



BERKELEY INITIATIVE FOR TRANSPARENCY  
IN THE SOCIAL SCIENCES

# Social Science Meta-Analysis and Research Transparency (SSMART) Grant Program

SSMART aims to improve the quality of research in economics, political science, psychology, and related disciplines by funding research related to transparency and reproducibility issues.

Empirical SSMART projects are pre-registered on the Open Science Framework.

Find SSMART working papers on the BITSS Preprints Service at <https://osf.io/preprints/bitss>.

## ASSESSING BIAS FROM THE (MIS)USE OF COVARIATES: A META-ANALYSIS

**Gabriel Lenz and Alexander Sahn** conduct a meta-analysis of p-values in articles published in the *American Journal of Political Science* (AJPS) in 2012-2015. They find that in nearly 40% of published articles, researchers likely achieved targeted statistical significance levels through covariate adjustment without disclosure or justification. In order to help readers evaluate authors' levels of discretion in using covariates, Lenz and Sahn recommend that they disclose minimum specifications and justify their use if they deviate significantly from other specifications. **A working paper can be found on BITSS Preprints.**

## EXTERNAL VALIDITY IN U.S. EDUCATION RESEARCH

**Sean Tanner** analyzes randomized trials clustered within education interventions in the United States to assess the generalizability of results, in addition to how well sample and target populations match. He finds that in the U.S., trials are systematically tested in samples of students who are less white and more socioeconomically disadvantaged than the general student population. He also finds that effect sizes decrease with follow up trials. **A working paper can be found on the OSF project page.**

## REPORTING GUIDANCE FOR TRIAL PROTOCOLS OF SOCIAL SCIENCE INTERVENTIONS

**Sean Grant** makes recommendations for adapting the SPIRIT Statement—originally developed for clinical trials and biomedical interventions—for the reporting of social science intervention trials. A modified online Delphi process is used to prioritize protocol checklist items and provide insight regarding future implementation of guidelines across disciplines. **A working paper can be found on the OSF project page.**

## OPEN SCIENCE AND DEVELOPMENT ENGINEERING: EVIDENCE TO INFORM IMPROVED REPLICATION MODELS

**Sebastian Galiani, Paul Gertler, and Mauricio Romero** conduct post-publication verifications on studies published in journals with open data for replication policies using only posted materials, rather than contacting authors for more information. Insight from these verification attempts, along with observations from semi-structured interviews with authors and editors, can be used to guide journals seeking to enact replication policies. **A working paper can be found on BITSS Preprints.**

## PANEL DATA AND EXPERIMENTAL DESIGN+

**Fiona Burlig, Louis Preonas, and Matt Woerman** derive analytical formulae and perform Monte Carlo simulations to develop methods for better powering longitudinal studies. In doing so, they address the shortcomings of using traditional experimental designs in panel data settings, which often yield overpowered studies in short panels and underpowered studies in long panels. The authors also developed a software package called "pcpanel" for Stata, with a package for R coming soon. **A working paper can be found on BITSS Preprints.**

## WILL KNOWLEDGE ABOUT MORE EFFICIENT STUDY DESIGNS INCREASE THE WILLINGNESS TO PRE-REGISTER?

**Daniel Lakens** examines whether editors of the top three journals in psychology consider non-conventional but more efficient study designs to be appropriate and finds that they do, but only if the design is pre-registered. He also finds limited effects of psychologist awareness of the immediate, individual benefits of pre-registration on willingness to pre-register studies. His findings suggest that, even though pre-registration can lead to more efficient research designs, knowledge of this does little to boost psychologists' already high willingness to pre-register. **A working paper can be found on BITSS Preprints.**

## HOW OFTEN SHOULD WE BELIEVE POSITIVE RESULTS?

**Eva Vivalt and Aidan Coville** estimate high false positive and false negative reporting probabilities in development economics, which undermine the value of scientific evidence used to inform policy. Their methods leverage AidGrade's dataset of over 600 development economics impact evaluations, along with estimates of priors and reasonable minimum detectable effects of various intervention-outcome combinations gathered from policymakers, development practitioners, and researchers. **Working paper expected Summer 2017.**

