



FACULTY OF ARTS
Charles University

Department of psychology

Psychophysics

0. Welcome

Instructors

- Jiří Lukavský, Ph.D.
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- Filip Děchtěrenko, Ph.D.
 - filip.dechterenko@ff.cuni.cz

Usually both present

Where to go

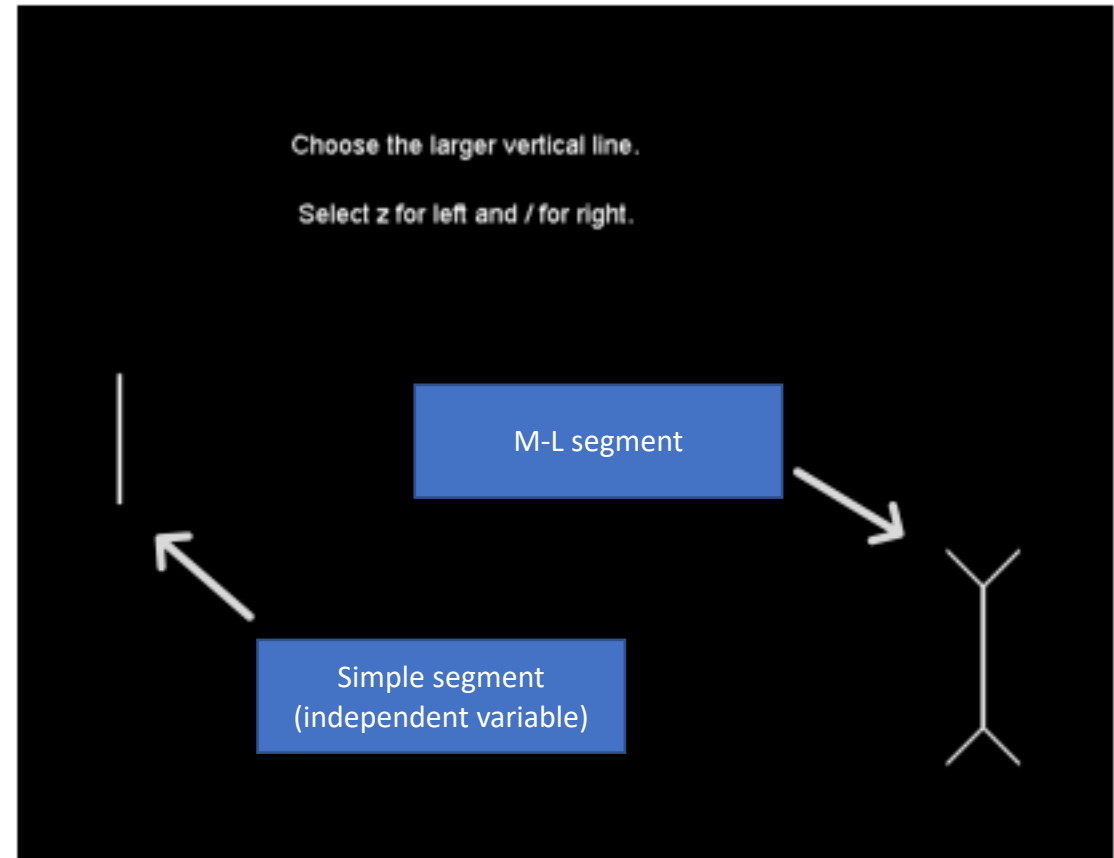
- Thursday 9:10 – 10:40, room C317
- Moodle - <https://dl1.cuni.cz/course/view.php?id=11781>

Course objectives

- Introduce modern psychophysics and its methods
- Learn main underlying principles
- How to apply principles on your own questions
 - Designing and evaluating your own experiment

