RESEARCH DESIGN

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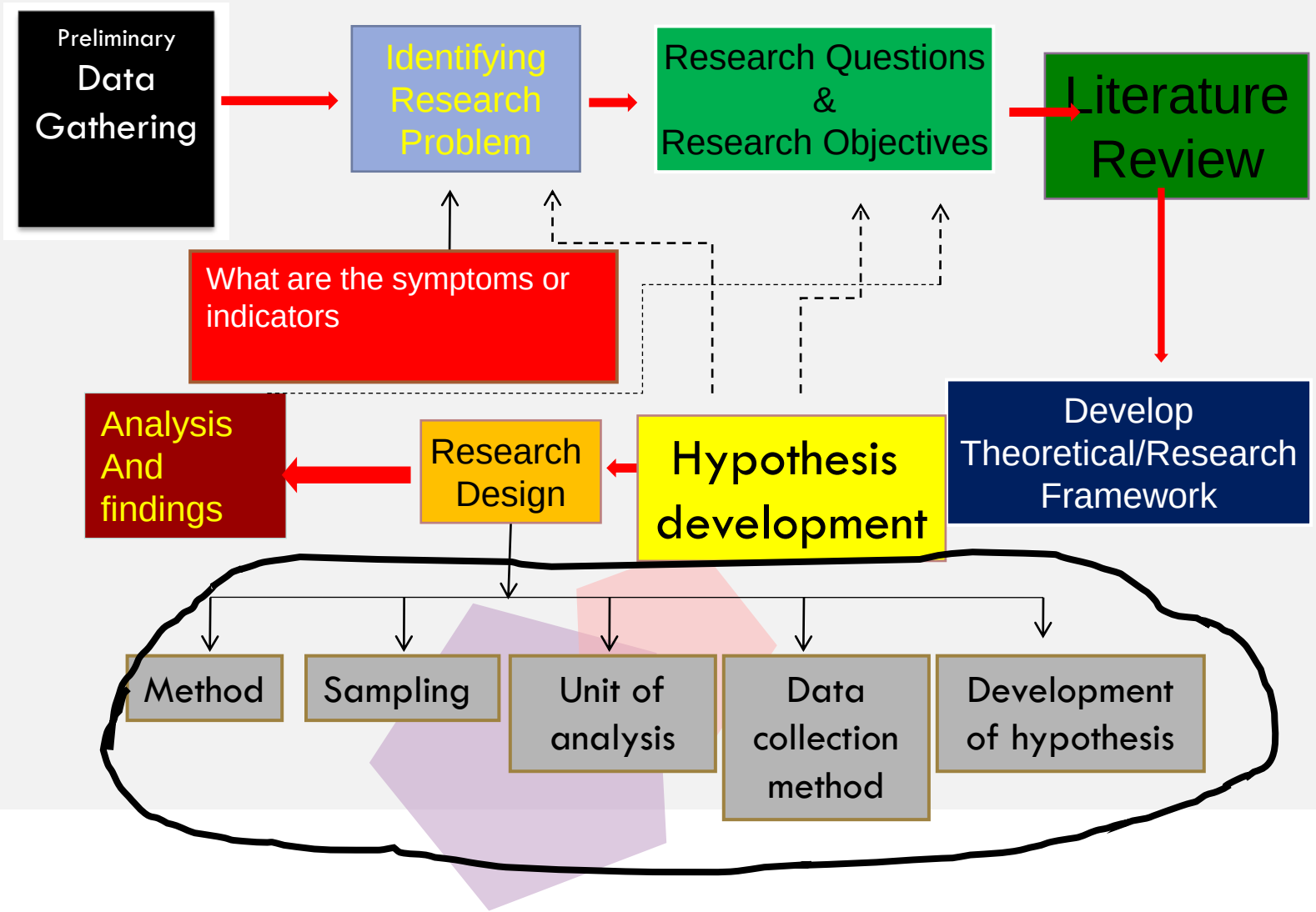
