

# Descriptive Research Design

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# Descriptive Research Design

🎵 In a world of endless why's and how's,  
Descriptive design details the nows! 🎵

# Descriptive Research

- Descriptive research is used to describe characteristics of a population or phenomenon being studied.
- It does *not* answer questions about *how/when/why* the characteristics occurred. It's primarily concerned with observing and describing events as they naturally occur.
- It is the necessary preliminary stage of research.

# Descriptive Research Questions

**Descriptive questions are, for example...**

- Descriptive questions are aimed at characterizing an observed phenomenon in terms of its various dimensions or properties.
- Descriptive questions ask about the existence, frequency, or degree of occurrence of the variables of interest.

# Descriptive vs Causal Research

## Descriptive Arguments

- *What* questions (e.g., when, whom, out of what, in what manner)
- Factual (but also inferential)

## Causal Arguments

- *Why* questions
- Inferential (but also factual)

# Examples of Descriptive Research Questions

- How do employees of a particular tech company experience their workplace communication culture?
- What is the average number of hours employees spend communicating with each other about personal matters each day?
- These two questions are very different from a methodological perspective and require very different research designs. What is the main difference?
- Other examples?

# Prejudice Against Descriptive Research

The term has come to be employed as a euphemism for a failed, or not yet proven, causal inference. Studies that do not engage causal or predictive questions are judged ‘merely’ descriptive.

‘What questions are generally easier to answer than why questions’, states Glenn Firebaugh.

‘Empirical data can tell us what is happening far more readily than they can tell us why it is happening’, affirms Stanley Lieberman.

*(John Gerring, “Mere Description”)*

# Taxonomy of Descriptive Arguments



# Taxonomy of Descriptive Arguments

- Particularizing (Accounts): no attempt to generalize beyond the specific case.
- Generalizing: using a case(s) description to shed light on a larger class of cases

# Generalizing Arguments

## Mono-Dimensional

- Indicators/indexes: empirical manifestations used to “measure” a concept (see Lazarsfeld, 1958)

## Multi-Dimensional

- Correlational: association or covariance between phenomena or components thereof
- Categorical:
  - Categorization (Synthesis): connects attributes of a topic to a central theme
  - Typology: sort phenomena into mutually exclusive and exhaustive discrete categories, based on categorization principles

# Importance of Description

**Description is necessary and fundamental**

- Certain social phenomena are intrinsically important, regardless of any causal effects they might possess and the roles they might play in causal propositions. For example:
  - Democracy
  - Human rights
  - War
  - Revolutions
  - Ethnic conflicts
  - Inequality
- What makes a topic important and valuable?

# Importance of Description

## Description is always inferential

- Inferential: Using observed data to draw conclusions about unobserved phenomena.
- Not only is causal research inferential, but so is descriptive research. The objects of interest of the social sciences are latent and complex constructs, which cannot simply be observed.
- For example, try to provide a mere description of “democracy”, “polarization”, “human rights”.

# Importance of Description

Causal research cannot exist without description.

- Before making statements about the mechanism M that causally links X to Y, it is necessary to **conceptually define** what M, X, and Y are.
  - Does **democracy** enhance the prospect of **peaceful coexistence**?
- Next, it is necessary to **measure** them.
  - How to measure democracy? How to measure peaceful coexistence?

# Is Description Simple?

“What questions are generally easier to answer than why questions.”

- All descriptive analysis involves the twin goals of (A) conceptualization and (B) measurement.
- Most social science concepts are not directly observable. They are:
  - Somehow matter of definition (A) — and many master concepts of social science have no standard and precise definition
  - And they are not not directly observable nor measurable but rather latent (B).

# Conceptualization

**Descriptive questions are difficult to answer definitively because of the complexity of reality and their interpretative nature.**

1. The superabundance of reality - it can't be fully described.
2. Language ambiguities - labels and definitions.
3. Limited falsifiability (Karl Popper, [see Wikipedia](#)) - social science descriptions are interpretative and lack clear criteria for disproof.

