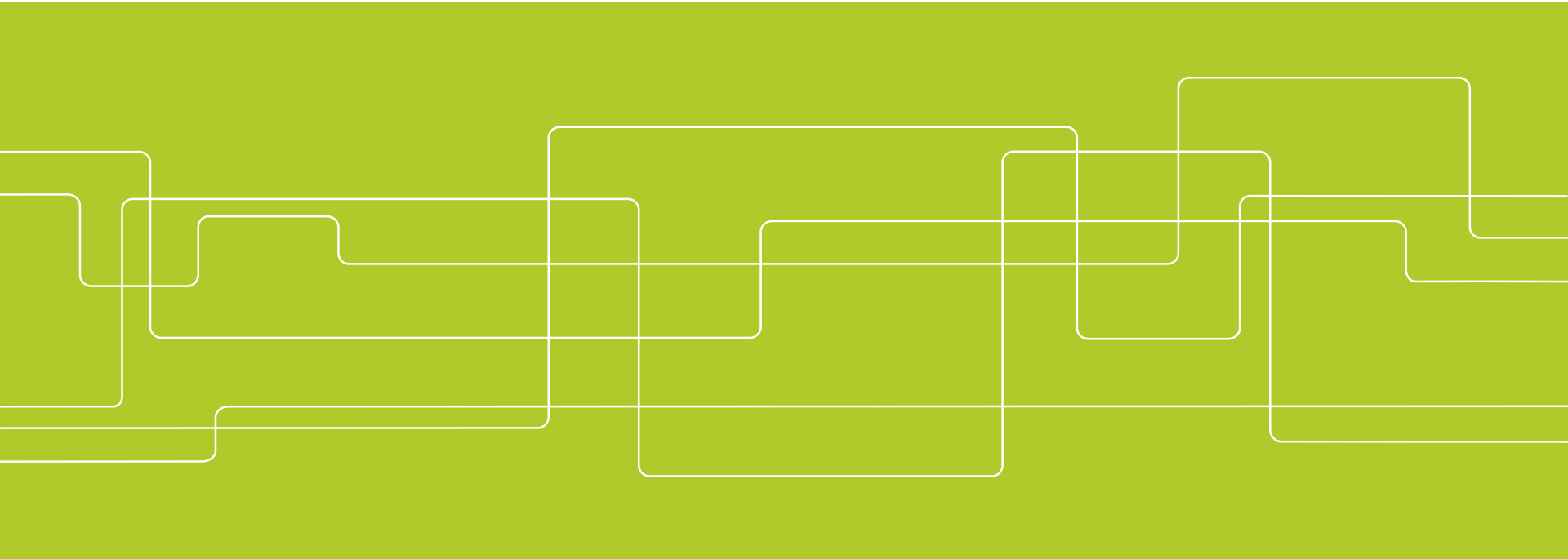




# Research Methods

Emily Christley





Emily Christley

PhD Student at the Department of Industrial Economics and Management

Master in Sustainable Energy Engineering (2018 - 2020, KTH)

Bachelor in Electro Mechanical Engineering (2014 - 2018, Cardiff)

Research project: **Sustainable Energy Transformations in Aviation**

- *"to contribute to an acceleration of sustainable energy transformation in aviation"*
- focus on alternative fuels and technologies
  - airports, airlines, local municipalities, fuel suppliers, aircraft manufacturers, users, markets, legislation



# My research (some examples)

## Theory/Concepts

Multi-level perspective on industrial transitions

Technological innovation systems

Narratives and storylines in discourse

## Method:

Qualitative case studies

## Context:

Sustainability transitions in the aviation industry in Sweden

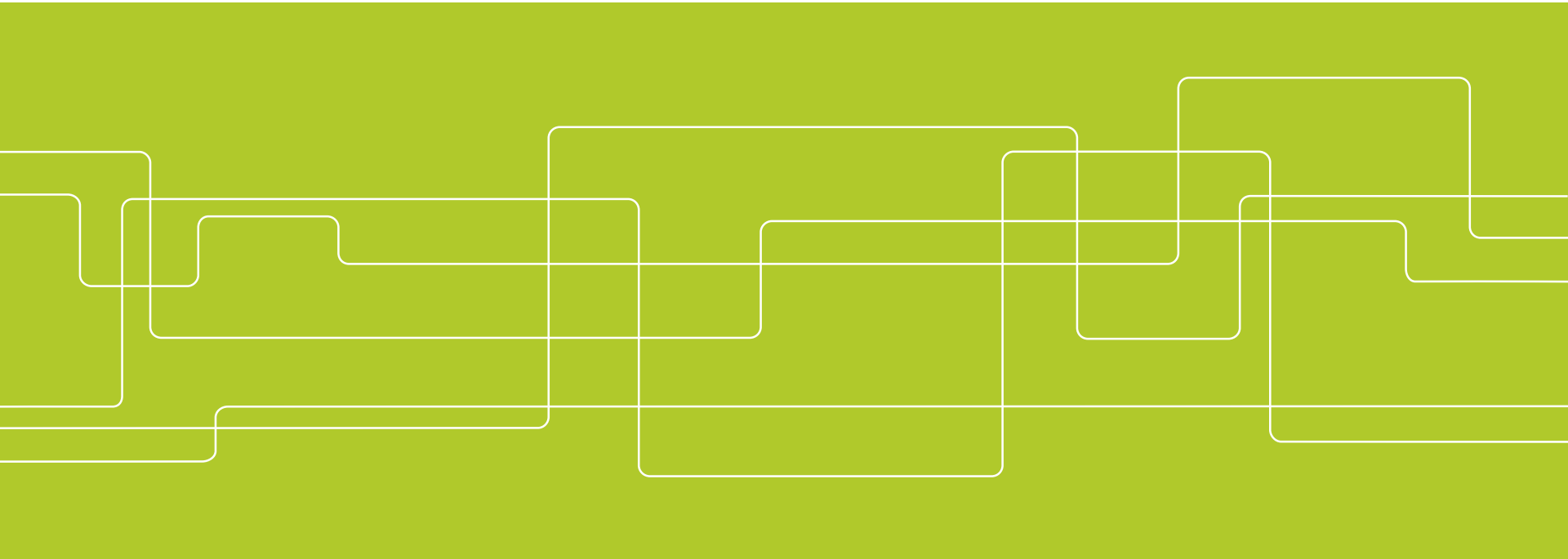
## Which method(s) do you plan to use in your bachelor thesis?



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# Research Methods



# Questions of method are challenging...



# Questions of method are challenging...



...but important.

## Energy Provision and Informality in South African Informal Urban Settlements

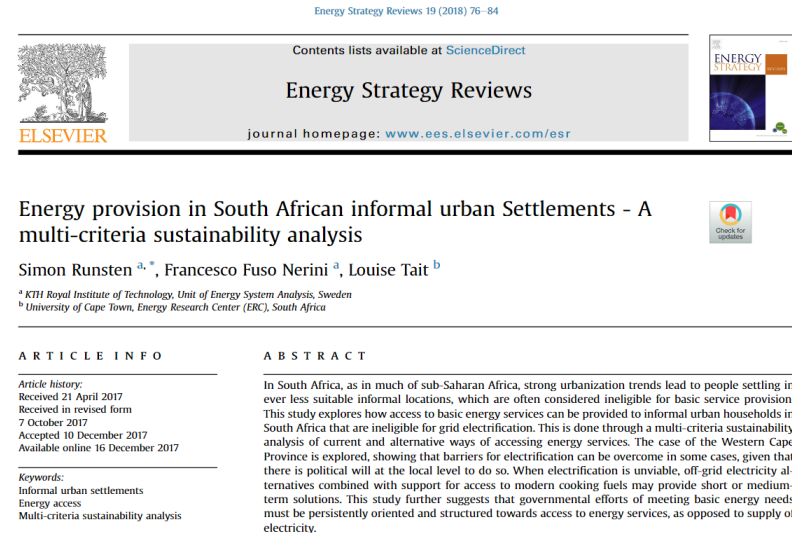
A Multi-Criteria Sustainability Assessment of  
Energy Access Alternatives

Simon Runsten



Minor Field Study

**Bachelor of Science Thesis**  
KTH School of Industrial Engineering and Management  
Energy Technology EGI-2015  
SE-100 44 STOCKHOLM







# Today

1. Research purpose & research path
2. Research space & methodological field
3. Reviewing the literature
4. Research designs
5. Methods
6. Data collection and analysis

# Research Purpose

# What is the purpose of research?

	Exploratory	Descriptive	Explanatory	Evaluative
<b>Means to</b>	Ask open questions Discover what is happening Gain insights	Gain accurate profile of events, persons or situations	Establish causal relationships between variables	Find out how well something works
<b>Useful if you are</b>	Unsure of an issue, problem or phenomenon	Willing to have a clear picture of the phenomenon	Aiming at explaining the relationships between variables	Concerned with assessing the effectiveness of something

Saunders et al 2016 (p.174-176)

# A typical path (for a case study)

## 1. Problem/topic

- Is it interesting to anyone?