## OPTIMAL USE OF SPATIAL INFORMATION IN CROWD-SOURCED META-ANALYSIS OF UNDERSTUDIED POPULATIONS

**Solomon Hsiang and James Rising** develop a new technique for distributed meta-analysis to optimize use of spatial information from understudied populations. They created Distributed Meta-Analysis System (DMAS), an online platform for crowdsourcing meta-analyses that collects, combines, and communicates empirical results, and is a collaborative database of statistical parameter estimates. **A working paper can be found on the OSF project page.**

## AGGREGATING DISTRIBUTIONAL EFFECTS: A BAYESIAN HIERARCHICAL ANALYSIS OF THE MICROCREDIT LITERATURE

**Rachael Meager** develops methods to conduct meta-analyses on distributional treatment effects using a Bayesian hierarchical framework. She applies this method to the microcredit literature to assess the generalizability of published RCT findings. She finds strong evidence that microcredit does not lead to worse household outcomes at the group level, but no generalizable evidence that it improves group outcomes. **A working paper can be found on the OSF project page.**

## WELFARE COMPARISONS ACROSS EXPENDITURE SURVEYS

**Elliot Collins, Ethan Ligon, and Reajul Chowdhury** conduct a replication of three capital transfer experiments involving ultra-poor households in Bangladesh, Ghana, and South Sudan. They detail challenges faced, as well as tools and methods used to provide practical guidance for researchers seeking to replicate studies. Furthermore, they combine the three studies to explore the applicability of economic theory in comparative impact evaluation and meta-analysis using potentially problematic datasets. **Working paper expected Fall 2017.**



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## PUBLICATION BIAS IN META-ANALYSES FROM PSYCHOLOGY AND MEDICAL RESEARCH: A META-META-ANALYSIS

**Robbie van Aert, Jelte Wicherts, and Marcel van Assen** find little evidence of publication bias in meta-analyses published in *Psychological Bulletin* and the *Cochrane Database of Systematic Reviews*. They use state-of-the-art publication bias testing methods and the p-uniform method to estimate for effect sizes corrected for publication bias. They found some evidence of bias in a subset of small studies with large effect sizes. **A working paper can be found on BITSS Preprints.**

## PUBLICATION BIAS AND EDITORIAL STATEMENT ON NEGATIVE FINDINGS

**Abel Brodeur and Cristina Blanco-Perez** collect z-statistics from studies published in two health economics journals before and after the 2015 release of a statement by editors of health economics journals acknowledging the potential merit of well-designed, well-executed, and interesting empirical studies, regardless of whether or not the studies reject specified null hypotheses. They show that the statement induced an increase in the number of papers published with negative findings, suggesting that it reduced publication bias. **A working paper can be found on the OSF project page.**

## USING P-CURVE TO ASSESS EVIDENTIARY VALUE OF SOCIAL PSYCHOLOGY PUBLICATIONS

**Leif Nelson, Michael O'Donnell, Fausto Gonzalez, and Hannah Perfecto** use p-curve to assess the evidentiary value of empirical social psychology and behavioral marketing studies published in *Psychological Science*, the *Journal of Personality*, and the *Journal of Consumer Research*. P-curve is a meta-analytic tool that assesses the likelihood of publication bias or p-hacking in literature by analyzing p-value distributions. **Working paper expected Fall 2017.**

## A LARGE-SCALE, INTERDISCIPLINARY META-ANALYSIS ON BEHAVIOR ECONOMICS PARAMETERS

**Colin Camerer and Taisuke Imai** conduct a large-scale meta-analysis of both published and unpublished studies involving risk aversion and time preference in economics, psychology, and neuroscience. The meta-analysis design includes estimate weighting according to study quality, bias estimation, and the resolution of parameter variation across methods or populations. **Working paper expected Summer 2017.**

