

# Lecture 27: New directions

Monday, December 4, 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

## Reminders

- Teaching evaluations

003

13%

45%

60%

100%

004

16%

010

26%

Section that has the highest +  
passes goal gets to choose song  
language (from a list of options)

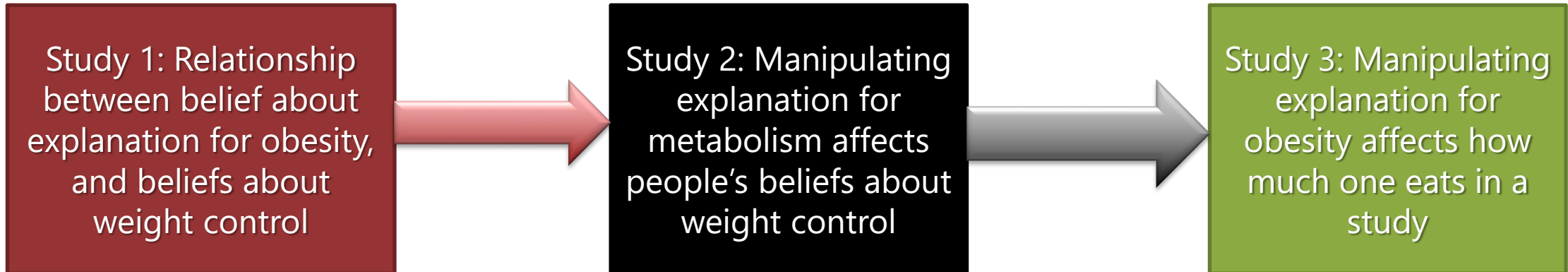
Our goal!

- Examinable content + Q & A during last lecture
- Finals review session: Dec 14, 2-3:30, Zoom

Ben embarrasses himself and  
sings a song on Wed

## Beyond single studies...

- Triangulate studies:



- Replicate studies:

- Can other researchers get the same effect?

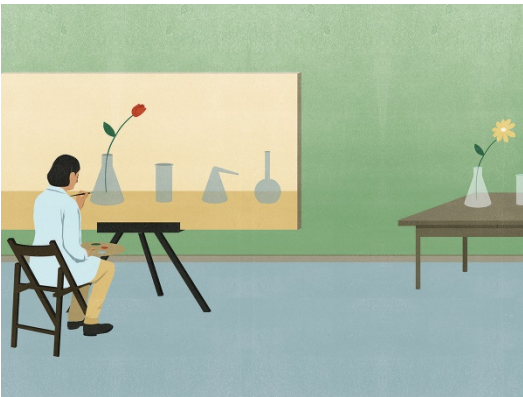
Dar-Nimrod, Cheung, Ruby, & Heine (2014)

- Meta-analyses:

- Across all studies done, how strong is the overall effect?

## Beyond single studies

- Replications can take multiple forms



Conceptual replication



Direct replication



Replication-plus-extension

## Beyond single studies

- Conceptual replications
  - Key question:
    - What was original study trying to examine?
  - New study:
    - New design and/or materials that are conceptually similar to original study

Study 1: Playing violent video games, then measuring one's likelihood of getting into a fight



Study 2: Playing different violent video games, then measuring how many violent thoughts someone has

Problem?

