Disciplinary

Incremental

- building on very narrow areas of specialization

Informing

Methodology Diverse

- Many ways to design a research project



Social Science Research

Reflects on Contemporary & Historical Social Change

Illuminates options

- Does not provide THE SOLUTION

Provides one possible answer to small questions

- Does not provide THE ANSWER

Gives voice to many perspectives

- Seeks many answers, options, & solutions
- Is not monolithic



Data Collection

Primary

- going to the source to extract & organize data yourself
 - interviews, surveys, locating original documents

Secondary

- collecting previously organized data
 - census, histories, basically any book, any web site



Types of Data

Nominal: Values assigned to qualitative data

- teaching evaluations

Ordinal: Values assigned to ranked data

- quartiles

Interval: Scaled differences, distances, or values (no absolute zero)

- temperature

Ratio: Scaled differences, distances, or values, (absolute zero exists)

- income



Types of Data

- Generally, interval/ratio level data is the most desirable for performing statistical analysis
- If you have interval/ratio data and would like to collapse and re-class you can
- However, data originally obtained at the ordinal and nominal level can not be re-classed as interval/ratio