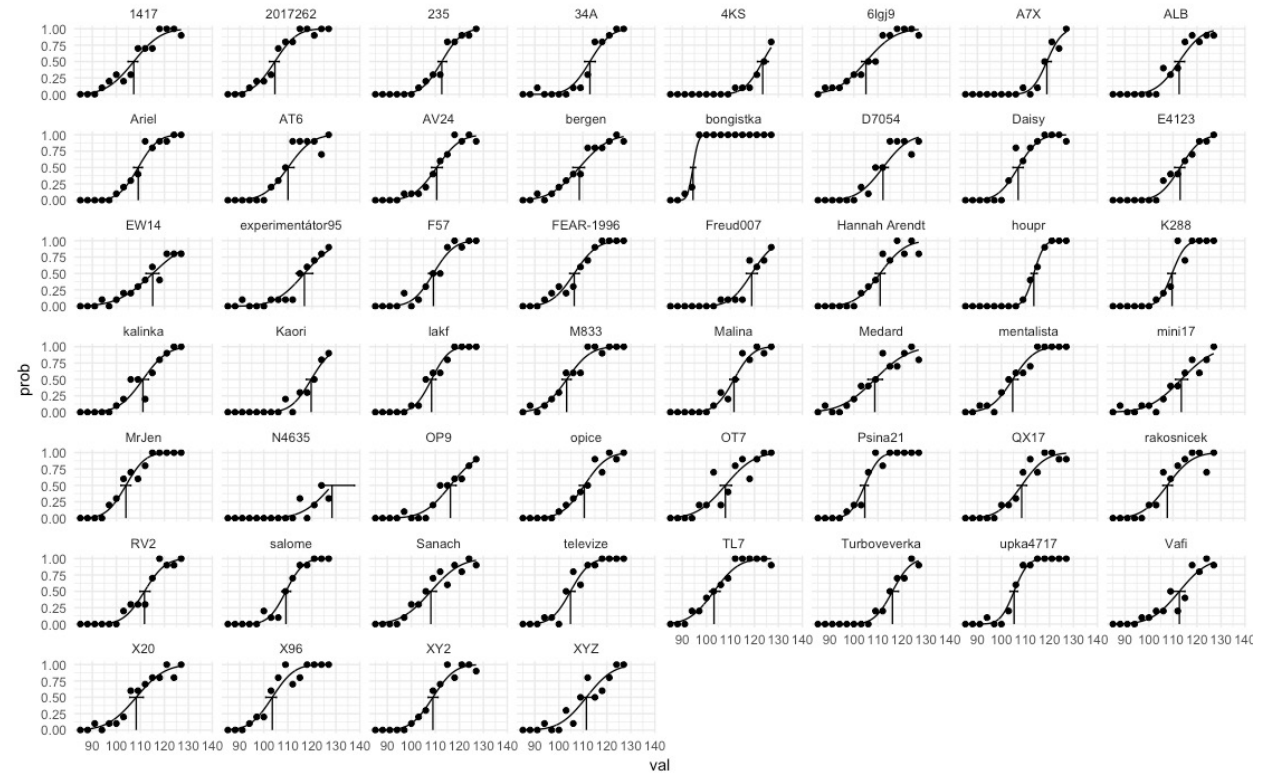
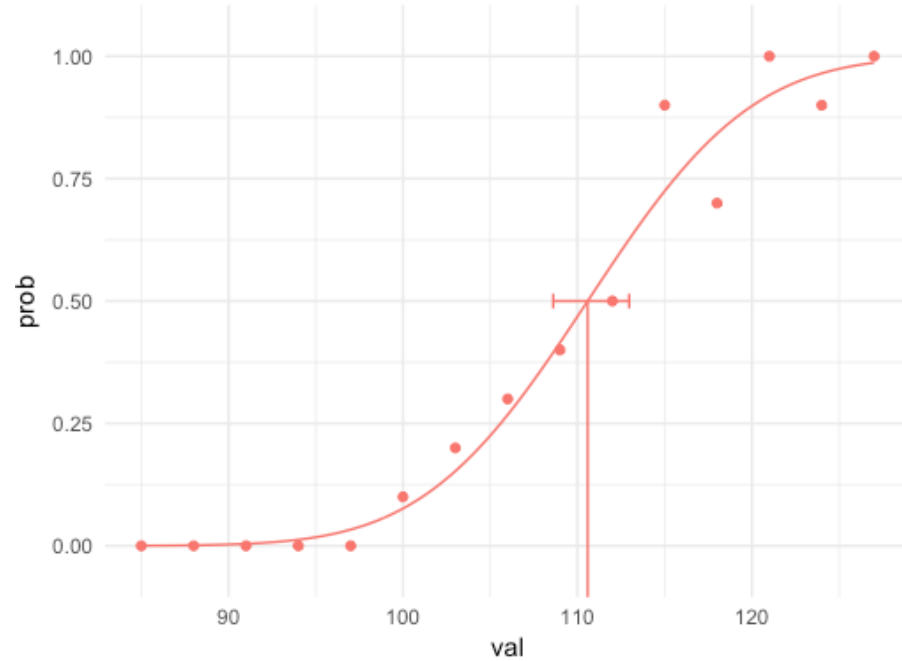
Illustration (ObPs seminar)

- Müller-Lyer illusion



Ratio of "M-L is longer" responses (dependent variable)

Illustration (ObPs seminar)



Why psychophysics

- Good foundation for experimental work
- Measurement theories from psychophysics can be applied in other domains (psychometrics)

Semester overview

1. Mar 2 – Welcome (FD+JL)
2. Mar 9 – Psychophysics, introduction, dichotomies (FD)
3. Mar 16 – Psychophysics, methods. PsychoPy. (JL)
4. Mar 23 – Psychometric function (FD).
5. Mar 30 – R and psychophysics (JL).
6. [Apr 6 – Easter holiday]
7. Apr 13 – Signal detection theory (SDT). (FD)
8. Apr 20 – PsychoPy, designing experiments, best practices (JL).
9. Apr 27 – SDT II. (FD)
10. May 4 – Adaptive methods (JL)
11. May 11 – Presentations

Prerequisites

- Not afraid of mathematics and computers
- Basic understanding of statistics (regression), R basics

- No formal prerequisites, it's up to you

Course completion requirements

- “Zápočet“ / Grade
- Miniproject
 - in small groups (pairs)
 - Collect your own data, evaluate results, write short report
 - termíny
 - Apr 20 – introduce your topic in class
 - May 11 – presentation and brief report (Rmarkdown)

Literature

- Kingdom, F. A. A., & Prins, N. (2016). *Psychophysics: A Practical Introduction*. Academic Press.

