



Preregistration and Replication: Good or Bad for Your Career?

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How I Got Involved

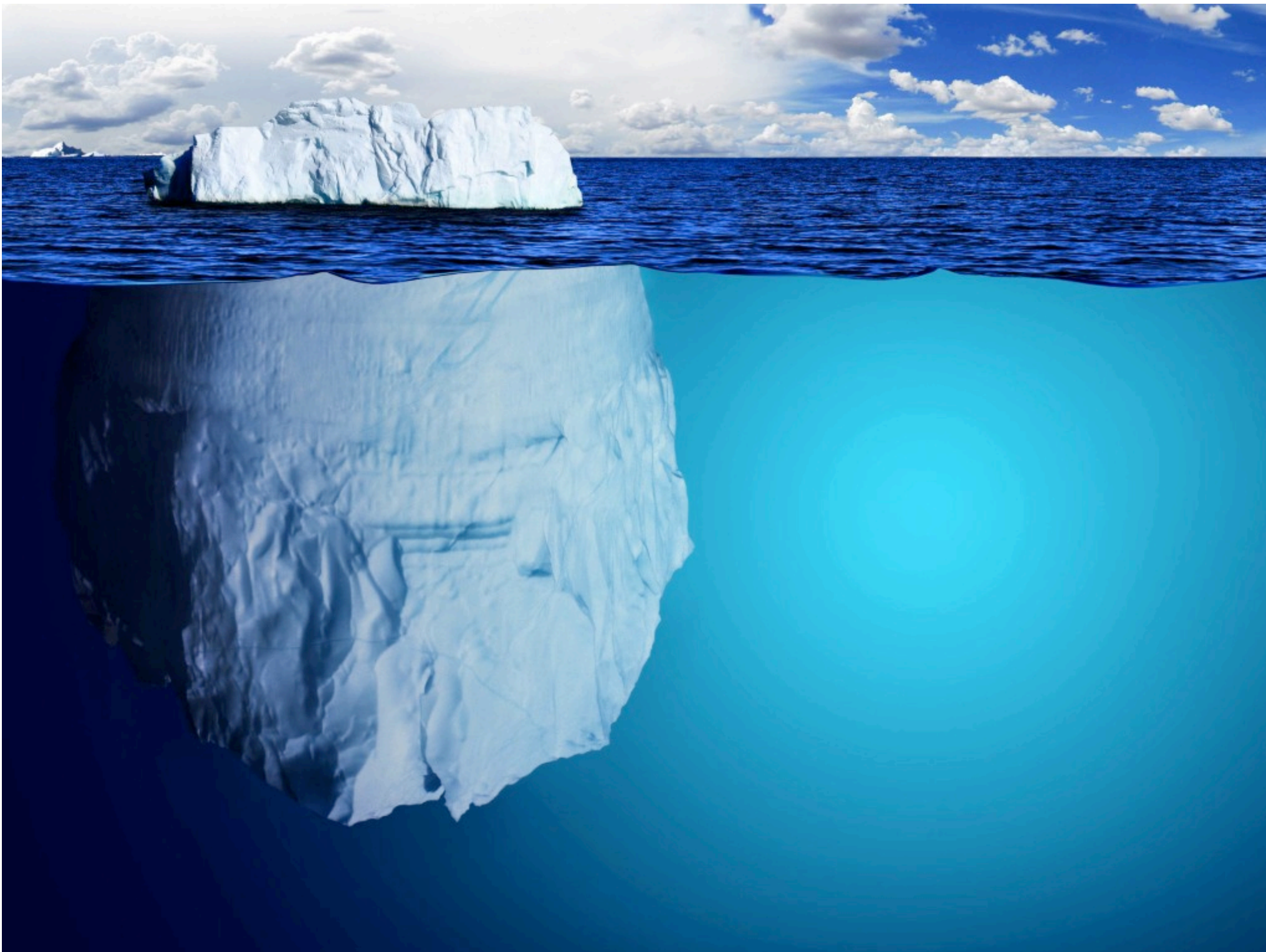
- Not a methodologist
- Not a social psychologist



“We have our own Stapel”



Dirk Smeesters



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ESSAY

Why Most Published Research Findings Are False

John P. A. Ioannidis

Published: August 30, 2005 • DOI: 10.1371/journal.pmed.0020124

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Ioannides

- A research finding is less true when
 - N is smaller;
 - effect sizes are smaller;
 - there is greater flexibility in design, analysis, and reporting;
 - when there are greater incentives.

