

# Week 1: Design Analytics

**Research Questions: Quality Control**

# How to tell the difference between a **good** and a **bad** research question?

Is it built upon an  
opinion?

Is the question  
original?

Is it answerable?

Is it balanced?

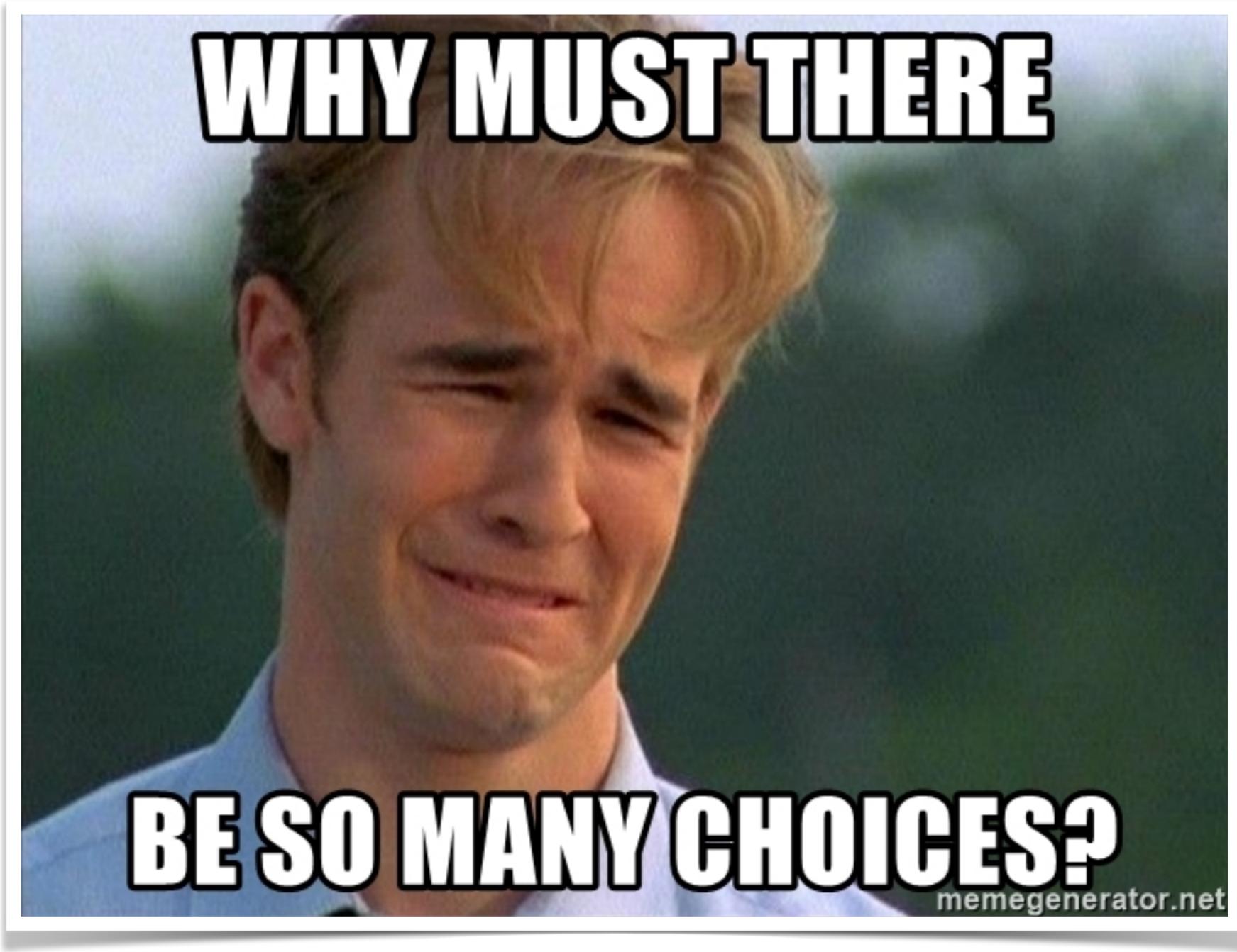
Is it specific?

# How to tell the difference between a **good** and a **bad** research question?

Can it be answered as a  
simple “yes” or “no”?

