



University of Adelaide

WILLIAM HENRY BRAGG
Nobel Prize in Physics 1915



The Nobel Foundation

WILLIAM LAWRENCE BRAGG
Nobel Prize in Physics 1915



JCSMR, ANU

HOWARD WALTER FLOREY
Nobel Prize in Physiology or Medicine 1945

Nobel Australians

The tyranny of distance has resulted in Australia becoming a nation of innovators. The achievements of the Australia's Nobel laureates are a reflection of the country's inventiveness and drive.

The year 1901 is significant for both Australia and the Nobel Prize. This was the year when Australia achieved nationhood and also the year when the first Nobel Prizes were awarded. Both Australia and the Nobel Prize have grown up together, jointly celebrating their centennial year.

The Nobel Prizes are renown throughout the world and bring the recipients great kudos and fame. Alfred Bernhard Nobel's (1833-1896) legacy rested with the fact that he was able to combine his background in science with the vision of an industrialist and the drive of an entrepreneur.

Nobel wrote literary works and was a keen observer of social matters and issues surrounding world peace. His legacy, the Nobel Prizes, reflect the interests he held during his life.

Nobel nominated five areas for recognition: physics, chemistry, peace, literature and physiology or medical works. Another award, the Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel, was established in 1968 and first awarded in 1969.

Celebrity Status

Each year, the announcement of the winners of the Nobel Prizes causes great interest and excitement. It is the chance for scientists, writers,

economists and peace advocates to gain recognition for excellence in their spheres of intellectual pursuit. For a small window of time in October and December each year, the recipients acquire the celebrity of a sports champion or film star.

Australia is recognised as an inventive and creative nation and these attributes can be traced back to 1768 when Captain James Cook was given command of the HMAS Endeavour. His orders were to take scientists on an expedition from England that led to the discovery of Australia via Tahiti and New Zealand in 1770. It can be said that Australia was founded as a result of a scientific expedition.

The tyranny of distance has made it difficult for Australians to obtain, collaborate and share their knowledge outside of Australia's shores. The introduction of air travel and the information technology revolution has greatly assisted Australians in contributing to the stock of human knowledge from home.

PhDs were first awarded in Australia as recently as 1948 when Sir Rupert Myers became the first Australian to receive one. In the same year, Erica Wolff, an immigrant from Germany, was the first woman to receive a PhD in this country. Both graduated from the University of Melbourne. Until this time, Australians had to



The Walter and Eliza Hall Institute

FRANK MACFARLANE BURNET

Nobel Prize in Physiology or Medicine 1960



Australian Academy of Science

JOHN CAREW ECCLES

Nobel Prize in Physiology or Medicine 1963



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ALEKSANDR MIKHAILOVICH PROKHOROV

Nobel Prize in Physics 1964



The Nobel Foundation

BERNARD KATZ

Nobel Prize in Physiology or Medicine 1970



The Nobel Foundation

PATRICK WHITE

Nobel Prize in Literature 1973



National Institute for Medical Research, London

JOHN WARCUP CORNFORTH

Nobel Prize in Chemistry 1975



University of Melbourne Archives

PETER CHARLES DOHERTY

Nobel Prize in Physiology or Medicine 1996

travel overseas for their doctorates and to do collaborative research.

In spite of this disadvantage, Australia has built an excellent research infrastructure and has since trained many eminent researchers who have made and will continue to make significant impacts internationally.

No other award in the world brings the prestige that a Nobel award delivers. The Prize is seen as the watershed for all awards that honour scientists and significant achievers in literature, peace and economics.

Why should we laud the Australian recipients of the Prize and who are they? To answer this question there is a need to understand the impact of the Prize itself. No other award in the world brings the prestige that a Nobel award delivers. The Prize is seen as the watershed for all awards that honour scientists and significant achievers in literature, peace and economics.

The honourees are those who have completed a piece of work that is considered by the Nobel committee to be a breakthrough and a significant contribution of new knowledge for the benefit of society.

Australia has produced Nobel laureates in Chemistry (John Cornforth), Medicine or Physiology (John Eccles, Bernard Katz, Howard Florey, Frank Macfarlane Burnet and Peter Doherty), Physics (Lawrence and William Bragg, Aleksandr Prokhorov) and Literature (Patrick White).

Each Australian laureate is unique and the achievements they have made transcend politics, prejudice, physical impairment and refugee status. With the exception of Patrick White, all the Australian laureates have been scientists.

Like many great people, they have been comfortable in themselves and have not sought public recognition.

Patrick White also possessed this quality. David Marr, author and biographer of Patrick White, relates the story of how the Swedish Ambassador to Australia tried to contact White to advise him of his Nobel Prize win for Literature.

White, a very private man, had an unlisted telephone number and even when his friends and colleagues were contacted they would not break White's rule about giving out his number. According to Marr's book: "Chaos followed."

Australia's Nobel Laureates attempts to raise awareness of the contribution these great Australians have made to society and acknowledge the credit they have brought to Australia through their achievements.

These people flourished in an era when our country was growing up and finding its character. The country relied very much on allowing immigrants to enter and contribute to the welfare of the nation. Australia was a very different place last century. Katz and Prokhorov were both refugees.

Katz (Medicine or Physiology 1970) found a home here after being persecuted as a Jew in Germany. He served in the Royal Australian Air Force in World War II. Prokhorov (Physics 1964) was born in Atherton, Queensland. His parents fled Russia at about the time of the Tzarist revolution and returned in 1923.

Nobel links

There have been other Nobel laureates with links to Australia. An American, Daniel Gajdusek (Physiology or Medicine 1976), was an investigator at the Institute of Medical Research in Melbourne in the 1950s when he began the work that would lead to his being awarded the Nobel Prize.

