

The outsider

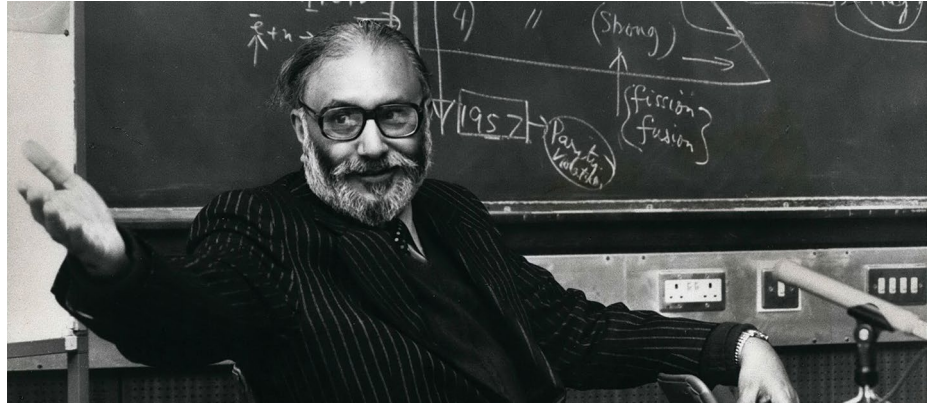
DOCUMENTARY

That Abdus Salam is better known abroad than in his own country, Pakistan, might come as a surprise to those who don't know his story. Countries tend to take pride in their Nobel laureates, who often become national heroes. But the relationship between Pakistan and Salam, a theoretical physicist who was awarded a third of the 1979 Nobel Prize in Physics for his contribution to the electroweak unification theory was never simple. The core of the problem was that Salam belonged to a sect, the Ahmadi, that was declared heretic by the Pakistani government in 1974. In Pakistan, Salam was not considered a Muslim — worse, he illegally claimed to be one.

This tortured relationship between religion, cultural belonging and attachment to a country that rejected him is the main theme of the documentary *Salam — The First ***** Nobel Laureate* (Kailoola Productions 2018). The asterisks in the title reflect the last affront to Salam: on his tombstone in Pakistan, the word 'Muslim' was painted over. Produced by Zakir Thaver and Omar Vandal and directed by Anand Kamalakar, the documentary was 14 years in the making and came to be thanks to the contributions of over 300 donors. What motivated the producers, both Pakistani, to embark on this project, was the realization that such an inspiring figure was completely absent from books and popular culture in their, and his, country.

Salam's story begins in 1926 in a rural village in Punjab. A child prodigy, he moved to Cambridge, UK, to do a PhD, and after a few years spent working in Pakistan he settled back to the UK. As a Muslim proud of his heritage working in the West, throughout his career Salam had to overcome prejudice and prove himself more than his colleagues. He was different and he looked different: in the footage of the Nobel ceremony, we see him in traditional dress between Steven Weinberg and Sheldon Glashow (the other two recipients of the Nobel Prize in Physics) wearing evening suits.

All narrated through rare original videos, pictures and interviews, the documentary delves into the human side of Salam rather than focusing on his scientific achievements, successfully conveying the image of the person behind the public figure. It portrays a man of great ideals but also a difficult person to be close to and an incredibly hard-



Credit: Keystone Pictures USA / Alamy Stock Photo

working scientist who demanded from his collaborators the same level of commitment and passion as he had. Michael Duff recalls that "being a student of Salam was something of a mixed blessing because he was brimming with ideas; 90% of them were nonsense, but the 10% were Nobel-prize-winning ideas." Salam's personal assistant describes him as a very charismatic, very humane, very difficult character. The time and effort he dedicated to science sometimes came at the expense of the time he had for his big family: following Muslim law that allows plural marriage, he had two wives (one of them a successful protein crystallographer and Dame of the British Empire) and six children.

But the main theme of the documentary is Salam's struggle to try to give back to a country that ostracized him. For some time he collaborated with the Pakistani government, and was heavily involved with their peaceful nuclear programme, and ambivalent towards the development of a nuclear weapon. Salam tried to go back to work in Pakistan after his PhD, when he moved to Lahore. However, he felt terribly isolated, and lacked access to scientific literature and the opportunities to engage with other physicists. The mounting discrimination against Ahmadis also contributed to his decision to move back to Britain. "It became quite clear to me that either I must leave my country, or leave physics," he said, "and with great anguish I chose to leave my country."

It was at this time that he decided that other scientists from developing countries should not face this choice in the future. In 1964, he founded the International Centre for Theoretical Physics in Trieste, Italy, which supports scientists working in physics and mathematics in developing

countries. The centre, which he considered one of his greatest achievements, now bears his name.

The documentary is engaging and well researched, with plenty of original footage. It includes videos and pictures from Salam's childhood and interviews with people who were close to him, from his children to the imam of the Ahmadi Mosque he attended in London. However, it's not always clear who the intended audience is because not much context is provided about Salam's life or the historical events that constitute the backdrop to his story. The result is that the documentary is in places difficult to follow for those unfamiliar with the events, and it is only little by little that the audience can piece together the information to form a coherent picture.

Salam's vision is well summarized by the opening quote of the documentary: "I am the first Muslim who has got the prize for science, breaking the barrier, taking away that sense of inferiority that, over the centuries, has come over the Muslim youth. This has been done by somebody who feels no conflict between his religion, his culture and science." *Salam — The First ***** Nobel Laureate* is a reminder that beyond his contributions to physics, the idea of science as a global enterprise where there should be no political or religious barriers and no superior and inferior players is Salam's lasting legacy. And 20 years after his death, there is still a long way to go. □

Reviewed by Giulia Pacchioni

Senior Editor at Nature Reviews Physics.
e-mail: Giulia.Pacchioni@nature.com

Published online: 2 January 2019
<https://doi.org/10.1038/s41567-018-0392-5>