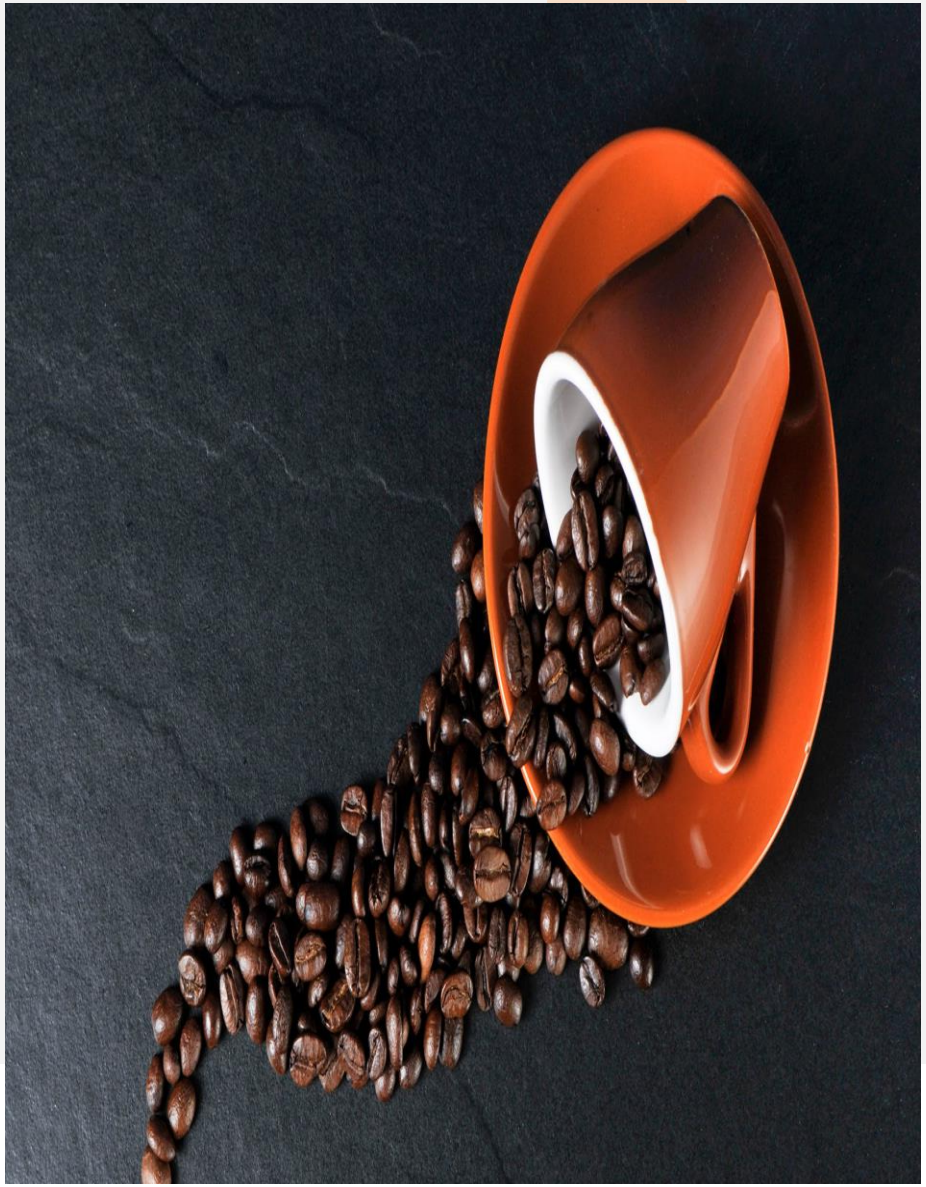
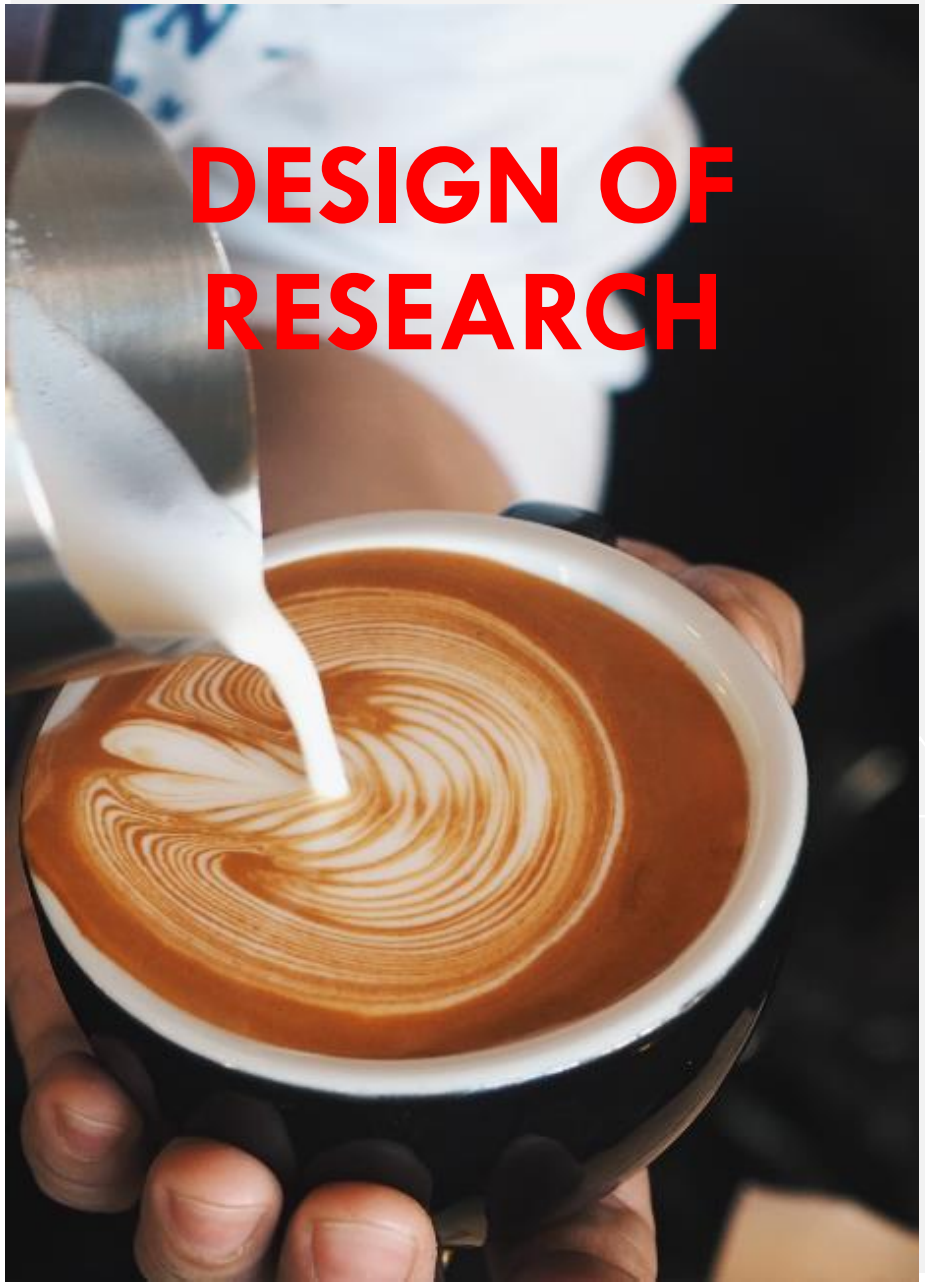
OVERVIEW OF RESEARCH PROCESS



