

NOBEL WOMEN

The Nobel Prizes have widely become regarded as the most influential award a person can achieve for lifetime accomplishments within the sciences.

Looking at the award's history, S Reid-Collins investigates the lack of diversity and what the Nobel Institute can do moving forward...

- **54 women** and **865 men** have been awarded Nobel Prizes.
- **Only 22 women** have been awarded prizes in Chemistry, Medicine and Physics.
- **6 women** have jointly won awards with their husbands in the sciences, while **only 3 women** have won individually.

There is an alarming lack of diversity within the Nobel Laureates—not just a lack of women, but also a lack of people from ethnic minorities. At the same time, we're seeing the number of women in scientific communities increasing significantly, with 28.8% of the world's researchers now comprising of women (UNESCO Institute of Statistics). This increased diversity within science is not being represented by the Nobel Laureates.

The Nobel Prizes are one of the most visible awards within the media. As the prizes shape the public perception of the scientific communities, representing women and ethnic minorities becomes essential.

The Nobel Prizes are not alone in their gender biases. The Royal Society's Hughes Medal has been awarded since 1902 to an outstanding researcher in the field of energy. It has only been awarded to two women. The first, Hertha Ayrton in 1906, wasn't able to collect her award as women weren't allowed to enter the Royal Society. Thankfully, this policy has changed. Through various programmes, The Royal Society has made great steps to campaign for diversity, including breaking down barriers for and celebrating scientists with disabilities. Despite these positive changes,

only one other woman, Imperial College London's Michelle Dougherty, has won the award, in 2008.

WHAT CAN BE DONE TO INCREASE DIVERSITY?

There are many ways that the Nobel committee can improve diversity, which other organisations already recognise. The American Geophysical Union is a scientific non-profit organisation of Earth and space sciences that understands the importance of diversity in science: "Having more diverse voices at the table leads to new perspectives and unique ways of thinking which in turn leads to better science and novel solutions." One of the many ways they are working to increase diversity within science is through a global team that creates nomination packages for people from underrepresented groups.

Another way in which diversity of prize winners can be increased is through diversity within the awarding panels. When panels lack this, a bias (unconscious or

otherwise) is built, as people are more likely to give awards to those who look and think like them.

Jess Wade is a postdoctoral research associate in the Faculty of Natural Sciences at Imperial College, whose public engagement work has championed women and ethnic minorities in STEM. She spoke of the importance of visible diversity in awarding bodies: "If you've published a list of who's on the shortlisting committee, it can really change who thinks to apply and also change the outcome."

The way in which science happens has also evolved. Large international teams collaborate, and this should be celebrated. In 2017 the Nobel Prize in Physics was awarded to three LIGO (Laser Interferometer Gravitational-Wave Observatory) researchers for capturing gravitational waves. This was made possible through the collaboration of over 1000 scientists working in 15 different countries. Many of those researchers have been awarded medals for their contribution, including 16 scientists in Scotland who received the President's Medal from the Royal Academy of Edinburgh.

Science has changed, and perhaps it is time for the Nobel Prizes to change to reflect that.

"Science isn't just done by one guy sitting in front of a blackboard with chalk. It's done by huge extensive teams of people around the world. Giving your prize to three old men really doesn't reflect that," says Wade. ■

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A NOBEL HISTORY?

NOBEL PRIZE WINNERS BY YEAR

— men — women

