

The logo for AUT (Auckland University of Technology) is displayed in white, bold, sans-serif capital letters on a black rectangular background.

# Tourism Research

Wk 1

Course Introduction

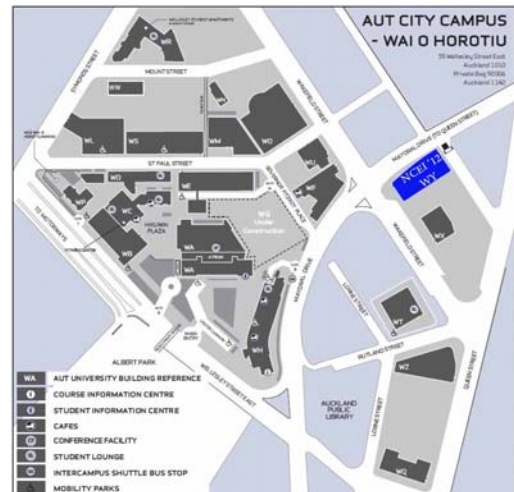
Lecture 01-1

## 1. Place in curriculum

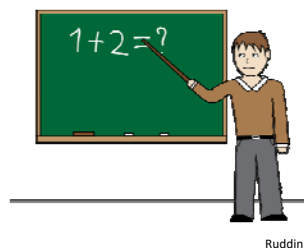
- BITM – Part A: Core Papers
- Level 7 paper – 15 points
- 150 learning hours
- Pre-requisites for course:
  - Undergraduate writing for academic purposes
  - Introduction to tourism

## 2. Organisation

- Timing:
  - 12 lecture hours: Tuesday 1-2pm
  - 24 tutorial hours:
    - Weeks 1-8: Thursday 8-10am
    - Weeks 9-12: Thursday 3-5pm
- Location:
  - Lectures: WF410
  - Tutorials:
    - Weeks 1-8: WF202
    - Weeks 9-12: WB410



- Contact possibilities:
  - Lecturer: Bart Neuts
  - Office WH317, contact hours every Wednesday 1pm-3pm
  - Email: [bneuts@aut.ac.nz](mailto:bneuts@aut.ac.nz)
  - Phone: +64 921 9999 ext. 6692
- Some notes on me and my research background:
  - From economist
  - To PhD researcher
  - To public servant
  - To teacher



### 3. Course overview

- What?

- Introducing the main elements to set up a scientific research project
- Evaluating different research techniques (qualitative and quantitative)
- Learning to set up surveys, understand sampling, and the structure of writing a research report
- Finding the balance between rigor (academic) and relevance (consultancy)

- Why?

- Because the process of scientific research is the foundation of academic knowledge
- Even when we are not researchers ourselves, we are still consumers of research → important to be able to think critically about research results
- To prepare you for the co-op project and other research-related activities

#### Auckland still one of the world's most liveable cities in the world

7:33 PM Monday Aug 24, 2015

☆ f 485 t in 27 g+ 1



This year, Auckland came in at number nine, moving up the ranks one spot from number 10 last year. Photo / Brett Phibbs

Auckland continues to be identified as one of the most liveable cities in the world.

Last week, the Economist Intelligence Unit (EIU) released its report on 140 cities, and for the fifth year in a row Auckland has made it into the top 10.

This year, Auckland came in at number nine, moving up the ranks one spot from number 10 last year.

NZME © [http://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=11502213](http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11502213)

- Course structure: 2 main parts



Images: Andrew Robinson (left), Live Life Happy (right)

- Weekly schedule: Theory

| Week                              | Lecture /tutorial   | Reading /resources  |
|-----------------------------------|---|---|
| <u>Wk 1</u> (27 Feb – 3 March)    | L: Introduction and administration. Assessment outline<br><br>T: Introduction to research         | Jennings, G. (2010). <i>Tourism Research (2<sup>nd</sup> ed.)</i> . Milton, Australia: John Wiley & Sons Australia. <b>Chapter 1+2</b><br><br>Singleton, R. A. Jr., & Straits, B. C. (2005). <i>Approaches to Social Research (4<sup>th</sup> ed.)</i> . New York, NY: Oxford University Press. <b>Chapter 1+2</b>  |
| <u>Wk 2</u> (6 March – 10 March)  | L: Methodology and research design<br><br>T: Methodology and research design                      | Jennings, G. (2010). <i>Tourism Research (2<sup>nd</sup> ed.)</i> . Milton, Australia: John Wiley & Sons Australia. <b>Chapter 4+5</b><br><br>Singleton, R. A. Jr., & Straits, B. C. (2005). <i>Approaches to Social Research (4<sup>th</sup> ed.)</i> . New York, NY: Oxford University Press. <b>Chapter 3</b>  |
| <u>Wk 3</u> (13 March – 17 March) | L: Literature review<br><br>T: Conceptualisation and operationalisation                           | Jennings, G. (2010). <i>Tourism Research (2<sup>nd</sup> ed.)</i> . Milton, Australia: John Wiley & Sons Australia. <b>Chapter 3</b><br><br>Saunders, M., Lewis, P., & Thornhill, A. (2000). <i>Research methods for Business Students (2<sup>nd</sup> ed.)</i> . London, United Kingdom: Financial Times/Prentice Hall. <b>Chapter 3</b><br><br>Singleton, R. A. Jr., & Straits, B. C. (2005). <i>Approaches to Social Research (4<sup>th</sup> ed.)</i> . New York, NY: Oxford University Press. <b>Chapter 4</b> |
| <u>Wk 4</u> (20 March – 24 March) | L: Qualitative methods<br><br>T: Qualitative methods: a case on using interviews and focus groups | Jennings, G. (2010). <i>Tourism Research (2<sup>nd</sup> ed.)</i> . Milton, Australia: John Wiley & Sons Australia. <b>Chapter 6</b><br><br>Cresswell, J. W. (2003). <i>Research Design: Qualitative, Quantitative and Mixed Methods Approaches (2<sup>nd</sup> ed.)</i> . Thousand Oaks, CA: Sage. <b>Chapter 10</b>   |

| Week  | Lecture /tutorial   | Reading /resources  |
|---|---|---|
| <u>Wk 5</u> (27 March – 31 March)               | L: Quantitative data collection: survey methods and design<br>T: Sampling techniques  | Jennings, G. (2010). <i>Tourism Research (2<sup>nd</sup> ed.)</i> . Milton, Australia: John Wiley & Sons Australia. <b>Chapter 5+8</b><br>Israel, G. D. (2009). Determining Sample Size (PEOD6). Retrieved from University of Florida, Institute of Food and Agricultural Sciences website: <a href="http://edis.ifas.ufl.edu">http://edis.ifas.ufl.edu</a> |
| <u>Wk 6</u> (3 April – 7 April)                 | L: Quantitative methods and data interpretation<br>T: Quantitative methods and data interpretation  | Jennings, G. (2010). <i>Tourism Research (2<sup>nd</sup> ed.)</i> . Milton, Australia: John Wiley & Sons Australia. <b>Chapter 9</b><br>Altinay, L., & Paraskevas, A. (2008). <i>Planning research in hospitality and tourism</i> . Oxford, United Kingdom: Butterworth-Heinemann. <b>Chapter 10</b>  |
| <u>Wk 7</u> (10 April – 13 April)               | L: Research report writing<br>T: Research report writing  | Jennings, G. (2010). <i>Tourism Research (2<sup>nd</sup> ed.)</i> . Milton, Australia: John Wiley & Sons Australia. <b>Chapter 10</b><br>Veal, A. J. (2006). <i>Research Methods for Leisure and Tourism: A Practical Guide (3<sup>rd</sup> ed.)</i> . New York, NY: Financial Times/Prentice Hall. <b>Chapter 13</b>                                       |
| <b>MID SEMESTER BREAK (17 April – 28 April)</b> |   |   |
| <u>Wk 8</u> (1 May – 5 May)                     | L: No lecture: mid-term preparation<br>T: No tutorial (replaced by mid-term)<br><b>Assessment 1: mid-term test, time and location TBC</b> |   |

- Weekly schedule: Practice

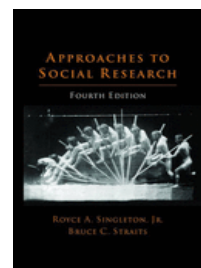
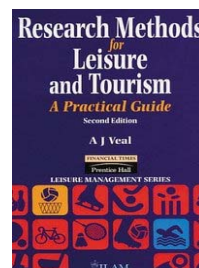
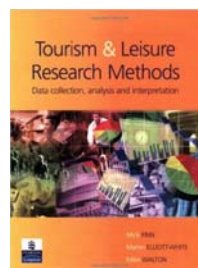
| Week                                    | Lecture /tutorial   | Reading /resources |
|---|---|--------------------|
| <u>Wk 9</u> (8 May – 12 May)            | L: Getting started with SPSS<br>T: Data extraction and initial coding for research report   |                    |
| <u>Wk 10</u> (15 May – 19 May)          | L: Descriptive data analysis and data exploration with graphs in SPSS<br>T: Analysing survey responses via descriptive statistics in SPSS |                    |
| <u>Wk 11</u> (22 May – 26 May)          | L: Finishing research report<br>T: Finishing research report<br><b>Assessment 2 deadline</b>  |                    |
| <u>Wk 12</u> (29 May – 2 June)          | L: Introduction to poster presentation<br>T: Developing a poster  |                    |
| <b>WEEKS 13, 14 AND 15 – EXAM WEEKS</b> |   |                    |

## 4. Learning goals

- Critically evaluate the application of various research methods to tourism
- Critically evaluate different research methods
- Apply and assess various forms of research analysis
- Integrate research applications into a comprehensive written and verbal report

## 5. Books

- No required textbook. Reading material per class will be provided via Blackboard.
- See Paper Study Guide for list of supplementary reading that could help you in preparing the assignments



## 6. Assessments

- Three assessments:

| # | Assessment type                            | Due date                | Weighting | Learning outcomes |
|---|--|-------------------------|-----------|-------------------|
| 1 | Individual assessment: mid-term test       | Week 8                  | 40%       | 1, 2              |
| 3 | Group research report                      | Week 11                 | 40%       | 1, 2, 3, 4        |
| 2 | Individual assessment: poster presentation | Week 13-15 (exam weeks) | 20%       | 4                 |

- Assessment 1: Mid-term test

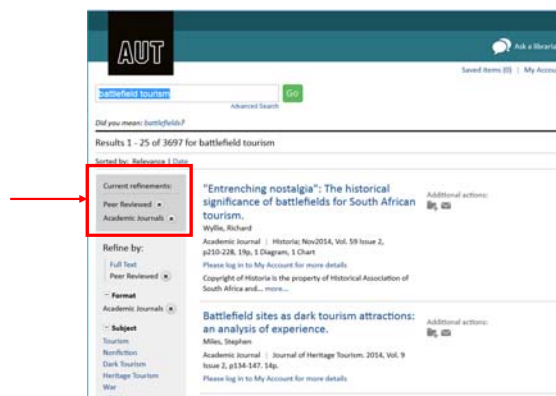
- Due date and time: Week 8, exact date and time TBC
- Content: The test will cover the topics discussed from weeks 1 to 6
- Structure of the test:

|        | Question style  | Marks per question/section | Marks total     |
|--------|---|----------------------------|-----------------|
| Part A | Ten multiple choice questions (true/false), covering theory | 1 mark                     | 10 marks        |
| Part B | Ten matching questions: matching concepts with statements   | 1 mark                     | 10 marks        |
| Part C | Five short answer questions                                 | 3 marks                    | 15 marks        |
|        |   |                            | <b>35 marks</b> |




- **Assessment 2: Group research report**
  - Due date and time: Friday 26 May, 6pm
  - Submission: Only soft copy via Turnitin (no print needed)
  - General purpose:
    - In groups of 2 to 3 you will design, set up, conduct and complete a research study
    - You are free to choose your own topic, provided it has a tourism focus and is applicable to your sample (i.e. your fellow students)
    - The project is meant to have you follow all distinguishable steps of research design and application, including some primary data analysis
  - Typical structure of work:
    1. Abstract (brief summary of report)
    2. Introduction to the topic (i.e. background, problem statement, research question)
    3. Literature review (i.e. themes and issues to be discussed)
    4. Methodology (i.e. philosophy/paradigm, approach, methods, survey design)
    5. Findings and analysis (i.e. results of analyses, relationship to theory)
    6. Conclusions and recommendations
    7. Reference list
    8. Appendix (i.e. questionnaire sample)


- **Requirements:**
  - 4,500-5000 words (excluding references and appendices) and a minimum of 15 academic references



- Academic references can be supplemented by visitor statistics (e.g. <http://www.tourismnewzealand.com/>)
- Use correct APA 6<sup>th</sup> referencing: <http://aut.ac.nz.libguides.com/APA6th>
- Write a conclusion that is more than a simple summary: <http://writingcenter.fas.harvard.edu/pages/ending-essay-conclusions>



- 
- **Assessment 3: Individual poster presentation**
    - Due date and time: during exam weeks, exact date and time TBC
    - The aim of the poster presentation is for you to present the setup and results of your research report in a visual poster format
    - Typical structure of poster:
      1. Introduction (i.e. brief summary of problem statement and main research questions)
      2. Literature review (i.e. themes and issues to be discussed)
      3. Methodology (i.e. methods of analysis used)
      4. Findings and analysis (i.e. results of analyses, relationship to theory)
      5. Conclusions
      6. Reference list


- 
- **Final assessment overview:**
    1. **Assessment 1:**
      - Mid-term test (40%)
      - Due date week 8
    2. **Assessment 2:**
      - Group research report (40%)
      - Due date 26 May (week 11)
    3. **Assessment 3:**
      - Individual poster presentation (20%)
      - Due date during exam weeks



**AUT**

# Tourism Research

Wk 1 Introduction to research  
Tutorial 01-2



## Today's session...



<https://www.youtube.com/watch?v=0Rnq1NpHdmw>  
Copyright: HBO (2016)

- In 2011, a scientific study proving that meat eaters are more selfish than vegetarians was widely reported in the Dutch popular media...



Joxemai



Elina Mark

<http://www.dutchdailynews.com/meat-eaters-selfish-less-social/>  
<http://www.nytimes.com/2013/04/28/magazine/diederik-stapels-audacious-academic-fraud.html?pagewanted=all>

- Enables you to explain the concept of research and the difference between scientific and non-scientific research
- Discusses the importance of openness in the scientific process
- Looks into multiple paradigms and their ultimate effect on scientific output
- Distinguishes between the various types of research
- Makes you understand the specific role of research in tourism

# 1. Scientific research: an introduction

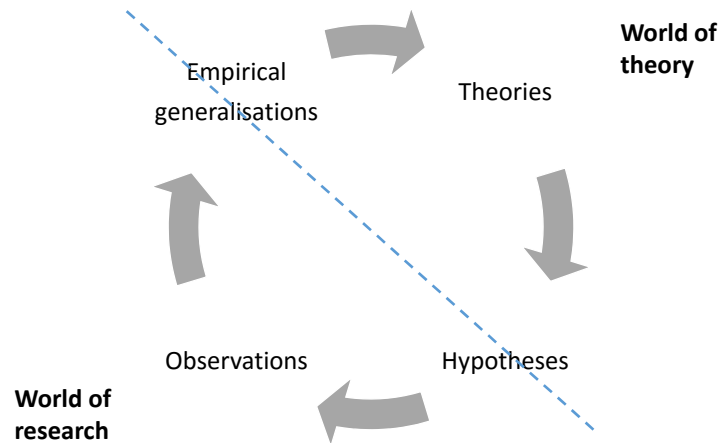
- An organised, systematic, critical, scientific inquiry, study or investigation into a specific problem, issue, setting or phenomenon undertaken with the objective of generating knowledge about the same
- So scientific research should be:
  - Systematic
  - Empirical (i.e. based on observations, and gathering, recording, analysing data)
  - Critical (i.e. open for review, experimentation)
  - With the intend to generate knowledge
  - In function of solving a specific problem

• Jennings (2010), Zikmund (1997)

- Importance of verification:
  - Whether a question can be approached scientifically depends on whether it can be subjected to verifiable observations (e.g. How many people believe in the theory of intelligent design? VS Is there a higher deity?)
  - For verification to be possible, explanations and findings need to be communicated clearly → reporting needs to be precise and reliable
- The tentative nature of science:
  - Scientists never achieve complete understanding
  - Every answer leads to new questions, every new fact, law, theory presents new problems
  - Scientific knowledge is based on empirical observations and these are always open to change through reinterpretation or possible contradictory new evidence

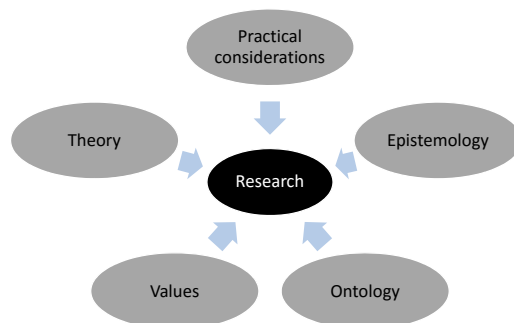
• Singleton & Straits (2005)

- Science as a process:
  - Scientific research therefore distinguishes itself by both its product (i.e. knowledge) and the process (i.e. the methods and logic of inquiry)



• Singleton & Straits (2005)

## 2. Variables influencing the scientific process



- a. Practical considerations:
- Availability of time and budget
  - Ethical considerations and aspects of law and regulations
  - Financer

• Cambré (2012)

### b. Theories:

- Theories are always important to guide research question in two ways: (1) to generate new theories, or (2) to test existing theories
- However, specifically in social sciences, theories might not be well developed and more likely to take the form of low-level principles
- Theories guiding the research might get a pervasive influence. Scientists develop a commitment to their work and might overlook or reject evidence that is contrary to their own ideas or theories. This is also true for disciplines as a whole, where major theories are only displaced after prolonged contradictory evidence

### c. Values

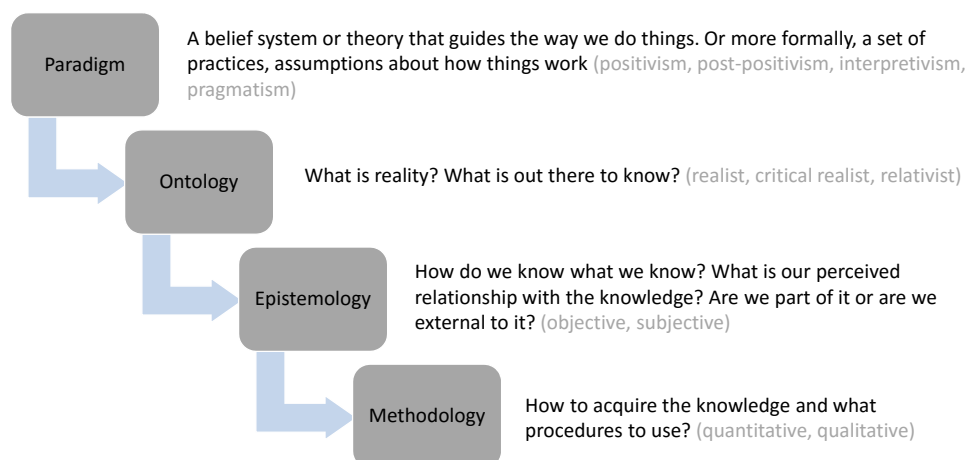
- Can reflect the beliefs or feelings of a researcher
- Can process bias at any or all points in the social research process, e.g.
  - Choice of research area and methods
  - Formulation of research question, research design, and data collection techniques
  - Implementation of data collection
  - Analysis and interpretation of data
  - Conclusions
- Can produce affinity or sympathy, especially in field study settings

From  
inconspicuous to  
incorrect

• Cambré (2012), Singleton & Straits (2005)

### d. Epistemology and ontology:

- Scientists themselves are not merely passive recorders of the social world, rather they actively interpret what they see on the basis of theories, assumptions, and values
- Therefore it is important to understand the particular world views and thought frameworks that guide the research



• Wahyuni (2012)

|              | Positivism   | Post-positivism   | Interpretivism  | Pragmatism  |
|--------------|--|---|---|---|
| Ontology     | Naïve realism; Reality is external, objective and independent of social actors                     | Critical realism; Reality is objective and exists independently of human beliefs and knowledge but is interpreted through social conditioning | Constructivism; Reality is socially constructed, subjective, may change and is multiple                                 | Reality is external, multiple. The view on reality is chosen so to best achieve an answer to the research question                                    |
| Epistemology | Objective; Only observable phenomena provide credible data. Focus on causality and generalisations | Primary objective; Phenomena can provide credible data. Focus on explaining within a context  | Subjective; Focus on details of situation. The reality behind these details, subjective meanings and motivating actions | Objective and subjective; Either of both observable phenomena and subjective meanings can provide acceptable knowledge depending on research question |
| Axiology     | Value-free and etic  | Value-laden and etic  | Value-bond and emic   | Value-bond and etic-emic  |
| Methodology  | Quantitative   | Quantitative or qualitative   | Qualitative   | Quantitative and qualitative (mixed or multi-method design)   |

• Wahyuni (2012)

- Does it even matter in real life?



