

Registered Reports in Psychology: Why, for whom and how?

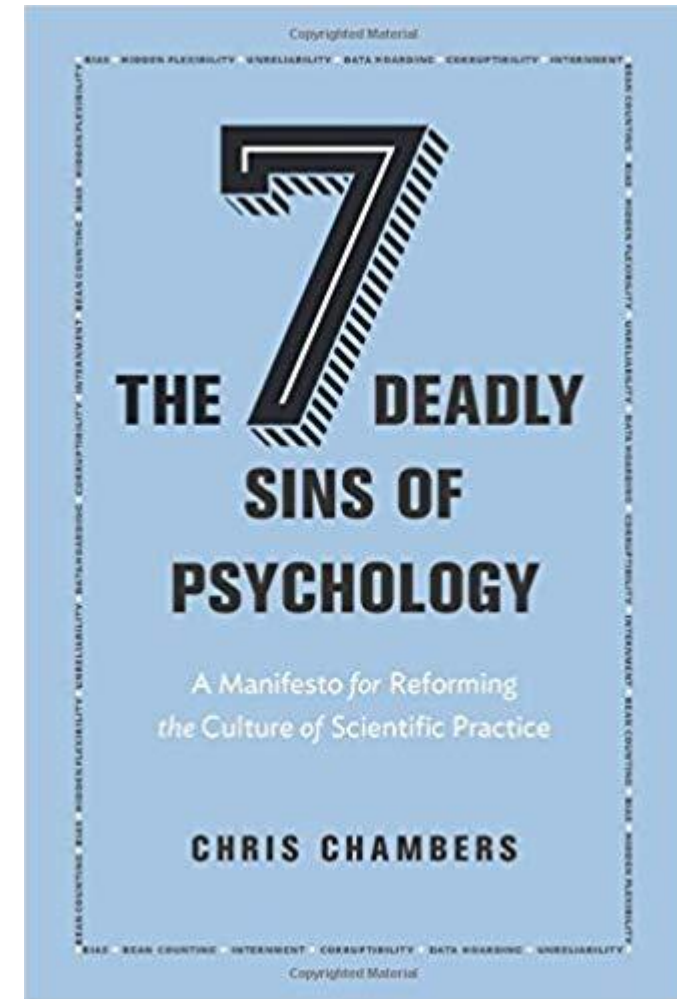
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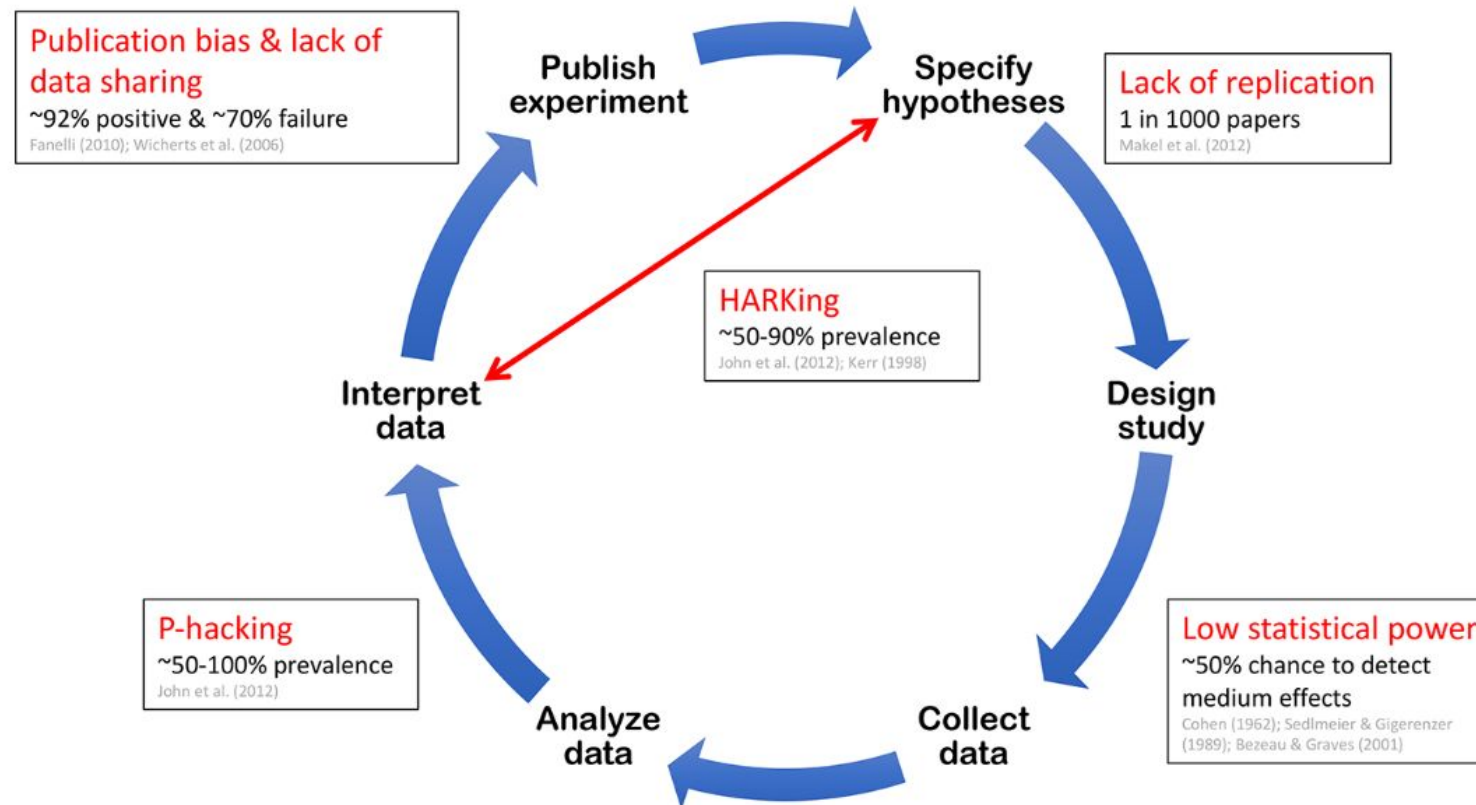
RegReports - Why?

