Collaborative replication and education projects

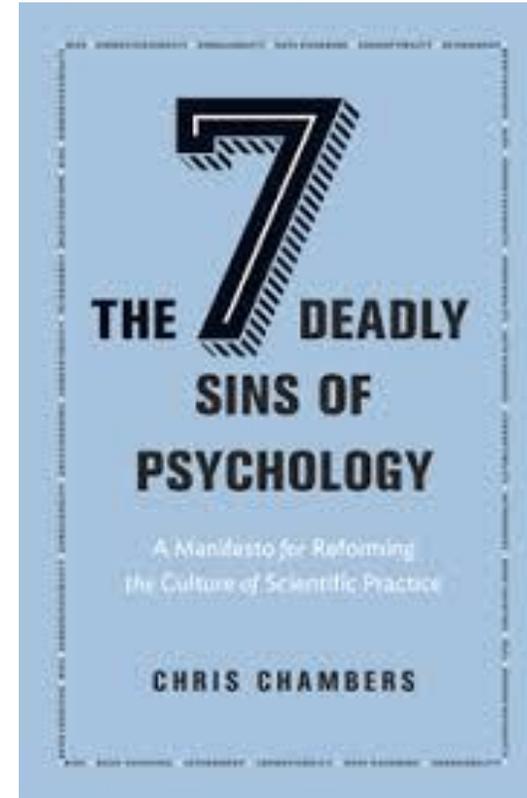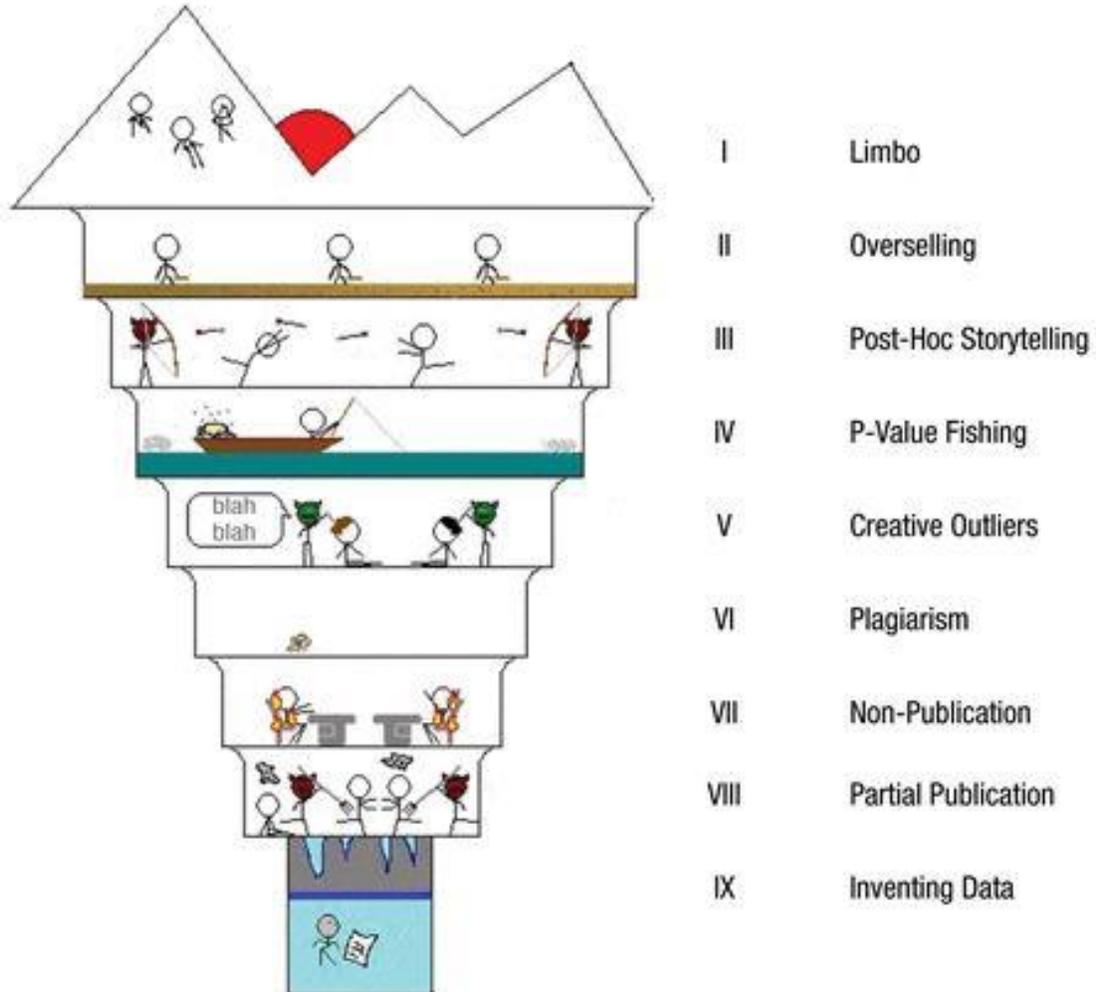Gerit Pfuhl, UiT the Arctic University of Norway