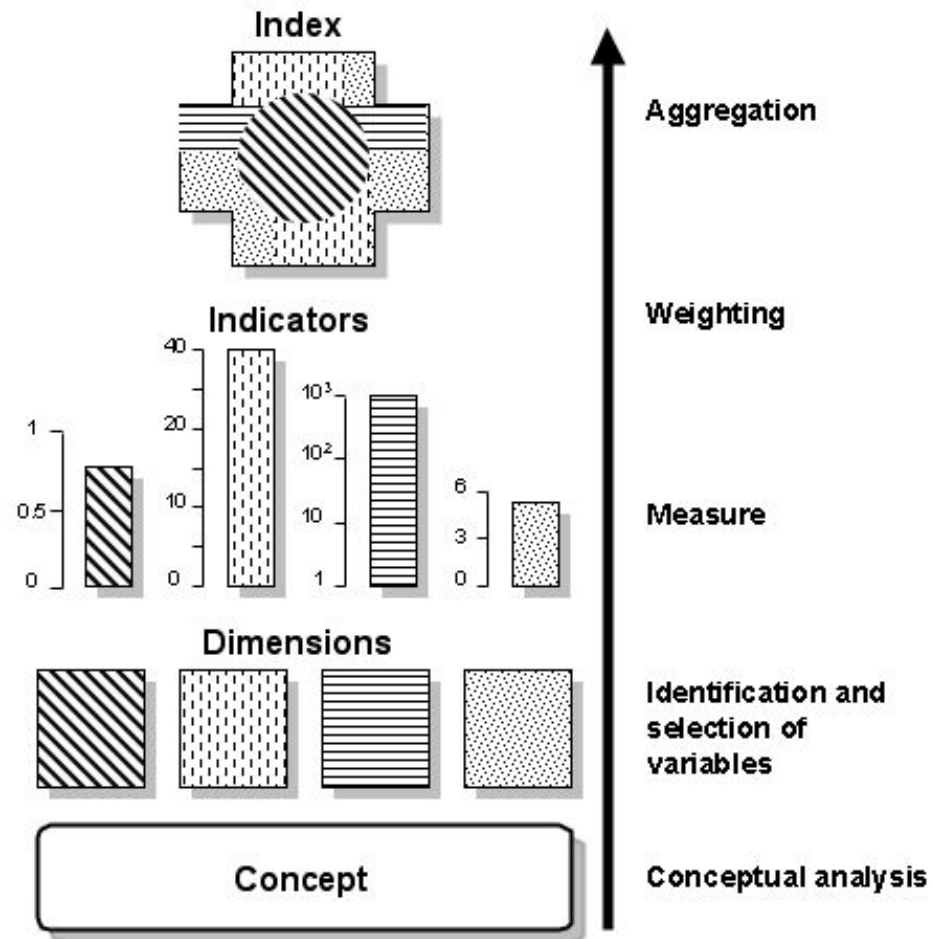
# Measurement

**Social science phenomena are typically latent, not directly observable or measurable.**

- Latent phenomena: are hidden or not directly visible or measurable, requiring indirect methods for their estimation.
- Directly observable phenomena: can be seen and measured directly.



# Measurement: Lazarsfeld paradigm



Lazarsfeld paradigm.

# Measurement: Validation

Measurement comes with the problem of its validation. How to validate a description? This is a circular problem (vicious circle) with important consequences (“garbage in, garbage out”).

- Face Validity: Often intuitive but unsystematic
- Convergent Validity: Compare with similar measures *deemed valid*
- Discriminant Validity: Compare with different measures *deemed valid*
- Causal Strategies: Assess causal relationships based on measures and relationships *deemed valid*

# Advance Research

**Making a scientific contribution with descriptive research is hard**

- Causal research can be enhanced in many ways, for example by:
  1. Introducing new causal factors (X).
  2. Offering fresh perspectives on Y.
  3. Exploring new causal mechanisms between X and Y.
  4. Exploring new moderators of the relationship between X and Y.
  5. Testing old models with new data.
  6. Employing innovative methods.
  7. Challenging previous findings.

# Advance Research

- Descriptive analyses are often at pains to demonstrate a scientific advance over what has been done before.
- Multiple causal analyses deepen understanding; multiple descriptive analyses may repack old ideas (new wine in old bottles)
- Descriptive innovation requires exploring new ground or redefining existing terrain, demanding more effort and resources.

# Is Descriptive Research Simple and of Little Theoretical Relevance?

- What is disinformation on social media?
- Is disinformation on social media increased over the last decade?
- Does social media affect ideological polarization of society?
- What is populist communication?
- How democratic are Western societies?