Ioannides

- A research finding is less true when
 - N is smaller:
 - But this is biomedical research.
 - How about psychology?
 - there is greater flexibility,
 - when there are greater incentives.

Psychological Self-Reflection



Research Article

Measuring the Prevalence of Questionable Research Practices With Incentives for Truth Telling

Psychological Science
23(5) 524–532
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DOI: 10.1177/0956797611430953
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The SAGE logo consists of a stylized 'S' inside a circle, followed by the word 'SAGE' in a bold, uppercase, sans-serif font.

Leslie K. John¹, George Loewenstein², and Drazen Prelec³

¹Marketing Unit, Harvard Business School; ²Department of Social & Decision Sciences, Carnegie Mellon University; and ³Sloan School of Management and Departments of Economics and Brain & Cognitive Sciences, Massachusetts Institute of Technology

Psychological Self-Reflection

This finding suggests that some questionable practices may constitute the prevailing research norm.

Research

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Institute

Psychological Self-Reflection

Article

Questionable Research Practices Revisited

Klaus Fiedler¹ and Norbert Schwarz²

Social Psychological and
Personality Science

1-8

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DOI: 10.1177/1948550615612150

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Abstract

The current discussion of questionable research practices (QRPs) is meant to improve the quality of science. It is, however, important to conduct QRP studies with the same scrutiny as all research. We note problems with overestimates of QRP prevalence and the survey methods used in the frequently cited study by John, Loewenstein, and Prelec. In a survey of German psychologists, we decomposed QRP prevalence into its two multiplicative components, proportion of scientists who ever committed a behavior and, if so, how frequently they repeated this behavior across all their research. The resulting prevalence estimates are lower by order of magnitudes. We conclude that inflated prevalence estimates, due to problematic interpretation of survey data, can create a descriptive norm (QRP is normal) that can counteract the injunctive norm to minimize QRPs and unwantedly damage the image of behavioral sciences, which are essential to dealing with many societal problems.

Psychological Self-Reflection

Article

Questionable Research Practices Revisited

Klaus Fiedler¹ and Norbert Schwarz²

Social Psychological and
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1-8

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DOI: 10.1177/1948550615612150

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QRPs are not the norm.

however,
QRP pre-
valence and the survey methods used in the frequently cited study by John, Loewenstein, and Prelec. In a survey of German psychologists, we decomposed QRP prevalence into its two multiplicative components, proportion of scientists who ever committed a behavior and, if so, how frequently they repeated this behavior across all their research. The resulting prevalence estimates are lower by order of magnitudes. We conclude that inflated prevalence estimates, due to problematic interpretation of survey data, can create a descriptive norm (QRP is normal) that can counteract the injunctive norm to minimize QRPs and unwantedly damage the image of behavioral sciences, which are essential to dealing with many societal problems.

