

# Sources of Questionable Interpretive Practices (QIPs)



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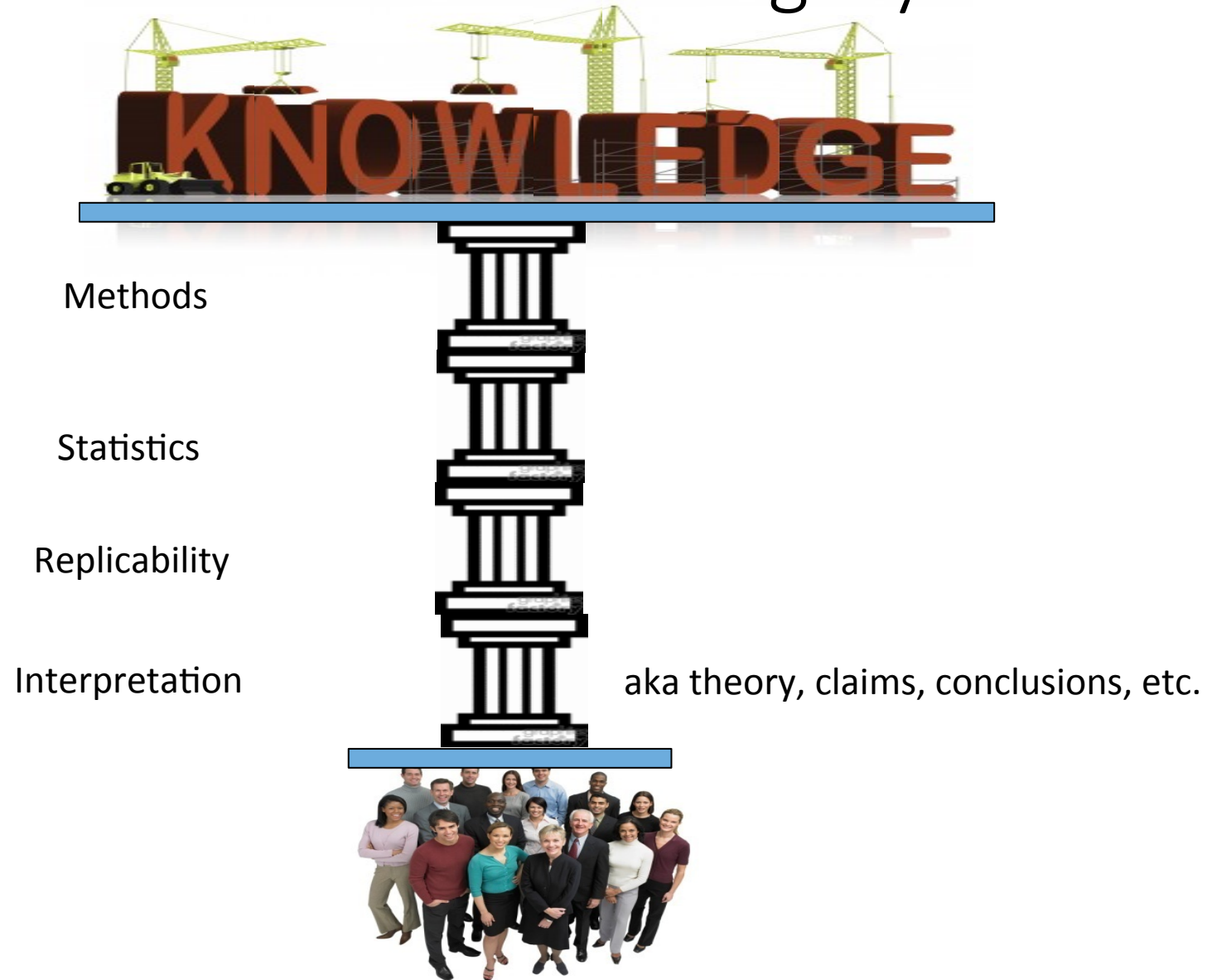
CASBS Best Practices in Science Conference

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***We (with Sean, Stephanie, and Ifat) have a slew of papers coming out on this:***

1. Political Diversity Will Improve Psychological Science (*Beh. Brain Sci*, in press).
2. The Politics of Social Psychological Science: Distortions in the Social Psychology of Intergroup Relations. (*Claremont Symposium*, in press).
3. The Politics of Social Psychology (*Sydney Symposium*, 2015)
4. Can High Moral Purposes Undermine Scientific Integrity? (*Sydney Symposium*, in press)

# Four blocks of Scientific Integrity Pillar



# Questionable Interpretive Practices

- Conceptual and narrative tools for reaching desired conclusions
- Mechanisms by which researcher motivated biases can distort conclusions, even with untainted data
  - Related to questionable research practices (QRPs), but may not involve use of unjustified data analytic practices

# Questionable Interpretive Practices (“quips”)

## Some QIPs:

- Double standards
- Mythmaking
- Embedded values
- Phantom facts
- Blind spots
- Cherrypicking (results to report; studies to cite)

**QIPs often function to advance moral/political goals** (Jussim, Crawford, Stevens, Anglin, & Duarte, in press; Jussim, Crawford, Anglin, & Stevens, 2015)

**Can influence all stages of research process** (Jussim, Crawford, Duarte, Anglin, Stevens, & Moaz, under review)

# The Curious Case of Condemning Climate Skeptics as Conspiracy Theorists

Lewandowski et al. (2013), paper titled, *“NASA Faked the Moon Landing – Therefore (Climate) Science is a Hoax”*

- people who doubt global warming believe bizarre conspiracy theories.

