Something something transition from above.

The following suggestions are a global commentary on how improvements in science might be achieved, rather than focusing on stop-gap solutions, as the evidence on replication and publication bias is clear (CITE). Transparency throughout the research process is the first key suggestion. The Internet has made it possible to share research across the globe, but a great deal of research still occurs behind laboratory doors to only be displayed in a final polished form. Websites like the Open Science Foundation grant insight into research processes, allowing researchers to share their methodologies, code, design, and other important components of their projects. In addition to posting materials for projects, pre-registration of hypotheses and methodology will be an important facet in scientific accountability.

A second suggestion involves the redefinition of evidentiary value or evidence for a studied phenomenon. The current focus on *p*-values has shown to be problematic, as many of the studies from the Open Science Collaboration (CITE) do not replicate at *p* < .05 or *p* < .005 (FIGURE FROM BELOW). With the change in transparency mentioned above, publishing research with solid research designs and statistics, regardless of *p*-values, will allow for a range of evidence to become available.  Publishing null findings is critical in replication and extension for discovering the limits and settings necessary for phenomena. Registered replications and reports will allow studies to be accepted prior to results being known, thus allowing researchers to focus on experimental design and hypotheses apriori instead of p-values posthoc. Reports should describe multiple indicators of evidence, such as effect sizes, confidence intervals, power analyses, Bayes Factors, and other descriptive statistics. A misunderstanding of statistical power still plagues psychological sciences (Bakker, CITE), and often, individual research labs may not have the means to adequately power a proposed study. Multilab studies and collaboration with other scientists is fundamental to alleviating these issues, while encouraging interdisciplinary science. Additionally, collaboration increases our statistical abilities, as every researcher cannot be expected to be proficient in all methods and analyses, but teams of researchers can be assembled to cover a wider range of statistical skills to provide adequate estimates of evidence in their reports.

Finally, progress must be obtained through a cultural shift across all levels of research practice. As individual researchers commit to improved methods, statistics, and transparency, higher quality reports will be published. Principle investigators can lead by example, training their graduate students, presenting at conferences, and otherwise disseminating knowledge to promote improved methodology. Training in the classroom is crucial, as it is often the zeitgeist to continue to teach outdating methods. Learning new methods and analyses is difficult, but open source mechanisms, such as massively open online courses, provide the ability for all levels of individuals to improve their skills. The open source community continues to create accessible analyses through the use of applications such as Shiny, and these efforts should be encourage and potentially incentivized by their home institutions. As training and implementation expand, reviewers for publication should focus on examining for appropriate methods, multiple sources of evidence, and transparency, rather than *p*-values. Editors and boards of journals can enforce new reporting and practice standards, as the Association for Psychological Science has enacted by requiring effect sizes and confidence intervals, along with Open Science Badges to encourage transparency. However, all of these suggestions require a hard examination of the incentive structure of publishing, especially as tied to tenure-track system. Unacceptable statistical manipulations, such as *p*-hacking, may be avoided if all forms of evidence are acceptable to publish, which creates less pressure to find statistical significance at any cost to keep one’s job.