Psychological Self-Reflection

General Article



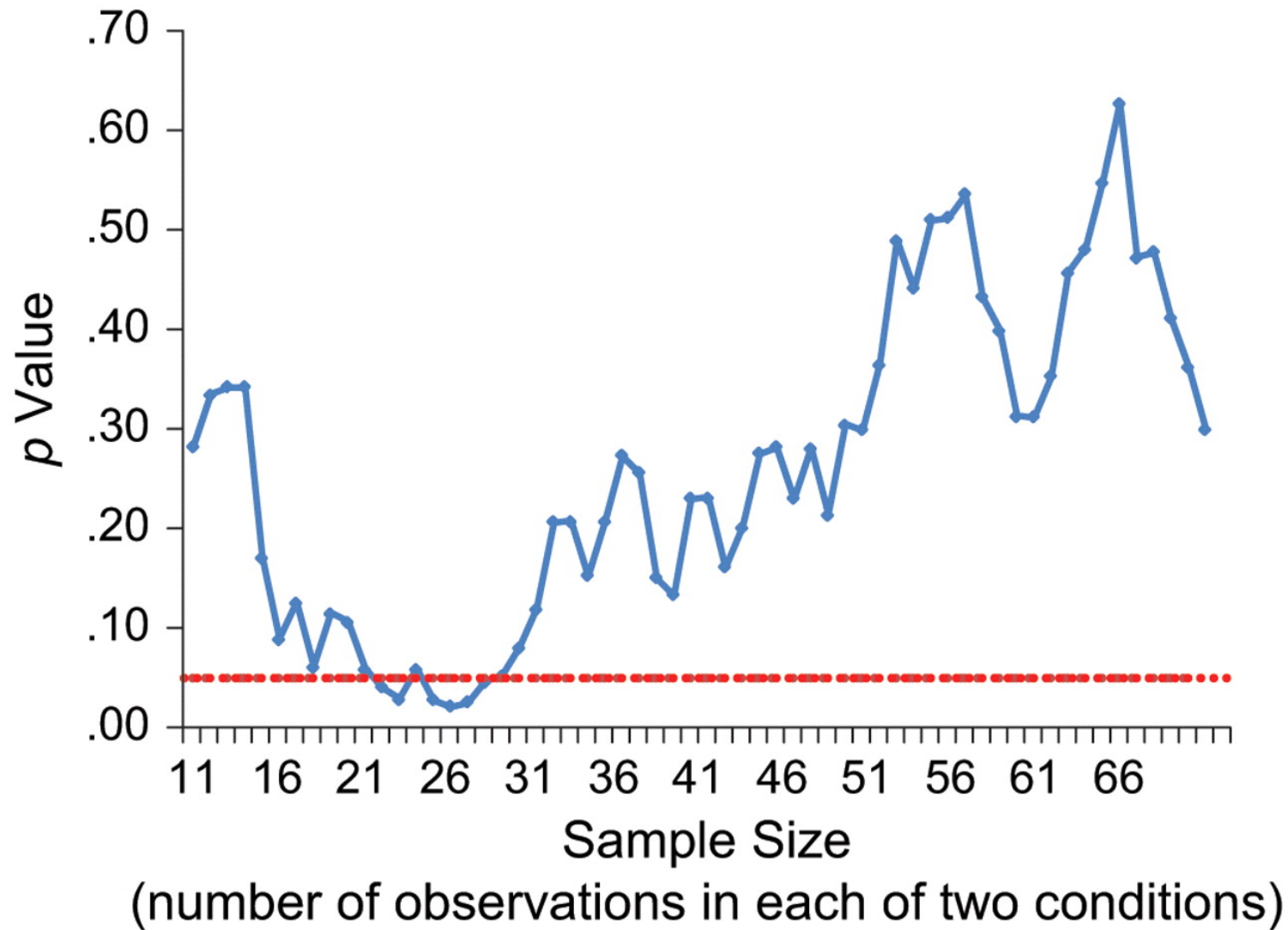
False-Positive Psychology: Undisclosed Flexibility in Data Collection and Analysis Allows Presenting Anything as Significant

Psychological Science
XX(X) 1–8
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DOI: 10.1177/0956797611417632
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Joseph P. Simmons¹, Leif D. Nelson², and Uri Simonsohn¹

¹The Wharton School, University of Pennsylvania, and ²Haas School of Business, University of California, Berkeley

Fig. 2. Illustrative simulation of p values obtained by a researcher who continuously adds an observation to each of two conditions, conducting a t test after each addition.