<https://www.youtube.com/watch?v=MXrNj3t6Vxo>  
Copyright: Fox (2006)



- Examples: Guess the paradigm

The difference between 180 and 158 is 22.

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**Try This**

Explain how you found your answer in Problem 4.


Math

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**Practice**

<http://www.lolwot.com/20-of-the-best-times-students-were-smarter-than-their-tests/>

**Cause:** Tony practices the piano 20 minutes every day.

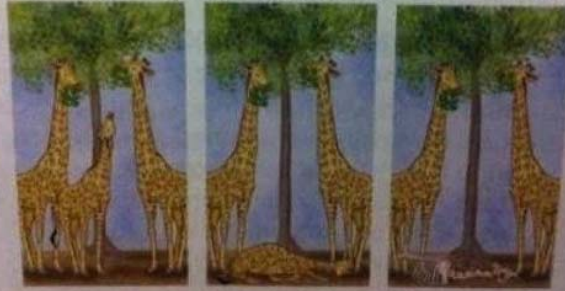


**Effect:** he is  
a big  
nerd

<http://www.lolwot.com/20-of-the-best-times-students-were-smarter-than-their-tests/>

10. The diagram below best illustrates

- ~~a. Lamarck's theory of evolution.~~
- ~~b. Darwin's theory of evolution.~~
- ~~c. Malthus's principles.~~
- ~~d. Lyell's theory about past changes.~~
- e. Giraffes are heartless creatures.



<http://www.lolwot.com/20-of-the-best-times-students-were-smarter-than-their-tests/>

There are 300 students in Year 10. Mary and Mark want to find out Year 10's favourite colour.

Mary asks 30 people.

Mark asks 150 people.

Mark says 'My conclusions are more likely to be reliable than Mary's'.

Why does Mark think he is right?

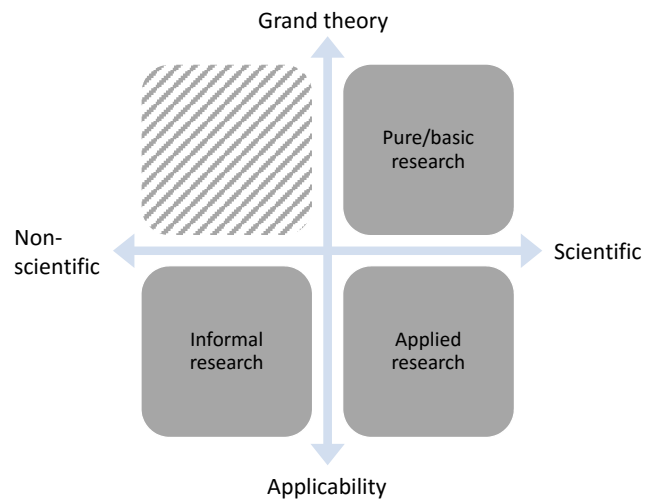
Because Mark is a man

<http://www.lolwot.com/20-of-the-best-times-students-were-smarter-than-their-tests/>

### 3. Types of research: the goal



<https://www.youtube.com/watch?v=ckv279qTibo>  
Copyright: Guillaume Duval (2006)



#### a. Informal research:

- Informal 'research' does not fall under the scope of this paper
- Refers to any type of observations done by anyone involved in the service industry and does not adhere to the typical structure of a scientific enquiry
- E.g. a waitress noticing guests are consistently returning a particular item of food. This can be observed, noted down, and maybe enquired about
- E.g. a tourist business communicating with guests via Tripadvisor in order to check whether guest expectations were met and to deal with complaints

#### b. Pure/basic research:

- Is intended to expand the boundaries of knowledge itself, conducted to verify the acceptability of a given theory
- It doesn't directly involve the solution to a particular, pragmatic problem → solutions cannot be immediately implemented
- Basic researchers emphasise high scientific standards - rigorousness

• Jennings (2010), Zikmund (1997)

### c. Applied research:

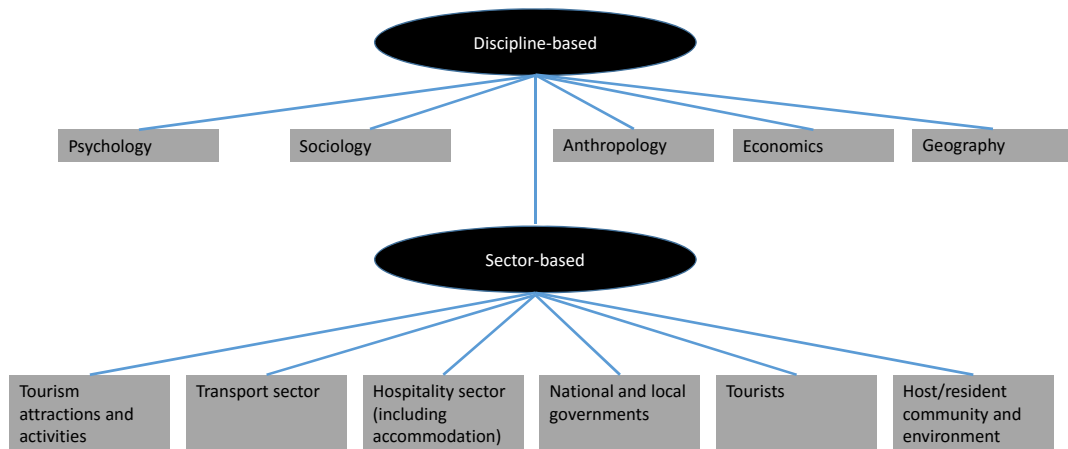
- Is undertaken to answer questions about specific problems or make decisions about a particular course of action or policy decision
- Most tourism research is located in the applied field. It involves elements of application of the findings into practice (e.g. planning, development, problem solving, issue identification, improvement of services, comparison of pricing policies)
- Applied research findings ought to have high relevance, useable results
- Research acts as advisor or consultant to the organisation

• Jennings (2010), Zikmund (1997)

## 4. Tourism research fields

- Why research is important for the tourism industry:
  - Tourism demand and supply are complex and interlinked. Research helps to understand how the three A's (access, amenities, attractions) impact the product
  - Tourism growth has been substantial and has brought about a complementary need for growth in tourism information. Research generates temporal views of past, present and future
  - Tourism growth brings about diverse impacts. Research provides information on these social, environmental, and economic impacts
  - Offers insights into motivations, needs, expectations and levels of satisfaction which can be used in business domains such as marketing and promotion
  - Provides information for planning and policy making by private and public sectors, on different levels by gathering information on a variety of aspects
  - Highlights educational needs for commercial operators and service providers

- The different research fields:




**a. Tourism attractions and activities:**

- Destination images
- The competitiveness of a tourism product/experience
- The quality of service delivered by staff
- Site visitation patterns
- The quality of educational components offered during a tourism experience
- Current and potential target markets
- Social, cultural, environmental and economic impact assessments
- The location of a tourism product/experience in the destination life cycle
- Strategies for future planning and marketing, or an understanding of the consequences of legislative and statutory changes

**b. Transport sector:**

- Development and evaluation of pricing strategies
- Determination of income and price elasticity of demand
- Data regarding quality control
- Current usage trends and patterns, as well as future forecast of transport needs
- Customer expectations and satisfaction
- Seasonality impacts
- The effectiveness of innovation and technological advancements

- Jennings (2010)



c. Hospitality sector:

- Quality evaluation and client needs in regard to services, amenities, and facilities
- Evaluation of menu changes and menu contents
- Health and safety issues
- Education and training requirements
- Effectiveness of loyalty programmes
- Development and monitoring of market profile and evaluation of marketing strategies
- Competitiveness analysis and competitor products


d. National and local governments:

- Establish visitation data sets to monitor visitation patterns for planning and management purposes
- Gather data on visitor numbers and activities in order to manage natural and built environment
- Know about expenditure patterns to regulate or stimulate investment
- Determine the effectiveness of overseas advertising and promotional campaigns

e. Tourists:

- Developing typologies in association with market segmentation (e.g. generating areas, socioeconomic backgrounds) and psychometric profiles (e.g. values, attitudes, expectations)
- Understanding motivations to assist in providing quality experiences, appropriate facilities, services, maintenance of tourism spaces, and marketing campaigns

• Jennings (2010)



f. Host/resident community and environment:

- Community participation in tourism planning and development
- Research to establish social, cultural, and environmental impacts and community attitudes to development
- Environmental audits
- Identification of issues and subsequent development of legislative requirements and policy developments
- Determination of carrying capacities
- Identification and monitoring of attitudes to user-pays pricing strategies

• Jennings (2010)

## 5. Recognising elements of scientific inquiry

- Reading: Fielding, D., & Knowles, S. (2014). Can you spare change for charity? Experimental evidence on verbal cues and loose change effects in a Dictator Game. doi:10.1007/s10683-014-9424-x
- Questions:
  - Can you identify the elements of the scientific process? From theory, to hypothesis, to observation, to generalization?
  - How do the authors make sure their research is verifiable?
  - What kind of paradigm would you say is behind this type of research?

## Conclusion

- Scientific research distinguishes itself on two important aspects: the goal (acquiring knowledge) and the process (systematic, empirical, critical, verifiable)
- Because of the importance of the process, we need to understand the elements that can influence the scientific process (i.e. practical considerations, theory, values, ontology, epistemology) and openly communicate these throughout the research report
- While we are concerned with the scientific site of research, in a way we are also involved in informal kinds or research throughout our life
- Research within tourism can be distinguished based on the main discipline used and on the specific sector under investigation, with different sectors having specific research needs



## References

- Cambré, B. (2012). *Business Research Methods* [PowerPoint slides]. Business Research Methods. Retrieved from Antwerp Management School.
- Fielding, D., & Knowles, S. (2014). Can you spare change for charity? Experimental evidence on verbal cues and loose change effects in a Dictator Game. doi:10.1007/s10683-014-9424-x
- Jennings, G. (2010). *Tourism research (2<sup>nd</sup> ed.)*. Milton, Australia: John Wiley & Sons.
- Singleton, R. A. Jr., & Straits, B. C. (2005). *Approaches to Social Research (4<sup>th</sup> ed.)*. New York, NY: Oxford University Press.
- Wahyuni, D. (2012). The Research Design Maze: Understanding Paradigms, Cases, Methods and Methodologies. *Journal of Applied Management Accounting Research*, 10(1), 69-80. Retrieved from <http://papers.ssrn.com>
- Zikmund, W. G. (1997). *Business research methods (5<sup>th</sup> ed.)*. Fort Worth, TX: The Dryden Press.

## Multimedia

- Fox (2006). *Family Guy, Season 4, Episode 21 – I Take Thee, Quagmire*. Retrieved March 2, 2017, from <https://www.youtube.com/watch?v=MXrNj3t6Vxo>
- Guillaume Duval (2006). *Mannen presteren beter ... wanneer er iemand kijkt. Studio 1 commercial*. Retrieved February 16, 2016, from <https://www.youtube.com/watch?v=cky279qTibo>
- HBO (2016). *Scientific Studies: Last Week Tonight with John Oliver*. Retrieved November 22, 2016, from <https://www.youtube.com/watch?v=0Rnq1NpHdmw>

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# Tourism Research

Wk 2

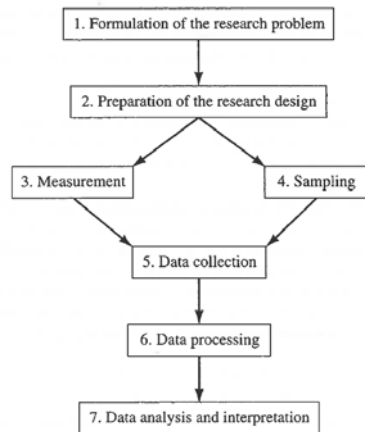
Methodology and research design

Lecture 02-1

## Today's session...

- Describes the different stages in the research process
- Pays attention to the research objectives and the importance of defining a research question
- Discusses the different research designs that can be used in tourism research
- Explains the differences between quantitative and qualitative methods
- Aims to let you understand the use of a mixed method approach

# 1. Stages of social research



Singleton & Straits (2005, p.70)

- A research plan:
  - An important condition for success of research
  - Prevents unintended research
  - Makes it possible for others to evaluate your research
  - Makes the research process less dependent on a single person
  - Gives clarity on sponsors, budgets, expectations and definitions
  - Makes you think of possible ethical issues
  - Links product (i.e. what will be analysed) with process (i.e. technical design)

• Cambré (2012)

- It is best to start thinking about your research early on:
  - Begin to think about topics that might interest you and that might provide you with a researchable area
  - It might feel like an unproductive process at first, with false starts or directional changes but will prevent difficulties at a much later stage
- Questions to ask yourself:

| What?  | Why?   |
|--|--|
| <ul style="list-style-type: none"> <li>• What puzzles/intrigues me?</li> <li>• What do I want to know more about / understand better?</li> <li>• What are my key research questions?</li> </ul>  | <ul style="list-style-type: none"> <li>• Why will this be of enough interest to others?</li> <li>• Can the research be justified as a contribution to knowledge?</li> </ul>                        |
| How – conceptually?  | How – practically?   |
| <ul style="list-style-type: none"> <li>• What models, concepts, and theories can I draw on to answer my research questions?</li> <li>• How can these be brought together in a conceptual framework to guide my investigation?</li> </ul> | <ul style="list-style-type: none"> <li>• What investigative styles and techniques can I use to apply the conceptual framework?</li> <li>• How can I gain access to information sources?</li> </ul> |

• Cambré (2012)

## 2. The start: formulation of the research problem

- This consists of three related, hierarchical procedures:
  - The problem statement
  - The research question
  - Hypotheses/Investigative questions
  
- a. The problem statement:
  - General starting point where a general societal issue is being observed
  - A high-level statement of intent whereby a certain deficiency is identified (a management question, an academic problem, a sustainability issue) that triggers a need for information

• Cooper & Emory (1995)

### b. Research question:

- Focuses the scope on what it is you want to research. The research question is a fact-oriented, information-gathering question. It is the single question that best states the objective of the research study
- Sources can come from personal interest, social problems, new developments in society, etc. and will help decide literature search, research design, data collection, etc.
- A research question should be:
  - Researchable (no yes-no questions!)
  - Based on current theory and state of knowledge (i.e. logical)
  - Potentially valuable and creating new knowledge
  - Not too small, not too broad
  - Formulated as a question
  - Goal-oriented
- Some types of research questions:
  - Frequency: "How much...?", "How many times...?"
  - Differences: "What are the differences between male and female...?"
  - Relationship: "To what extent is x affected by y?"

• Cambré (2012), Cooper & Emery (1995)

- Think of formulating a research question in terms of: which relationships among which variables of which units of analysis?
  - Units of analysis = what or who is to be described or analysed
  - Variables = characteristics of units that vary over cases, over time, or over both cases and time
  - Relationships = anticipations of causal effects between variables (requires association, direction of influence, nonspuriousness)

c. Hypotheses/Investigative questions:

- To further guide the research process, the central research question is broken down into a number of sub-questions or investigative questions. Together these ought to satisfactorily respond to the general research question
- Specifically in quantitative research, these often take the form of hypotheses. Hypotheses are a specific type of questions that speculate the possible relationships between variables, deduced from theory, and that have to be tested

• Cambre (2012), Cooper & Emery (1995), Singleton & Straits (2005)

- Example: Watanabe, S., Sakamoto, J., & Wakita, M. (1995). Pigeons' discrimination of paintings by Monet and Picasso. *Journal of the Experimental Analysis of Behavior*, 63(2), 165-174. doi: 10.1901/jeab.1995.63-165



the-athenaeum.org



See-ming Lee

- Problem statement?
- Research question?
- Hypotheses?



### 3. The plan: preparation of the research design

- Research design provides a framework for decisions about data collection methods, sampling techniques, field work procedures and data analysis efforts. The design is therefore critically different from research methods. The latter are simply the tools a researcher uses for collecting empirical materials/data and for interpreting or analysing the information collected
- The preliminary research outline and strategy will first of all depend on the original research purpose (as intrinsic to the research question)
  1. Exploratory → Unstructured research design
  2. Descriptive → Structured research design
  3. Explanatory (causal) → Structured research design

• Cambré (2012)

- There are 5 major designs:

1. Experimental design:

- Looks at effect relationship between dependent and independent variable in time
- Control variables are very important in experimental designs

2. Cross-sectional/correlational design:

- Data collection happens with multiple units (observations), at one time, to collect quantitative data, on at least two variables, in order to check for patterns
- Via surveys, structured observations, content analysis, official statistics, diary research, etc.



