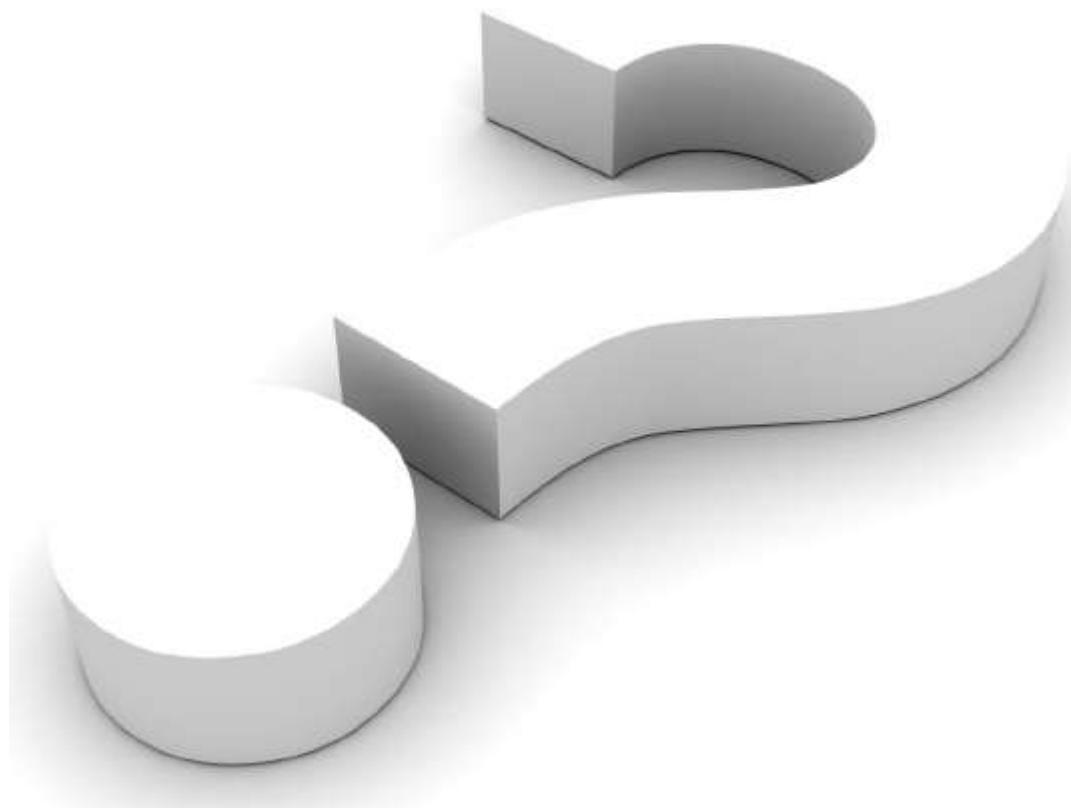


# Research Question



# Why Research Question?

"If I had an hour to solve a problem and my life depended on the solution, I would spend the first 55 minutes determining the proper question to ask, for once I know the proper question, I could solve the problem in less than five minutes."

—ALBERT EINSTEIN

# What is a research question?

- = The single core question you ask to answer in the conclusions of your paper.
- = Is the central problem of your research around which you organize your paper.  
You focus all your descriptions, analyses, interpretations, discussions, evaluations, arguments etc. on the RQ.

# Research question templates

Descriptive research

*What are the characteristics of X?*

Comparative research

*What are the differences and similarities between X and Y?*

Correlational research

*What is the relationship between variable X and variable Y?*

Exploratory research

*What are the main factors in X? What is the role of Y in Z?*

Explanatory research

*Does X have an effect on Y?  
What is the impact of Y on Z?  
What are the causes of X?*

Action research

*How can X be achieved?  
What are the most effective strategies to improve Y?*

Evaluation research

*What are the advantages and disadvantages of X?  
How well does Y work?  
How effective or desirable is Z?*

# A research question for an empirical study

*What is the effect of the independent variables (IVs) and moderator variables (MVs) on the dependent variables (DVs) given any controlled variables (CVs)?*

- **Independent Variables** are changes that occur in an experiment that are directly caused by the experimenter.
- **Dependent Variables** are changes that occur due to independent variables.
- A **Controlled Variable** is anything else that could influence the dependent variables.
- **Moderator Variables** describe subject characteristics the effect of which the researcher wishes to assess.

