

# RESEARCH METHODS IN SOCIAL SCIENCES

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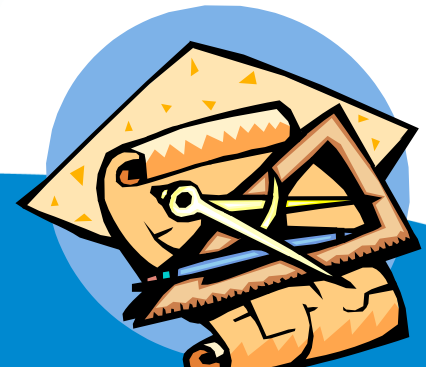


# KEY QUESTION?

What kind of study will I be doing?

# Research design & methodology

- Research design is a plan or blueprint for answering the research questions and fulfilling the objectives of the study.
- Described as the “logical structure that guides” the researcher.
- It focuses on the end-product.
  - “What kind of study is being planned and what kind of results are aimed at?”
  - What kind of evidence is required to address the research question adequately?
- Research methodology focuses on the research process and the kind of tools and procedures to be used.



# Difference between design & methodology

Research design	Research methodology
<p>The final product is the centre point.</p> <p>What are the results that you hope for?</p>	<p>The main focus is on the research process. What are the tools and procedures that you will use?</p>
<p>The research problem or research question is the starting point.</p>	<p>You start with specific tasks such as the sampling, method of data collection etc.</p>
<p>The focus is on the evidence that is needed to answer the research question.</p>	<p>The focus is on the most objective individual steps needed to carry out the procedure.</p>



# Research design

## The research design needs

- Clear objectives derived from the research question
- To specify sources of data collection
- To consider constraints and ethical issues
- Valid reasons for your choice of design

# Classification of the research design

## *Three traditional categories of research design:*

- **Exploratory** - “discovery”: open questions to gain insight
- **Descriptive** - “relationships”: gain an accurate profile of persons, events, or situations
- **Causal** - “cause-and-effect”: Establish causal relations between variables

*The choice of the most appropriate design depends largely on the objectives of the research and how much is known about the problem and objectives.*

# Exploratory research design

- **Find out what is happening, to clarify your understanding of a problem.**
- **3 ways for conducting:**
  - **A search of the literature**
  - **Interview experts in the subject**
  - **Conducting focus group interviews**

**Flexible and adaptable to change**

# Descriptive research design

- Its object is to portray an accurate profile of persons, events or situations.
- Usually a research cannot be simply descriptive since the reader's reaction would be **SO WHAT?**
- So it is a means to an end, not an end in itself



# Explanatory research design

- **Studies that establish causal relationships between variables**

# Research methods

The research methods can be classified as either:

- **Qualitative research** – exploring and understanding the meaning individuals or groups ascribe to a social or human problem.
- **Quantitative research** – testing objective theories by examining the relationship among variables.
- **Mixed methods research** – an approach to inquiry that combines or associates both qualitative and quantitative forms.



# Qualitative vs. quantitative research methods

Criteria	Qualitative research	Quantitative research
<b>Purpose</b>	To understand & interpret social interactions.	To test hypotheses, look at cause & effect, & make predictions.
<b>Group studied</b>	Smaller & not randomly selected.	Larger & randomly selected.
<b>Variables</b>	Study of the whole, not variables.	Specific variables studied
<b>Type of data collected</b>	Words, images, or objects.	Numbers and statistics.
<b>Form of data collected</b>	Qualitative data such as open-ended responses, interviews, participant observations, field notes, & reflections.	Quantitative data based on precise measurements using structured & validated data-collection instruments.

# Qualitative vs. quantitative research

Criteria	Qualitative research	Quantitative research
<b>Type of data analysis</b>	Identify patterns, features, themes.	Identify statistical relationships.
<b>Objectivity and subjectivity</b>	Subjectivity is expected.	Objectivity is critical.
<b>Role of researcher</b>	Researcher & their biases may be known to participants in the study, & participant characteristics may be known to the researcher.	Researcher & their biases are not known to participants in the study, & participant characteristics are deliberately hidden from the researcher (double blind studies).
<b>Results</b>	Particular or specialized findings that is less generalizable.	Generalisable findings that can be applied to other populations.
<b>Scientific method</b>	Exploratory or bottom-up: the researcher generates a new hypothesis and theory from the data collected.	Confirmatory or top-down: the researcher tests the hypothesis and theory with the data.