## EXAMINING THE REPRODUCIBILITY OF META-ANALYSES IN PSYCHOLOGY

**Daniel Lakens, Marcel van Assen, Farid Anvari, Katherine Corker, James Grange, Heike Gerger, Fred Hasselman, Jacklyn Koyama, Cosima Locher, Ian Miller, Elizabeth Page-Gould, Felix Schönbrodt, Amanda Sharples, Barbara Spellman, and Shelly Zhou** attempt to reproduce 20 meta-analyses published in psychology journals and discuss the difficulties in such a process, as well as recommended improvements for reporting standards. They find that 25% of the selected meta-analyses could not be reproduced. Moreover, 96% of published meta-analyses did not follow reporting guidelines, and a third did not specify all individual effect sizes. **A working paper can be found on BITSS Preprints.**

## INTEGRATED THEORETICAL MODEL OF CONDOM USE FOR YOUNG PEOPLE IN SUB-SAHARAN AFRICA

**Cleo Protopogerou, Martin Hagger, and Blair Johnson** conduct a meta-analysis of the effects of attitudes, norms, and perceived risks of non-use on condom use in youth populations in Sub-Saharan Africa. Their findings show direct and positive effects of attitudes, norms, and perceived control and risk on condom use intentions, as well as of intention and control on use. They also find negative effects of perceived barriers on use. The framework can be used to inform condom promotion interventions. **A working paper can be found on BITSS Preprints.**

## INVESTIGATION OF DATA SHARING ATTITUDES IN THE CONTEXT OF A META-ANALYSIS

**Joshua Polanin and Mary Terzian** survey over 700 researchers whose studies were recently used in meta-analyses to understand why many are averse to sharing individual participant data (IPD). They show that data sharing agreements may improve researchers' willingness to share IPD so long as concerns regarding storage, future use, and rights to results, consultation, and collaboration are addressed. Their findings can be used to inform meta-analyses seeking to collect IPD, as well as provide insight into data sharing in general. **Materials can be found on the OSF project page.**

## METALAB: PAVING THE WAY FOR EASY-TO-USE, DYNAMIC, CROWDSOURCED META-ANALYSES

**Christina Bergmann, Sho Tsuji, Molly Lewis, Mika Braginsky, Page Piccinini, Alejandrina Cristia, and Michael C. Frank** created MetaLab, an online platform that facilitates the use of dynamic meta-analyses and provides useful tools for addressing conceptual and methodological questions. The interface was initially designed for early language development analyses, though other fields can easily use the platform. **Working paper expected Fall 2017.**

## BAYESIAN EVIDENCE SYNTHESIS: NEW META-ANALYTIC PROCEDURES FOR STATISTICAL EVIDENCE

**Eric-Jan Wagenmakers, Raoul Grasman, Quentin F. Gronau, and Felix Schönbrodt** develop a suite of meta-analysis techniques for Bayesian evidence synthesis to address challenges that constrain classical meta-analysis procedures. The suite of techniques allows for the quantification of evidence for and against the absence of effects, monitoring of evolving bodies of evidence, "model-averaged" combination of fixed-effects and random-effects meta-analysis, and improved planning of new studies to maximize their accuracy and impact. **Working paper expected Summer 2017.**

## DEVELOPING A GUIDELINE FOR REPORTING MEDIATION ANALYSES (AGREMA) IN RANDOMIZED TRIALS AND OBSERVATIONAL STUDIES

**Hopin Lee, James McAuley, Rob Herbert, Steven Kamper, Nicholas Henschke, and Christopher Williams** use systematic reviews, Delphi surveys, consensus meetings, and dissemination to develop new reporting guidelines for mediation analyses to improve their accuracy, facilitate replication and meta-analysis, and limit bias. These guidelines can be used to address inconsistent and inaccurate reporting in favor of improved transparency of research findings across disciplines. **A working paper can be found on the OSF project page.**