



Opinion: We Should Ditch Awards in Science

Conducting research to elucidate nature’s mysteries is reward enough.

Bill Sullivan (Jul 8, 2021)

There’s one part of every scientific conference that I dread. It’s not the tasteless coffee or whatever the cafeteria tries to pass off as chicken parmesan. It’s being asked to judge the trainee posters presented by students and postdoctoral fellows. As a seasoned faculty member, I am routinely asked to select my top three picks for the “best” poster from among dozens, or sometimes hundreds, of hopeful presenters.

I’ve always looked upon awards in science—from poster prizes to the Nobel Prize—with mixed feelings. On the surface, it seems laudable to acknowledge someone’s achievement, but it places far too much credit on one or a few individuals who happened to be the last link in a chain of knowledge that stretches far back into the past of our collective enterprise. We stand not only on the shoulders of giants, but on an incalculable number of unrecognized researchers of varying height who have added to the pyramid that allows us to see farther.

I don’t believe it is fair to judge the value of scientific work for a number of other reasons. There are many studies conducted that may not reveal their significance for years or decades to come. We could be staring paradigm-shifting work in the face but fail to recognize it because we’re blinded by the current dogma in the field. I’ve seen numerous trainees win poster awards because the work chased a hot trend that later fizzled out as a dead end in subsequent years. By manufacturing an unnecessary competition, we erode the spirit of collaboration that drives progress in the scientific community.

Also, it is impossible to fairly judge researchers’ science when there are vital questions with respect to the equity of resources available to the trainees and their laboratories. Some laboratories are better equipped or have access to expert collaborators or core facilities that many others don’t have. Some trainees work in better-funded labs. Some have earned fellowships that other trainees are not eligible for, often because of citizenship status. Some universities pay stipends and fees for graduate students, which gives their lab another advantage by freeing up money for supplies or commercial services. These fiscal advantages are usually not considered but clearly influence the scope and quality of the project presented, and judging people for their work is an inherently flawed prospect when the playing field is so incredibly uneven.

Moreover, some trainees have done amazing work but may not be the best presenter of said work, thereby underselling its importance. I've also seen some trainees win a poster award for a project they've recently inherited but have not yet added to in a meaningful manner.

There are also practical concerns we face as poster judges. At most scientific conferences, it is impossible to give a full listen to each and every poster presenter. If what we end up judging is only a fraction of the research being presented, how is this fair? I also suspect that most of us gravitate toward systems or techniques we understand or find exciting, so we may be unconsciously biased in praising projects which are more familiar to us or in which have a vested interest. There is an inescapable element of subjectivity in evaluating any type of work, and work of a scientific nature is not free of this limitation.

One could argue that science awards provide incentives for excellence and productivity. But to reward a single person is to deny many others. Is it worth the risk of demoralizing and disenfranchising many budding young scientists just to honor a few? By manufacturing an unnecessary competition, we erode the spirit of collaboration that drives progress in the scientific community.

I applaud research organizations, foundations, and scientific publishing companies that want to dole out poster prizes. The society memberships, journal subscriptions, and cash awards are well-intended and much appreciated, but a random lottery system is a more equitable way to distribute these charitable donations among conference participants. And no one goes home feeling like her project has lesser value than the work of her colleagues.

Much of the same logic applies to other rewards given for scientific achievement, all the way up through the Nobel Prize. With its focus on a few individuals, the Nobel Prize ignores countless others who were instrumental in forging the chain of discovery. Notably, numerous Nobel laureates have donated their prize winnings to support research or humanitarian organizations, a tradition that is nearly as old as the Nobel Prize itself. Marie Curie, who shared the Nobel Prize in physics in 1903, famously invested the money in further research on radiation. More recently, the 2019 winners of the Nobel Prize in economics donated their prize money to the Weiss Fund for Research in Development Economics, to support the next generation of economists.

Personally, I've always done science for the sheer joy of figuring things out—to solve puzzles that contribute to humanity's knowledge and may even save lives one day. I don't know any student or postdoc who chooses the challenging path of research because they want to earn an award. Walking the path towards discovery is reward enough, and everyone should feel appreciated for their noble effort in revealing nature's secrets.

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