Lecture 8: Conducting Studies

Friday, September 22, 2023

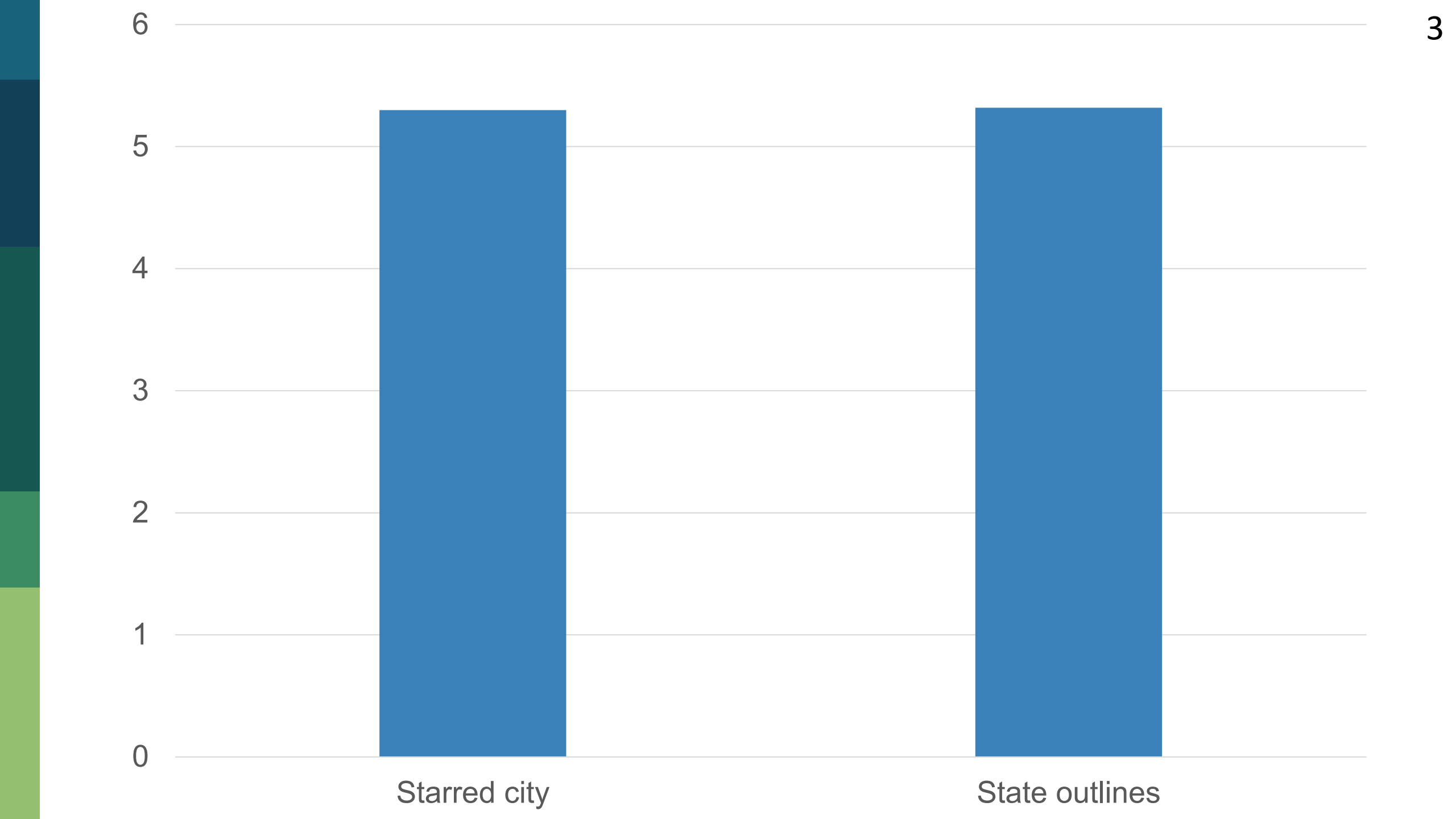
Your Teaching Fellows:

003/004:	Zahra Abolghasem	Bronwen Grocott
	Vasileia Karasavva	Ni An
010:	Thalia Lang	Malina Lemmons
	Ruoning Li	Irene Wen