design of research

- *The research design is the master plan specifying the methods and procedures for collecting and analyzing the needed information.*
- *A detailed outline of how an investigation will take place. A research design will typically include how data is to be collected, what instruments will be employed, how the instruments will be used and the intended means for analysing data collected.*
- *A master plan that specifies the methods and procedures for collecting and analyzing the needed information*





DESIGN OF RESEARCH

❑Type of Research:

- ❑Exploratory research
- ❑Descriptive studies
- ❑Explanatory (causal) studies

❑Research Strategies :

- Experiment
- Survey
- Case study
- Action research
- Grounded theory
- Ethnography
- Archival research

❑ Time Horizons:

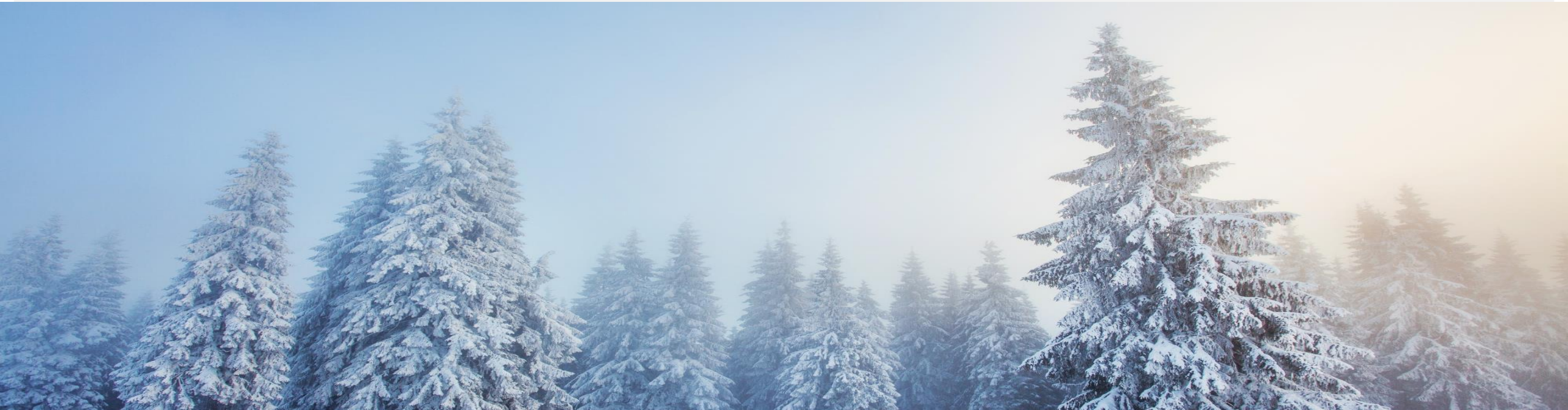
- Cross-sectional studies
- Longitudinal studies

❑ Qualitative vs Quantitative Research

❑ Data Collection and Data Analysis

Exploratory Research

- Conducted to clarify ambiguous situations or discover ideas that may be potential business opportunities.
- Initial research conducted to clarify and define the nature of a problem.
  - Does not provide conclusive evidence
  - Subsequent research expected



Descriptive Research

- Describes characteristics of objects, people, groups, organizations, or environments.
  - Addresses who, what, when, where, why, and how questions.
  - Considerable understanding of the nature of the problem exists.
  - Does not provide direct evidence of causality.
- Diagnostic analysis
  - Seeks to diagnose reasons for market outcomes and focuses specifically on the beliefs and feelings consumers have about and toward competing products.

