

Call for Manuscript Submissions

Short Papers, submission deadline: September 1st 2014

**Special Issue of Communication Methods & Measures on
“Questionable Research and Publication Practices in Communication
Science”****Editors of Special Issue**

Tilo Hartmann (t.hartmann@vu.nl)

Ivar Vermeulen (i.e.vermeulen@vu.nl)

Department of Communication Science

VU University Amsterdam

The Problem

Across the globe, scientific research communities are engaged in heated debates about scientific conduct and questionable research and publication practices (often referred to as the “sloppy science” debate). This debate centers on the prevalence of questionable scientific practices (see Table 1 for an overview) and on the extent to which such practices hinder scientific progress. Although the debate originated in other research fields, such as Medicine (Ioannidis, 2005), Criminology (Eisner, 2009), and Psychology (see, e.g., the November 2012 issue of *Perspectives in Psychological Science*), it clearly is relevant to the practice of communication science. This special issue of *Communication Method & Measures* aims to spark a discussion about “sloppy science” in communication research - a critical reflection on our common research and reporting practices - with the goal of potentially improving our standards heading into the future.

Misconduct vs. questionable research practices: Most scholars would hope if not also agree that blatant scientific misconduct such as data fabrication or plagiarism is fairly rare. Although better ways of improving fraud detection perhaps need our attention, we believe a much more interesting and impactful debate concerns more common practices that are “questionable” rather than illegitimate. A compelling demonstration of the consequences of employing such borderline practices is provided by Simmons et al. (2011), who show that undisclosed flexibility in data collection and analysis allows researchers to “present anything as significant” (p. 1359). Questionable research practices (e.g., developing hypotheses after data analysis, Kerr, 1998; increasing sample size until results gets significant; not reporting problematic cases, variables, experimental conditions) may be implicitly encouraged by publication practices that focus on significant findings and “good stories” (Kerr, 1998; Simmons et al., 2011; Levelt Committee et al., 2012). Pressure to publish may also encourage researchers to polish their manuscripts and to push aside ethical concerns about research practices. As a result, many “false positive” findings end up published (Nelson, Simmons, & Simonsohn, 2012) that are unlikely to replicate if such replication attempts are undertaken (Francis, 2012).

Table 1: Examples of questionable research practices - compiled from Eisner (2009), Simmons et al. (2011), and Levelt Committee et al. (2012).

P-hacking: Practices to optimize the relative number of accepted hypotheses or significant results reported in a paper

- 1 HARKing: Hypothesizing After Results are Known (or: presenting exploratory findings as confirmatory findings)
- 2 “Peeking” (collecting extra cases until significance is reached; not conforming to pre-determined sample size)
- 3 Instrumentally omitting or collapsing experimental conditions
- 4 Instrumentally omitting or collapsing dependent/mediating variables
- 5 Instrumental removal or inclusion of outliers (i.e. without employing pre-determined exclusion criteria)
- 6 Instrumental removal of scale items (i.e. without employing pre-determined criteria for scale construction)
- 7 Instrumental composition of outcome scores (e.g., difference or change scores, dichotomizing scores, not conforming to a pre-determined analysis plan)
- 8 Instrumental use of covariates (i.e., not conforming to a pre-determined analysis plan)

Reproducibility problems: Practices that hamper the reproducibility of prior results

- 1 Incomplete reporting on research procedure
- 2 Incomplete reporting on used measurement instruments
- 3 Incomplete reporting about statistical tests applied
- 4 Presenting underpowered studies
- 5 Keeping incomplete records of raw data, analyses, materials

Publication bias: Practices that lead to selective publication of results

- 1 Cherry picking: submitting / accepting only studies that “worked”; ignoring studies that “failed” (also: the “file drawer” problem)
 - 2 Replication problem: low incentives to replicate prior studies and publish them
-

We believe that communication science is a field just as likely to suffer from questionable practices as any other field of research. Therefore, we seek to compile a special issue of *Communication Method & Measures* that contributes to a constructive debate focused on the prevalence, determinants, forms, instances of, and successful interventions against questionable research practices within communication science. The goal is to increase awareness of questionable research practices in our field, to illuminate the problem of false positives and reproducibility in our field, and to contribute to the ongoing discussion about how to further enhance our research and reporting practices.