## 2. Objective

- What do I want to find?

## 3. Literature review

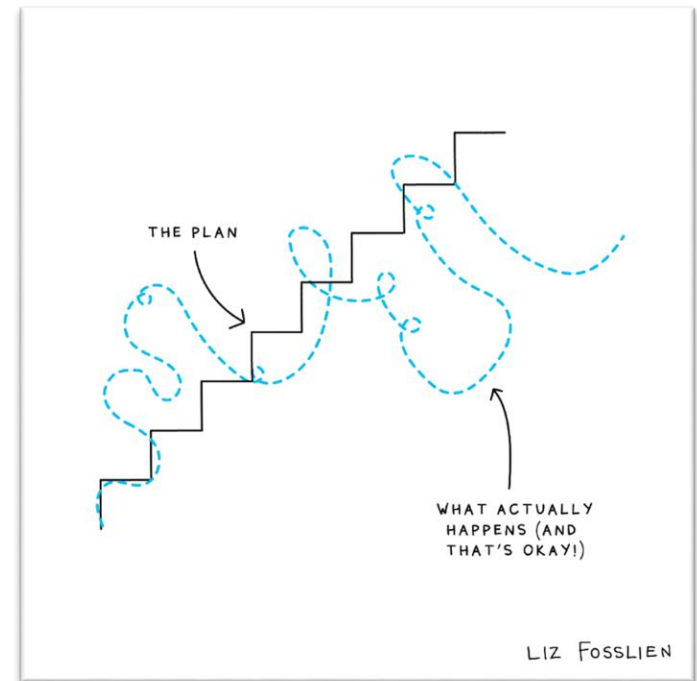
- What is the state of the art?
- Theoretical/conceptual Framework

## 4. Empirical design/analysis

- Deciding the unit of analysis
- Selecting cases
- Collecting and analyzing the data
- Interpreting the findings

## 5. Writing and reporting

- Theoretical implications
- Practical implications



***But wait...***  
***can you research problem change***  
***during the research process?***



# YES.

*“You should not think that a case study’s design cannot be modified by new information or discovery during data collection. Such revelations can be enormously important leading to your **altering or modifying your original research design** (Yin, 2017, p.63)”*

*“if you are conducting **exploratory research**, you must be willing to **change your direction** as a result of **new data** that appear and **new insights** that occur to you (Saunders et al, 2016, p. 175)”*



# Research Space

# Dimensions of Research

Figure 1 Potential Research Space

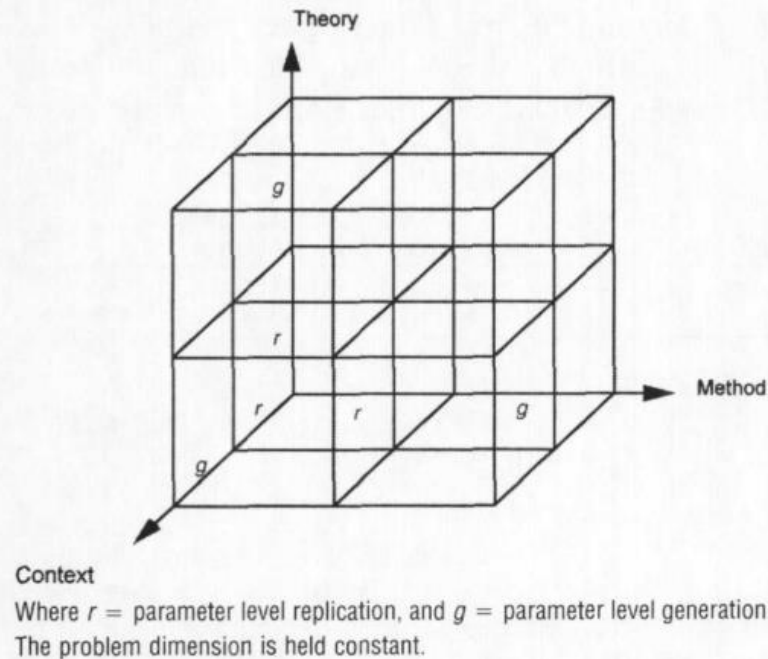


Table 1 Research Space and Levels

Level 1	
Problem	<i>General problem</i> General managerial and research question(s)
Theory	<i>Philosophical lens</i> Meta theory, including ontological, epistemological, and methodological axioms
Method	<i>Data generation</i> Methods of data production, including measurement issues, survey processes, interviews techniques, observational protocols, etc.
Context	<i>Investigative context</i> The when, where, and from whom/what data is collected (i.e., population specification and variable delineation (e.g., country, culture, industry, etc), sample issues, etc.)

(Berthon et al, 2002)





# Theory ...

‘Theory’ is a ***formulation regarding the cause and effect relationships between two or more variables***, which may or may not be tested. (Saunders, 2019, p.729)

‘Theory’ is ***simply a way of imposing conceptual order*** on the empirical complexity of the phenomenal world (Suddaby 2014, p. 407).

**Which 'theory' or 'theoretical concepts' do you plan to use in your bachelor thesis?**

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0376-0421(95)00044-6

## APPLICATION OF MODERN ALUMINUM ALLOYS TO AIRCRAFT

E. A. Starke, Jr\* and J. T. Stale

\*University of Virginia, Charlottesville, VA 229  
Alcoa Technical Center, Alcoa Center, PA 158

**Abstract**—Aluminum alloys have been the primary material of choice for aircraft since about 1930. Although polymer matrix composites are being used in military aircraft and are being specified for some applications in modern aircraft, they are the overwhelming choice for the fuselage, wing, and support structure and military cargo and transport. Well known performance characteristics, experience, and established manufacturing methods and facilities, are contained confidence in aluminum alloys that will ensure their use in this century and likely well into the next one. But most significantly, it is aluminum aircraft alloys that continue to keep them in a competitive position. This review covers the performance and property requirements for current aircraft and describes aluminum alloys and product forms which demonstrate the structural performance advantages of aluminum aircraft alloys.

Prog. Aerospace Sci., Vol. 33, pp. 431–472, 1998  
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0376-0421/98 \$10.00



Article

## Exploring the Political Discursive Lock-In Aviation in Sweden

Aneta Kulanowicz\* and Johan Nordensvard

Renewable and Sustainable Energy Reviews 156 (2022) 111972



## Renewable and Sustainable Energy Reviews

journal homepage: www.elsevier.com/locate/rsre

## Analysing the opportunities and challenges for mitigating the climate impact of aviation: A narrative review



## 'Energy regions': The transo socio-technical futures

Philipp Späth<sup>a,\*</sup>, Harald Rohrer<sup>b</sup>

<sup>a</sup> IFP - Institute of Forest and Environmental Policy, University of  
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## ARTICLE INFO

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Transition management  
Multi-level framework  
Regional governance  
Energy systems

## 1. Introduction

At both national and EU-level ambitious targets have been set for a substantial reduction of energy systems towards greater sustainability. When it comes to the translation of such general objectives concerning our energy future into concrete policies and practices, however, we find not only much debate and controversy. This is not surprising, as the concretisation and materialisation of general notions of sustainability into concrete decisions, investments and practices always proves to be a matter of politics and social dispute (Hajer, 1995; Meadowcroft, 2005).

In this paper we analyse the emergence and role of 'guiding visions' in such socio-technical transformation processes towards greater sustainability. In particular, we investigate a regional vision building process for a sustainable energy system in an Austrian 'energy region' and discuss its contribution in terms of a

'discursive niche' to a transition towards a sustainable low-carbon energy system.