The 7 Deadly Sins of Psychology (Chambers, 2017)

1. (Confirmation) Bias, e.g., Neophilia, 'conceptual' replications
2. Hidden Flexibility, e.g., p-hacking, HARKing, subgrouping
3. Unreliability, e.g., lack of power and replicability
4. Data Hoarding
5. Corruptibility
6. Internment
7. Bean Counting



RegReports - Why?



RegReports - Why?

DIE WELT

Einmal ist **KEINMAL**

Zahlreiche klassische Experimente der Psychologie lassen sich nicht wiederholen. Sind sie deshalb falsch?

DER UMGANG MIT DATEN IST MANCHMAL SEHR KREATIV

Im Grunde wissen die Psychologen noch nicht, warum Bestätigungsversuche des Öfteren scheitern. Es könnte auch an einer gewissen Kreativität in der Auswertung der Daten in den Originalstudien liegen.

The New York Times

SCIENCE TIMES AT 40

Essay: The Experiments Are Fascinating. But Nobody Can Repeat Them.

Science is mired in a “replication” crisis. Fixing it will not be easy.

ScienceNews

MAGAZINE OF THE SOCIETY FOR SCIENCE & THE PUBLIC

SCIENCE & THE PUBLIC PSYCHOLOGY, SCIENCE & SOCIETY

‘Replication crisis’ spurs reforms in how science studies are done

RegReports - Why?

Foster trust in empirical science!

by enabling researchers to demonstrate that their studies have been conducted, analyzed, and reported as initially planned

RegReports - For whom?

- Authors
 - can base their research on scientific and quality criteria - irrespective of the possible outcome
- Editors
 - can increase validity and replicability of their journal contents
 - establish a quality commitment and brand
- Readers
 - higher confidence in published results, because of reduced publication bias
- Funding agencies
 - efficient budget allocation by ensuring the proper publication of null results

RegReports - How?

- Authors of empirical studies publish details regarding sampling, sample size and the plan for analysis *prior* to conducting the study
 - preregistered study protocols can be handled and peer-reviewed like an article
 - acceptance of preregistered study protocols based on method and quality of design, not on outcome
- Increase in robustness and replicability of psychological science

RegReports - How?



Over 160 journal already offer a preregistered format today!

Source: <https://cos.io/rr/>

RegReports - A silver bullet?

