Introduction to the Special Section on Advancing Science

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“Only through criticism can knowledge advance . . .”
—Magee (1973, p. 6), describing Popper's philosophy of science

The November 2012 issue of Perspectives on Psychological Science created quite a stir. It consisted solely of two special sections: the first on replicability and the “crisis of confidence,” the second on research practices. The articles were made available free of charge and have been downloaded hundreds of thousands of times.

The field has responded in various ways to the events that spawned the problems addressed in that issue. For example, editorial policies about what should be included in manuscripts have evolved, replications and failures to replicate are being published, and more journals have become open access. Also, in direct response to the November 2012 issue, Perspectives was flooded with manuscripts about research practices in psychology and about philosophy of science generally. We decided to call a moratorium on publishing such manuscripts for a few months as attitudes within the field changed and practices caught up. But now we are ready to resume.

This special section is a set of articles that (mostly) came in separately, but we grouped them together here because they fit together nicely. The section begins with an article that was written by the late Bill McGuire about 35 years ago and never published (McGuire, 2013, this issue). It is edited by John Jost, and in his introduction, Jost describes how perfectly timely this article is for the crisis of today. The next two articles deal with two practices that have been advocated by those in the vanguard of changing practice. LeBel and company (2013, this issue) asked authors to disclose information about their experimental designs and procedures that are often left out of published papers, and they have created a website where any author can do so. Researchers seem enthusiastic about the value of such a resource. Perrino and her large team (2013, this issue) report on a successful example of collaborative data sharing. They explain the barriers and benefits of such endeavors to the various stakeholders and describe how collaborative data sharing can be effectively implemented. Boot, Simons, Stothart, and Stutts (2013, this issue) address the old yet still pervasive problem of placebo effects in psychology with some new data and arguments.

The final two articles are not about methods per se; rather, their juxtaposition illustrates something I think we need more of in our field (as related to the quotation above): critical discussion. Firestone's article (2013, this issue) is a critique of research on embodied perception, mostly that emanating from the laboratories of Proffitt and colleagues. Firestone reports no new data; instead, he enumerates criticisms he has about the interpretation of data that already exist. Then, in a long reply, Proffitt (2013, this issue) responds to the criticisms and clarifies his embodied approach.

I believe that there is much to be learned from such discussions and hope to have more in Perspectives in the future. However, creating a productive dialogue of this sort is not easy—authors need to be arguing over theory and interpretation, not fact; they need to be addressing the same points, not arguing past each other; it needs to be done in a civil manner; and neither side should have the advantage of knowing what the other side will say in advance. The protocol here was that Firestone submitted his manuscript, it went out to four reviewers (including Proffitt, whose review was not relayed to Firestone), Firestone revised based on the almost-accepted Firestone paper. As the editor, I tried throughout the process to make sure that there were no perceived slights to the other author or his views and that there was agreement as to facts (e.g., descriptions of experiments). Accordingly, both authors responded to a final set of editorial comments to make sure the focus was on the contended scientific issues.

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Comments from readers on this topic (or on this process) may be submitted only after Perspectives publishes a history of embodied cognition research as part of the Celebration of 25 Years of APS in the September 2013 issue.

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References