

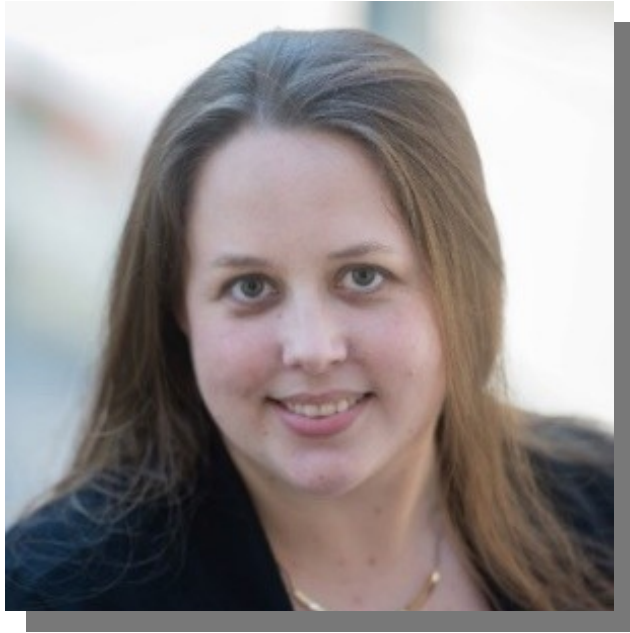
# Capturing Mental Representations of the Self

“Self-Image” Research & Web Application

# Roadmap

- Introduction
- Methodology: “Reverse correlation” and mental representations
- Research question
- Pilot study
- The Self-Image WebApp (current)
- Self-Image Experiment Platform (goal)

# Brief Intro



**Tara C. Dennehy**  
Postdoctoral Fellow  
University of British  
Columbia

- PhD training in experimental social psychology
- MA training in experimental cognitive psychology

