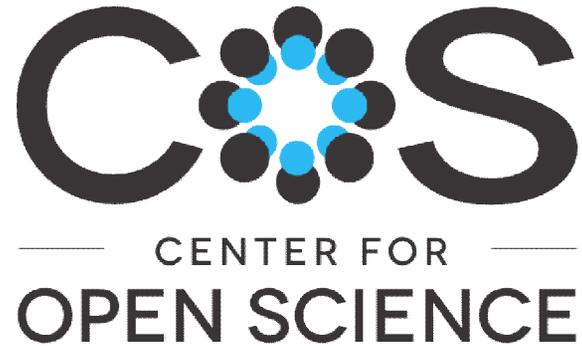


These slides:

<https://osf.io/gfetw/>



# Crowdsourcing Science

Brian Nosek

University of Virginia -- Center for Open Science

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# The dysfunctional trio

Researchers are rewarded for...

“ *The* findings

“ *Many* findings

“ *My* findings

# The dysfunctional trio and the consequences are...

*" The findings*

*" Unreliable findings*

*" Many findings*

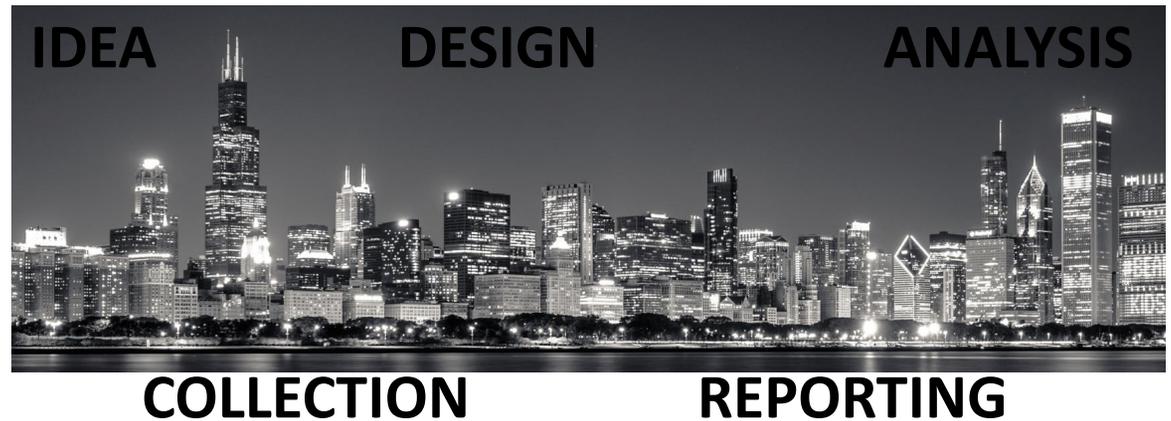
*" "Small", uninformative findings*

*" My findings*

*" Non-cumulative findings*