Jon Grahe, Pacific Lutheran University

Collaborative replication and education project (CREP): Accelerating transition to full open science practices
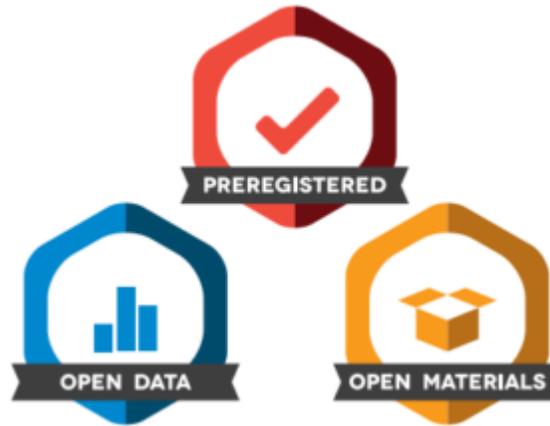
Why needed?

The Nine Circles of Scientific Hell

I	Limbo
II	Overselling
III	Post-Hoc Storytelling
IV	P-Value Fishing
V	Creative Outliers
VI	Plagiarism
VII	Non-Publication
VIII	Partial Publication
IX	Inventing Data

THE 7 DEADLY SINS OF PSYCHOLOGY

A Manifesto for Reforming the Culture of Scientific Practice
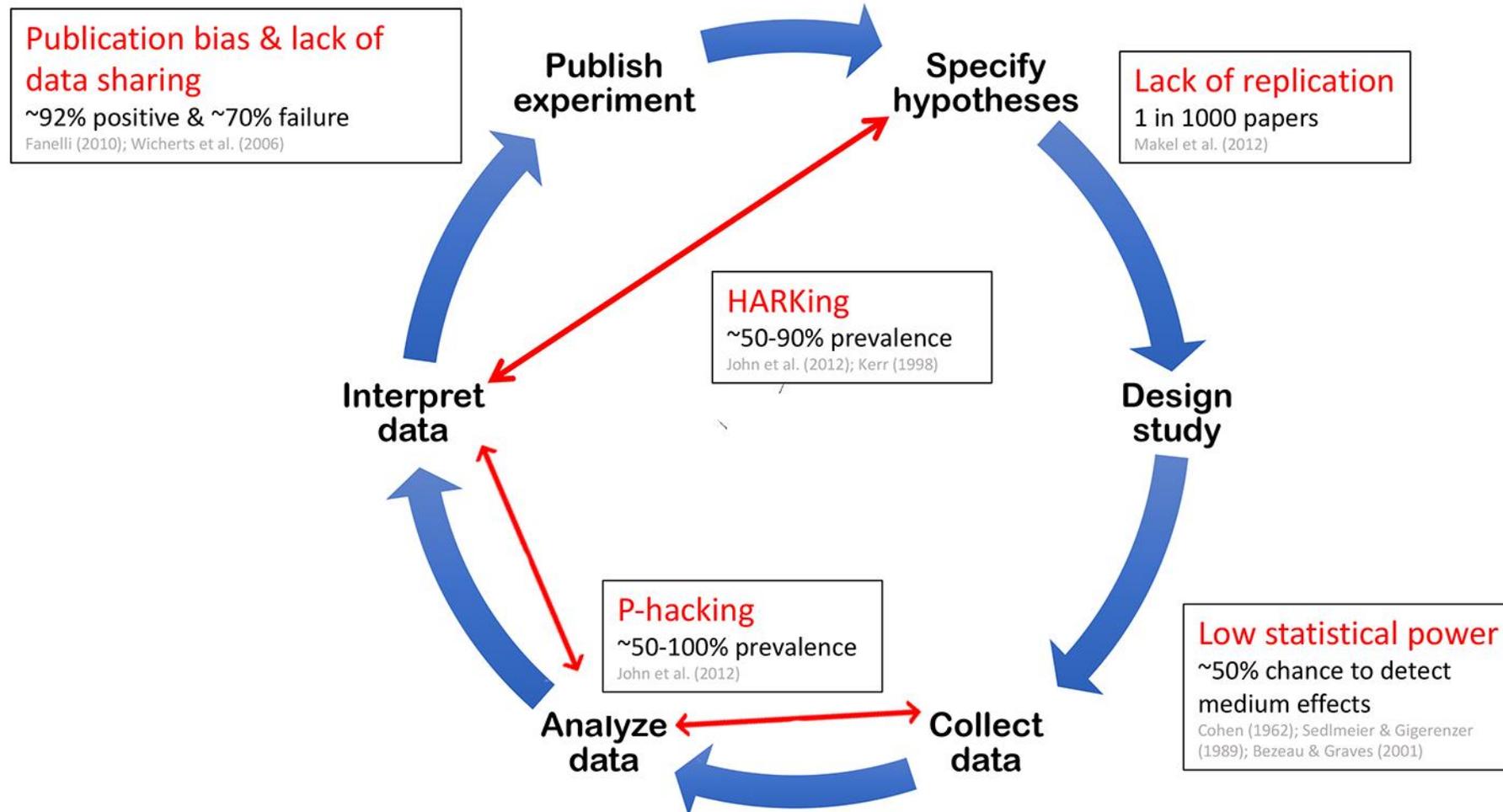
CHRIS CHAMBERS