**Beliefs**

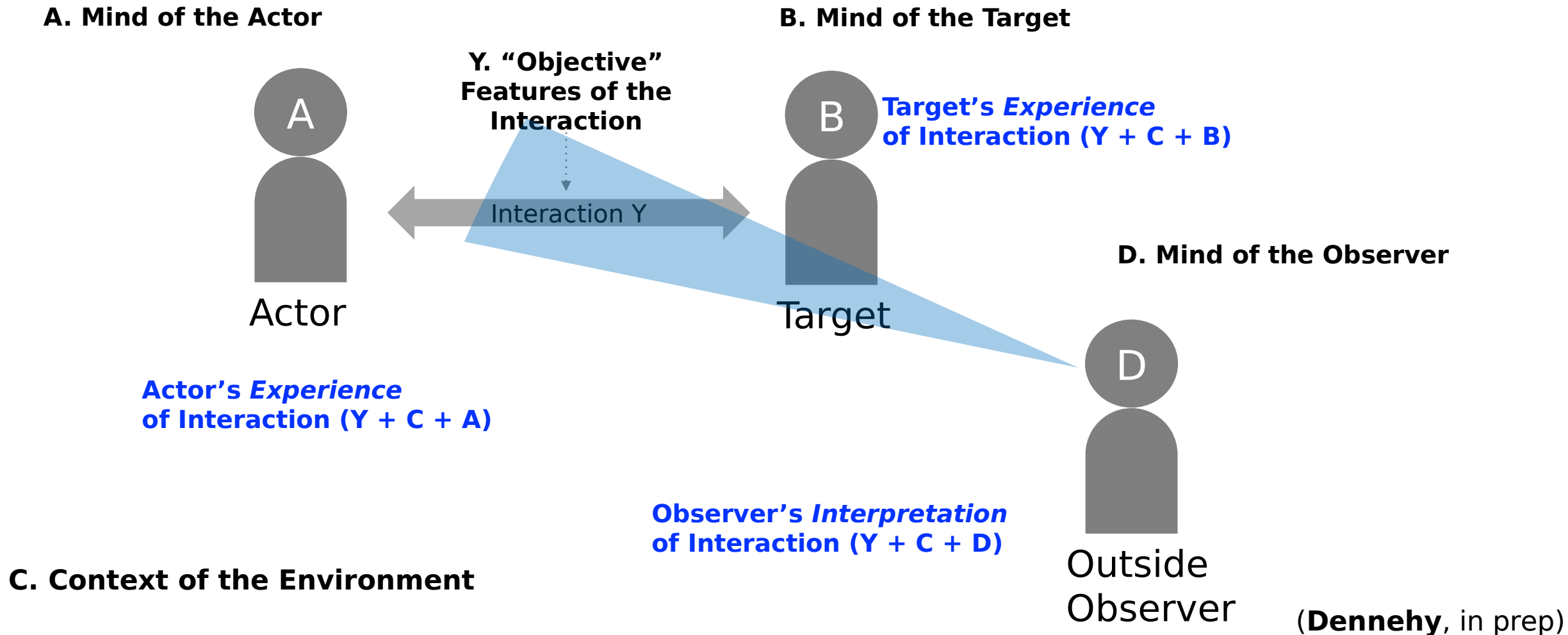
**Implicit**

**Attitudes**

**Stereotype**

**S**

# BIASes in Interactions

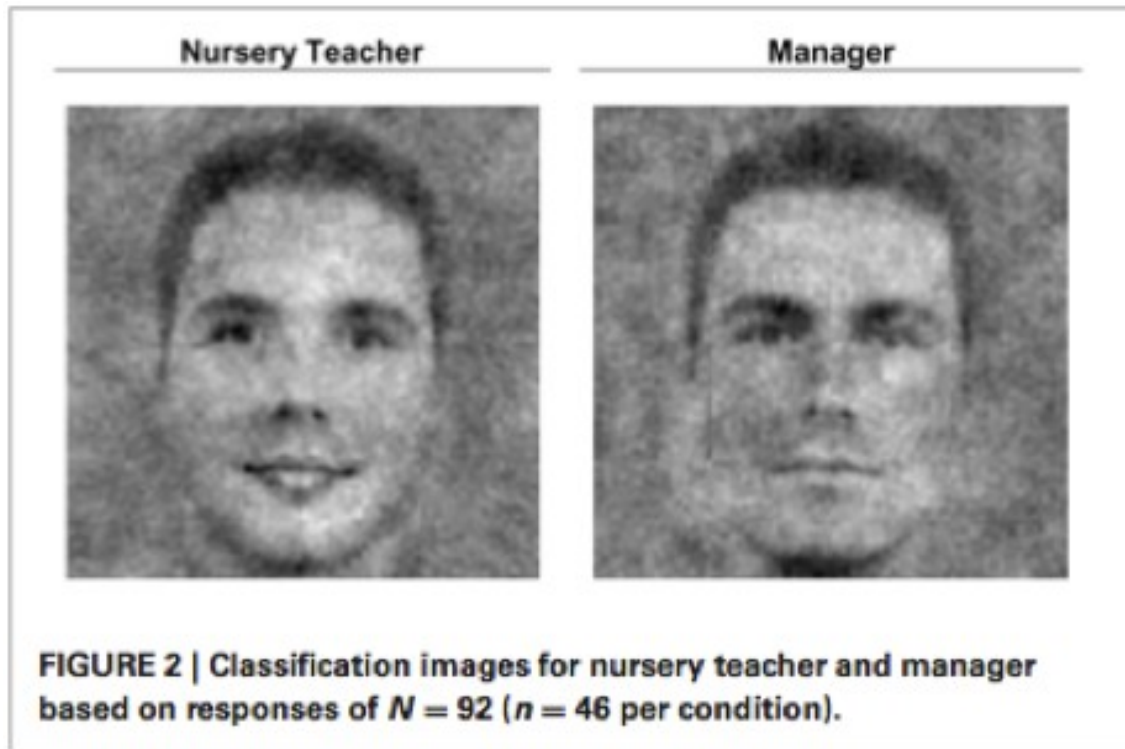


Does being the target of  
BIAS expressions affect  
how targets see  
themselves?

How can we test this question? Reverse correlation as a methodology

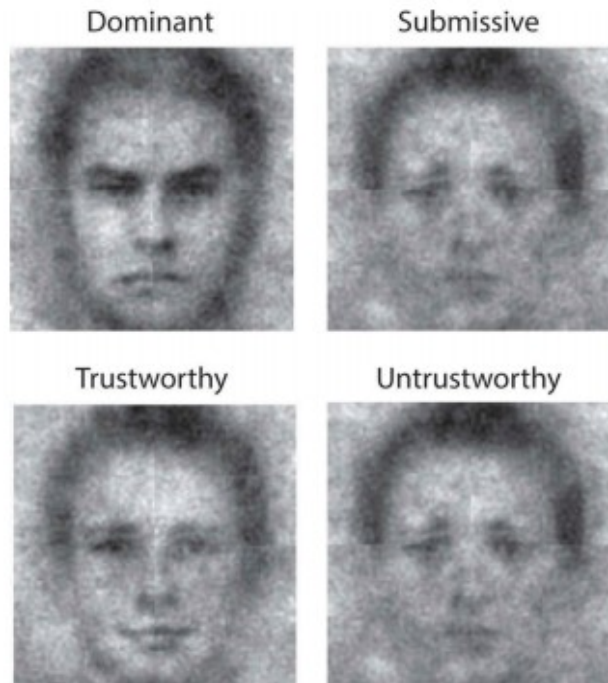
# Methodology: “Reverse Correlation”

Imhoff & Dotsch (2013) found that people can “generate” images — by selecting between identical images overlain by opposite patterns of random noise — that depict their mental representations of social category members.



see also Dotsch, Wigboldus, & van Knippenberg, 2011;  
Mangini & Biederman, 2004

# Mental Representations of Faces



**How do we picture personality characteristics in faces?**

Dotsch, R., & Todorov, A. (2012). Reverse correlating social face perception. *Social Psychological and Personality Science*, 3(5), 562-571.

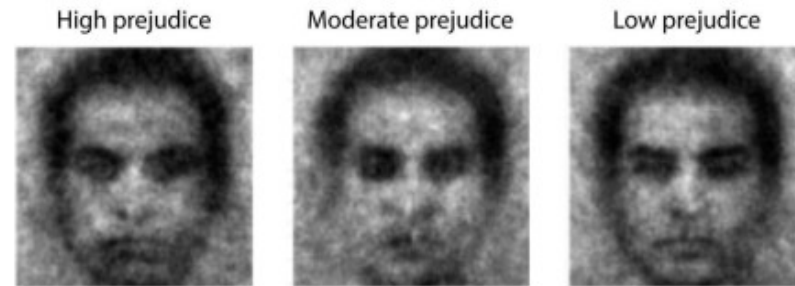
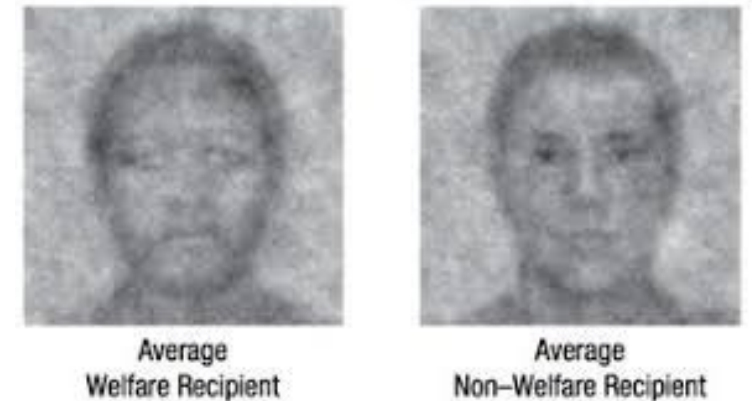