Contoso

Causality

- Causal inference: a conclusion that when one thing happens, another specific thing will follow
- Three critical pieces of causal inference:
  - Temporary sequence: deals with the time order of events; the cause must occur before the effect
  - Concomitant variance: occurs when two events “covary” or “corelate”, meaning they vary systematically
  - Nonspurious association: any covariation between a cause and an effect is true and not simply due to some other variables
- Causal research should do all the following:
  - Establish the appropriate causal order or sequence of events
  - Measure the concomitant variation between the presumed cause and the presumed effect
  - Examine the possibility of spuriousness by considering the presence of alternative plausible causal factors

Research Strategies: Experiment

- An experiment will involve:
  - Definition of a theoretical hypothesis
  - Selection of samples from know 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 social science
  - 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
- **Survey**
  - To collect a large amount of data from a sizeable population and standardize it to allow easy comparison
  - Types: Questionnaires, Structured Interviews

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)

- Case Studies:
  - The documented history of a particular person, group, organization, or event.

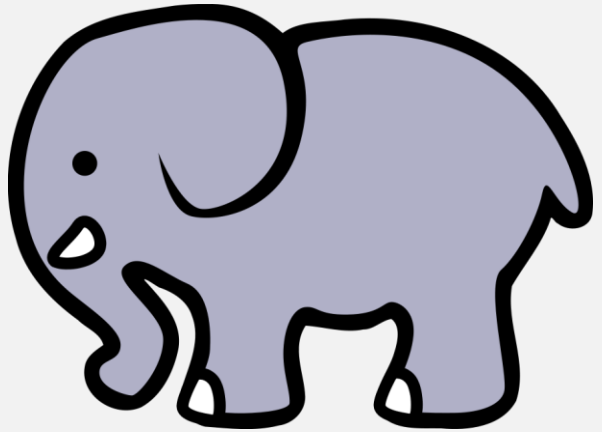
Research Strategies: Action Research

❑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
- Can have two distinct focus (Schein, 1999) – the aim of the research and the needs of the sponsor

Research Strategies; Grounded theory *(Inductive deductive approach)*



- **Key features:**
- **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 logical-deductive one**

- **Represents an inductive investigation in which the researcher poses questions about information provided by respondents or taken from historical records.**
  - **The researcher asks the questions to him or herself and repeatedly questions the responses to derive deeper explanations.**

Research Strategies: Ethnography *(Inductive approach)*

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

- **Ethnography**
  - **Represents ways of studying cultures through methods that involve becoming highly active within that culture.**

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

TYPES OF DATA

Quantitative vs Qualitative

- Discrete: Nominal
- Continuum; Ordinal, Interval, Ratio

- The level of mathematical Operations
  - Nominal : = and ≠
  - Ordinal : = , ≠, >, <
  - Interval := , ≠ , > , <, + , -
  - Ratio : = , ≠, >, <, +, - , × , ÷