Neuroskeptic. (2012). The nine circles of scientific
hell. *Perspectives on Psychological Science*, 7, 643-644.

The Hypothetico-deductive model of the scientific method
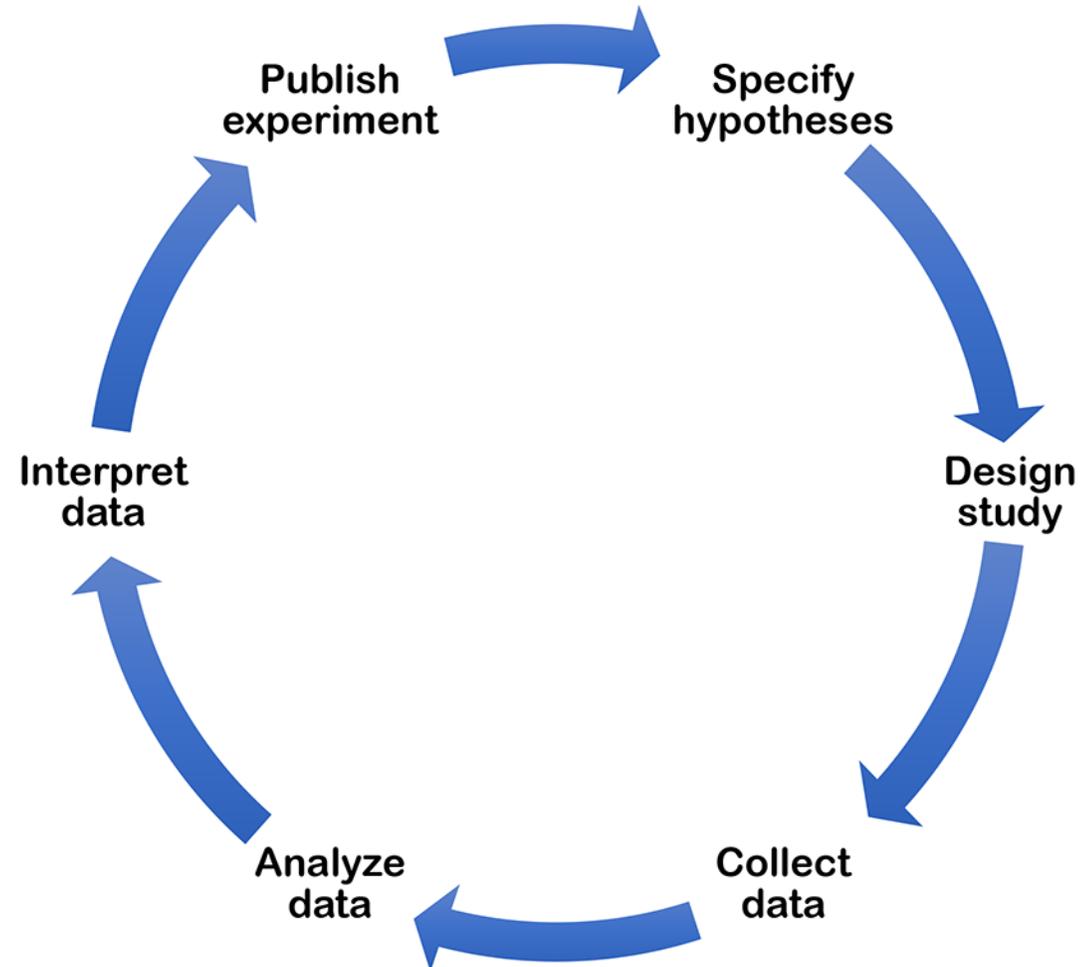
The Hypothetico-deductive model of the scientific method

