

OPEN RESEARCH CASE STUDY



Open And Online Experimental Philosophy

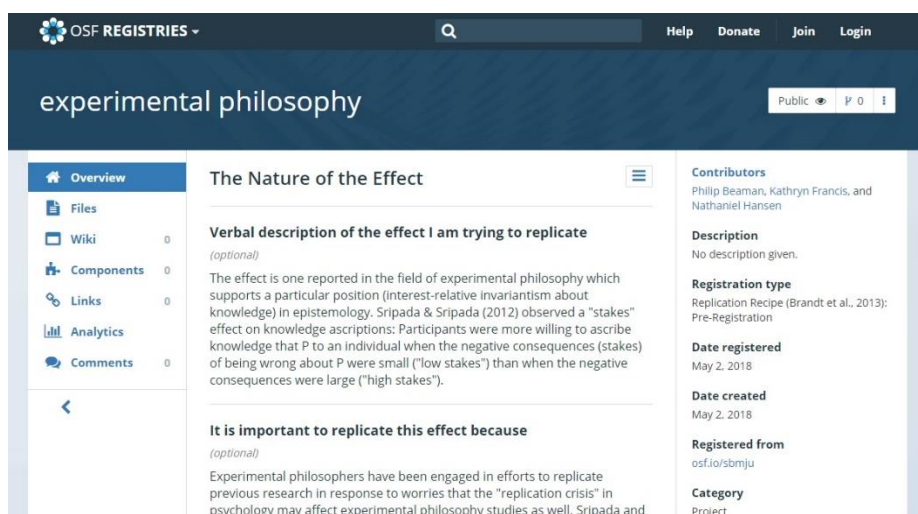
Using empirical methods from experimental philosophy and psychology, philosopher Dr Nat Hansen teamed up with psychologists Dr Kathryn Francis and Professor Philip Beaman to explore how people talk about knowledge in everyday language. Following a pre-registered study protocol they used the methods and tools of open reproducible research to test and qualify findings from a published study.

As philosophy develops new approaches to answering philosophical questions, it stands to benefit from responses in a variety of disciplines to the **challenge of experimental reproducibility**. We used empirical methods from experimental philosophy and psychology to explore how people talk about knowledge in everyday language, and whether 'knowing' something is influenced by what is at stake.

In an initial large-scale online study, following our established experimental procedures, we failed to find evidence that the 'stakes', or importance of being wrong, affect judgements about whether a subject knows a proposition. As this statistically powerful but null effect appeared to contradict **published results**, we decided to see if we could replicate those results. We publicly pre-registered our study design on the Open Science Framework (OSF)¹ using materials supplied by the original study authors so that we could replicate their methods.

Our study found a small effect of stakes on knowledge, but the overall pattern of results did not replicate those of the original study. Our findings were presented at an **experimental philosophy and psychology conference** dedicated to Open Research, hosted by University College London in 2018. The full results are forthcoming in an Open Access philosophy journal² and will be published with a set of freely available experimental tools for future work in this area. The study dataset is openly available from the University of Reading Research Data Archive³.

Our study found a small effect of stakes on knowledge, but the overall pattern of results did not replicate those of the original study.... The full results are forthcoming in an Open Access philosophy journal² and will be published with a set of freely available experimental tools for future work in this area. The study dataset is openly available from the University of Reading Research Data Archive³.



The screenshot shows the OSF Registries interface for a project titled "experimental philosophy". The page is divided into several sections:

- Overview:** A sidebar menu with options for Files, Wiki (0), Components (0), Links (0), Analytics, and Comments (0).
- The Nature of the Effect:** The main content area, which includes:
 - Verbal description of the effect I am trying to replicate (optional):** A paragraph describing the effect: "The effect is one reported in the field of experimental philosophy which supports a particular position (interest-relative invariantism about knowledge) in epistemology. Sripada & Sripada (2012) observed a 'stakes' effect on knowledge ascriptions: Participants were more willing to ascribe knowledge that P to an individual when the negative consequences (stakes) of being wrong about P were small ('low stakes') than when the negative consequences were large ('high stakes')."
 - It is important to replicate this effect because (optional):** A paragraph stating: "Experimental philosophers have been engaged in efforts to replicate previous research in response to worries that the 'replication crisis' in psychology may affect experimental philosophy studies as well. Sripada and
- Contributors:** Philip Beaman, Kathryn Francis, and Nathaniel Hansen.
- Description:** No description given.
- Registration type:** Replication Recipe (Brandt et al., 2013): Pre-Registration.
- Date registered:** May 2, 2018.
- Date created:** May 2, 2018.
- Registered from:** osf.io/sbrnju.
- Category:** Project.

Screenshot: Kathryn Francis; Content Copyright © 2011 - 2019 Center for Open Science

Our research methods also highlighted the risks to users of internet data collection services, who may inadvertently make themselves identifiable to others by sharing location information and other online identifiers.


For our experiments we collected data from participants using the **Amazon Mechanical Turk** crowdsourcing application. We became aware that research participants using Virtual Private Servers (VPS) can easily hide their identities. This can compromise the integrity of online research, because it enables participants to bypass exclusion criteria (e.g. by pretending to be somewhere they are not), and to complete an experiment multiple times using different IP addresses.

We used a freely-available IP address lookup package in the R programming language to write a script that can trace IP addresses back to legitimate Internet Service Providers or flag suspicious responses. This increases the transparency of online data collection procedures and the quality of the data collected. We describe our use of these techniques in a further paper on online testing methodologies⁴ currently under preparation for an Open Access methods journal. The R script for tracking suspicious responses is openly available on the **OSF**.

In using this IP tracking technology we discovered how easy it was to obtain location and identifying information about supposedly anonymous individuals. We were able to track people who had used public transport Wi-Fi networks and could identify which train service they had used, which stations they were travelling between, and at what time they were on a specific train. Of course, tools such as these can increase the transparency of online data collection and the quality of the data collected. But this also raises an important question about how 'open' our practices should be when sharing our resources could enable the misuse of participant data.

Open at a glance

- Replication study of published research found original results could not be reproduced
- Materials provided by original study authors to enable exact replication of methods
- Study design publicly pre-registered, ensuring transparency about confirmatory findings
- Findings, code and data to be made freely available under open licences

 For more information, please contact:

Dr Nat Hansen
Department of Philosophy
n.d.hansen@reading.ac.uk

Tel (0118) 378 6993

Professor Philip Beaman
School of Psychology and
Clinical Language Sciences
c.p.beaman@reading.ac.uk

Tel (0118) 378 7637

University of Reading
Whiteknights
Reading, RG6 6AL

 /theuniversityofreading

 @UniRdg_Research
www.reading.ac.uk

References and further information

1. Beaman, P., Francis, K., and Hansen, N. (2018). Experimental philosophy. Study pre-registration. <https://osf.io/sqeau>
2. Francis, K. B., Beaman, C. P., and Hansen, N. (2019). Stakes, scales and scepticism. *Ergo* (in press).
3. Francis, K., Hansen, N. and Beaman, P. (2019). Stakes, scales, and skepticism datasets (The psychology of philosophical thought experiments). University of Reading. Dataset. <http://dx.doi.org/10.17864/1947.205>
4. Beaman, C. P., Francis, K. B., and Hansen, N., Rewards and hazards of online testing: a review of methods and issues (in preparation).