At the end of this course, we will leave single studies behind, and look at lines of research. You might have heard the saying 'One Study Is No Study'. In Lecture 7.1, the topic of Replications is discussed. Why are they important, and what types of replication studies are there?

Then, we will meet my personal nemesis: Publication Bias (Lecture 7.2). Researchers primarily share studies that confirm their hypotheses, and don't write up studies that show no significant effects, and that's a bad, bad thing. How can we ever know what's true, when we only have access to part of the research people do?

We will end on a more positive note by discussing Open Science, which is related to all things that will make science more transparent. In Assignment 7.1, you will try to answer a very simple research question, pre-register your hypothesis, and after collecting the data, share your results, data, and analysis script on the Open Science Framework.

Can't get enough? Some suggestions for additional reading:

Lecture 7.1

An excellent overview of what replication is, why we should do it, is provided by:

Schmidt, S. (2009). Shall we really do it again? The powerful concept of replication is neglected in the social sciences. Review of General Psychology, 13(2), 90–100. http://doi.org/10.1037/a0015108

A practical approach to designing replication studies is provided by:

Brandt, M. J., Ijzerman, H., Dijksterhuis, A., Farach, F. J., Geller, J., Giner-Sorolla, R., … Van't Veer, A. (2014). The replication recipe: What makes for a convincing replication? Journal of Experimental Social Psychology, 50, 217–224.

An explanation of why replication studies are important, but not rewarded enough in science, is provided in:

Koole, S. L., & Lakens, D. (2012). Rewarding Replications A Sure and Simple Way to Improve Psychological Science. Perspectives on Psychological Science, 7(6), 608–614. http://doi.org/10.1177/1745691612462586

Lecture 7.2

The classic paper on the file-drawer problem by Rosenthal is:

Rosenthal, R. (1979). The file drawer problem and tolerance for null results. Psychological Bulletin, 86(3), 638.

Another classic excellent paper, which also contains some empirical data, is published by Greenwald:

Greenwald, A. G. (1975). Consequences of prejudice against the null hypothesis. Psychological Bulletin, 82(1), 1.

A good introduction to publication bias can be found in:

Ferguson, C. J., & Heene, M. (2012). A vast graveyard of undead theories publication bias and psychological science's aversion to the null. Perspectives on Psychological Science, 7(6), 555–561.

An empirical examination of publication bias can be found in:

Fanelli, D. (2012). Negative results are disappearing from most disciplines and countries. Scientometrics, 90(3), 891–904. http://doi.org/10.1007/s11192-011-0494-7

A funny satirical piece, responding both the the article by Daryl Bem, and the article by Wagenmakers et al recommended for Lecture 2.2, is:

Bones, A. K. (2012). We Knew the Future All Along Scientific Hypothesizing is Much More Accurate Than Other Forms of Precognition—A Satire in One Part. Perspectives on Psychological Science, 7(3), 307–309. http://doi.org/10.1177/1745691612441216

Lecture 7.3

An article discussing how open science can lead to a scientific utopia is:

Nosek, B. A., & Bar-Anan, Y. (2012). Scientific Utopia: I. Opening Scientific Communication. Psychological Inquiry, 23(3), 217–243. http://doi.org/10.1080/1047840X.2012.692215

An article discussing how peer reviewers can promote open science is here:

Morey, R. D., Chambers, C. D., Etchells, P. J., Harris, C. R., Hoekstra, R., Lakens, D., ... others. (2016). The Peer Reviewers' Openness Initiative: incentivizing open research practices through peer review. Royal Society Open Science, 3(1), 150547.

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