Thus, we issue this call for short empirical research reports that examine questionable research and reporting practices in Communication Science (for format issues please refer to the submission guidelines of the journal). Papers that qualify for consideration include those that...

(1) Document the prevalence of and reasons for questionable research and reporting practices:

- We encourage the submission of empirical papers that address the **prevalence** of or **reasons** for questionable research and reporting practices in communication science. For example, we could imagine an adaptation of the study about questionable research practices conducted by John et al. (2012) to communication science.
- In addition, we think it is also helpful to empirically examine potentially problematic **publication practices** (e.g., a focus on “good stories”, significant findings, accepted hypotheses, concise methodological reporting, “new” stories rather than replications, detrimental incentives for authors, reviewers, editors, etc.), as well as the effectiveness of possible **solutions** (e.g., study pre-registration, publication of data sets, supplementary material, etc.).
- We also encourage content-analytical studies that examine **to what extent articles in leading Communication journals report sufficient methodological information** (e.g., confidence intervals, steps in handling data like dropping of cases or variables, etc., see Simmons et al., 2011). Also relevant in the present context is to what extent communication scholars produce cumulative and comparable knowledge by using standardized measurement instruments, or instead tend to adapt existing instruments or develop them “ad-hoc”.
- Furthermore, we are very much open to other ideas to empirically address these issues.

or

(2) Reflect on Replication

- Another set of short empirical reports may concern attempts to *replicate* central research insights of communication science. Such attempts could help the field to reflect on specific reproducibility problems within the field and on possible solutions to improve reproducibility (Koole & Lakens, 2012).
We like to encourage scholars to pick a central communication study, try to exactly replicate it, and then to not only report the replication but particularly also to *reflect upon* the replication attempt (e.g., encountered problems, etc.). Acceptance of replication studies will be based entirely on the quality of submitted research *proposals*, pre-registered through the Open Science Framework – hence before data collection and regardless of their outcomes (see below).
- Replication reports may be submitted as shorter papers, about 18 pages, double-spaced, 12 point, including references.

Submission Procedure

- **Early feedback about the general idea (until February 1st 2014):** To minimize overlap, we strive to prevent different scholars interested in contributing to the special issue from submitting papers on the same topic. Therefore, we suggest that potential contributors send a short and informal email (see email contact above) to one or both of editors of the special issue in which they roughly sketch their submission idea. Editors will indicate whether such a submission would fit the special issue, and whether the contributor would be willing to collaborate with others who propose a similar submission. Replicating authors will receive further instructions on how to submit and pre-register a full replication proposal.
- **Submission deadline for replication proposals: June 1st 2014**
- **Submission deadline for other short empirical reports: September 1st 2014**
- **Review of submitted replication proposals and empirical reports:** Following standard procedures of *Communication Method & Measures*, all submissions will be evaluated in a blinded peer-review by two reviewers. Editorial decisions ought to be announced within about 14 weeks after submission deadlines.

References

- Eisner, M. (2009). No effects in independent prevention trials: Can we reject the cynical view? *Journal of Experimental Criminology*, 5, 163–183.
- Francis, G. (2012). The psychology of replication and replication in psychology. *Perspectives on Psychological Science*, 7(6), 585–594.
- Ioannidis, J. P. A. (2005). Why most published research findings are false. *PLoS Medicine*, 2(8), e124. R
- John, L. K., Loewenstein, G., & Prelec, D. (2012). Measuring the prevalence of questionable research practices with incentives for truth-telling. *Psychological Science*, 23, 524–532.
- Kerr, N. L. (1998). HARKing: Hypothesizing after the results are known. *Personality and Social Psychology*, 2, 196–217. doi: 10.1207/s15327957pspr0203_4
- 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.
- Levelt Committee, Noort Committee, & Drenth Committee (2012). *Flawed science: The fraudulent research practices of social psychologist Diederik Stapel*. Retrieved from <http://www.tilburguniversity.edu/nl/nieuws-en-agenda/finalreportLevelt.pdf>
- Nelson, L.D., Simmons, J.P., & Simonsohn, U. (2012). Let's publish fewer papers. *Psychological Inquiry: An International Journal for the Advancement of Psychological Theory*, 23(3), 291–293.
- Simmons, J. P., Nelson, L. D., & Simonsohn, U. (2011). False-positive psychology: Undisclosed flexibility in data collection and analysis allows presenting anything as significant. *Psychological Science*, 22, 1359–1366.