
Our Scholarly Practices Are Derailing Our Progress: The Importance of “Nothing” in the Organizational Sciences

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A recurrent theme in the history of industrial and organizational (I–O) psychology has been to (re)evaluate the vitality, importance (Cascio, 1995), and identity of the field (Ryan & Ford, 2010). We believe that such self-examination and the discussion that typically ensues is valuable. Kepes and McDaniel (2013) fire another important missive in this line of self-critique and focus squarely on the quality of the information we are generating in our scientific endeavors. We focus our commentary on one particular aspect of their message: the publication of null (or even nil) results. Specifically, we discuss why null results may appear rarely in our literature. Then, we offer suggestions and prescriptions for how our field should promote the publication of results without regard to statistical significance.

As noted by Kepes and McDaniel, the *Journal of Business and Psychology* has devoted a special issue to null results (Nothing, Zilch, Nil: Advancing Organizational Science One Null Result at a Time). As coeditors of this special issue along with

Larry James, Chuck Lance, and Chuck Pierce, we saw this as a great opportunity to take our science in a different direction and treat the special feature as a case study of sorts. The reactions to the special feature were bimodal. A number of people we spoke to expressed their appreciation and made comments such as “I wish there were more opportunities for publishing null results that are, nonetheless, meaningful” and “this is so needed in I–O.” Colleagues also noted that by asking for papers in which null results take center stage, we would undoubtedly be flooded with a tsunami of submissions from which we might find a thimble full of quality manuscripts. We would simply get every poorly conceived, badly measured, underpowered, and otherwise worthless study ever conducted. We would be opening the proverbial floodgates.

As a result, we built into our editorial process a proposal-screening step so as to manage the anticipated flood. What happened next was interesting. We did not receive 200 or 100 or even 75 proposals (which is what we typically get for special features). We received 30 proposals. Half of the proposals were not invited to the next stage of the process (a full submission). Reasons primarily included not displaying sufficient methodological rigor to claim the existence of a null effect and insufficient

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rationale for the study or the importance of what was being studied. Of the 15 full papers that made it through the initial screen, four were later accepted for publication.

We believe the fact that we were not inundated with manuscripts is likely a product of researchers' (a) recognition (self-awareness) of the methodological deficiencies in their work that may be driving null results and (b) being conditioned to view null results as worthless. If the first reason was the primary driver of individuals' decisions to not submit to this special issue, then we think we should be collectively proud, as a field, that we recognize null results frequently are produced by measures with poor reliability, research designs that are not appropriate for answering the question at hand, low statistical power, and a litany of other methodological flaws. If the second reason was the primary driver of individuals' decisions to not submit to this special issue, we need to think about mechanisms that encourage us to more broadly consider the value of research and to not be so quick to assume null findings mean we learn nothing from the study.

The question becomes how can our field encourage the publication of high-quality research that produces null findings? Although we like the idea proposed by Kepes and McDaniel of reserving journal space for these efforts, we would like to suggest a few additional approaches.

1. *Resocialization.* Our field must come to value the importance of null research. Research showing no effects can be critically important to deductive efforts (e.g., theory testing) and inductive efforts (e.g., testing the efficacy of an intervention). Quite simply, such results are essential to our growth as a science. A greater embracing of null results in publications will also promote greater integrity in our research. Authors will do precisely what journal editors and reviewers reward them for doing.

Because null results are not published (at least commonly), authors focus their papers around significant results. Given that publishing, for many individuals, is a central aspect of career success, the incentives to engage in less-than-desirable behaviors are enormous (e.g., repackaging of research to give the impression that hypotheses were offered a priori, HARKing, selectively reporting only those studies that produced statistically significant results, etc.). A resocialization of the importance of null results also directly addresses the publication bias concern raised by Kepes and McDaniel.

2. Examine and potentially modify training models. Methodological rigor is critical in all research and perhaps even more so in research examining the null given that error serves to promote the discovery of null results. We need to emphasize in our formal and informal training clear methods for reaching confidence in observed null findings. Topics that are likely to feature prominently in this regard include a strong understanding of statistical power, the importance of using established (or the process of establishing) high-quality measures, the need for triangulation using different methods, and the appropriate manipulation of experimental conditions. These and other topics are likely already covered in most graduate training programs, but we believe they are not frequently (if ever) discussed in relation to null results. Instead, null results are often treated as a "bad" outcome in many methodology courses and discussions. Methodological rigor and the outcomes of our research are two different, though certainly related, topics. Rigorous research design and data collection should be the fundamental characteristic by which we generate confidence in our observed results.

3. Expand beyond conventional statistical tools. We should welcome alternative approaches to evaluating our data. Traditional significance testing is but one paradigm for advancing scientific knowledge. It is an approach, however, that does not readily lend itself to meaningfully interpreting null effects as evidence for the lack of “true” relations. Other approaches such as reporting point estimates for effect sizes along with confidence intervals and the use of Bayesian methods (Kruschke, Aguinis, & Joo, 2012) should be more fully embraced. Alternative statistical foundations provide additional information that can uniquely influence the development of a broader range of collective knowledge.
4. Editors and reviewers must be encouraged to keep an open-mind through the review process and not view statistical significance as isomorphic with research impact. Ultimately, null results produced through a high-quality research design should be afforded more weight than significant results produced by low-quality designs. One can collect data with quality methods and measures and simply not find evidence for a particular effect. Such efforts should not be punished, as meaningful null results are important for advancing our science. If gatekeepers convey a message that null results will, by default, be routinely rejected or dismissed, authors will adapt counterproductively (e.g., selectively dropping hypotheses and/or variables after seeing data and results; using control variables in a manner to finesse a significant result; handling outliers in a way as to misrepresent findings). Such deleterious activities ultimately hinder our scientific progress.
5. Consider changes to our journal evaluation system. Journals are often evaluated based on impact factors. As a result, editors are understandably

focused on maintaining or improving citation counts associated with published articles as such improvements are typically associated with stronger impact factors. Unfortunately, this focus may lead to practices that have deleterious effects on our literature. Consistent with the theme of this commentary, we believe that one of the outcomes of these pursuits is the almost complete lack of studies reporting null results. Namely, it would seem reasonable to assume that null findings may just not be cited to the extent of significant findings as the discovery of an effect can often fuel a research stream rather than end a stream of research. If this is indeed the case, our emphasis on impact factors certainly plays a role (perhaps unconsciously) in pushing journal editors and reviewers to eschew research that produces null results. The use of broader journal quality indicators may ameliorate this issue. Examples of such indicators could include stakeholder ratings of a journal’s quality, the editorial board, and perceived journal impact. Acceptance rates also convey useful information about journal quality. Furthermore, perhaps there are alternatives to the standard impact factor formula (e.g., the Eigenfactor metric, Bergstrom, 2007) that might encourage journals to publish a greater spectrum of research.

We are not advocating that a deluge of null results papers be submitted to journals. If all of us submitted everything we ever did, our journals would be clogged and the system would suffer. Instead, we are simply suggesting that we all keep an open mind that scientific progress can take many forms. Rather than discouraging the publication of work that does not confirm a priori alternative hypotheses, we should instead be encouraging researchers to ask interesting and important questions, use rigorous methods and appropriate statistical

analyses, and share those results no matter how small or large the p -value.

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