**Weak return on investments**  
**Slow, inefficient progress**

# Crowdsourcing Science



# Standard Model

Vertical Integration

Resource Intensive

Exclusive

Produces lots of small science

Singular contribution model

Values “just enough” knowledge

# Crowdsourcing Model

Horizontal Distribution

Resource Light

Inclusive

Enables big science

Diversifies contribution model

Leverages core expertise

# Reducing Implicit Racial Preferences: I. A Comparative Investigation of 17 Interventions

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University of Virginia

Maddalena Marini  
University of Modena and Reggio Emilia

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London Business School

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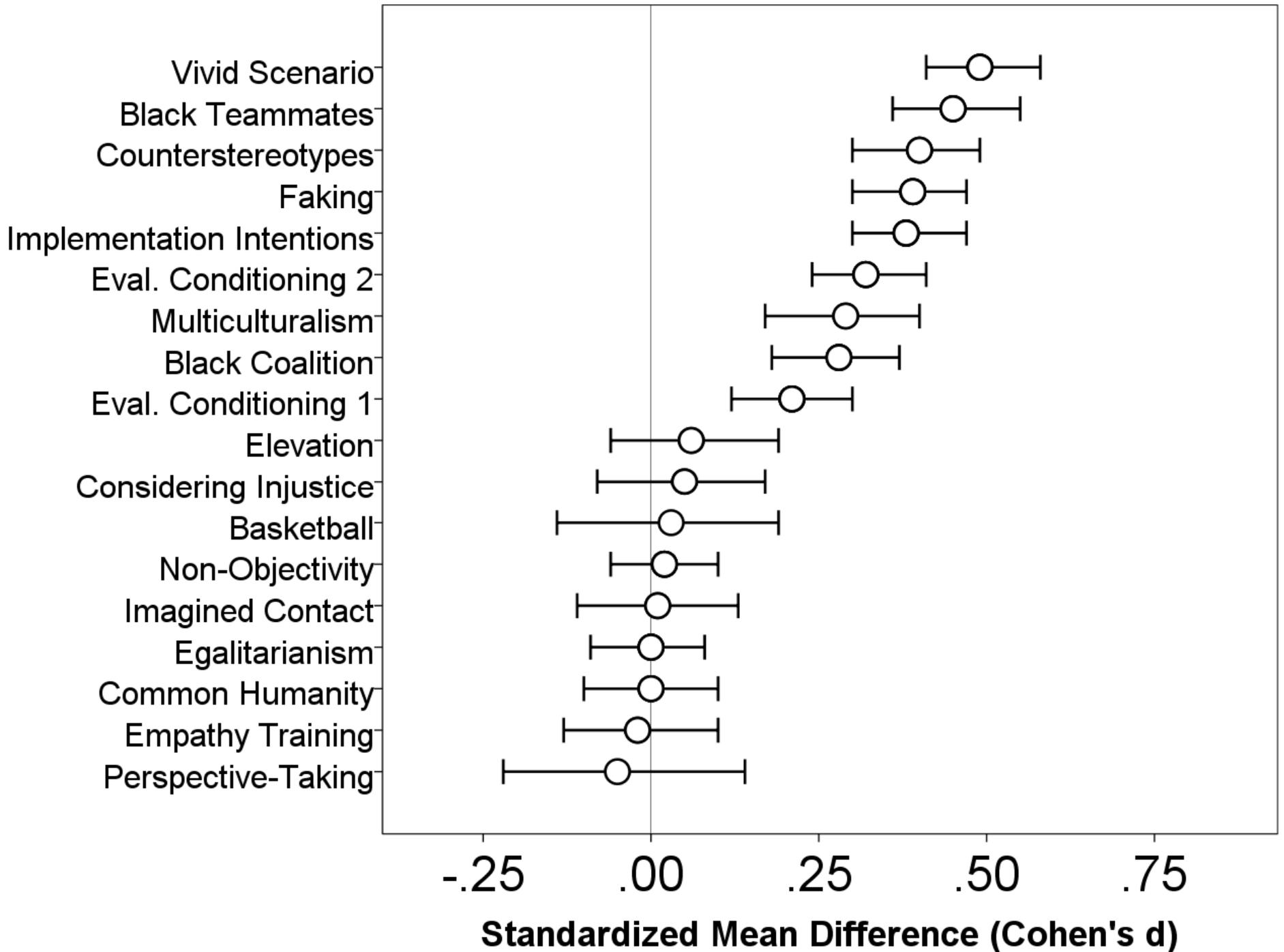
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N. Sriram  
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Mahzarin R. Banaji  
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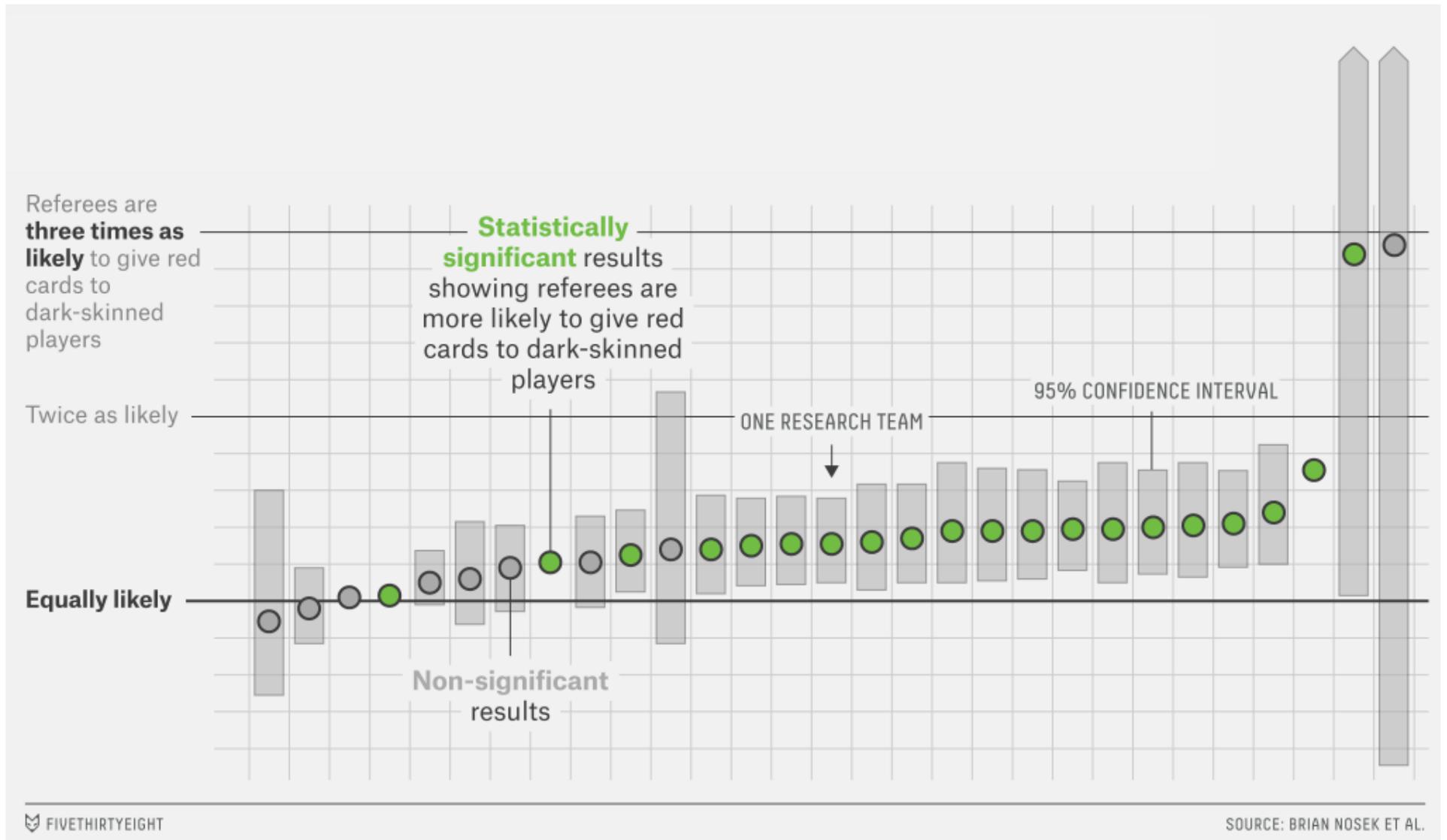
# Many Analysts, One Data Set: Making Transparent How Variations in Analytic Choices Affect Results