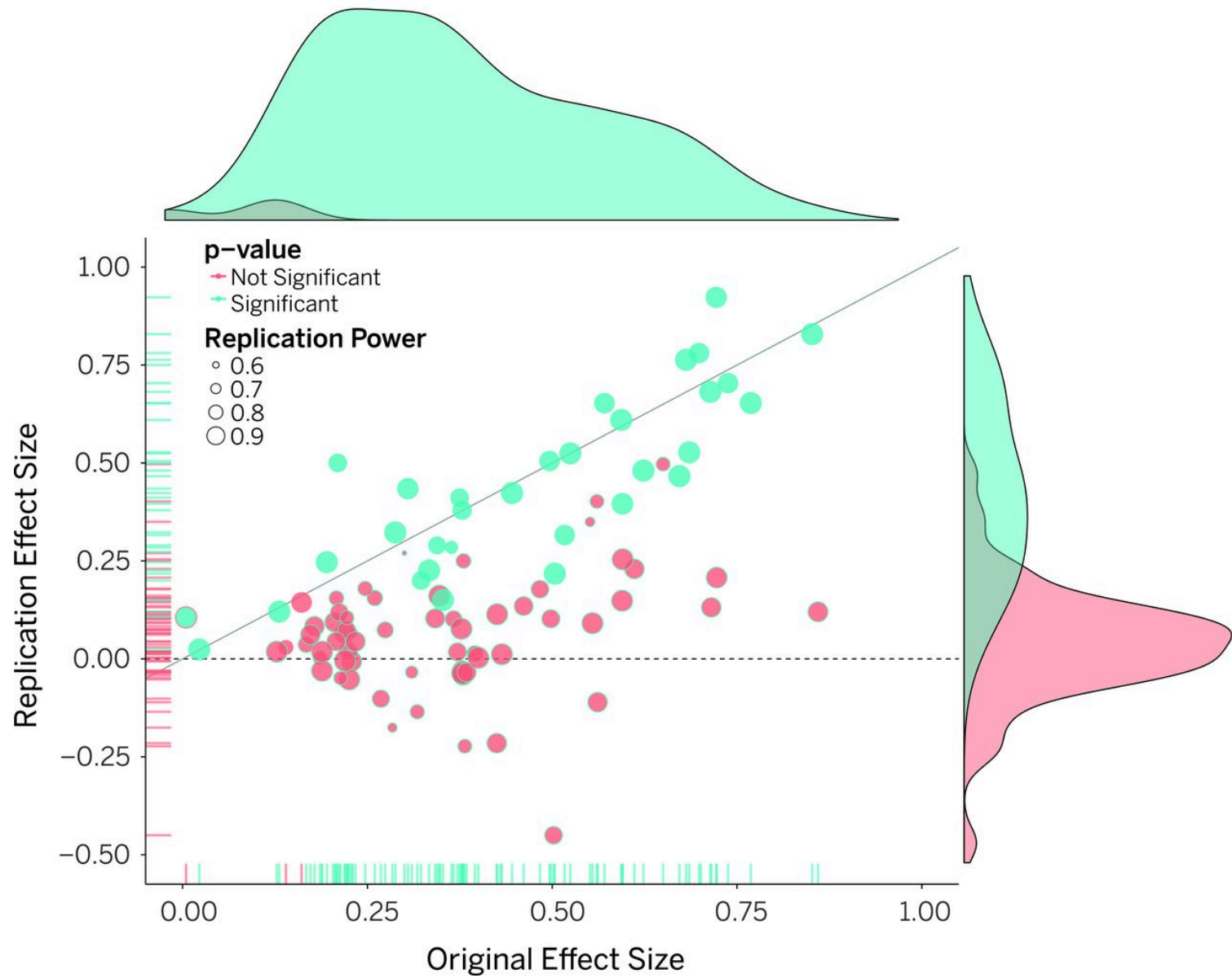
Joseph P. Simmons et al. *Psychological Science*
2011;22:1359-1366



Psychological Self-Reflection

We ... demonstrate how unacceptably easy it is to accumulate (and report) statistically significant evidence for a false hypothesis.

Original study effect size versus replication effect size (correlation coefficients).



Salient

- 36% replication rate overall
- Social psychology
 - *Psychological Science* social: 29%
 - *JPSP*: 23%
- Cognitive Psychology
 - *Psychological Science* cognitive: 53%
 - *JEP:LMC*: 48%

Crisis, What Crisis?



