



Welcome Week

# Academic & Scientific Work

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**Assistant Professor**  
**Finance and Accounting Group**

# **What is academic and scientific work and why is it relevant?**

# Academic and scientific work offers the most rigorous, successful, and proven methodology we have, even for the most unlikely challenges:



- 116 Italian start-ups (Camuffo et al., 2020)
- 4-month training program to develop their start-up idea
  - Research versus entrepreneurial approach
- Which start-ups will have the best ideas and will generate revenue?

CONTROL	TREATMENT
<p><b>STEP 1 – BUSINESS MODEL CANVAS</b> <i>Explore key components of business</i></p> <p><b>STEP 2 – CUSTOMER INTERVIEWS</b> <i>Explore customers' needs</i></p> <p><b>STEP 3 – MINIMUM VIABLE PRODUCT</b> <i>Explore customers' willingness to pay</i></p> <p><b>STEP 4 – CONCIERGE/PROTOTYPE</b> <i>Explore customer-service/product interaction</i></p>	<p><b>STEP 1 – BUSINESS MODEL CANVAS</b> <i>Explore key components of business</i></p> <p><b>STEP 2 – CUSTOMER INTERVIEWS</b> <i>Explore customers' needs</i></p> <p><b>STEP 3 – MINIMUM VIABLE PRODUCT</b> <i>Explore customers' willingness to pay</i></p> <p><b>STEP 4 – CONCIERGE/PROTOTYPE</b> <i>Explore customer-service/product interaction</i></p>
<p>Standard approach followed by entrepreneurs</p>	<p><u>AT EACH STEP</u></p> <p>Hypothesis definition: CLEAR &amp; FALSIFIABLE Validation: IDENTIFICATION, POTENTIAL BIASES, <i>e.g. ethnographic interviews, A/B tests</i></p>

Search heuristics, such as trial and error, effectuation, and confirmatory search

CONDUCT RESEARCH!

# Today: A quick introduction to academic and scientific work\*

\* An excerpt of my elective for master students in the Spring semester: “Academic Research and Writing”

# What is academic and scientific work?

a process of systematic inquiry that entails the collection of data, documentation of critical information, and analysis and interpretation of that data/information, in accordance with suitable methodologies set by specific professional fields and academic disciplines

# What is academic and scientific work?

Uses a structured way to formulating questions and identifying problems

Gathers evidence and draws inferences

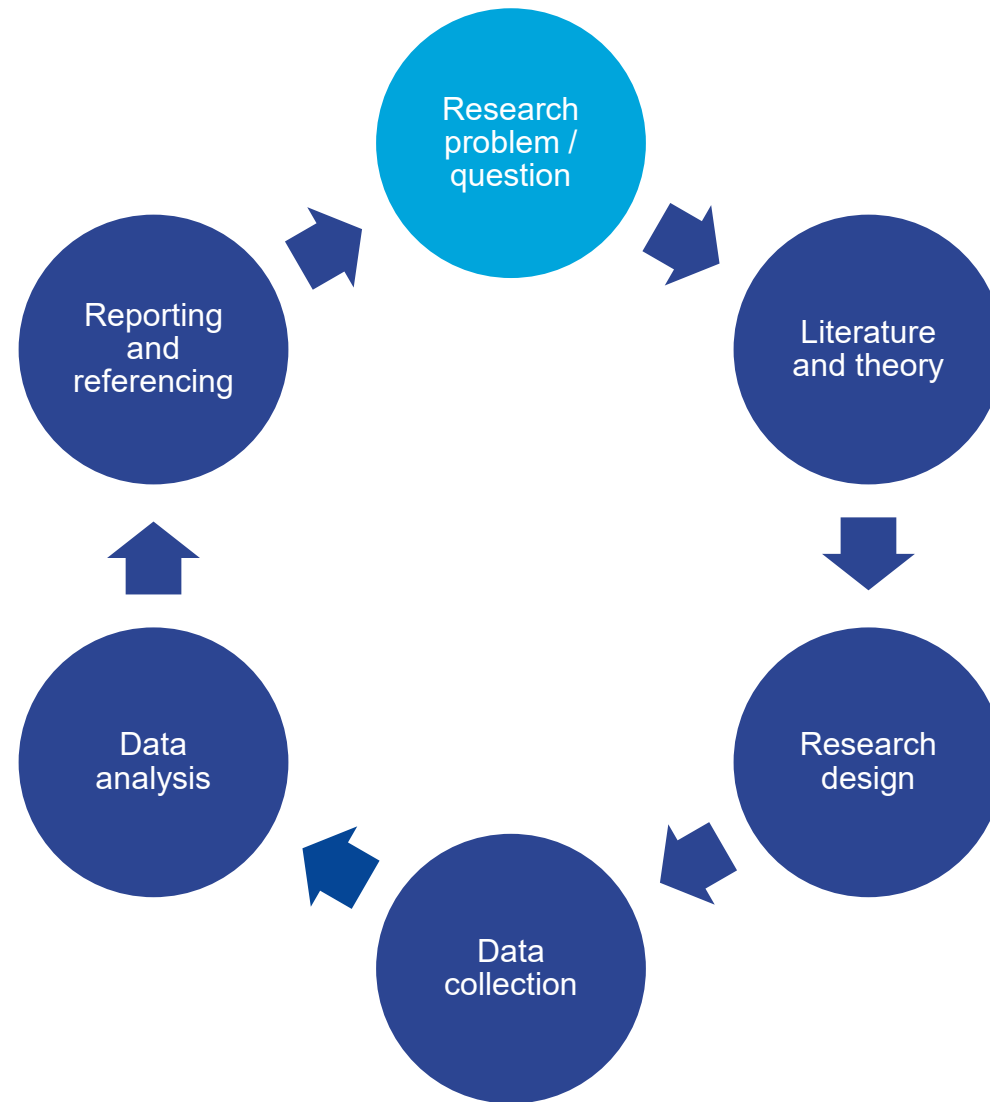
a process of **systematic inquiry** that entails the **collection of data, documentation of critical information, and analysis and interpretation of that data/information**, in accordance with **suitable methodologies set by specific professional fields and academic disciplines**

Relies on methodologies of different academic fields and disciplines

# Academic and scientific work follows a continuous cycle



# What is a good research question/problem?





# Good research questions and problem statements are clear, focused, and concise

Minimize room for misinterpretation

Specific enough to be covered in one paper

*“A research question is a clear, focused, concise, and arguable question around which you center your research project.”*

It is the punchline for not a personal or political commentary but a prerequisite for a structured academic and scientific analysis

# Research questions and problem statements can be motivated through theory and practice



# Research questions and problem statements can be motivated through theory and practice

When does cognition (“thinking carefully about something”) enable either moral reasoning or self-interested motivated reasoning?



Sweatshop labor is wrong unless the worker is cognitively motivated: Cognition can both increase and reduce self-interested reasoning (Paharia et al. 2013)

**Which question is which?**



Why do consumers say they dislike sweatshop labor but buy products that are produced by it?

# Research questions and problem statements can be motivated through theory and practice

When does cognition (“thinking carefully about something”) enable either moral reasoning or self-interested motivated reasoning?

Theoretical Question



Sweatshop labor is wrong unless the worker is paid enough to live on. Cognition can both increase and reduce moral reasoning (Paharia et al. 2013)

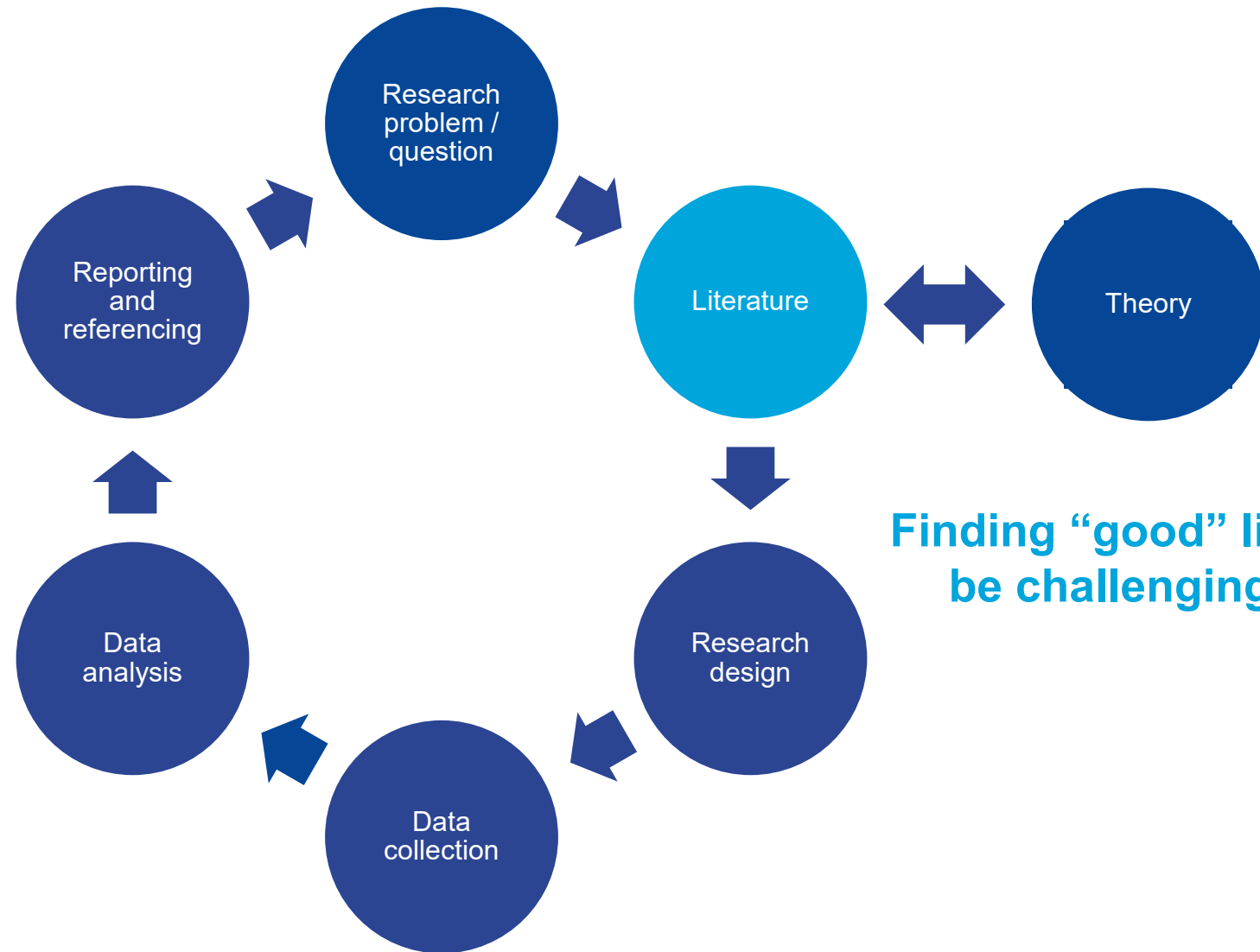
**Which question is which?**

“Practical” Question

Why do consumers say they dislike sweatshop labor but buy products that are produced by it?