Advances in Methods and  
Practices in Psychological Science  
1–20  
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and B. A. Nosek<sup>3,47</sup>

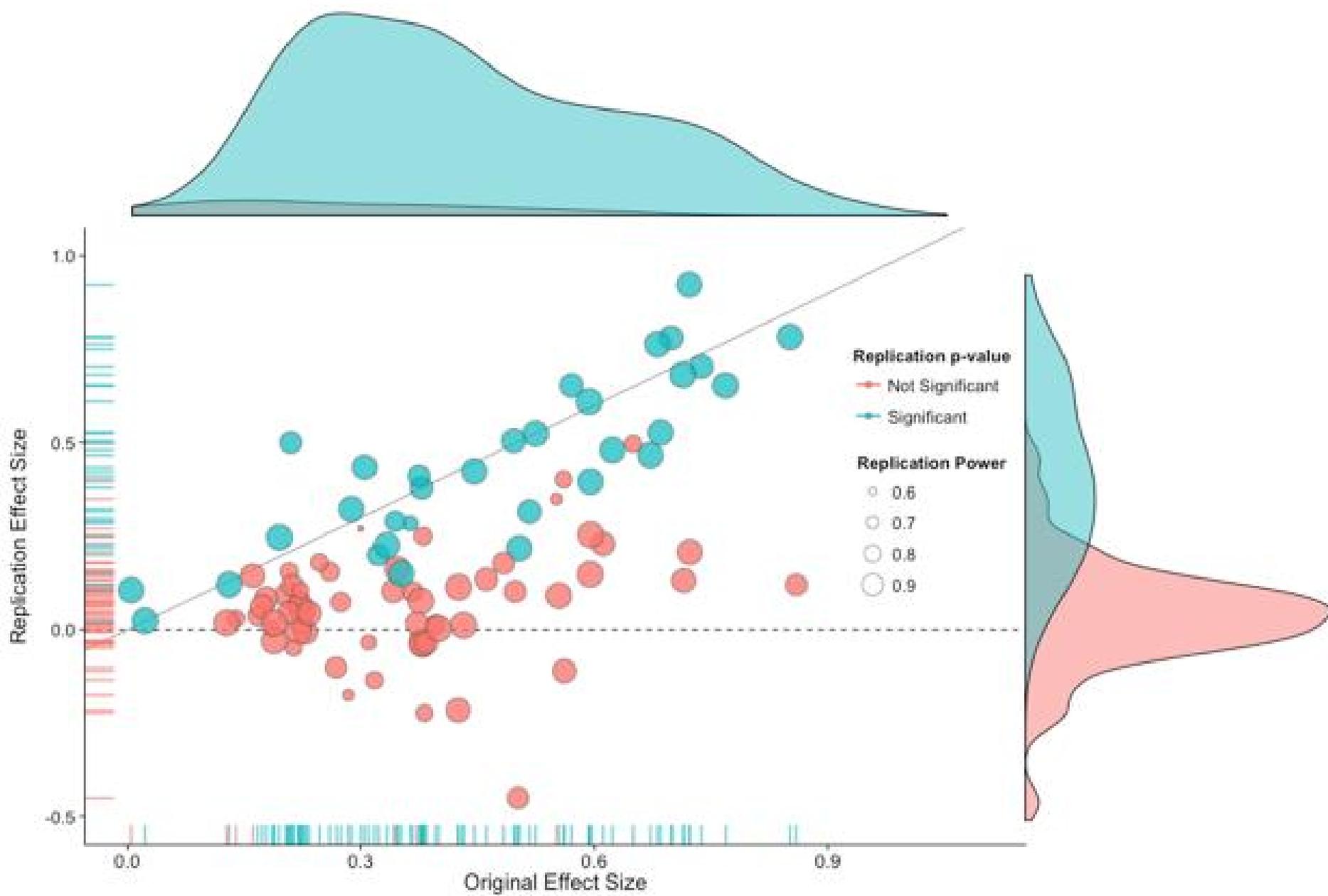


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# Many Labs 5

Lead: Charlie Ebersole

171 co-authors

10 “not endorsed” papers from RP:P

Revise protocols w/expert review

Run RP:P and Revised protocols

Labs = 3 to 9 per study