Responses to the Crisis

- Ostriches
- Small Dogs
- Squid
- Tasmanian Devils
- Ant colonies
- Owls



An ostrich is the central focus of the image, shown from the side and slightly from behind. It has dark brown, shaggy feathers on its head and neck. The ostrich is standing on a dry, rocky, and sparsely vegetated field. In the background, there are rolling hills under a clear blue sky with some light, wispy clouds. The overall scene is bright and sunny.

The Opinion Pages | OP-ED CONTRIBUTOR

Psychology Is Not in Crisis

By LISA FELDMAN BARRETT SEPT. 1, 2015

But the failure to replicate is not a cause for alarm; in fact, it is a normal part of how science works.

But t
part

mal







Shameless little bullies, replication mafia, replication police,
McCarthyite nightmare, Hostile replicators,
mindless replicators, god's chosen soldiers in a great jihad,
Witch hunt, A bunch of self-righteous, self-appointed sherifs,
replication hysteria, ...



Source: Felix Schönbrodt
<https://osf.io/4bzrv/>







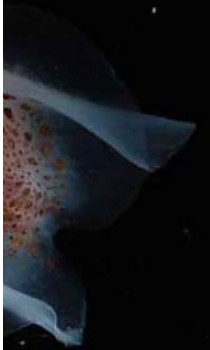
Fritz Strack

16 november om 18:43

The terrorist attack in France is a challenge for social psychology. I think social psychologists should actively participate in the public discourse and harness their knowledge to explain crucial aspects of the current events.

our science. I think it's about time that the insights from social psychology become visible again in the public debate after this tedious discussion about methodological issues.









Proc Natl Acad Sci U S A. 2015 Mar 3; 112(9): 2688–2692.

PMCID: PMC4352797

Published online 2015 Feb 17. doi: [10.1073/pnas.1417712112](https://doi.org/10.1073/pnas.1417712112)

Psychological and Cognitive Sciences

Hunger promotes acquisition of nonfood objects

[Alison Jing Xu](#),^{a,1} [Norbert Schwarz](#),^{b,c} and [Robert S. Wyer, Jr.](#)^d





Uli Schimmack Examples like this explain why the replicability in 2015 is no different than replicability in 2010 (before Bem, 2011 = ground zero): old-school p-hacking is still publishable, especially in journals that have no expertise in psychology like PNAS.



Greg Francis It reads like a parody. The reported statistics scream of p-hacking.









Many Labs

**Registered
Replication
Reports**



A close-up photograph of an owl's face, showing its large, bright yellow eyes and detailed brown and grey feathers. The owl is looking directly at the camera with a steady gaze. The background is a soft, out-of-focus brown.

What Can I Learn From This?



A painting depicting a woman in a vibrant red dress lying face down on a rocky, forest floor. Her body is the central focus, with her arms tucked under her head. The background shows a dense forest with trees and a stream. The overall mood is somber and contemplative. Overlaid on the center of the image is the text "Self-reflection should not become self-obsession" in a white, bold, sans-serif font with a blue outline.

**Self-reflection should not
become self-obsession**



**A meta-perspective is essential
for methodologists
but what can the rest of us do?**

Some Practical Tips

Open Up Your Science

- Data
- Methods
- Stimuli
- Reviews

Preregister

- Separate *a priori* from *a posteriori* analyses.
 - Intellectual hygiene.
 - Stops you from fooling yourself and others.
 - Takes up more time at the front end.
 - Can be frustrating.
 - Saves time in the end.
 - Better data, better research.