# What do we already know?



Finding "good" literature can be challenging (at first)!



# What is “good” literature?

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2023

Claudia Goldin

“for having advanced our understanding of women’s labour market outcomes”

## Some criteria :

- Reputation of the author (e.g., prizes and affiliations)
- Impact factor, SJR, or another metric of its journal
- Ranking of the journal it is published in: ERIM, ABS, FT50
- Number of citations of the specific articles

SJR: <https://www.scimagojr.com/>



[The importance of pay in employee motivation: Discrepancies between what people say and what they do](#)

SL Rynes, B Gerhart, KA Minette - Human resource ..., 2004 - Wiley Online Library

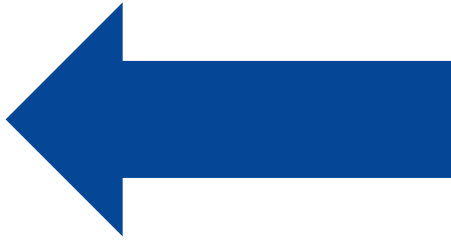
Abstract A majority of human resources professionals appear to believe that employees are likely to overreport the importance of pay in employee surveys. However, research suggests the opposite is actually true. We review evidence showing the discrepancies between what

☆ Cited by 451 [Related articles](#) [All 15 versions](#)

**Rule of thumb: A “good” research paper is (1) published in a highly-ranked journal AND/OR (2) cited many times**

# How do I find relevant literature fast?

Backward snowballing!



- Pick a “good” research paper that is relevant for you (closely-related paper)
- Scrutinize its reference list to find other “good” and relevant research papers
- Read those research papers
- Scrutinize the reference lists of those research papers...
- And so on ...

# How do I find relevant literature fast?

Forward snowballing!



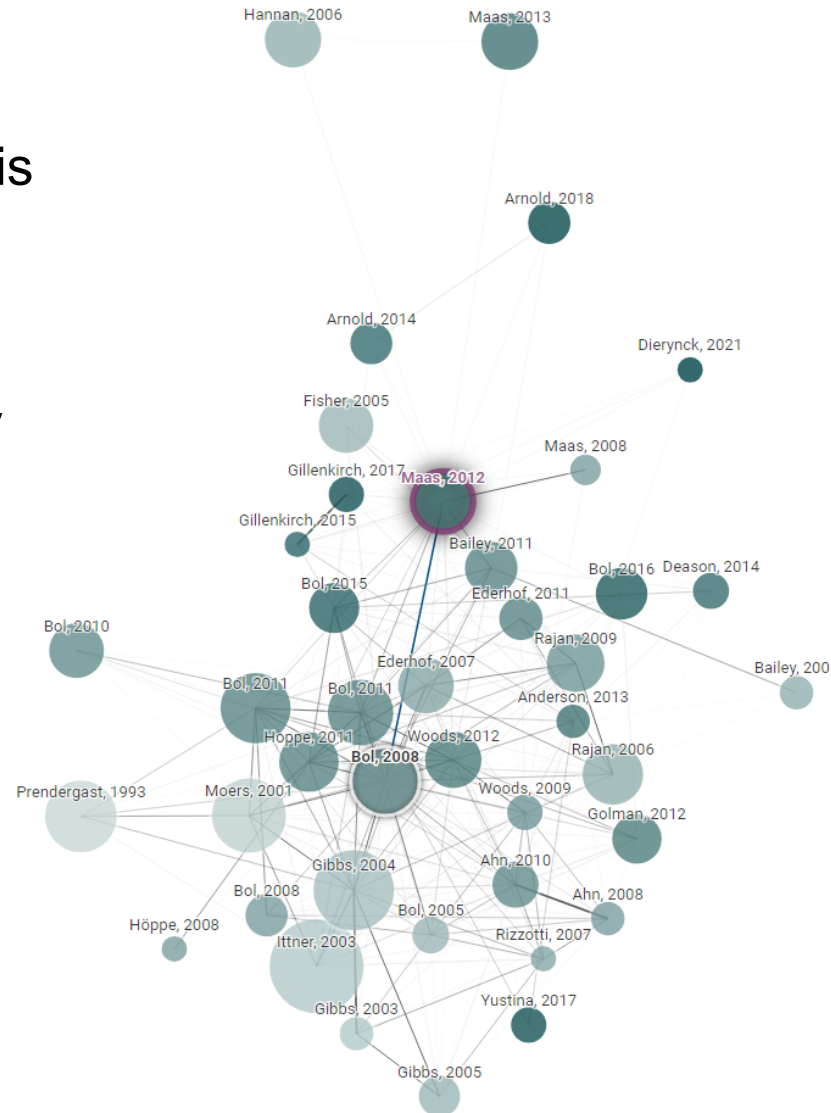
- Identify a “good” research paper that is relevant for you
- Search for this publication, e.g., in [scholar.google.com](https://scholar.google.com) or [scopus.com](https://scopus.com)
- Click on “Cited by” (“Zitiert von”)



# How do I find relevant literature fast?

## Connected papers

- Identify a “good” research paper that is relevant for you
- Search for this publication, e.g., in [www.connectedpapers.com](http://www.connectedpapers.com)
- Click on connected papers with many citations
- Pricing:
  - 5 graphs per month (Free)
  - Unlimited graphs (4.32 EUR)



In search of informed discretion: an experimental investigation of fairness and trust reciprocity

V. S. Maas, M. V. Rinsum, Kristy L. Towry

2012, International Journal of Radiation Oncology Biology Physics

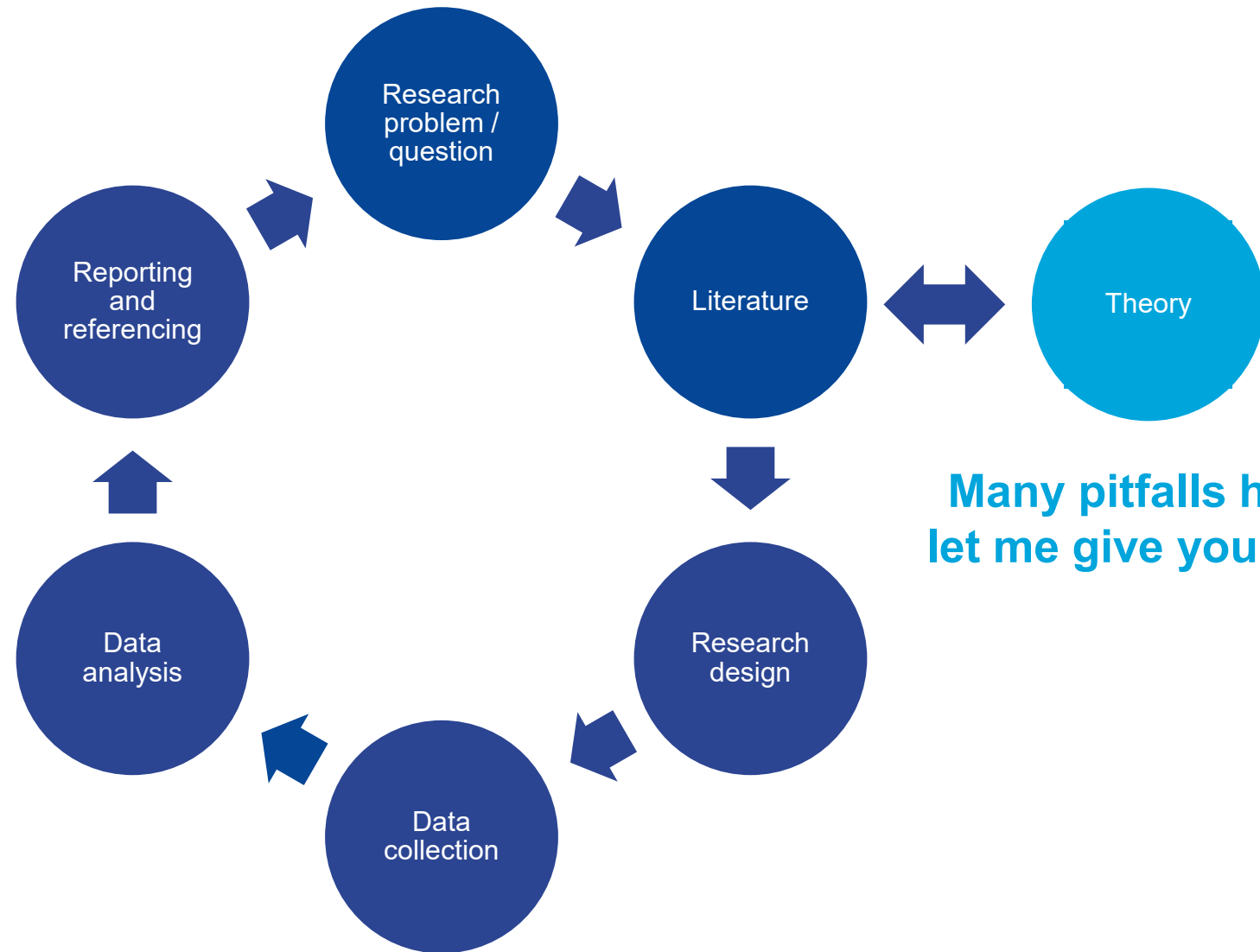
96 Citations

Save

Open in:

The invention provides a baling machine for baling groups of packages containing product into a bale bag. Packages are transported to fall down a chute individually where they are stacked in a group until the group is allowed to fall into a bale bag and into engagement with a moving platform which decelerates the group to minimize impact and resulting bruising. The filled bale bag is then ejected and closed.

