

Research Method- Data Collection

Week 7

Collecting Secondary Data

- This is data which already exists such books and documents
- One can think of their Literature Review as largely based on secondary data
- So there's a possibility of answering a part of your RQ or achieving one of your research objective through the use of Secondary Data
- Of course, it would involve the **reanalyzing** of the data that already exist, to relate to your research

- Secondary data include both quantitative and qualitative data
- The data you find may have been subjected to little or no processing, i.e. it is still largely raw data or
- The data you find may have been subjected to detailed and lengthy processing, i.e. compiled or published data
- It is important to remember that these data were previously collected for a different purpose

- So be careful in the use of secondary data, as its validity could be questionable
 - Is the data **applicable** or **suitable** to your research?
 - Is it a reliable source?
- Never take secondary data at face value!!!
- It should also be noted that where it is possible one should get to the '***primary or original source of the secondary data***'
- Do not rely on a secondary account of the secondary data

- As another example, at this level we do not want you to use an authors work if you have not directly read it.
- That is, **do not** do this:
 - According to Smith (2003) as cited by King (2006, pg. 67)
- Get to the source of the work, do not rely on what King is saying about what Smith has said.
- You need to read Smith's work directly
- This must be noted when you are doing your Literature Review

Evaluating Secondary Data Sources

Saunders et al (2009, pg. 273)

1 Assess overall suitability of data to research question(s) and objectives

Pay particular attention to:

- *measurement validity*
- *coverage including unmeasured variables*

2 Evaluate precise suitability of data for analyses needed to answer research question(s) and meet objectives

Pay particular attention to:

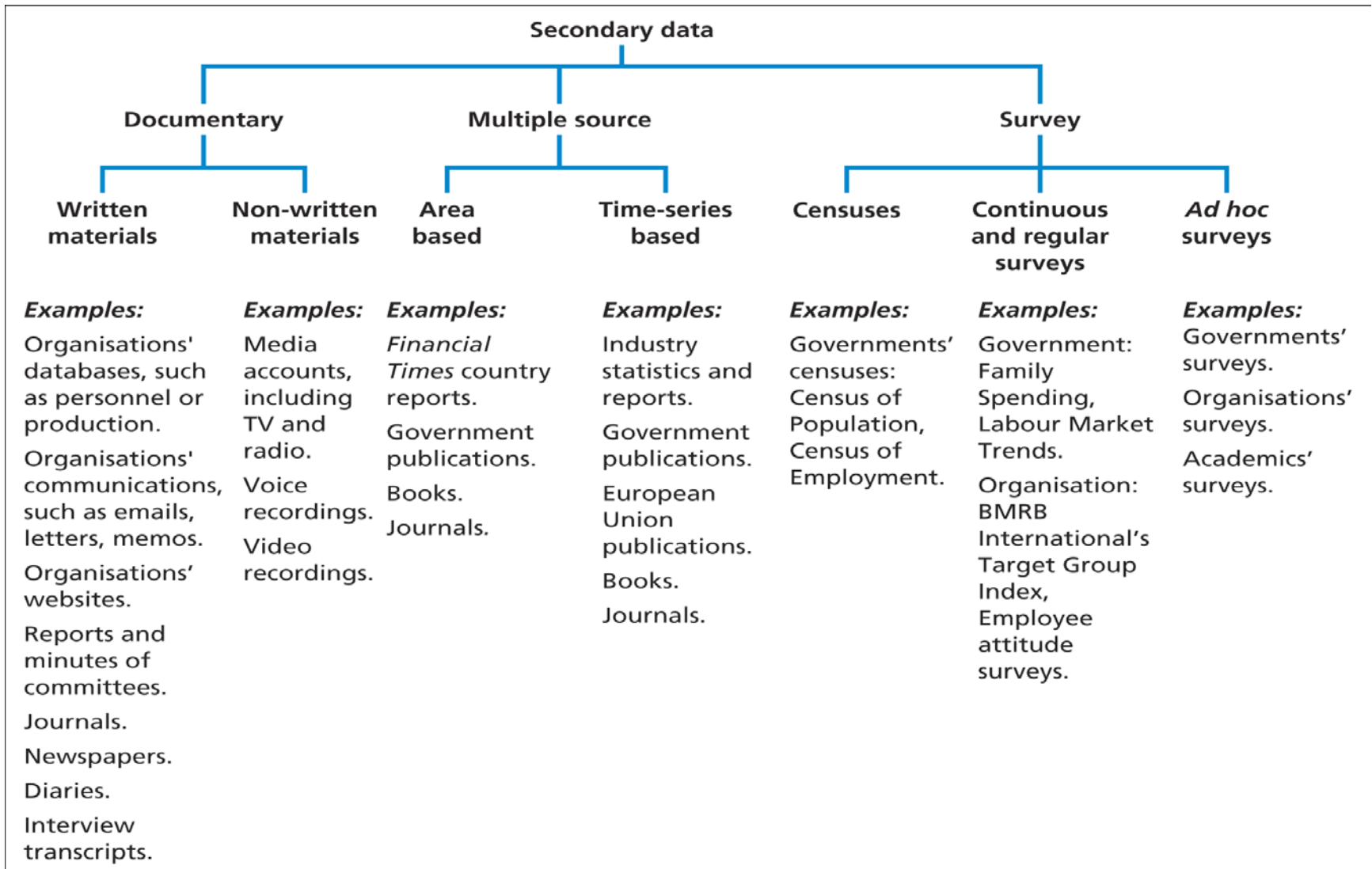
- *validity*
- *reliability*
- *measurement bias*