There is a growing body of literature dealing with the transition of socio-technical systems towards sustainability and the system innovations this requires. As set out in more detail in the introductory paper of this special section (Smith, Voss, Grün, introduction to this section) the dynamics of such transformation processes can best be understood in a multi-level perspective (MLP) of innovation (Rip and Kemp, 1998; Geels, 2005). This perspective distinguishes a micro-level of protected niches, functioning as test-beds for the emergence of new socio-technical constellations, a meso-level of socio-technical regimes (such as energy systems) and a broader context of the socio-technical landscape, which encompasses cultural norms, values and persistent socio-technical structures.

While the multi-level perspective convincingly explains the obduracy of existing energy system configurations and the dynamics of system transitions in a historical perspective, our understanding of ongoing transition processes still is far from complete. The MLP mainly studies transformation dynamics in the interplay of technology variation in (temporally protected) niches



Chloé, Kulanowicz, A., Nordensvard, J. Exploring the Political Discursive Lock-In on Sustainable Aviation in Sweden. Energies 2021, 14, 7401. <https://doi.org/10.3390/energies14017401>

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inferior to trains and, therefore, all focus should go to the last path dependency in the merged frame of National environment possibility that both the role of aviation or its sustainability is. There is here a static perceived view of technology as being dependency in the linkage of aviation transport with particular, for instance, oppose aviation while the conservative party was in aviation. This polarization is actually the largest and most lock-in as this undermines any compromises or large-scale future

**Keywords:** aviation; policy; discourse; sustainability; lock-in;

## 1. Introduction

The aim of this paper is to explore the contested role of aviation in Sweden using an interpretative policy analysis. I will interpret possible aviation futures. Our argument path dependencies where one is based around a static whereas the second is based on interparty conflict when which leads to a status quo and disregards a long-term into or de-investment into the technology.

Even though Sweden is already considered a global transformation [1], there are questions about how to be being able to reduce greenhouse gas emissions to net zero the aviation industry needs to undergo major transformations, actually reduce its impact on the climate and to reach the Agreement [2].

After the Paris Agreement, the European Union reduce greenhouse gas (GHG) emissions by at least 40 net zero emissions by 2050. As part of the new Euro European Climate Law goal is to write into law the greenhouse gas emissions by 2050 [3]. Aviation is a part of the sustainable

## PRIMARY STRUCTURE OF SUBSONIC AIRCRAFT

- 2.1. Property requirements for fuselage
- 2.2. Property requirements for wings
- 2.3. Property requirements for empennage
3. ALUMINUM ALLOY PRODUCT FORMS FOR AIRCRAFT
- 3.1. Wrought products
- 3.2. Castings
- 3.3. Superplastic products for aircraft
4. ALUMINUM ALLOY ALLOYS
- 4.1. Alloy designation systems
- 4.2. Wrought heat treatable alloys
- 4.3. Cast alloys
- 4.4. Temper designation system
5. STRUCTURE PROPERTY RELATIONSHIPS
- 5.1. Microstructural features
- 5.2. Strength
- 5.3. Fracture toughness
- 5.4. Fatigue crack initiation
- 5.5. Fatigue crack propagation
- 5.6. Stress corrosion cracking
- 5.7. Corrosion resistance
- 5.8. Elastic modulus
- 5.9. Summary of structure/property relationships
6. DRIVERS FOR MATERIALS SELECTION AND ALUMINUM ALLOY PRODUCT DEVELOPMENT FOR AIRCRAFT
- 6.1. 1930s–1960s
- 6.2. 1970s
- 6.3. 1980s
- 6.4. 1990s
7. RECENT DEVELOPMENTS
- 7.1. Market driven materials development
- 7.2. Recent advances and applications of 2XXX and 7XXX alloys
- 7.3. Recent advances and applications of aluminum–lithium alloys

Research Policy 30 (2010) 449–458

Contents lists available at ScienceDirect

## Research Policy

journal homepage: www.elsevier.com/locate/respol



## 'Energy regions': The transformative power of regional discourses on socio-technical futures

Philipp Späth<sup>a,\*</sup>, Harald Rohrer<sup>b</sup>

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## ARTICLE INFO

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**Keywords:**  
Guiding visions

## ABSTRACT

'Guiding visions' play an important role in the transition management approach as a central means of mobilizing social actors and the co-ordination of dispersed agency.

'Energy regions' in Austria are an interesting example for the strategic promotion of such guiding visions in the context of regional development. We describe the case of Murau, an Alpine district in which a strong actor network has been built around a vision of systematically exploiting renewable energy sources and at the same time saving the region from economic decay. The vision gained much authority and has been institutionalised at various levels of regional governance. It furthermore was supported by and played an important role for various local attempts to influence socio-technical changes.

processes drive strategies of visions and put to support sustainable power

action in the emerging trends; convergence by reinforcing

lights reserved.

low-carbon

the transition of the system the introduction processes can of innovation distinguishes -beds for the meso-level of a broader encompasses cultures, explains the meso and the perspective, our air from communities in the context) indices

of the aviation industry around the transport. We mining the road to sustainable aviation a merged frames sort and steering the third emerged environmentally

t. We can see that there is not just a 'stagnant' aviation that discounts the change as the technology changes, never clean or dirty. Another path

ical parties where the green party, to support aviation and innovation

actually the largest and most important aspect of the discursive

norms or large-scale future investments in sustainable aviation.

use; sustainability; lock-in; industry; emission; electrified aviation

explores the contested political discourse around the future interpretative policy analysis of how the different political ion futures. Our argument is that there are two discursive is based around a static view of the aviation technology interparty conflict when deciding on the future of aviation, disregards a long-term decision to make large investment technology.

already considered a global leader in sustainable energy positions about how to move forward to reach the goal of e gas emissions to net zero emissions. It is well known that under major transformations in the upcoming decades to be climate and to reach the below 2 degree goal of the Paris

nt, the European Union (EU) put up a goal that aims to emissions by at least 40 percent by the year 2030 and to As part of the new European Green Deal, EU's proposed to write into law the goal about achieving net zero GHG is a part of the sustainable transport ambitions [4], with its

\* Corresponding author. Tel.: +49 781 2037220.  
E-mail address: spaeth@ifp.uni-freiburg.de (P. Späth).

