

BEHIND THE SCIENCE: HOW THE SHAW PRIZE REALLY WORKS

Since the launch of the Shaw Prize in 2002 and the first cycle of awards in 2004, it has gained increasing recognition within the scientific community. To mark its 20th anniversary, we find out how the award is rolled out and its impact on the world so far.

German astrophysicist Reinhard Genzel will have you know that, behind the scenes, the prestigious Shaw Prize is not “a club of old men who give these wonderful prizes to their friends”. In reality, the annual selection process for the award, which recognises outstanding achievements in astronomy, life science and medicine, and mathematical sciences, is rigorously thoughtful.

Genzel, who received the Shaw Prize in Astronomy in 2008, is the prize’s current chair of the Board of Adjudicators – a post he has held since 2022. In 2020, he jointly won – with Andrea Ghez – the Nobel Prize in Physics for their discovery of the supermassive black hole at the centre of our galaxy. There is thus a lot of gravity to his words, pun intended.

His stand about the Shaw Prize’s selection process is strongly supported by renowned theoretical physicist Kenneth Young, emeritus professor at the Chinese University of Hong Kong. Young, who is the chair of the Shaw Prize Council, was invited to be involved in its implementation at the early stage by

the Chinese-American physicist Chen-Ning Yang, winner of the Nobel Prize in Physics in 1957. Yang was “the chief academic architect of the whole thing”, Young says.

Post Magazine chatted with Genzel and Young as they discussed their involvement in the Shaw Prize, how it is administered, its significance for the scientific community and their respective hopes for the award in the future.

Q&A What does the Shaw Prize mean to you?

Young It has been good to have the opportunity to contribute to a very meaningful endeavour – to help the Shaws, whom I and many others respect very much. More personally, I’ve had the opportunity to meet very interesting, smart people. Through that process, I’ve been motivated to learn a little bit about some of these works at very high levels. For an academic, the impetus and the opportunity to learn new things are always fun.

Genzel As a scientist, there are a number of prizes in the world you can aspire to get. What the Shaw Prize has managed to do in a relatively short period of time is to become one of the real top prizes in the world. This certainly has a lot to do with the fact that it has picked areas of research – astronomy and mathematics – that are not all that well covered by the Nobel Prize. I must say I’m quite proud that the Shaw Foundation and the Shaw committees have been able to stay at the very top, and I’m very happy to be able to participate in this.

Q&A Do scientists care about awards?

Young I think scientists are always pleased that their work is recognised in the community – and not just by fellow scientists in a narrow field, and not because of the kudos. But especially for the sake of basic science, the value of their discovery actually is proportional to the number of people who understand it, and therefore scientists – especially at that level, where they make very fundamental advances – really want to have opportunities to share the good news. These high-level prizes provide the opportunity to do so.

Genzel From experience, awards can be important to scientists. I won the [2020] Nobel Prize during the pandemic so there wasn’t the usual ceremony in Stockholm, but when the minister-president of Bavaria heard about my receiving the Nobel Prize, we had a little private festivity in the residence of the governor. That gives me a little bit of a possibility from time to time to talk to the politicians and have some amount of influence. These prizes can help advance scientists in their private and scientific life, and also increase their impact on society.

Q&A How are the Shaw Laureates selected each year?

Young How the prize is set up – very sensibly so, by Professor Yang – shows very clearly to the outside world and to the selection committee members that the donors want to keep their distance from the selection process and will not intervene. The Shaw Prize has gained a fair bit of reputation worldwide. And of course this comes from the quality of the laureates being selected. People can see that we are selecting really top people. We have also put together very high-level selection committees, and this in turn gives solid credibility to the prize.

Genzel Each field/category has a selection committee of somewhere between five and seven people chaired by a person whom we appoint for typically three to four years, so that over time we get different people. They look at the nominations, analyse and then debate them. We ensure these nominations are reasonable, and the process is fair. It’s very important that the committee members don’t have hidden conflicts



Professor
KENNETH YOUNG

of interest – institutional, national, gender etc. The most important criterion is excellence, so we remind ourselves never to stray away from the path of excellence.

Q&A What are your hopes for the award in the years to come?

Young I hope it will go from strength to strength. Things take time to develop, and I’m actually surprised by how new areas of research have opened up so-called traditional fields. Many of the examples that we see in the Shaw Prize are things that were not even in the imagination of people. People were not even asking these questions 30 or 40 years ago. Some people might have said physics has reached a dead end; it has solved all problems to be solved basically. But it turns out the physics in the textbooks of 30 years ago is fundamentally wrong in very many ways. And many of these works in astrophysics have been recognised by the Shaw Prize.

Genzel I hope we continue to look at areas of research which are recently emerging. We should be flexible and allow new subjects or areas to come in. We should increase diversity, but how do we maximise diversity yet keep the excellence? I really personally would be absolutely against forgoing excellence only in favour of diversity. I would turn it the other way around. I would say, let’s look hard for excellence while increasing diversity. Finally, I hope the award maintains its independence – no outside or political influence on the prize.



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