Figure 6. CIs of Moroccan faces for subgroups of participants with different levels of prejudice against Moroccans (adopted with permission from Dotsch et al., 2008).

**How does prejudice affect mental representations of outgroup members?**

Dotsch, R., Wigboldus, D. H., Langner, O., & van Knippenberg, A. (2008). Ethnic out-group faces are biased in the prejudiced mind. *Psychological science*, 19(10), 978-980.

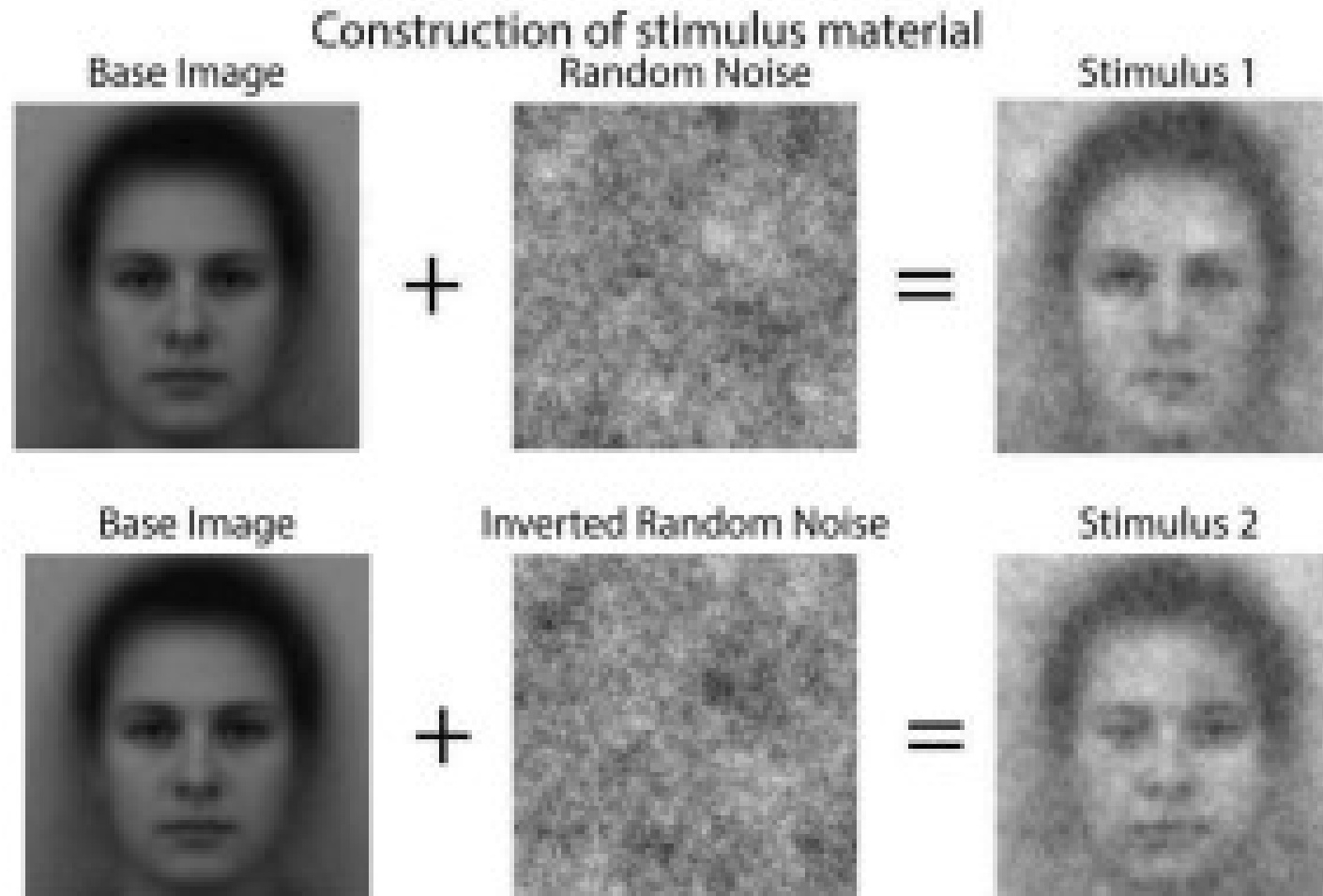


**How are stereotypes about welfare recipients racialized and gendered?**

Brown-Iannuzzi, J. L., Dotsch, R., Cooley, E., & Payne, B. K. (2017). The relationship between mental representations of welfare recipients and attitudes toward welfare. *Psychological*