Primary vs Secondary Data

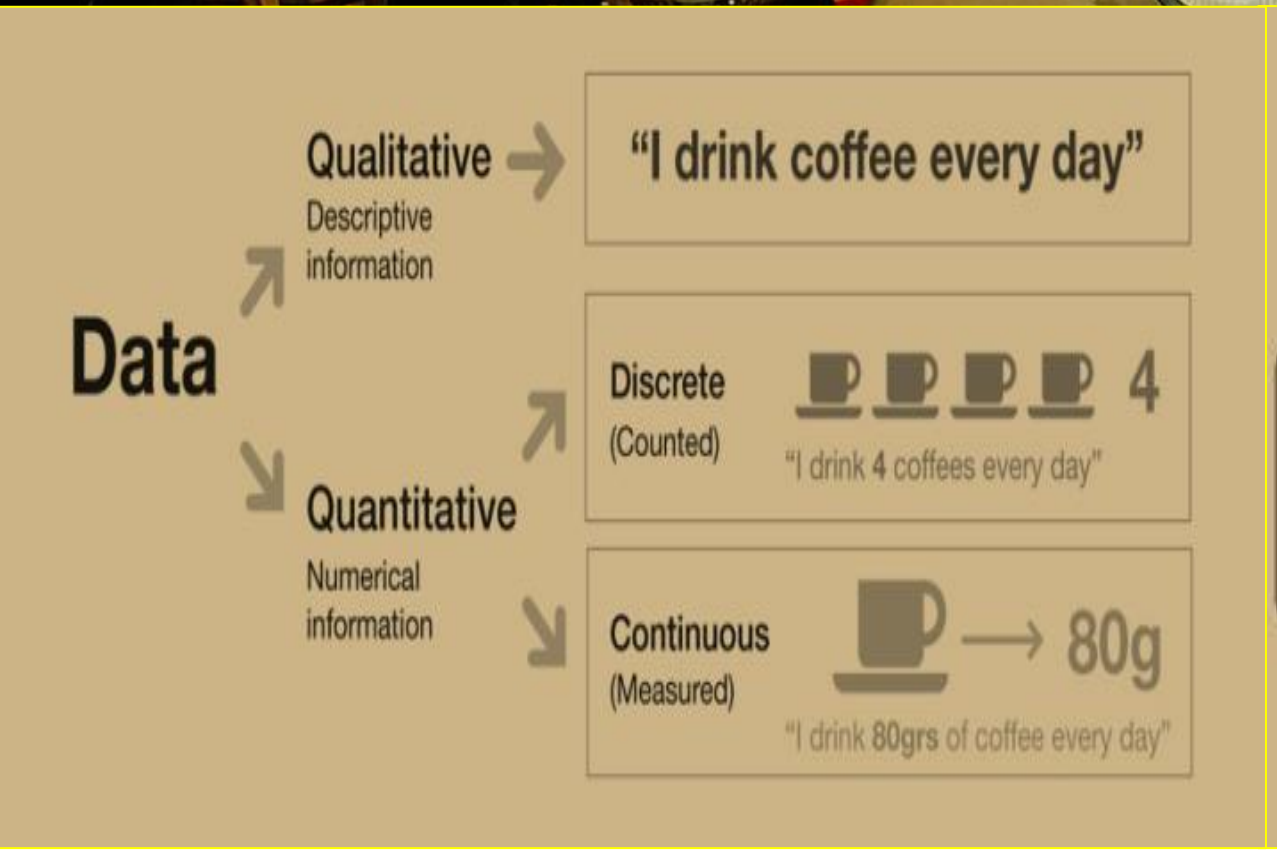
- Primary data: directly collected by researcher and his/her team

