



# Curate Science

*Transparency Labels for Science*

**A Platform to Crowdsource the Transparency of Research**



Etienne P. LeBel, PhD

*KU Leuven*

etienne.lebel@gmail.com

etiennellebel.com

CurateScience.org

# Science

Allows us to

- Understand stuff
- Fix/improve stuff (e.g., medical problems)



# “Cargo Cult” Science?



Richard  
Feynman

# Crisis of Confidence

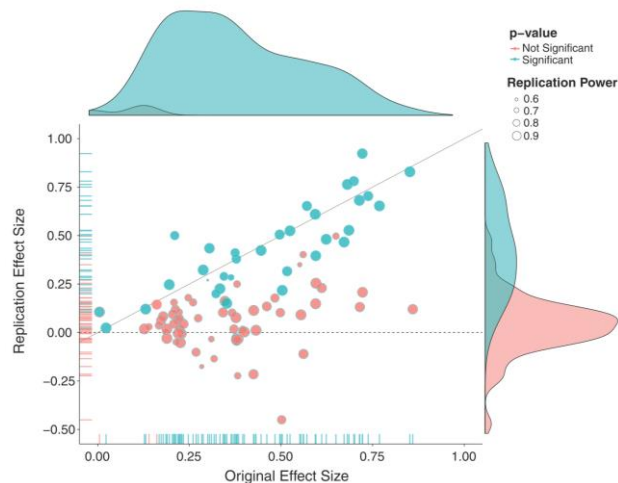
**Replicability rates: < 20 - 40%**

(based on > 3,000 replication studies including RPP, ML1, ML2, ML3, SP)

**Result reproducibility rates:**

**< 30 - 35%**

(Chang & Li, 2015; Hardwicke et al., 2018)



RPP (OSC, 2015)



ML2 (Klein et al., 2018)

"Registered Reports"



ClinicalTrials.gov

✓ protocols.io



PsychoPy<sup>3</sup>



OpenSesame



The  
**Dataverse**  
Project



CODE OCEAN

IPython



Code

100% P-hacking Free

Here's how you  
can replicate our  
result.

Here, check our  
numbers.



400+ reporting  
guidelines

**Reporting  
standards**

OPEN  ACCESS

 Preprints

arXiv.org

A  $R^G$

bioRxiv

 OSF PREPRINTS

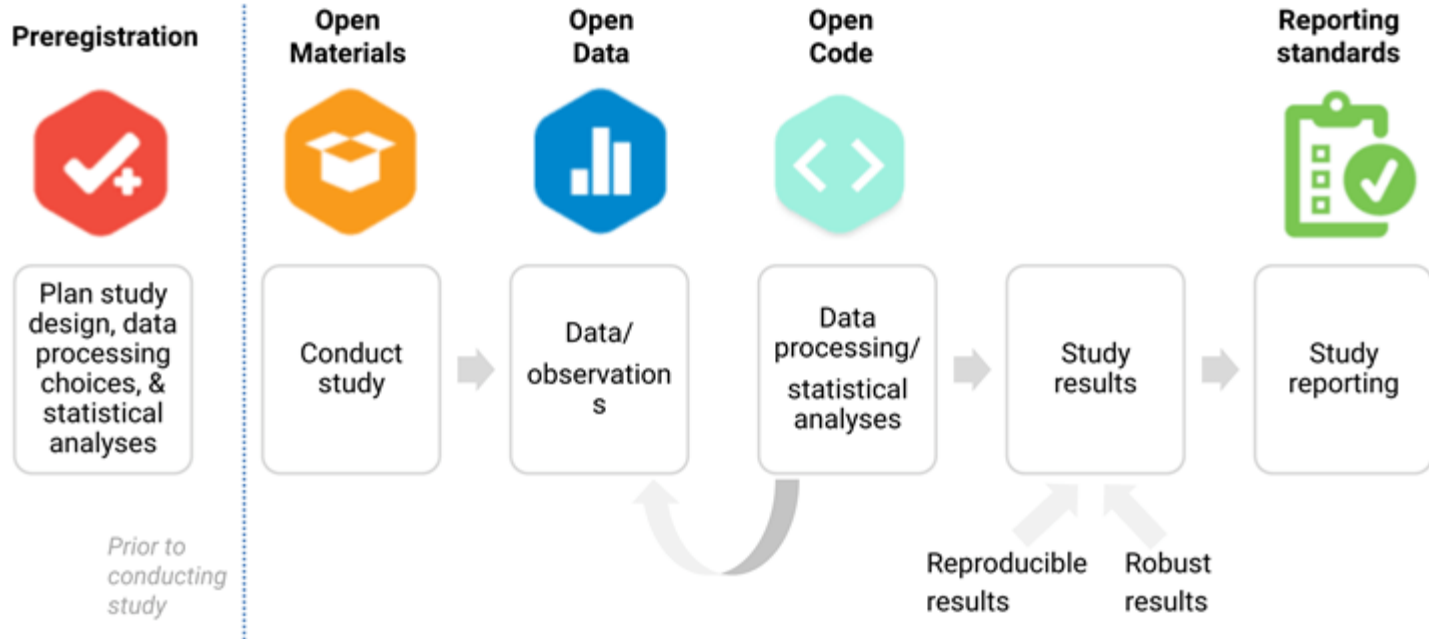
COS  
— CENTER FOR —  
OPEN SCIENCE



# Missing Piece

No platform to look up the transparency of a published study/article

# Core Transparency Categories



"Registered Reports"