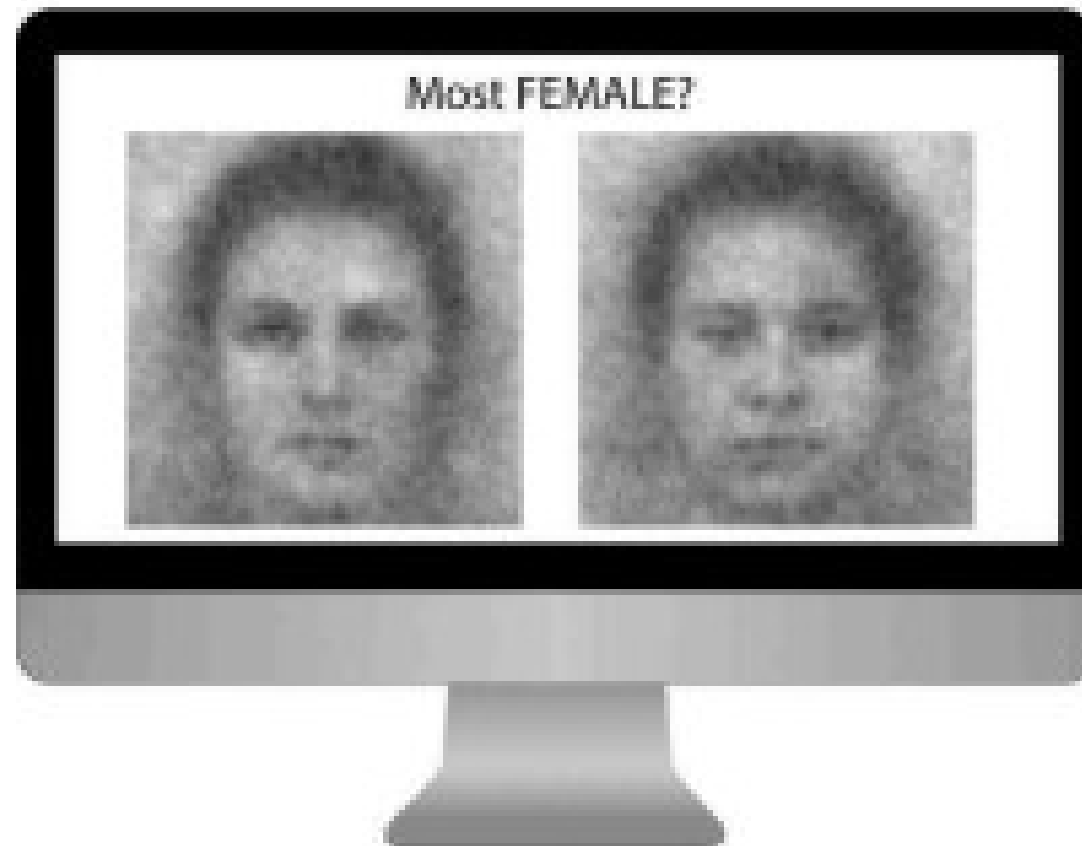


# Stimulus Construction

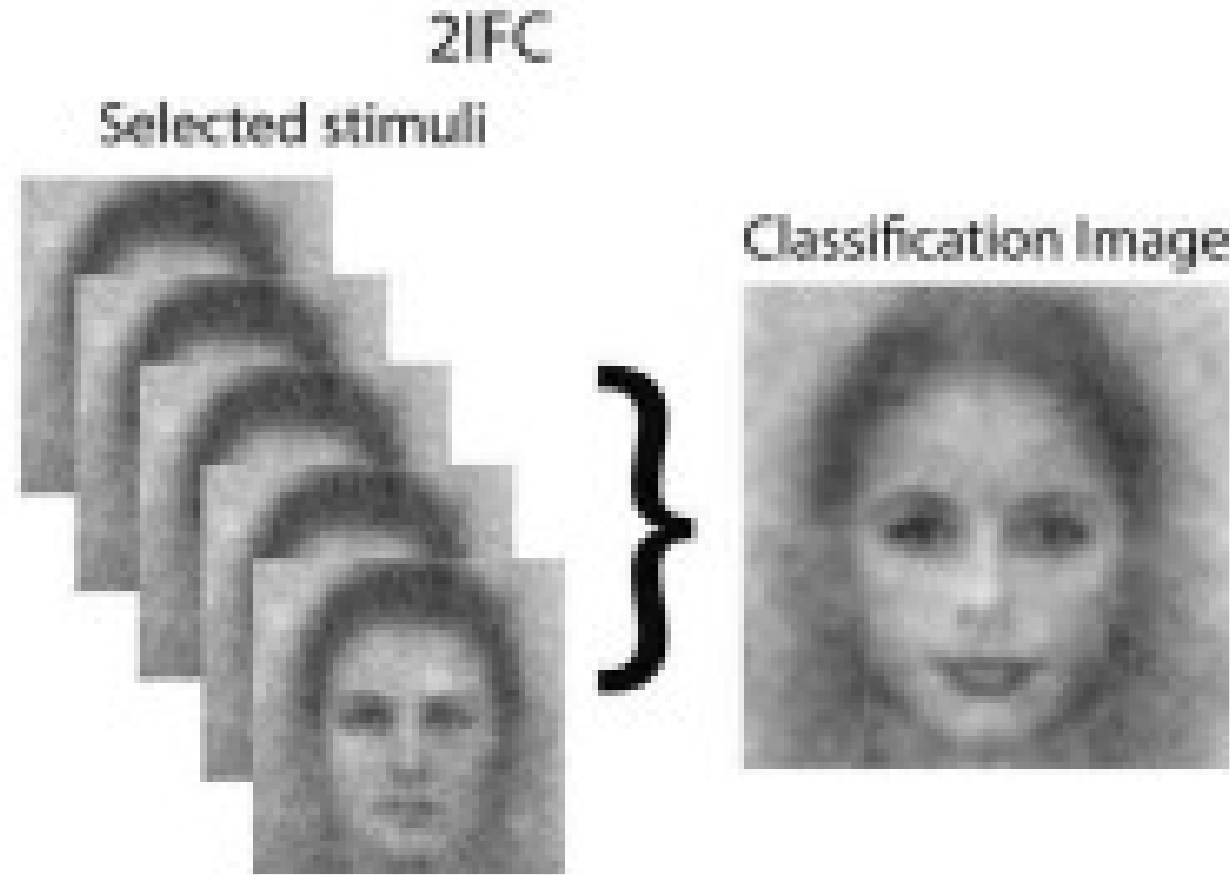


# Forced-Choice Task

Two-Image Forced Choice Task (2IFC)