<https://www.youtube.com/watch?v=OSsPfbup0ac>  
Copyright: Cool psychologist (2009)

• Cambré (2012)

### 3. Longitudinal design:

- Either panel or cohort research. Observations are made over multiple time periods
- Longitudinal design is time consuming and comes at high costs

### 4. Case design:

- Detailed and in-depth analysis of one case (= to highlight complexity and specificity)
- Things that can be a case: e.g. community, family, organisation, person, event
- A case design has the problem of generalisation: a case is not a sample and the aim should therefore not be generalisability

### 5. Comparative design:

- Two or more cases with more or less identical technique
- Understand social phenomena through comparison (multiple-case research)
- Cross-cultural, cross-national
- Comparability between cases leads to theoretical reflection, not generalisation
- It is a hybrid that is both an extension of cross-sectional research and of case research

• Cambré (2012)

## 4. The toolset: choice of methodology and methods

- Within the design choice, specific methods of data collection and analysis can be implemented within different designs, even though some designs automatically lead to a specific choice
- We can distinguish 3 main methodologies, each consisting of numerous methods:
  1. Quantitative
  2. Qualitative
  3. A mixed methodology
 (With some researchers further identifying indigenous and cross-cultural methodologies)

• Jennings (2010)



## 1. Quantitative methodology:

- Mostly associated with a (post-)positivist paradigm
- A deductive approach that establishes knowledge by testing hypotheses. The world is seen as consisting of causal relationships. The researcher therefore identifies and tests relationships between variables
- An objective relationship between the researcher and the participants (i.e. objective epistemology). The researcher is essentially viewed as the outsider by study participants
- The research design is structured, systematic and replicable
- Data are presented numerically and analysis is based on statistics
- The report provides findings from the sample that are ideally generalised to the wider study population

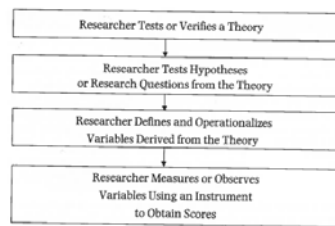


Figure 7.4 The Deductive Approach Typically Used in Quantitative Research

Creswell (2003, p.125)

• Jennings (2010)

## 2. Qualitative methodology:

- Mostly associated with the interpretive paradigm
- An inductive approach that establishes the nature of truth by being grounded in the real world. The world is seen as consisting of multiple realities and knowledge is subjective
- The researcher is essentially viewed as an insider by study participants
- The research design is unstructured in order to respond to the field setting, and emerges in the course of field work. The sample method is non-random
- Empirical materials are presented as text, rather than numerical representations
- Interpretation is focused on eliciting key themes

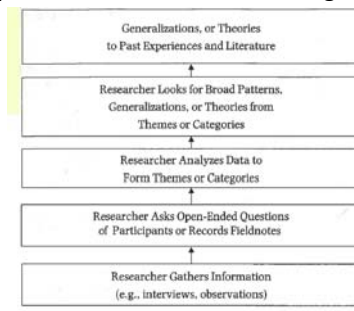


Figure 7.5 The Inductive Logic of Research in a Qualitative Study

Creswell (2003, p.132)

Reversal of the research stages is exemplary in what is known as grounded theory:

- Idea that exploratory (unlike descriptive and explanatory) studies cannot be framed in a hierarchical way of research.
- Grounded theory reverses the research design by starting with observations and constructing a theory through the analysis of data
- Unlike positivist research, grounded theory research starts with a general question or just the collection of observations and involves:
  - Establishing codes = identifying anchors that represent key points
  - Develop concepts = group codes of similar contents into higher-order concepts
  - Establish categories = broad groups of similar concepts that generate a theory
  - Come to a theory = collection of categories that detail subject of research

• Jennings (2010)



<https://www.youtube.com/watch?v=O3oVyRalfck>

Copyright: The Jane Goodall Institute (2015)

### 3. Mixed methodology:

- Refers to the mixing of both quantitative and qualitative methods in varying ways and degrees
- Central to the use of mixed (or multiple) methods is the idea of methodological triangulation: by using multiple methods that do not share the same inherent weaknesses, we enhance our chance of solving the problem. Therefore, in social science, two or more dissimilar measuring instruments or approaches are used. If the methods independently produce similar findings, our confidence in the result increases
- Possible combinations:

| <i>Implementation</i>            | <i>Priority</i> | <i>Integration</i>        | <i>Theoretical Perspective</i> |
|----------------------------------|-----------------|---------------------------|--------------------------------|
| No Sequence<br>Concurrent        | Equal           | At Data Collection        | Explicit                       |
| Sequential—Qualitative<br>first  | Qualitative     | At Data Analysis          |                                |
| Sequential—Quantitative<br>first | Quantitative    | At Data<br>Interpretation | Implicit                       |
|                                  |                 | With Some<br>Combination  |                                |

Creswell (2003, p.211)

- Jennings (2010), Singleton & Straits (2005)

## Conclusion

- Because scientific research is characterised by its process, thorough attention needs to be paid to the design stages
- The first and most important aspect of any research is a clearly identified research question, originating from a broader problem statement and dissected into different hypotheses or investigative questions
- The grand design of the research involves thinking about all subsequent steps that need to be taken in order to arrive to an answer to the research question and can include experimental, cross-sectional, longitudinal. case, and comparative design
- These broad designs then further define which specific methodology (quantitative, qualitative, mixed) will be used, linking the research question and paradigms with the final lower-level methods of data collection and interpretation

## References

- Cambré, B. (2012). *Business Research Methods* [PowerPoint slides]. Business Research Methods. Retrieved from Antwerp Management School.
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- Creswell, J. W. (2003). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (2<sup>nd</sup> ed.)*. Thousand Oaks, CA: Sage.
- Jennings, G. (2010). *Tourism research (2<sup>nd</sup> ed.)*. Milton, Australia: John Wiley & Sons.
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## Multimedia

Cool Psychologist (2009). *The Bystander Effect*. Retrieved February 17, 2016, from <https://www.youtube.com/watch?v=OSsPfbup0ac>

The Jane Goodall Institute (2015). *Reflections from Jane Goodall on her 55 years of research with the Chimpanzees of Gombe*. Retrieved February 17, 2016, from <https://www.youtube.com/watch?v=O3oVyRalfck>

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# Tourism Research

Wk 2

Methodology and research design

Tutorial 02-2

## Today's session...

- Gives some exercises on developing a research question
- Tries to identify research design and main methods from a tourism paper
- Starts with forming groups and lets you think about problem statement and main research question

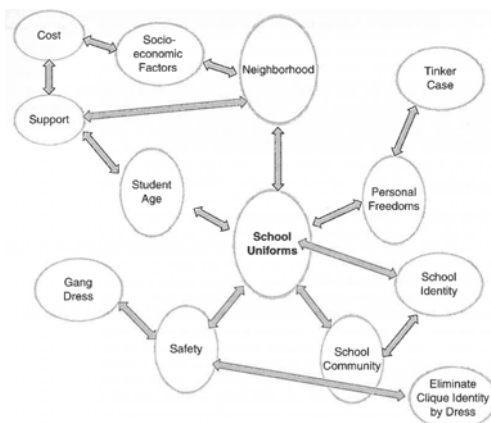
# 1. Exercise: developing a research question

- Question: Based on the movie below, identify a general problem statement and researchable question



<https://www.youtube.com/watch?v=gXLu2-Faask>  
Copyright: In The House NZ (2015)

- Question: Based on the next movie, try to identify a research question by using a concept map and table (examples shown below). Specifically state which are your units of analysis, the variables to research and the suspected relationship



| MAIN IDEA/CONCEPT: SCHOOL UNIFORMS      |                      |   |                        |
|---|----------------------|---|------------------------|
| Major Ideas/Things/Concepts             |                      |   |                        |
| Safety                                  | Freedoms             | Community                                 | Demographics           |
| Connected Ideas/Things/Concepts         |                      |   |                        |
| Gangs                                   | Personal freedom     | School/Local                              | Student age            |
| Cliques/Bullying                        | Self-expression      | School identity                           | Urban?                 |
| ID students                             | Tinker Case          | Support school                            | Transient?             |
| -Intruders stick out                    | Group vs. individual | All or some schools                       | Can parents afford it? |
| -In/out of school students identifiable |                      | Can community afford to provide uniforms? |                        |

- Gregory (2013, p.4-5)





<https://www.youtube.com/watch?v=yHXa62lrd-E>  
Copyright: BBC News (2015)

## 2. Exercise: identifying research design

- **Reading:** Neuts, B., & Nijkamp, P. (2012). Tourist crowding perception and acceptability in cities: An Applied Modelling Study on Bruges. *Annals of Tourism Research*, 39(4), 2133-2153. doi:10.1016/j.annals.2012.07.016
- **Questions:**
  - Can you identify the problem statement, research question, and hypotheses?
  - Is this an exploratory, descriptive or explanatory study? How can you tell?
  - Which of the research designs can you identify in this study? And are the methods used of quantitative, qualitative, or mixed nature?



### 3. Preparation of group assignment

- Form groups per 2 to 3 students
- Use the time to set up a plan of action and brainstorm about a potential research topic



Carabo

### Conclusion

- Interesting research questions can be formed through newspaper reading, watching the news, etc. Each social issue can lead to a multitude of potential research questions
- A concept map helps you to look at the bigger picture. After drawing the bigger picture, you need to decide which variables to keep, which ones to drop and how to develop a scope for your research question
- While the lecture identified 5 main categories of research design, actual design is often a hybrid of types

- Gregory (2013, p.4-5)

## References

Gregory, J. L. (2013). Concept Mapping, Finding Your Way. In B. P. Skott, & M. Ward (Eds.), *Active Learning Exercises for Research Methods in Social Sciences* (pp. 3-7). Thousand Oaks, CA: Sage.

Neuts, B., & Nijkamp, P. (2012). Tourist crowding perception and acceptability in cities: An Applied Modelling Study on Bruges. *Annals of Tourism Research*, 39(4), 2133-2153.  
doi:10.1016/j.annals.2012.07.016

## Multimedia

BBC News (2015). *Spike in tourist driver crashes in New Zealand*. Retrieved February 17, 2016, from <https://www.youtube.com/watch?v=yHXa62lrd-E>

In The House NZ (2015). *23.09.15 – Question 3 – Andrew Little to the Prime Minister*. Retrieved February 17, 2016, from <https://www.youtube.com/watch?v=gXLu2-Faask>

AUT

# Tourism Research

Wk 3 Literature review and secondary data analysis  
Lecture 03-1

## Today's session...

- Discusses killer icebergs and poor penguins



Reinhard Jahn

The Sydney Morning Herald reported that more than 150,000 Adélie penguins have died in a colony in Antarctica after the grounding of a giant iceberg.

The penguins used to thrive at Cape Denison, where a large area of water used to be kept open near the shore. However, when an iceberg grounded in the bay at the end of 2010, floating sea ice was trapped near the coast leading the penguins to have to make a round trip of more than 120km to feed in the sea. As a result, since 2011 the population has plummeted from 160,000 to just 10,000.

Fairfax Media © <http://www.smh.com.au/environment/climate-change/giant-iceberg-could-wipe-out-adlie-penguin-colony-at-cape-denison-antarctica-20160212-gmslgx.html>

- Pays attention to the importance of the literature reviews and the steps that need to be undertaken
- Shows that while a literature review is a secondary data analysis, secondary data can have further importance in answering original research questions
- Discusses some of the sources of secondary data and its advantages and disadvantages compared to primary data

## 1. At the beginning of it all: the literature review



Tonymetone

Lord Polonius: What do you read my Lord?  
 Hamlet: Words, words, words.  
 Lord Polonius: What is the matter, my lord?  
 Hamlet: Between who?  
 Lord Polonius: I mean, the matter that you read,  
 my lord.

*From: Hamlet (William Shakespeare)*

- The lit review has a special place in the research process. Possibly with the exception of a grounded theory research, a literature review comes before any choice on research design or method
- There are 2 broad forms of lit review, each with their specific goals:
  1. Primary, explorative
  2. Critical, in-depth

- Saunders et al. (2000)

### 1. Primary, explorative:

- Is at the first stage of the research project
- The explorative lit review is meant to:
  - Identify current problems. Providing background for the problem you want to study
  - Put the problem in a historical perspective and get to know the current state of knowledge
  - Understand how others handled similar problems in the past
  - Help to state a research question

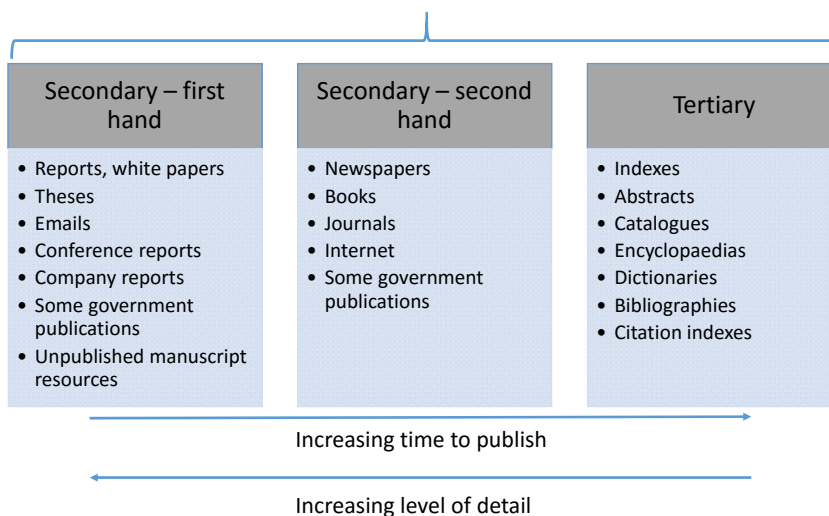
### 2. Critical, in-depth:

- Conducted after the research question and important hypotheses have been stated
- Goal is to attempt to provisionally answer the research question on the basis of others' research
- Only scientific literature should be used
- Summarises and integrates current knowledge of the topic (agreements, disagreements, different schools of thought, new questions arising, unanswered questions)
- A temporary conclusion can take the form of a conceptual model and could further refine the research questions

• Saunders et al. (2000)

### • Main sources for the lit review:

Represents the flow of information from the original (primary) source



• Saunders et al. (2000)

## 2. Steps in the lit review

- The lit review is an iterative process and should be repeated multiple times throughout the research
- The main steps are: prepare → conduct → analyse → report
  1. Preparing the search:
    - Decide on certain parameters: which kind of literature? From which period? How many references?
    - Choosing key terms to search literature (e.g. names of relevant authors, organisations, keywords). This can be influenced via brainstorming, primary literature search, checking dictionaries and encyclopaedias, etc.
  2. Conduct the search:
    - Systematic via identified key terms
    - Snowballing = looking up literature that has been cited in previously read books and articles
    - Scanning and browsing in books
    - Continue searching information until material overlaps and key themes and perspectives are identified

• Saunders et al. (2000)

### 3. Analyse the literature

- First: read the abstract (does it look relevant?)
- Then: skim the text. Focus most on introduction, discussion and conclusion sections
- Make a summary in your own words (paraphrasing not quoting)
- Write down key words and concepts from that study so you can link it with other literature
- Write down own comments, reflection on the results

### 4. Report

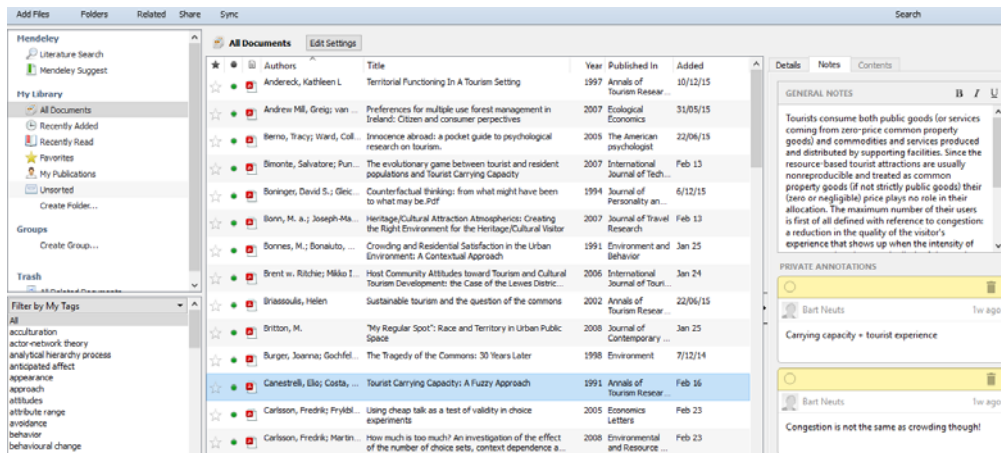
- Not a collage of summaries. Instead it is a first attempt to answer the research questions in order to show the current state of knowledge and what your own research will add to this
- Write the literature report per topic/theme, not per author/source! This way, divergent viewpoints and schools of thought are centralised, combined and critically evaluated. This identifies how previous works will support and enhance your study and is also intended to find grey areas of knowledge and gaps which indicate the significance of your research question
- Some ways to describe others' work:

According to A (2004) and B (1998), customer satisfaction means ... In his study on ... G (2002) confirmed these findings in the field of accommodation services. However, E's (2003) work examined the concept from a different angle and suggested that ...

• Saunders et al. (2000)



- For large research projects, a system to collect, order, and annotate literature is useful. Two free reference managers to consider are:
  - Mendeley: <https://www.mendeley.com/home/c/?e=238>
  - Zotero: <https://www.zotero.org/>



### 3. Conclusion on lit review

|                                 |  |
|---------------------------------|--|
| <b>Format</b>                   | Not an unstructured collage but a structured text that displays ideas by themes and adds comments                              |
| <b>Relevancy</b>                | Identifies theories and previous research that influenced the research topic   |
| <b>Significance</b>             | Shows a gap in previous research that needs to be filled and identifies the methodology that might be adopted for the research |
| <b>Authority</b>                | Surveys scholarly articles, books and sources, relevant to a particular issue or set of theories                               |
| <b>Credential and knowledge</b> | Provides a description, summary, and critical evaluation of each work  |
| <b>Support</b>                  | Assists the analysis and interpretation of your data   |

## 4. A focus on secondary data analysis

- The two main forms of data a researcher can access are primary and secondary data

### Primary data

(or empirical material) are those that are collected first-hand by the researcher to use specifically in the research project (e.g. responses to surveys, interview texts, observations)



### Secondary data

Are those that have been produced by others, not connected to the research project, for their primary use (e.g. governmental documents and statistics, diaries and letters, journal articles). The lit review always uses secondary data!

- Jennings (2010)

- While secondary data is the building stone of the lit review, secondary data can be used for broader purposes and serve as tools to answer your own unique research questions
- Some major secondary data for tourism research include:
  - Public documents (statistical documents and government reports; NZ Tourism Strategy 2015)
  - Archival documents (public records and historical data)
  - Personal documents (diaries, personal letters, emails, and autobiographies)
  - Administrative documents (generated in the business environment and associated with public, private and non-profit organisations, e.g. annual reports, meeting notes, and in-house documentations)
  - Formal study and reports (may have conditions or restrictions for use, e.g. commercial-in-confidence reports)
  - Online, publicly shared resources (blogs, Instagram, TripAdvisor reviews, etc.)

- Jennings (2010)

- Secondary data analysis involves:
  - Identifying and locating relevant documents and materials
  - Gathering and analysing/interpreting those documents (finding methodological fit between the secondary sources and your researcher project)
- Example: Stocker, T. L., Dutcher, L. W., Hargrove, S. M., & Cook, E. A. (1972). Social Analysis of Graffiti. *The Journal of American Folklore*, 85(338), 356-366. Retrieved from: <http://www.jstor.org/stable/539324>.