# Methodological Field

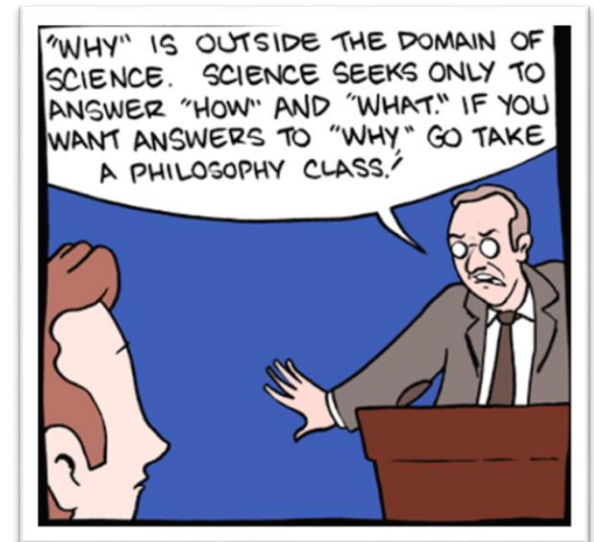
# Positivism / Interpretivism

## Positivist approach

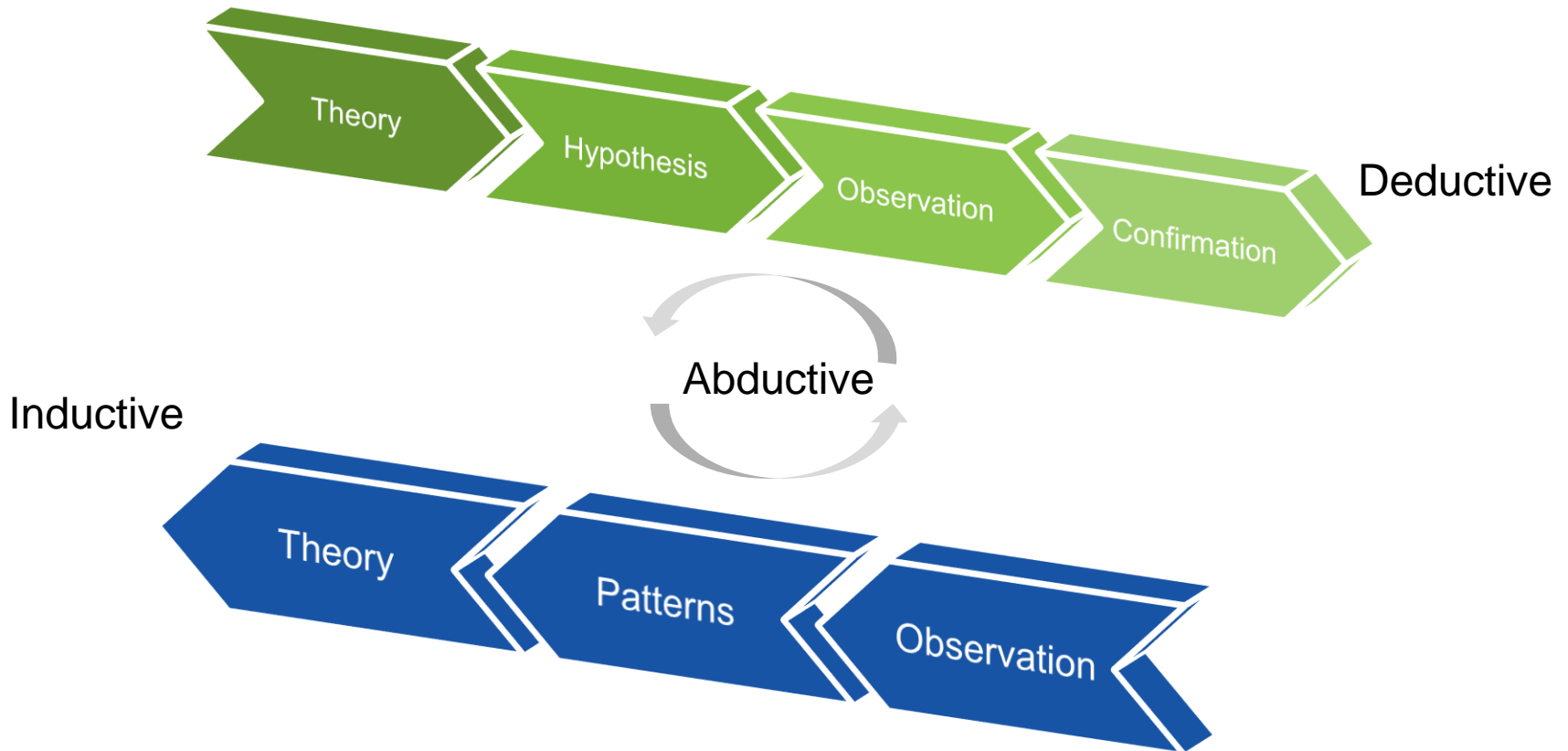
- “[...] surrounding precise empirical observations of individual behavior in order to discover and confirm a set of probabilistic causal laws that can be used **to predict general patterns of human activity**”

## Interpretivist approach

- “[...] socially meaningful action through the direct detailed observation of people in natural settings in order **to arrive at understandings and interpretations** of how people create and maintain their social worlds” (Neuman, 1997:as cited in Arnaboldi 2012).

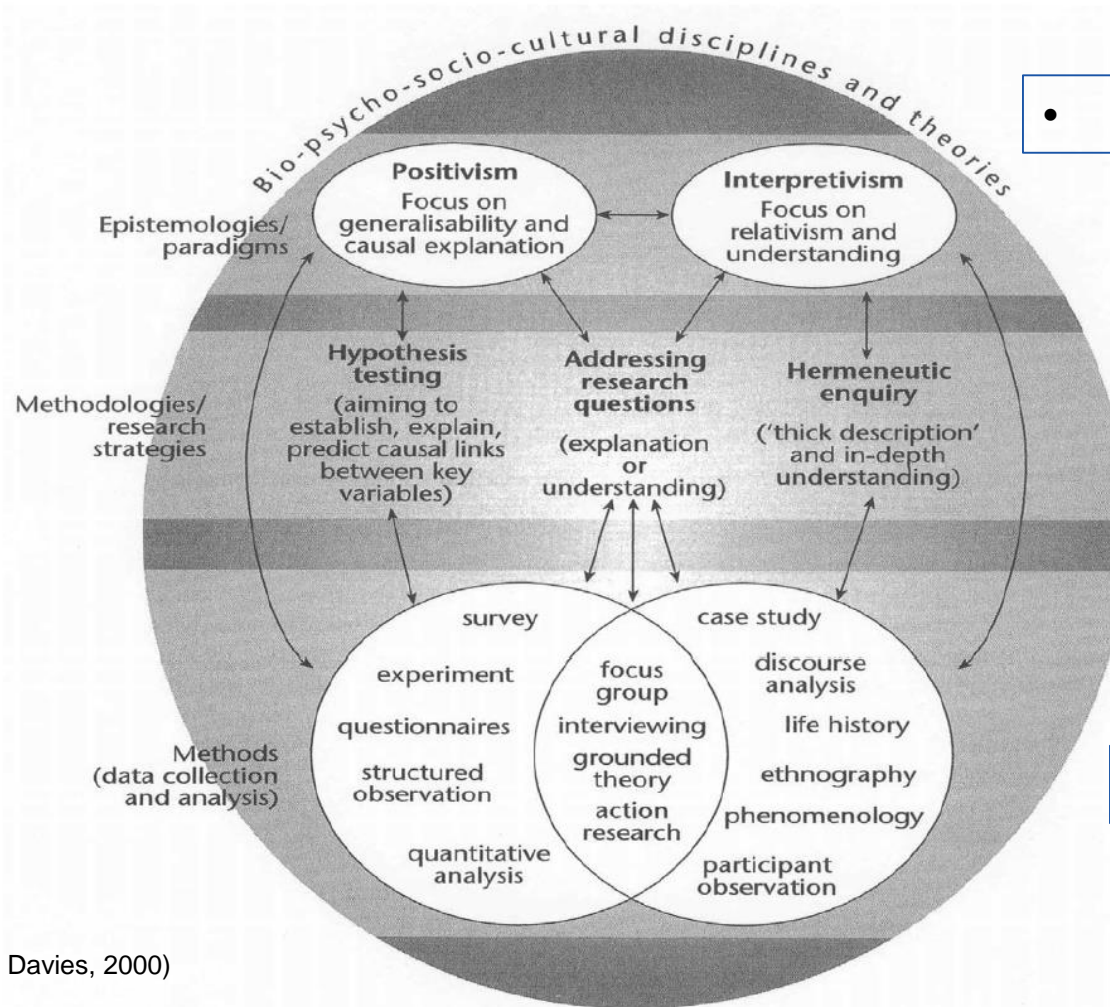


# Abductive?



*“... an **abductive** approach moves back and forth, in effect combining deduction and induction (Suddaby 2006). This matches what many business and management scholars actually do (Saunders 2017, p. 148)”*