# Qualitative vs. quantitative research

Criteria	Qualitative research	Quantitative research
<b>View of human behavior</b>	Dynamic, situational, social, & personal.	Regular & predictable.
<b>Most common research objectives</b>	Explore, discover, & construct.	Describe, explain, & predict.
<b>Focus</b>	Wide-angle lens; examines the breadth & depth of phenomena.	Narrow-angle lens; tests a specific hypotheses.
<b>Nature of observation</b>	Study behavior in a natural environment.	Study behavior under controlled conditions; isolate causal effects.
<b>Nature of reality</b>	Multiple realities; subjective.	Single reality; objective.
<b>Final report</b>	Narrative report with contextual description & direct quotations from research participants.	Statistical report with correlations, comparisons of means, & statistical significance of findings.

# Mixed research methods

Mixed methods consists of:

*“the collection or analysis of both quantitative and qualitative data in a single study in which the data are collected concurrently or sequentially, are given a priority, and involve the integration of data at one or more stages in the process of research”.*

Sequential vs concurrent mixed research design

# Reasons for “mixing”

- The insufficient argument – either quantitative or qualitative may be insufficient by itself
- Multiple angles argument – quantitative and qualitative approaches provide different “pictures”
- The more-evidence-the-better argument – combined quantitative and qualitative provides more evidence
- Community of practice argument – mixed methods may be the preferred approach within a scholarly community
- Eager-to-learn argument – it is the latest methodology
- “Its intuitive” argument – it mirrors “real life”

# Research strategies

- select
  - Experiment – variables; hypotheses
  - Survey – questionnaires; quantitative data
  - Archival research – admin records & documents
  - Case study – phenomenon in its real life context
  - Ethnography – study groups
  - Action research – iterative process of inquiry
  - Grounded theory – develop theory inductively
  - Narrative inquiry – collect & analyse complete stories
- Or a combination of strategies



# Research Strategies

## **An experiment will involve**

- Definition of a theoretical hypothesis
- Selection of samples from known populations
- Random allocation of samples
- Introduction of planned intervention
- Measurement on a small number of dependent variables
- Control of all other variables

# Research Strategies

## Survey: key features

- Popular in business research
- Perceived as authoritative
- Allows collection of quantitative data
- Data can be analysed quantitatively
- Samples need to be representative
- Gives the researcher independence
- Structured observation and interviews can be used

# Research Strategies

## Case Study: key features

- Provides a rich understanding of a real life context
- Uses and triangulates multiple sources of data

A case study can be categorised in four ways and based on two dimensions:

single case v. *multiple case* (*more ability to generalize*)

*holistic case* (*choose 1 organization as a whole*)

v. *embedded case* (*some departments or activities*)

# Research Strategies

## Action research: key features

- Research IN action - not ON action *focusing on the purpose*
- Involvement of practitioners in the research
- The researcher becomes part of the organisation
- Promotes change within the organisation

# Research Strategies

## **Grounded theory: key features**

*Inductive deductive approach*

- Theory is built through induction and deduction
- Helps to predict and explain behaviour
- Develops theory from data generated by observations
- Is an interpretative process, not a logico-deductive one

# Research Strategies

## Ethnography: key features

Inductive approach

- Aims to describe and explain the social world inhabited by the researcher
- Takes place over an extended time period
- Involves extended participant observation *such as studying gorillas in their natural habitat*