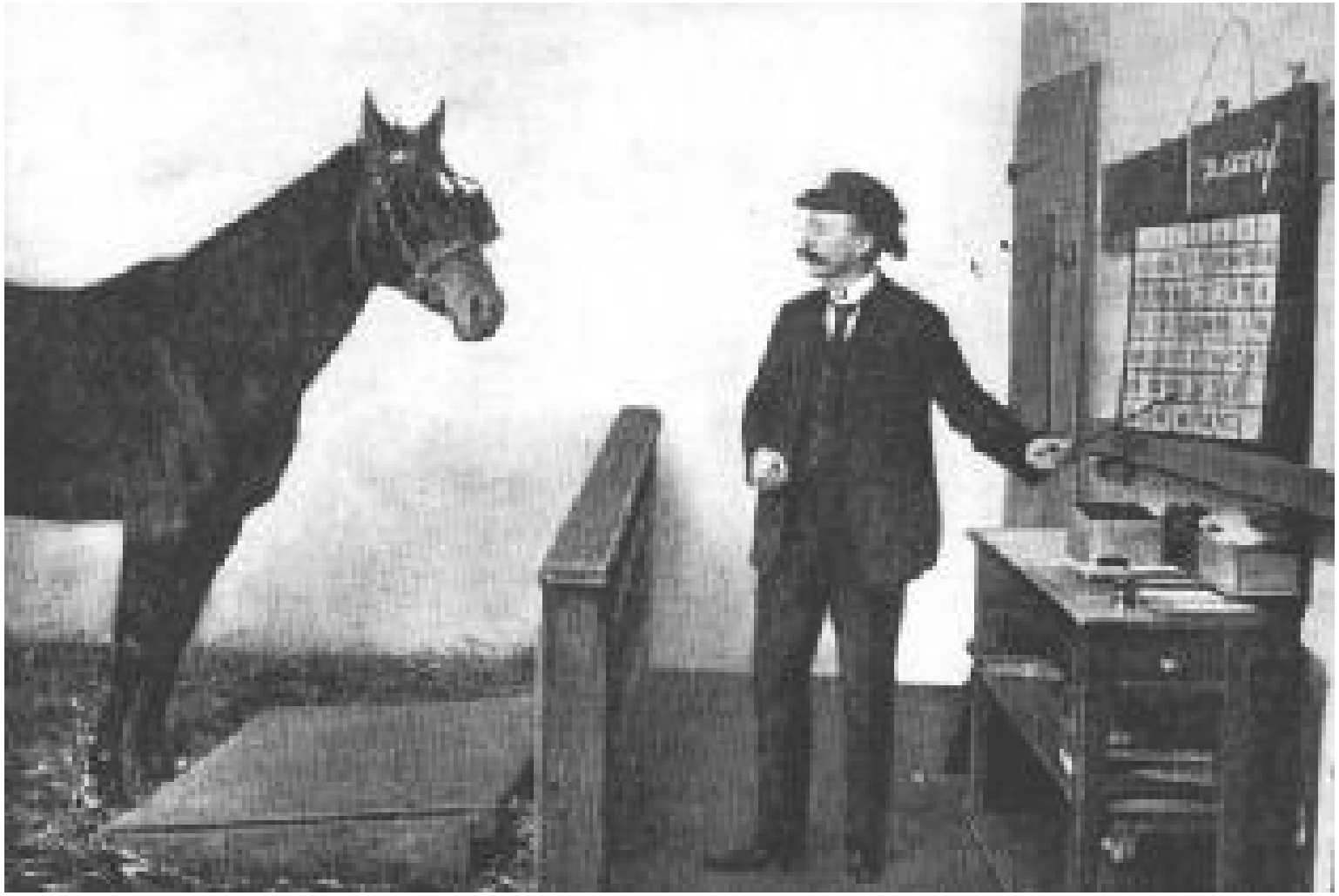
Lectures: MWF 12:00 PM – 1:00 PM (003); 1:00 PM – 2:00 PM (004); 2:00 PM – 3:00 PM (010)
Office hours: Tuesdays 2:00 PM – 4:00 PM

Course timeline

- Friday, Sept 29: Lab 1
- Groups/TFs/Rooms assigned (Canvas -> Course shell -> People -> Project Groups tab -> Search for yourself!)
- Friday, Oct 6: Exam 1 (Review session on Oct 5, Thursday, 4:30-6 zoom)
- Mediation form