Increase Your Power

- Power analyses
- Sequential analyses

—

Article

Behavior Research Methods, Instruments, & Computers
December 1998, Volume 30, Issue 4, pp 690-697

First online:

A better stopping rule for conventional statistical tests

Robert W. Frick 

- <http://onlinelibrary.wiley.com/doi/10.1002/ejsp.2023/abstract>
- Bayesian analysis
<http://journal.frontiersin.org/article/10.3389/fpsyg.2015.00494/abstract>

Increase Your Power

- Use within-subjects designs

Increase Your Power

- Online resources like Mechanical Turk
 - Good for cognitive experiments
 - Careful with well-known experiments

The screenshot shows the Amazon Mechanical Turk Requester interface. At the top, the logo for 'amazonmechanical turk' is displayed with 'beta' underneath, followed by the word 'REQUESTER'. Below this is a navigation bar with tabs for 'Home', 'Create', 'Manage', 'Developer', and 'Help'. Underneath the navigation bar, there are links for 'Overview', 'Tour', 'Case Studies', 'Pricing', 'Partners', and 'Business Solutions', along with a link for 'We're Hiring! Learn More'. The main content area features a large heading 'Work Distribution Made Easy' in orange. Below this heading, a paragraph states: 'Mechanical Turk gives businesses and developers access to an on-demand, scalable workforce'. To the right of this text is an icon of three stylized human figures in blue and orange. Below the paragraph are three bullet points, each with a green checkmark: 'Flexibility: Scale your workforce up and down quickly', 'Accuracy: Get high-quality, cost-effective results', and 'Speed: Start receiving results in minutes'. Below these bullet points is a large orange button labeled 'Get Started'. At the bottom of the page, there are three smaller promotional cards. The first card is titled 'Work Distribution Made Easy' and repeats the text from the main heading. The second card is titled 'Categorization on Mechanical Turk' and describes the 'Categorization App'. The third card is titled 'Sentiment Rating Simplified' and describes the 'Sentiment App'. Each card includes a small icon related to its topic.

amazonmechanical turk beta REQUESTER

Home Create Manage Developer Help

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Work Distribution Made Easy

Mechanical Turk gives businesses and developers access to an on-demand, scalable workforce

- ✓ **Flexibility:** Scale your workforce up and down quickly
- ✓ **Accuracy:** Get high-quality, cost-effective results
- ✓ **Speed:** Start receiving results in minutes

[Get Started](#)

Work Distribution Made Easy
Mechanical Turk gives businesses and developers access to an on-demand, scalable workforce

Categorization on Mechanical Turk
The Mechanical Turk **Categorization App** makes it simple to get fast, accurate results on your Categorization Project!

Sentiment Rating Simplified
The Mechanical Turk **Sentiment App** makes it simple to collect and understand sentiment on your data!

Replicate, but with Moderation

- Only if it's relevant to your own research or teaching.
 - If you want to build on someone else's research.
 - If you want to know about the reliability of the findings you're teaching.

Research Article



Learning About What Others Were Doing: Verb Aspect and Attributions of Mundane and Criminal Intent for Past Actions

William Hart¹ and Dolores Albarracín²

¹University of Alabama and ²University of Illinois at Urbana-Champaign

Psychological Science

22(2) 261–266

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DOI: 10.1177/0956797610395393

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After an argument broke out between James Westmoreland and Darryl McElroy in a 2009 dice game in East Cleveland, Westmoreland *was pulling/pulled* out his gun and *was pointing/pointed* it at Darryl McElroy. As the other players, including Darryl McElroy, attempted to run away, Westmoreland *was firing/fired* gun shots, one of which struck McElroy in the back, paralyzing him. McElroy and others identified Westmoreland as the shooter, and Westmoreland was later arrested and confessed to the crime.