3 Judge whether to use data based on an assessment of costs and benefits in comparison to alternative sources

If you consider the data to be definitely unsuitable, *do not* proceed beyond this stage

Types of Secondary Data

Saunders et al (2009, pg. 259)



Advantages of Secondary Analysis

- Reduce Cost and time
- More time for Data Analysis
- High Quality Data
- Opportunity for longitudinal analysis
- Reanalysis may offer new interpretations

Limitations of Secondary Analysis

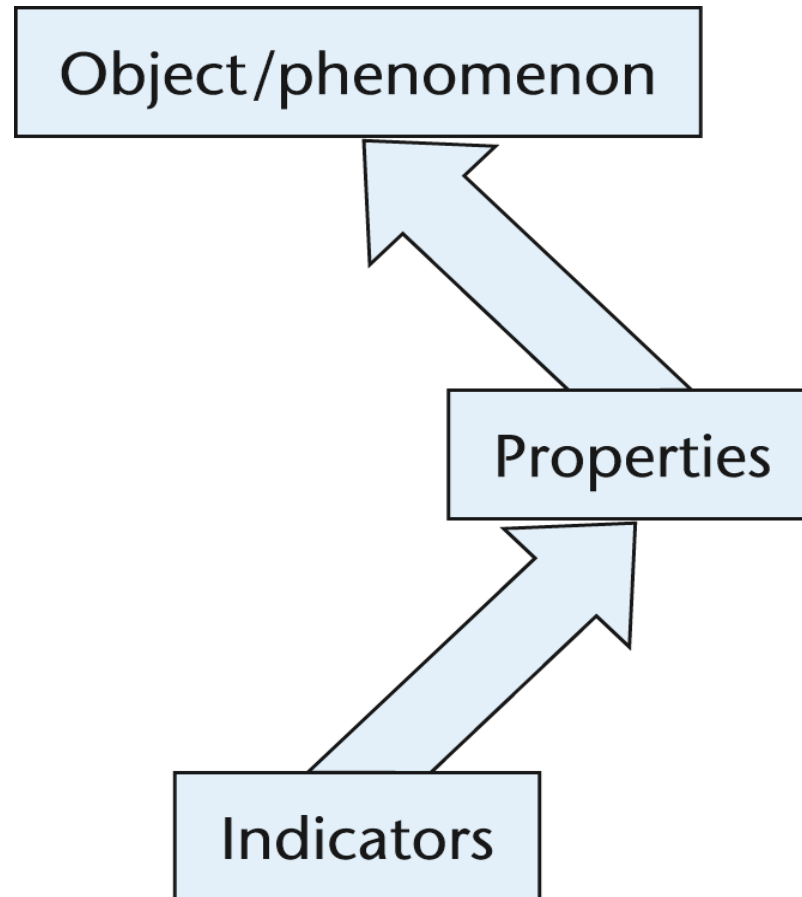
- Lack of familiarity with data
- Complexity of data
- No control of data quality
- Absence of key variables
- Outdated
- Research Methodology may not be suitable-
e.g. sample