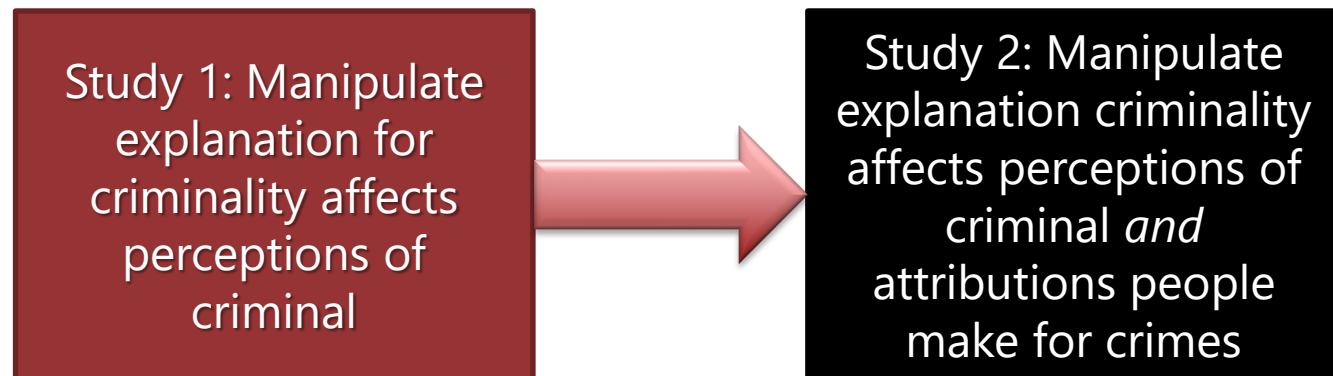
## Beyond single studies

- Direct replications
  - Key question:
    - Was the original finding real, or was it by chance?
  - New study:
    - Exactly copying methodologies and materials as original study
  - Compensates for problems with conceptual replications

Problem?

## Beyond single studies

- Replication-plus-extension
  - Key question:
    - Was the original finding real, and what else can I do with it?
  - New study:
    - Partially uses the same materials as the original, but adds additional parts to address additional questions



## Beyond single studies

- Meta-analysis

- Allows researchers to get a better understanding of what the actual effect might be


# Problem?




# Beyond single studies

- Publishing null studies


**Journal of Articles in Support of the Null Hypothesis**


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Welcome to the *Journal of Articles in Support of the Null Hypothesis*. In the past other journals and reviewers have exhibited a bias against articles that did not reject the null hypothesis. We seek to change that by offering an outlet for experiments that do not reach the traditional significance levels ( $p < .05$ ). Thus, reducing the file drawer problem, and reducing the bias in psychological literature. Without such a resource researchers could be wasting their time examining empirical questions that have already been examined. We collect these articles and provide them to the scientific community free of cost.

JASNH is published online bi-yearly. [RSS Feed](#) 

**Volume 13, No. 1 (July 2016)**

**The Lies we Live: Using the Verifiability Approach to Detect Lying about Occupation**  
*Louise Jupe, Aldert Vrij, Sharon Leal, Samantha Mann, Galit Nahari* 

**Ageism, Illegal Drug Use, and Young Adults' Experiences With Illness, Dementia and Death**  
*Andrew Hughes, TaClestia Bolar, Shelia M. Kennison* 

**Who's Afraid of Death and Terrorists? Investigating Moderating Effects of Sense of Coherence, Mindfulness, Neuroticism, and Meaning in Life on Mortality Salience**  


Some study:

Result 1: Significant

Result 2: Non-significant

Result 3: Significant

## New Directions

- Remember?



Marc Hauser



Diederik Stapel



Lawrence Sanna



Dirk Smeesters

## New Direction

- “Replication crisis” in psychology
  - Many results from psychological studies cannot be replicated by either original researchers or other researchers
    - Due to Questionable Research Practices (QRPs)/p-hacking



Over half of psychology studies fail reproducibility test

Largest replication study to date casts doubt on many published positive results.

**Scientists Replicated 100 Psychology Studies, and Fewer Than Half Got the Same Results**

**Most scientists 'can't replicate studies by their peers'**

**Psychology's Credibility Crisis: the Bad, the Good and the Ugly**

As more studies are called into question and researchers bicker over methodology, the field is showing a healthy willingness to face its problems

