



Implicit versus explicit social attitudes in  
diversity research and training:  
**Are we as unbiased as we think?**

April 19, 2013

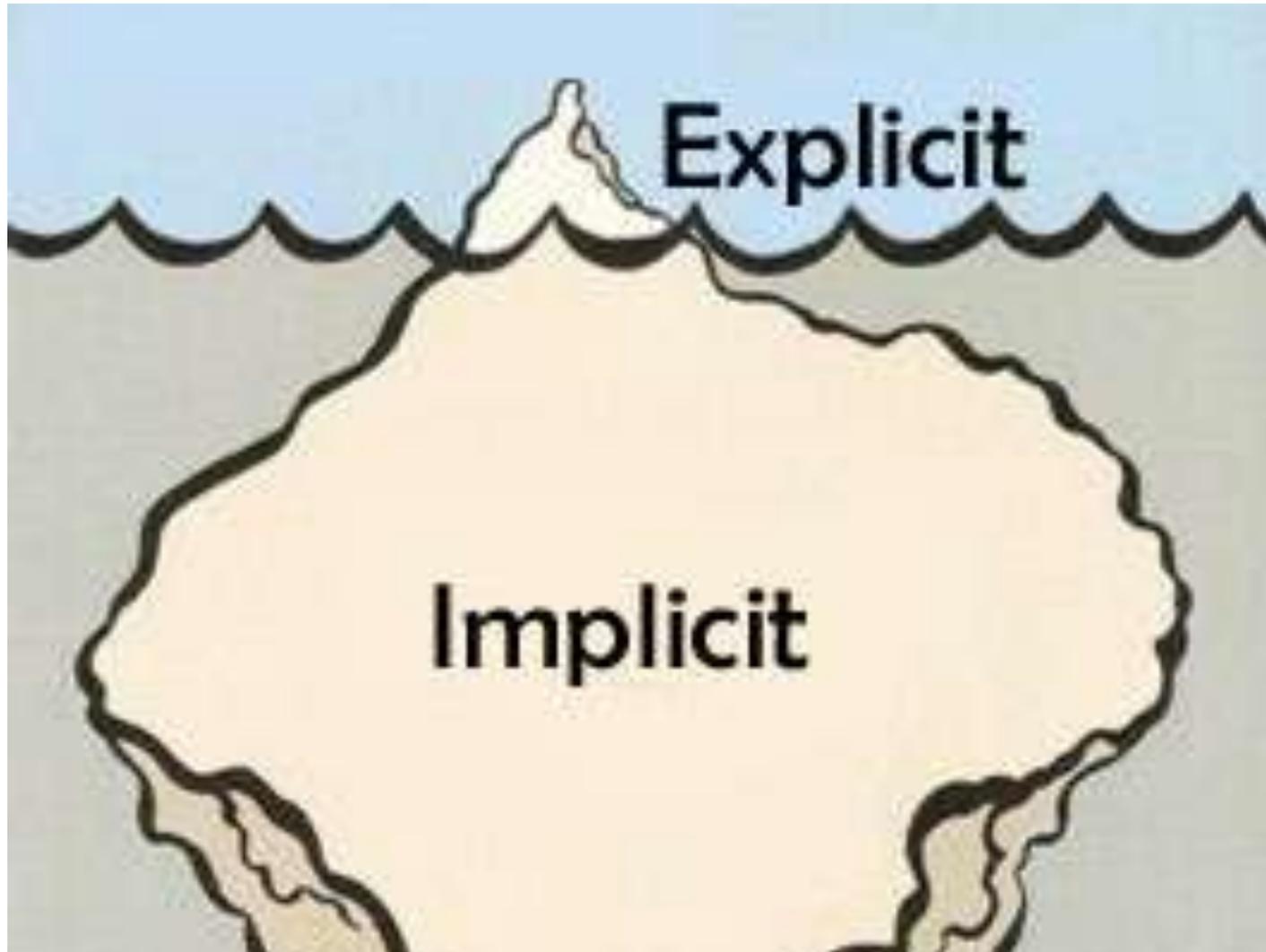
Presented by:

Sequana Tolon, Adena Young-Jones, and Donald Fischer

# Outline of Presentation

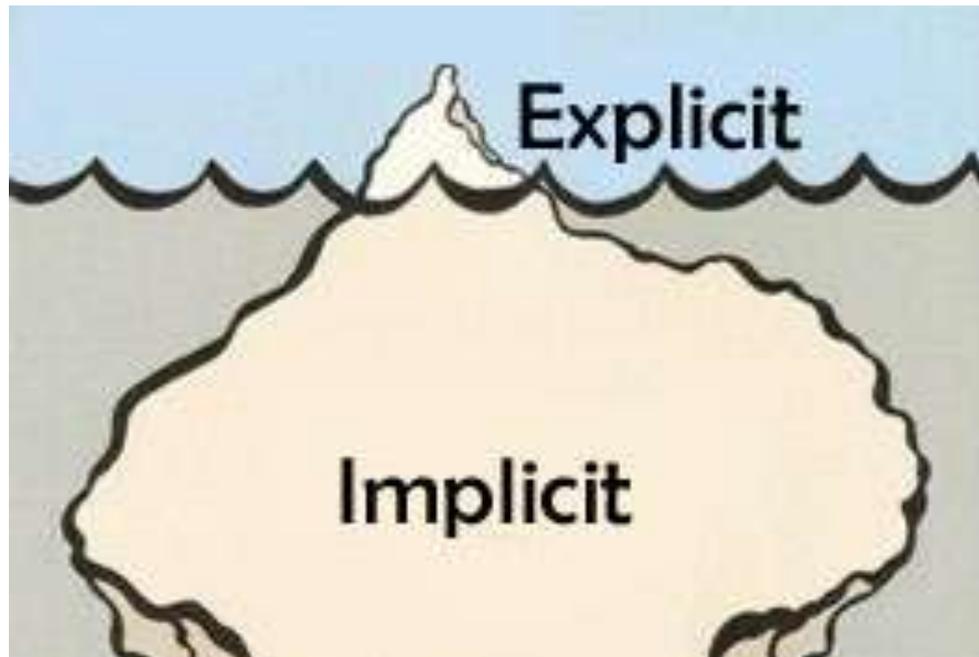
- I. Introduction of Implicit versus Explicit Attitudes
- II. Attitude Activity
- III. IAT Demonstration
- IV. IAT Research
  - I. Procedure
  - II. Hypothesis
  - III. Results
  - IV. Implications and practical utility

# Implicit versus Explicit Attitudes



# Implicit versus Explicit Attitudes

- Research shows that people do *not* realize the extent of their own prejudices because they are so well-learned and operate outside our awareness.



# Implicit versus Explicit Attitudes

- “Bogus Pipeline” versus Questionnaires
  - Sigall and Page (1971)

The image shows a sample of a questionnaire form. The form is titled "Empire State University" and "Department of Psychology". It contains several sections with headings such as "Personal Information", "Demographics", "Attitudes", and "Opinions". The form includes various input fields, checkboxes, and a grid of boxes for responses. A large, bold, black watermark with the word "Sample" is overlaid diagonally across the center of the form.

# Implicit versus Explicit Attitudes

- “Bogus Pipeline” versus Questionnaires
  - Sigall and Page (1971)



A sample of a questionnaire form, likely related to the Sigall and Page (1971) study. The form contains several sections with headings and a grid of response options. A large, bold, black watermark reading "Sample" is overlaid diagonally across the center of the form.



A second sample of a questionnaire form, identical to the one on the left. It features the same layout of sections and a grid of response options. A large, bold, black watermark reading "Sample" is overlaid diagonally across the center of the form.