Collecting Primary Data

- Of course Primary data is original data, new data collected for the purpose of your research by **YOU**
- There are many methods:
 - Lab Experiments
 - Focus groups
 - Interviews
 - Questionnaires

- In research we are interested about collecting data about **variables**
- A variable is an attribute of the entity which you have chosen as your unit of analysis
- For example, age and qualifications are variables of individuals.
- Number of employees and profit margin are attributes of an organization
- **Content, Navigation and Accessibility are some properties of Web Usability.**

Getting your Idea for Action



- Variables can be classified as qualitative or quantitative
- A **qualitative variable** is non numerical attribute of an object
- For example variables like gender or colour are qualitative variables of an individual
- A **quantitative variable** is a numerical attribute of an object
- Quantitative data can be classified as discrete or continuous

- In order to obtain a quantitative measure you need to use a suitable **measuring tool**
- Some attributes like age, income, height or even weight have accepted and known measures i.e. years, \$, cm, kg
- But for some attributes there will be difficulty, such as honesty, loyalty or intelligence
- If there are no generally accepted measure, you must devise your own or find out what other research have used

Sampling

- Random
- Systematic
- Stratified
- Cluster
- A good sample must be:
 - Chosen at random, i.e. every member of the population has an equal chance of being selected
 - Not too small but not too large
 - unbiased

Data Collection Methods

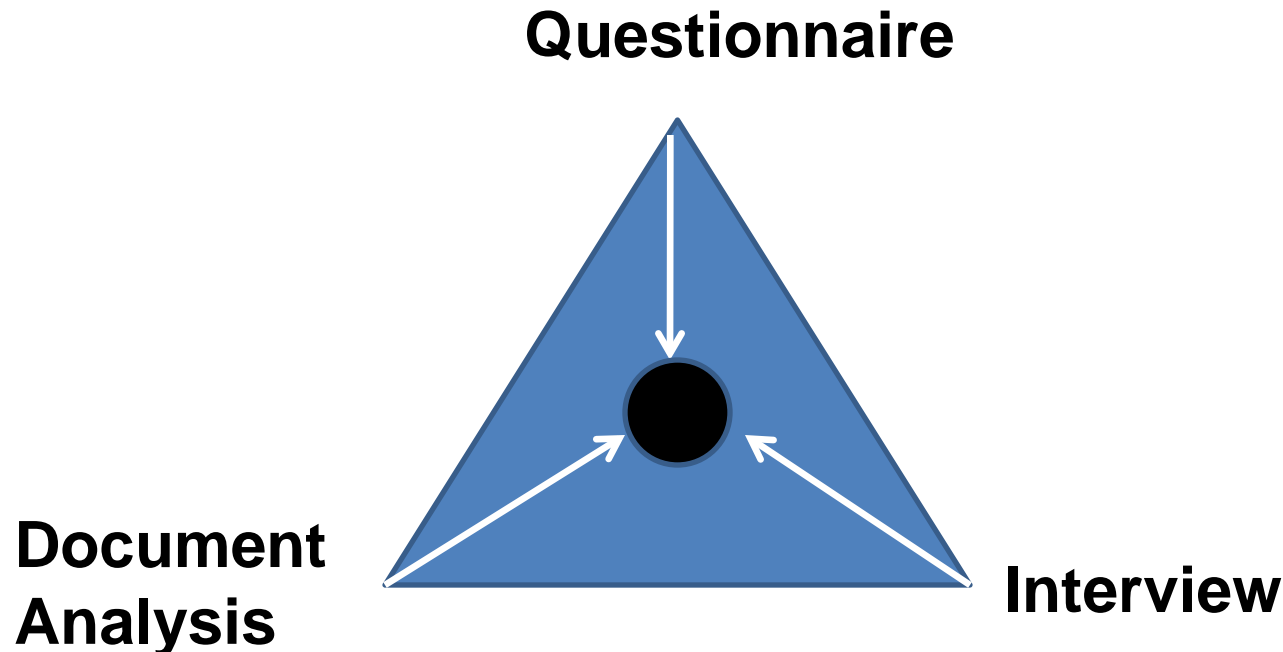
- There will always be a combination of Quantitative and Qualitative inputs into your data generating activities
- Each approach presents a mixture of advantages and disadvantages

- Quantitative approach allows analytical and predictive power through the use of Statistical Analysis. However suffers from reductionist tendencies
- Qualitative provides a more 'real' basis for analysis and interpretation of phenomena, but expensive and time consuming
- It must be noted that the methods you utilize to collect your data can be either quantitative or qualitative
- That depends on how you use them!!!