# Academic and scientific work uses theories



**Many pitfalls here. So, let me give you pointers**

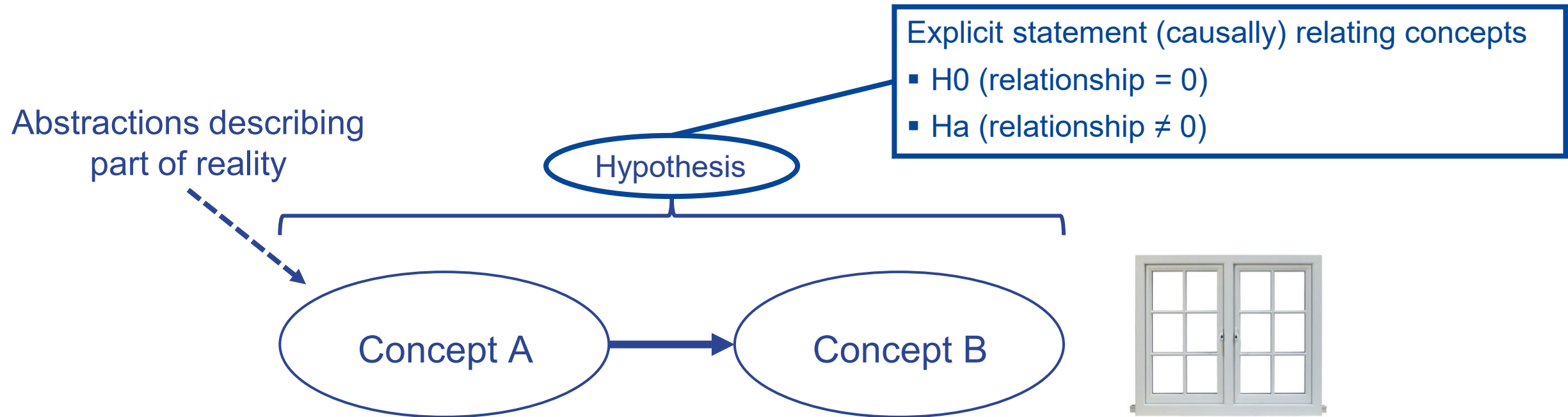
# What is a theory?

A theory is a window to look at the (observable) world



# What is a theory?

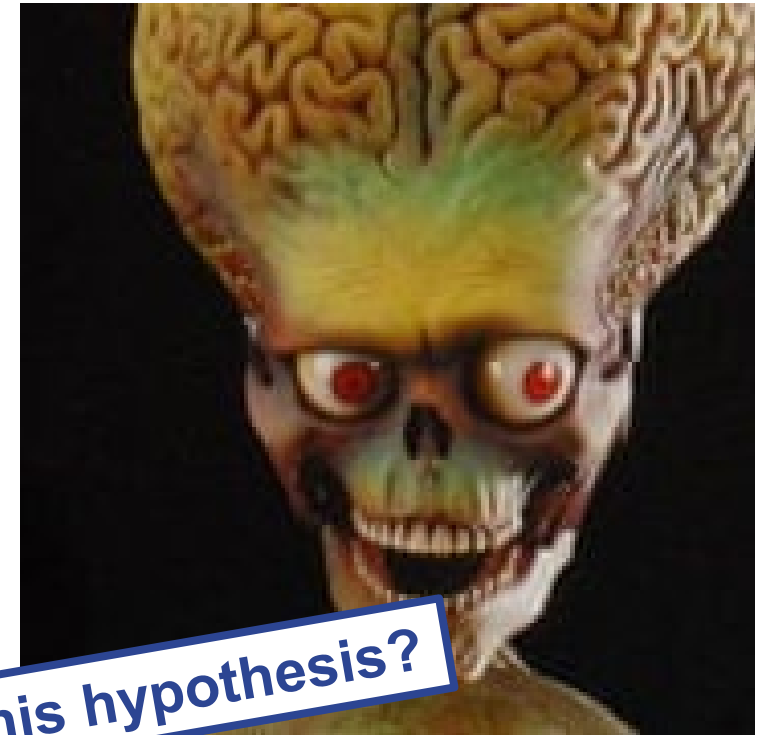
Theories (causally) link concepts and (often) formulate hypotheses



# What is a good hypothesis?

My close friend had an interesting “hypothesis”

“The universe is amazing and life in the universe may surprise us! Thus, aliens take any type of form.”

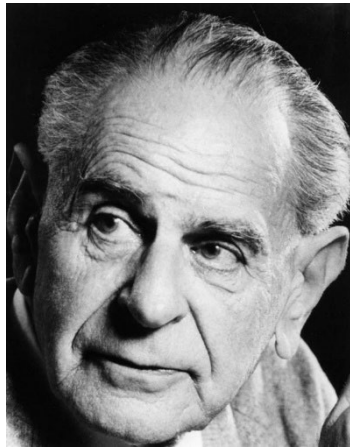


What is ‘wrong’ with this hypothesis?



# A 'good' hypothesis is falsifiable!

“The universe is amazing and life in the universe may surprise us! Thus, aliens take any type of form.”