# Creating a Classification Image



How does exposure to  
subtle sexism impact how  
women see *themselves*?

Pilot Study

# Experimental Manipulation

- Women ( $N = 58$ ) expected to complete a mock job interview with a male interviewer.
- Participants first watched two video of the alleged interviewer engaging in subtly sexist (vs. non-sexist) behavior toward a female interviewee who was offscreen.



Taylor Krozy  
Undergraduate Honors Thesis Student

# Example classification task trial:

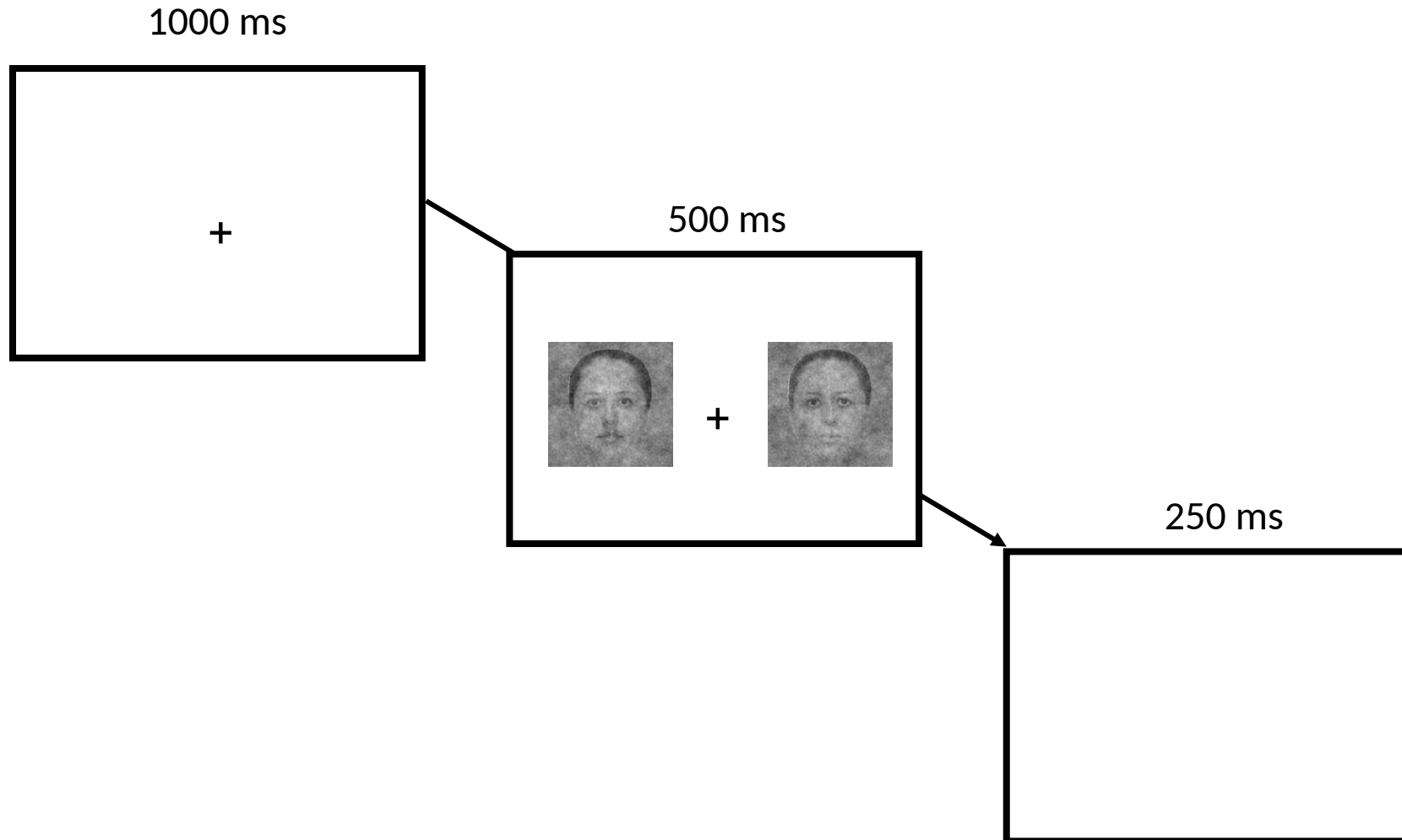
Which image is more like you?