Concept of Triangulation

- Triangulation is a way of assuring the validity of research results through the use of a variety of research methods or techniques
- It is a means of overcoming the weaknesses and biases which can arise from the use of only one of the methods such as observation, questionnaires etc.
- For example, a researcher might choose to begin their research with an unstructured interview

- This will allow them to identify key issues and which they can then use as a basis for more formal interviews and questionnaires
- Think of it as a Surveyor trying to find a point, they will locate the point based on three views



- Triangulation also allows researchers to collect both quantitative and qualitative data from both primary and secondary sources
- For Example:
 - in a study of the long term effects on victims of crime,
 - it would be possible to use both questionnaires and interviews to assess the effects of crime on victims
 - as well as investigating eye witness accounts in newspapers or reports of trials

Triangulation Defined

- “the use of more than one method or source of data in the study of a phenomenon so that findings may be cross-checked”

Bryman (2008, pg. 700)

Questionnaires

- Questionnaires are associated with both positivistic and phenomenological methodologies
- It is a list of carefully listed question, with the view of eliciting reliable responses a chosen sample
- The aim is to find out what a selected group of participants do, think or feel

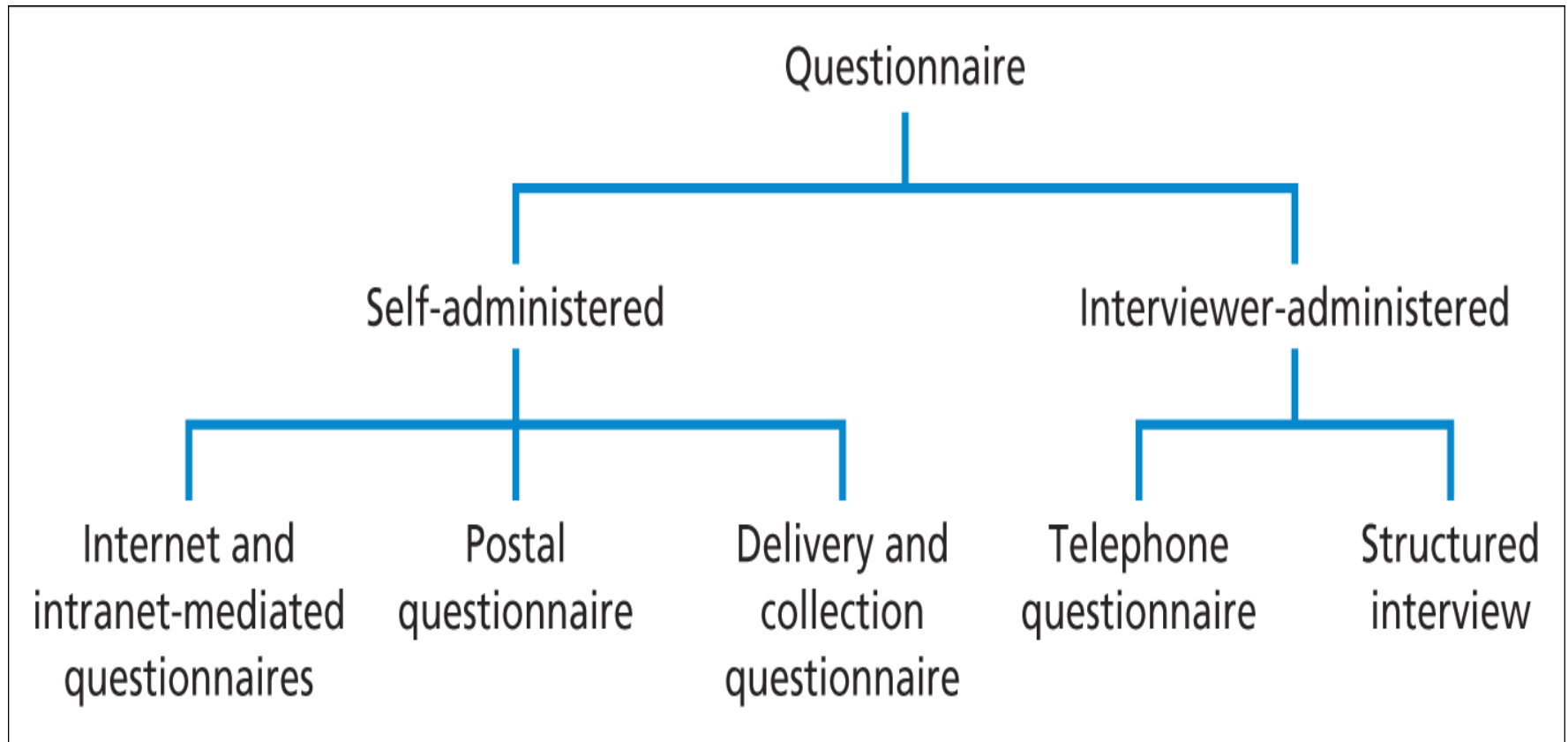
Main Decisions when using a Questionnaire