Karl Popper

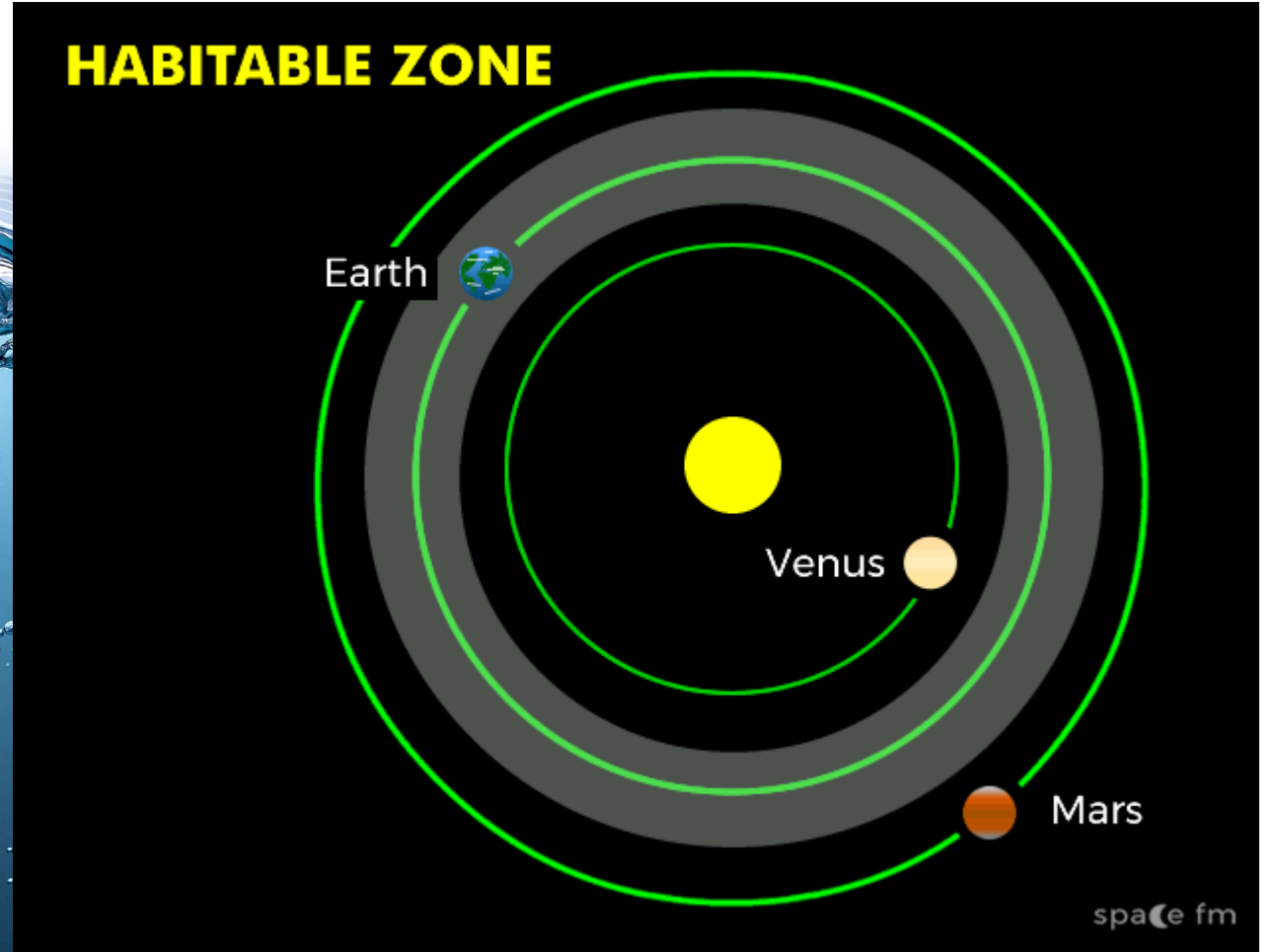
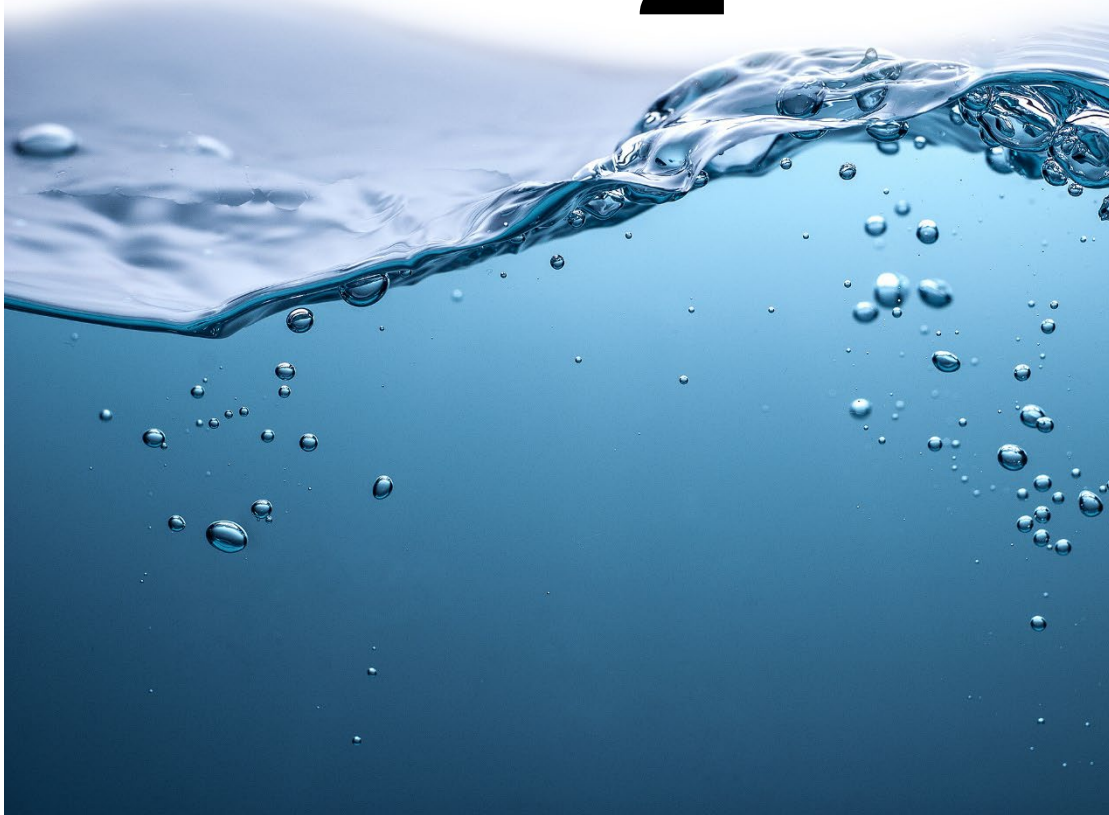
If your hypothesis cannot be proven wrong, it is not useful

A 'good' hypothesis is falsifiable, meaning that empirical evidence should be able to contradict it

We develop hypotheses about (causal) relationships and they are falsifiable (testable)

# My alternative hypotheses about aliens:

O<sub>2</sub>



# How do we find answers?

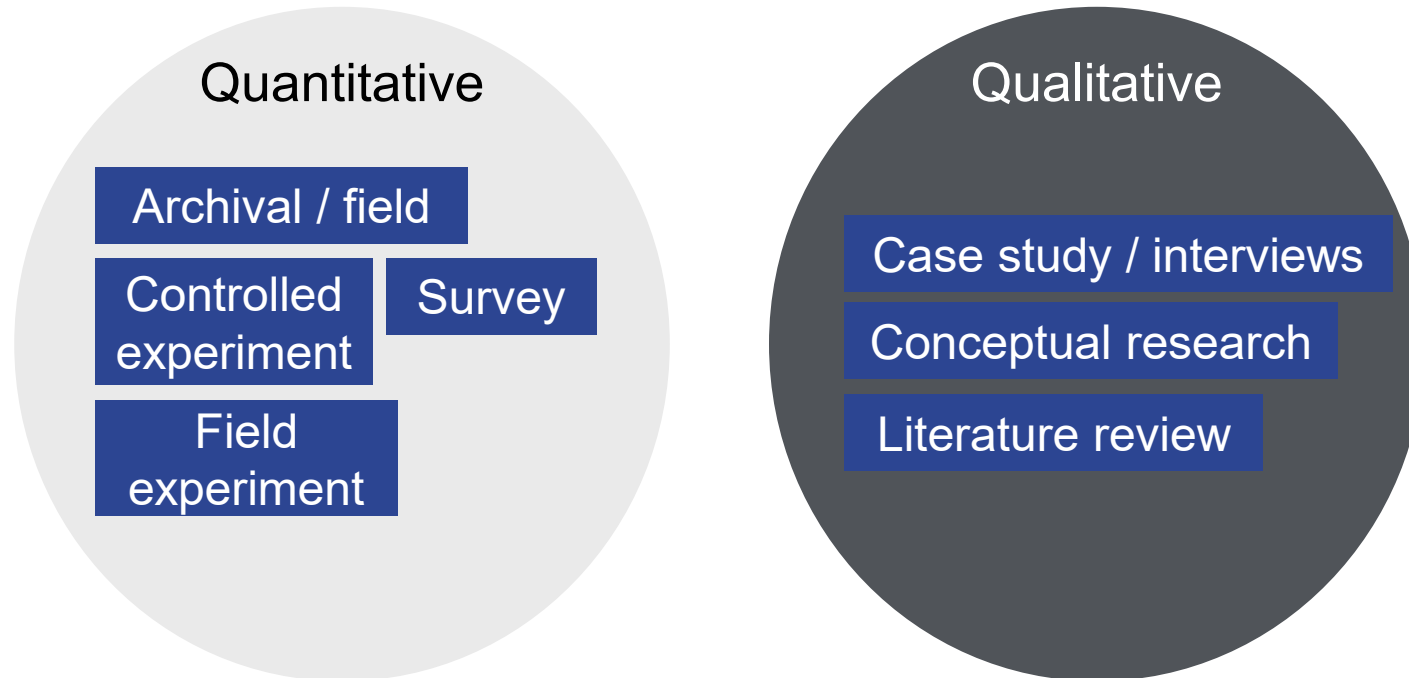


Let me give you a quick overview of the research methodologies



# Researchers use a variety of research methods!

Choices are typically predetermined by your supervisor



# Qualitative research methods

What are the differences?

## Literature review



## Conceptual research



## Case study / interviews



# Qualitative research methods

They rely on non-numerical data (observations, interviews, and prior studies)

## Literature review

- Systematic and comprehensive analysis and synthesis of existing literature.
- Example: Cooper and Kagel (2016)

## Conceptual research

- Develop new ideas or theories using conceptualization and theoretical argumentation
- Example: Ashforth et al. (2016)

## Case study and interviews

- In-depth, detailed examination within a real-world context
- Example: DeRonda and Lok (2016)

**Generally, qualitative methods focus on synthesizing and developing theories**

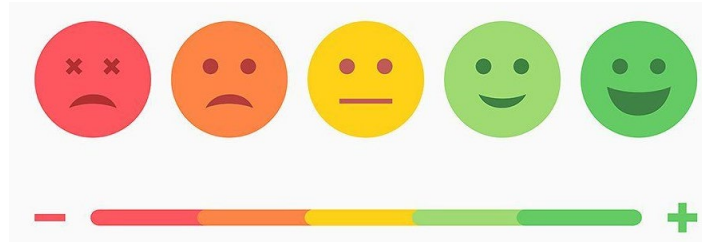
# Quantitative research methods

What are the differences?