Jackson Mississippi, USA

- Graffiti in toilets as an unobtrusive measure to reveal patterns of customs and attitudes of society
- Data collected from more liberal to more conservative schools and for male and female toilets
- Graffiti coded according to various categories: e.g. homosexual, heterosexual, nonsexual, racist, etc.

• Jennings (2010)

- Advantages versus disadvantages of using secondary data:

| Advantages  | Disadvantages   |
|---|---|
| <ul style="list-style-type: none"> <li>• Retrospective = enables researchers to go back in time to re-examine tourism phenomena and establish patterns and trends</li> <li>• Quick and easy accessibility and at low cost</li> <li>• Data collected are spontaneous</li> <li>• Non-reactive (study participants are unaware that data are being used)</li> <li>• Produced in the language of the participants rather than the researcher</li> </ul> | <ul style="list-style-type: none"> <li>• Not always accessible (i.e. privacy issues)</li> <li>• Incompleteness</li> <li>• Sometimes questionable reliability</li> <li>• Possible methodological problems, bias, applicability to current research</li> <li>• Questionable representativeness and problematic comparisons</li> </ul> |

• Jennings (2010)

- Because of the limitations of using secondary data to answer research questions, most research still is based on collecting primary data via a quantitative and/or qualitative method (which will be discussed in more detail in the next classes)
- Advantages versus disadvantages of using primary data:

| Advantages  | Disadvantages  |
|---|--|
| <ul style="list-style-type: none"> <li>• Collected for the specific purposes of the project</li> <li>• If relevant guidelines and protocols are followed correctly, the data will have relevancy</li> <li>• Enables the researcher to target the specific study population</li> <li>• Lack of inherited methodological errors and bias</li> </ul> | <ul style="list-style-type: none"> <li>• Reactive nature (participants are aware they are being studied and may change behaviours, opinions, attitudes, or values)</li> <li>• Obtrusive nature (people have to spend time and energy to respond)</li> <li>• Time-consuming and resource-intensive</li> </ul> |

• Jennings (2010)

## Conclusion

- The key concept in scientific research is standing on the shoulders of giants
- Therefore, primary to defining the research question and throughout the research process a thorough literature review and analysis needs to be conducted in order to identify the state of current knowledge and the existing knowledge gaps where contributions can be made
- These gaps in existing knowledge will primarily be filled through the primary quantitative and/or qualitative method, although depending on the research question there are opportunities to use secondary data sources to answer original questions

## References

Jennings, G. (2010). *Tourism research (2<sup>nd</sup> ed.)*. Milton, Australia: John Wiley & Sons.

Saunders, M., Lewis, P., & Thornhill, A. (2000). *Research Methods for Business Students (2<sup>nd</sup> ed.)*. London, United Kingdom: Financial Times/Prentice Hall.

Stocker, T.L., Dutcher, L.W., Hargrove, S.M., & Cook, E.A. (1972). Social Analysis of Graffiti. *The Journal of American Folklore*, 85(338), 356-366. Retrieved from: <http://www.jstor.org/stable/539324>.

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# Tourism Research

Wk 3                      Conceptualisation and operationalisation  
Tutorial 03-2

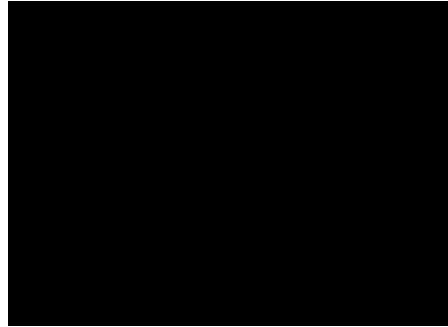
## Today's session...

- Builds on the previous classes on devising a research question and analysing literature and looks at the important aspects of conceptualisation and operationalisation in the scientific process
- Briefly introduces these concepts, and gives an exercise in order to identify the steps from concept to measurement item in a journal article
- Leaves you time to further discuss the group research project, with specific attention to identifying concepts, dimensions, and think about measuring these concepts



# 1. Conceptualisation and operationalisation

- Scientific norms require description of methods and procedures so studies can be replicated. It is essential to have clear references to the terms in the hypothesis
- E.g.: How many acts of violence do you count in this movie (Shell, 2014)?



<https://vimeo.com/8965484>  
Copyright: Warner Bros (1952)

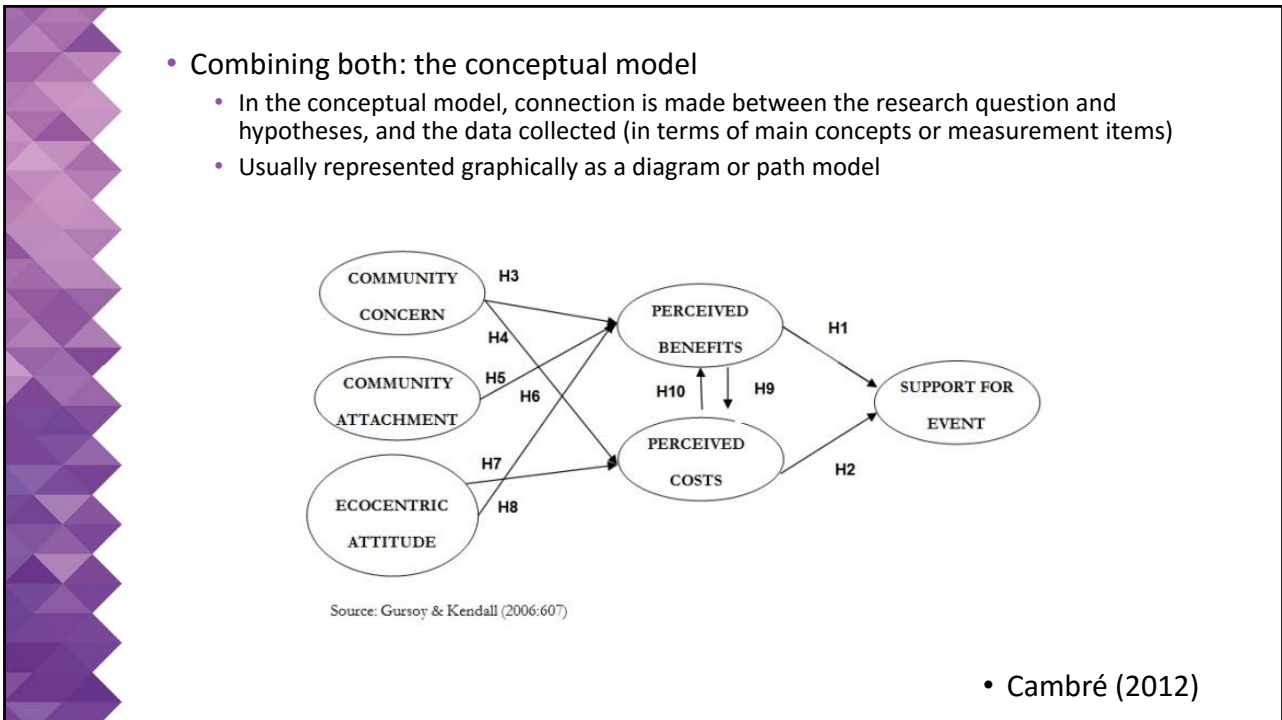
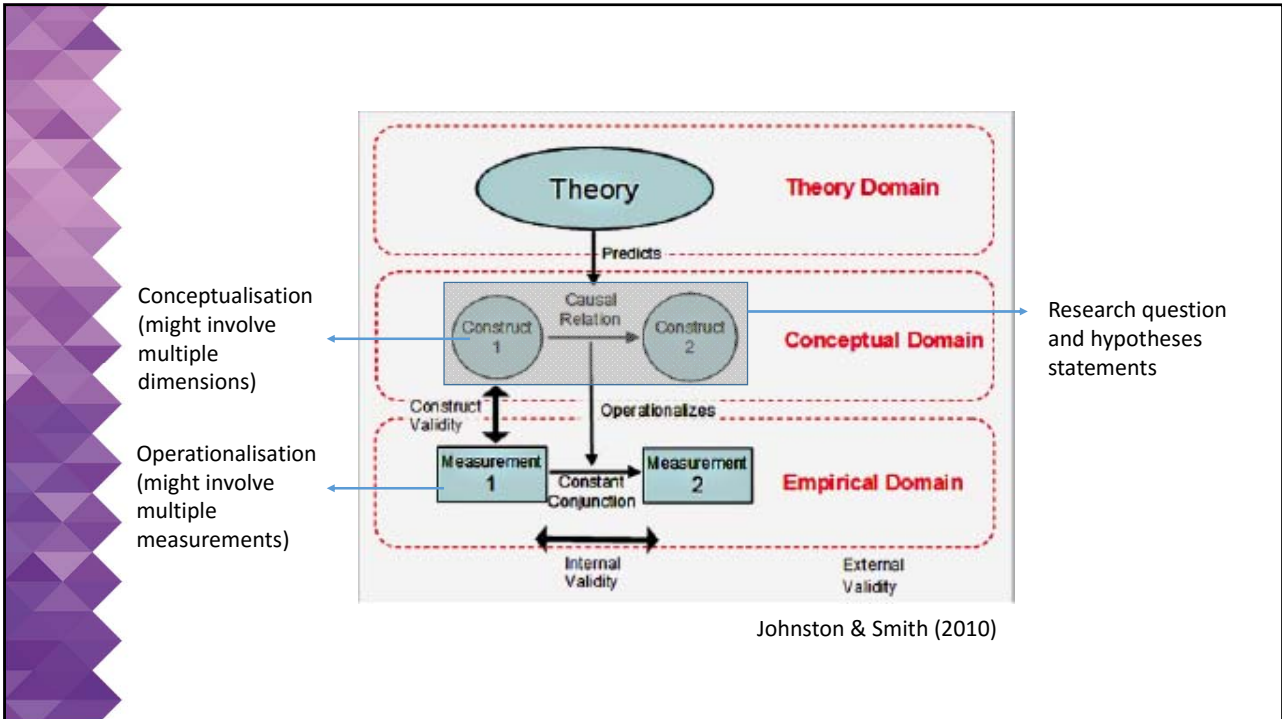
## • From Conceptualisation:

- Is the process of defining and clarifying concepts
- Building on existing literature to develop a shared body of knowledge
- Conceptualisation often means that concepts need to be broken down in multiple dimensions (e.g. IQ consist of verbal comprehension, perceptual reasoning, working memory, and processing speed)
- In social sciences, many concepts cannot be directly observed. Through operationalisation we decide on an observation method to move from concept to variable

## • To Operationalisation:

- As a first guidance, a researcher should attempt to find a tried-and-trusted measurement tool
- Operationalisation takes the form of defining one or more indicators (= a single observable measure, e.g. a single item in a survey)
- Because of imperfect correspondence between indicators and concepts, researchers often rely on multiple indicators (measurement items) per concept. These are then aggregated into composite measures (=concepts)

• Singleton & Straits (2005)



- Quality indicators in social research:



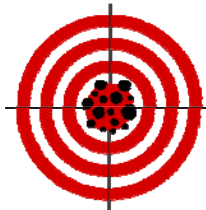
Unreliable & Invalid



Unreliable, But Valid



Reliable, Not Valid



Both Reliable & Valid

Nevit Dilmen

- Reliability = are measures consistent?
- Replication = is study repeatable?
- Validity = do we measure what we want to measure?
  - Face validity = do measures appear, by the face of it, to reflect concepts?
  - Content validity = do measures adequately represent all facets/dimensions of a concept?
  - External validity = can results be generalised beyond the research setting?

- Cambré (2012), Field (2009)

## 2. Exercise: distinguishing concepts and measurement items

- Reading: Alcázar, C. H., Piñero, M. S., & Ruiz de Maya, S. (2014). The effect of user-generated content on tourist behavior: the mediating role of destination image. *Tourism & Management Studies*, 10, 158-164. Retrieved from <http://www.tmmstudies.net>
- Questions:
  - Can you identify the concepts and the conceptual model? Do the authors recognize different dimensions in the concepts?
  - Describe the operationalization of the concepts, i.e. how were they measured?
  - Identify aspects of reliability and validity in this study? E.g. how did the authors ensure content validity?

### 3. Preparation of group assignment

- Use the time to think about the concepts in your research question and ways in which you can operationalize these concepts (i.e. what are the different dimensions, how could you measure them?)



Carabo

### Conclusion

- The steps to conceptualise the theory and research problem into workable definitions and operationalise them for measurement are critical in the research process
- Only after we know what to measure, we can think of methods how to measure it
- Conceptualisation and operationalisation is also necessary in order to connect your own work with the work of others (by using shared definitions and measurement items) and to develop reliable and valid instruments

## References

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## Multimedia

- Warner Bros (1952). *Rabbit Seasoning*. Retrieved February 24, 2016, from <https://vimeo.com/8965484>



The logo for AUT (Auckland University of Technology) is displayed in white, bold, sans-serif capital letters on a black rectangular background.

# Tourism Research

Wk 4

Quantitative data collection: survey methods and design

Lecture 04-1

## Today's session...

- Introduces the survey method as one of the main tools to collect primary data in quantitative analysis
- Identifies the main ways in which a questionnaire can be administered
- Looks into aspects of good questionnaire design and wording
- Identifies question types, scaling, and coding issues



## 1. Collecting quantitative data: the survey

- It is the main method for collecting primary quantitative data
- The process is (more than in qualitative methods) strictly guided by the research question and hypotheses
- Info is gathered from a sample, using a questionnaire (research instrument)
- Research based on surveys is often used to generalise from the sample to a larger population
- The success of a survey is determined by the response rate (i.e. the % of the sample that positively responded to the survey) → non-response analysis is needed and should be random, non-systematic!

- The two common broad categories are:
  - Descriptive surveys: designed to identify characteristics of a specific population either at a given moment in time or over a period of time. Their aim is to be descriptive. Generally answers the question “who/what?” (e.g. visitor surveys on demographics)
  - Analytical surveys: seek explanations for observed variables in given phenomena. Their aim is to be explanatory/predictive. Answers the question “why?” (e.g. different levels of visitor satisfaction)
- Main ways of administering a survey questionnaire are:

|                         | Administering the questionnaire   | Completing the questionnaire   |
|-------------------------|---|--|
| <b>Mail-back</b>        | Questionnaires are mailed to respondents who fill in the answers and return to sender                       | Self-completed whereby respondents complete the answers  |
| <b>Telephone</b>        | Structured interviews using closed questions via telephone call-up  | Interviewer-completed whereby the interviewer asks the questions, provides the response sets and records the answers given |
| <b>E-surveys/online</b> | E-questionnaires without direct interaction between researcher and respondent. Similar to mail-back surveys | Self-completed whereby respondents complete the answers  |
| <b>On-site surveys</b>  | Questionnaires are administered in person on site (e.g. on the street, at a museum entrance, etc.)          | Can be both self-completed and interviewer-completed   |

- Jennings (2010)

## 2. Recording the answers: the questionnaire

- The questionnaire is the form (the tool) that is used for recording the written responses from the respondents in a fixed and controllable way
- It is a useful research tool when:
  - A large sample needs to be studied
  - Limited funds are available
  - There needs to be a large measure of comparability, reliability, and validity
- Steps in setting up the questionnaire include:
  - Choose objectives and develop a conceptual model based on literature review
  - Operationalise the concepts into measurement items (where possible based on previous research)
  - Pilot test the questionnaire to determine clarity of questions, ease of responding, length
  - Make modifications based on pilot test

• Jennings (2010)

### 1. Design guidelines:

- Introductory statement:
  - Makes clear the identity of persons contacting the respondents
  - Identifies what the research is about, why it is important and what kind of information is to be collected
  - Indicates how people have been selected (e.g. at random) and making clear that participation is voluntary
  - Guarantee confidentiality and reassure that data will be anonymised and aggregated (i.e. no individual identification)
  - Provide contact details to give respondents the opportunity to ask questions
- Language of questions:
  - Give clear instructions on how to respond to each question (e.g. ticks, how many answers allowed, etc.)
  - Directions to respondents must be clear, unambiguous, and complete
  - Define all terms in your questionnaire that might be misunderstood
  - Avoid insulting assumptions (e.g. "How do you explain the poor quality of your programme?") and leading questions
  - Avoid questions that are actually asking multiple things at once
  - Avoid negatives and double negatives (e.g. "The term Holocaust usually refers to the killing of millions of Jews in Nazi death camps during Word War II. Does it seem possible or does it seem impossible to you that the Nazi extermination of the Jews never happened?")

• Cambré (2012)

## Cover letter/ introduction

**Washington State University**  
Social and Economic Sciences Research Center

Wilson Hall 133  
PO Box 84024  
Pullman, WA 99164-4024  
509-335-3111  
FAX 509-335-6118

**Inside address** → L. T. Hansen  
2121 Lincoln Way East  
Uniontown, WA 99962-2056

**The request** → I am writing to ask your help in a study of new residents being conducted for the state of Washington. This study is part of an effort to learn what draws people to the state, and whether they are happy or unhappy with what they find here.

**Why you were selected** → It's my understanding that you may have moved to Washington state sometime in the last few years. We are contacting a random sample of new residents from every county in the state to ask why they moved, what their employment experience has been, and whether services are meeting their needs.


**Usefulness of survey** → Results from the survey will be used to help state and local government make Washington a better place for new residents like you. By understanding what people want when they move here, public officials can do a better job providing services and improving the state's quality of life. And by knowing more about the job skills of new residents, public agencies and private businesses can help make the most of what new residents contribute to the state's economy.

**Confidentiality** → Your answers are completely confidential and will be released only as summaries in which no individual's answers can be identified. When you return your completed questionnaire, your name will be deleted from the mailing list and never connected to your answers in any way. This survey is voluntary. However, you can help us very much by taking a few minutes to share your experiences and opinions about Washington state. If for some reason you prefer not to respond, please let us know by returning the blank questionnaire in the enclosed stamped envelope.

**Token of appreciation** → We have enclosed a small token of appreciation as a way of saying thanks for your help.

**Willingness to answer questions** → If you have any questions or comments about this study, we would be happy to talk with you. Our toll-free number is 1-800-833-0867, or you can write to us at the address on the letterhead.

**Thank-you** → Thank you very much for helping with this important study.

**Real signature** → Sincerely,  
  
Don A. Dillman  
Professor and Deputy Director

P.S. If by some chance we made a mistake and you have not moved to Washington (or back to Washington after living somewhere else) since January 1990, please answer only the first question in the questionnaire and return the rest of it blank. Many thanks.

## Unclear answer categories

Figure 2.3 Restructuring a question to provide interpretable answers.