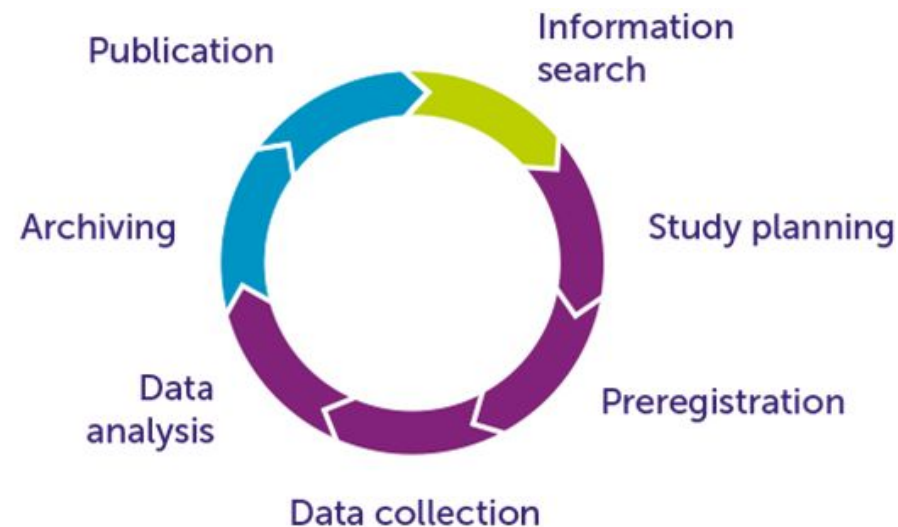
“The single cheap solution that will solve all of the problems in the entire world” (Goldacre, 2009)

Several challenges remain

- incentive for authors to adopt preregistration formats
- integration for authors in writing a study protocol
- integration and decision aids for reviewers
- integration into journal systems for editors and readers

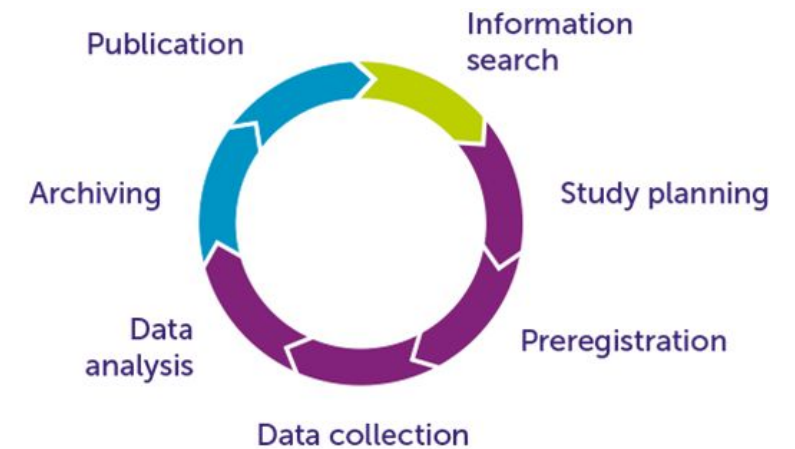
RegReports - How?

ZPID is a Public Open Science Institute for Psychology and related disciplines



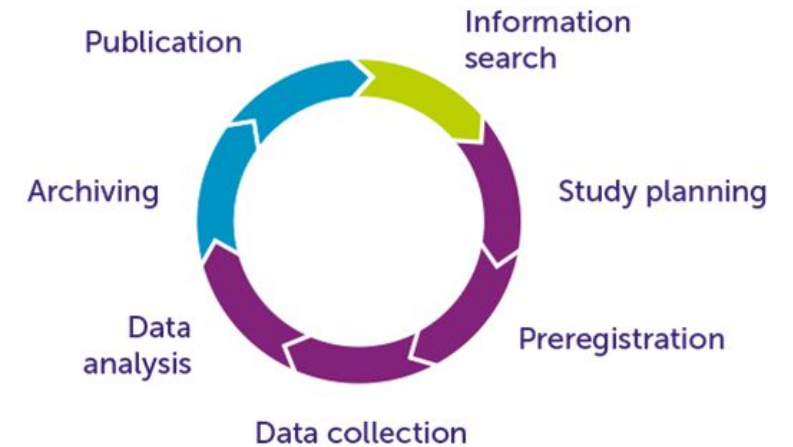
RegReports - How?

