Against Eminence

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Abstract

The drive for eminence is inherently at odds with scientific values, and insufficient attention to this problem is partly responsible for the recent crisis of confidence in psychology and other sciences. The replicability crisis has shown that a system without transparency doesn't work. The lack of transparency in science is a direct consequence of the corrupting influence of eminence-seeking. If journals and societies are primarily motivated by boosting their impact, their most effective strategy will be to publish the sexiest findings by the most famous authors. Humans will always care about eminence. Scientific institutions and gatekeepers should be a bulwark against the corrupting influence of the drive for eminence, and help researchers maintain integrity and uphold scientific values in the face of internal and external pressures to compromise. One implication for evaluating scientific merit is that gatekeepers should attempt to reward all scientists whose work reaches a more objective threshold of scientific rigor or soundness, rather than attempting to select the cream of the crop (i.e., identify the most "eminent").

“Sometimes science is a lot more art than science, Morty. A lot of people don’t get that.”

-Rick (from *Rick and Morty*)

Science should be scientific. The drive for eminence is inherently at odds with scientific values, and insufficient attention to this problem is partly responsible for the recent crisis of confidence in psychology and other sciences. Humans will always care about eminence. Scientific institutions and gatekeepers should be a bulwark against the corrupting influence of the drive for eminence.

Background

The field of psychology is in flux. This may not seem worrisome; in science, as in life, the only constant is change. But the kind of change we are seeing now is more profound than typical scientific developments. The system for producing and evaluating research is broken, as demonstrated by the implausibly high rate of positive findings in the literature (Fannelli, 2010), the many failures to replicate even fundamental studies in the field (e.g., Hagger et al., 2016; Wagenmakers et al., 2016), and the lack of transparency in published research (Vanpaemel et al., 2015; Wicherts et al., 2006).

Transparency is among the most important distinguishing features of science. The ability to trace another researcher’s steps, understand the basis for their claims, and reproduce their results, is what distinguishes scientific knowledge from other kinds of knowledge (Lupia & Elman, 2014; Merton, 1973). Transparency also makes it possible for scientists to distinguish robust from shaky findings. Trusting a finding without knowing exactly how it was obtained is like buying a used car without looking under the hood.

The replicability crisis has shown that a system without transparency doesn’t work. For most of our field’s history, we have been evaluating research without looking under the hood. If

we continue to evaluate research findings based on their superficial characteristics, and let damning evidence be swept under the rug, we will end up with a lot of lemons in our lot. As economic models have shown, this cycle will drive out the best research and will lead to an erosion of trust in the system when consumers of science realize that there is inadequate quality control (Akerlof, 1970; Vazire, in press).

How Scientific Institutions Failed Us

How did we get here? Who let this happen? Those in charge of setting scientific norms and standards should have been striving to increase transparency, thereby bolstering our confidence that we can trust published research. Instead, many high level decisions in science are made with a different goal in mind: increasing impact. Professional societies and journals have prioritized publishing attention-grabbing findings for the sake of boosting visibility and prestige (and, sometimes, also their bottom line). In other words, our collective thirst for eminence is a threat to scientific progress.

Seeking eminence is inherently at odds with scientific values. The desire for eminence is especially pernicious when it influences scientific gatekeepers' decisions. Editors who are influenced by the status of submitting authors (or the prestige of their institutions) violate a basic premise of science: that scientific work should be evaluated on its own merits, regardless of the source. As Merton wrote in 1942, "The acceptance or rejection of claims entering the lists of science is not to depend on the personal or social attributes of their protagonist" (p. 270). Keeping status bias out of scientific evaluations is not easy. It requires a rigorous system implemented by people who are aware of this threat and vigilant against it. This vigilance must include precautions against our tendencies to be swayed by status and to be deferential to authority (Okike et al., 2016). Therefore, gatekeepers must not only be blind to the personal and

social attributes of authors (Vazire, 2016), but must steel themselves against the blowback that comes with questioning authority and disregarding status.