An uninterpretable combination of closed-ended ordered and unordered categories:

6. Which of these five statements best describes this dean:

- Innovative but lacking leadership qualities
- About the same on innovation and leadership qualities
- Stronger on leadership than innovation
- A born leader
- A real innovator

Revision—Ordered categories for each concept:

6. To what extent has the dean demonstrated strong leadership qualities?

- All of the time
- Most of the time
- Some of the time
- Seldom
- Never

7. To what extent has the dean demonstrated an ability to innovate?

- All of the time
- Most of the time
- Some of the time
- Seldom
- Never

Revision—Unordered categories that achieve head-to-head comparison of concepts:

6. Which one of the following do you feel best describes the dean?

- A strong leader
- A strong innovator
- Both a strong leader and innovator
- Neither a strong leader nor innovator

Dillman (2000, p.48, 162)

- General layout:
  - Design the questionnaire so that it can easily be filled out and tabulated
  - Make sure that your questionnaire looks attractive (i.e. items are neatly arranged and the copies are clean and readable). Do not cramp the presentation (e.g. reducing margins and space between questions)
  - Group together items which relate to specific sections
  - Keep questions and answers together (e.g. never split a question so that it appears on two separate pages)
  - Possibly use filter questions when certain questions can be irrelevant to particular respondents
- Question order:
  - Early questions should be directly related to the topic of the research
  - Potentially embarrassing questions should be left till later. Keep demographic questions (classification of respondents by age, life-stage, socio-economic group, gender) for the end if considered necessary
  - General questions should precede specific ones
- Answers:
  - Answer categories should be even
  - Potential answer categories cannot overlap and have to be mutually exclusive
  - Items in a series with identical answer categories should be grouped together by using tabular format

• Cambré (2012)

### Items in a series

#### An inefficient structure:

7. To what extent do you consider a lack of rental housing to be a problem in this community?

- Not a Problem
- Small Problem
- Moderate Problem
- Serious Problem

8. To what extent do you consider poor road and street repair to be a problem in this community?

- Not a Problem
- Small Problem
- Moderate Problem
- Serious Problem

Etc.

#### A revision that places questions into an item-in-a-series format:

7. Do you consider each of the following to be a Serious Problem, Moderate Problem, Small Problem, or Not a Problem in this community? (Please circle one answer for each.)

Extent to which situation is a problem in this community

|                                       |         |          |       |               |
|---------------------------------------|---------|----------|-------|---------------|
| A lack of rental housing . . . . .    | Serious | Moderate | Small | Not a Problem |
| Poor road and street repair . . . . . | Serious | Moderate | Small | Not a Problem |

Etc.

Dillman (2000, p.101)

### Even answer categories

#### Problem:

25. How satisfied were you with the service you received when you bought your air conditioner?

- Completely satisfied
- Mostly satisfied
- Somewhat satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied

#### A revision:

25. How satisfied were you with the service you received when you bought your air conditioner?

- Completely satisfied
- Somewhat satisfied
- Neither satisfied nor dissatisfied
- Somewhat dissatisfied
- Completely dissatisfied

### Mutually exclusive categories

#### Problem:

7. From which one of these sources did you first learn about the tornado in Derby?

- Radio
- Television
- Someone at work
- While at home
- While traveling to work

#### A revision:

7. From which one of these sources did you first hear about the tornado in Derby?

- Radio
- Television
- Another person

8. Where were you when you first heard about it?

- At work
- At home
- Traveling to work
- Somewhere else

Dillman (2000, p.58, 65)

## 2. Deciding on questions and types:

- Using existing questions from other research allows to use questions that have been tried and tested (i.e. makes use of reliability and validity testing that has already taken place). It also allows you to draw comparisons or give some ideas about how best to approach your own questions
- Questions can be closed-ended single answers, closed-ended multiple response, open-ended

|             | Closed-ended single answers  | Closed-ended multiple response   | Open-ended  |
|-------------|--|--|---|
| Advantages  | <ul style="list-style-type: none"> <li>• Easy to analyse, quick to answer</li> <li>• Large comparability over studies and between respondents</li> </ul>   | <ul style="list-style-type: none"> <li>• Easy to analyse, quick to answer</li> <li>• Large comparability over studies and between respondents</li> <li>• More information is provided than in closed-ended single answers</li> </ul>                 | <ul style="list-style-type: none"> <li>• Respondents can answer in their own terms and allow for unexpected answers</li> <li>• The questions are not leading, i.e. do not suggest certain kinds of answers</li> <li>• Useful for exploring new areas</li> </ul> |
| Limitations | <ul style="list-style-type: none"> <li>• Restricts the respondents to a series of pre-determined answers</li> <li>• Responses must be exhaustive</li> <li>• Potential design issues: must make sure that responses are mutually exclusive</li> </ul> | <ul style="list-style-type: none"> <li>• Restricts the respondents to a series of pre-determined answers</li> <li>• Responses must be exhaustive</li> <li>• Potential design issues: must make sure that responses are mutually exclusive</li> </ul> | <ul style="list-style-type: none"> <li>• More time-consuming to administer and analyse (coding necessary)</li> <li>• Require greater effort from respondents</li> </ul>   |

• Cambré (2012)

- Type of response set possibilities in closed-ended questions:

| Type of scale         | Characteristics  | Coding  |
|-----------------------|--|---|
| Binary                | <ul style="list-style-type: none"> <li>• Only two answers possible: e.g. Yes/no, Agree/disagree</li> </ul>   | Coded as dummy variable (0 or 1)  |
| Checklists            | <ul style="list-style-type: none"> <li>• Presents a number of categories from which respondents can select one, a limited, or an unlimited number of categories: e.g. various types of information sources used</li> <li>• Categories have no inherent ranking to them</li> </ul>  | Recorded as collection of dummy variables (0 or 1) for data analysis        |
| Ranking               | <ul style="list-style-type: none"> <li>• Ask respondents to rank an entire list or select and rank a limited number from a list: e.g. the three most important information sources used</li> </ul>   | Recorded as collection of ordinal variables (e.g. 1 to 3) for data analysis |
| Likert                | <ul style="list-style-type: none"> <li>• Used for measurement of attitudes and opinions</li> <li>• Likert scale indicates degree of agreement or disagreement. Provides indication of strength: e.g. Strongly agree / agree / undecided / disagree / strongly disagree</li> <li>• Uses multiple measurement items per concept in order to develop a scale</li> </ul> | Coded as ordinal variable (e.g. 1 to 5)                                     |
| Semantic differential | <ul style="list-style-type: none"> <li>• Scales used to determine independent and comparative measures of concepts</li> <li>• The scale is made up of two opposites e.g. active &lt;-----&gt; passive (commonly using 7 points in between the polar opposites)</li> </ul>  | Coded as ordinal variable (e.g. 1 to 7, -3 to +3)                           |

• Jennings (2010)

- Levels of measurement:

- Nominal: related to the use of words or nouns and used to categorise people. No inherent ranking between individuals. Numbers can be assigned as codes but have no inherent meaning. No mathematical relationships possible
- Ordinal: Scale with inherent ranking (e.g. from worst to best) but not necessarily equal distance between ranks. From the assigned numbers we can distinguish which aspects are most or least preferred but we cannot say anything about the interval between the numbers
- Interval: Scale with inherent ranking and equal distance between the intervals. Because the measures are now considered quantitative, we can perform mathematical equations such as addition and subtraction (although multiplying and dividing are not possible)
- Ratio: Scale with inherent ranking, equal distance between ranks and a non-arbitrary zero point, making it possible to multiply and divide as well

| Information provided | Nominal | Ordinal | Interval | Ratio |
|----------------------|---------|---------|----------|-------|
| Classification       | YES     | YES     | YES      | YES   |
| Rank order           | NO      | YES     | YES      | YES   |
| Equal intervals      | NO      | NO      | YES      | YES   |
| Non-arbitrary zero   | NO      | NO      | NO       | YES   |

• Jennings (2010), Singleton & Straits (2005)

### Avoid specificity that exceeds memory

Problem:

12. About how many books have you read for leisure during the past year?  
 \_\_\_\_\_ Number of books

A revision:

12. About how many books have you read for leisure during the past year?
- None
  - 1-2
  - 3-5
  - 6-10
  - 11 or more

### Use lower level of measurement for sensitive responses

Problem:

38. What was this person's total income from all sources in 1999?  
 \_\_\_\_\_ Total income for 1999

A revision:

38. Which of the following broad categories best describes this person's total income from all sources in 1999?
- \$10,000 or less
  - \$10,001 to \$20,000
  - \$20,001 to \$35,000
  - \$35,001 to \$50,000
  - \$50,001 to \$100,000
  - \$100,001 or more

Dillman (2000, p.57, 75)



### 3. Potential sources of error/common mistakes:

- An excessive use of open questions or yes/no questions
- Failure to give clear instructions on self-completion questionnaires
- Letting respondents choose more than one answer when question is not meant to be multiple response
- Formulating closed answers that are not mutually exclusive (or omitting categories)
- Failure to ensure the answers correspond to the question
- Cross-national issues in translation, equivalence of measurements and concepts

• Cambré (2012)

### 3. Setting up online questionnaires

- The advent of the internet has made setting up an online questionnaire increasingly simple. Advantages of online surveys include a very fast response rate and a decrease in the potential for manual coding errors. Furthermore, online survey packages offer easy options for primary data analysis
- A main disadvantage of online surveys is that the sample that can be approached through this method is often not a representative slice of the population
- Some popular tools for developing online surveys are:
  - Limesurvey: <https://www.limesurvey.org/>
  - Google Forms: <https://www.google.co.nz/forms/about/>
  - SurveyMonkey: <http://www.surveymonkey.com>
  - Qualtrics: <http://www.qualtrics.com/>

• Jennings (2010)

## Conclusion

- A questionnaire is a structured way of collecting data in a comparable and controlled format
- Since quantitative analysis aims towards generalisability, a questionnaire needs to be designed properly in order to ensure that each respondent understands and answers the questions in similar fashion
- While open-ended data can add to the richness of the responses, the majority of questions should be of closed nature

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# Tourism Research

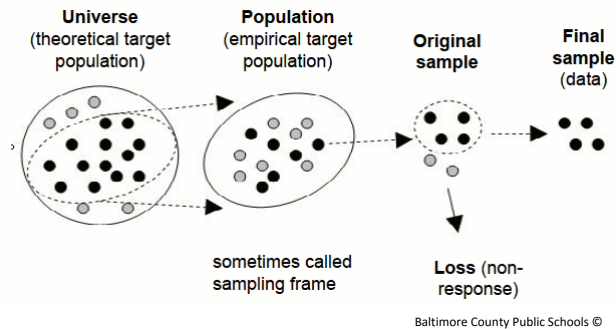
Wk 4      Sampling techniques  
Tutorial 04-2

## Today's session...

- Makes you aware of the principles of sampling
- Explains the procedures for obtaining accurate samples and identifies the use of appropriate sampling designs for different research purposes
- Gives some ideas on how to determine sample size and factors to take into consideration when determining sample size

# 1. Some definitions

The theoretical population means the entire group of people that the researcher wishes to investigate. Closely related is the empirical population or sampling frame, which is the population from which the sample is drawn



A sample is a subset of the population. By studying the sample, the researcher draws conclusions for the population

Sampling is the process of selecting a sufficient number of elements from the population so that by studying the sample we can make generalisations about the population

- Jennings (2010)

- Example: Abraham Wald and the missing bullet holes



United States Air Force

| Section of plane  | Bullet holes (per square foot) |
|-------------------|--------------------------------|
| Engine            | 1.11                           |
| Fuselage          | 1.73                           |
| Fuel system       | 1.55                           |
| Rest of the plane | 1.8                            |

- Problem: Armour makes planes more resistant against bullets but also makes the plane heavier, and less manoeuvrable and fuel-efficient
- Question: How can plane be armoured most efficiently?
- Prior observations: Planes coming back from engagement were covered in bullet holes. But damage wasn't uniformly distributed across the aircraft. There were more bullet holes in the fuselage, not so many in the engines (see table)

- Ellenberg (2015)

- Why sampling?
  - It is practically impossible to collect data from thousands of elements due to time, costs, and human resources
  - Studying a sample rather than the entire population might actually lead to more reliable results due to fewer errors in data collection (easier to control)
- There are two important elements in sampling:
  1. Sampling design = the choices made in selecting a sample. Through appropriate design, it ensures that sample subjects are not chosen from the extremes but are representative of the true characteristics of the population
  2. Sample size = actual number of subjects chosen as a sample. If the sample size is appropriate, the sample mean will be within close range of the true population

• Jennings (2010)

- Representativeness and generalisation:
  - While there is always a slight probability that the sample values might fall outside the population characteristics, a well chosen sample is highly likely representative for the population
  - We can identify two types of generalisation of results:

| Statistical generalization  | Replication   |
|---|---|
| <ul style="list-style-type: none"> <li>• Use probability theory to estimate the likelihood that the patterns observed in the sample will hold in the population</li> <li>• Probability theory enables researchers to find out how likely the patterns in a sample are to reflect those in a wider population, with a specific degree of confidence</li> <li>• Statistical generalisation requires randomly selected representative samples, which is central in most survey research</li> </ul> | <ul style="list-style-type: none"> <li>• This method is used in experimental research</li> <li>• Most experiments are not based on statistically representative samples. Therefore, researchers cannot use statistical generalisation</li> <li>• Instead, generalisation of findings is tested through repeated measurement (replication of experiments) in different circumstances and with different participants</li> <li>• If findings are replicated regardless of context, methods, and participant characteristics, the researcher can be confident that the results apply widely</li> </ul> |

• Jennings (2010)

## 2. Sample designs

- Two general sampling frames:

|                         | Probability   | Non-probability   |
|-------------------------|---|---|
| General characteristics | <ul style="list-style-type: none"> <li>• Every item in population (or sampling frame) has an equal chance of being included</li> <li>• Ensures a random sample, free of bias</li> <li>• Allows the precision of the results to be quantified and associated level of confidence to be stated</li> </ul> | <ul style="list-style-type: none"> <li>• Not all elements have an equal chance of being selected</li> <li>• Not random, based on a researcher's subjective judgement or convenience</li> <li>• Often used in exploratory studies or when sample frame is not valid</li> </ul> |
| Main types              | <ul style="list-style-type: none"> <li>• Simple random</li> <li>• Systematic</li> <li>• Stratified random</li> <li>• Multi-stage cluster</li> </ul>   | <ul style="list-style-type: none"> <li>• Convenience (haphazard or availability)</li> <li>• Quota</li> <li>• Snowballing</li> <li>• Purposively (judgemental)</li> </ul>  |

- Jennings (2010)

### a. Probability sampling:

1. Simple random sampling:
  - Uses either random number tables or an online random number generator, a sample is selected from a list
  - Best used when there is an easily accessible and accurate sampling frame
2. Systematic sampling:
  - From a sampling frame, an initial starting point is selected by a random process. Then, every  $n^{\text{th}}$  number on the list is selected (e.g. every 10<sup>th</sup> person walking into the museum)
3. Stratified random sampling:
  - People in the sampling frame are divided into strata (i.e. categories), such as women and men, large cities and small cities, etc. → strata should be based on a variable that is considered meaningful in the relationship with the independent variable
  - Within each stratum, a simple random or systematic sample is selected
4. Multi-stage cluster sampling:
  - Sampling is carried out in stages, using smaller and smaller sampling units. Initially it involves dividing the population into clusters (or groups)
  - From all these formed clusters, one or more are randomly chosen and either everyone in the cluster is sampled or elements are randomly selected from this cluster

- Jennings (2010)



## b. Non-probability sampling:

1. **Convenience sampling:**
  - Select haphazardly those cases that are easiest to access
  - Likelihood of bias is high, the researcher will mainly make contact with people who are available
  - Visitor surveys belong to this category in the sense that only those visitors who are available to the interviewer at a given moment in time and space are likely to be included
2. **Quota sampling:**
  - The researcher calculates a set number of participants for inclusion in the sample based on some pre-determined variables (e.g. gender, age, nationality)
  - Once the number of sample units has been calculated for each variable being considered, the selection process is by convenience
3. **Snowball sampling:**
  - Used with difficult to reach participants because the researcher may not be informed about the formal or informal connections
  - Once the researcher identifies one member of the population, other members are identified by this member until all the participants have been contacted
4. **Purposively sampling:**
  - Researcher uses judgement to select cases that will best enable him/her to answer the research questions
  - Often used when working with small samples as in case studies and cases are selected that are particularly informative

• Jennings (2010)

## 3. Sample size

- Question: Does sample size need to be proportional to population size (i.e. larger samples for larger populations)?



Evan Amos

There are some 124 billion M&M's made each year. Say we want to know the percentage of green M&M's from this population. If we would take a sample of 0.01% proportional to the population, we would still need to sample 12.4 million M&M's!

Could we instead get a reasonable estimate from sampling 1 bag, 2 bags, 3 bags, ...? Let's try it out.