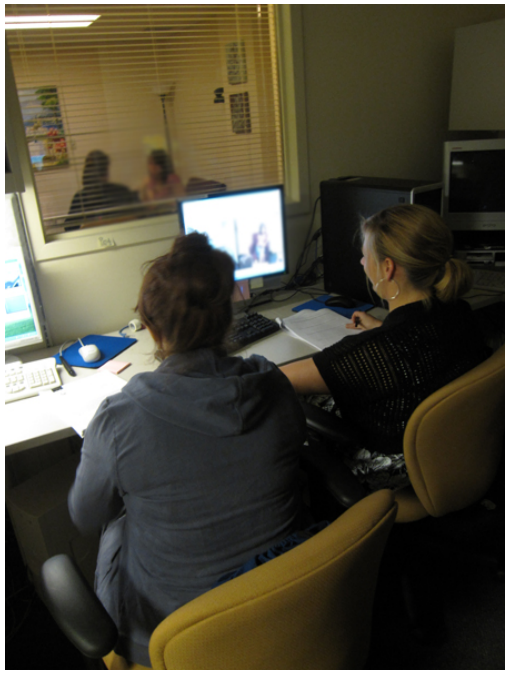

6
5
4
3
2
1
0
Starred city
State outlines

Experimenter Expectancy Effects



Experimenter Expectancy Effect

- Researcher knows what condition participants are in, **unconsciously** manipulates an experiment in order to find the expected effect.
  - Threat to internal validity
- Examples:



Options for Avoiding Experimenter Expectancy Effects

- Options?

Double-blind study

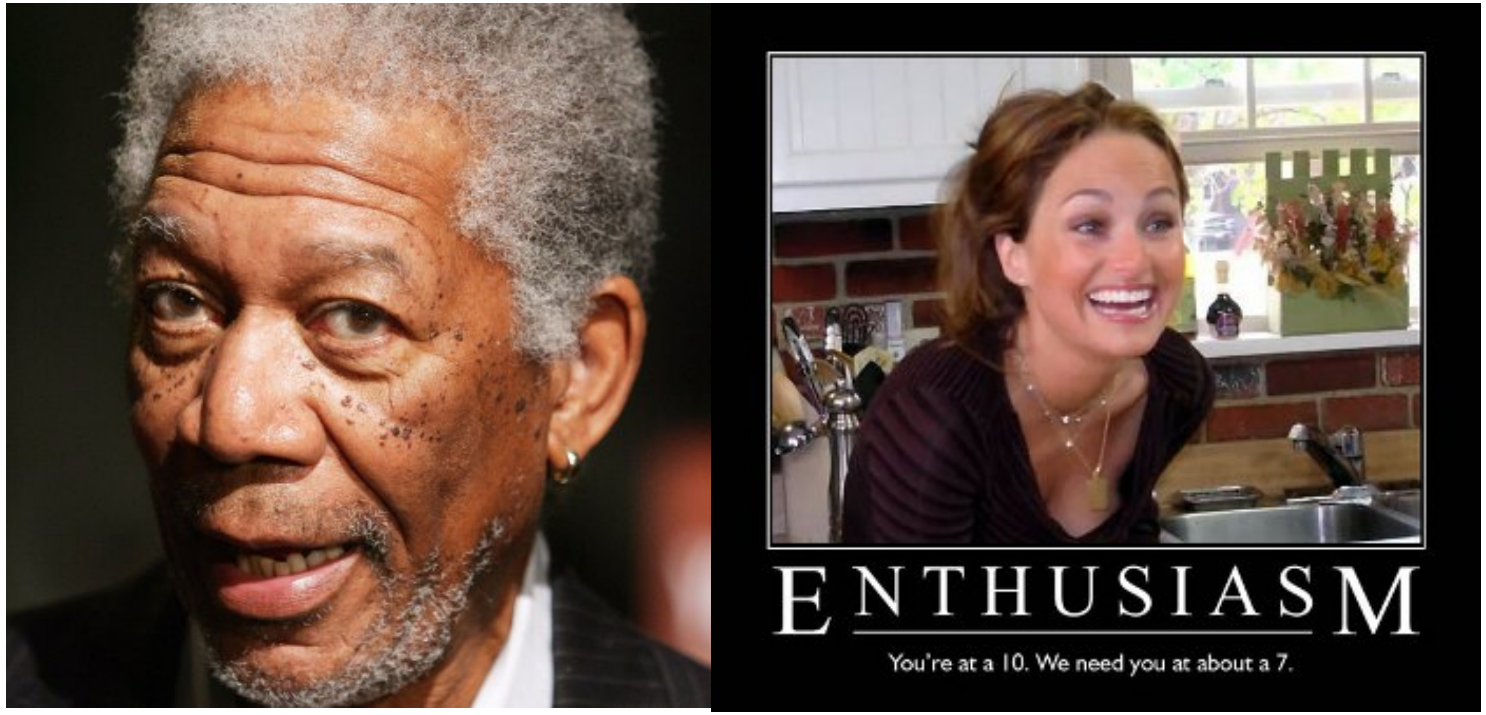
Keep the researcher/experimenter and participant blind to the hypothesis of the study