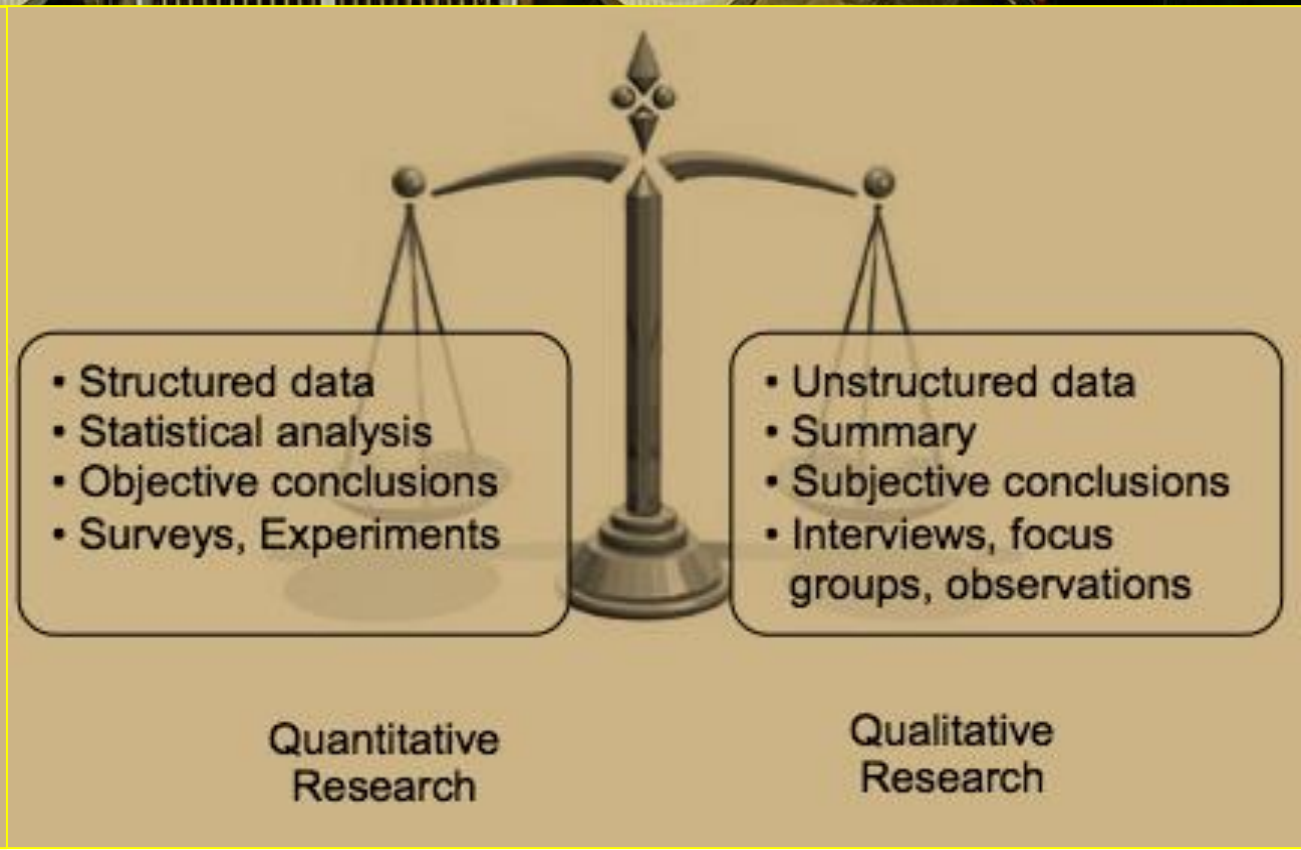
- Secondary: data collected by others

Cross section vs *time series/ longitudinal*

- *cross section:* the study of a phenomenon at a particular time
- *longitudinal:* It has the capacity to study change and development

Comparing Qualitative and Quantitative Research





Qualitative vs Quantitative Research

Qualitative Research	Research Aspect	Quantitative Research
Discover Ideas, Used in Exploratory Research with General Research Objects	Common Purpose	Test Hypotheses or Specific Research Questions
Observe and Interpret	Approach	Measure and Test
Unstructured, Free-Form	Data Collection Approach	Structured Response Categories Provided
Researcher Is Intimately Involved. Results Are Subjective.	Researcher Independence	Researcher Uninvolved Observer. Results Are Objective.
Small Samples—Often in Natural Settings	Samples	Large Samples to Produce Generalizable Results (Results that Apply to Other Situations)
Exploratory Research Designs	Most Often Used	Descriptive and Causal Research Designs

Uses of Qualitative Research

- **Qualitative research is useful when:**
  - It is difficult to develop specific and actionable decision statements or research objectives.
  - The research objective is to develop a detailed and in-depth understanding of some phenomena.
  - The research objective is to learn how a phenomenon occurs in its natural setting or to learn how to express some concept in colloquial terms.
  - The behavior the researcher is studying is particularly context-dependent.
  - A fresh approach to studying the problem is needed.

Qualitative Research Orientations

- Major Orientations of Qualitative Research
  - Phenomenology—originating in philosophy and psychology
  - Ethnography—originating in anthropology
  - Grounded theory—originating in sociology
  - Case studies—originating in psychology and in business research

Quantitative data analysis: Key Points

- Data must be analyzed to produce information
- Computer software analysis is normally used for this process
- Data should be carefully prepared for analysis
- Researchers need to know how to select and use different charting and statistical techniques

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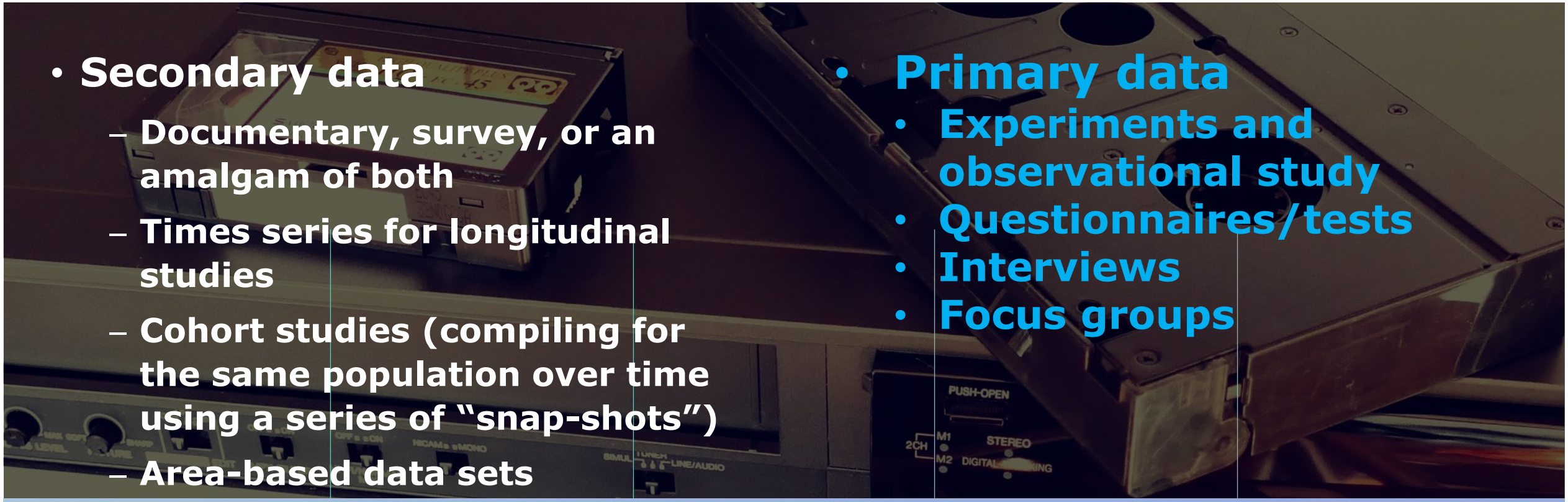
Quantative data analysis: Main Concerns

