

Commentaries

Enough Talk, It's Time to Transform: A Call for Editorial Leadership for a Robust Science

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The focal article (Grand et al., 2018) addresses one of the most important issues across virtually all areas of science (Goldstein, 2010): the trustworthiness and credibility of a scientific discipline. Once these attributes are lost, it is difficult to regain them within a reasonable time frame, if ever. In contrast to previous articles on this topic (e.g., Kepes & McDaniel, 2013), the authors of the focal article provide a detailed review of the stakeholders surrounding industrial and organizational (I-O) psychology, including their potential effect on the robustness and trustworthiness of our scientific discipline. In essence, the focal article describes I-O psychology's ecosystem responsible for fostering robust and credible science. The authors should be commended for their comprehensive undertaking, and we have no substantive disagreements. However, implicitly, as with most articles on this vital topic, the focal article tends to take a bottom-up approach to decision making and change. The bottom-up approach is an emergent process where the individuals involved in the day-to-day activities are primarily responsible for the decision-making process and resulting change (Kindler, 1979). Thus, changes resulting from this process are incremental and typically involve making minor adjustments to existing processes (Bartunek & Moch, 1987).

By contrast, the top-down approach to decision making is typically a more planned approach, instigated and sustained by formal leaders (Kindler, 1979). Top-down change is particularly important when radical changes, which require fundamental changes in culture, are necessary (Huy, Corely, & Kraatz, 2014). This is the type of change that is needed to achieve the goal of creating a more robust science. Although suggestions from researchers about

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what needs to change may be informative, they are examples of bottom-up change, which is unlikely to be effective. Thus, we advocate the use of a top-down approach aimed at initiating and making sweeping transformational change. Stated differently, substantially more editorial leadership is necessary for change to occur. In areas such as healthcare, transformational change was found to be much more likely “when small incremental improvements are linked with large-scale management changes” (Riley, Parsons, Duffy, Moran, & Henry, 2010, p. 72). In further support of this, research found that change initiated in a bottom-up manner but implemented and executed in a top-down manner is more likely to gain support and, thus, be successful (Heyden, Fourné, Koene, Werkman, & Ansari, 2017). This occurs because those at the top (e.g., editors) have a more comprehensive understanding of how ongoing changes affect the field as a whole. This best positions them to address any issues that may come about during the process of change.

A clear assignment of responsibilities outside of the typical “authors have to,” “reviewers ought to,” or “editors should” is missing from the recommendations from the focal article and other articles on this topic. We argue that general recommendations without the assignment of who specifically is responsible for the implementation and follow-through of these recommendations (i.e., who is responsible for ensuring that authors, reviewers, and editors actually do what they ought to do) may not bring about the much-needed transformational change necessary to halt the credibility loss experienced in our scientific discipline. For example, we have known for decades that publication bias poses a problem to the accuracy of our cumulative scientific knowledge (Rosenthal, 1979; Sterling, 1959). Yet, to this day, no mandatory procedures have been implemented to combat the presence of this bias, potentially because nobody feels responsible to address this problem. Consequently, instead of actively addressing this issue, it has become more and more problematic over the years (Fanelli, 2012). Similarly, many have argued that journals place too much emphasis on the development of “theory” and highlighted the detrimental effect that this has on our discipline (Cucina & McDaniel, 2016; Hambrick, 2007). Yet, instead of combatting and reversing this trend, it may have accelerated in the past decade or so (Campbell & Wilmot, 2018; Kepes & McDaniel, 2013). The situation is similar for other recommendations, such as the requirement to make one’s data available. Despite numerous calls for data-sharing requirements, not much has changed (Wicherts, 2011). This is especially troublesome when one considers that results from articles where the authors have shared their data are stronger and more robust (Wicherts, Bakker, & Molenaar, 2011).

Taken together, stakeholders in our scientific discipline, including leaders and gatekeepers such as editors and reviewers, have known about many of our discipline’s problems for decades. Yet, the problems persist. It is our

belief that describing the issues in more detail and highlighting more stakeholders in our scientific ecosystem is unlikely to bring about the necessary change to restore the trustworthiness and credibility of our scientific discipline. Our practices and procedures have to change. Such a change would be transformational, which is more likely to be successful with a top-down approach to decision making and organizational change (Huy et al., 2014; Riley et al., 2010). For example, in the medical sciences, it took congressional action in the form of laws and regulations to establish official research registries (Stetz & Subramony, 2013). Yet, medical researchers did not start to routinely preregister their studies until the International Committee of Medical Journal Editors (ICMJE) made publication in its journals contingent upon preregistration (De Angelis et al., 2004) and the Food and Drug Administration Amendments Act of 2007 established civil monetary penalties of up to \$10,000 per day for noncompliance with the law (Laine et al., 2007). Before the requirement from the ICMJE and the threat of monetary penalty, medical researchers tended to ignore the government mandated registration by exploiting loopholes in the laws and regulations (Dickersin & Rennie, 2012).