Pre-registration of replications

Pre-registration (n) =   publication of data-collection and analysis plan
                                                      before collecting the data
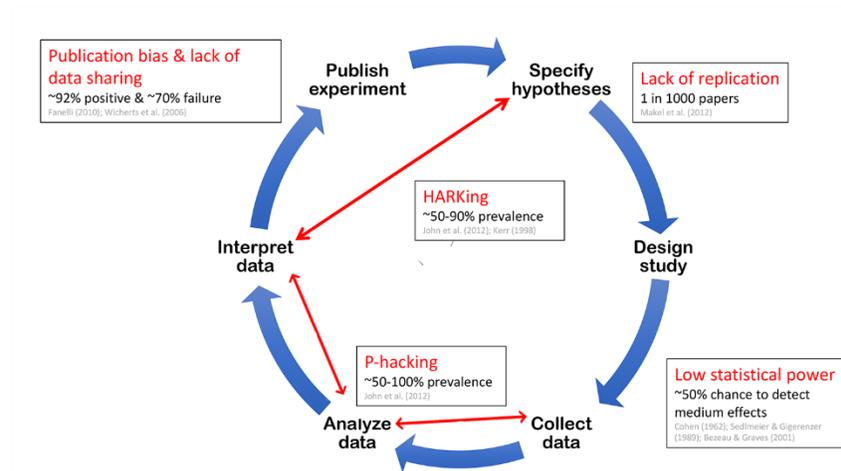
"Gold" pre-registration
- Submit study plan to a journal
- Acceptance before start of data-collection

"Silver" pre-registration
- Publish study plan on the internet (e.g., OSF)
- Collect data and refer to pre-registration document

Pre-registration of replications

- Simultaneously solves
  - File-drawer (all results published)
  - HARKing (impossible)
  - P-hacking (impossible)
  - Low power (high power required a priori)
- → Ensures validity of the hypothetico-deductive model

Replication projects in teaching

https://osf.io/c29pj/

OSF HOME ▾   My Quick Files

| t | Data and results | Files | Wiki | Analytics | Registrations | Contributors | Add-ons | Settings |

Replication of Kool, W., McGuire, J. T., Rosen, Z. B., & Botvinick, M. M. (2010) at UiT - The Arctic University of Norway /

Pro:
- Good research practices
- Real-life project
- Direct interaction with original authors

Challenges:
- Power
- Probably only feasible for replications

CREP Workflow

Tasks	Students
Claiming a study	contact us & provide contact details, receive a CREP# and Executive Reviewer and Administrative Advisor
Preparing a Study	Fork the CREP study page to be replicated. edit and populate it with relevant
First Pre-Data Review	contact Executive Reviewer 2 weeks before data collection begins. Include all info on OSF page except for IRB approval. Please include CREP# and link to OSF page
Response to Review	reply to exec reviewer about what changes were made.
Data Collection	REGISTER the OSF page using "OSF-Standard Pre-Data Collection Registration". Send link to registered page to Executive reviewer before data collection
Second -Post Analyses Review	add data component, add results component, notify Jon Grahe and administrative assistant that project is complete
Post Review	update OSF page with any publications / presentations

CREP Workflow

Tasks	Supervisors
Finding a study	encourage students to review CREP
Preparing a Study	check that students are completing basic information
First Review	check page first to give any preliminary feedback
Response to Review	assist students in addressing pressing issues
Second Review	monitor student progress; advise on best practices
Post Review	work with students on conference presentations and manuscripts as desired

CREP Workflow

Tasks	Administrators
Claiming a study	add information to CREP Progress page, make sure contributor has best practice guidelines. Share CREP progress page with new contributor (view only)
Preparing a Study	put link to student OSF page on our "in progress projects" on OSF page
First Review	Update CREP progress
Response to Review	Update CREP progress
Second Review	update CREP progress, update OSF page moving approved study in Researchers and Findings page
Post Review	email contributors and ask them to add component "What I learned from the CREP project?"