- Sample size
- Type of questions
- Wording questions and how to ensure that they are intelligible and unambiguous
- Design of questionnaire, including instructions

- Wording of any accompanying cover letter
- Method of distribution and return of completed questionnaires
- Tests for validity and reliability
- Methods for collating and analyzing the data

Types of Questionnaires

Saunders et al (2009, pg. 363)



Type of Questions

Open questions

6 Please list up to three things you like about your job

1.....

2.....

3.....

List questions

7 What is your religion?

Please tick ✓ the appropriate box

Buddhist	<input type="checkbox"/>	None	<input type="checkbox"/>
Christian	<input type="checkbox"/>	Other	<input type="checkbox"/>
Hindu	<input type="checkbox"/>		
Jewish	<input type="checkbox"/>		
Muslim	<input type="checkbox"/>		
Sikh	<input type="checkbox"/>		

Category questions

8 How often do you visit the shopping centre?

Interviewer: listen to the respondent's answer and tick ✓ as appropriate

- ☐ First visit
- ☐ Once a week
- ☐ Less than fortnightly to once a month
- ☐ 2 or more times a week
- ☐ Less than once a week to fortnightly
- ☐ Less often

Saunders *et al.* (2009)

Ranking questions

- 9 Please number each of the factors listed below in order of importance to you in choosing a new car. Number the most important 1, the next 2 and so on. If a factor has no importance at all, please leave blank.**

<i>Factor</i>	<i>Importance</i>
<i>Carbon dioxide emissions</i>	[]
<i>Boot size</i>	[]
<i>Depreciation</i>	[]
<i>Price</i>	[]

Adapted from Saunders *et al.* (2009)

Rating questions

10 For the following statement please tick the box that matches your view most closely

Agree Tend to agree Tend to disagree Disagree

I feel employees'
views have
influenced the
decisions taken
by management

☐☐☐☐

Saunders *et al.* (2009)

Method of Distribution

- By post
- By telephone
- Face to Face
- Group Distribution
- Individual Distribution
- Online Distribution
 - Emails
 - Facebook

Response Rate

Number of usable questionnaires

X 100

Total sample – Unsuitable or
uncontactable members of the sample

Coding Questionnaire for Computer Analysis

- Done through the use of specialist software
e.g. Statistical Package for the Social Sciences
(SPSS) www.spss.com
- You will need to take account of the format in
which the program expects to find your data
- Most packages will expect data to be in
numeric form
- Therefore you must allocate numeric code to
each variable
- See handout for example

Interviews

- It is a method of collecting data in which selected participants are asked questions
- Interviews make it easy to compare answers
- Issues to consider:
 - Confidentiality
 - Bias of interviewer
 - Recording mechanism
 - Organizing the interview
 - Developing interview themes

- A Quantitative approach suggest closed questions, which have been prepared beforehand
- A Qualitative approach suggest unstructured questions, where the questions have not been prepared beforehand