✓ protocols.io



OpenSesame

figshare



The Dataverse Project



CODE OCEAN



equator network

400+ reporting guidelines

OPEN ACCESS

Preprints

arXiv.org

A R<sup>G</sup>

bioRxiv

OSF PREPRINTS

Preregistration



Plan study design, data processing choices, & statistical analyses

Prior to conducting study

Open Materials



Conduct study

Open Data



Data/ observations

Open Code



Data processing/ statistical analyses

Reporting standards



Study reporting

Reproducible results

Robust results

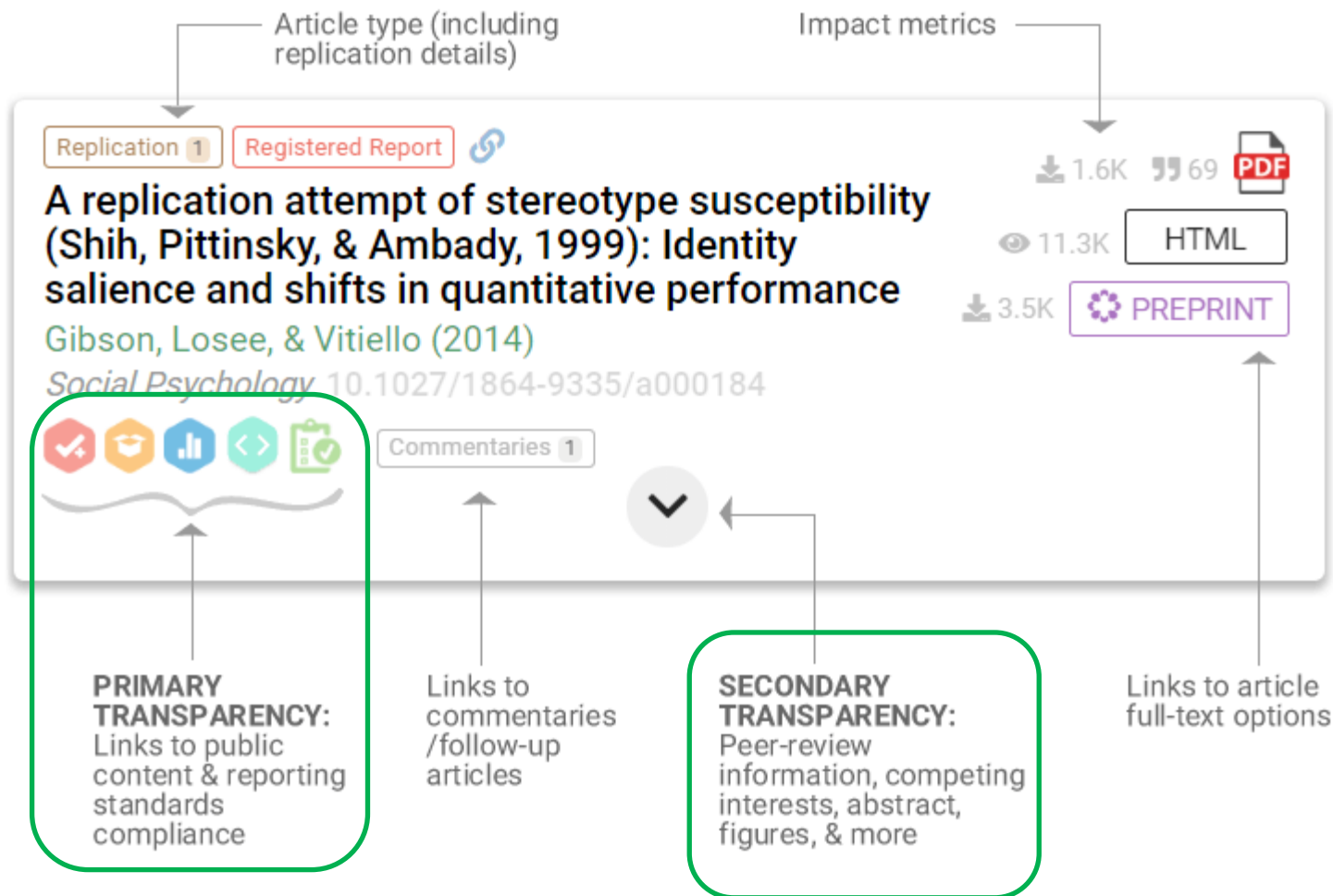




# Curate Science

Platform to *label & link* the transparency and replication of empirical research

(and soon result reproducibility)



**More**

replicability



Editor: S Vazire   Reviewers: Anonymous reviewer 1, Anonymous reviewer 2   [Open peer review](#) 

# Tailored to Different Article Types



Original

Research that examines new questions not directly comparable to previous research.