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Into this mix stepped Lewandowski et al. (2013) with a paper titled, “NASA Faked the Moon Landing – Therefore (Climate) Science is a Hoax”

## High Moral Purposes (more quotes from the paper)?

***The opposition is conservative (and ignorant? and/or immoral??):***

“90% of books endorsing skepticism toward environmentalism that have been published since 1972 have been sponsored by conservative think tanks”

“Researchers in history and sociology frequently cite the “manufacture of doubt” by vested interests and political groups as a factor...”

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Two major ingredients for the motivated distortion of science are in place:

High Moral Purpose (save the planet!)

Crushing One’s Opponents (the evil obstructionist conservatives!)

**BUT, we are all motivated. Motivation ≠ Distortion.**

**Distortion requires demonstrating that a claim that advances some agenda is actually wrong or misleading.**

# The Curious Case of Condemning Climate Skeptics as Conspiracy Theorists

## THE EVIDENCE Lewadowski et al presented

N=1145 web survey

- belief in conspiracies
  - Fake Moon Landing, AIDS created to kill Blacks/Gays, etc.
- and acceptance of scientific conclusions
  - HIV causes AIDS, burning fossil fuels increases atmospheric temperatures, etc.)
- Latent variable modeling showed that “conspiracist ideation” negatively predicted (-.21, standardized regression coefficient) acceptance of climate science.

***So, where is the problem?***



# The Results

The Moon Landing Was Faked

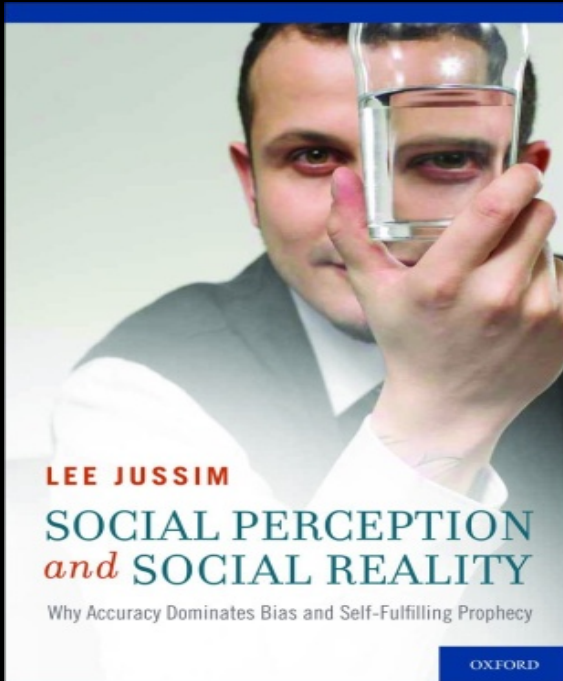
Strongly disagree	Disagree	Agree	Strongly Agree
1067	68	4	6

Cell entries are the frequency of each response

DISAGREEING with hoaxes is the reasonable, “scientific” response. AGREEING is the whacky response.

When the data are this skewed, is SEM even appropriate?

## Social Psychology is Riddled with QIPs



### **Social Perception and Social Reality: Why Accuracy Dominates Bias and Self-Fulfilling Prophecy. (2012). Oxford University Press.**

(recipient of *Publishers' Prose Award* for best book in Psychology)

And a slew of in press articles and chapters with collaborators Anglin, Crawford, Duarte, Haidt, Maoz, Stern, Stevens, Tetlock.

#### QIPs characterize claims about:

Power of expectancy and stereotype biases

Error and bias in social perception

Power of implicit and subtle prejudice

Psychology of politics and ideology

Environmental beliefs and attitudes

Power of the situation

# How can we test hypotheses about sources of QIPs?



# Blind spots

Study 1: Do people's personal beliefs influence their preferred research questions, research conclusions, and acceptable criteria?

Study 2: Are there negative impacts on research quality when adopting direction-oriented vs. non-direction-oriented research questions?

# Blind spots

Study 1: Do people's personal beliefs influence their preferred research questions, research conclusions, and acceptable criteria?

Study 2: Can adopting a unidirectional hypothesis bias information search, compared to adopting competing alternative hypotheses?

# Study 2

**General research question:** Can adopting a unidirectional hypothesis cause a biased information search, compared to adopting competing alternative hypotheses?

## Method

Advanced undergraduates (paid) under impression that study is for assessment of department's advanced method courses

## Basic Experimental Design

Participant given 2 hours to conduct Google Scholar literature search to answer one of two research questions:

**One-sided question:** Are conservatives more prejudiced than liberals?

**Two-sided question:** Are conservatives more prejudiced than liberals, or are liberals more prejudiced than conservatives?

# Study 2

## DVs I: Characteristics of the Articles Identified

Cited articles mentions (0) or does not mention (1) possibility that liberals can be prejudiced

Cited articles hypothesize that liberals can be prejudiced(0) or does not mention it (1)

## DVs II: Characteristics of the Participants

*Based on the literature you reviewed, which of the following is true?*

- Liberals are more prejudiced than conservatives
- Conservatives are more prejudiced than liberals
- Liberals and conservatives are about equally prejudiced

# Conclusions

- Directional vs. non-directional hypotheses?
  - More problematic when goals are more personal (moral, political) than scientific
  - Bring back Popperian falsification through the use of alternative competing hypotheses or opposing research questions?



Thank you!