Computer study

Have a computer run the study, minimising interactions between researcher and participant

Interaction effects

- Various social components of the researcher/participant interaction may affect the results
  - Biosocial effect
  - Psychosocial effect
- Example:



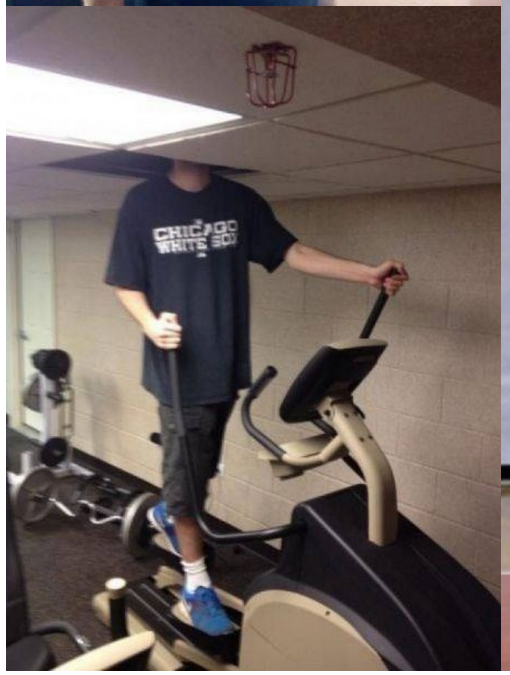
Practical Considerations

- How to design study to maximize chances of detecting effect if it's there?

- Optimizing our operational definitions of the IV and the DV
  - Avoiding ceiling and floor effects
  - Appropriate pairing of IV and DV