# The methodological field



- Philosophical Worldview

- Research Design / Strategy of inquiry

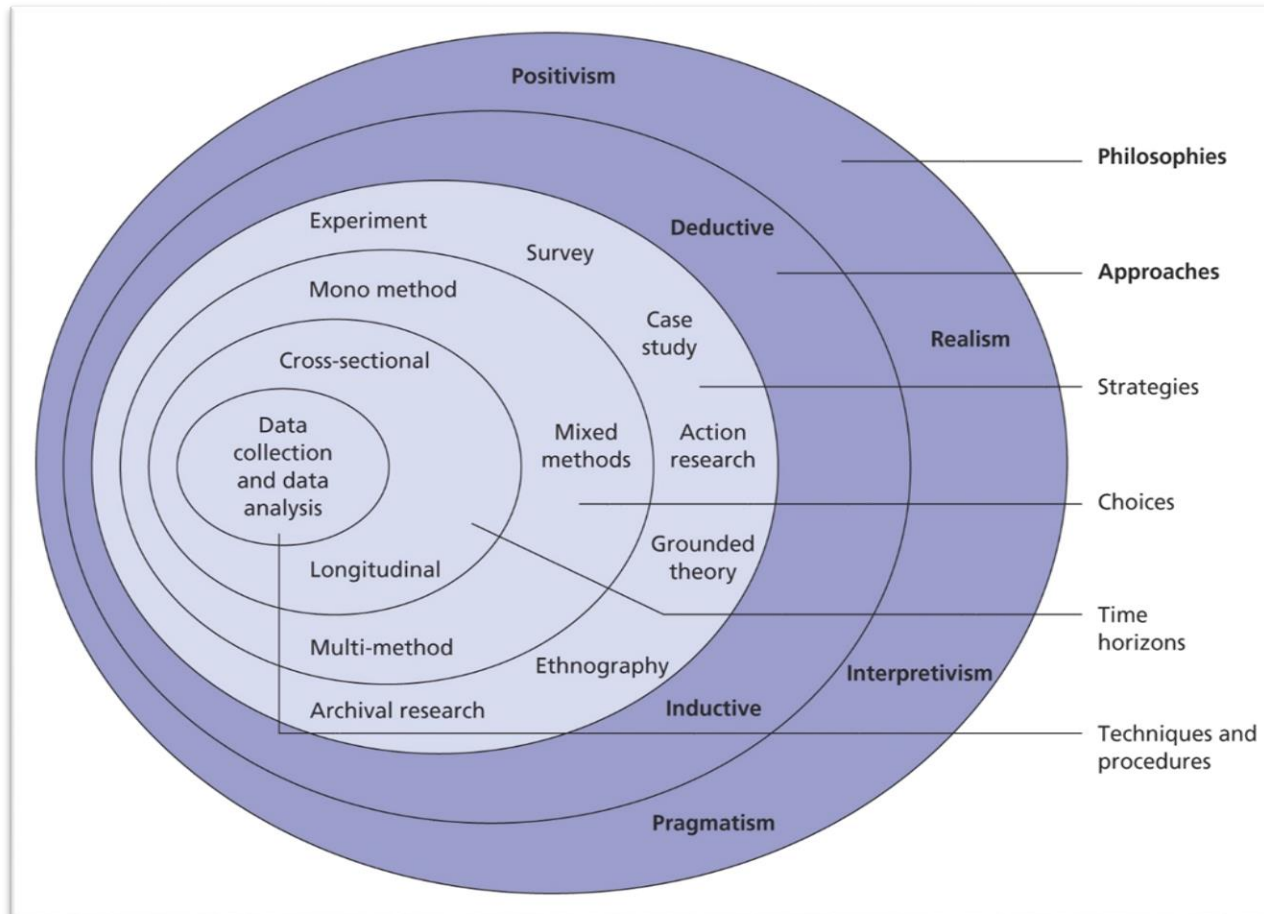
- Methods

(Gomm and Davies, 2000)

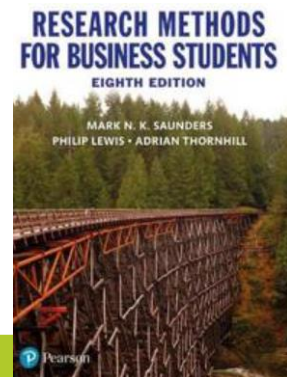
Creswell (2009)



# The methodological field



Saunders' Research Onion (2007)








# Reviewing the literature

# literature

/ˈlɪt(ə)rətʃə/ 

*noun*

written works, especially those considered of superior or lasting artistic merit.

"a great work of literature"

*synonyms:* written works, writings, (creative) writing, literary texts, compositions, letters, [belles-lettres](#); [More](#)

- books and writings published on a particular subject.

"the **literature on** environmental epidemiology"

*synonyms:* publications, published writings, texts, reports, studies, relevant works

"the literature on prototype theory"

\*Google Dictionary



# Search vs. Review

Which ones are the definitions of “Review”?

- A. try to find something by looking or otherwise seeking carefully and thoroughly.
- B. an act of searching for someone or something.
- C. a formal assessment of something with the intention of instituting change if necessary
- D. a critical appraisal of a book, play, film, etc. published in a newspaper or magazine.

\*Google Dictionary

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Review

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\*Google Dictionary

## Growing literature ....

The number of science publications is growing exponentially, doubling every 9–10 years (Bornmann and Mutz, 2015)

For instance, web of Science Core Collection (WoS, 2018)

- More than 20,300 journals + books and conference proceedings
- Over 71 million records
- More than a 1 billion cited references (1900 to present)



# Why should you review the literature?

Literature review let you

- determine whether the topic is **worth studying**
- provide a brief overview of **key ideas and themes** (general to narrow)
- summarise, **compare and contrast the research of the key** research streams
- **narrow down to highlight previous research** work most relevant to your own research and **compare/contrast**
- highlight those aspects **where your own research provide fresh insights**

Saunders et al (2009)



## Also ...

They help you to

- Generate and refine your research questions
- Avoid repeating research that has been conducted already [which is very unlikely anyway]
- Learn from different research designs

# The databases



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Student Alumni Staff | KTH Biblioteket

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Search

KTH Library  
Home | Studies | Research | Co-operation | About KTH | Library

KTH / KTH Library

Search in the library search service Primo

Search for books, e-books, articles, journals, databases...

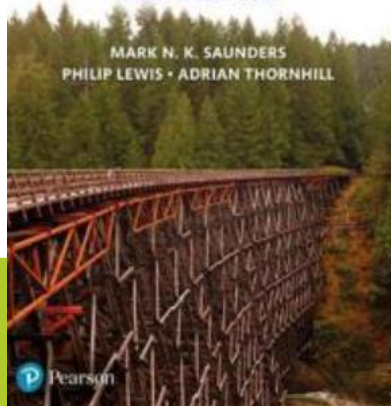
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## RESEARCH METHODS FOR BUSINESS STUDENTS

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MARK N. K. SAUNDERS  
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Journal of Business Research 104 (2019) 333–339

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### Literature review as a research methodology: An overview and guidelines

Hannah Snyder

BI Norwegian School of Business, Nydalenveien 37, 0404 Oslo, Norway

#### ARTICLE INFO

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Literature review  
Systematic  
Research methodology  
Systematic review  
Integrative review

#### ABSTRACT

Knowledge production within the field of business research is accelerating at a tremendous speed while at the same time remaining fragmented and interdisciplinary. This makes it hard to keep up with state-of-the-art and to be at the forefront of research, as well as to assess the collective evidence in a particular area of business research. This is why the literature review as a research method is more relevant than ever. Traditional literature reviews often lack thoroughness and rigor and are conducted ad hoc, rather than following a specific methodology. Therefore, questions can be raised about the quality and trustworthiness of these types of reviews. This paper discusses literature review as a methodology for conducting research and offers an overview of different types of reviews, as well as some guidelines to how to both conduct and evaluate a literature review paper. It also discusses common pitfalls and how to get literature reviews published.

#### 1. Introduction

Building your research on and relating it to existing knowledge is the building block of all academic research activities, regardless of discipline. Therefore, to do so accurately should be a priority for all academics. However, this task has become increasingly complex. Knowledge production within the field of business research is accelerating at a tremendous speed while at the same time remaining fragmented and interdisciplinary. This makes it hard to keep up with state-of-the-art research and to be at the forefront, as well as to assess the collective evidence in a particular research area. This is why the literature review as a research method is more relevant than ever. A literature review can broadly be described as a more or less systematic way of collecting and synthesizing previous research (Baumeister & Leary, 1997; Tranfield, Denyer, & Smart, 2003). An effective and well-conducted review as a research method creates a firm foundation for advancing knowledge and facilitating theory development (Webster & Watson, 2002). By integrating findings and perspectives from many empirical findings, a literature review can address research questions with a power that no single study has.

It can also help to provide an overview of areas in which the research is disparate and interdisciplinary. In addition, a literature review is an excellent way of synthesizing research findings to show evidence on a meta-level and to uncover areas in which more research is needed, which is a critical component of creating theoretical frameworks and building conceptual models. However, traditional ways of describing and portraying the literature often lack thoroughness and are not undertaken systematically (Tranfield et al., 2003). This results in a lack of

knowledge of what the collection of studies is actually saying or to what it is pointing at. As a result, there is a great chance that authors build their research on flawed assumptions. When researchers are selective of the evidence on which to build their research, ignoring research that points the other way, serious problems can be faced. In addition, even when the methodology of the reviews is valid, there are often issues with what constitutes a good contribution.