Does it address a  
problem?

Is it “analytical” or  
“descriptive”?



# *Answerable or not?*

**Bad** Is Artificial Intelligence going to take all our jobs?

**Good** What human skills can be substituted by AI-powered systems?

⚠ The question should be answerable (**either through deduction or induction**), and should be answerable **within a reasonable amount of time**.

# *Sufficiently complex or not?*

**Bad** Can robots improve the quality of life of elder citizens?

**Good** In what ways can domestic robots improve the quality of life of elderly?

⚠ The answer of the question should be relatively complex (read “**not a straight yes or no**”) and must take some effort in answering.

# *Original or not?*

**Bad** Is the gamification of learning beneficial or disadvantageous?

**Good** How does gamification of learning languages (e.g., Duolingo) impacts learners' vocabulary recall?

⚠ The question still hasn't been answered (red “**answer does not exist yet**”) or hasn't been answered in a specific context.

# *Specific or not?*

**Bad**

How do smart doorbells influence people?

**Good**

How does smart doorbells impact pro-privacy behavior amongst gig workers?



The question should be **sufficiently specific and not vague**. This will enable you to answer it properly with data and observations.

# *Balanced in scope or not?*

**Bad**

Does AI improve public health by rapidly diagnosing cancer, and performing better than doctors?

**Good**

Does AI-powered imaging tools improve the diagnosis of breast cancer amongst adult women?



The question should **neither be too generic or too narrow**. Instead a good question should be **focused on a single topic/theme or related topics/themes**.

# *Requires analysis or not?*

**Bad** In the last decade, has the adoption of smart phones increased globally?

**Good** What factors have influenced the increased adoption of smart phones among refugees fleeing the Syrian war?

⚠ The question should require you to **apply (some sort of) analysis** while answering. The question should **not be answered by describing facts**.

# *Asks for opinions or not?*

**Bad**

Which fitness tracker is the most appreciated?

**Good**

What factors contribute to the perceived appreciation of fitness trackers among non-athlete adults?

