Preregistered Direct Replications (PDRs) report high quality, preregistered, direct replications of studies published in *Psychological Science*. The format was introduced to the journal by former Editor-in-Chief, Steve Lindsay [Lindsay, J. S. (2017), Preregistered Direct Replications in *Psychological Science, Psychological Science*, 28(9), 1191-1192.]. In the years since its introduction, the format has moved through infancy and into adolescence. As anyone who has ever been an adolescent can attest, entities in this phase of their development often could benefit from suggestions and guidance on how to navigate the challenges they face. Moreover, as the field of tests for replication becomes more crowded, the already “high bar” that Steve set for PDRs has become even higher, with greater expectations that the work accepted in this category make important and impactful contributions to the field. The following guidelines are intended to aid authors who are considering a PDR submission, so as to maximize the quality and impact of the work. This document also provides information on the process of review and evaluation of PDRs.

**Criteria for Publication**

As with all *Psychological Science* submissions, the primary criterion for publication of a PDR is empirical and theoretical importance and impact. Thus authors of a PDR must make a convincing case that the test for replication will make a valuable contribution to understanding a phenomenon and/or advance a theory of broad current interest to psychological scientists. It is not sufficient to argue that the original study (a) was published in *Psychological Science*, and thus that the journal is obligated to publish a test for replication of it; (b) has been cited many times; and/or (c) has yet to be directly replicated. Instead, PDR submissions must make clear what is at stake—empirically and/or theoretically—and how the test for replication will contribute above-and-beyond the original article. Meeting these criteria likely will require that in addition to replication procedures, the new work will feature means to reconcile any discrepancies between the findings of the original and replication studies, shed new light on the psychological processes or mechanisms involved, and extend the original study in theoretically important ways.

To qualify as a Preregistered Direct Replication, a replication study should be designed so as to test the same hypotheses in essentially the same way as the original study. At the same time, it is understood that “direct replications” may involve a change to surface-level aspects of the procedure, especially in cases when many years have passed since the original study, and methodological advances have been made in the mean time. As well, it often is the case that to further elucidate the phenomenon under investigation, additional manipulations, conditions, or populations—beyond those in the original study—will be necessary. In the final report of PDRs, the possible implications of changes to original study procedures should be discussed, such that the new conditions may attest to the replicability and generalizability of the findings (assuming replication), or may provide an explanation or partial explanation for discrepancies between the findings of the original study and the test for replication (assuming non- or partial-replication).

**Review Process**

PDRs are a form of empirical article in which the methods and proposed analyses are preregistered and reviewed prior to research being conducted (as per the procedure for Registered
Reports as described at https://cos.io/rr/). The review process for PDRs is divided into two stages. In Stage 1, editors and reviewers assess study proposals before data are collected. In Stage 2, reviewers consider the full study, including results and interpretation. As part of a Stage 1 submission, authors may report the results of pilot tests. However, data collection for the full study or studies can commence only once Stage 1 acceptance (a.k.a. in principle acceptance) has been secured. (Note that when the PDR mechanism first was introduced, authors were encouraged to receive Stage 1 acceptance prior to data collection. This step now is required. Submissions that do not receive Stage 1 acceptance prior to data collection will not be considered under this mechanism.)

Before undertaking the work, authors submit a **Stage 1 manuscript**, which will include only an Introduction, Methods (including proposed analyses), and Pilot Data (where applicable). In considering papers at Stage 1, reviewers will assess:

1. The importance of the research question(s) for contemporary psychological research and theory.
2. The likely impact of the work in terms of its potential to illuminate the phenomenon, above-and-beyond the original article and any prior tests for replication.
3. The logic, rationale, and plausibility of the proposed hypotheses.
4. The soundness and feasibility of the methodology and analysis pipeline (including statistical power analysis where appropriate).
5. The adequacy of the methods and proposed analyses to address the research questions, both in terms of the test for replication and in terms of further elucidation of the phenomenon under investigation.
6. The sufficiency of outcome-neutral tests for ensuring that the results obtained can test the stated hypotheses, including manipulation and sensitivity checks (see Center for Open Science, 2017).

More so than a standard research study, PDRs directly build on previously published research. For this reason, it is highly desirable that researchers considering a test for replication consult with the corresponding author of the original study, or other members of the original author team. Researchers should include in their submission a report on the outcome of this step and those who do not take it should include explanation of why it was omitted.

Following assessment of the protocol by editors and reviewers, the manuscript can then be offered in-principle acceptance (IPA; note that a submission may undergo a round [or rounds] of review and revision before acceptance). IPA means that the journal virtually guarantees publication if the authors conduct the study in accordance with their approved protocol and meet the other criteria for a Stage 2 manuscript (below). With IPA in hand, the researchers then implement the study.

Upon completion of the research study, authors submit a **Stage 2 manuscript** in which they provide a complete report of the work, including Results and Discussion sections. This Stage 2 submission then undergoes extended review. Although there will be attempts to ensure continuity in the review process (i.e., overlap in reviewers of the Stage 1 and Stage 2 submissions), it is not guaranteed. For the Stage 2 review, reviewers will consider:
1. Whether the data are able to test the authors’ proposed hypotheses by satisfying the approved outcome-neutral conditions (such as manipulation and sensitivity checks, etc.).

2. Whether the introduction, rationale, and stated hypotheses are the same as the approved Stage 1 submission.

3. Whether the authors adhered precisely to the registered experimental procedures.

4. Whether any unregistered post hoc analyses are justified, methodologically sound, and informative.

5. Whether the authors’ conclusions are justified given the data.

Please note that at Stage 2, manuscripts may undergo one or more rounds of review and revision before final acceptance.

**Further Requirements for Publication**

Before publication of the final report, authors will be required to make their data, and code or scripts publicly available on the Open Science Framework (https://osf.io/) or other recognized, permanent repository. They also will be required to make their study materials publicly available, if they have not already been made available by the original authors. Authors also must formally Register their protocol for the replication study on the Open Science Framework (https://osf.io/) or other recognized, permanent repository.

I intend to revise this document over time to provide more information to maximize the quality and impact of Preregistered Direct Replications. For the moment, I hope you find this guidance helpful. And as a final word: as is the case for any set of guidelines, potential authors may take—or leave—the advice herein.

Patricia J. Bauer
Editor-in-Chief, *Psychological Science*
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