# Example #1 of RQ

- *Independent variable: Three different types of candle : A, B, and C.*
- *Dependent variable: Height of candle measured in centimetres at regular intervals of time*
- *Controlled variables: No wind. Time measured in minutes.*
- *Moderator variable: Room temperature*

*Which candle type burns down fastest inside the room at different examined room temperatures, respectively: A, B, or C?*

## Example #2 of RQ

- *Independent variable:* *structural changes*
- *Dependent variable:* *behaviour, attitude and interests*
- *Controlled variables:* *small-scale private forest ownership*
- *Moderator variable:* *agricultural sector or wood industry*

**What** are the effects of structural changes in the agricultural sector and in the wood industry on the behaviour, attitude, and interests of small scale private forest owners?

# Example #3 of RQ

- *Independent variable: contaminated food*
- *Dependent variable: EHEC*
- *Controlled variable: oral transmission*
- *Moderator variable: nutrition habits*

**How** can contaminated food be responsible for the oral transmission of EHEC (Enterohaemorrhagic *E. coli*)?

# Example #4 of RQ

- ♦ *Independent variable: glass colour*
- *Dependent variable: beer quality*
- *Controlled variable: beer bottles*
- *Moderator variable: Bavaria*

**Why** should beer not be filled in  
green bottles?

# Research statement

- = RQ in statement form
- = Thesis statement
  - Gives the single central claim you argue for in your paper
  - Is at the same time the statement of what you concluded in your research

*Validation of ThS:*

Make it answer to a tentative RQ.

# A research statement for an empirical study

*This study investigates the effect of the*

- ◆ *independent variables (IVs) and*
- ◆ *moderator variables (MVs) on the*
- ◆ *dependent variables (DVs) given any*
- ◆ *controlled variables (CVs).*

# Why to have a RQ?

If an opinion is refined into a **thesis statement** without being questioned first, the research effort is limited to finding information that "proves" **what you already think.**

## Research statement

- = RQ in statement form
- = Thesis statement
  - Gives the single central claim you argue for in your paper
  - Is at the same time the statement of what you concluded in your research

*Validation of ThS:*

Make it answer to a tentative RQ.

# A research statement for an empirical study

*This study investigates the effect of the*

- *independent variables (IVs) and*
- *moderator variables (MVs) on the*
- *dependent variables (DVs) given any*
- *controlled variables (CVs).*

*More powerful*

**WHY  
HOW  
WHAT**

**WHO, WHEN, WHERE**

**WHICH, YES/NO QUESTIONS**

*Less powerful*

# Powerful questions are open

Why did we do it that way?

→ *tendency to dig in, defend*

How does it work?

→ *provokes to analyse, think*

What would make this work better?

→ *moves forward into action*

# What is there in a RQ?

- A problem formulation
  - A gap in our knowledge
  - An incomplete business in the field
  - A want to
    - » solve the problem
    - » fill the gap
    - » complete the business
  - The potential to do so and answer the question
- ➡ Requires knowledge of what is already known and published on the problem or on related problems (theories, methods, data)

# What form to use in a RQ?

- Question or statement form ✓
- Closed or open question
  - Closed question with clear y/n answer = OK  
*Is it possible to predict the volatility of the stock market by means of a statistical model? (Yes, it is.)*
  - Closed question with ambivalent answer
    - ⇒ reformulate your RQ as an open question.

*Can coaching be used as means of improving performances within area X? (Under some circumstances it can be used, whereas in other contexts not)*

*REWRITE: How can.../Which performances can...*

Always consider if an open question is a better solution.

# How to write a RQ?

- Focus your RQ on one single topic.
- If more questions, make clear which is the main one.
- Use corollary questions as supportive material.
- Use precise terminology.
  - Avoid using vague phrases like *“certain”*, *“most”*, *“usually”*, *“a kind of”*, *“and alike”*.
    - ⇒ Give exact data instead: *which ones*, *when*, *which concrete features*.
- Limit the amount of data and state it explicitly in your RQ.

## Data in RQ: Example

- *Which function do piers have in a building?*
  - All piers? All kinds of buildings? UNFOCUSSED
  - Implied necessity of generally valid conclusion!  
IMPOSSIBLE
  - Is there an adequate answer? NO

*Which function did piers have in a residential building found in archaeological excavations on site X?*

RQ has a clear scope and focus.

Relevant conclusion and adequate answer are possible.