## Archival/Field



## Surveys



## Controlled/Field Experiments





# Quantitative research methods

They rely on numerical data

**Archival/Field**



Any structured or unstructured naturally-occurring data  
(not generated by researchers themselves)

- Naturally-occurring, large-sample data
- Example: Bertrand and Schoar (2003)

## Survey

- Collected data using questionnaires
- Example: Bouwens and Van Lent (2007)

## Controlled Experiment

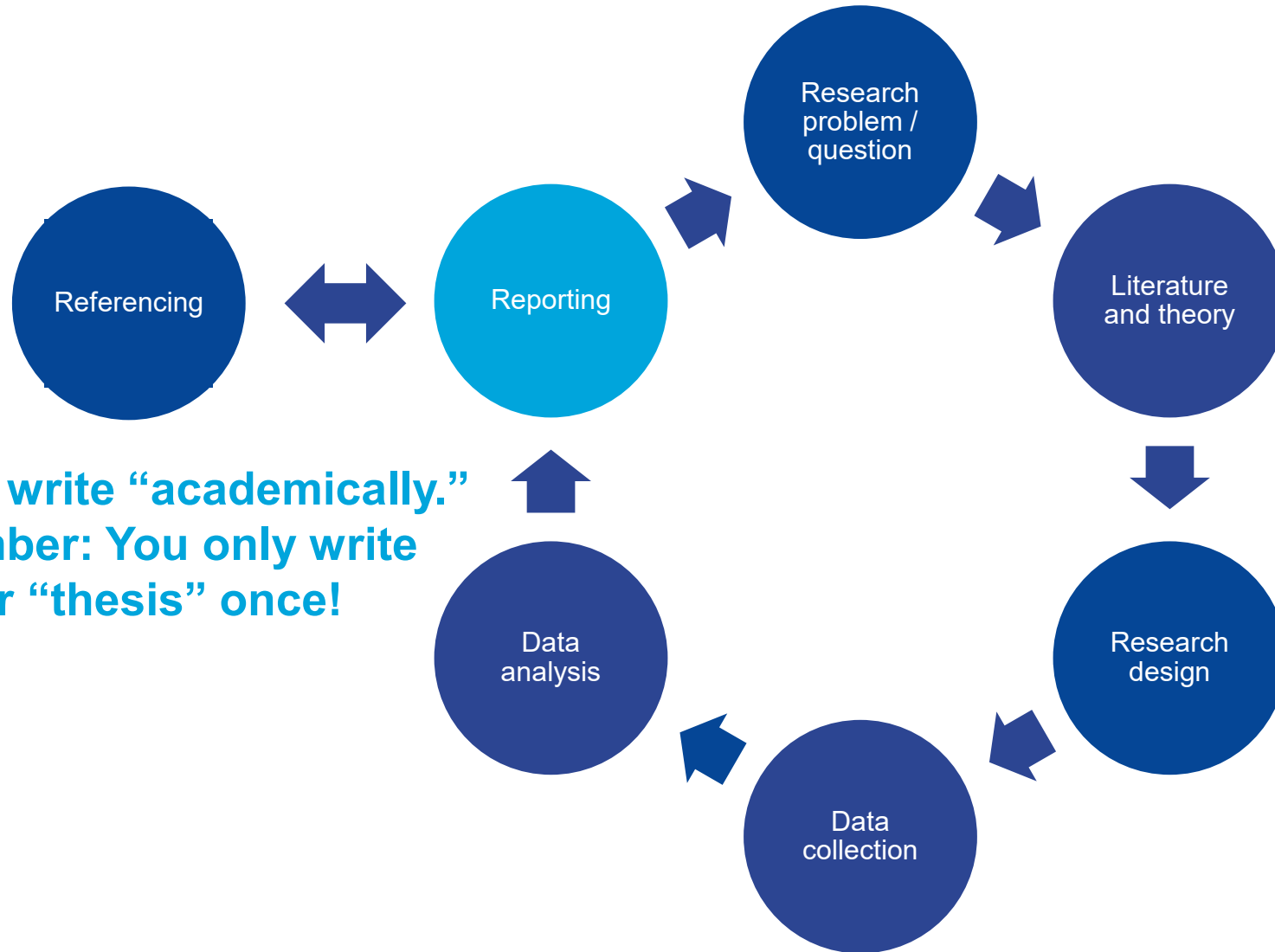
- Intervention in laboratory or closed online environment
- Example: Most of my research! See [www.victorvanpelt.com](http://www.victorvanpelt.com)

## Field Experiment

- Intervention in a field setting
- Example: Casas-Arce et al. (2017)

**Generally, quantitative methods focus on finding empirical support for and testing theories**

# How do I report what I have learned?

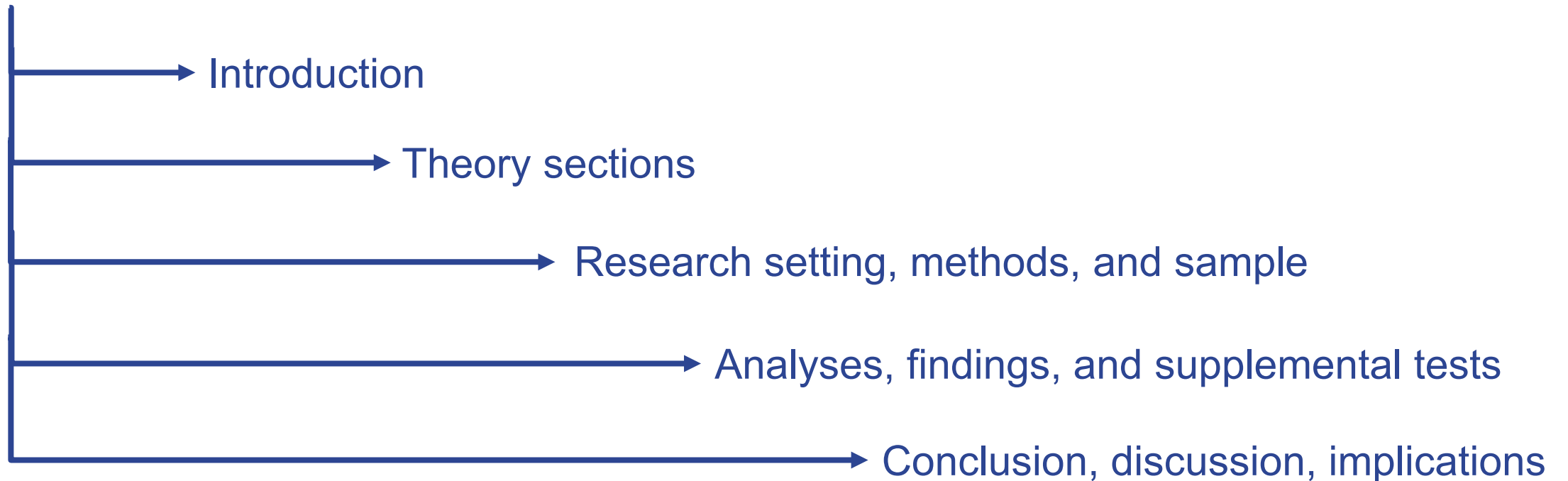


**You must write “academically.”  
Remember: You only write  
your “thesis” once!**

# Structure your research paper

Research papers, like the thesis, have commonly-accepted sections:

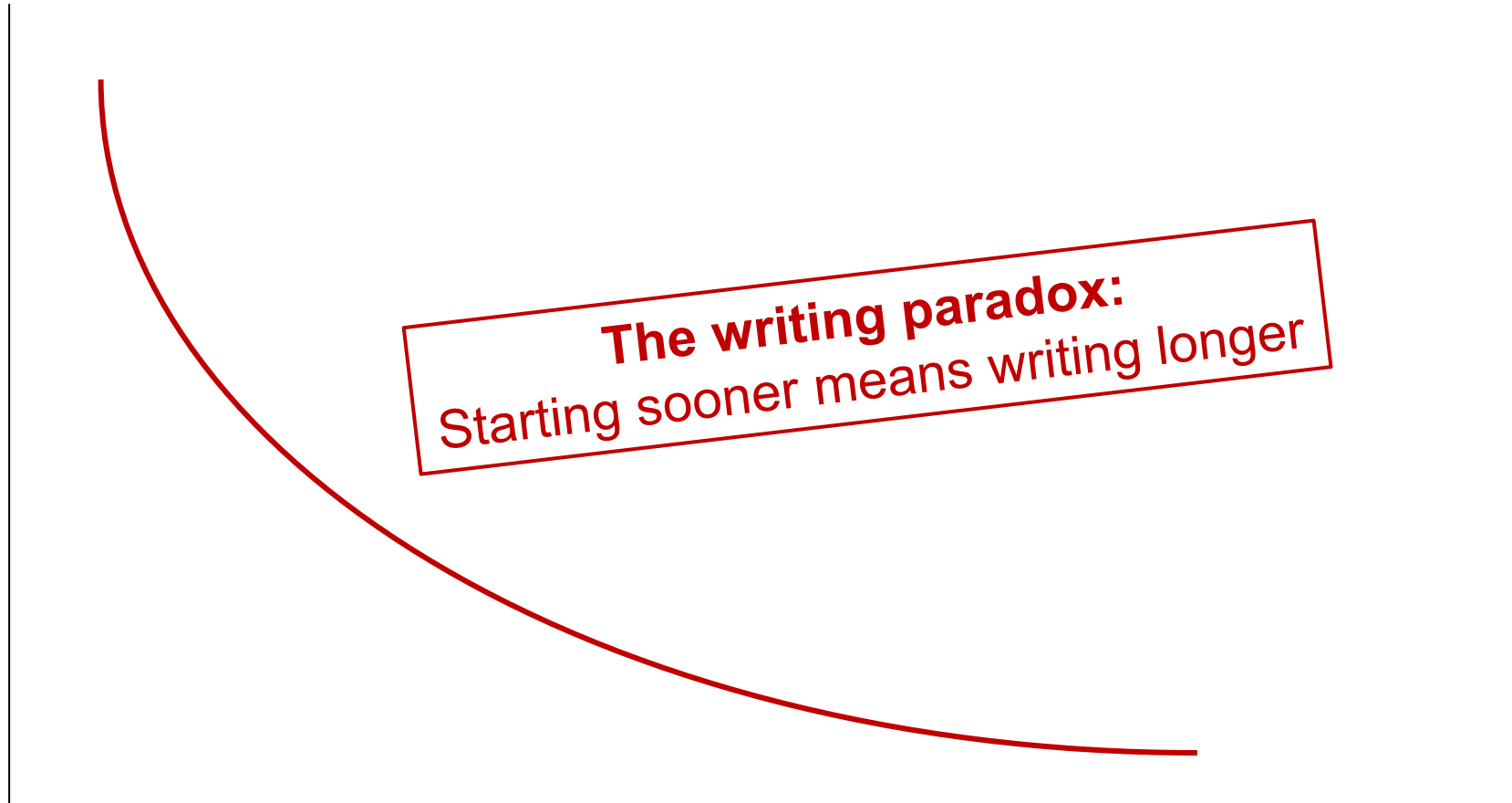
Title + Abstract



**Let's give you my most critical writing tips...**

# #1 Think before you start writing!

Rewriting costs  
(time)



Point at which  
you start writing



# #1 Think before you start writing!

Research proposal writing	
Day	Activity
1	<ul style="list-style-type: none"><li>Understanding what comprises a research proposal</li><li>Conceptualising the research<ul style="list-style-type: none"><li>What do you want to research?</li><li>What is the problem?</li><li>Why is it a problem?</li><li>What has the literature told you about the problem?</li><li>Is there a gap in the literature?</li></ul></li></ul>
2	<ul style="list-style-type: none"><li>Writing the...</li></ul>
	<ul style="list-style-type: none"><li>... literature to support the problem or identify the...</li><li>Writing the revised introductory statement</li><li>Writing the revised problem statement</li><li>Writing the rationale</li><li>Writing the aims and research questions</li></ul>
4	<ul style="list-style-type: none"><li>Writing a review of the literature</li></ul>

**First make a plan! I.e., use summaries, overviews, notes, findings. Gather literature, create reference lists, write a proposal, etc.**

Body Language and Oral Presentations Traditional Format

I. BODY LANGUAGE (conveys your state of mind)

A. Movement

1. Strive for natural movement.
2. Control distracting mannerisms. (pacing, pen-clicking).
3. Develop natural style
  - (a) Move forward to stress points.
  - (b) Step back and focus attention.
4. Hold objects.

appear relaxed and friendly.

