

Research methods: An introduction

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research methods

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- ▶ What is methodology?

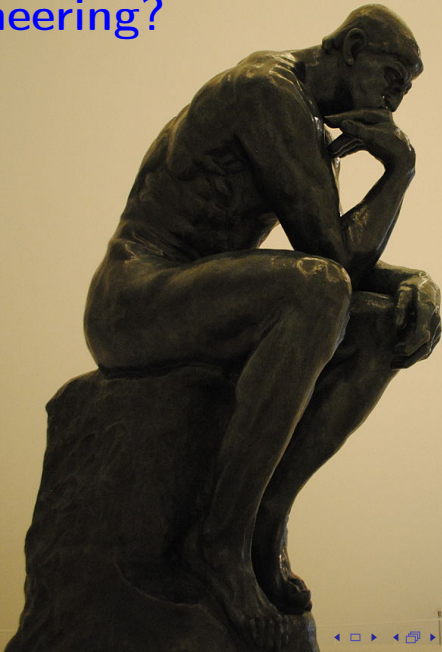
- ▶ What is methodology?
 - ▶ broad sense

- ▶ What is methodology?
 - ▶ broad sense
 - ▶ narrow sense

theoretical science vs. engineering?

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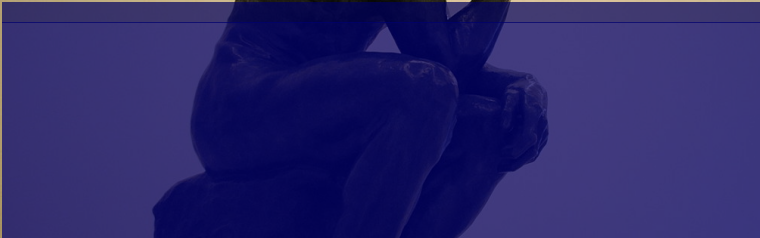
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theoretical science vs. engineering?

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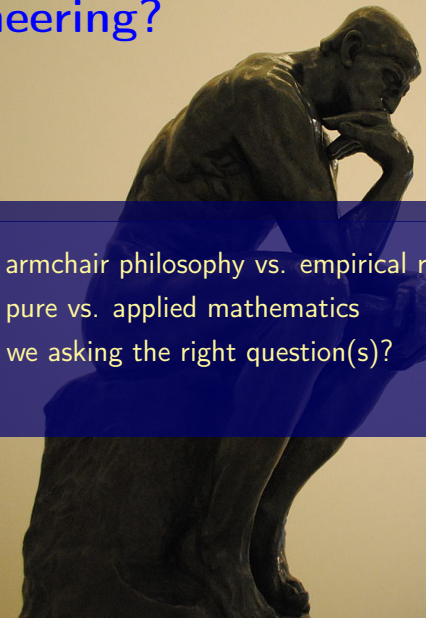
theoretical science vs. engineering?

- ▶ or: armchair philosophy vs. empirical research

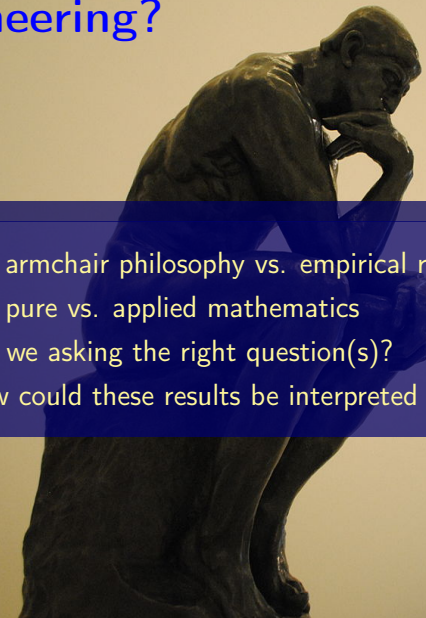
theoretical science vs. engineering?

- ▶ or: armchair philosophy vs. empirical research
- ▶ or: pure vs. applied mathematics

theoretical science vs. engineering?

- 
- ▶ or: armchair philosophy vs. empirical research
 - ▶ or: pure vs. applied mathematics
 - ▶ are we asking the right question(s)?

theoretical science vs. engineering?

- 
- ▶ or: armchair philosophy vs. empirical research
 - ▶ or: pure vs. applied mathematics
 - ▶ are we asking the right question(s)?
 - ▶ how could these results be interpreted differently?

course outline

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course outline

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- ▶ lecture/discussions:

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- ▶ lecture/discussions:
 - ▶ formulating the initial problem

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- ▶ lecture/discussions:
 - ▶ formulating the initial problem
 - ▶ doing the literature review

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 - ▶ re-formulating the problem/hypothesis

course outline

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 - ▶ re-formulating the problem/hypothesis
 - ▶ choosing the appropriate methodology specific to the project type

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- ▶ lecture/discussions:
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 - ▶ re-formulating the problem/hypothesis
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 - ▶ analyzing the results

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 - ▶ interpreting the results

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 - ▶ analyzing the results
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 - ▶ disseminating the results

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 - ▶ interpreting the results
 - ▶ disseminating the results
- ▶ student presentations

why do we still use mechanical keyboards?

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Fact

The scientific knowledge and technical expertise needed to create a touch-screen keyboard with the full range of haptic feedback of a mechanical keyboard exist today.

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 - ▶ switch keyboard layouts and even the size and number of keys

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 - ▶ swap out the keyboard entirely for a drawing pad or a second screen or one expanded screen

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- ▶ incredible potential to:
 - ▶ switch keyboard layouts and even the size and number of keys
 - ▶ swap out the keyboard entirely for a drawing pad or a second screen or one expanded screen
 - ▶ provide a range of adjustable haptic feedback that is not possible with a mechanical keyboard

assignment

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