Of course, there already exist some guidelines for conducting literature reviews that suggest different types of reviews, such as narrative or integrative reviews (e.g., Baumeister & Leary, 1997; Wong, Greenhalgh, Westhorp, Buckingham, & Pawson, 2013), systematic reviews, and meta-analysis (e.g., Davis, Mergerson, Bennett, & Mazerolle, 2014; Liberati et al., 2009; Moher, Liberati, Tetzlaff, & Altman, 2009) or integrative reviews (e.g., Torrico, 2005). There have also been some attempts to develop guidelines specifically for business or management research (e.g., Palmaster, Houston, & Hulland, 2018; Tranfield et al., 2003). By building on and synthesizing these different types of literature reviews, this paper takes a broader view by summarizing and integrating the different guidelines, including how to apply them in business research. More specifically, the purpose of this paper is to provide an overview of and guidelines for different types of literature reviews as a research method in business research.

In the following paper, it will be argued that the potential for making theoretical and practical contributions using the literature review as a method will be advanced by clarifying what a literature review is, how it can be used, and what criteria should be used to evaluate its quality. The paper has several contributions. First, this paper separates between different types of review methodologies; systematic,

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<https://doi.org/10.1016/j.jbusres.2019.07.039>

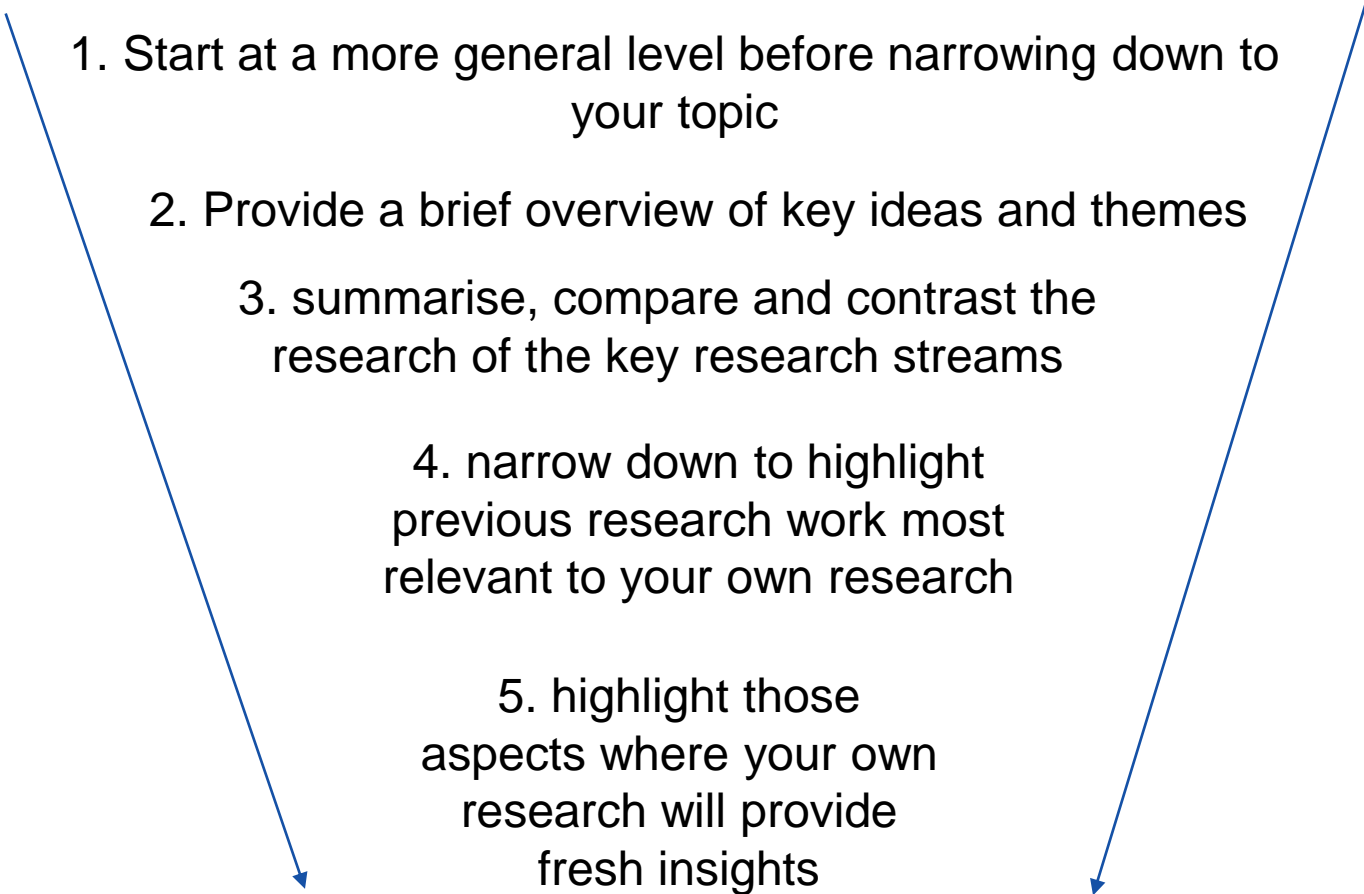
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Available online 01 August 2019

0148-2963/ © 2019 The Author. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

# **How to write and structure a literature review chapter?**

# One example: Funnel approach

1. Start at a more general level before narrowing down to your topic
  2. Provide a brief overview of key ideas and themes
  3. summarise, compare and contrast the research of the key research streams
  4. narrow down to highlight previous research work most relevant to your own research
  5. highlight those aspects where your own research will provide fresh insights
- 
- A large blue funnel shape is centered on the slide, with its widest part at the top and narrowing towards the bottom. Two blue arrows point downwards from the left and right sides of the funnel, starting near the top and ending near the bottom, indicating the direction of the funnel approach.

# How to structure



**My advice:** Do not list/summarize papers one by one.  
Instead, you can come up with themes and synthesize the knowledge!



# Research designs



# Research Designs

It can be called “strategies of inquiry” as well

Two main type of designs

- Qualitative (i.e., non-numerical)
- Quantitative (i.e., numerical)

They should not be viewed as polar opposites or dichotomies

Mixed approaches are possible



# Qualitative vs Quantitative

Some examples (not dichotomies):

	Qualitative	Quantitative
Data	E.g., using words or observations	E.g., using numbers
Purpose	Exploring and understanding	Examining the relationships among variables
Questions	Open-ended	Close-ended
Strategies	Case study etc.	Experiment etc.



# Quantitative Designs

Some examples:

- **Survey research**
  - a quantitative or numeric description of
    - trends,
    - attitudes,
    - or opinions
  - Studies a sample of a population.
- **Experimental research**
  - seeks to determine if a specific treatment influences an outcome
  - true experiments, natural experiments, quasi-experiments





# Qualitative Designs

Some Examples:

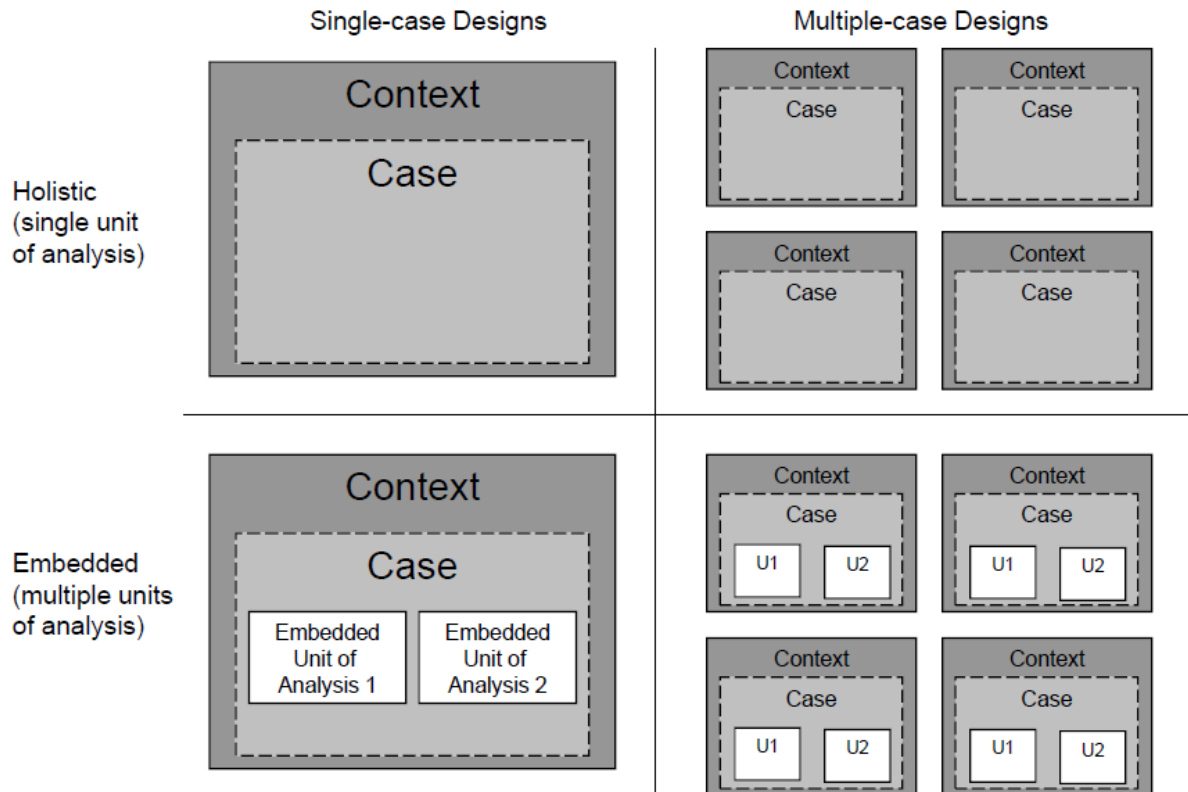
- **Narrative research**
  - researcher studies the lives of individuals
  - provide stories about individual lives
  - involve a narrative chronology
- **Phenomenological research**
  - Grounded theory approach
  - Ethnography
  - Case studies

## For instance ...

A **case study** is an empirical inquiry that

- investigates a contemporary phenomenon **in depth and within its real-life context**,
- copes with a distinctive situation in which there are **many variables**
- relies on **multiple sources of evidence**
- may benefit from the prior development of **theory to guide data collection and analysis** (Yin, 2009; p.18)

# Single vs. Multiple Units of Analysis



(Yin, 2009:32)

# Methodological Differences

	Survey	Case Study	Econometrics	....
Source of Data	Responses to questionnaires	<b>Human words, observation, documents etc.</b>	Large databases	
Position of the researcher	Outside the field	<b>Entering and observing the field</b>	Outside the field	
Data Analysis	Mathematical	<b>Non Mathematical</b>	Mathematical	
Software/tool	Yes	<b>Sometimes</b>	Yes	
Type of research questions	Hypothesis and relations among variables	<b>Open ended questions</b>	Hypothesis and relations among variables	
Phenomenon	Reducible into a model	<b>Complex</b>	Reducible into a model	

(Arnaboldi, 2012)

# Research Questions

	Research question	Control of behavioural events	Focus on contemporary events
<b>Experiment</b>	How? Why?	yes	yes
<b>Survey</b>	Who? What? Where? How many? How much?	no	yes
<b>Case Study</b>	How? Why?	no	yes

(Yin, 2016)



# Research Methods



# Research Methods

But ....

# **What is difference between method and methodology?**





*“The most common definitions suggest that*

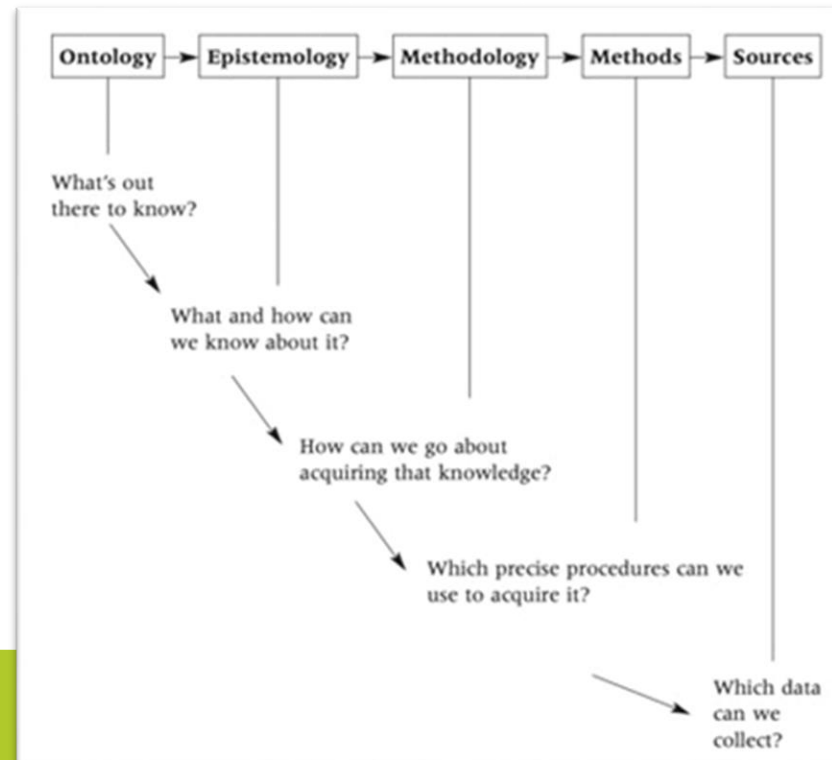
- methodology is the overall approach to research linked to the paradigm or theoretical framework*
- the method refers to systematic modes, procedures or tools used for collection and analysis of data.”*

*(Mackenzie and Knipe, 2006)*

*“The most common definitions suggest that*

- methodology is the overall approach to research linked to the paradigm or theoretical framework*
- the method refers to systematic modes, procedures or tools used for collection and analysis of data.”*

*(Mackenzie and Knipe, 2006)*



(Grix, 2002)



# Research Methods

## Research methods

- involve the forms of data collection, analysis, and interpretation that researchers propose for their studies

## Some examples

- Big data analysis
- Questionnaires
- Experiments
- Observations
- Focus groups
- Interviews
- Documents
- Records etc.

**For instance: Interviews**

# Interviews

Interviewing is a method to know about phenomenon by asking open-ended questions to informants

- **Who to interview?**
- **Which questions?**
  - It depends on research question
  - Let them talk
- **Structured semi-structured?**
- **Recording**
  - Always ask in advance
  - Ask additional questions after turning off the recorder

## Different types of interviews vs. research purpose

	Exploratory	Descriptive	Explanatory	Evaluative
Structured		++	+	+
Semi-structured	+		++	++
Unstructured	++			+

++: more frequent  
+: less frequent

Saunders et al 2016 (p. 393)



# Different types of interviews

## Structured interviews

- Based on predetermined and standardized questions
- More often in quantitative research

## Semi-structured interviews

- Non-standardized
- More often in qualitative research
- Researcher has some themes and some key questions to cover (although their use may vary from interview to interview)
- Some questions can be dropped and some others can be added
- Room for open discussion

## Unstructured interviews

- Ideas on what aspects to explore
- No predetermined questions
- Informal and non-directive