- Preparing, inputting and checking data
- Choosing the most appropriate statistics to describe the data
- Choosing the most appropriate statistics to examine data relationships and trends



- **Secondary data**
  - Documentary, survey, or an amalgam of both
  - Times series for longitudinal studies
  - Cohort studies (compiling for the same population over time using a series of "snap-shots")
  - Area-based data sets

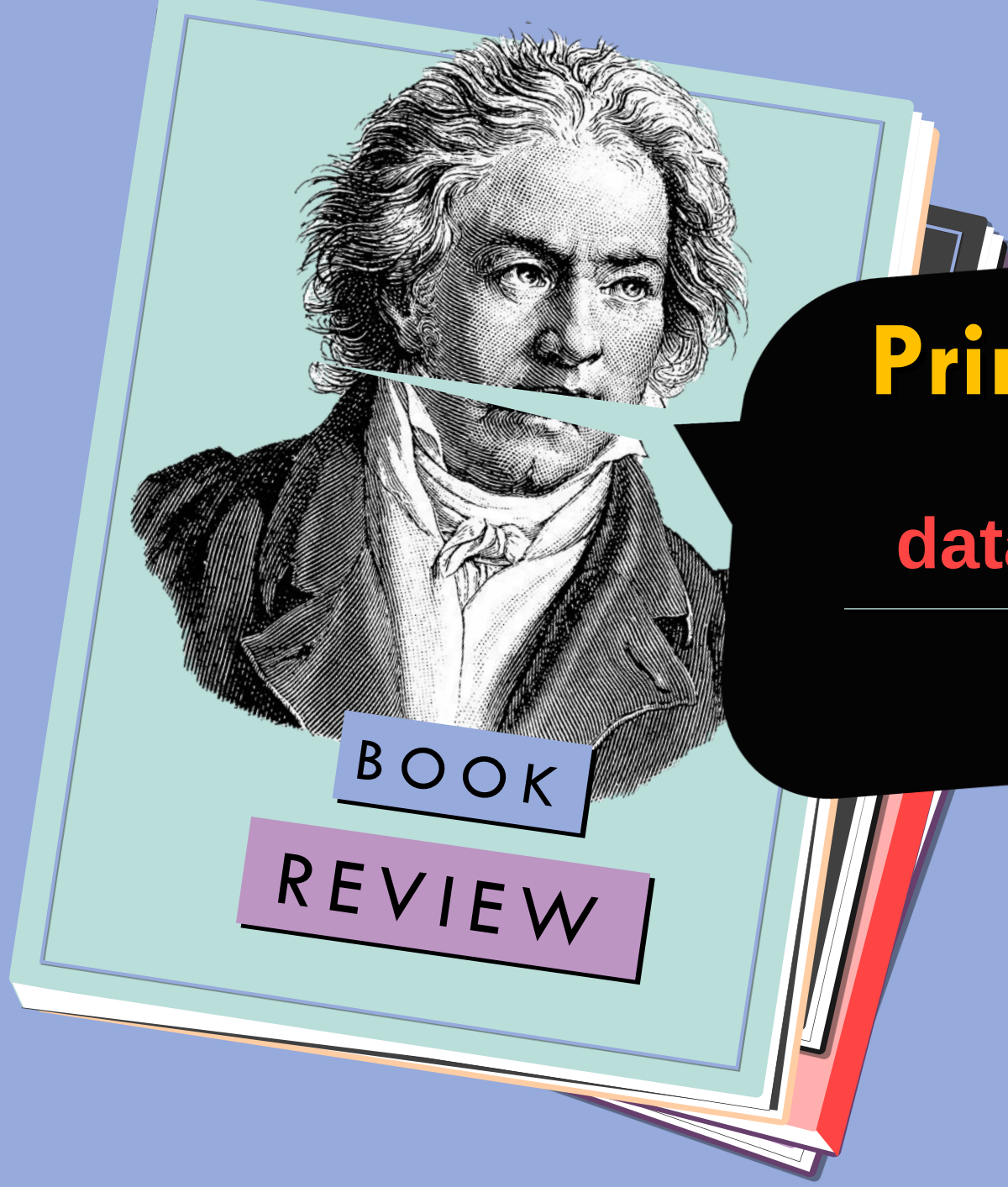
- **Primary data**
  - Experiments and observational study
  - Questionnaires/tests
  - Interviews
  - Focus groups

Data Sources

Caption Lorem Ipsum

Secondary Data

- **Availability of secondary data sources**
  - **References in publications (books, journal articles)**
  - **Within organisations (unpublished sources)**
  - **Tertiary literature (indexes and catalogues in archives or online)**

