The SCORE Project
Assessing and Predicting Replicability of Social-Behavioral Science Findings
Call for Collaborators
Center for Open Science
February 2019

OVERVIEW

There is substantial interest in the extent to which published findings in social-behavioral sciences are reproducible and whether it is possible to predict the likelihood of reproducing. Large-scale replication and prediction market projects in some subfields, particularly parts of psychology and economics, have provided initial evidence that reproducibility may be lower than expected or desired, and that surveys of experts and prediction markets may be effective at predicting reproducible findings. There is still much to learn about reproducibility across business, economics, education, political science, psychology, sociology, and other areas of social-behavioral sciences. To advance understanding, we will:

- Create a database of about 30,000 papers published between 2009 and 2018 from 60+ journals in the social-behavioral sciences that publish primarily empirical, non-simulated research with human participants.
- Sample about 3,000 papers from this population and code them using human and automated methods for primary claim, key design features, and key statistics, and merge data from other sources (e.g., altmetrics, citations, open data) to help assess the credibility of the original claims.
- Conduct replications (new data) or reproductions (reanalysis of original data) of up to 300 of these papers

Other teams will be assessing the 3,000 papers using humans or machines to generate predictions (scores) of the reproducibility of the primary findings. If successful, the project will introduce evidence for methods to rapidly assess the credibility of findings, and identify features that can improve credibility and reproducibility. Completing this project will require large-scale collaboration of experts across social-behavioral research communities.

PROJECT ORGANIZATION AND FUNDING

The coordinating team will create and enhance the initial dataset, and then will code and prepare papers for possible replication or reproduction. Those papers selected for replication will be sourced with appropriate individuals or labs to conduct the research. DARPA has provided funding for the organizers and to provide grants to replication and reproduction (RR) individuals or teams. There may be more ways to contribute to the project besides conducting one or more replication or reproduction studies, but we emphasize this for now.

WHAT RR TEAMS WILL DO

Individuals or teams that are matched to a paper will either conduct a high-powered replication or reanalyze the original data to reproduce and evaluate the robustness of the original finding. Selection between these will depend on the nature of the data and original project. Teams will follow open science best practice by preregistering the project design and analysis plan, preparing and sharing research materials and code, and--to the extent ethically possible--making data openly available. Teams will provide a brief final report on the outcome of the replication attempt for integration into the full dataset. The coordinating team will provide support and active management throughout the project.

WHAT RR TEAMS WILL GET OUT OF IT

Beyond participation in perhaps the largest collaborative social-behavioral research project ever conducted, participating individuals and teams will:

- Receive a funding award to conduct the research
- Receive training and support for conducting open science best practice on conducting a replication or reproduction of published research
- Be free to publish the results of their replication or reproduction study
- Be co-authors on aggregate reports and publications of the overall findings across all replication and reproduction studies

HOW TO JOIN THE PROJECT

We are presently gathering expressions of interest to assess the size and areas of expertise of potential contributors. Signing up now does not commit you to participate. If you are interested to get more information, please complete this short form. We will gather interest and then follow-up with more details so you can decide whether to participate.

If you have questions, contact Chris Chartier (cchartie@ashland.edu), the collaborative sourcing coordinator for the project, or leads from any of the partner organizations for sourcing:

- Replication Network in Economics (Bob Reed, bob.reed@canterbury.ac.nz; Maren Duvendack, m.duvendack@uea.ac.uk)
- CASPER in Education (Bryan Cook, bc3qu@virginia.edu; Bill Therrien, wjt2c@virginia.edu).
- Berkeley Initiative for Transparency in the Social Sciences (Ted Miguel, emiguel@berkeley.edu; Katie Hoeberling, khoeberling@berkeley.edu)

WHAT HAPPENS NEXT

The core team is meeting in February to confirm the study design, process of sample selection, and approach to sourcing individuals and labs to conduct the replications and reproductions. If you complete the short form, we will follow-up soon after that with details about the project and timeline so you can decide whether to collaborate.

