Celebrate! Americans Sweep Nobel Prizes Once Again

By Alex Berezow, PhD — October 4, 2018

October is a great month. Cool weather has returned, the leaves are changing colors, and football is in full swing. And, for science geeks like me, the Nobel Prizes are announced.

Until relatively recently, the Nobel Prizes were met with worldwide admiration. The Peace Prize started to lose its luster about two decades ago when it was awarded to the terrorist Yasser Arafat. By its very nature, the Peace Prize has always been political, but it seems only to have gotten worse since then. There's really no conceivable reason why Barack Obama or Al Gore are Peace Prize laureates.

On the flip side, the prizes that are awarded for science -- Physiology/Medicine, Physics, and Chemistry -- are mostly free of politics. They also tend to go to researchers who are truly worthy of the prize. And this year, once again, Americans have swept the Nobel Prizes. Why? Contrary to all the doomsday prophesying in the media, America is #1 in science [2] and will be for quite some time.

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On Monday, the Nobel Prize for Physiology or Medicine [3] was awarded to two scientists, one of whom was an American, for their work on cancer immunotherapy. In recent years, harnessing the body's immune system to fight cancer has exploded into its own field, and these two scientists helped lead the way.

On Tuesday, the Nobel Prize for Physics [4] was awarded to three scientists, one of whom was an American, for research in laser physics. The American won half of the prize all by himself, since he
was the primary inventor of something called "optical tweezers," which as its name implies, is a way to use laser light to pick up and move objects. (The other half of the prize was awarded to two scientists for their research on high-intensity laser pulses.)

On Wednesday, the Nobel Prize for Chemistry [5] was awarded to three scientists, two of whom were Americans. Half of the prize went to an American scientist who developed a technique called directed evolution. This procedure, which is now common across the world, uses the principles of evolution to purposefully alter enzymes with the purpose of developing better ones. The other half of the prize went to two scientists, one of whom was an American, for a technique called "phage display," which allows proteins to be quickly screened.

On the biggest scientific stage in the world, Americans have yet again laid claim to the lion's share of the prizes. Everyone -- not just Americans -- should be celebrating these amazing achievements which have truly made our world a better place.

But not everyone is celebrating, particularly science journalists, some of whom are intent on destroying the Nobel Prizes entirely. Why? Because sexism and racism.

The Nobel Prizes Should Be Reformed, Not Ridiculed or Scrapped

The complaints against the Nobel Prizes have grown in recent years. The loudest complaints involve the lack of women Nobel laureates.

Indeed, there aren't many. According to Nature [6], as of 2017, there were 599 Nobel Prizes awarded for science. Merely 18 were women. So, case closed. The Nobel Prizes are sexist, right?

No. Let's keep in mind that the Nobel Prizes have been awarded since 1901 [7]. For the vast majority of time that the Nobel Prizes have existed, science was done overwhelmingly by men. The Nobel Prize committee itself [8] indicates that historical fact largely explains the gender discrepancy.

Today, there are far more women doing science than ever before. This is a good thing. Additionally, we can expect that, in the future, we will see more Nobel Prize laureates who are female. This year, two of the eight Nobel laureates were women, so now, the fraction has crept up to 20 out of 607. Given how few of these prizes are awarded, it will take a very long time to reach a ratio that will satisfy the people who fret over this sort of thing.

Thus, naysayers like science writer Ed Yong will grumble in perpetuity [9] by using this opportunity to throw cold water [10] on what should be a moment of celebration. Others have gone even farther. Physics writer Matt Francis once wrote [11] that the Nobel Prizes should be "dethroned" because they "promote the idea that Science is done by the Lone White Male Genius, maybe with an adoring female assistant standing by."

Sexist and racist. Of course.

How to Reform the Nobel Prizes

The one complaint about the Nobel Prize that is legitimate is that some research involves far more than three people. By rule, the Nobel Prize for any given topic cannot be awarded to more than three individuals. This is a real problem, especially for physics. Today, some of the best physics,
like particle physics, involves thousands of scientists. Picking just three to honor is unfair.

This is where reform is needed most. And yes, the Nobel Prize committee should remain cognizant of the fact that it would be nice to have more women as Nobel laureates. But it has already made steps to address that, which is why the former issue (not awarding more than three scientists) needs the most attention.

The Nobel Prizes aren't perfect. No prize is. Somebody always (often justifiably) feels left out. But that is not a reason to eliminate or "dethrone" them. The public admiration that the Nobel Prizes bestow upon researchers has done far more good for science than harm. May they live long and prosper.


Links
[6] https://www.nature.com/articles/d41586-018-06879-z
[10] https://twitter.com/edyong209/status/1046726789333241862