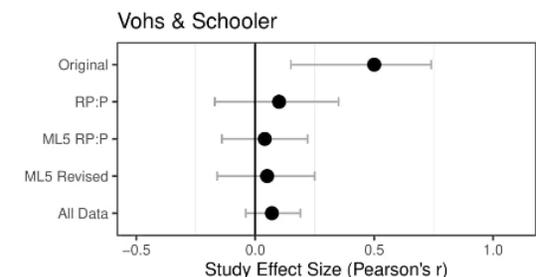
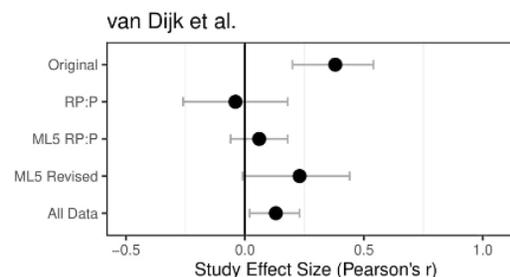
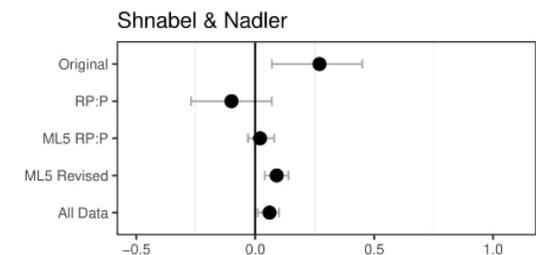
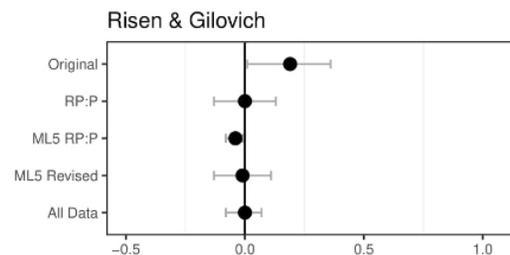
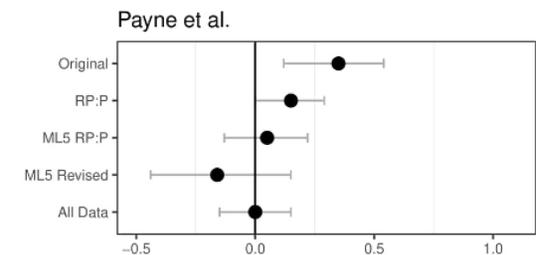
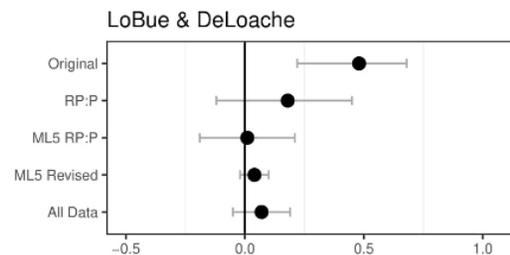
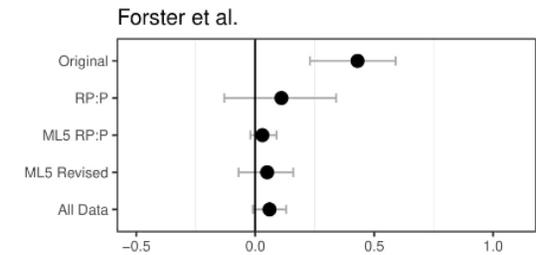
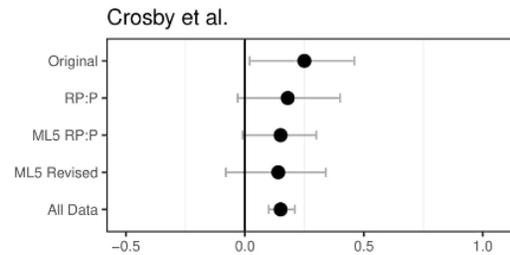
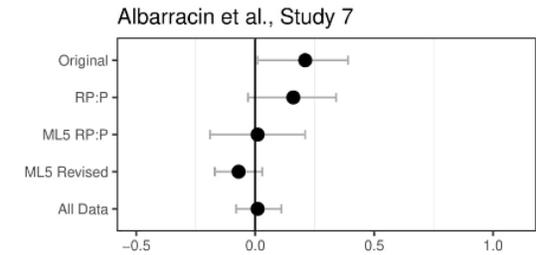
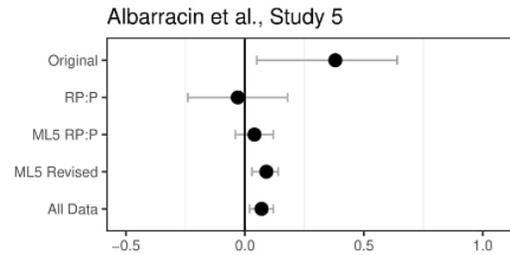
N = 276 to 3512 per study