- ZPID wants to enable preregistration
 - no normative statements
 - mission of associations like DGPs, APA, etc.
 - Supporting pre-registration by:
 - integrating preregistration into a research cycle
 - participating in developing and implementing joint standards (currently with: DGPs, Hogrefe, SIPS, APA, BPS, etc.)



RegReports - How?

- ZPID wants to enable Registered Reports!
 - offering free and independent data collection services for successfully reviewed protocols
 - offering notarization and long-term preservation services
 - developing a service for authors and editors to create and review protocols (“RegReports”)
 - developing SMART-preregistration in PsychOpen GOLD (OA journals) (“SMART-Protocols”)



RegReports - notarization and preservation

- PsychArchives
 - keep a copy of protocols with an independent third party (“notarization”)
 - connect and preserve protocol, data, analysis code, publication and all other digital research objects for a study in one place

The screenshot shows the PsychArchives website interface. At the top is a blue header with the PsychArchives logo and navigation links: Home, Contribute, Browse, and a search icon. Below the header is a purple breadcrumb trail: PsychArchives / Content / Study Protocols. A light gray box contains the text: "Please use this identifier to cite or link to this item: <http://dx.doi.org/10.23668/psycharchives.2351>". The main content area displays metadata for a study protocol:

- Title:** The Effect of Shopping Satisfaction during Leisure Travel on Satisfaction with Life Overall: The Mitigating Role of Financial Concerns
- Authors:** Sirgy, M. Joseph; Yu, Grace B.; Lee, Dong-Jin; Bosnjak, Michael
- Issue Date:** 10-Jan-2019
- Abstract:** Despite growing interest in leisure well-being and life satisfaction, there is still limited research concerning the role of financial well-being in leisure travel experiences. The proposed pre-registered research is designed to test the notion that shopping experience during leisure travel may enhance leisure travel satisfaction, satisfaction with leisure life, and satisfaction with life overall, moderated by financial concerns. Theoretical and managerial implications will be discussed based on the results of a social survey.
- URI:** <https://hdl.handle.net/20.500.12034/1983>; <http://dx.doi.org/10.23668/psycharchives.2351>
- Citation:** Sirgy, M. J., Yu, G. B., Lee, D.-J., & Bosnjak, M. (2019, January 10). The Effect of Shopping Satisfaction during Leisure Travel on Satisfaction with Life Overall: The Mitigating Role of Financial Concerns. Leibniz Institut für Psychologische Information und Dokumentation (ZPID). <https://doi.org/10.23668/psycharchives.2351>
- Appears in Collections:** Study Protocols

Below the metadata is a section titled "Files in This Item:" containing a table with two rows of files:

File	Description	Size	Format	Preview PDF	Download
Leisure_Finance_Balance.pdf		244,8 kB	Adobe PDF	Preview PDF	Download
SurveyQuestionnaire.pdf		165,89 kB	Adobe PDF	Preview PDF	Download

At the bottom of the page, there is a link "Show full item record" with a document icon, and a footer stating "This item is licensed under a Creative Commons License" with the Creative Commons logo.

RegReports - service to create and review

- Platform populated with templates developed for psychological science
 - technology based e.g. on protocols.io

Copy of Information Recommended for Inclusion in Manuscripts Reporting Meta-Analyses

Description Guidelines & Warnings Materials Steps +SHARE VIEW All changes saved

1 Title

State the research question and type of research synthesis (e.g., narrative synthesis, meta-analysis).

2 Author note

List all sources of monetary and in-kind funding support; state the role of funders in conducting the synthesis and deciding to publish the results, if any.

Describe possible conflicts of interest, including financial and other nonfinancial interests.

Give the place where the synthesis is registered and its registry number, if registered.

Provide name, affiliation, and e-mail address of corresponding author.

3 Abstract

Objectives:

State the research problems, questions, or hypotheses under investigation.

4 Abstract

Eligibility criteria:

Describe the characteristics for inclusion of studies, including independent variables (treatments, interventions), dependent variables (outcomes, criteria), and eligible study designs.