• Marchant-Shapiro (2013)

- Factors affecting choice of sample size:

- Purpose of the study:
  - Descriptive survey often allowing for smaller samples than analytical surveys
- Population size
- Level of precision wanted (i.e. sampling error):
  - The range in which the true value of the population is estimated to be
  - Expressed in percentage points (usually 5%)
- Level of confidence (or risk):
  - Based on Central Limit Theorem that states that when a population is repeatedly sampled, the average value of the sample attribute will be equal to the true population value and the values obtained by these samples will be distributed normally around the true value
  - If a 95% confidence level is selected, this means that 95 out of 100 samples will have the true population value within two standard deviations
- Variability of attributes being measured:
  - The more heterogeneous a population, the larger the sample needs to be to obtain a given level of precision
  - A proportion of 0.5 (i.e. 50%) indicates maximum variability in a population and is often used in determining a more conservative sample size

- Israel (2009)

- Strategies for determining sample size:

- A census for small populations:
  - Uses the entire population as a sample
  - Eliminates sampling error and provided data on all the individuals of the population
  - In small populations (e.g. 200 or less), virtually the entire population would have to be sampled anyway in order to achieve desirable levels of precision
- Using a sample size of similar studies or published tables:
  - Might lead to repeating errors of previous studies though
  - Published tables provide sample sizes for given sets of criteria, working under the assumption of normally distributed attributes

| Size of Population | Sample Size (n) for Precision (e) of: |     |     |      | 3,000  | 811   | 353 | 191 | 97 |
|--------------------|---------------------------------------|-----|-----|------|--------|-------|-----|-----|----|
|                    | ±3%                                   | ±5% | ±7% | ±10% |        |       |     |     |    |
| 500                | a                                     | 222 | 145 | 83   | 4,000  | 870   | 364 | 194 | 98 |
| 600                | a                                     | 240 | 152 | 86   | 5,000  | 909   | 370 | 196 | 98 |
| 700                | a                                     | 255 | 158 | 88   | 6,000  | 938   | 375 | 197 | 98 |
| 800                | a                                     | 267 | 163 | 89   | 7,000  | 959   | 378 | 198 | 99 |
| 900                | a                                     | 277 | 166 | 90   | 8,000  | 976   | 381 | 199 | 99 |
| 1,000              | a                                     | 286 | 169 | 91   | 9,000  | 989   | 383 | 200 | 99 |
| 2,000              | 714                                   | 333 | 185 | 95   | 10,000 | 1,000 | 385 | 200 | 99 |

- Israel (2009)

- Using formulas to calculate a sample size:
  - Usually leads to values similar to those that are tabulated, but own calculations might be needed for different combinations of levels of precision, confidence and variability
  - While different formulas can be found, one of the most used ones is:

$$n_s = \frac{N}{1 + N(e)^2}$$

Assuming a 95% confidence level, a variance (P) = .5, with  $n_s$  = sample size, N = population size, e = level of precision

Which can be corrected for small populations:

$$n_0 = \frac{n_s}{1 + \frac{(n_s - 1)}{N}}$$

With  $n_s$  = previously defined sample size,  $n_0$  = population-corrected sample size, N = population size

• Israel (2009)

- Other sample size considerations:
  - The above formulas and tabulations all assume simple random sampling. In the case of stratified or cluster sampling, the variances in each subpopulation have to be taken into account
  - Another consideration to choose sample size relates to the cases needed for reliable data analysis. While frequencies and means can be calculated for small sample sizes, multiple regression, ANOVA, structural equation modelling, etc. require good sample sizes (200-500 at a minimum)
  - In addition, adjusting the sample size may be needed to accommodate comparative analysis of smaller subgroups. At least 100 elements would be needed for major subgroups while even smaller subgroups need to be presented by at least 20 to 50 cases
  - Finally, the estimated level of non-response (usually at least 30%) needs to be added to the calculated sample size in order to come to an estimate of the total sample that needs to be approached

• Israel (2009)

## 4. Preparation of group assignment

- Use the time to start thinking about the questions to ask in your questionnaire in order to be able to collect data to answer your research question



Carabo

## Conclusion

- The potential of probability sampling in tourism is restricted by lack of appropriate sampling frames → visitors to attractions, hotels, etc. are not known beforehand and their personal details are seldom recorded afterwards. Thus non-probability sampling is prevalent in tourism research
- Since the characteristics of any sample are likely to differ from those of the population, sampling errors will exist
- To minimise sampling errors, choosing an appropriate sample size is necessary. While formulas and tabulated versions do exist, sample sizes are also largely determined by data requirements and the need for comparative analysis which requires minimal observations for subgroups under consideration (e.g. different tourist nationalities)

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# Tourism Research

Wk 5

Quantitative methods and data interpretation

Lecture 05-1

## Today's session...

- Introduces some major tools in quantitative analysis and will therefore be a bit more... quantitative
- Looks into the primary aspect of coding, which precedes all analysis in quantitative research. Making sure there are no coding errors is the first step to a successful data analysis
- Discusses a few methods related to descriptive statistics and inferential statistics, respectively
- Gives a general indication on how to make statements on generalisation and representativeness



Standardised mortality ratios for total and cause specific mortality in 3521 Swedish women with cosmetic breast implants

| Cause of death         | Observed No of deaths | Expected No of deaths* | Standardised mortality ratio (95% CI) |
|------------------------|-----------------------|------------------------|---------------------------------------|
| All causes             | 85                    | 58.7                   | 1.5 (1.2 to 1.8)                      |
| Suicide                | 15                    | 5.2                    | 2.9 (1.6 to 4.8)                      |
| Unintentional injury   | 10                    | 5.6                    | 1.8 (0.9 to 3.3)                      |
| Cardiovascular disease | 11                    | 11.2                   | 1.0 (0.5 to 1.8)                      |
| Malignancies:          | 36                    | 25.9                   | 1.4 (1.0 to 1.9)                      |
| Lung                   | 8                     | 2.7                    | 3.0 (1.3 to 5.9)                      |
| Cervix uteri           | 3                     | 1.2                    | 2.5 (0.5 to 7.4)                      |
| Breast                 | 4                     | 6.7                    | 0.6 (0.2 to 1.6)                      |
| Other causes           | 13                    | 10.8                   | 1.2 (0.6 to 2.1)                      |

\*Based on age specific and calendar year specific death rates in total female Swedish population.

Koot et al. (2003, p.527)

Of the 3521 Swedish women with breast implants in the research, the statistically expected number of suicides ought to be 5.2. However, the observed total of suicides in the sample was three times as high, at 15. So there is a positive correlation between having breast implants and suicide rates



FDA

## 1. Primary data: quantitative methods

- The quantitative research strategy emphasises numbers and statistical analysis, with the main preoccupations being:
  - Causality
  - Generalisation
  - Replication
- On the simplest level, what we are interested in in quantitative analyses is variations in variables and between people
- As was discussed in previous class, the main method to collect quantitative data is the questionnaire. However, depending on the research topic, the use and analysis of secondary data sources is also widespread (e.g. in economics)

## 2. Coding

- Depending on the method of the questionnaire delivery, data can be directly extracted (including coding) from an online survey tool or the coding needs to be performed manually (or via scan) from the returned questionnaires
- Each of the categorised groups to be analysed requires a numeric value before they can be entered, counted and analysed and the way of coding depend on the type of variable:

- Binary:

What is your sex?       female     male

Is this your first visit to Bruges?       yes     no

Usually, give value 0 to one category and 1 for the other category. Specifically in cases such as the second example, where 'yes' means people have visited the city before. Coding 'yes' as 1 is then most logical

- Jennings (2010)

- Nominal, single response:

Which is your country of origin?  
 Belgium                       Spain  
 Holland                       Great-Britain  
 France                         United States  
 Germany                     Other: ..... (**specify**)  
 Japan

Coding quite similar to binary questions. Each mutually exclusive category receives a unique numerical code. E.g. Belgium = 1, Holland = 2, France = 3, Germany = 4, etc.

- Nominal, multiple response:

Which of the following attractions have you already visited or are you planning on visiting? (**multiple answers possible**)

Groeninge Museum                       Gruuthuse Museum  
 Belfry                                       Basilica of the Holy Blood  
 St John's Hospital                       Boat trip on the Reien  
 Minnewaterpark                       Coach tour through the inner city  
 Beguinage                               Jerusalem church  
 English Convent                       Welcome Church of Our Lady  
 City Hall                                   Lace Museum  
 Mills                                         Guido Gezelle Museum  
 Other: ..... (**specify**)

When respondents can select multiple answer categories from a list, the coding becomes slightly more complicated. Each item on the list will be presented as a separate column in the data input file. Respondents are then coded 1 if they ticked the box of an answer category, and 0 if they haven't ticked the box. So this question will lead to 17 columns in the data input file

- Ranking:

What are your favorite sports? Please rank your preferences below.

3 Football  
 5 Baseball  
 4 Basketball  
 1 Golf  
 WWF Wrestling  
 1 continue Continue with the next survey item.  
 2 go back Return to previously answered items  
 3  
 4  
 5  
 na

Ranking questions will get coded in ordinal fashion. Each answer category (e.g. 'football', 'baseball', 'basketball', 'golf', 'WWF wrestling' will be presented as a separate column in the data input file. The codes attributed then range from 1 to 5 (or 1 to 3 for a top three type of answer), depending on the rank given by the respondents

- Ordinal, Likert scale:

2.1 How important is each of these factors in your decision to come to Bruges? (**one answer per row**)

|                                    | very important | important | not important | totally unimportant | no opinion |
|------------------------------------|----------------|-----------|---------------|---------------------|------------|
| The history                        |                |           |               |                     |            |
| The cultural heritage              |                |           |               |                     |            |
| The museums                        |                |           |               |                     |            |
| The cultural performances          |                |           |               |                     |            |
| The tranquillity of the inner city |                |           |               |                     |            |
| The romance                        |                |           |               |                     |            |
| The many restaurants               |                |           |               |                     |            |
| The bars                           |                |           |               |                     |            |
| The shopping facilities            |                |           |               |                     |            |
| The business                       |                |           |               |                     |            |
| The meeting facilities             |                |           |               |                     |            |
| Visiting friends or relatives      |                |           |               |                     |            |

Coding depending on categories of Likert scale. For 5 levels, e.g. 'very important', 'important', 'important, nor unimportant', 'not important', 'totally unimportant', give a range from 5 to 1. Special consideration needs to be made if a 'no opinion' option is included. While sometimes 'no opinion' will be coded as the median value of a Likert scale (e.g. 3), this is not completely accurate. Alternatively, a missing value code can be given to respondents choosing the 'no opinion' answer, even though this leads to a loss of data

- Semantic differential:

Best expresses your impression of how that feature applies to **instructor and his/her teaching style and knowledge**

- Good           Bad
- Strong           Weak
- Motivated           Aimless
- Fast           Slow
- Difficult           Easy

Coding of semantic differential scale uses numerical values (1 to 7) or (-3 to +3), depending on the box that was ticked on the scale. Each variable row will be included as a separate column in the data input file. The above question will thus result in 5 column variables, each with a code ranging from 1 to 7

- Ratio:

How many dollars does it cost?

\$   
Enter only integer numbers. No decimal point or currency sign.

Variables measured on a ratio level (e.g. age, income, ticket price) do not need to be coded. At a later stage it can still be decided to combine the values in a limited number of categories

- **Open-ended:**

By what means of transportation did you come to Bruges?

- car
- bus
- train
- motorcycle
- bicycle
- Other: ..... (specify)

Open-ended questions (either completely open-ended or as open-ended possibilities in a closed question) need to be treated just like categorical data. The entire range of open-ended answers is investigated, and the researcher looks to recurring themes and categories to simplify the data. E.g. the above example might have led to the following answers:

Friend's car x5  
 Taxi x3  
 Rental car x2  
 Tour bus x20  
 Mum's car x1

From this, we might decide to count all respondents who answered 'Friend's car', 'Taxi', 'Rental car' or 'Mum's car' under the closed category 'car', while the respondents who answered 'Tour bus' could be added to the 'bus' category.

- **Special consideration should go to coding missing responses. Rather than leaving them blank, good practice is to give all missing responses a special code such as 666 or 999 (value should be unique!)**

- **Data entry can be done in a number of statistical and spreadsheet programs. Probably the easiest way is to do primary data input in an Excel sheet and later export this sheet into SPSS for statistical analysis**

| 1  | A      | B      | C   | D   | E   | F    | G    | H    | I    | J    | K    | L    | M    | N   | O   | P   | Q    | R    |
|----|--------|--------|-----|-----|-----|------|------|------|------|------|------|------|------|-----|-----|-----|------|------|
| 2  | datum  | aanval | 1.1 | 1.2 | 1.3 | 1.4a | 1.4b | 1.4c | 1.4d | 1.4e | 1.4f | 1.4g | 1.4h | 1.5 | 1.6 | 1.7 | 2.1a | 2.1b |
| 3  | 20-Oct | 26895  | 1   | 9   | 3   | 9    | 7    | 1.4c | 3    | 7    | 5    | 7    | 3    | 5   | 1   | 1   | 9    | 7    |
| 4  | 20-Oct | 26895  | 1   | 9   | 1   | 9    | 9    | 1    | 7    | 9    | 9    | 7    | 1    | 5   | 9   | 0   | 3    | 3    |
| 5  | 20-Oct | 26895  | 1   | 9   | 1   | 9    | 7    | 3    | 7    | 7    | 7    | 1    | 3    | 5   | 1   | 9   | 0    | 7    |
| 6  | 20-Oct | 26895  | 1   | 9   | 2   | 9    | 9    | 3    | 7    | 7    | 7    | 1    | 3    | 5   | 1   | 0   | 7    | 7    |
| 7  | 20-Oct | 26895  | 1   | 9   | 1   | 9    | 9    | 1    | 9    | 9    | 9    | 1    | 7    | 9   | 1   | 0   | 7    | 7    |
| 8  | 20-Oct | 26895  | 1   | 1   | 1   | 7    | 3    | 7    | 3    | 9    | 7    | 3    | 7    | 9   | 1   | 0   | 7    | 7    |
| 9  | 20-Oct | 26895  | 9   | 1   | 3   | 9    | 7    | 1    | 1    | 9    | 9    | 3    | 1    | 5   | 1   | 0   | 7    | 7    |
| 10 | 20-Oct | 26895  | 1   | 1   | 1   | 7    | 7    | 7    | 5    | 9    | 9    | 3    | 5    | 5   | 1   | 0   | 7    | 7    |
| 11 | 20-Oct | 26895  | 1   | 9   | 3   | 1    | 7    | 7    | 7    | 7    | 7    | 7    | 7    | 5   | 1   | 0   | 9    | 9    |
| 12 | 20-Oct | 26895  | 1   | 1   | 1   | 9    | 7    | 1    | 9    | 3    | 3    | 7    | 1    | 1   | 1   | 0   | 7    | 7    |
| 13 | 20-Oct | 26895  | 9   | 9   | 1   | 9    | 9    | 9    | 3    | 9    | 9    | 1    | 1    | 1   | 9   | 0   | 9    | 9    |
| 14 | 20-Oct | 26895  | 9   | 9   | 1   | 9    | 9    | 1    | 3    | 9    | 9    | 1    | 1    | 1   | 9   | 0   | 9    | 9    |
| 15 | 20-Oct | 26895  | 9   | 1   | 1   | 9    | 7    | 3    | 7    | 7    | 7    | 7    | 7    | 3   | 5   | 9   | 0    | 3    |
| 16 | 20-Oct | 26895  | 9   | 1   | 1   | 7    | 9    | 7    | 7    | 9    | 7    | 1    | 5    | 5   | 9   | 0   | 7    | 7    |
| 17 | 20-Oct | 26895  | 9   | 9   | 1   | 7    | 7    | 7    | 9    | 9    | 7    | 7    | 3    | 5   | 9   | 0   | 7    | 5    |
| 18 | 20-Oct | 26895  | 1   | 9   | 3   | 3    | 1    | 7    | 7    | 7    | 3    | 5    | 3    | 9   | 1   | 0   | 7    | 7    |
| 19 | 20-Oct | 26895  | 9   | 9   | 3   | 7    | 3    | 1    | 5    | 5    | 3    | 3    | 3    | 9   | 1   | 0   | 7    | 7    |
| 20 | 20-Oct | 26895  | 1   | 9   | 1   | 7    | 7    | 7    | 5    | 5    | 9    | 7    | 3    | 5   | 1   | 0   | 3    | 3    |
| 21 | 20-Oct | 26895  | 1   | 1   | 1   | 7    | 7    | 1    | 7    | 7    | 9    | 1    | 5    | 5   | 1   | 0   | 7    | 9    |
| 22 | 20-Oct | 26895  | 1   | 1   | 1   | 7    | 7    | 1    | 7    | 9    | 9    | 3    | 7    | 5   | 1   | 0   | 7    | 7    |
| 23 | 20-Oct | 26895  | 9   | 9   | 1   | 7    | 5    | 7    | 7    | 7    | 9    | 7    | 3    | 5   | 1   | 0   | 3    | 3    |
| 24 | 20-Oct | 26895  | 9   | 1   | 1   | 7    | 7    | 7    | 7    | 7    | 7    | 7    | 3    | 1   | 1   | 0   | 1    | 1    |
| 25 | 20-Oct | 26895  | 1   | 9   | 1   | 7    | 7    | 3    | 7    | 7    | 7    | 3    | 7    | 5   | 1   | 0   | 9    | 9    |
| 26 | 21-Oct | 24269  | 1   | 9   | 1   | 9    | 9    | 1    | 5    | 5    | 9    | 7    | 1    | 1   | 1   | 0   | 7    | 7    |
| 27 | 21-Oct | 24269  | 1   | 9   | 1   | 9    | 9    | 1    | 5    | 5    | 9    | 3    | 1    | 1   | 1   | 0   | 3    | 7    |
| 28 | 21-Oct | 24269  | 9   | 1   | 1   | 9    | 9    | 1    | 9    | 9    | 9    | 3    | 1    | 1   | 1   | 0   | 3    | 7    |
| 29 | 21-Oct | 24269  | 9   | 1   | 1   | 9    | 9    | 1    | 9    | 9    | 9    | 3    | 1    | 1   | 1   | 0   | 3    | 7    |
| 30 | 21-Oct | 24269  | 1   | 1   | 1   | 7    | 9    | 1    | 9    | 9    | 3    | 1    | 1    | 1   | 9   | 0   | 3    | 3    |
| 31 | 21-Oct | 24269  | 1   | 1   | 1   | 7    | 9    | 1    | 9    | 9    | 3    | 3    | 1    | 1   | 9   | 0   | 1    | 1    |
| 32 | 21-Oct | 24269  | 9   | 9   | 1   | 9    | 7    | 1    | 9    | 9    | 9    | 1    | 3    | 9   | 1   | 0   | 1    | 9    |
| 33 | 21-Oct | 24269  | 1   | 9   | 1   | 9    | 9    | 3    | 9    | 9    | 9    | 3    | 1    | 5   | 1   | 0   | 3    | 3    |
| 34 | 21-Oct | 24269  | 1   | 9   | 1   | 9    | 9    | 7    | 9    | 9    | 9    | 3    | 1    | 5   | 1   | 0   | 7    | 7    |

### 3. Main data analysis methods

- In the data analysis section, we want to answer the question “what was observed, recorded, or experienced as a result of the research work?” In order to analyse this, graphs and tables are the first tools
- Two general types of quantitative analysis:
  - Descriptive statistics: summarise, describe and organise data that is definitely known (i.e. data directly observed). Descriptive statistics do not allow us to make conclusions beyond the data or test hypotheses
  - Inferential statistics: do more than just describing. Inferential statistics compare groups, test a hypothesis or make predictions, making inferences about relationships that extend beyond the data. For example, we try to infer what a population thinks based on a sample, or we want to make judgements on the probability that an observed group difference is trustworthy and didn't happen by chance

- Insights from Trump-rally: descriptive or inferential?