Original papers  $r = .37$

RP:P  $r = .11$

ML5 RP:P  $r = .04$

ML5 Revised  $r = .05$

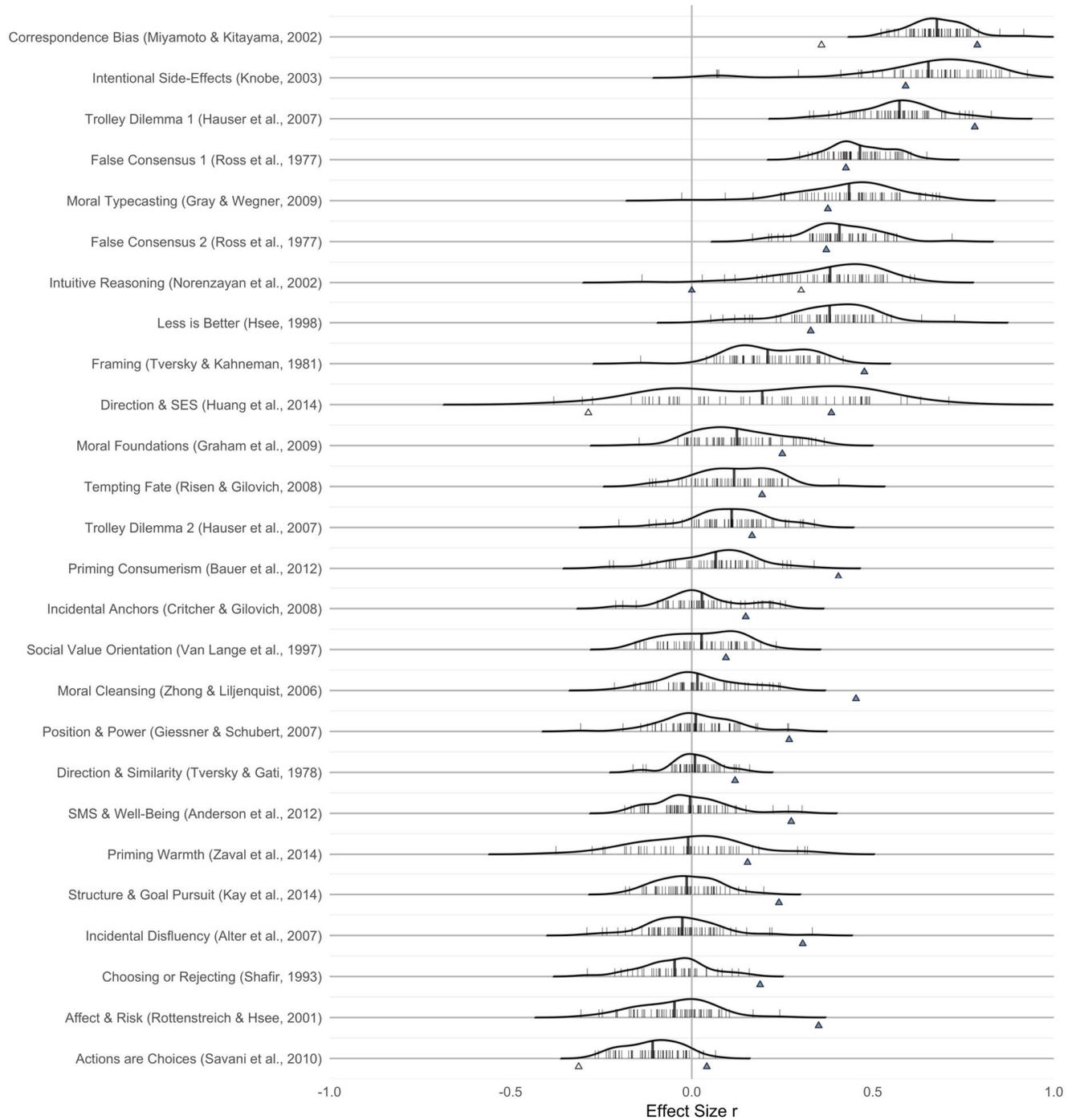


# Many Labs 2: Investigating Variation in Replicability Across Samples and Settings

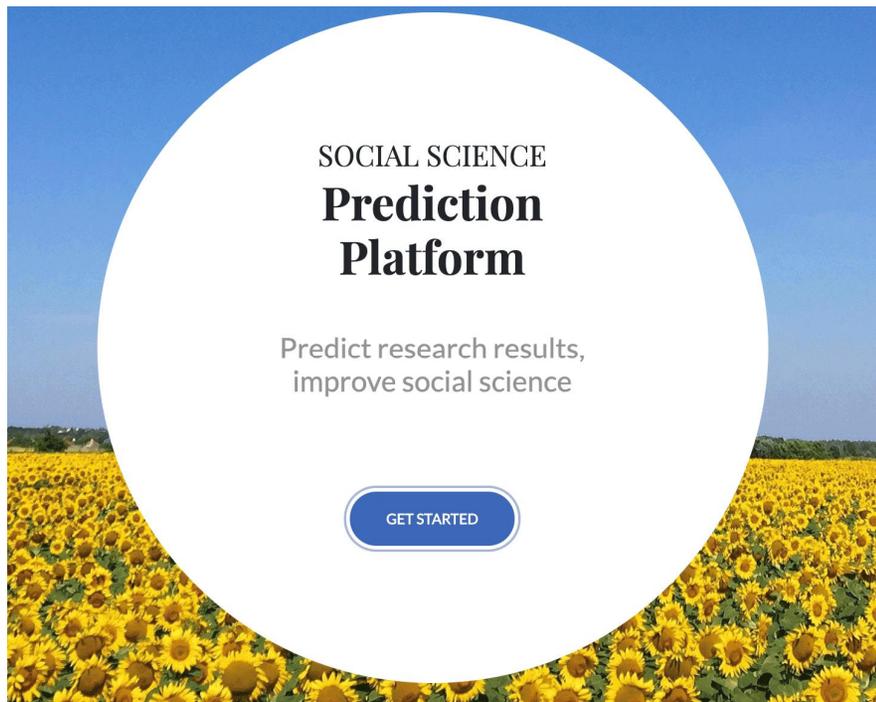


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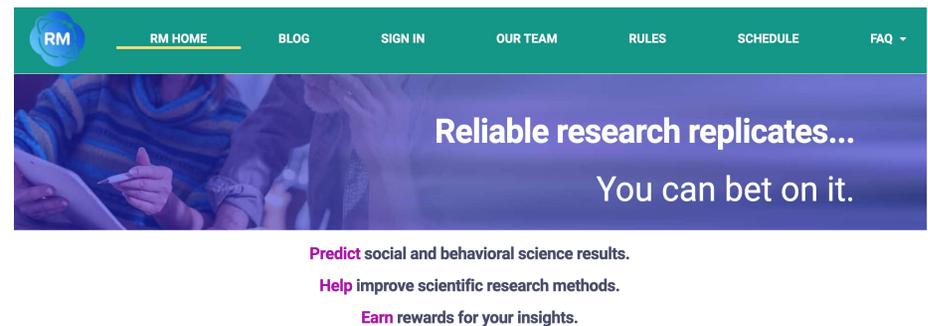
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Susan L. O'Donnell<sup>111</sup>, Haruka Oikawa<sup>112</sup>, Masanori Oikawa<sup>112</sup>,  
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Felix D. Schönbrodt<sup>122</sup>, Maciej B. Sekerdej<sup>123</sup>, David Sirlópu<sup>27</sup>,  
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Karin C. H. J. Smolders<sup>94</sup>, Agata Sobkow<sup>124</sup>, Walter Sowden<sup>125</sup>,  
Philipp Spachtholz<sup>122</sup>, Manini Srivastava<sup>126</sup>, Troy G. Steiner<sup>7</sup>,  
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Stephanie Szeto<sup>38</sup>, Ewa Szumowska<sup>123</sup>, Andrew C. W. Tang<sup>113</sup>,  
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Michael Wood<sup>131</sup>, Julie A. Woodzicka<sup>143</sup>, Marta K. Wronska<sup>19</sup>,  
Liane Young<sup>144</sup>, John M. Zelenski<sup>145</sup>, Zeng Zhijia<sup>146</sup>, and  
Brian A. Nosek<sup>55,147</sup>