ANTICIPATED TIMELINE

Project Funded	January 2019

Project Launched	February 2019
Initial Organizing	March-April 2019
Preparing, sourcing, and conducting replications and reproductions	April 2019-April 2020
Completion of Phase 1	June 2020

Following Phase 1, we expect to repeat the project with some improvement in efficiency with advancing automated tools and a maturing process.

THE INCLUDED JOURNALS

The following journals are likely to define the population of possible papers and findings eligible for inclusion in this project. Selection followed a prioritization process that is spelled out more fully elsewhere. The selection principles were to obtain good representation of journals from a defined set of social-behavioral science domains, achieve diversity for inclusion of subdisciplines within those domains, prioritize higher impact journals (citations/article) as defined by the Scimago database, prioritize larger journals that are likely to have at least 50 eligible papers/year, and prioritize journals that are likely to have papers eligible for inclusion in this project -- reporting empirical research with a statistical inference test corresponding to a research claim.

Economics	**Political Science**	**Psychology**
American Economic Review	American Journal of Political Science	Journal of Personality and Social Psychology
Journal of Finance	American Political Science Review	Journal of Applied Psychology
Quarterly Journal of Economics	Journal of Political Economy	Journal of Consulting and Clinical Psychology
Journal of Labor Economics	Comparative Political Studies	Journal of Experimental Psychology: General
Journal of Financial Economics	World Development	Psychological Science
Review of Financial Studies	Journal of Conflict Resolution	Child Development
Econometrica	British Journal of Political Science	Clinical Psychological Science
American Economic Journal: Applied Economics	World Politics	European Journal of Personality
Experimental Economics	Journal of Experimental Political Science	Cognition
Sociology	**Management**	Journal of Experimental Social Psychology
American Sociological Review	Journal of Management	Journal of Environmental Psychology

Journal of Marriage and Family	Journal of Business Research	Evolution and Human Behavior
Demography	Academy of Management Journal	
American Journal of Sociology	Leadership Quarterly	**Health related**
European Sociological Review	Organization Science	Psychological Medicine
Social Forces	Management Science	Health Psychology
		Social Science and Medicine
Education	**Marketing/Org Behavior**	
Educational Researcher	Journal of Marketing	**Criminology**
American Educational Research Journal	Journal of Consumer Research	Law and Human Behavior
Journal of Educational Psychology	Journal of the Academy of Marketing Science	Criminology
Computers and Education	Journal of Marketing Research	
Learning and Instruction	Journal of Organizational Behavior	**Public Administration**
Contemporary Educational Psychology	Organizational Behavior and Human Decision Processes	Journal of Public Administration Research and Theory
Exceptional Children		Public Administration Review

THE COORDINATING TEAMS

Replication and Reproduction Preparation and Management

Melissa Kline — Research Scientist, Center for Open Science
melissa@cos.io

Nick Fox — Research Scientist, Center for Open Science
nick@cos.io

Andrew Tyner — Research Scientist, Center for Open Science
andrewtyner@cos.io

Zach Loomas — Project Coordinator, Center for Open Science
zach@cos.io

Olivia Miske — Project Coordinator, Center for Open Science
olivia@cos.io

Brianna Luis
brianna@cos.io
Project Coordinator, Center for Open Science

Bob Reed
bob.reed@canterbury.ac.nz
Professor, Economics and Finance
University of Canterbury

Data Enhancement

Simon Parsons
simon@cos.io
Data Manager, Center for Open Science

Titipat Achakulwisut
my.titipat@gmail.com
Graduate Student, University of Pennsylvania

Konrad Kording
kording@upenn.edu
Professor, Neuroscience & Bioengineering,
University of Pennsylvania

Daniel Acuna
deacuna@syr.edu
Assistant Professor, Information Studies, Syracuse University

Project Leadership

Beatrix Arendt
beatrix@cos.io
Program Manager, Center for Open Science

Tim Errington
tim@cos.io
Director of Research, Center for Open Science

Brian Nosek
nosek@cos.io
Executive Director, Center for Open Science
Professor, Psychology, University of Virginia