# Implicit versus Explicit Attitudes

- Both implicit and explicit tests have **value** (Wittenbrink, Judd, & Park, 1997)
  - Implicit stereotypes compared to explicit reports
    - Explicit tests were related to implicit measures



# Implicit Attitude Activity





# Examples of IAT test topics:

- Gender
- Religion
- Native American
- Arab-Muslim
- Skin-tone
- Weapons
- Disability
- Race
- Gay-Straight
- Age (young-old)
- Presidents
- Asian-European

# Implicit Association Test (IAT)

- Implicit Association Test (IAT; Greenwald & Banaji, 1995)
  - Tool which measures underlying attitudes *and* stereotypes in an indirect and automatic manner



# Implicit Association Test (IAT)

## Demonstration

<https://implicit.harvard.edu/implicit/selectatest.html>

African-American  
*or*  
Good



European-American  
*or*  
Bad

# Background of the Research Study

## Inspiration for research

- Rudman, Ashmore, and Gary (2001)
  - Explicit Racial Prejudice
  - Motivation to Control Prejudiced Reactions Scale
  - IAT-Preference
  - IAT-Stereotype

The **present study** attempts to replicate and extend the findings of Rudman et al. (2001).

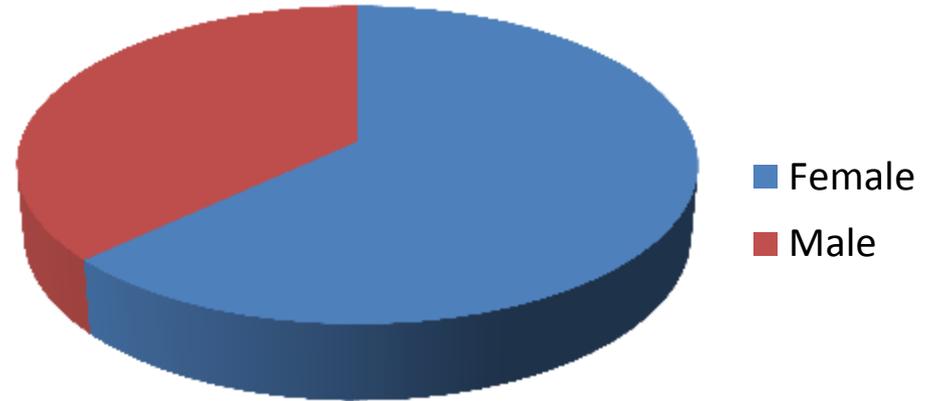
# Hypotheses

- **Hypothesis 1:** *Students' implicit and explicit racial attitudes will change over time (pre-post differences).*
- **Hypothesis 2:** *The changes in racial attitudes will be more evident in the pre-post change for the explicit measures among students in the diversity course than for students in the adjustment course.*
- **Hypothesis 3:** *The changes in racial attitudes will be more evident in the pre-post change for the implicit measures among students in the adjustment course than for students in the diversity course.*

# Demographics

## *Participants*

- Participants ( $N = 86$ )
  - Only 44 were used
- 10% Minority



# Procedure & Measures

- The assessments took place approximately mid semester
- Assessment Measures
  - Explicit Racial Prejudice
  - Motivation to Control Prejudiced Reactions Scale
  - IAT-Preference
  - IAT-Stereotype
- Students were provided immediate feedback regarding their scores



# Concept Labels and Word Stimuli

*Table 1. Concept Labels (in italics) and Word Stimuli for the Implicit Association Tests*

Race		Evaluation		Stereotype	
• <i>Black</i>	• <i>White</i>	• <i>Positive</i>	• <i>Negative</i>	• <i>Mental Strength</i>	• <i>Physical Ability</i>
6 faces	6 faces	joy	terrible	math	athletic
		glorious	nasty	educated	run
		wonderful	evil	scientist	boxing
		love	hurt	smart	dance
		happy	horrible	college	jump
		laughter	failure	read	rhythmic
		pleasure	awful		
		peace	agony		

# Intervention Concept

Pre-test Assessment



Time elapse

Post-test Assessment



Time elapse



# Results

- Descriptive statistics
- Zero-order correlations



# Descriptives

Table 2. Descriptive Statistics for Study Variables.