# Prediction Markets

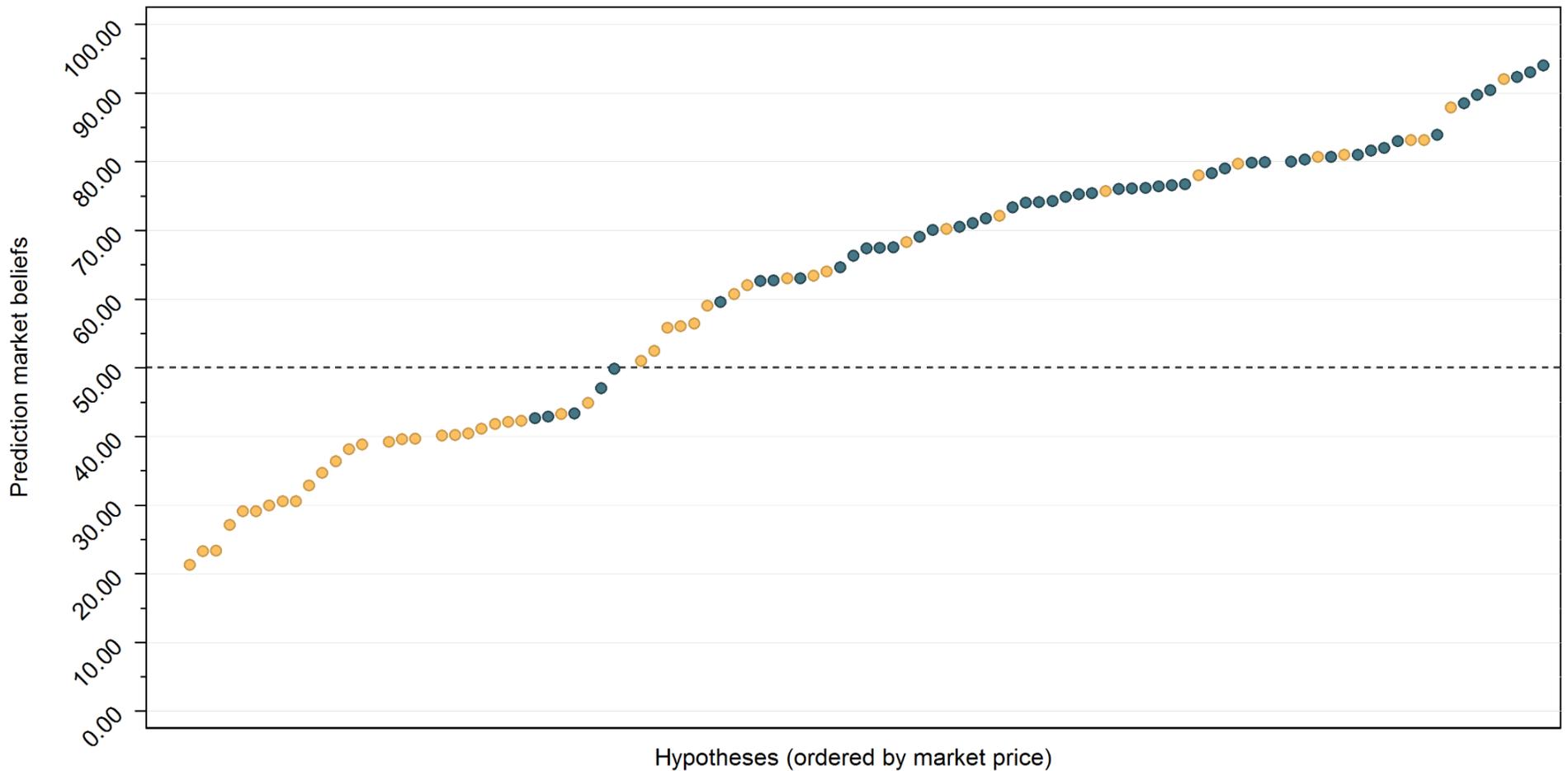


<https://socialscienceprediction.org/>



<https://www.replicationmarkets.com/>

# Prediction Markets



Camerer et al., 2016, 2018; Dreber et al., 2016;  
Forsell et al., 2018

Courtesy of Felix Holzmeister

# How to make it work

## Process

- “ Modularity
- “ Low barrier to entry
- “ Bite-sized contributions
- “ Light, persistent leadership
- “ Strong communication and documentation
- “ Information commons
- “ Clear milestones and timeline
- “ Incentives and credit

# How to make it work

## Infrastructure



Psychological Science Accelerator

A Distributed Laboratory Network

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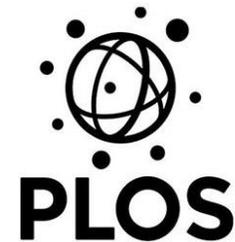
# How to make it work

## Funding

Registered Reports, <http://cos.io/rr/>



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# How to make it work

## Credit

### **CRedit – Contributor Roles Taxonomy**



CRedit (Contributor Roles Taxonomy) is high-level taxonomy, including 14 roles, that can be used to represent the roles typically played by contributors to scientific scholarly output. The roles describe each contributor's specific contribution to the scholarly output.

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Formal Analysis  
Funding acquisition  
Investigation  
Methodology  
Project administration

Resources  
Software  
Supervision  
Validation  
Visualization  
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