C. Gestures

1. Use natural gestures to emphasize what you're saying.
2. Integrate and coordinate gestures with text.
3. Examples
  - (a) number of fingers = number discussed.
  - (b) sizes, shapes - tall, short
4. Use gestures to help pace yourself.
5. Use gestures based on audience size.

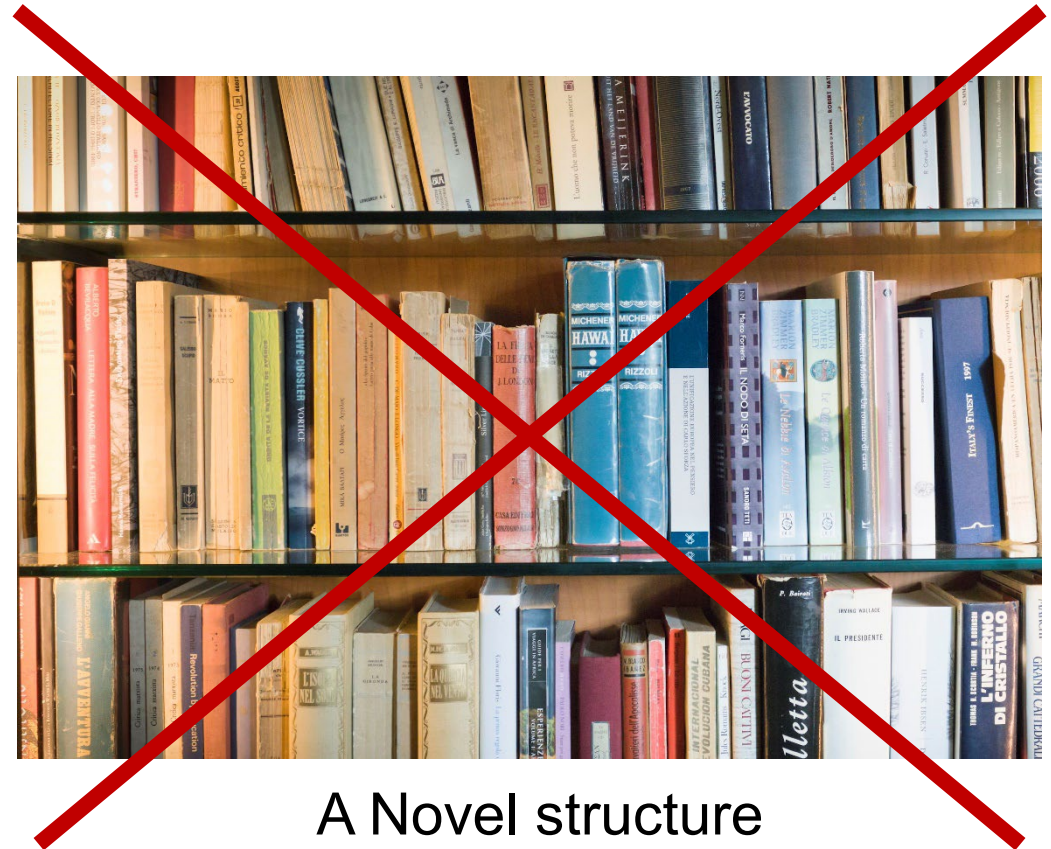
D. Posture

1. Practice good posture.
2. Don't prop up against wall or desk.
3. Don't sit unless it's part of presentation.

# #2 Within each section, use the right structure and order



A news paper structure

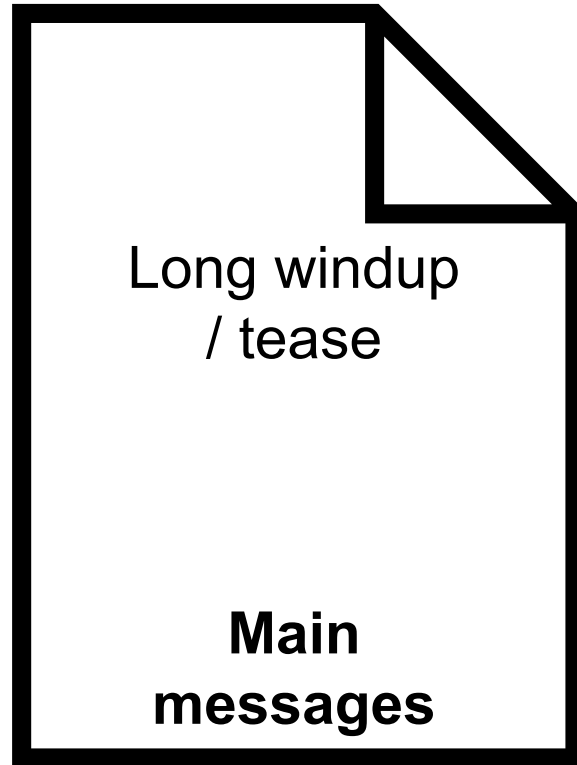


A Novel structure

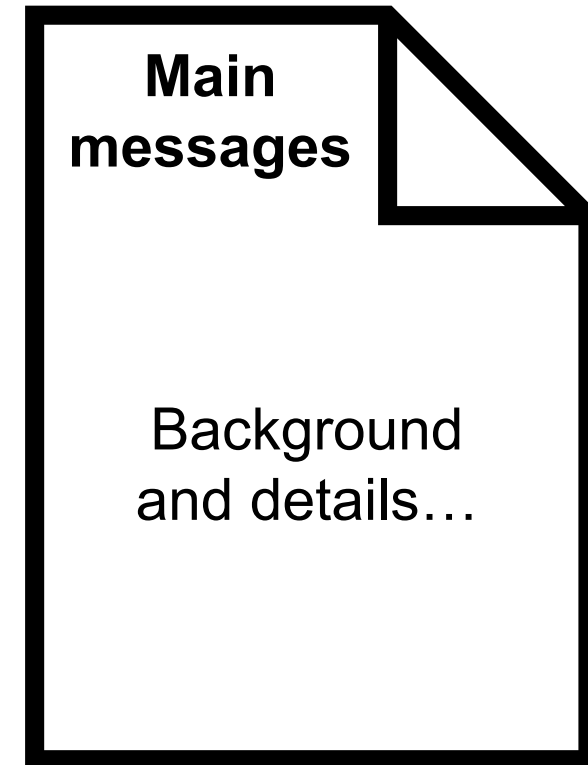
## #2 Within each section, use the right structure and order

**FINANCIAL TIMES**

### Novel structure



### News paper structure



# #3 For each paragraph, follow the golden rule of the paragraph

**One paragraph communicates ONLY one sub-message!**

Start with communicating this sub-message in the first sentence!

Afterward:

- Information piece A
- Information piece B
- Information piece C
- Information piece D
- Information piece ...

Evaluate carefully which information pieces you need to explain and substantiate the sub-message of the paragraph

**Choosing which information piece to include is difficult!  
Check with your target audience!**

**Put your messages first, others' messages second**

# Most writers face the following challenges:

**APPEARING FORMAL:** We tend to use indirect language

**APPEARING FORMAL:** We tend to use complex words and synonyms

**APPEARING FORMAL:** We tend to use our writing to create distance between us and our message (and the target audience)



## #4 Use story-telling

Main “action” = verb

*The design of employment contracts offered to employees before they start employment at an organization is influenced by managers’ judgments.*



How managers design compensation contracts

*Managers’ judgments influence the design of employment contracts offered to employees before they start employment at an organization*

Main “character” = subject

## #5 Within each paragraph, use the “flow” technique!

As one of their core tasks, managers design and implement performance-based contracts. A recurring concern revolving around the use of performance-based contracts is that the included performance measures are subject to imperfections. To assist managers in increasing the efficacy of performance-based contracts, accounting researchers have estimated and examined optimal weighting decisions as a function of different performance measure properties (Banker and Datar 1989; Datar, Kulp, and Lambert 2001; Krishnan, Luft, and Shields 2005). Another way to improve the efficacy of performance-based contracts is through adjusting performance-based pay based on noncontractible information that becomes available during the contracting period, also referred to as discretionary adjustment (Baker, Gibbons, and Murphy 1994; Bol 2008; Bol and Smith 2011; Bol, Hecht, and Smith 2015). Since the use of discretionary adjustment is a salient feature of performance-based contracts, it may be meaningful to consider whether including discretionary adjustment in performance-based contracts further improves the efficacy of performance-based contracts by strengthening sorting on important personal attributes.