<https://www.youtube.com/watch?v=iWFMnnKRC0k>

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a. Descriptive statistics:

1. Measures of central tendency

- Explorative statistics that show the mode, mean, median, standard deviation, etc. for each univariate variable, provided the measurement level is at least ordinal
- Mode = the category that is chosen most frequently

E.g. Transportation type used

| Type | Car | Bus | Train | Other |
|------|-----|-----|-------|-------|
| n    | 25  | 16  | 20    | 5     |

The mode of the transportation question is 'car' because most observations fall in this category

- Median = the middle score of a distribution. The point where exactly half the cases are below it and half the cases are above it. Can be observed by organising the data in rank order (from small to large) and looking for the middle point

E.g. Times visited previously

0 0 0 0 1 1 2 2 2 3 5

The median is 1 because exactly 5 observations precede it and 5 observations come after it

0 0 0 0 1 1 2 2 3 5

In case of an even number of observations, the median will be calculated as the average of the two points closest to the middle, so here  $(1+2)/2 = 1.5$

- Jennings (2010)

- Mean = the average value of the distribution

$$\bar{X} = \frac{\sum X}{n}$$

E.g. Times visited previously

0 0 0 0 1 1 2 2 2 3 5

The mean is  $16/11 = 1.45$

- Standard deviation = identifies the difference between all scores and the mean

$$sd = \sqrt{\frac{\sum (X - \bar{X})^2}{n}}$$

E.g. Number of people in travel company

1 1 2 2 4

1. Calculating the mean:  $10/5 = 2$

2. Subtracting the mean from each score and squaring the difference:

$$(1-2)^2 = 1$$

$$(1-2)^2 = 1$$

$$(2-2)^2 = 0$$

$$(2-2)^2 = 0$$

$$(4-2)^2 = 4$$

3. Sum these scores:  $1 + 1 + 0 + 0 + 4 = 6$

4. Divide this sum by number of observations:  $6/5 = 1.2$

5. Take the square root of this number:  $\sqrt{1.2} = 1.095$

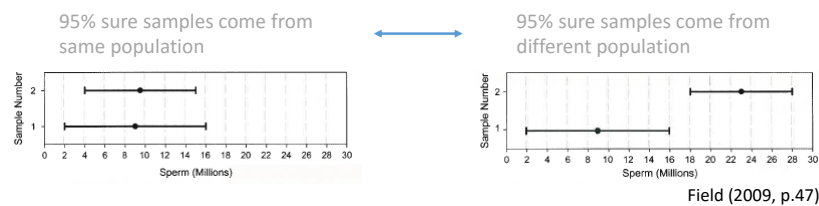
- Jennings (2010)



- As was said in the beginning, essentially we are interested in variations when we do quantitative research. The standard deviation is therefore an important measure, because it tells us how much variation there is in the sample. Or in other words: it shows us the error we make when we use the sample mean to represent an individual observation
- The standard deviation tells us how well the sample mean represents the sample observations. We are also interested to know how well a specific sample represents the population. This is called the standard error. For samples  $> 30$ , dividing the sample sd by  $\sqrt{N}$  is a good approximation of the standard error. The standard error can then be used to calculate confidence intervals:

|   |                                |
|---|--------------------------------|
| Lower boundary of 95% confidence interval | $= \bar{X} - (1.96 \times SE)$ |
| Upper boundary of 95% confidence interval | $= \bar{X} + (1.96 \times SE)$ |

- This confidence interval shows the boundaries in which the population mean falls with 95% certainty. By comparing confidence intervals of different means, we can start to get some idea about whether or not the means came from the same population



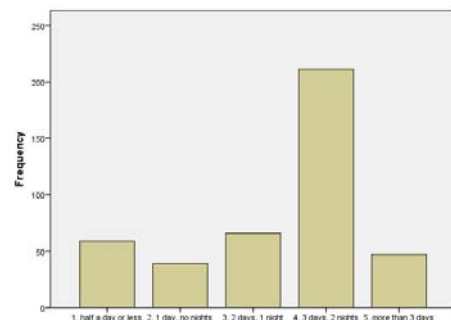
- Field (2009)

## 2. Frequency tables:

- A table that shows the frequency of observations in each category of a univariate variable. It lists the categories and counts the number (and or percentage) of observations (i.e. responses) in each

E.g. Length of stay in Bruges

|                             | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------------------------|-----------|---------|---------------|--------------------|
| Valid 1. half a day or less | 59        | 14.0    | 14.0          | 14.0               |
| 2. 1 day, no nights         | 39        | 9.2     | 9.2           | 23.2               |
| 3. 2 days, 1 night          | 66        | 15.6    | 15.6          | 38.9               |
| 4. 3 days, 2 nights         | 211       | 50.0    | 50.0          | 88.9               |
| 5. more than 3 days         | 47        | 11.1    | 11.1          | 100.0              |
| Total                       | 422       | 100.0   | 100.0         |                    |



- An interesting way to interpret the frequency table is by thinking of it as a probability: i.e. how likely is a category expected to occur. For instance, if our sample of tourists in Bruges is representative, we can infer that there is a 14% chance that a tourist will not stay longer than half a day

- Field (2009), Jennings (2010)

### 3. Crosstabs:

- Quite similar to frequency tables but a bivariate data analysis. Frequency information is presented on two variables simultaneously, giving an early indication of associations
- In general, the independent variable is presented in the columns and the dependent variable in the rows

E.g. Length of stay in Bruges per nationality category

|                |                       |                      | Nationality |          |        | Total  |
|----------------|-----------------------|----------------------|-------------|----------|--------|--------|
|                |                       |                      | European    | American | Asian  |        |
| Length of stay | 1. half a day or less | Count                | 49          | 10       | 0      | 59     |
|                |                       | % within Nationality | 14.2%       | 25.0%    | 0.0%   | 14.0%  |
|                | 2. 1 day, no nights   | Count                | 28          | 11       | 0      | 39     |
|                |                       | % within Nationality | 8.1%        | 27.5%    | 0.0%   | 9.2%   |
|                | 3. 2 days, 1 night    | Count                | 55          | 8        | 3      | 66     |
|                |                       | % within Nationality | 15.9%       | 20.0%    | 8.1%   | 15.6%  |
|                | 4. 3 days, 2 nights   | Count                | 190         | 10       | 1      | 211    |
|                |                       | % within Nationality | 55.1%       | 25.0%    | 29.7%  | 50.0%  |
|                | 5. more than 3 days   | Count                | 23          | 1        | 23     | 47     |
|                |                       | % within Nationality | 6.7%        | 2.5%     | 62.2%  | 11.1%  |
| Total          |                       | Count                | 345         | 40       | 37     | 422    |
|                |                       | % within Nationality | 100.0%      | 100.0%   | 100.0% | 100.0% |

Without using any inferential statistics, from observations we can already deduce that Americans seem to have the shortest length of stay (1 day maximum), while Europeans are comparatively more represented in the middle categories (2-3 days) and the Asian tourists show a tendency to stay longest (+3 days). Via inferential statistics we can then further investigate whether these observations are statistically significant

- Jennings (2010)

### b. Inferential statistics:

#### 1. Association and correlation

- Measures of association and correlation reduce the information from a crosstab into a single interpretable number and give an indication of a statistically valid relationship
- It is important to note that these measures give an indication of association, strength and direction, but not of causality. We cannot infer with certainty from an association that one variable causes the other one
- There are different measurements of association and correlation, depending on whether the variables are measured on nominal, ordinal, interval or ratio

| Measures of association | Level of measurement of the data | High strength of association level when: | Independence when: | Formula  |
|-------------------------|----------------------------------|--|--------------------|--|
| Lambda ( $\lambda$ )    | Nominal                          | 1.0                                      | 0                  | $\lambda = \frac{\sum f_i - F_{\sigma}}{N - F_{\sigma}}$ |
| Gamma ( $\gamma$ )      | Ordinal                          | +1.0, -1.0                               | 0                  | $\gamma = \frac{n_b - n_d}{n_b + n_d}$                   |
| Tau ( $\tau$ )          | Ordinal                          | +1.0, -1.0                               | 0                  | $\tau = \frac{n_b - n_d}{N\sqrt{N - 1/2}}$               |
| Rho ( $\rho$ )          | Interval, ratio                  | +1.0, -1.0                               | 0                  | $\rho = 1 - \frac{6\sum d^2}{N(N^3 - 1)}$                |
| Chi-square ( $\chi^2$ ) | Nominal, ordinal                 | Infinity                                 | 0                  | $\chi^2 = \sum \frac{(O-E)^2}{E}$                        |

- Jennings (2010, p.293)

## E.g. Length of stay in Bruges per nationality category

Nationality is a nominal variable.  
The different categories do not  
have an inherent ranking

Length of stay is an  
ordinal variable. The  
different categories  
can be ranked from  
less to more, but the  
distance between  
categories is not  
equal.

|                |                       |                      | Nationality |          |        | Total  |
|----------------|-----------------------|----------------------|-------------|----------|--------|--------|
|                |                       |                      | European    | American | Asian  |        |
| Length of stay | 1. half a day or less | Count                | 49          | 10       | 0      | 59     |
|                |                       | % within Nationality | 14.2%       | 25.0%    | 0.0%   | 14.0%  |
|                | 2. 1 day, no nights   | Count                | 28          | 11       | 0      | 39     |
|                |                       | % within Nationality | 8.1%        | 27.5%    | 0.0%   | 9.2%   |
|                | 3. 2 days, 1 night    | Count                | 55          | 8        | 3      | 66     |
|                |                       | % within Nationality | 15.9%       | 20.0%    | 8.1%   | 15.6%  |
|                | 4. 3 days, 2 nights   | Count                | 190         | 10       | 11     | 211    |
|                |                       | % within Nationality | 55.1%       | 25.0%    | 29.7%  | 50.0%  |
|                | 5. more than 3 days   | Count                | 23          | 1        | 23     | 47     |
|                |                       | % within Nationality | 6.7%        | 2.5%     | 62.2%  | 11.1%  |
| Total          |                       | Count                | 345         | 40       | 37     | 422    |
|                |                       | % within Nationality | 100.0%      | 100.0%   | 100.0% | 100.0% |
|                |                       |                      |             |          |        |        |

Association statistic to use for the combination of a nominal and an ordinal variable is the chi-square statistic:

|                              | Value                | df | Asymp. Sig. (2-sided) |
|------------------------------|----------------------|----|-----------------------|
| Pearson Chi-Square           | 134.008 <sup>a</sup> | 8  | .000                  |
| Likelihood Ratio             | 95.898               | 8  | .000                  |
| Linear-by-Linear Association | 13.031               | 1  | .000                  |
| N of Valid Cases             | 422                  |    |                       |

Association is statistically significant (i.e. the chance that this association would be found purely by chance is below 0.000)

## 2. Independent-means T-tests

- Test for statistical differences between means of two groups of different respondents
- Useful for answering hypotheses of the like “are foreign tourists more likely to cause traffic accidents in New Zealand as compared to locals?” i.e. comparing the effect of one specific variable on another, dependent variable
- Since the test compares means, the dependent variable should be measured at least on interval level
- For the most likely condition in tourism research (independent-means with non-equal sample size), the formula of the t-test is:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_p^2}{n_1} + \frac{s_p^2}{n_2}}}$$

With  $s_p$  being the pooled variance estimate, calculated as  
 $s_p^2 = [(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2] / (n_1 + n_2 - 2)$

The resulting score can then be compared to tabulated t-values that would be expected by chance alone

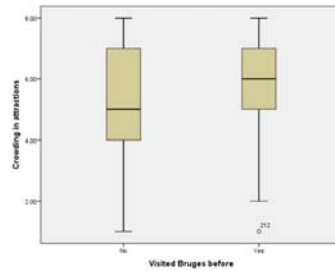
- Field (2008)

E.g. Hypothesis: first-time visitors to Bruges are more susceptible to feelings of crowdedness

Below you will find a scale that has to indicate the extent of crowding in the attractions (museums, squares, boats), ranging from not at all crowded (1) to extremely crowded (9). Could you indicate a number that matches your feeling? (circle one number)

|                    |   |                  |   |         |   |              |   |   |
|--------------------|---|------------------|---|---------|---|--------------|---|---|
| not at all crowded |   | Not very crowded |   | crowded |   | very crowded |   |   |
| 1                  | 2 | 3                | 4 | 5       | 6 | 7            | 8 | 9 |

Feeling of crowding measured using Vaske's 9-point crowding scale. While ordinal in nature, for practice often used as having interval characteristics



Preliminary analysis of means already seems to suggest our hypothesis is wrong. The mean for repeat visitors is higher, and there is less spread around the mean

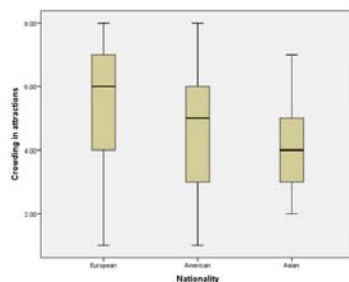
The t-test is significant (p-value <.05) which means that we reject the null hypothesis of no significant difference. We can conclude that there is indeed a difference between crowding perception in these groups. As we can see from the figure, repeat visitors have a higher average perception of crowding than first time visitors

|                         |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |         |
|-------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|---------|
|                         |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |         |
| Crowding in attractions | Equal variances assumed     | 13.507                                  | .000 | -3.959                       | 420     | .000            | -.65451         | .16534                | -.97950                                   | -.32952 |
|                         | Equal variances not assumed |   |      | -4.114                       | 382.896 | .000            | -.65451         | .15909                | -.96730                                   | -.34172 |

3. Analysis of Variance (ANOVA)

- Conceptually very similar to the t-test. The main difference is that the t-test can only be performed to compare two groups (e.g. male versus female). If we want to be able to compare more than two groups (e.g. nationalities), then we conduct an ANOVA
- Useful for answering hypotheses of the like "which nationalities are more likely to cause traffic accidents in New Zealand?" i.e. comparing the effect of one specific variable with multiple categories on another, dependent variable
- Since this test compares means as well, the dependent variable should be measured at least on interval level
- An ANOVA-test only shows whether there is a significant difference between group means. It will not show between which groups these differences are significant. To identify that, we need to conduct a post-hoc comparison test

E.g. Hypothesis: different nationality groups differ in their perception of crowdedness



From the first look on the mean and the tendency around the mean, it indeed seems to suggest that the Asian-group shows comparatively lower crowding values than the American-group. The European-group has the highest mean value for crowding.

**Test of Homogeneity of Variances**

Crowding in attractions

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 3.668            | 2   | 419 | .026 |

Levene's test shows that the variances of the different groups are significantly different from one another. This means that instead of a regular ANOVA, we should instead use Welch ANOVA, and also choose the appropriate post-hoc test

**ANOVA**

Crowding in attractions

|                | Sum of Squares | df  | Mean Square | F      | Sig. |
|----------------|----------------|-----|-------------|--------|------|
| Between Groups | 92.635         | 2   | 46.318      | 17.706 | .000 |
| Within Groups  | 1096.076       | 419 | 2.616       |        |      |
| Total          | 1188.711       | 421 |             |        |      |

**Robust Tests of Equality of Means**

Crowding in attractions

|       | Statistic <sup>a</sup> | df1 | df2    | Sig. |
|-------|------------------------|-----|--------|------|
| Welch | 20.618                 | 2   | 60.312 | .000 |

a. Asymptotically F distributed.

ANOVA Welch shows that the chance of getting a statistic of 20.618 when there is no effect of nationality is less than .000. So we can conclude that there is a significant difference in crowding perception between groups. Via a post-hoc comparison test, we can find out where exactly these differences are

**Multiple Comparisons**

Dependent Variable: Crowding in attractions

Tamhane

| (I) Nationality | (J) Nationality | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|-----------------|-----------------|-----------------------|------------|------|-------------------------|-------------|
|                 |                 |                       |            |      | Lower Bound             | Upper Bound |
| European        | American        | .74384                | .30866     | .059 | -.0210                  | 1.5087      |
|                 | Asian           | 1.54587*              | .24950     | .000 | .9278                   | 2.1639      |
| American        | European        | -.74384               | .30866     | .059 | -1.5087                 | .0210       |
|                 | Asian           | .80203                | .37761     | .107 | -.1210                  | 1.7250      |
| Asian           | European        | -1.54587*             | .24950     | .000 | -2.1639                 | -.9278      |
|                 | American        | -.80203               | .37761     | .107 | -1.7250                 | .1210       |

\*. The mean difference is significant at the 0.05 level.

Since homogeneity of variance was violated, we show the results of the Tamhane's T2 Post-hoc test. We can see that the significant differences are found between two groups: Europeans and Asians. Looking at the first row, there is a significant difference between Europeans and Asians. Since this mean difference is positive, we can see that Europeans have significantly higher crowding values than Asians

## 4. And what about generalisation?

- We said that one of the aims of quantitative analysis is to generalise the findings from the sample to the entire population
- In order to make statements of representativeness, we need to test the observed probabilities of the sample distribution against the hypothesised probabilities that would occur in case the sample was representative of the population

E.g. are the age groups in our sample representative for the distribution of age in the population?

|                | Frequency | Percent | Valid Percent |
|----------------|-----------|---------|---------------|
| Valid 16-19y   | 2         | .2      | .2            |
| 20-34y         | 109       | 8.5     | 10.4          |
| 35-49y         | 309       | 24.1    | 29.4          |
| 50-64y         | 432       | 33.8    | 41.1          |
| >64y           | 198       | 15.5    | 18.9          |
| Total          | 1050      | 82.0    | 100.0         |
| Missing System | 230       | 18.0    |               |
| Total          | 1280      | 100.0   |               |

We compare the frequencies found in our sample with the known population frequencies: 16-19y = 5.8%, 20-34y = 32.3%, 35-49y = 28.2%, 50-64y = 20.6%, >64y = 19.1%. Via a chi-square test we can confirm that the observed probabilities are statistically different from the hypothesised (i.e. real) ones, giving an issue for generalisation

|             | Observed N | Expected N | Residual             |
|-------------|------------|------------|----------------------|
| 16-19y      | 2          | 57.5       | -55.5                |
| 20-34y      | 109        | 320.0      | -211.0               |
| 35-49y      | 309        | 279.3      | 29.7                 |
| 50-64y      | 432        | 204.1      | 227.9                |
| >64y        | 198        | 189.2      | 8.8                  |
| Total       | 1050       |            |                      |
| Chi-Square  |            |            | 450.794 <sup>a</sup> |
| df          |            |            | 4                    |
| Asymp. Sig. |            |            | .000                 |

## Conclusion

- Where qualitative analysis are interested in content and context, quantitative analyses look for meaningful (i.e. statistically significant) relationships
- Since coding means that data are represented by numbers, we need to carefully distinguish between the measurement levels (statistical tests do not look beyond the numbers and cannot see whether the numbers have a meaningful rank)
- The most used quantitative methods can be divided into descriptive and inferential methods. We only introduced a small number of the wide array of possible statistical tests here
- Ultimately, we also have to test whether our sample adheres to the concept of representativeness of the population if we want to make generalisations



## References

- Jennings, G. (2010). *Tourism research (2<sup>nd</sup> ed.)*. Milton, Australia: John Wiley & Sons.
- Field, A. (2009). *Discovering Statistics Using SPSS (3<sup>th</sup> ed.)*. London, United Kingdom: Sage.
- Koot, V. C. M., Peeters, P. H. M., Granath, F., Grobbee, D. E., & Nuren, O. (2003). Total and cause specific mortality among Swedish women with cosmetic breast implants: Prospective study. *British Medical Journal*. 326(7388), 527-528. doi:10.1136/bmj.326.7388.527

## Multimedia

- Comedy Central UK (2017). *Why Are Trump Supporters Campaigning Already? – The Daily Show*. Retrieved March 24, 2017, from <https://www.youtube.com/watch?v=jWFMnnKRC0k>

The logo for AUT (Auckland University of Technology) is displayed in white, bold, sans-serif capital letters on a black rectangular background.

# Tourism Research

Wk 5

Quantitative methods and data interpretation

Tutorial 05-2

## Today's session...

- Gives you an exercise in cross-tabulation, their construction and the interpretation of these
- Thinks you've had your fair share of quantitative aspects to research and gives you time to work on your research project

## 1. Designing a cross-tabulation between drinking and gender, and class year

- You receive a datasheet with data from a class survey. The variables that were collected are student gender (SEX), class year (CLASS), and drinking behaviour (DRINK)
- Using this data, develop a cross tabulation, with and without (CLASS) as control variable. Is there a difference in analysis when using the control variable?