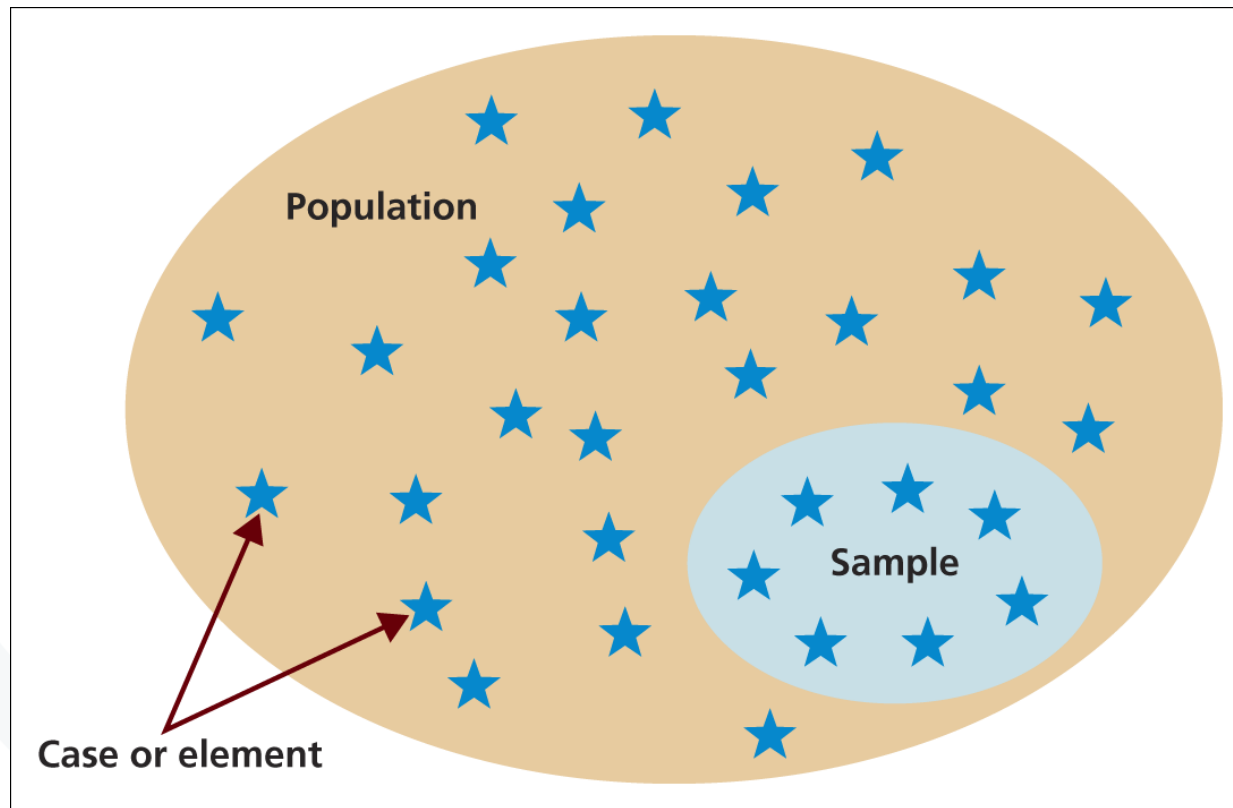
# Research Strategies

## Archival research: key features

- Uses administrative records and documents as the principal sources of data
- Allows research questions focused on the past
- Is constrained by the nature of the records and documents
- Example: historical research

# Population and sample

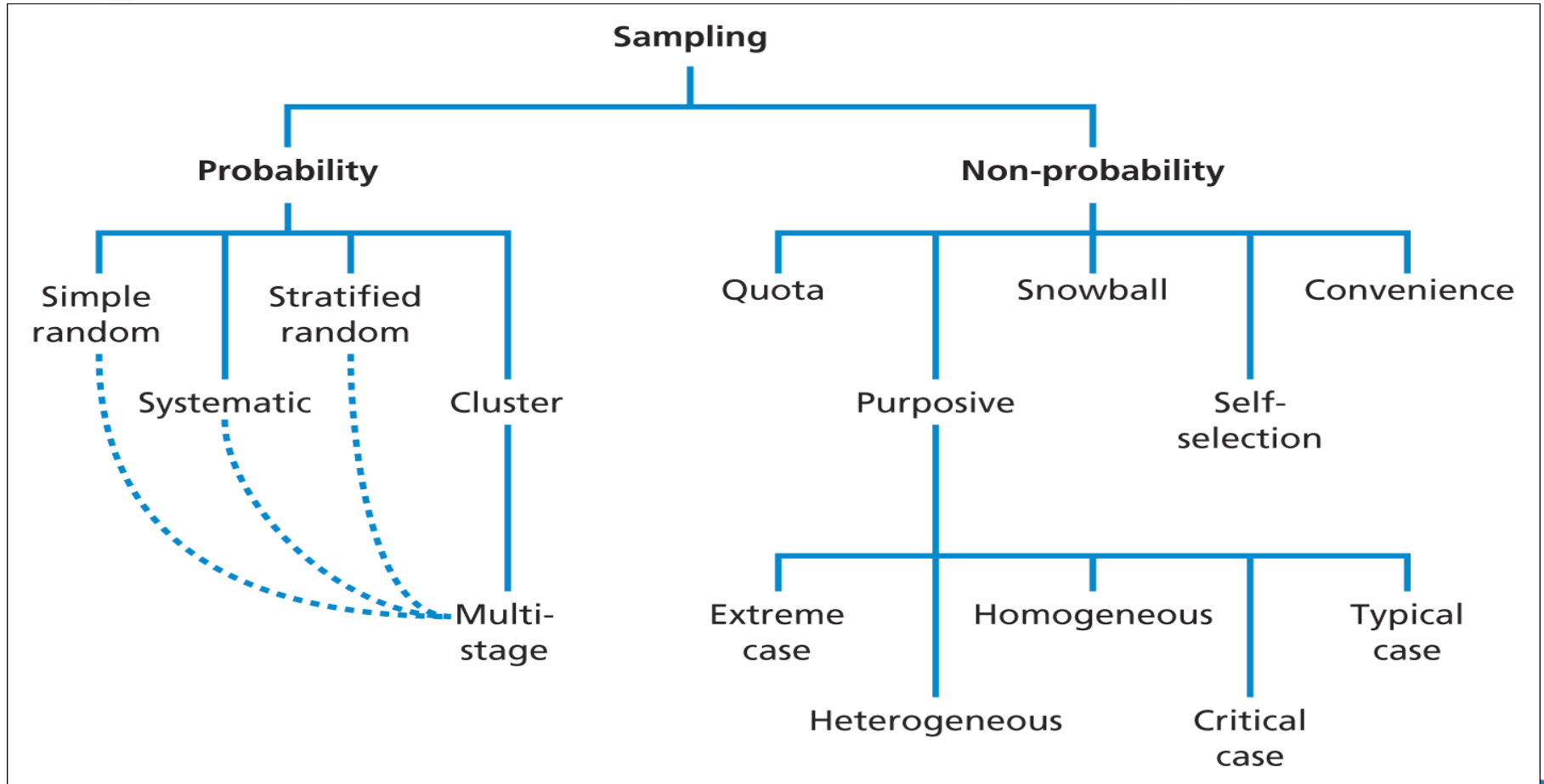
## Population, sample and individual cases