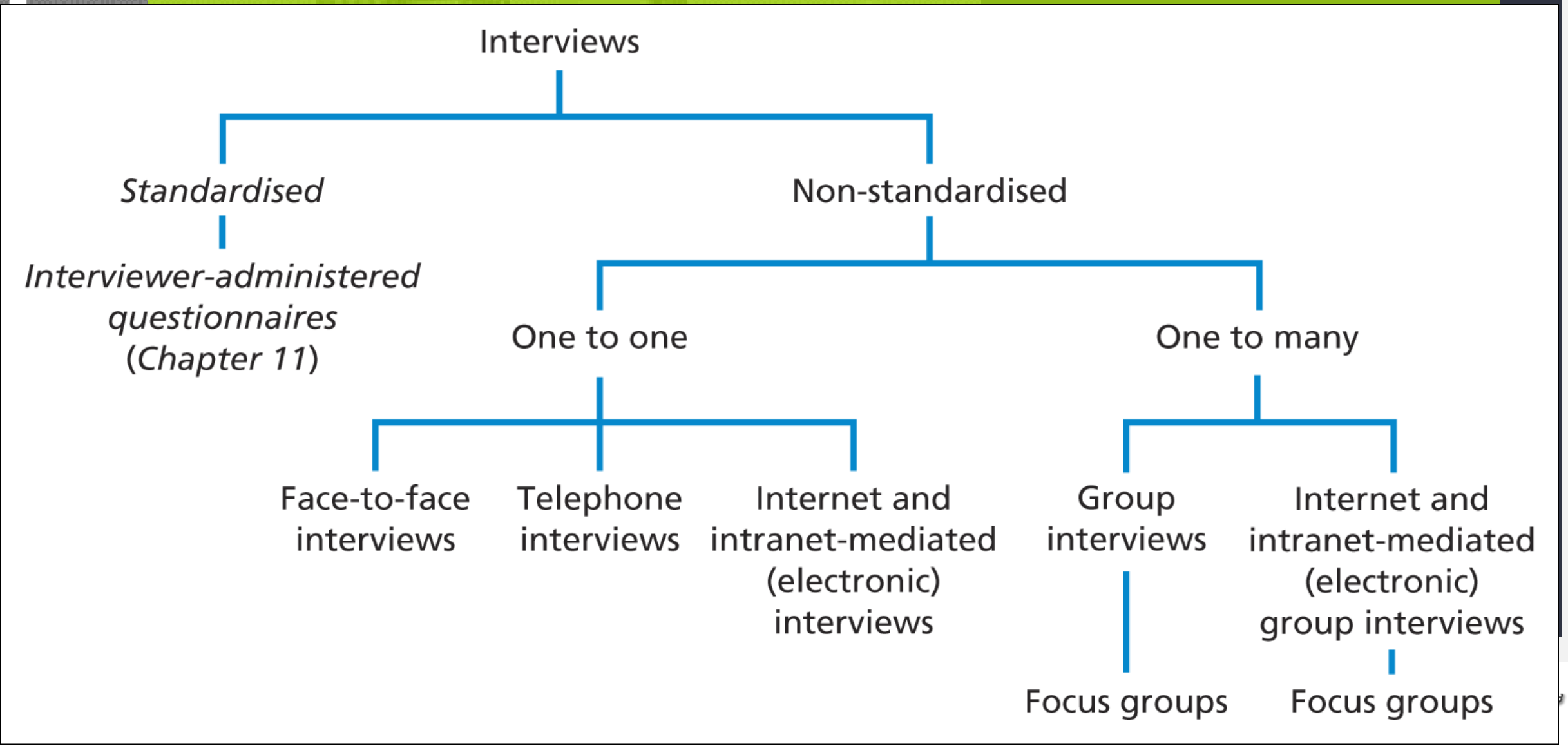


Primary Data

data you collect

- Questionnaires
- Interviews
- Focus groups
- Experiments and observational study

Forms of interview



Focus Group Discussion

Focus Groups = bring a small group of people (10-12) together for an interactive, spontaneous discussion of a particular topic or concept. Discussion is led by a trained moderator and usually lasts 1 ½ hours

Typical Objectives:

- *To identify and define problems.*
- *To generate new ideas about products, services, delivery methods, etc.*
- *To test advertising themes, positioning statements, company and product names, etc.*
- *To discover new constructs and measurement methods.*
- *To understand customer needs, wants, attitudes, behaviors, preferences and motives*

Observations

- *Methods – human/mechanical/electronic.*
- *Useful where respondent cannot or will not articulate the answer.*
- *Cannot be used to measure thoughts, feelings, attitudes, opinions, etc.*

What is a Questionnaire?

- **A set of Questions designed to generate the statistical information from and data necessary for accomplishing a research project's objectives**
- **Definition of Questionnaires: Techniques of data collection in which each person is asked to respond to the same set of questions in a predetermined order (Adapted from deVaus. 2002)**

When to use questionnaires

- For explanatory or descriptive research
- Linked with other methods in a multiple-methods research design
- To collect responses from a large sample prior to quantitative analysis

THANK YOU

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