Control variable: CLASS

|           | Male | Female | Total |
|-----------|------|--------|-------|
| Drink     |      |        |       |
| Not drink |      |        |       |
| Total     |      |        |       |

- Hunter (2013)

## 2. Preparation of group assignment

- Use the time to further develop your questionnaire and already think about how you will code the different answers and how you could go on to analyse these



Carabo

## Conclusion

- When constructing a questionnaire for quantitative analysis, we need to look both backwards and forwards: backwards to make sure that the research question is sufficiently covered via the operationalisation of the constructs and forwards to make sure the categories chosen and levels of measurement will be appropriate for the data analysis we have in mind

## References

Hunter, A. K. (2013). Cross-Tabulation Tables and The Relationships Between Variables. In B. P. Skott, & M. Ward (Eds.), *Active Learning Exercises for Research Methods in Social Sciences* (pp. 114-121). Thousand Oaks, CA: Sage

AUT

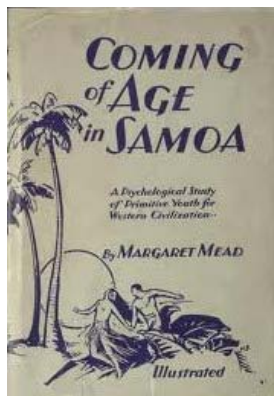
## Tourism Research

Wk 6

Qualitative methods

Lecture 06-1

### Today's session...




- Margaret Mead's fieldwork in Samoa was completed over a period of 6-9 months during 1925/26. She wrote of a society where love was available for the asking and crime was dealt with by exchanging a few mats. This book launched Margaret Mead's career, which led to her becoming one of the most renowned figures in American anthropology
- Samoa painted as a place of nearly stress free living, where the children pass through adolescence without the many pressures put upon teenagers in an industrial, twentieth-century America. In Mead's Samoa, families are large, taboos and restrictions are few, and disagreements are settled by the giving of mats
- Mead refers to premarital sex as the "pastime par excellence" for Samoan youth. She writes that Samoa is a virtual paradise of free love, as the young people from (approximately) 14 years of age until they are married have nothing on their minds except sex

<http://faculty.usfsp.edu/jsokolov/314mead1.htm>

- Mead (1943)



- 
- Makes you understand the main methods of qualitative research
  - Introduces you to different types of interviews
  - Makes you aware of other non-obtrusive data sources and strengths and weaknesses of each method
  - Talks a bit about sampling and coding



## 1. Primary data: qualitative methods

- Is a research strategy that emphasises words rather than quantifications in the collection and analysis of data
- Characteristics of qualitative data collection
  - Reporting via textual analysis, citations instead of tabular format and statistics
  - Aims for contextualisation, holism (space, time), offering broad and panoramic views instead of micro-analyses
  - Detailed description of a particular aspect of an individual, a case history or a group's experiences. Explores how individuals or group members give meaning to and express their understanding of themselves, their experiences and their day-to-day setting
  - Aims to describe in detail social events and explore why they happen instead of how often

• Creswell (2003)



- Main sources of primary qualitative data collection:

- Observation and/or Participation
- In-depth interviewing
- Focus groups
- Document analysis
- Audiovisual materials

a. Participant observation (ethnography)

- Researcher attempts to participate fully in the lives and activities of the research subjects and thus becomes a member of the subjects' group, organisation or community
- Can also be limited to researcher as observer
- Steps involved in participant observation:
  - Considering research purpose and deciding type of participant observation
  - Seeking ethical clearance and if needed, negotiate access to study setting
  - Engage in exploratory observation of the site and usage patterns and flows
  - Design research methodology, conduct pilot study, and enter the field
  - Interpret and report empirical materials

• Creswell (2003), Jennings (2010), Marshall & Rossman (1999)

b. Interviews

- One of the most important data gathering techniques for qualitative researchers. Interviews allow researchers to gather rich data from people in various roles and situations
- Different types of interviews can be identified, depending on the structure of the conversations:

|          | Structured   | Semi-structured                                   | Unstructured                                 |
|----------|--|---|--|
| Method   | Quantitative   | Qualitative                                       | Qualitative                                  |
| Examples | Standardised surveys, interviewer-completed questionnaires | In-depth interviews                               | In-depth interviews                          |
| Format   | Fixed schedule, short responses                            | Topic/theme lists, generally open-ended questions | Oral/life histories, conversational          |
| Duration | Short: 10 to 30 min  | Medium to long: 1h or more                        | Medium to long: 2h or more, several sessions |

• Jennings (2010)

- Factors in choice of interview type:

| Semi-structured  | Unstructured   |
|--|--|
| <ul style="list-style-type: none"> <li>• Beginning the investigation with a fairly clear focus</li> <li>• If more than one person is to carry out the fieldwork → ensures comparability of interviewing styles</li> <li>• When conducting multiple case study research → to ensure cross-case comparability</li> </ul> | <ul style="list-style-type: none"> <li>• Beginning with a general notion of wanting to research a topic</li> <li>• When using an interview guide will not allow genuine access to world views of certain groups</li> </ul> |

- Designing the topic list:

- List with topics and sub-topics to help you answer your research question (but try not to make it too specific)
- Sequence of topics logical for respondent, but be prepared to alter the order of questions if needed
- Use language that is comprehensible and relevant to the people you are interviewing
- Ensure to record some descriptive information of the respondent (name, age, gender, company position, etc.) in order to contextualise people's answers

| TRAVEL EXPERIENCES IN A HOST NATION                           |
|---|
| ■ Background travel experiences (grand tour type of question) |
| ■ Present travel experience                                   |
| — who with?   |
| — how able to travel now?                                     |
| — duration of travel  |
| — why here (the host nation)?                                 |
| — what activities?  |
| — satisfaction  |
| • destinations  |
| • activities  |
| • people (hosts)  |
| ■ Future plans  |
| ■ Other comments  |


Jennings (2010, p.174)

- Cambré (2012)

- Types of questions to ask:

1. Introducing questions: "Please tell me about when your interest in X first began?"; "Have you ever ...?"; "Why did you go to ...?"
2. Follow-up questions: getting the interviewee to elaborate his/her answer, such as "Could you say some more about that?"; "What do you mean by that?"; "Can you give me an example?" → looking more for facts and answers typically brief
3. Probing questions: following up what has been said through direct questioning → requires more thought, goes deeper, is more opinion-oriented
4. Specifying questions: "What did you do then?"; "How did X react to what you said?"
5. Direct questions: perhaps best left until towards the end of the interview in order not to influence the direction of the interview too much, such as "Do you find it easy to keep smiling when serving customers?"; "Are you happy with the amount of on-the-job training you have received?"
6. Indirect questions: "What do most people round here think of the ways that management treats its staff?"
7. Structuring questions: "I would now like to move on to a different topic"
8. Interpreting questions: "Do you mean that your leadership role has had to change from one of encouraging others to a more direct one?"; "Is it fair to say that what you are suggesting is that you don't mind being friendly towards customers most of the time, but when they are unpleasant or demanding you find it more difficult?"


- Cambré (2012)



c. Focus groups

- Group interview composed of a small number of participants, facilitated by a moderator, in which the topic is defined clearly and precisely
- Main interest is in the ways individuals discuss issues as members of a group, rather than as individuals. Focus group researchers are interested in how people respond to each other's views and built up a view out of interactions taking place within the group
- When to use a focus group:
  - So that people known to have a certain experience can be interviewed about it in a relative focussed way
  - Allows to develop an understanding about why people feel the way they do
  - Participants are able to bring issues to the fore in relation to a topic they deem to be important and significant
  - To offer the opportunity to study how individuals collective make sense of a phenomenon and how group norms can influence individual thinking
- Choice of participants:
  - Those who are interested in the topic
  - Those who can represent specific occupations, organisational members, stakeholders, or other stratifying criteria

• Cambré (2012)

- 
- Designing the topic list:
    - The question is in how far a focus group should be structured and guided. There is no one best way and this will depend on the nature of the research topic and the level of interest and/or knowledge among participants
    - Either one can use just one or two general questions to stimulate discussion, with the moderator intervening as necessary, or the researcher can inject more structure into the organisation of the sessions, using more questions
  - Reporting on focus groups:
    - Data are most commonly presented as if they were one-to-one interview data
    - Interaction between focus group participants may either be complementary or argumentative

• Cambré (2012)

#### d. Document analysis:

- Thematic analysis:
  - Is a qualitative approach to text
  - Undertaking a search for themes in interview transcripts or field notes (resulting from participant observation or interviews). Frequency of certain words and phrases can indicate a theme
  - Compare and contrast emergent themes with the literature to deepen insight into the emergent theory
  - Description and quotation provide the foundation of a qualitative reporting
- Content analysis:
  - Is a more quantitative approach to text
  - Researcher first searched for structures and patterns in the text by developing a set of categories of words and phrases; these codes are then applied to units of text
  - Once the text has been coded, various statistical techniques can be used, so it is a quantitative means of analysing the content of qualitative data (e.g. how many counts per theme)
  - Is useful for looking at frequencies of words, changes in frequency over time, scope attributed to a topic, direction, intensity (i.e. strength of direction)

• Jennings (2010)

#### e. (Audio)visual materials:

- Idea that much of tourism is about images and therefore visual methods can allow researchers to access and create knowledge about phenomena which cannot be as readily accessed with the sole use of more traditional methods
- Three broad types of visual materials:
  - Collected from secondary sources and later studied by relying on analyses such as content or semiotic analysis (e.g. postcards, travel photography, videos posted on the internet, images of destinations in guidebooks)
  - Specifically created for the purpose of the project (e.g. researcher-created photography or film, drawing maps of visitor movements, GIS-tracking)
  - Used as data in further research as photo elicitation (e.g. surveys, interviews)

Table 9.1 Photographic scenes (in %)<sup>a</sup>

| Site/actor <sup>b</sup>            | Family members | Locals   | Other tourists | No people | Total      |
|------------------------------------|----------------|----------|----------------|-----------|------------|
| Rural landscapes                   | 9              | –        | –              | 17        | 26         |
| Residence                          | 13             | –        | 2              | 2         | 17         |
| Beach                              | 11             | –        | –              | 3         | 14         |
| Cultural sights                    | 11             | –        | –              | 3         | 14         |
| Amusement parks, zoos, pool areas  | 7              | –        | 1              | 2         | 10         |
| Urban landscapes                   | 7              | –        | –              | 1         | 8          |
| Means of transport                 | 3              | –        | 2              | 1         | 6          |
| Restaurant or other small facility | 4              | –        | –              | –         | 4          |
| Museums and galleries              | –              | –        | –              | 1         | 1          |
| <b>Total</b>                       | <b>65</b>      | <b>–</b> | <b>5</b>       | <b>30</b> | <b>100</b> |

Notes

a Values in percentages with values less than 1% not mentioned

b Only in foreground of the picture.

Haldrup & Larsen (2012, p.156)

• Rakić & Chambers (2012)

- Advantages and limitations per type:

| Data collection type    | Advantages   | Limitations   |
|-------------------------|--|---|
| Participant observation | <ul style="list-style-type: none"> <li>Researcher has first-hand experience and can record information as it is revealed</li> <li>Provides info when other methods might be ineffective</li> <li>Unusual aspects, behaviour that might not want to be discussed, can be noticed from observation</li> <li>Useful in exploring topics that may be uncomfortable to discuss</li> </ul> | <ul style="list-style-type: none"> <li>May be seen as intrusive</li> <li>Private information may be observed that researcher cannot report</li> <li>Is not appropriate for opinions/attitudes</li> <li>Time-consuming to build up trust</li> <li>Does not work well with large groups</li> <li>Focussed on present, past and future cannot be observed</li> </ul> |
| Interviews              | <ul style="list-style-type: none"> <li>Useful when direct observation impossible</li> <li>Possibility to get rich data, historical information</li> <li>Researchers control line of questioning, possibility to ask for clarifications</li> <li>Participants not constraint to a priori reasoning</li> <li>Non-verbal behaviour can also be noted</li> </ul>                         | <ul style="list-style-type: none"> <li>Provides 'indirect' information (respondent bias)</li> <li>Does not provide information in natural field setting</li> <li>Researcher's presence can bias responses</li> <li>People are not equally articulate and perceptive</li> </ul>  |
| Focus groups            | <ul style="list-style-type: none"> <li>Group interaction and decision processes can also be observed</li> <li>Less time-consuming than individual interviews</li> <li>More freedom for respondents to develop topics and line of discussion</li> </ul>   | <ul style="list-style-type: none"> <li>Researcher has less control over proceedings</li> <li>Data are difficult to organise and analyse</li> <li>Recording may be time-consuming to analyse</li> <li>Potential problems of group effects</li> <li>Can potentially cause discomfort for individuals to share personal details or profound disagreements</li> </ul> |

• Cambré (2012), Creswell (2003), Jennings (2010)

| Data collection type    | Advantages   | Limitations   |
|-------------------------|--|---|
| Document analysis       | <ul style="list-style-type: none"> <li>Enables a researcher to obtain the language and words of participants</li> <li>Can be accessed at a time convenient to the researcher (unobtrusive)</li> <li>Enables past and present to be studied</li> <li>Saves time and expenses</li> </ul> | <ul style="list-style-type: none"> <li>Information may not be easily accessible</li> <li>Materials may be incomplete and not completely cover the research question</li> <li>The documents may not be authentic or accurate and researcher is separated from author</li> <li>Iterative readings of texts can produce different interpretations</li> </ul> |
| (Audio)visual materials | <ul style="list-style-type: none"> <li>Unobtrusive method of collecting data</li> <li>Complementary to other forms of data collection</li> <li>Provides an opportunity for participants to directly share their reality</li> <li>Creative, captures attention visually</li> </ul>      | <ul style="list-style-type: none"> <li>May be difficult to interpret or selectively framed</li> <li>Subjectivity of interpretation</li> <li>May not be accessible, ethical issues</li> <li>The presence of an observer may be disruptive and affect responses</li> </ul>  |

• Creswell (2003), Jennings (2010)

## 2. Sampling and coding

- Sampling of participants:
  - Qualitative methods do not attempt to generalise, instead try to gain in-depth understanding of the topic under study
  - Sampling method must serve the purpose of in-depth understanding. Selection for information rich data → usually up until answers/themes get repeated
  - Sampling via snowballing (or chain) sampling, purposive sampling or convenience sampling → therefore not adhering to principle of probability sampling and representativeness
- Coding qualitative data is meant to answer the questions:
  - What is the meaning of my data?
  - What are the main themes and contribution to knowledge?

• Jennings (2010)

- A code can be a word that is used to describe/summarise a sentence, a paragraph, or even a full piece of text
- Open (preliminary) coding occurs during the first phase of interpretation. During data collection when the researcher reviews the data and searches for reoccurrences
- Steps involved in coding include:
  - Reading all transcriptions carefully and writing down some ideas as they come to mind
  - Pick one document (the most interesting one). Think about the main underlying meaning of the content and write this in the margin. Do this for several documents
  - Make a list of the topics you found so far, cluster similar topics. Arrange these topics in columns, ranging from major topics, unique topics, and leftovers
  - Take this list and go back to the data. Abbreviate topics to codes and write these codes next to appropriate parts of the texts. See whether new categories or codes emerge
  - Find the most descriptive wording per topic and turn them into categories. Look for ways to reduce the total list of categories by grouping related topics. Draw lines to show interrelationships
  - Make a final decision on the abbreviation (i.e. code) for each category
  - Assemble all data material belonging to each category in one place and perform a preliminary analysis
  - If necessary, recode existing data

• Creswell (2003), Jennings (2010)



When you move into your own home, you're alone. There is no bustle of people around the house. I miss having someone to chat with when I get home. I put the TV or some music so there's some background noise, the silence makes me feel so alone. Sometimes I will be sat watching trash TV and thinking I should be out doing something rather than watching this rubbish. I read a lot but sometimes I am too tired and just want to veg out. But it's been good to move out of mum and dad's as it's not healthy to rely on them as they won't last forever. I become independent and made my own decisions. It's good they still there when I need them. It's good to have some distance as when I was at home I was arguing a lot with my dad and that was made me decide it was time to go.

*feelings*  
*Living alone*  
*New relationship with parents*  
*Independence*  
*Old relationship with parents*  
*Argument with Dad*  
*Relation with father*

Graham R. Gibbs, Dawn Clarke, Celia Taylor, Christina Silver and Ann Lewins

### Coding: Example


A: We have an upstream delivery method, primarily to retailers, a 3<sup>rd</sup> party vendor keeps track and sends the bulbs out. The idea is to lower the price on shelves. The major constraint is its difficult to know our customer- hard to evaluate who is buying the bulb and what sockets they are putting them into. However there are some advantages. We can control consumer choice, working with retail partners, we have dominant displays of incentivized bulbs. Yet we think EISA is going to really impact future savings...

| Respondent | Excerpt   | Code | Themes or Categories  |
|------------|---|------|-----------------------|
| 1          | Upstream delivery method                          | UP   | Type of Program       |
| 1          | Constraint is its difficult to know our customers | NEG  | Weaknesses of Program |
| 1          | Control consumer choice                           | POS  | Strengths of Program  |
| 1          | EISA is going to really impact future savings     | EISA | Impact of EISA        |

Filiberto (2013)

### • Memos:

- A researcher's own commentary on what happened during research project
- States the thinking, feelings, and behaviour at certain times:
  - Procedural memos: focus on research process (what you did and how)
  - Analytical memos: focus on subject matter (ideas about what data mean)



Raf Aerts

- Jennings (2010)

## Conclusion

- Qualitative methods are characterised by a focus on words and texts, not attempting to quantify findings. The analysis is based on content, not on statistical relationships
- The main sources for qualitative data collection are: (participant) observation, in-depth interviewing, focus groups, document analysis, and (audio)visual materials, each with specific strengths and limitations
- Since qualitative methods do not attempt to generalise data, sampling is more haphazard and based on a researcher's intuition or through participant referral

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The logo for AUT (Auckland University of Technology) is displayed in white, bold, sans-serif capital letters on a black rectangular background.

# Tourism Research

Wk 6

Qualitative methods and mid-term overview

Tutorial 06-2

## Today's session...

- Will discuss a mid-term example to help you prepare
- Gives an example of qualitative thematic analysis of travel reviews on TripAdvisor

## 1. Tourist satisfaction in the digital age

- You receive 2 bundles with a number of visitor reviews from TripAdvisor. One for a hotel (Alpers Lodge) and one for an activity (Fergs Kayaks)
- Can you identify elements of satisfaction/dissatisfaction for each of both? Can you identify distinctive themes?

|                 | Alpers Lodge | Ferg Kayaks |
|-----------------|--------------|-------------|
| Satisfaction    |              |             |
| Dissatisfaction |              |             |

- What can you learn from this in terms of dealing effectively with this kind of user-generated content?

## 2. Preparation of group assignment

- Use the time to further develop your questionnaire and already think about how you will code the different answers and how you could go on to analyse these



Carabo



## Conclusion

- Online sources such as TripAdvisor offer new ways to connect with travellers/respondents and get insights into attitudes and behaviours
- Via qualitative thematic analysis we can attempt to identify common themes in the satisfaction/dissatisfaction of customers in order to improve our product