5 Abstract

Methods of synthesis:

Describe the methods for synthesizing study results, including

- Statistical and other methods used to summarize and to compare studies
- Specific methods used to integrate studies if a meta-analysis was conducted (e.g., effect-size metric, averaging method, the model used in homogeneity analysis)

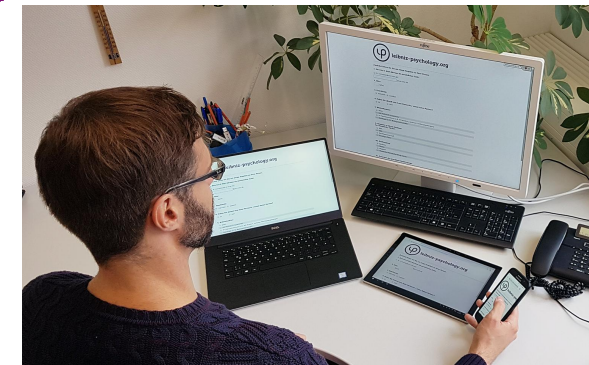
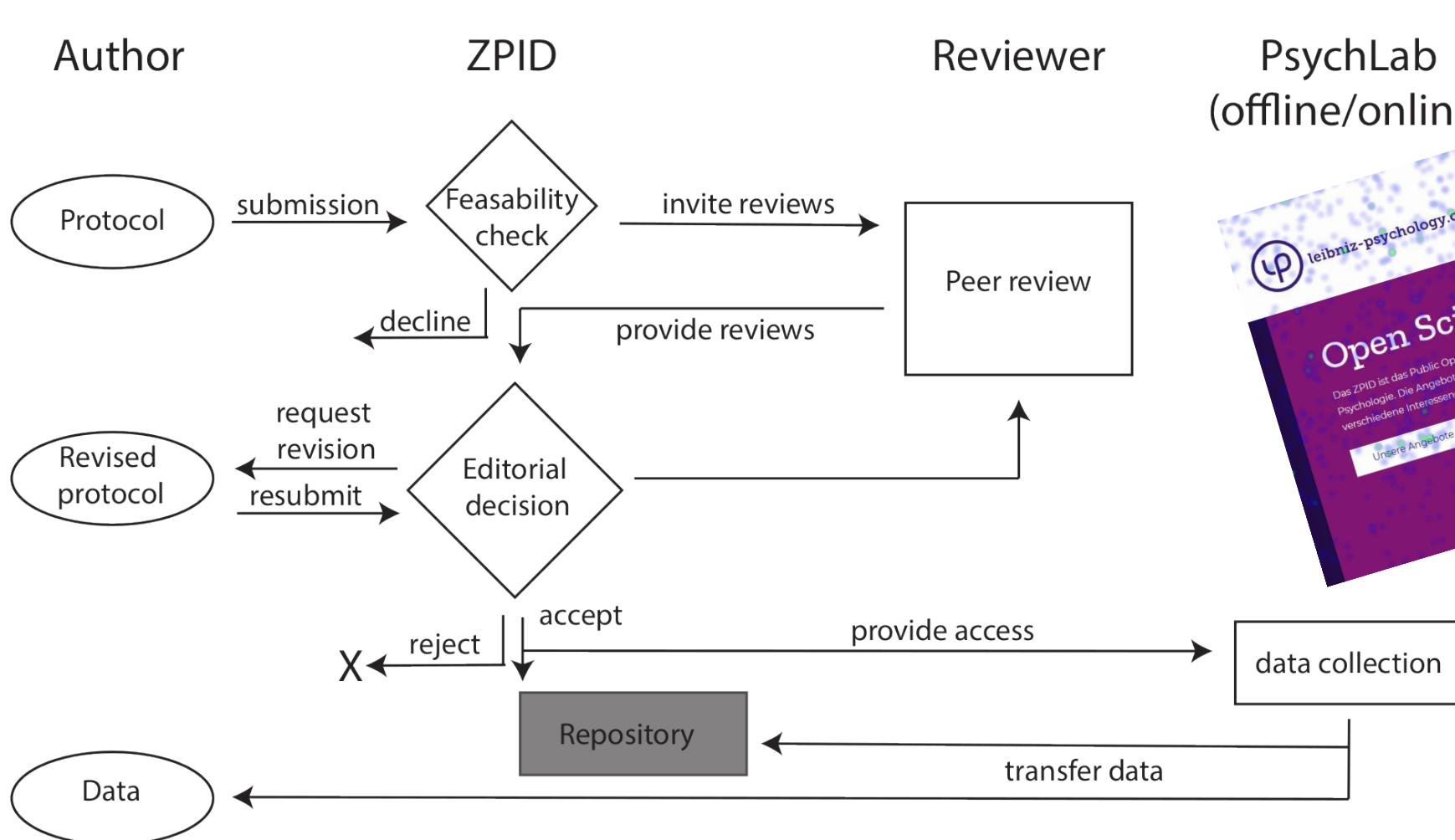
6 Abstract

