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for the Social Sciences

Screen recordings as a documentation tool

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Screen recordings as a tool to document computer assisted data collection procedures
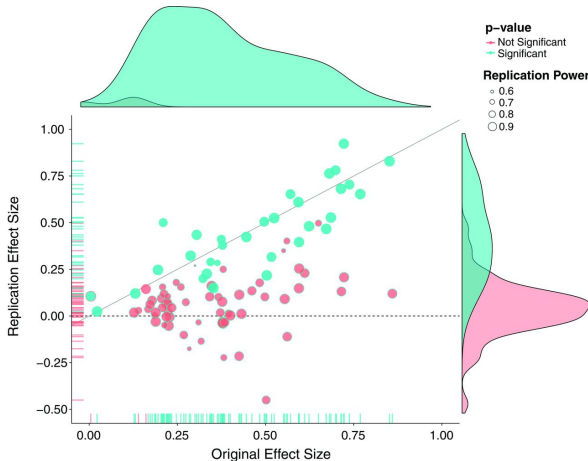
Schedule

- Replication and Peer-Review Problems
- Why sharing materials is not enough
- Screen Recordings
- A Tutorial

Replication

[…] we thereby admit that no isolated experiment, however significant in itself, can suffice for the experimental demonstration of any natural phenomenon […]
- Fisher, 1974, p. 13

Replication success

Non - Replications

$$\alpha \text{ or } \beta \ ?$$

Close Replications

- Close replications are informative (when Null result is found)
- Otherwise not finding effect can be attributed to changes in method (Doyen, Klein, Simons, & Cleeremans, 2014)

Small changes can lead to different results

Verbal overshadowing replication (Alogna et al., 2014)

- Small changes to procedure led to smaller effect size
- Changes were not 'flagged' by original authors

The problem

- Small changes can lead to behavioral changes
- Unless a phenomenon is fully understood we cannot know which details are important

Reporting all details of the method

Problems in reporting the method

(Possibly important) details are often missing from published papers:

My own experience:

- task omitted from paper by accident

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My own experience:

- task omitted from paper by accident
- font and colors not known (probably the default from the experimental software)
- "More generally, the method is not detailed enough."
- "Please indicate more explicitly what the evaluation question was and what the response options were [...]. This is the most important measure [...] **yet it is often not reported in full details**."

Post-hoc arguments

- So, any post hoc argument is valid when a study cannot be replicated?
- NO! Original authors have to document methods!
- "If the recent so-called crisis in psychology has highlighted anything, it is the prevalence and **danger of post hoc narratives**." - R. Morey, BayesFactor Blog

Solution?

TOP guidelines highest level of transparency of research materials:

"Materials must be posted to a trusted repository [. . .]"

Not enough?

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- Time costly to set up all folders, softwares etc.

More problems with Open Material

- Not justified to spend that much time to look at procedure (e.g., during peer-review)
- Even when running a replication (and having access to the materials and being able to run the software) it would be good to know how the original procedure looked like

Proposed solution

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- Possibility to show interaction of users with the experiment by recording keyboard and mouse input

Proposed solution

Add a link to the video in your publication:

Procedure

The learning phase followed the procedure of the experiment
by Heycke et al. (2017). A video of an example procedure
can be watched at: https://osf.io/eyfxs/ (please note that the

From Heycke & Stahl, 2018

Proposed solution

- Easy to access by reviewers and peers
- Great documentation for replication efforts
- e.g. osf.io/eyfxs/

Practical questions

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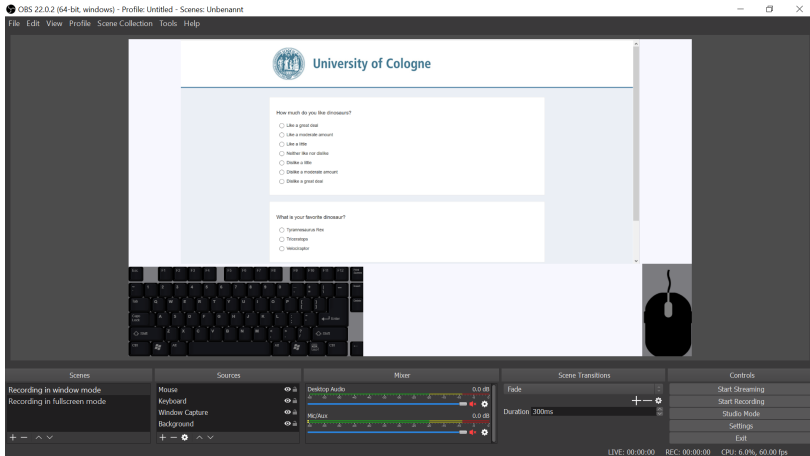- We tested OBS with PsychoPy2, OpenSesame, Inquisit, MediaLab, E-Prime and web browsers

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- We tested OBS with PsychoPy2, OpenSesame, Inquisit, MediaLab, E-Prime and web browsers
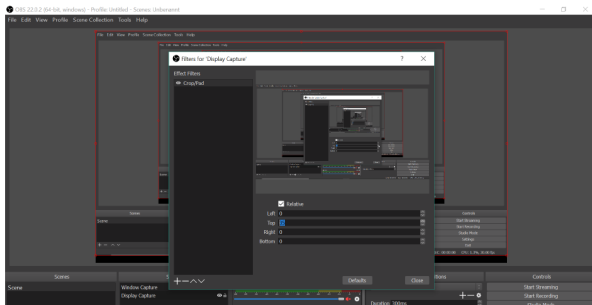- OBS runs on Win, Mac and Linux

OBS example

An example: osf.io/b4uyg

Tutorial & OBS

Tutorial & OBS

If you select „crop/pad", you can make specific changes in the right part of the window. For example, you can increase the digit corresponding to „Top" by clicking on the up arrow which will crop out more and more of the upper part of the video.

Summary

- Details missing from papers
- Possibly important for replication attempts and review process
- Open Material not enough
- Easy and highly detailed way of documenting the procedure is a screen capture of an example procedure

Thank you

- Tobias Heycke 🐦 @TobiasHeycke
- Lisa Spitzer 🐦 @Lisa__Spitzer
- Slides: osf.io/x3dtn
- Tutorial: osf.io/y6gbm

Caveat

- When timing is very important (in ms region), videos can give false impressions (e.g., in suboptimal presentation)
- When (many and extremely) different between subjects conditions are used, it is not feasible to record each