Within-paragraph flow!

## #6 When you have a first draft, apply Chekov's gun



*If you write in the first paragraph that there is a rifle hanging on the wall, then in the second or third paragraph it absolutely must go off. If it is not going to be fired, it should not be hanging there in the first place.*



# #6 When you have a first draft, ask others for feedback

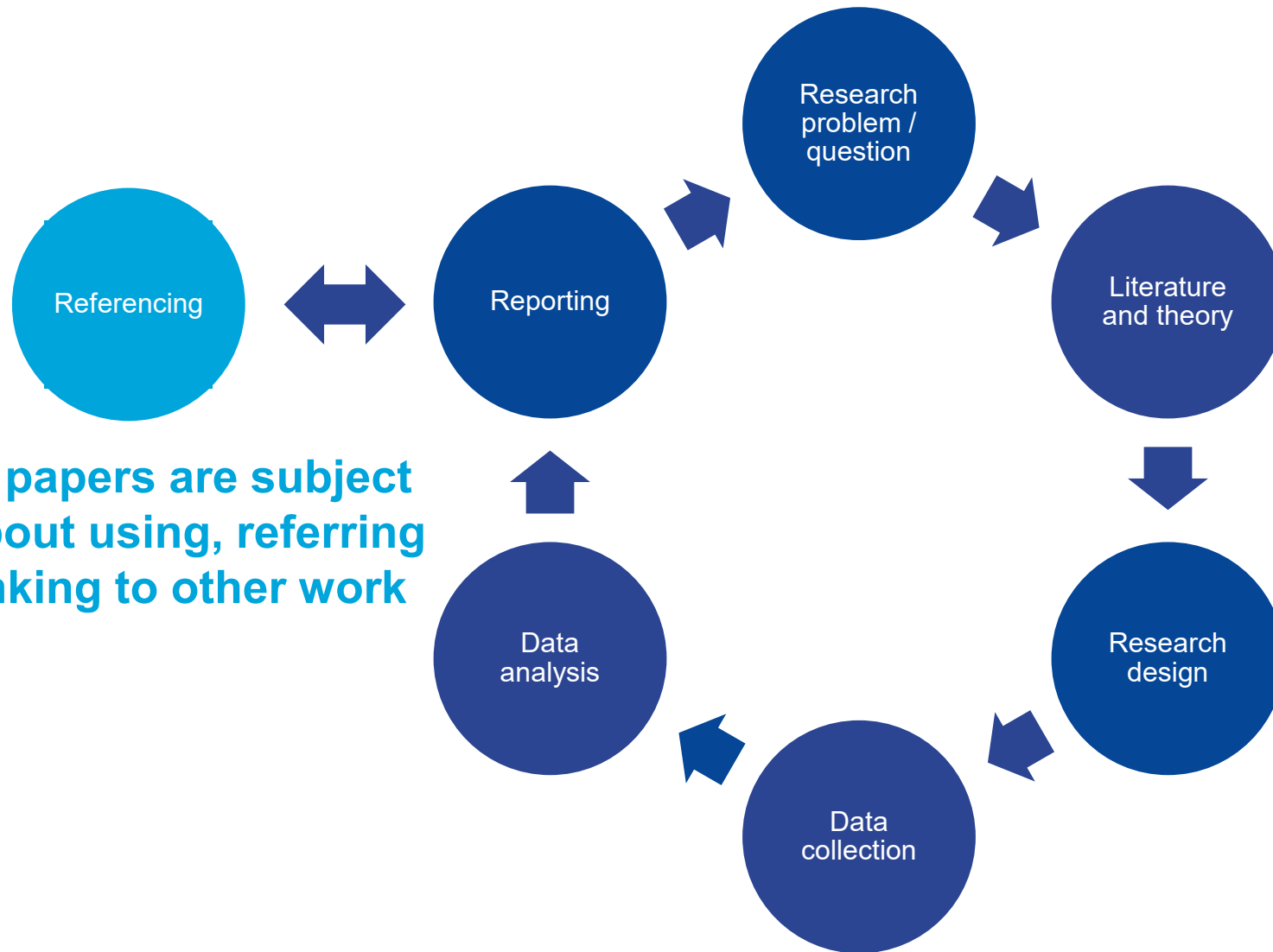


**Be aware: Not everyone may be part of your target audience!**

Your supervisor and fellow master students in business and management



# How do I report what I have learned?



Research papers are subject to rules about using, referring to, and linking to other work

# What is “APA” and Endnote?

## What is American Psychological Association (APA) Style?

- Set of rules developed by social and behavioral scientists to standardize academic writing
- It has been developed to improve communication among researchers
- Guidelines for aspects of writing, constructing tables, avoiding plagiarism, **referencing**, etc.

## Best practice advice/tool/source:

- APA Publication Manual is available here: <https://apastyle.apa.org/style-grammar-guidelines>  
(see In-Text Citations and References)
- Easy guide is available here: <https://www.scribbr.com/category/apa-style/>

# How do I paraphrase someone else's work?

- Paraphrasing restates text with the author's last name and the year of publication. For example: Horses are quite clever (Smith, 2020) or Smith (2020) shows that horses are quite clever.
- If you're referring to a very specific part of a source, you should also include a locator such as a page number or timestamp. For example: (Smith, 2020, p. 170) or Smith (2020, p. 170)

## Two ways to paraphrase someone else's work: Parenthetical vs. narrative references

According to prior research, ... (Smith, 2020).

Smith (2020) notes that ...

# Every reference will appear in the reference list!

Section after main body and before appendices

## REFERENCES

0.5 in hanging indent

Barry, B., & Stewart, G. L. (1997). Composition, process, and performance in self-managed groups: The role of personality. *Journal of Applied Psychology*, 82(1), 62-78.  
<https://doi.org/https://doi.org/10.1037/0021-9010.82.1.62>

Double-spacing

Bunderson, J. S., & Boumgarden, P. (2009). Structure and learning in self-managed teams: why “bureaucratic” teams can be better learners. *Organization Science*, 21(3), 609-624. <https://doi.org/10.1287/orsc.1090.0483>

Carton, A. M., & Cummings, J. N. (2013). The impact of subgroup type and subgroup configurational properties on work team performance. *Journal of Applied Psychology*, 98(5), 732-758. <https://doi.org/10.1037/a0033593>

Alphabetical order (else year)

# Software can do this for you!

My WHU → SERVICES → IT → IT GUIDES → SOFTWARE → SOFTWARE FOR STUDENTS


Software for students

[See all](#)



The image shows a grid of six software cards. The first row contains Citavi, EndNote 20 (circled in blue), Grammarly, and JMP. The second row contains Microsoft 365 Apps for enterprise and think-cell. Each card displays the software's logo, title, and availability for students, faculty, and research assistants.

Software	Available for
Citavi	Students, Faculty, Research Assistants
EndNote 20	Students, Faculty, Research Assistants
Grammarly	Students, Staff, Faculty, Research Assistants
JMP	Students, Staff, Faculty, Research Assistants
Microsoft 365 Apps for enterprise	Students, Staff, Faculty, Research Assistants
think-cell	Faculty, Research Assistants, Students

# Integrate references into Endnote directly!

transformational leadership 

About 559.000 results (0,09 sec)

**[BOOK] Transformational leadership**  
BM Bass, RE Riggio - 2006 - books.google.com  
Transformational Leadership, Second Edition is intended for both the students of leadership. It is a comprehensive review of theorizing that can serve as a reference and starting point for additional research.  
☆  Cited by 12237 Related articles All 4 versions 

**Cite**

- MLA Bass, Bernard M., and Ronald E. Riggio. *Transformational leadership*. Psychology press, 2006.
- APA Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership*. Psychology press.**
- Chicago Bass, Bernard M., and Ronald E. Riggio. *Transformational leadership*. Psychology press, 2006.
- Harvard Bass, B.M. and Riggio, R.E., 2006. *Transformational leadership*. Psychology press.
- Vancouver Bass BM, Riggio RE. Transformational leadership. Psychology press; 2006 Aug 15.

BibTeX **EndNote** RefMan RefWorks

# Watch out for plagiarism!

You probably heard about **deliberate** plagiarism:  
A classmate turning in an essay they did not write and without permission



However, most plagiarism occurs by **accident**, and it happens more easily than you think:

- Forgetting to use quotation marks for a quote
- Paraphrasing too closely to the original text (e.g., just switching out a few synonyms)
- Mentioning an idea that you read somewhere without citing it
- Not including a complete reference list at the end of your paper

**Ensure to add references to things you are quoting, and paraphrase the rest or write it in your own words**



# Watch out for Generative A.I.!

## AI Declaration

Using artificial intelligence (AI) tools as support in writing your thesis or papers is not forbidden. While AI tools can help you in generating your texts and brainstorm on ideas, you must be aware of the following limitations:

- Unless you can find reliable sources, you must assume that the **output of the AI is wrong** since it is not based on academic research but on neuronal networks.
- Questions concerning copyright on texts produced with AI are not yet sufficiently answered. E.g., OpenAI claims that texts produced with ChatGPT are under the ownership of OpenAI and may not be used without permission. German copyright law postulates different assumptions, though, when the output is mostly based on human input into the chatbot. Additionally, texts produced with ChatGPT may be identical to copyrighted texts or include parts of them without referencing them and thus potentially leading to **copyright infringements**.
- Using texts prepared with ChatGPT or similar AI tools may lead to cases of **plagiarism**, e.g., when the produced texts are similar to original texts and not sufficiently referenced in academic work. Furthermore, our plagiarism detection software now includes a tool to increase the capability to detect texts written by AI and report on that.
- When plagiarism is detected, your thesis or paper will be graded with a 5.0, and you will have to write it again – keep in mind that you only have two attempts for your final thesis! When it is detected and confirmed that major parts of a thesis or a paper have been written by AI tools, this will be treated similarly to **ghost-writing cases** and may result in ultimately failing the studies due to fraudulent conduct.