Variables	N	Mean	SD	Alpha
<b>Pretest Measures<sup>1</sup></b>				
Motivation to Control	86	4.42	.79	.83
Racial Prejudice	86	2.28	.60	.84
IAT-Preference <sup>2</sup>	85	-.474	.47	.67
IAT-Stereotype <sup>3</sup>	85	-.156	.42	.72
<b>Posttest Measures<sup>1</sup></b>				
Motivation to Control	73	4.67	.78	.86
Racial Prejudice	73	2.12	.59	.86
IAT-Preference <sup>2</sup>	71	-.578	.39	.70
IAT-Stereotype <sup>3</sup>	57	-.196	.44	.80

<sup>1</sup> All implicit measures are IAT effects expressed as D measures (Greenwald et al., 2003).

<sup>2</sup> Larger negative values indicate a stronger association of Black+negative (and White+positive).

<sup>3</sup> Larger negative values indicate a stronger association of Black+physical (and White+mental).

# Correlations

1

Table 3. Zero-order Correlations for Study Variables

Variables	1	2	3	4	5	6	7	8
<b>Pretest Measures</b>								
1. Motivation to Control	-							
2. Racial Prejudice	-.53**	-						
3. IAT-Preference	-.15	-.15	-					
4. IAT-Stereotype	-.19	-.05	.63**	-				
<b>Posttest Measures</b>								
5. Motivation to Control	.69**	-.37*	-.04	-.15	-			
6. Racial Prejudice	-.51**	.70**	-.11	-.07	-.42**	-		
7. IAT-Preference	-.07	-.14	.66**	.72**	-.08	-.22	-	
8. IAT-Stereotype	-.11	-.07	.39**	.39**	-.02	-.30*	.57**	-

\* $p < .05$ ; \*\* $p < .01$

N = 44 (all non-Black students with complete data)

# Results (cont.)

- Univariate analyses of the four dependent measures produced significant within-subject main effects for pre-posttest differences on:
  - ✓ **The Motivation to Control measure** ( $F(1, 41) = 5.75, p < .05, \text{partial } \eta^2 = .12$ )
  - ✓ **Racial Preference IAT** ( $F(1, 41) = 10.69, p < .01, \text{partial } \eta^2 = .21$ ).

# Group Means for Study Variables

Spring 2012

<u>Course-Sec<sup>1</sup></u>	<u>N<sup>2</sup></u>	<u>RP<sup>3</sup></u>	<u>MC<sup>3</sup></u>	<u>IAT-P<sup>3</sup></u>	<u>IAT-S<sup>3</sup></u>	<u>RP<sup>4</sup></u>	<u>MC<sup>4</sup></u>	<u>IAT-P<sup>4</sup></u>	<u>IAT-S<sup>4</sup></u>
PSY101-1	15	2.63	4.34	-.536	-.052	–	–	–	–
PSY101-2	13	2.32	4.13	-.484	-.318	2.25	4.42	-.679	-.300
PSY411-1	25	2.10	4.67	-.447	-.182	2.09	4.85	-.683	-.180
PSY411-2	6	2.08	4.14	-.083	.182	2.08	4.33	-.231	.153

<sup>1</sup> PSY101 = adjustment course; PSY411 = diversity course

<sup>2</sup> Non-Black students with complete data

<sup>3</sup> Pretest measures

<sup>4</sup> Posttest measures

# Discussion



A lack of sufficient research on the development and use of baseline measures exists.

- What are the benefits and drawbacks of using IATs as an evaluation of attitudinal interventions?

# Practical Implications



Impact of implicit  
versus explicit  
measures:

- Education
- Business
- Personal  
Development

# Take-Home Messages

- Implicit attitudes are not always congruent with explicit attitudes.
- Implicit attitudes are less likely to be impacted by efforts to impression management when compared to explicit attitudes.
- Implicit Attitude assessments provide an opportunity for awareness building and personal development.

# Questions and Answers





# THANKS FOR YOUR TIME.

Sequana Tolon, Adena Young-Jones, and Donald Fischer

Missouri State University  
Department of Psychology