Uses of different types of interview in each of the main research categories

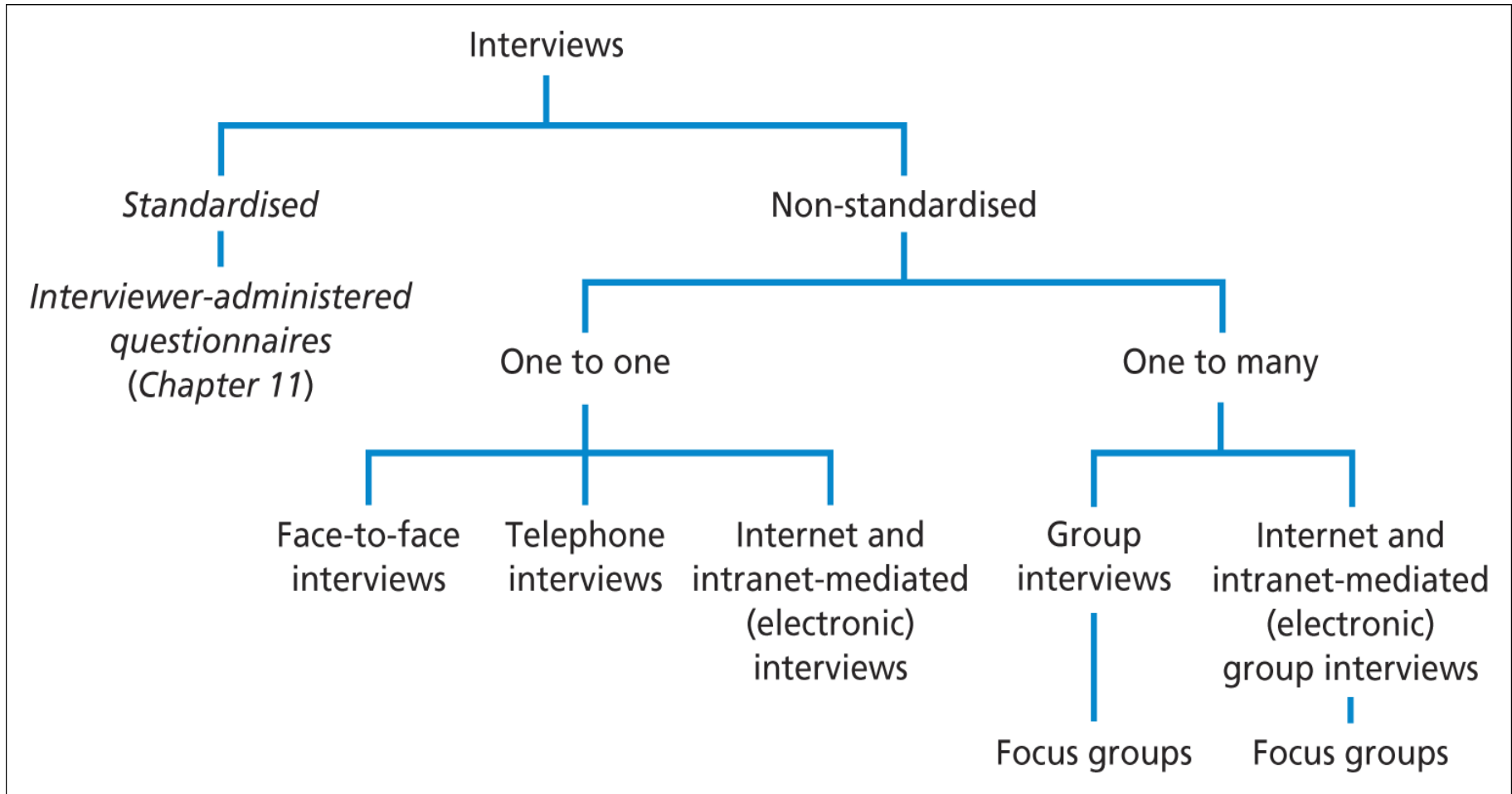
Saunders et (2009, pg. 323)

	Exploratory	Descriptive	Explanatory
Structured		✓✓	✓
Semi-structured	✓		✓✓
Unstructured	✓✓		

✓✓ = more frequent, ✓ = less frequent.

Forms of Interviews

Saunders et al (2009, pg. 321)



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