CREP Workflow

| Tasks	Reviewers
First Review	review OSF page and original manuscript, identify any issue that would impact data collection; identify any suggestions for improving communication on OSF page; make sure page was forked from study page
Second Review	check data files are readable; data honesty statement (completion pledge); results reported correctly; study was preregistered; wiki descriptions of each component are informative; check to make sure the N > than minimum required

Home　Notifications　M

Tweet

Hans Fredrik Sunde
@hfsunde

Follow

Brilliant text about @CREP_psych by @Gerit_Pfuhl: "Replications are not only necessary; they are the best way to learn how to conduct research." How come this isn't standard practice yet?

psykologisktidsskrift.no/accelerating-o　...
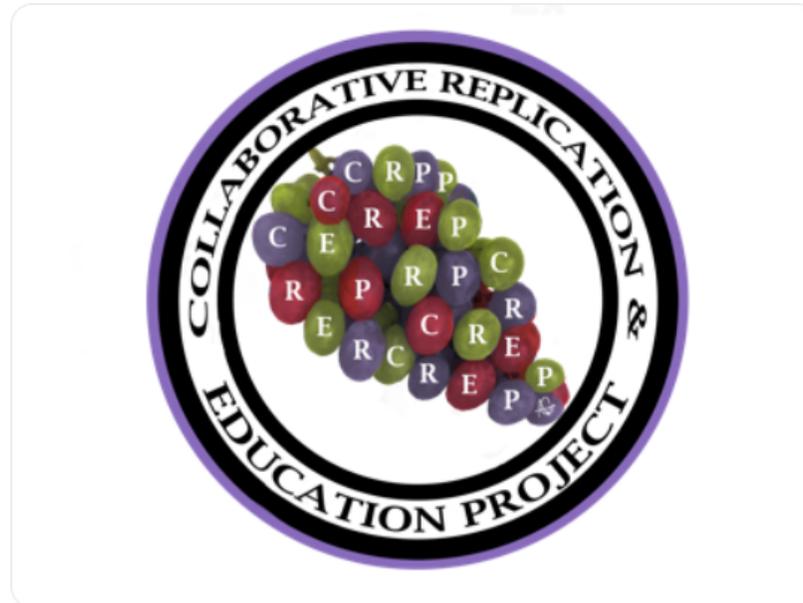
1:53 AM - 9 Nov 2018

Accelerating Open Science: The Collaborative Replications and Education Project (CREP)

9. NOVEMBER 2018

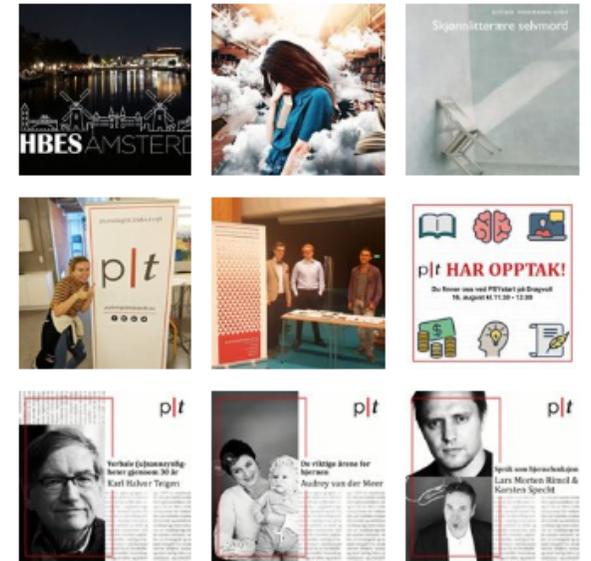*Written by: Gerit Pfuhl, Associate professor in psychology at UiT and NTNU.*

This article is from our newest edition of Psykologisk Tidsskrift, Fagkritikk (read more).

Recent years have seen a revolution in publishing and large support for open access publishing.... Les mer!

The CREP logo, CREP rhymes with grapes

The site will undergo maintenance between Nov 20, 2018 11:00 PM and Nov 21, 2018 12:30 AM (+0100 UTC). Thank you for your patience.

