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Boosting inclusivity in the Nobels

After the euphoria of 2018, this year's Nobel prizes in chemistry, medicine and physics have again all been awarded to men. Here are three ways to encourage change.

By Nobel standards, the committee that awards the economics prize is on a roll. Esther Duflo — awarded jointly for work that used randomized controlled trials to find ways to alleviate poverty — is the second woman to win the Nobel prize in economic sciences, following the late Elinor Ostrom in 2009. But, as we celebrate all of this year's inspiring Nobel prizewinners, we should reflect on the fact that, once again, members of the Royal Swedish Academy of Sciences and the Nobel Assembly of the Karolinska Institute have been unable to find a single recipient for the chemistry, physics and medicine awards who is not a man. Moreover, only one of the nine laureates in these categories — Japan's Akira Yoshino, awarded a share in the chemistry prize for his work on lithium-ion batteries — is not from Europe or North America.

The Royal Swedish Academy of Sciences is trying. More women are being nominated, the academy's secretary-general Göran Hansson told *Nature* (*Nature* <http://doi.org/dcm9>; 2019). And when individuals and institutions are asked to nominate potential Nobel candidates, they are advised to consider diversity in gender, geography and topic in their choices.

As this journal and many others have pointed out over the years, the lack of diversity among laureates is a systemic problem — and we accept it is not one that can be solved quickly. We know that today's prizes are often based on work carried out decades ago, when barriers in academia to women and other under-represented groups were even more formidable than they are today.

We also know that established institutions suffer from inertia and that selection processes have built-in biases, none of which can be

overcome overnight. But even by the sometimes slow standards of change in science, the Nobel awarding bodies' steps towards reform are too incremental.

We pointed out last year — and reiterate — that a first-order action is to release the data. Both the Swedish academy and the Karolinska Institute need to start reporting on the numbers of female scientists and scientists from other under-represented groups being nominated. We understand that convention prevents the identification of individuals for at least 50 years, but it should be possible to provide aggregate figures without identifying individuals. Reporting of these data would provide a greater incentive for change.

A second relatively simple action would be to diversify the sources that nominations — which are by invitation only — are accepted from. This month, many individuals and institutions will receive letters inviting nominations for the 2020 prizes. How many of these letters are sent beyond elite universities and academies isn't known.

As a small test case, *Nature* approached three of the world's largest international scientific networks that include academies of science in developing countries. They are the International Science Council, the World Academy of Sciences and the InterAcademy Partnership. Each was asked if they had been approached by the Nobel awarding bodies to recommend nominees for science Nobels. All three said no.

A third set of actions concerns ways in which the Nobel organizations can better understand their past. There's an evident injustice when more than a century of awards for the world's best scientists in chemistry, physics and medicine yields only 19 women (see 'Nobel imbalance') and not a single black person. If the Nobel archives were opened up to historians, more detail would come to light, allowing lessons to be learnt for the future. Several universities, including the Massachusetts Institute of Technology in Cambridge and the University of Glasgow, UK, have made their archives accessible in this way to take steps towards understanding their institutions' histories — in both cases, their links to slavery.

At the same time, both the Swedish academy and the Karolinska Institute must find ways to posthumously recognize scientists whose contributions to discovery and invention have been overlooked. Data released after the 50-year blackout lists the physicist Lise Meitner as having been nominated 48 times for either chemistry or physics without ever winning a Nobel.

At the end of his *Nature* interview, Hansson says that although it is important to have Nobel-prizewinning role models who are women and from diverse ethnicities, the prize will be devalued unless it goes to the most important discoveries and the individuals who made them. But these statements are not mutually exclusive.

As the world's children and young people absorb the news of this year's Nobels, many will be imagining that they, too, might make discoveries that could make them a future winner of the world's most prestigious science prizes. Unless the Nobel awarding bodies widen their search for nominations, they stand to miss out on many of these discoveries. ■