# Overview of sampling techniques

## Sampling techniques



# Data collection techniques

‘What type of data do I need?’

- Using secondary data
  - What? Where is it located? Access secured?
- Collecting primary data
  - Who? Where are my intended participants?
  - Participant observation
  - Structured observation
  - Interviews -Forms of interviews
    - Structured, semi-structured and unstructured
  - Questionnaires
    - do not have to included in proposal

# Measuring instrument/data gathering and capturing

- Primary vs secondary data sources
- Describe the instruments will be used to gather data (tests, techniques, surveys, etc)
- Provide reliability and validity information to show techniques are valid for the study
- Describe how the variables will be measured
- Provide justification for selection of instruments based on theory, research question, subject characteristics, etc.
- Provide published reliability of instrument and plan to establish reliability
- Trustworthiness in qualitative research

# Analysing and interpreting quantitative data

- Quantitative data is presented in a numerical format and collected in a standardised manner
  - e.g. surveys, closed-ended interviews, tests
  - analysed using statistical techniques
- Descriptive statistics are used to summarize the basic feature of a data set through
  - measures of central tendency (mean, mode, and median)
  - dispersion (range, quartiles, variance, and standard deviation)
- Inferential statistics allow researchers to assess their ability to draw conclusions that extend beyond the immediate data, e.g.
  - if a sample represents the population
  - if there are differences between two or more groups
  - if there are changes over time
  - if there is a relationship between two or more variables

# Analysing and interpreting qualitative data

- Qualitative data is thick in detail and description.
- Data often in a narrative format
- Data often collected by observation, open-ended interviewing, document review
- Analysis often emphasizes understanding phenomena as they exist, not following pre-determined hypotheses

There are a number of paradigm and discipline based strategies for qualitative data analysis including

- content analysis, discourse analysis, narrative analysis, conversation analysis, semiotics, hermeneutics, grounded theory

# Other things to Note

- Time dimension – cross-sectional or longitudinal
- Conceptualisation – i.e. you must specify the meanings of the concepts and variables to be studied.
- Operationalisation – how will we actually measure the variables under study?
- Reliability – are the results repeatable? – relevant to quantitative social research.
- Replication - can others replicate the results?
- Validity – will examine later but are the results a true reflection of the world? Internal (are they measuring the underlying phenomenon)/external (generalise to the population)

# Are you there??

- Research methodology
  - For each of the headings, indicate what is appropriate for your research
    - Research design
    - Research method/approach
    - Research strategy
    - Population
    - Sampling
    - Data collection
    - Data analysis

**Thank you**

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