## Questionable studies?

- Daryl Bem – Evidence for extrasensory perception



Thursday January 27, 2011





# Questionable studies?

- Lady Macbeth Effect

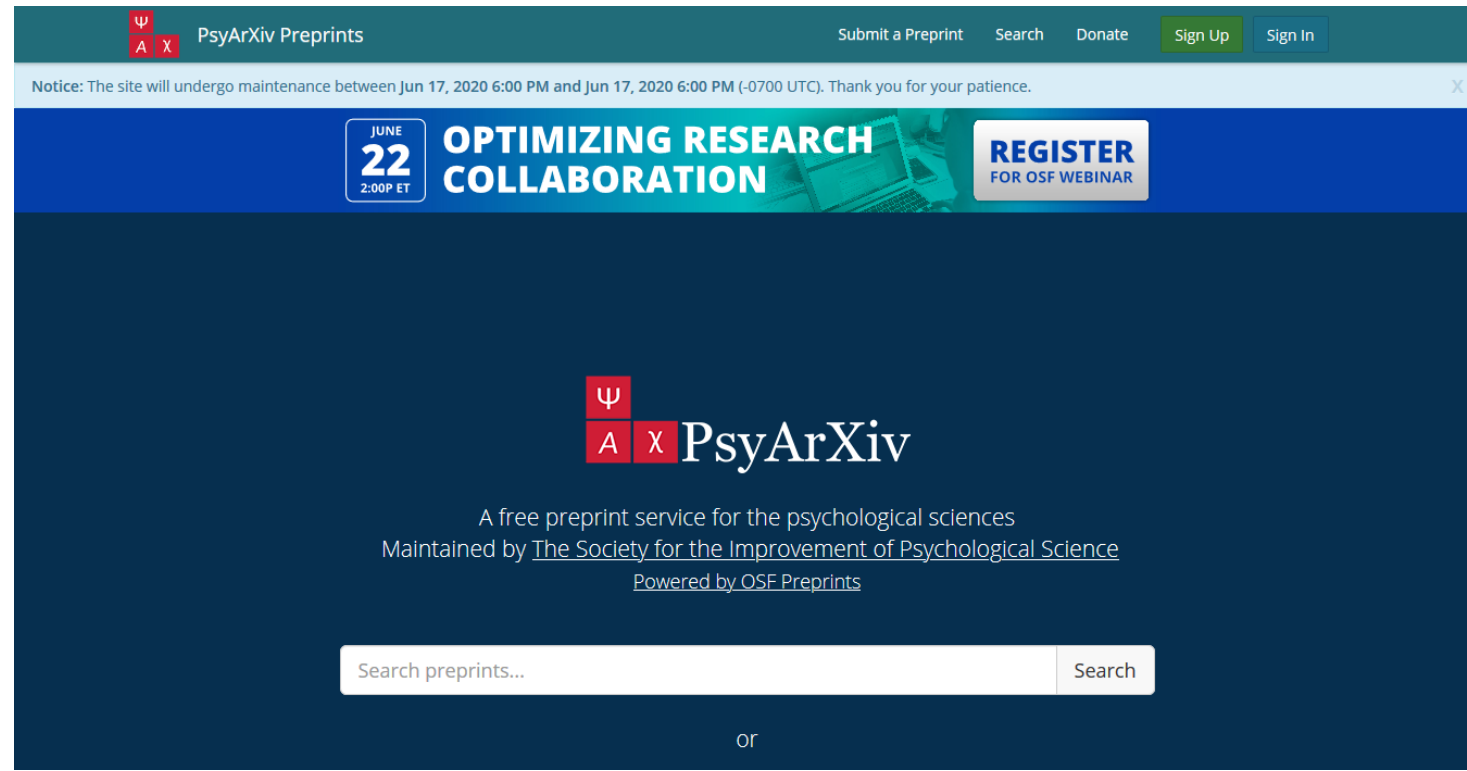


# New Directions

- Open Science
  - Movement to allow data and research to be accessible to everyone
  - Encourages transparency, community, and collaboration
  - Allows for better scrutiny and quality assessment of research

# New Directions

- Open Science - Preprints
  - Unpublished work published online (or print that is pre-publication)
  - No pay-wall, publically accessible
  - Drawback: Not peer-reviewed



# New Directions

## A Preregistered Study of Competing Predictions Suggests That Men Do Overestimate Women's Sexual Intent

Damian R. Murray, Sean C. Murphy, William von Hippel, Robert Trivers, Martie G. Haselton

First Published January 5, 2017 | other



- Open Science
  - *Psychological Science's* Open Badges



Open data

Authors provide data for anyone to access and analyze



Open materials

Authors provide study materials for anyone to access and check/replicate



Pre-registration

Authors registered hypotheses and analysis plan before running the study



# New Directions

- Open Science
  - Open Science Foundation's Registered Replication Reports (RRRs)
    - Write proposal to register hypothesis
    - Register materials and plan of analysis
    - Upload data and all analyses
    - Write report to address reproducibility of registered hypothesis