Replication

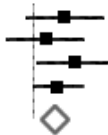
Reexamines previous research by collecting new data using methodologies similar to an original study.



Reproducibility/  
Robustness  
reanalysis

**Reproducibility:** Reexamines previous research by repeating the same statistical analyses on existing data.

**Robustness:** Reexamines previous research by conducting different statistical analyses on existing data.



Metaanalysis

Combines evidence across previously published studies on a common topic.

Conceptual

Non-empirical research that makes a theoretical or conceptual contribution (including methodological articles with or without use of simulation studies)



Bonus badges!



## Recently Added

Search:

Showing 1 to 110 of 110 entries

Reanalysis - Meta-analysis



### Meta-analysis of the effect of red on perceived attractiveness

GK Lehmann, AJ Elliot, & RJ Calin-Jageman (2018)

*Evolutionary Psychology* 10.1177/1474704918802412



HTML

Added: February 16, 2019

Reanalysis - Robustness



### Probing birth-order effects on narrow traits using specification-curve analysis

JM Rohrer, B Egloff, SC Schmukle (2017)

*Psychological Science* 10.1177/0956797617723726



PREPRINT

#### Content type

- ☐ Original research
- ☒ Replications
- ☐ Reanalyses - Robustness
- ☐ Reanalyses - Meta-analyses

#### Transparency

- ☒ Registered Report format
- ☒ Preregistered design + analysis
- ☐ Public study materials
- ☐ Public data
- ☐ Public code
- ☐ Reporting standard compliance

# Motivation to Contribute?

- **Selfish benefits**
  - Increase the [impact and value](#) of your research
  - Easiest and best way to [organize your publications](#)
  - [Competitive edge](#) in job applications, job promotions, and grant applications
  - Maximize your [research integrity and accountability](#) to research funders and to the public
- **Collective/Communal benefits** (to research community & students)
  - Facilitates [reuse and reanalysis](#) of empirical findings (e.g., in meta-analyses), accelerating scientific progress
  - Facilitates [replication and extension](#) of published findings
  - Yields rich metadata resources for [teaching](#) and [meta-science research](#) on transparency, reproducibility, and replication

ASSISTANT PROFESSOR  
**DANIEL LAKENS**



Phone  
+31 40 247 4581

E-mail  
d.lakens@tue.nl

Group / Unit  
Human Technology Interaction

Department / Section  
Industrial Engineering & Innovation Sciences

Building  
IPO-rebouw

Floor / room  
1.33

RECENT PUBLICATIONS

→ SEE ALL PUBLICATIONS

POWERED BY

Replication 100

Estimating the [replicability] of psychological science

AA Aarts, ..., EP LeBel, ... , & BA Nosek (2015)

Science

Commentaries 1

Replication 2

Replication difficulties of Correll's (2008) modulation of 1/f noise in a racial bias task

C Madurski\* & EP LeBel (2015) \*Student co-author

Psychonomic Bulletin & Review 10.3758/s13423-014-0792-4

Conceptual Buy on

# Grants Database

APPLY

FOR GRANTEES

CONTACT

GRANTS DATABASE

The Foundation awards approximately 200 grants per year (excluding the Sloan Research Fellowships), totaling roughly \$80 million dollars in annual commitments in support of research and education in science, technology, engineering, mathematics, and economics. This database contains grants for currently operating programs going back to 2008. For grants from prior years and for now-completed programs, see the annual reports section of this website.

## Filter

### YEAR

- 2018
- 2017
- 2016
- 2015
- 2014

SEE MORE

### PROGRAM

- Science
- Economics
- Higher Education
- Digital Technology
- Public Understanding
- Working Longer
- Energy and Environment
- Initiatives
- Sloan Research Fellowships

## Grantee Publications

Replication 16 Registered Report

Registered Replication Report of Finkel, Rusbult, Kumashiro, & Hannon's (2002) Study 1  
I Cheung, L Campbell, EP LeBel, ... , & JC Yong (2016)  
*Perspectives on Psychological Science* 10.1177/1745691616664694

HTML

Conceptual

A new replication norm for psychology  
EP LeBel (2015)  
*Collabra* 10.1162/collabra.2015.00020

HTML

Replication 100

Estimating the [replicability] of psychological science  
AA Aarts, ... , EP LeBel, ... , & BA Nosek (2015)  
*Science* 10.1126/science.1264716

PREPRINT

Replication 2

Replication difficulties of Correll's (2008) modulation of 1/f noise in a racial bias task  
C Madurski\* & EP LeBel (2015) \*Student co-author  
*Psychonomic Bulletin & Review* 10.3758/s13423-014-0757-4

PREPRINT





# Roadmap

"Early  
beta"\*

Beta

Public  
launch

Spring 2019

Autumn 2019

Summer 2020

\*Can grant you special  
early access if you email me  
at *curatescience@gmail.com*

## Future vision:

- Online community collectively creating a living, growing corpus of curated evidence

*Thank you for your attention.*

*Questions/feedback/comments welcome!*



# Curate Science

*Transparency Labels for Science*



Etienne P. LeBel, PhD

*KU Leuven*

etienne.lebel@gmail.com

etiennelebel.com

CurateScience.org