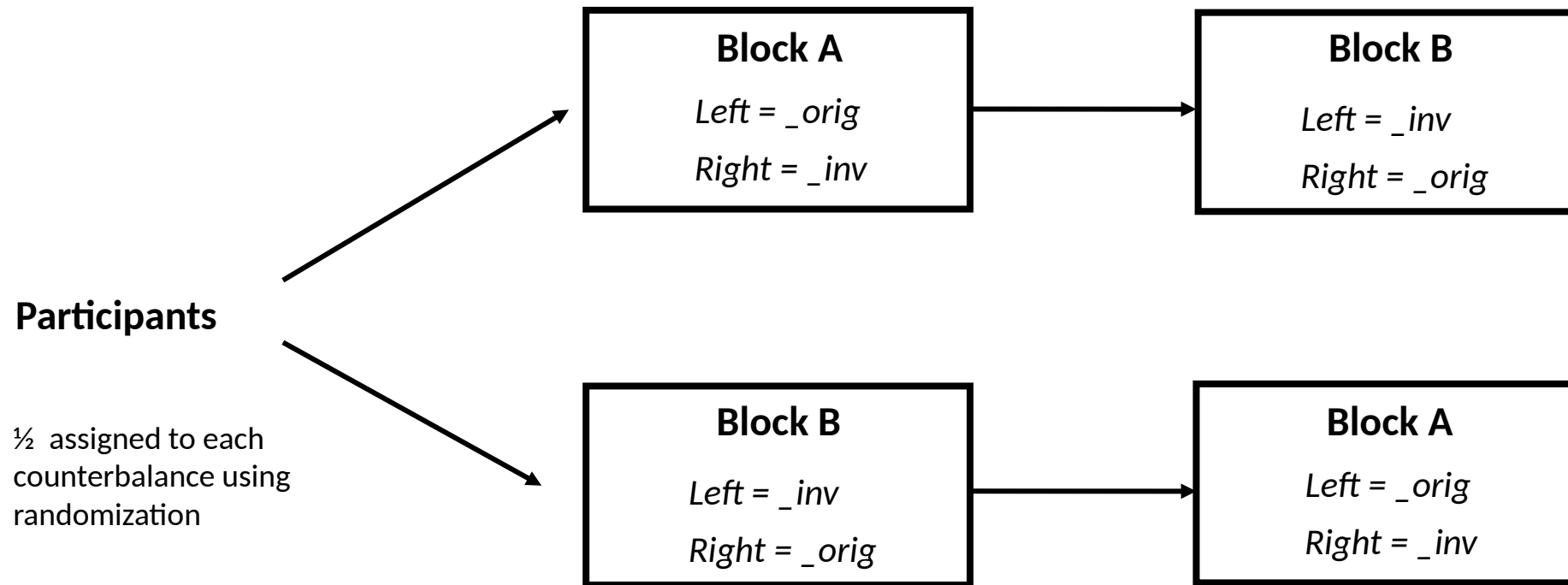
+



# Trial timing:



# Counterbalancing: 400 Trials, in two blocks



Note: The names “Block A” and “Block B” and the mappings of “\_orig” and “\_inv” are arbitrary



# Self-representations after subtle sexism

Which image is most like you?



“E”



“I”

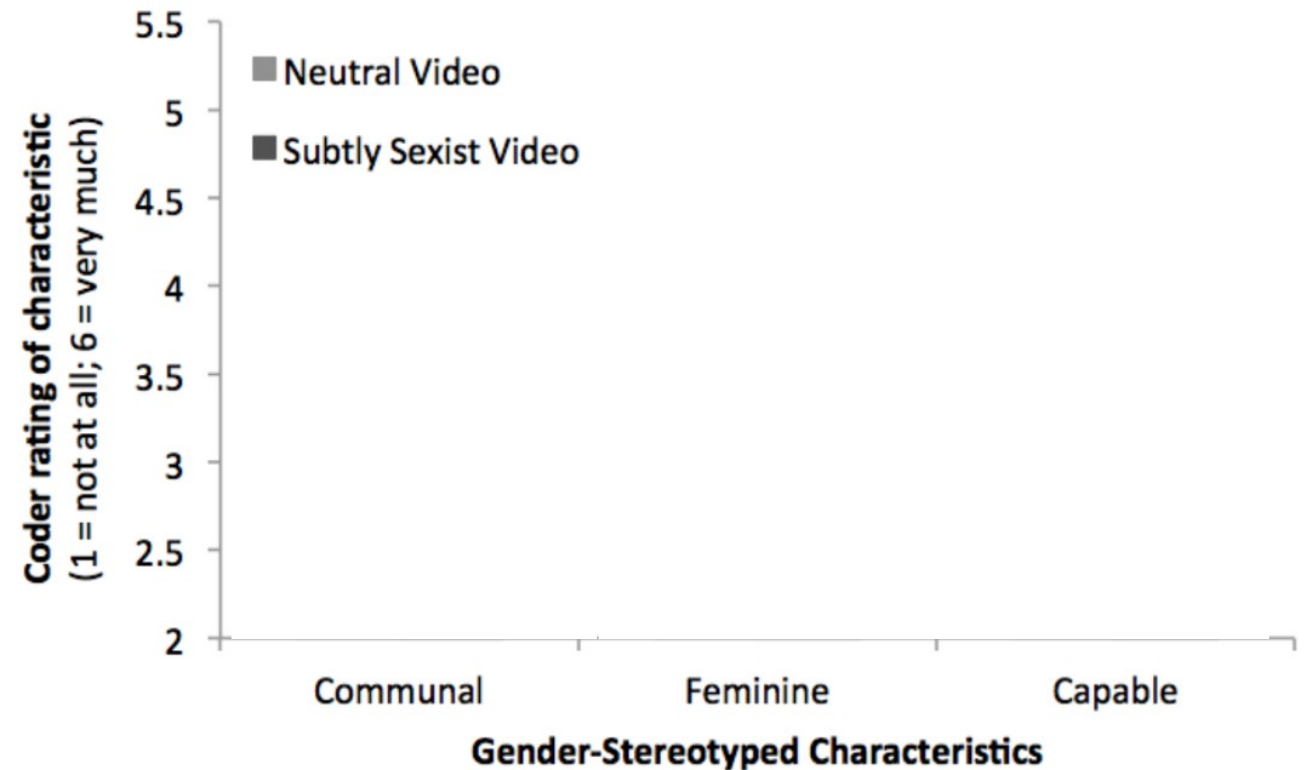
Composite



× 400 trials

N = 59

Σ(Random noise from  
each selected image)