# Data Analysis

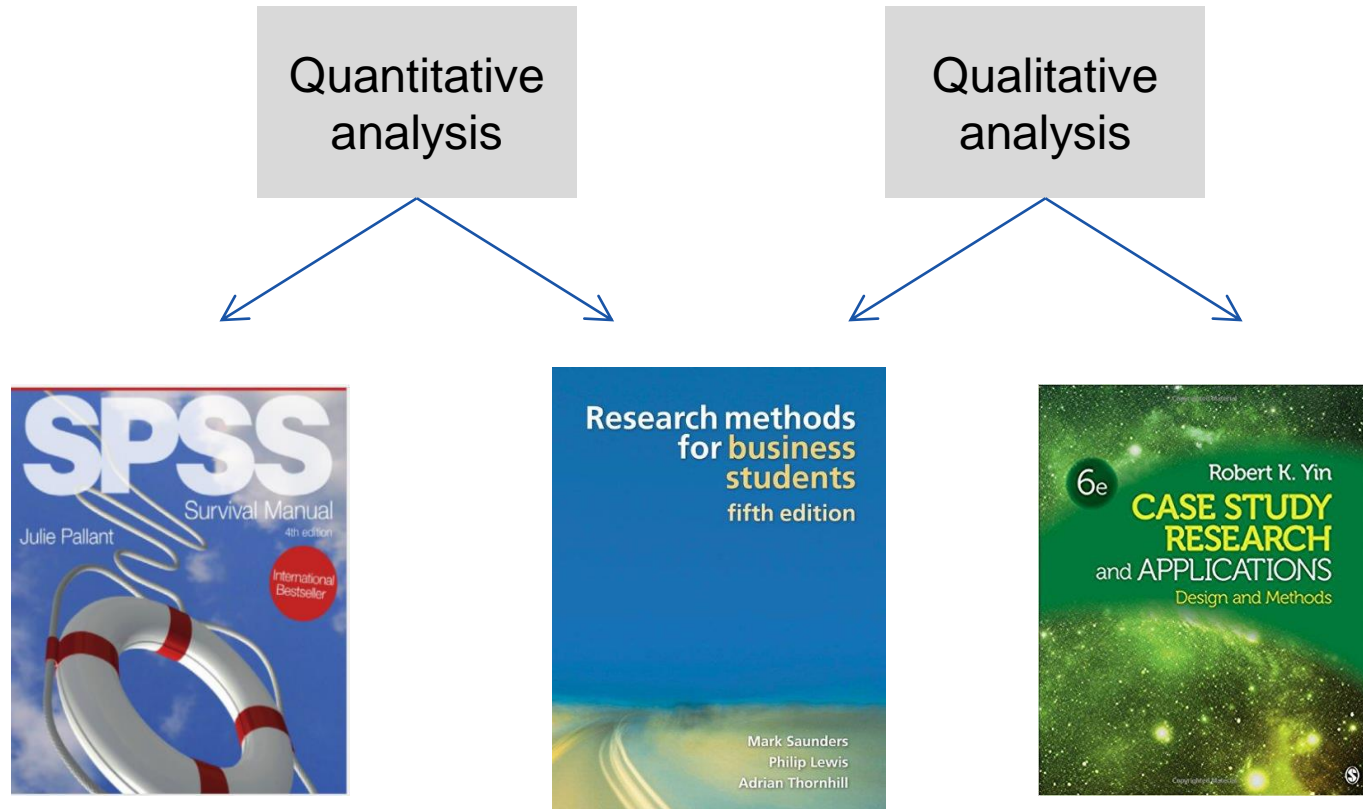


# Quantitative vs. Qualitative data

	Quantitative data	Qualitative data
<b>Data type</b>	Based on meanings derived from <b>numbers</b>	Based on meanings expressed through <b>words</b>
<b>Data structure</b>	Collection results in numerical and <b>standardized data</b>	Collection results in <b>non-standardized data</b> requiring classification into categories
<b>Data analysis</b>	Analysis conducted through the use of diagrams and <b>statistics</b>	Analysis conducted through the use of <b>conceptualisation</b>

Saunders et al 2016 (p. 482)

# Some suggestions





# For instance: interview analysis

Have you analyzed any interviews so far?

# For instance: interview analysis

The primary source for case study are interviews

- Once transcribed you start analyze the text
- Which steps:
  - Deciding on your approach to analysis
  - Coding text
    - If you are in group: make the first coding separately and then cross-check results
  - Identify variables/dimensions
  - Identify:
    - Patterns
    - Relations



# Approach to analysis

Using a **deductive** approach

- Existing theoretical framework help you organize and direct your data analysis

Using an **inductive** approach

- You do not use a predetermined theoretical framework
- You start to collect data and then explore them

**Remember:**

- It is an interactive and iterative process
- Abductive approaches are common
- You can change your approach along the way

Saunders et al 2016 (p. 569-571)

# Coding the text

- A code is a concept, a word that signifies “what is going on in this piece of data.”
- Coding, on the other hand, is the analytic process of examining data line by line or paragraph by paragraph (whatever is your style) for significant events, experiences, feelings, and so on, that are then denoted as concepts (Strauss & Corbin, 1998)
- Codes can be based on
  - Themes, Topics
  - Ideas, Concepts
  - Terms, Phrases
  - Keywords

## An example

**Interviewer:** Tell me about teens and drug use.

**Respondent:** I think teens use drugs as a release from their parents Well, I don't know. I can only talk for myself. For me, it was an experience. You hear a lot about drugs You hear they are bad for you.

Source: *Basics of Qualitative Research*, (Strauss & Corbin, 1998).

## An example

**Interviewer:** Tell me about teens and drug use.

**Respondent:** I think teens use drugs as a release from their parents Well, I don't know. I can only talk for myself. For me, it was an experience. You hear a lot about drugs You hear they are bad for you.

### AFTER CODING

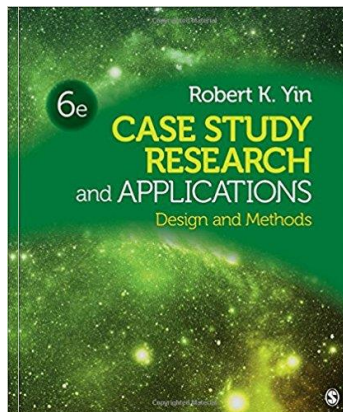
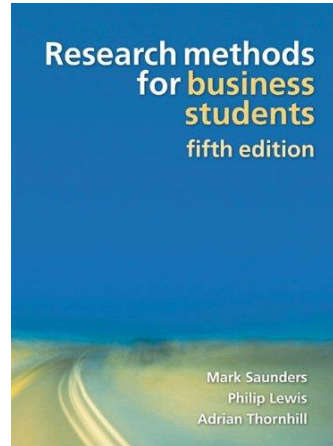
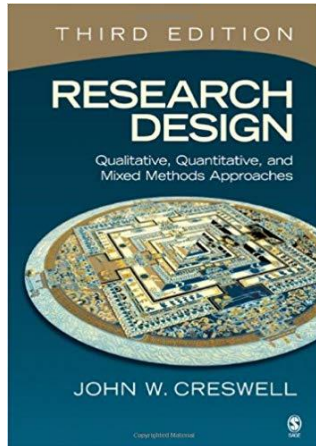
**Interviewer:** Tell me about teens and drug use.

**Respondent:** I think teens use drugs as a release from their parents [**“rebellious act”**]. Well, I don't know. I can only talk for myself. For me, it was an experience [**“experience”**] You hear a lot about drugs [**“drug talk”**]. You hear they are bad for you [**“negative connotation”** to the **“drugtalk”**].

Source: *Basics of Qualitative Research*, (Strauss & Corbin, 1998).



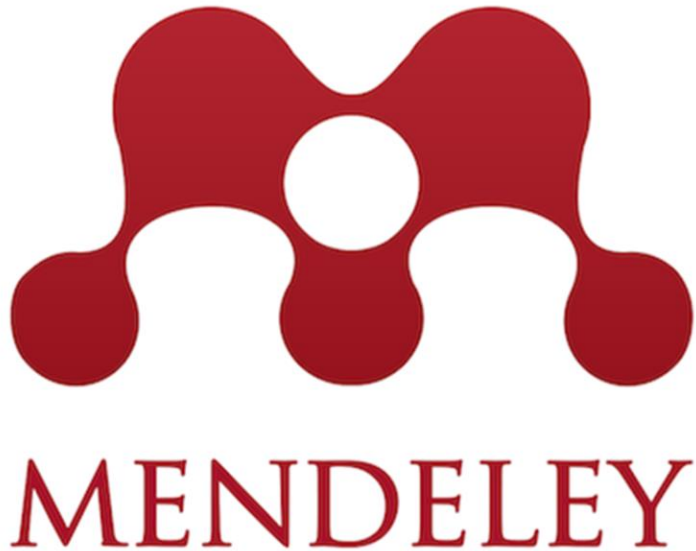
# Some key books ...



**Btw, how do you manage your references?**



**EndNote™**



**Any questions or  
comments?**

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# Thanks!



# References

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