The lack of transparency in science is a direct consequence of the corrupting influence of eminence-seeking. If journals and societies are primarily motivated by boosting their impact, their most effective strategy will be to publish the sexiest findings by the most famous authors. Moreover, they will have little motivation to give readers the information necessary to critique the claims made in those papers. Journals – and authors – that do not follow this model will not survive if impact is the primary measure of their worth (Smaldino & McElreath, 2016). This creates an incentive structure where researchers have little choice but to prioritize impact and recognition over scientific rigor – those who do not get selected out of the field.

What is the Role of Individual Researchers?

The tension between eminence and rigor exists at all levels of science. I have focused so far on gatekeepers because they control the incentive structure that shapes individual researchers' behavior. Therefore, they have the most responsibility to uphold scientific values, and the most power to erode those values. However, individual researchers' desire for eminence can also threaten the integrity of the research process, and must also be kept in check.

All researchers are human, therefore all researchers desire recognition for their work. We will never eradicate scientists' desire for fame and status, and it would be a bleak existence for scientists if we removed this source of motivation altogether. However, there is no good reason to amplify this human drive, to encourage scientists to seek fame. Scientists constantly struggle with the tension between human desires and scientific ideals. Why make it harder for them by giving these human desires an even stronger platform?

The job of scientific institutions, then, is to help researchers maintain integrity and uphold scientific values in the face of internal and external pressures to compromise (Merton, 1973). When impact becomes the primary metric by which we evaluate science — a common practice as acknowledged by many of the articles published in the special section of this journal in 2016 — our scientific institutions have abdicated this duty. When our scientific institutions allow, or worse, encourage, our desire for eminence or impact to rule the roost, scientific rigor will suffer. As described by Moore and colleagues (2017), “a competitive requirement, perceived or real, for ‘excellence’, in combination with a lack of belief in the ability of assessors to detect false claims, leads to a conception of ‘excellence’ as pure performance: a concept defined by what you can get away with claiming in order to suggest (rather than actually accomplish) ‘excellence.’”

How Eminence Drives Out Diversity

Another harmful consequence of the glorification of eminence is that it reinforces inequalities in science. If scientists (and journals, societies, etc.) are evaluated based on their ability to attract attention, those with the most prestige will be heard the loudest. To the extent that certain groups are overrepresented at high levels of status (e.g., people who are male, Caucasian, able-bodied, wealthy, heterosexual, English-speaking, etc.), an emphasis on eminence will propagate their privilege and raise the barrier to entry for others (Eagly & Miller, 2016; Simonton, 2016). Moore and colleagues (2017) also made this point eloquently:

an emphasis on the performance of “excellence”—or, in other words, being able to convince colleagues that one is even more deserving of reward than others in the same field—will create even stronger pressure to conform to unexamined biases and norms within the disciplinary culture: challenging expectations as to

what it means to be a scientist is a very difficult way of demonstrating that you are the “best” at science; it is much easier if your appearance, work patterns, and research goals conform to those of which your adjudicators have previous experience.

What Now?

So, if scientific institutions ought to de-emphasize eminence, how should scientific merit be evaluated? I agree with Moore and colleagues who argue that we should not attempt to differentiate the “truly excellent” from other scientists doing sound work. We should admit that we can only reliably distinguish rigorous science from shoddy science; finer-grained distinctions are not often valid (Simonton, 2016). Judgments of “excellence” are likely full of bias and create perverse incentive structures.

What does this mean, practically, for committees that must select one or a few “winners” (e.g., hiring committees, award committees, keynote speaker selection, etc.)? First, admit that a large number of scientists meet the objective criteria for these recognitions (i.e., do sound science). Second, admit that the selection of one or a few individuals from among this group is not based on merit, but on preference or partiality. It is fine for groups to select (e.g., hire) or recognize (e.g., with a keynote address) members who exemplify their values, but this should not be confused with exceptional scientific merit. Finally, whenever possible (e.g., for tenure, promotion, and when journal space¹ or grant funds permit), we should attempt to reward all scientists whose work reaches a more objective threshold of scientific rigor or soundness, rather than attempting to select the cream of the crop.

¹ It is hard to imagine an argument for limited journal space, given technological advances

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