# A good research question

- Is interesting to the writer
- Is relevant to the subject
- Is based on
  - something not right □ “*it is said ... but in reality...*”
  - the relation between X and Y
  - the observation that sticks out
  - a sense of wondering
- Makes it possible
  - to debate or argue a point
  - to conclude something
- Is in question or in statement (claim) form
- Has *one* clear main question (+ subquestions)
- Is clearly marked in the introduction
- Is short (< 10 lines)

# What do RQs imply?

## Question type

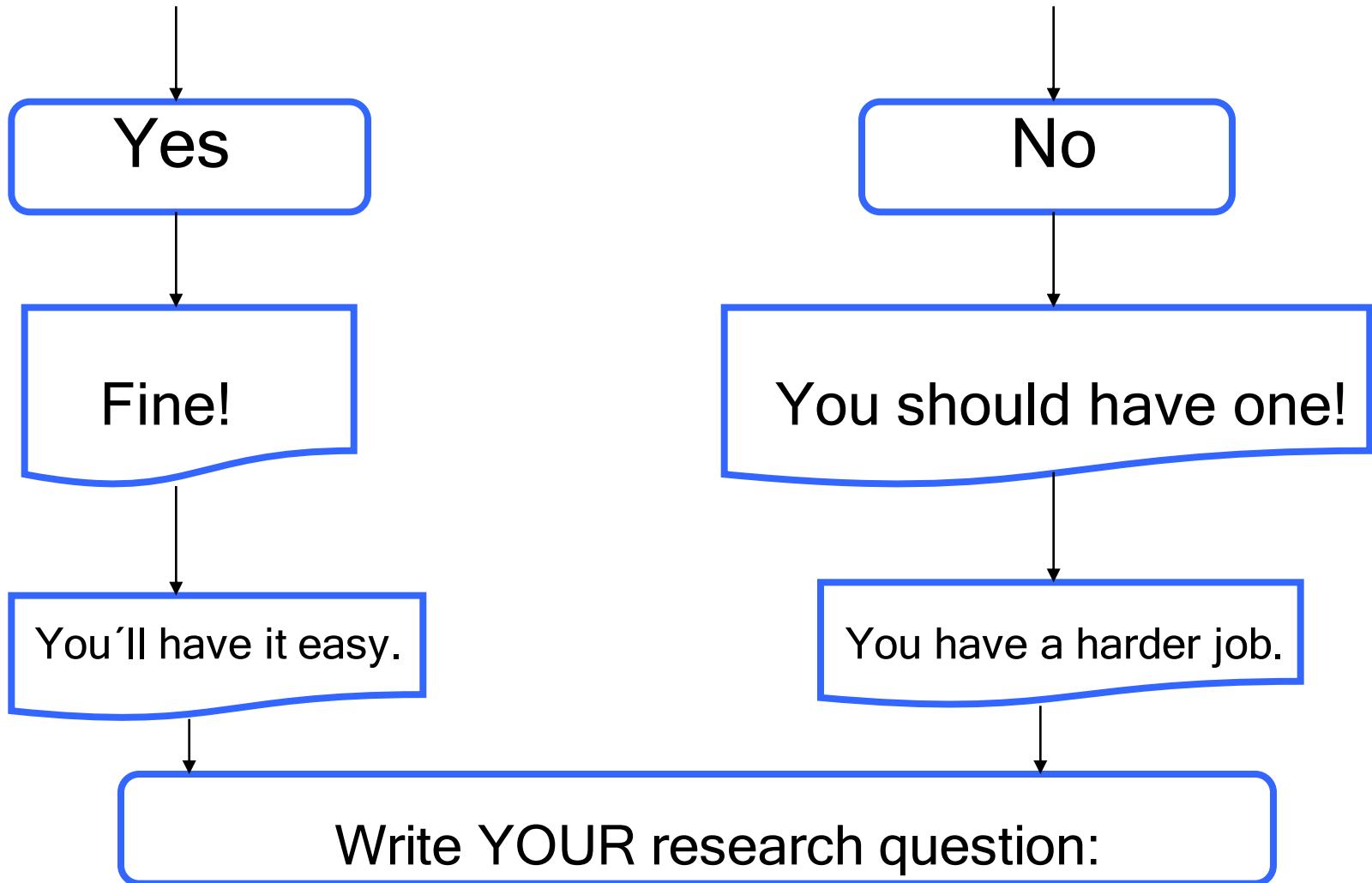
- What-questions → Set the scene for account description
- Why-questions → interpretation analysis
- How-questions → discussion evaluation agenda

Prefer why & how !

*\*What is the effect of X on Y?*

Better:      *How does X affect Y?*

# Do you have a research question?



*“The essence of what I want to say in my paper.”*

# Homepage of Scribo: A RQ-writing software tool



[www.scribo.dk](http://www.scribo.dk)