<sup>^</sup>  $p < .10$ ; \*  $p < .05$

(Dennehy et al., in progress)

# Drawbacks of lab-based approach

- Two experimenters to every single participant
- Each session took 90 minutes (time to take photo, manually crop & edit photo, create stimuli, and set up reaction time task)
- Getting 59 women took nearly one full academic year
- Currently, COVID-19 = no lab research

# The Self-Image Web Application

Automating the Self-Image Study

# Self-Image Web App

Screencap outdated

Home

Consent Form

Take a Selfie

Pre Survey

Experimental  
Manipulation

Trials

Post Survey

Complete

## Let's Take a Selfie!

Please follow the instructions below to take and submit photo.

## Let's Take a Selfie!

### Column 1

(Or upload a picture of yourself that follows below requirements)

- Place your face at the center of the photo frame, follow the guiding arrows
- Suitable lighting, neither too dark nor over exposed
- Keep a neutral expression
- Look at your camera

### Column 2



Take Snapshot

### Column 3

your captured image will appear here...

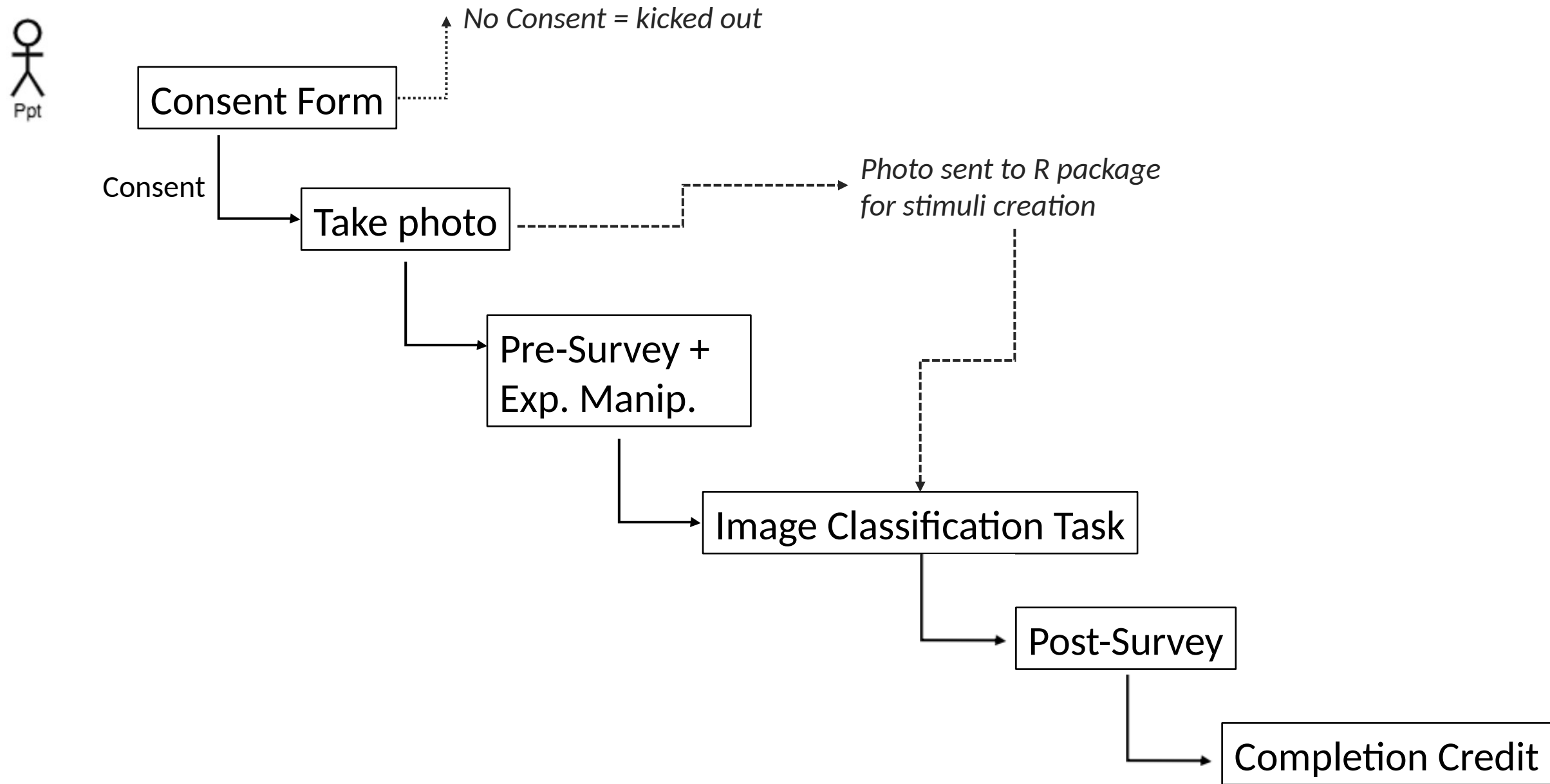
submit snap

Choose File

No file chosen

Submit

Link from SONA:



# Self-Image Experiment Platform

Building a more robust experiment platform for running multiple experiments

# Other possible Self-Image experiments\*:

- “Where are you really from?”
  - Asian Americans’ self-representations after being presumed non-American
- The “Strong Black Woman” stereotype and expectations
  - How Black women see themselves after strength expectation reminder
- Consequences of misgendering
  - How do cis, trans, and non-binary people represent themselves after being misgendered?
- Presumed incompetent
  - Disabled people’s self-representations after patronizing treatment

\* These are ideas based on programs of research in my field. Each specific experiment would need to be carefully designed to ensure it is ethical and sensitive to the target population

Example of a site that hosts multiple social psychology studies using the same method



Project Implicit®

### PROJECT IMPLICIT SOCIAL ATTITUDES

Log in or register to find out your implicit associations about race, gender, sexual orientation, and other topics!



E-mail Address

LOGIN

REGISTER

Or, continue as a guest by selecting from our available language/nation demonstration sites:



United States (English)



GO!

### PROJECT IMPLICIT HEALTH

Find out your implicit associations about exercise, anxiety, alcohol, eating, marijuana, and other topics! **GO!**

### PROJECT IMPLICIT FEATURED TASK

Measure your implicit association between different social groups and Human/Animal. **GO!**



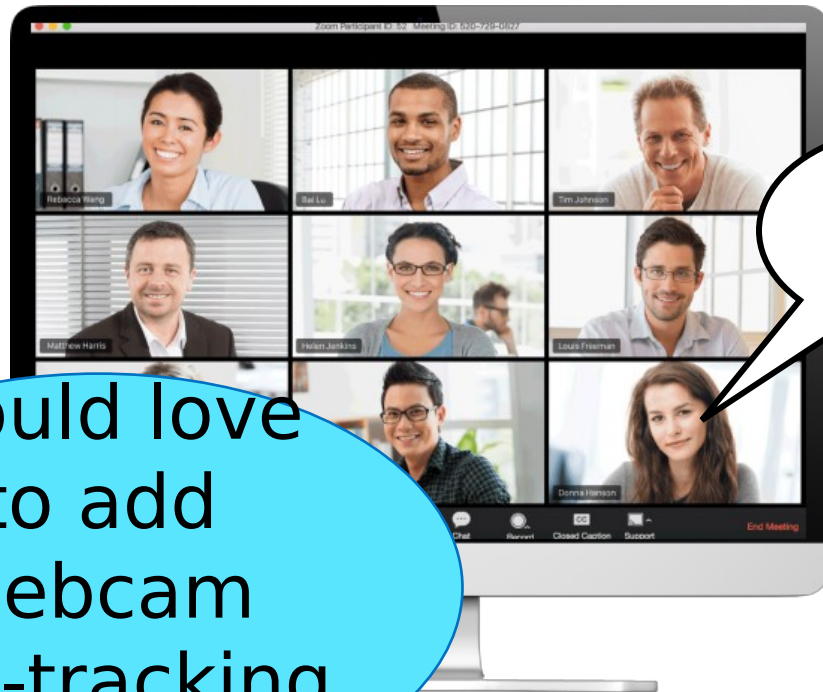


# Stretch Goals

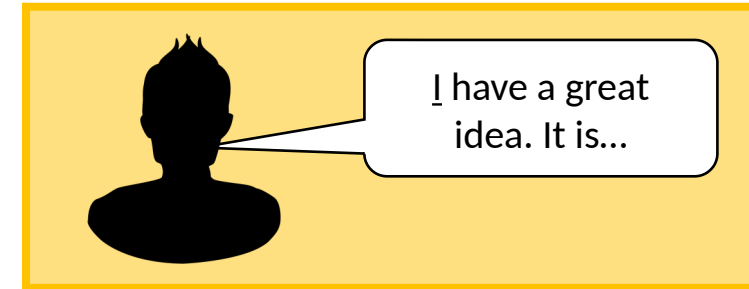
- Allow variations on research design
  - e.g., repeated measures (before & after experimental manipulation; multiple manip.)
  - traditional (non-self) reverse correlation experiments
- Interface for stimuli coding, studies using classification images
- **Webcam Eye-Tracking**
  - this is technically for a separate line of research, but Prof. Slaughter suggested it could be built into/onto this platform

# Amplification research: Who do we pay attention to? (Eye Tracking)

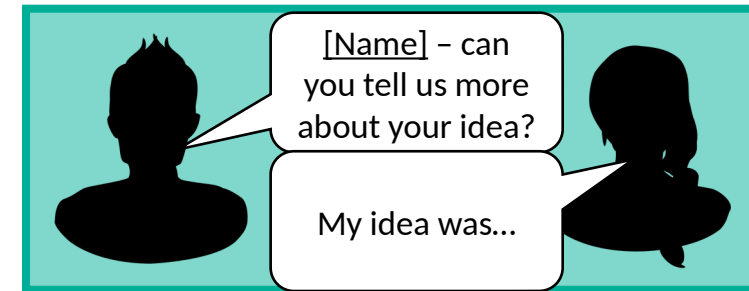
*Fake “Zoom” Recording*



“We  
should  
[idea].”



**APPROPRIATION**



**AMPLIFICATION**

# Questions?

Thank you!

# Resources:

- Primer on reverse correlation: <http://www.rondotsch.nl/rcicr/>
- Running reverse correlation studies online:  
<https://github.com/AntonGollwitzer/ReverseCorrelationRunningOnline>