Accelerated CREP - RRR: Turri, Buckwalter, & Blouw (2015)

Braeden Hall, Jordan Wagge, Christopher Chartier, Gerit Pfuhl, Stefan Stieger, Evie Vergauwe, Erica Musser, Leslie Cramblet Alvarez, Sara Alvarez Solas, Michael Schulte-Mecklenbeck, Andy Field, Elena Henderson, Hans IJzerman, Marianne Fallon, Asil Özdoğru, Michael Andreychik, Sau-Chin Chen, Waldir Sampaio, Anastasiia Tkalich, Amy Nusbaum, Thomas Evans, Martin Voracek, Ulrich Tran, Sean Lee, David Redman, Sümeyra Özben, Nicole Mathis, Felizitas Pernerstorfer, Andree Hartanto, Martin Mækelæ, Florian Cova, Jack Arnal, Kaitlyn Werner, Erin Buchanan, Hannah Johnson, Vilius Dranseika, Kaminski Gwenaël, Samantha Schwegmann, Christoph Schild, Evin Yildirim, Yannick Michael Endres, Paula Bange, Kira Aschenbroich, Manyu Li, Annie Hanh Vu, Balazs Aczel, Lin Chia-Shien, bryandon chiu, Lim Ying, Neil Kirk, Nicole Legate, Miles Lowry, Lindsey Osborne, Lee Ru Xuan, Peter Szecsi, Yanna Weisberg, YU-HSUAN KU, Colleen Lamb, Anthony Krafnick, Russell Warne, Carmel Levitan, Daniel Storage, Krystian Barzykowski, Ewout Meijer, Corey Fincher, Carlota Batres, Robert Calin-Jageman, Mark Brandt, Jon Grahe

Created on: November 01, 2018 | Last edited: November 05, 2018

⊘ **Accepted:** PsyArXiv uses post-moderation. This preprint has been accepted by a moderator and is publicly available and searchable.

Running head: RRR: TURRI, BUCKWALTER, & BLOUW (2015)

Registered Replication Report: Turri, Buckwalter, & Blouw (2015)

Braeden F. Hall, Jordan R. Wagge, Christopher R. Chartier, Gerit Pfuhl, Stefan Stieger, Evie Vergauwe, Erica D. Musser, Leslie D. Cramblet Alvarez, Sara Alvarez Solas, Michael Schulte-Mecklenbeck, Andy P. Field, Elena Kelsey Henderson, Hans IJzerman, Marianne Fallon, Asil A. Özdoğru, Michael R. Andreychik, Sau-Chin Chen, Waldir M. Sampaio, Anastasiia Tkalich, Amy T. Nusbaum, Thomas Rhys Evans, Martin Voracek, Ulrich S. Tran, Sean T. H. Lee, David Redman, Sümeyra Özben, Nicole Mathis, Felizitas Pernerstorfer, Andree Hartanto, Martin J. Mækelæ, Florian Cova, Jack D. Arnal, Kaitlyn M. Werner, Erin M. Buchanan, Hannah Johnson, Samantha Schwegmann, Vilius Dranseika, Justas Žilys, Gwenael Kaminski, Christoph Schild, Evin Yildirim, Yannick Michael Endres, Paula Bange, Kira Aschenbroich, Manyu Li, Annie Hanh Vu, Balazs Aczel, Peter Szecsi, Lin Chia-Shien, Chiu Chuan Peinn, Lim Ke Ying, Neil W.

Abstract

According to the Justified True Belief (JTB) account of knowledge, a person's ability to know something is defined by having a belief that is both justified and true (i.e., knowledge is justified true belief). However, this account fails to consider the role of luck. In 1963, Gettier argued that JTB is insufficient because it does not account for ...

See more

Download preprint

Downloads: 99

Preprint DOI

10.31234/osf.io/zeux9

License

Disciplines

Social and Behavioral Sciences   Psychology, other

OSF Preprints accelerates scholarly review, publishing and discovery.

The launch of **OSF Preprints** branded services continues COS's ongoing commitment to open and transparent research practices. The new preprints service is built on our flagship platform, OSF, which helps researchers design and manage their project workflow, data storage, DOI management, and collaboration.

We developed **OSF Preprints** to meet these major goals:

- Facilitate and accelerate new models of scholarly communication across multiple research disciplines
- Improve accessibility of scholarship
- Facilitate timely feedback on scholarship
- Address delays of research publishing
- Improve scholarly communication
- Provide a single search interface to access a growing number of preprint sources

OSF Preprints uses SHARE to aggregate search results from a variety of other preprint providers such as arXiv, bioRxiv, PeerJ, CogPrints and others. Over a

Thanks for listening, Happy to take your questions?

How do we get there?