Results:

State the results of the synthesis, including

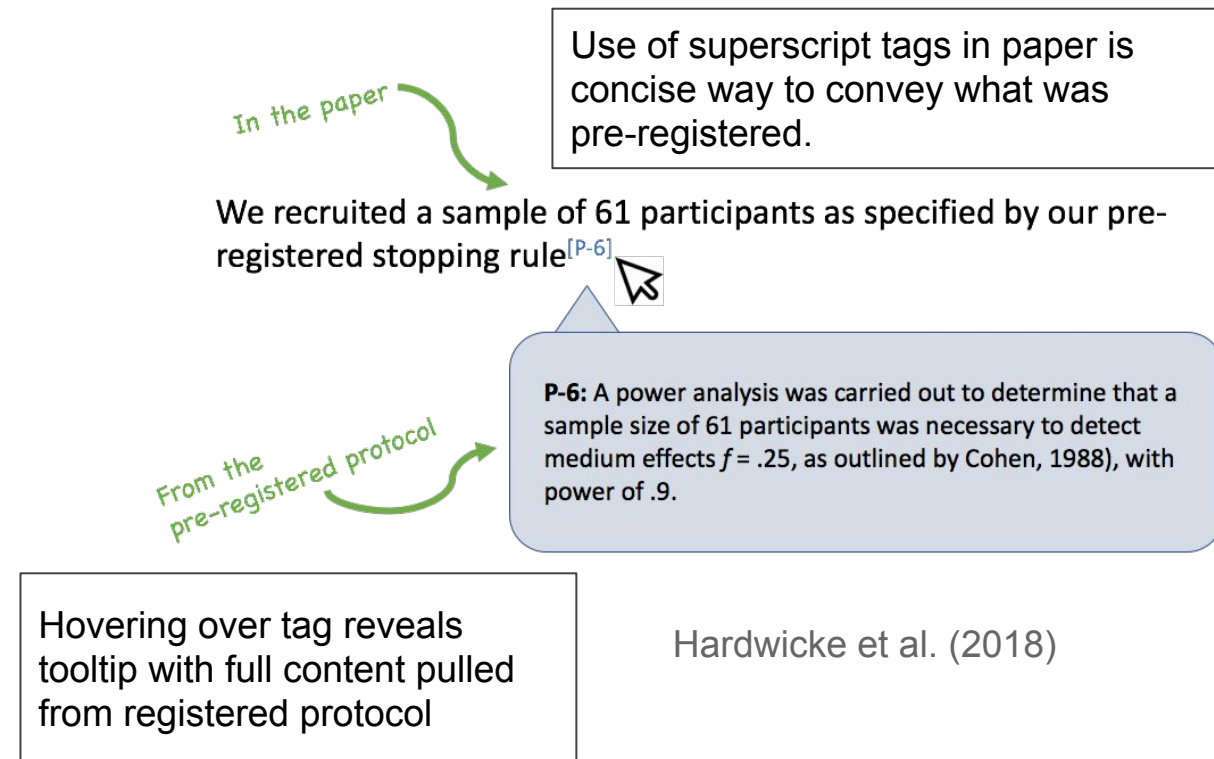
- Number of included studies and participants, and their important characteristics
- Results for the primary outcome(s) and moderator analyses
- Effect size(s) and confidence interval(s) associated with each analysis if a meta-analysis was conducted

RegReports - free data collection incentive



RegReports - SMART-Preregistrations

- Deposit additional machine-readable version of protocols in PsychArchives
 - markup of individual sections within the protocol
- Implement display on journal side in PsychOpen GOLD OA journals



RegReports - Perspectives

- 2019: prototype software for comfortably creating and reviewing protocols and notarizing them in PsychArchives
- 2020: PsychLab Offline incentive fully operational

We expect most of the proposed ideas to be transferable to other empirical sciences, as the approaches are not strictly specific for psychology and hope these domains can profit from our endeavours.

Thank you very much. Any questions?