As this illustrates, it may require the diligent enforcement and the threat of severe punishments for the required transformational change to take place. Scherer and Trelle (2008) reported that only one-fourth of medical researchers were willing to disclose all items required by the registration database before the rather stiff civil penalties were introduced by the Food and Drug Administration Amendments Act of 2007. After this act, registration increased dramatically (Dickersin & Rennie, 2012). This increase was attributed to the enforcement of the laws and regulations, which ensured that the transformational change was successful (Dickersin & Rennie, 2012).

Therefore, the assertion that “surveillance is not the answer” (Derksen & Rietzschel, 2013, p. 295), when it comes to the enforcement of rules and regulations to ensure that a scientific discipline produces robust and trustworthy findings, is unsound. The threat of stiff financial penalties as well as the warning from the editors of the top medical journals did more than the countless articles that discussed, for instance, the need for an open research culture. We should stop making excuses for why we cannot implement some of the recommendations made in our journals over the last several years (e.g., Kepes & McDaniel, 2013; O’Boyle, Banks, & Gonzalez-Mulé, 2017; Pashler & Wagenmakers, 2012). For example, the argument that we cannot make data available because of privacy concerns (Gabriel & Wessel, 2013) or concerns from test publishers (Jones & Dages, 2013) seems to be somewhat disingenuous, as privacy concerns from subjects in medical trials tend to be higher and concerns from pharmaceutical companies should be more severe than from psychological test vendors, especially after one anonymizes the data.

Yet, in the medical sciences, there is an implicit acknowledgment that “unreported trials, or those reported in an imprecise or incomplete manner, generally have limited to no societal value” (Zarin, Tse, Williams, & Carr, 2016, p. 2003). Maybe we need such an acknowledgement as well. The hope that, by some magical intervention, authors, reviewers, and editors, among other stakeholders, will suddenly start to change their behaviors, without incentive, seems unlikely after all these years. After all, as scientifically literate individuals, we should know that past behaviors are the best predictors of future behaviors.

We thus recommend that the editors of our top journals come together and form a group analogous to the ICMJE (e.g., the “International Committee of I-O Psychology and Management Journal Editors”). If this group of top-tier journal editors agrees to make publication conditional upon pre-registration, authors are likely to follow suit, just as they did in the medical sciences. Similarly, if the editors of our top journals agree to make publications conditional on factors such as public data availability, similar to what the PLOS journals do (i.e., “PLOS journals require authors to make all data underlying the findings described in their manuscript fully available without restriction, with rare exception”; <http://journals.plos.org/plosone/s/submission-guidelines>), authors are likely to follow suit. Put differently, whatever the editors of our top-tier journals decide, authors likely comply with, as article publications are the primary determinant of an author’s market value (Gomez-Mejia & Balkin, 1992). Also, we predict that once the most prestigious journals establish criteria for article publication, other journals will follow suit, as the practices that our top journals follow and implement will set the standard in the journal marketplace. We note that many journals, including our top journals, already signed up to follow the Journal Editor Ethics 2.0 Code (<https://editorethics.uncc.edu/>), which binds our journals to refrain from coercive citation practices and encourages the promotion of ethical research practices, among other practices and standards. Thus, the first step in the formation of a group of journal editors to establish potential publication criteria was already taken.

Instead of maintaining our current publishing system, which encourages researchers to marshal the available “methodological flexibility” (Kepes & McDaniel, 2013, p. 256) to “chase the significant” (Ferguson & Heene, 2012, p. 558), a stronger focus on research quality, potentially by requiring study registration and/or data sharing, initiated by our journals should bring about the transformational changes needed. To ensure that the changes will not be isolated, they could be combined with changes generated via bottom-up decision-making processes, where authors, reviewers, and other stakeholders determine additional criteria and practices for article publication that could be implemented by our journals. A combination of top-down and

bottom-up decision making may be the best approach for the transformational change to a robust and trustworthy science to be successful and long lasting.

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Robust Science: A Review of Journal Practices in Industrial-Organizational Psychology

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The focal article (Grand et al., 2018) provides an exemplary roadmap for improving the practice of robust science in industrial-organizational (I-O)

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