

Editorial Maintaining Quality

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Survey Research Methods has slightly revised its publication policies. Firstly, starting with the publication of this Editorial, SRM will accept – under specified conditions – manuscripts that discuss experiments in non-probability samples for peer-review. Secondly, SRM will require authors to publish replication materials of their study as Online supplement to their article. Finally, Survey Research Methods will publish replication studies of articles published in the journal. This Editorial gives reasons for these changes.

Keywords: Editorial policies, non-probability samples, experiments, TOP-Guidelines

SRM is – and has always been – a journal focusing on general population surveys. It has thus not published studies on small samples of student populations, or non-probability samples. In the firm conviction that probability samples are a quality criterion, the founding editors of SRM made the decision to publish only articles based on data from probability samples. Full stop.

The conservative attitude of SRM on non-probability samples has come under pressure from various sides. First, there was version 2.0 of the markup language HTML in 1995, making it possible to use the World Wide Web for filling in forms, and thus for completing survey questionnaires online. Web surveys rapidly became very popular among survey researchers, and even more so among all others who want to gather *some* data. Today, web surveys are the dominant mode for students of all faculty who want to collect their *own* data for their master theses, or seminar papers. Web surveys are used by newspapers to learn about the opinion of their *readers*, and sometimes – as Jelke Bethlehem (2015) reports in his essay on “Sunday shopping” at the end of this issue – web surveys are used by policy makers to prepare an informed policy decision. Bethlehem reminds us in an entertaining way, that the great majority of those attempts use non-probability samples and thus produce only a mirage of the parameter of interest; it goes away when taking a closer look.

A second challenge to SRM’s non-probability policy is more serious: experiments. Web surveys not only made data

collections through surveys cheaper and faster, web surveys also simplified the implementation of *real* experiments. Real experiment thereby does not refer to an experiment in the tradition of Meselson and Stahl, who purposefully created observations that are consistent with only one of three conflicting theories; see (Holmes, 2001) for a discussion.¹ Instead, the term “real experiment” is used for experiments designed in the tradition of clinical trials, which are used to study whether or not there is a causal effect of *one* particular variable of interest. The major building block of such experiments is the randomized assignment of research units to a treatment and a control group. If the dependent variable differs between the two experimental groups, and pure random fluctuations have been ruled out by conventional statistical tests, it can be concluded that the treatment has a causal effect.

Experiments have the great advantage that sampling no longer matters. The identification of the treatment effect relies solely on successful randomization. It might be the case that the treatment effect is only valid for the very specific types of observations used in the experiment, but this is regarded as acceptable. In fact, in medicine, knowing that some drug heals West European women aged 25-30, could be a big relief for those women. However, it is somewhat more debatable, if it is analogously useful for survey research to know that a specific question format decreases item non-response for female students of, say, social psychology.

A sometimes overlooked flaw in the *research program* of real experiments is that the conventional technique to rule out pure chance will lead us to accept approximately 5% of treatments as having a causal effect when there is in fact none. Letting the research program run forever without cau-

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¹I wish to thank Steffen Ganghof of the University of Potsdam for pointing me to the Meselson and Stahl experiment.

tion will therefore create a batch of accepted artefacts. Given the ease with which we can now run experiments in web surveys on convenience samples, journals such as *Survey Research Methods* must prevent that from happening. A powerful counter-measure is to insist on the formal derivation of the hypothesized causal effect from (accepted) general theories. Another counter-measure is replication. If experiments are done in a large sample with a sampling mechanism that is independent of the dependent variable one could, for example, replicate the analysis for dissimilar groups – males and females, old and young, rich and poor, etc. If the causal effect of a treatment can be shown for each of these groups, the evidence would be more convincing. A more serious replication, however, would be one that repeats the entire experiment. Starting with the next issue, *Survey Research Methods* will therefore accept replication studies for publication; see more on this below.

Decreasing response rates of probability samples are the third challenge to SRM's non-probability policy. With response rates below 100%, the sampling probabilities are no longer fixed by the sampling design. Uncertainty about the true sampling probabilities steps in, and this uncertainty rises with the amount of nonresponse. With low response rates, sampling probabilities are more or less unknown, and probability samples are probability samples only by design. The sampling probabilities might still be estimable, but this is sometimes also true for the unknown sampling probabilities of convenience samples (Wang, Rothschild, Goel, & Gelman, 2015). In this regard, the difference between probability samples and non-probability samples is now blurry.

The challenges to the censorious reliance on probability samples has led SRM to slightly revise its publication policy. Starting with the publication of this Editorial, we now invite colleagues to submit articles based on non-probability samples. SRM will accept manuscripts that discuss experiments in non-probability samples for peer-review, if the key variable of interest is derived from general theory, and measures to study the external validity have been taken. SRM will also accept for peer-review manuscripts of observational studies based on convenience samples, if measures were taken to estimate the research units' sampling probabilities. Finally SRM explicitly invites manuscripts that discuss the possibilities and risks of drawing inferences from non-probability samples.

Being more permissive in terms of non-probability samples, SRM from now on stresses more seriously the crite-

rior of inter-subjective testability (Popper, 2005, pp. 22–26). Like many other Journals, SRM has signed the [Transparency and Openness Promotion Guidelines](#) of the [Center for Open Science](#). As a consequence, *Survey Research Methods* will publish replication studies of articles published in the journal. Replication studies will undergo the same reviewing process as original journal articles. When they are published, replication studies will be marked as such.

As a second consequence, starting with the publication of this Editorial, SRM publishes papers only if the data, methods used in the analysis, and materials used to conduct the research are clearly and precisely documented and are available to any researcher for purposes of reproducing the results or replicating the procedure. Specifically, authors must *provide program code, scripts, codebooks, and other documentation sufficient to precisely reproduce all published results*. These replication materials must be uploaded as supplementary materials on the Journal's webpage after final acceptance at the very latest. Replication materials will not be part of the reviewing process. Additionally, authors using original data must make the data available at a trusted digital repository, and data must be appropriately cited in the text and listed in the reference section – a list of repositories can be found on SRM's webpage. It is thereby understood that in some cases access will be provided under restrictions to protect confidential or proprietary information. SRM may also grant exceptions to data and material access requirements.

The Editorial Board believes that these changes help SRM stay current in a changing world where web surveys are ubiquitous and data sharing is easier than ever.

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