Ceiling vs. Floor Effects: not all DVs are created equal

Ceiling effect



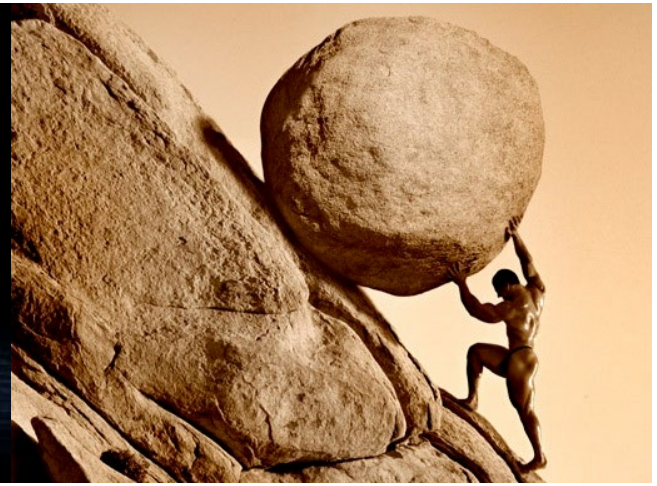
Too easy

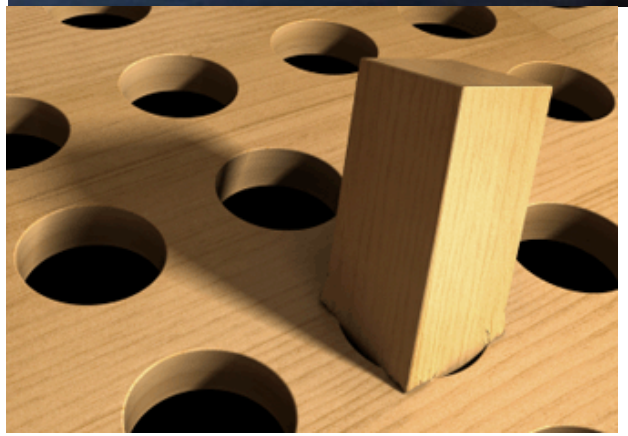
Everybody does very well

Very little variability

Hard to see effect of IV

Floor effect





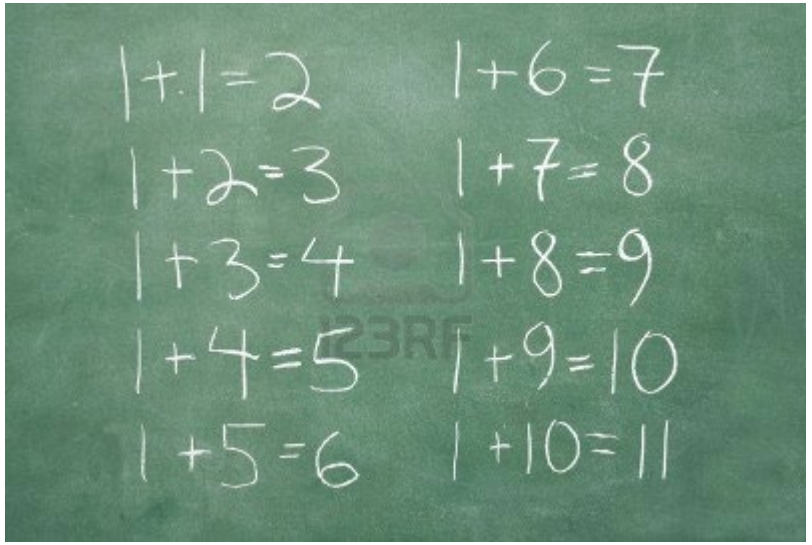
Too difficult

Everybody does very poorly

Very little variability

Hard to see effect of IV

Example Study:



Strength of IV

Strong

Weak

Sensitivity of DV

Tough

Sensitive

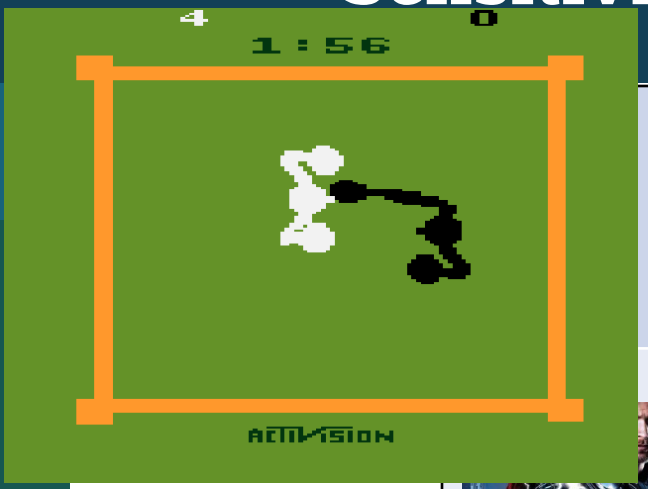
Strength of IVs and Sensitivity of DVs

IV (Manipulation)		DV (Measurement Instrument or the construct itself)	
	Good shot at creating a big change in DV		Resistant to change
	Good at making fine distinctions in DVs, but usually can't create big effects		Changes easily

Strength of IVs and Sensitivity of DVs

IV (Manipulation)		DV (Measurement Instrument or the construct itself)	
	Charitability manipulation: *Your ticket just won you $1 million!*		Willingness to donate $1 million
	Charitability manipulation: *Imagine some guy winning $1 million.*		Feeling charitable

Strength of IVs and Sensitivity of DVs



IV (Manipulation)		DV (Measurement Instrument or the construct itself)	
	Immersive manipulation: *Play series of particularly violent missions*		Willingness to stab someone
	Thought manipulation: *<u>Think</u> about playing Atari Boxing*		Killing ants