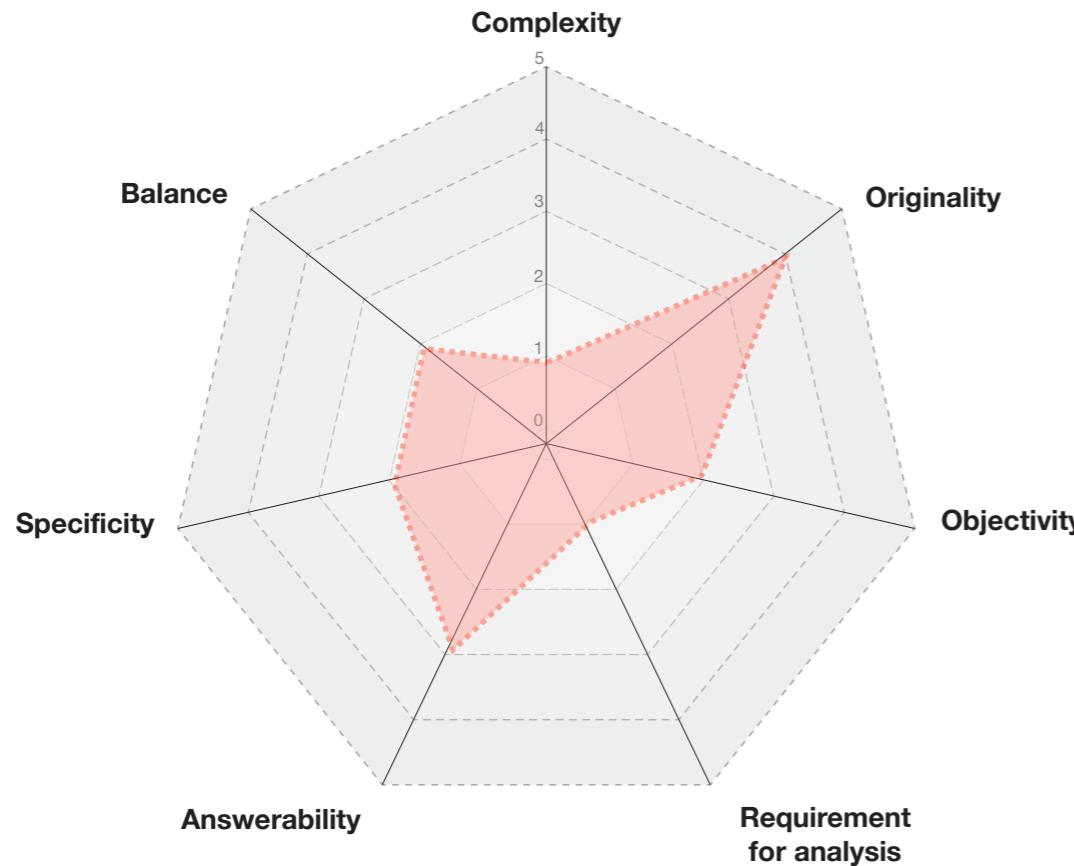


The question **should not ask for an opinion or value judgement**. Instead the question **must have its basis in data and objective evidence**.

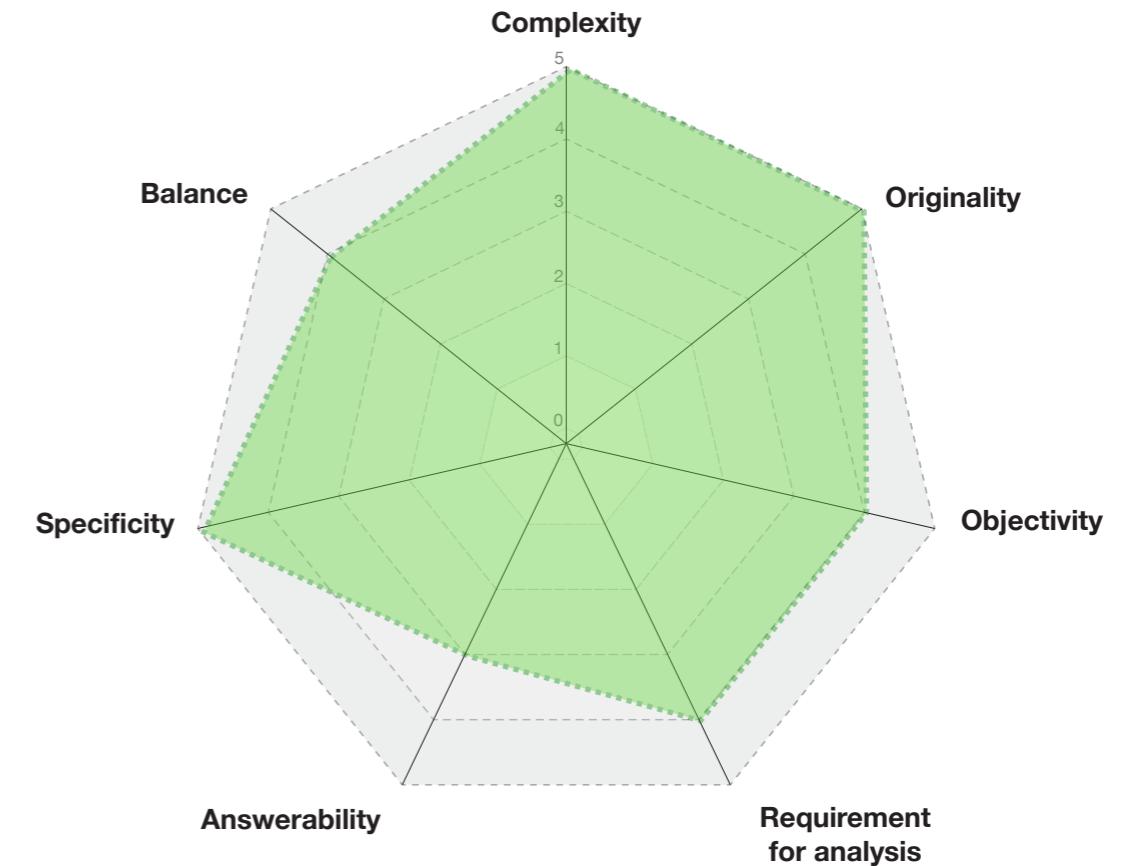


All of them at once, I suppose

# Research Question Quality Control



Bad Question



Good Question

\*our goal