Thus, be aware that – like with all other resources used – you need to indicate the usage of AI tools correctly. For this purpose, please include a (new) self-production declaration at the end of your thesis paper, which addresses the following questions:

## Did you use AI tools (e.g., ChatGPT) to prepare your thesis?

### NO

*If you answer NO, please indicate shortly why (50-150 words).*

### YES

*If you answer YES, please answer:*

1. *Which tools did you use? (up to 200 words)*
2. *For which parts and purpose of your thesis did you use the AI tools (up to 400 words)*  
[Answering this question is important. However, it is not an adequate substitute for a detailed indication of where in the manuscript AI-generated text was used.]
3. *How was your experience?*  
Please write a brief personal reflection note (200-400 words) on your experience using the AI tools. Please tackle at least the following aspects:
  - *To which extent did the AI tools improve your productivity?*
  - *Did you experience any drawbacks and explicit mistakes in the output of the AI tools?*

# But please. I beg you to use Grammarly Pro....

My WHU → SERVICES → IT → IT GUIDES → SOFTWARE → SOFTWARE FOR STUDENTS



## Set goals

Get tailored writing suggestions based on your goals and audience.

### Audience

General  Knowledgeable  Expert

Expert: May require rereading to understand.

### Formality

Informal  Neutral  Formal

Neutral (default): Restricts slang but allows standard casual expressions.

### Domain

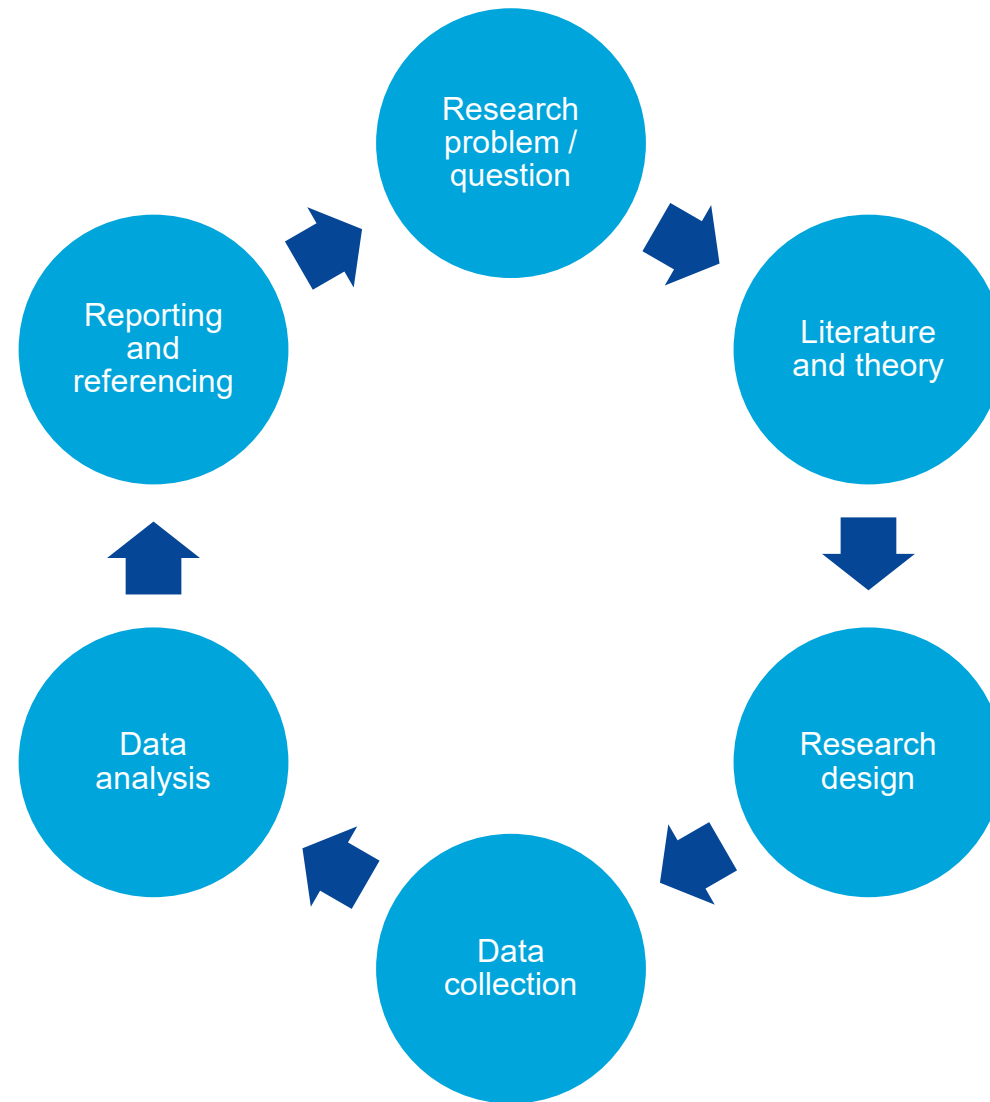
Academic  Business  General  Technical  Casual  Creative

Academic: Strictly applies all rules and formal writing conventions.

Reset to defaults

Done

# You have just gotten a taste of the basics



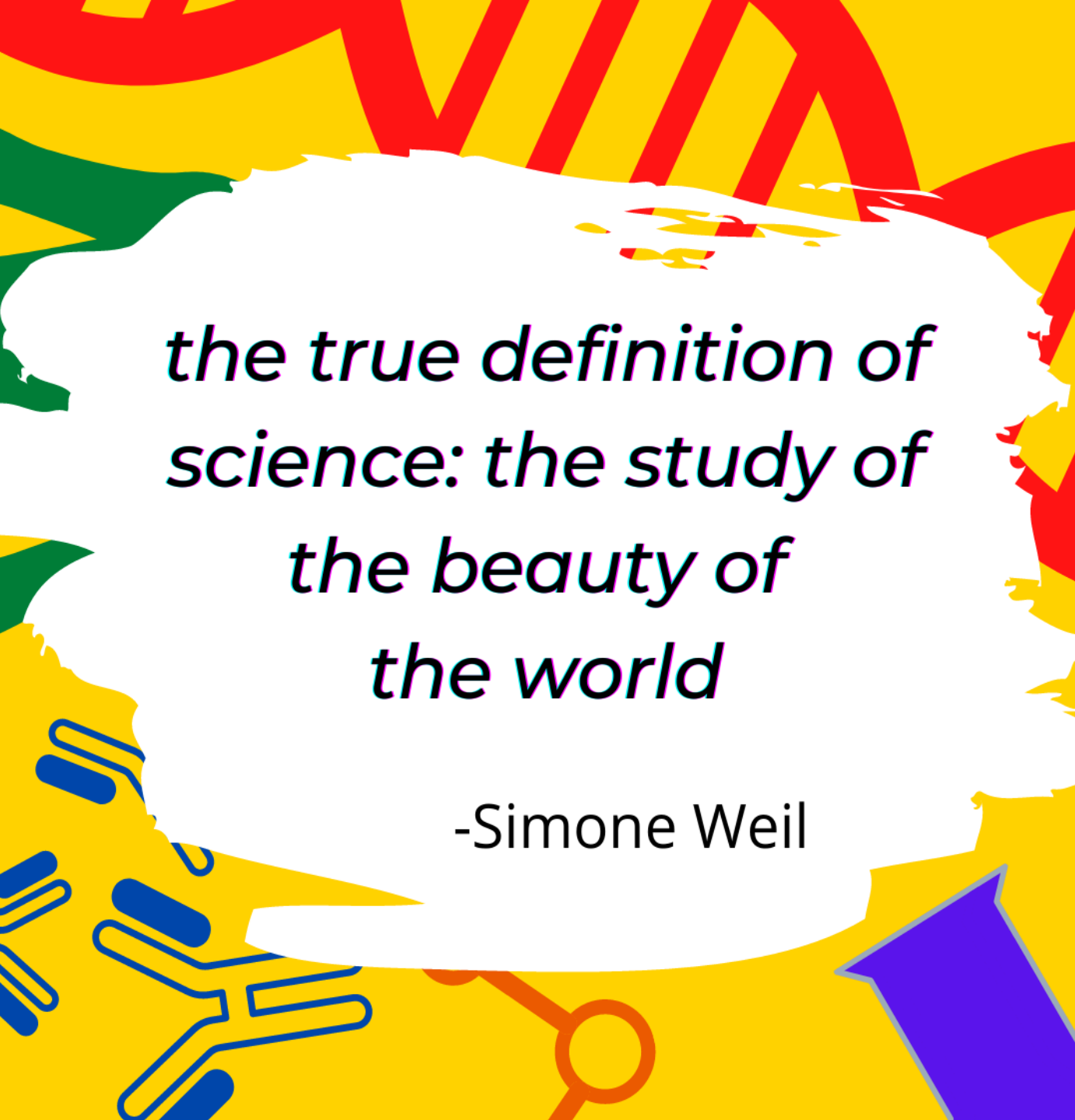
**There is much more you could learn:**



## Academic Research and Writing



Spring 2025



*the true definition of  
science: the study of  
the beauty of  
the world*

-Simone Weil

**All the best for your  
research endeavors at  
WHU!**

**WHU – Otto Beisheim School of Management**

Dr. Victor van Pelt

Assistant Professor of Accounting

Finance and Accounting Group

WHU – Otto Beisheim School of Management

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<https://www.victorvanpelt.com>

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