 OPEN ACCESS  PEER-REVIEWED

RESEARCH ARTICLE

Understanding How Grammatical Aspect Influences Legal Judgment

Andrew M. Sherrill , Anita Eerland, Rolf A. Zwaan, Joseph P. Magliano

Published: October 23, 2015 • DOI: 10.1371/journal.pone.0141181

Article

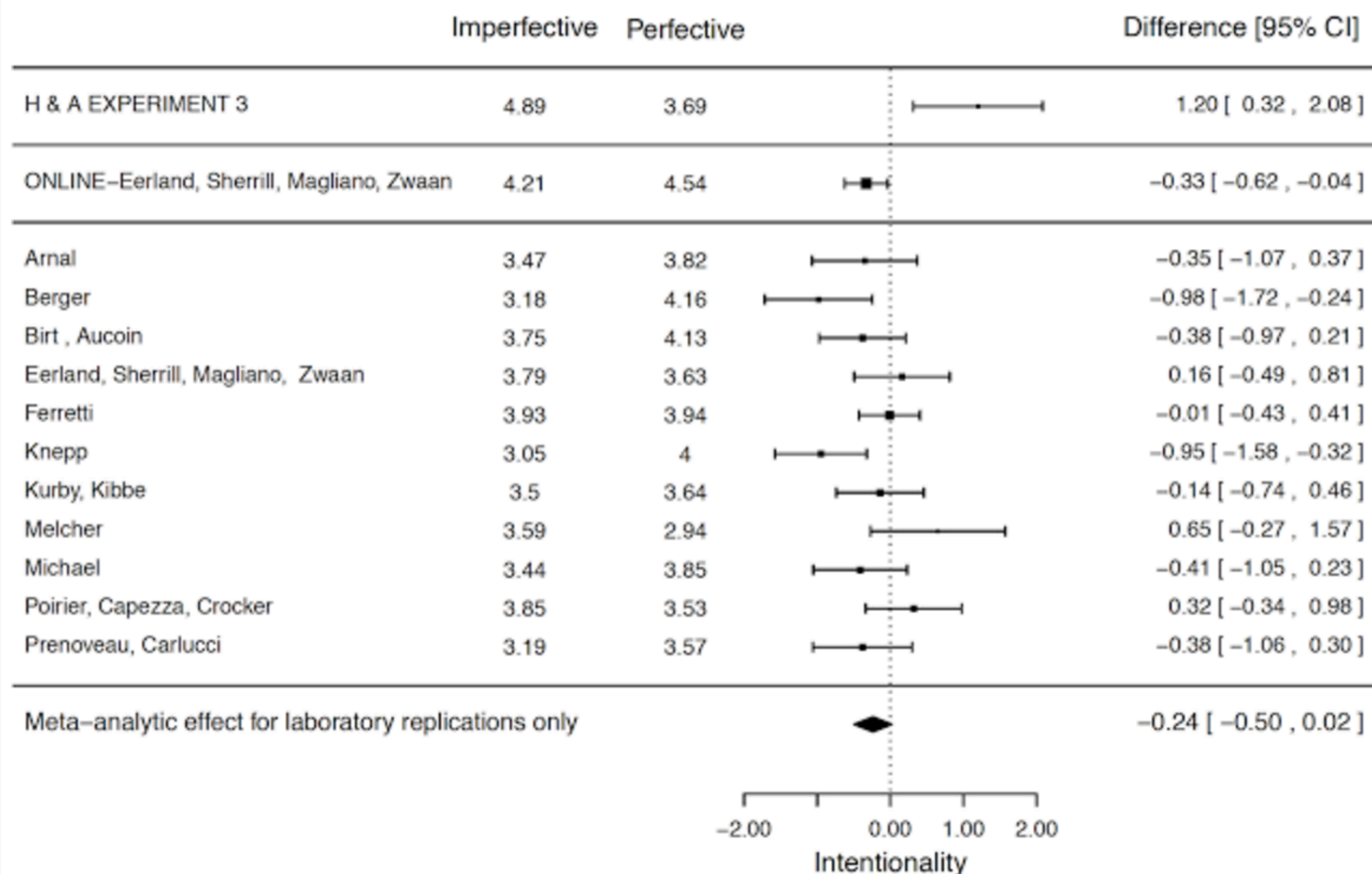
About the Authors

Metrics

Comments

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For a similar view...



A Short (Personal) Future History of Revolution 2.0

Barbara A. Spellman
University of Virginia

Perspectives on Psychological Science
2015, Vol. 10(6) 886–899
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DOI: 10.1177/1745691615609918
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*We have not yet made
the needed advances in
the way we accumulate,
connect, and draw
conclusions from our
aggregated research.*

A S
Re

Bar
Unive

*However, we are now
ready to move forward
adopting incremental
changes.*

A
Re

Bar
Unive

**With small, incremental steps,
we'll be getting there,
slowly but surely.**



Thank You!