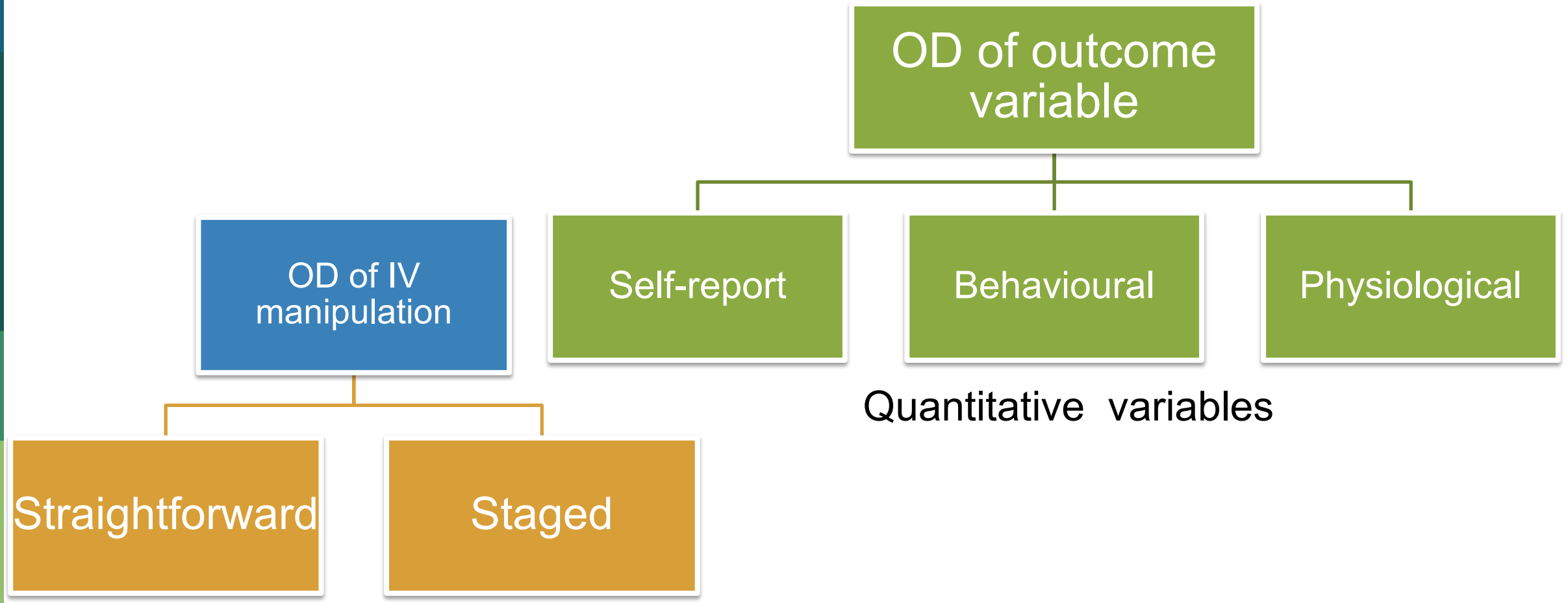
Practical Considerations

- How do we design the study to maximize the chances that we'll be able to
  - Conclude that the IV caused changes in the DV?
    - Experimental control, including ruling out potential alternative explanations (e.g., expectancy effects, demand characteristics)
  - Detect an effect if it's there?
    - Optimize our operational definitions

Learning objectives

- By the end of next class, you should be able to
  - Discuss different types of IVs and DVs commonly used in research
  - Create different types of DVs to evaluate a claim
  - Understand the different types of between- and within-subjects designs
  - Understand the advantages and disadvantages associated with within-subjects designs
  - Manage disadvantages of within-subjects designs
  - Describe the relationship between strength of IV/sensitivity of DV and experimental designs

Key Terms


OD of outcome variable
OD of IV manipulation
Self-report
Behavioural
Physiological
Straightforward
Staged
Quantitative variables

Manipulating the IV: Straightforward Manipulation

- Simple and easy
- Present participants with something that will influence DV

- Examples:
  - Music → Mood
  - Movies → Heart rate

Manipulating the IV: Staged Manipulation

- Try to indirectly elicit a state
- Make participants feel like they're in the situation

- Example:
  - Using confederates to make participants feel excluded
  - Diffusion of responsibility studies