John Harsanyi was awarded the Nobel Prize for Economics in 1994, shared with John Nash Jnr and Reinhard Selten, for their pioneering analyses of equilibria in the theory of non-cooperative games.

Although residing in the US at the time, he had completed a masters degree at the

University of Sydney (1953) and had also worked in a research position at the Australian National University.

The 2003 Nobel Prize for Literature was awarded to South African-born John Maxwell Coetzee who resides in Australia where he is attached to the University of Adelaide.

In times past, Australians have been compelled to pursue their careers abroad in order to be recognised as successes at home. This need to compete, combined with the quest for knowledge and creative pursuit, has meant Australians punch well above their weight in cultural, sporting and scientific activities.

Much has been written about the exploits of our sporting heroes and movie stars. This book attempts to go some way towards raising the awareness of a different type of hero, to celebrate their achievements and provide inspiration.

Professor Istvan Hargittai states in his book *The Road to Stockholm* that, from very early on, the Nobel Prizes have been surrounded by an “aura” and that science in particular needs icons.

The Australians who are featured in the following pages have all been high achievers who were rewarded by the ultimate recognition of excellence: the Nobel Prize.

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The Nobel Prize medal

Each medal features a different image depicting what the award is for. The medals for **Physics and Chemistry** feature an image that represents Nature in the form of a goddess resembling Isis emerging from the clouds, holding a cornucopia in her arms. The veil which covers her face is held up by the Genius of Science. It is the medal of The Royal Swedish Academy of Sciences.

The Genius of Medicine holds an open book in her lap on the medal for **Physiology or Medicine**. She is collecting the water pouring out from a rock in order to quench a sick girl's thirst. This is the medal of the Nobel Assembly at the Karolinska Institute.

The medal for **Literature** depicts a young man sitting under a laurel tree writing down the song of the Muse. It is the medal of the Swedish Academy.

Each of these three medals feature the Latin inscription “*inventas vitam juvat excoluisse per artes*”, meaning “Inventions enhance life which is beautified through art”.

The image on the **Peace** medal depicts a group of three men forming a fraternal bond. Its Latin inscription is “*pro pace et fraternitate gentium*” which means: “For the peace and brotherhood of men”. It is the medal of the Norwegian Nobel Committee.

The medal for **Economics** shows the North Star emblem of the Royal Swedish Academy of Sciences, dating from 1815, with the words “*Kungliga Vetenskaps Akademien*” (The Royal Swedish Academy of Sciences) around the edge.

Alfred Nobel's face also features on one side of each medal. The image on the medals for Physics and Chemistry, Physiology or Medicine and Literature is the same, featuring a portrait of Alfred Nobel and the years of his birth and death in Latin. As seen here, the design of Alfred Nobel's face on the medals for Peace and Economics is slightly different.



PEACE



ECONOMICS



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What is the Nobel Prize?

Each year, the world eagerly awaits the announcement of who will be awarded a Nobel Prize. But what is it and when did it first come into existence?

The Nobel Prize is the first international award given yearly since 1901 for achievements in physics, chemistry, medicine, literature and peace. The Prizes were instigated by Swedish scientist Alfred Nobel. When Nobel signed his last will and testament on November 27 1895, he laid the foundation for what would become the Nobel Prizes. He stated in his will, “The whole of my remaining estate shall be dealt with in the following way: the capital, invested in safe securities by my executors, shall constitute a fund, the interest on which shall be annually distributed in the form of prizes to those who, during the preceding year, shall have conferred the greatest benefit on mankind.”

Nobel added: “It is my express wish that in awarding the prizes no consideration whatever shall be given to the nationality of the candidates, but that the most worthy shall receive the prize, whether he be Scandinavian or not.” The words ensured that the Nobel Prizes would be truly international awards.

A private institution known as the Nobel Foundation was established in 1900 based on the will of Alfred Nobel. It manages the assets made available through the will for the awarding of the Nobel Prizes. In 1968, the Sveriges Riksbank (Bank of Sweden) instituted the Prize in Economic Sciences in Memory of Alfred Nobel.

Eligibility

To be considered eligible for an award, it is necessary to be nominated in writing by a person competent to make such a nomination. According to the Statutes of the Nobel Foundation, information about the nominations is not to be disclosed, publicly or privately, for a period of

50 years. The restriction not only concerns the nominees and nominators, but also investigations and opinions in the awarding of a prize.

The actual prize

The prize consists of a medal, a personal diploma and a prize amount.

The announcement of the Nobel Prize winners for the year is made on the same day that the Prize-awarding institutions choose from among the names recommended by the Nobel committees. This takes place in the month of October. Immediately after the vote, a press conference is held by the Prize-awarding institutions involved. These institutions are: The Royal Swedish Academy of Sciences (Prize in Physics, Chemistry and Economics), Karolinska Institute (Prize in Physiology or Medicine), The Swedish Academy (Prize in Literature) and The Norwegian Nobel Institute (Peace Prize).

Prize ceremonies

The Prizes are all awarded on December 10 each year, the anniversary of Alfred Nobel’s death. The Prize award ceremonies and banquets take place in Stockholm (for the Nobel Prizes in Physics, Chemistry, Physiology or Medicine, Literature and The Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel), while the Nobel Peace Prize ceremony takes place in Oslo, Norway on the same date. At the Prize Award ceremony in Stockholm, His Majesty the King hands each laureate a diploma and a medal. The Peace Prize is presented by the Chairman of the Norwegian Nobel Committee in the presence of the King of Norway.



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