

Editorial: a man and his prizes

T O R E F R Ä N G S M Y R

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This year is the 100th anniversary of the Nobel Prizes. On 10 December 1901, Röntgen received the first prize. Since then, some 700 Nobel Laureates have received the same honour. No prize in the world, at least no prize for science, has reached the same level of glory. How did it come to be so?

The sum of money is of course one reason. From the beginning it was 150 000 Swedish Crowns, which must have been the largest prize sum that time, probably comparable in importance to the current sum, which this year will be 10 million Swedish Crowns (around £1 million). Another reason is that the prize was international, and it was not at all obvious that it should be at the time. Even the Swedish King Oscar I protested and thought that the prizes should be restricted to Swedes; this would not have pleased Alfred Nobel.

Alfred Nobel was brought up in a most international milieu in St Petersburg, at that time a European metropolis, rich in culture and science and a sparkling society. Alfred's father had gone bankrupt in his building business in Sweden and left for St Petersburg, where he started a mechanical industry and produced submarine mines for the Russian army. When Alfred was nine the whole family moved to St Petersburg, as Alfred's father had now made a fortune. The sons were instructed by leading university professors at home, both in the humanities and the natural sciences. Besides Swedish, they learned Russian, English, German and French. Consequently, Alfred had an international outlook from the beginning.

When Alfred was 20, he went on a grand tour – to the United States and several European countries – and he spent one year with the famous chemist Jules Pelouze in Paris. Here, he heard about the new explosive nitroglycerin, which was so difficult to tame. Pelouze had previously worked on gun cotton. Ascanio Sobrero, an Italian student of Pelouze, had produced the new substance, initially called pyro-glycerin, but he had sounded a warning about it since it was so unstable and impossible to control. Alfred's invention was to make it controllable.

In 1863, 30 years old, Alfred Nobel received his first patent on a product called 'blasting oil'. Ten years later he had built a world empire on the refined product, called 'dynamite', and bought a house in central Paris. On the Lüneburger Heide, outside Hamburg, where he had set up a factory, he found the 'kieselguhr', a diatomaceous earth that could soak up the nitroglycerin, which he could then form into a paste or a kneadable mass. This paste could also be made into sticks, which could easily be inserted into a drill hole and could be safely transported without exploding. He had also invented the percussion cap, which could be used to make the paste explode, and he had obtained patents for dynamite in a series of countries.

At the age of 40, the foundation of his fortune was laid. By 1873, Alfred Nobel had built 17 factories in nine countries (Sweden, Britain, Germany, USA, Austria, Spain, Switzerland, Italy and Portugal). He went on making new discoveries and his company grew, as did his wealth. He was an inventor, an industrial magnate, and an organizer. He had to protect his patents, develop his products, set up new companies and correspond with all the corners of the globe in five languages. He was constantly out travelling, by train and boat; factories blew up, scaremongering was rife and companies were revealed to be fraudulent. Moreover, he was seldom really well, he felt ill and frail, complained frequently of migraine, rheumatism and a poor stomach. But he coped, in spite of everything. In the role of entrepreneur he was unbeatable.

Alfred Nobel viewed himself with a philosophical scepticism. He often described himself as a loner, a hermit, a melancholic, or a misanthropist. He once wrote: 'I am a misanthropist, yet I mean well; I am a super-idealist who can digest philosophy better than food.' It is clear that the philanthropist, or what he called the super-idealist, existed side by side with the misanthropist. And it was the idealist in him that drove him to donate his fortune to those who had served mankind through science, medicine, literature, and had worked to promote peace.

The idea of giving away his fortune did not by any means come out of the blue. Alfred Nobel had long pondered the issue. He had even rewritten his will on a number of occasions to try to find the best formulation. On one occasion he had also commented: 'In particular I see great inherited wealth as a misfortune, which serves only to promote mankind's apathy.'

Why did he choose just the five subjects that he did? Science was first of all close to his interests. He regarded himself as a kind of scientist, saying that he was the first to bring nitroglycerin from the scientific laboratory to industrial production. He was himself a chemist and had also studied physics. He became interested in medicine and physiology, due to his own ill-health, and knew how important those fields were to humanity. As for literature he was fond of reading and he himself wrote poetry and dramas. His favourite poet was – perhaps a little surprisingly – Shelley, the atheist and revolutionary. The peace cause was close to his heart, inspired in part by his contacts with Bertha von Suttner (herself a prize-winner in 1905).

Nobel put his name to the final version of his will on 27 November 1895 at the Swedish–Norwegian Club in Paris. One year later, on 10 December 1896, he died alone in his villa in San Remo. The will took up no more than one side of writing paper. After listing his bequests to relations and other persons who were close to him, Nobel announced that the interest of the whole of his estate was to be distributed 'in the form of prizes to those who, during the preceding year, have conferred the greatest benefit on mankind'. The science prizes were to be handled by the Royal Swedish Academy of Sciences, the prize in medicine or physiology by the Karolinska Institute, and the one in literature by the Swedish Academy. The Peace Prize was left to the Norwegian Parliament, since Norway was still united with Sweden at that time.

At his death, Nobel had 355 patents registered in his name, and around these he had built up some 90 factories in 20 countries. It is therefore not surprising that the sum of money available to establish the prizes was so great, some 31 million Swedish crowns. In this jubilee year, the original sum has grown to more than 4 billion, and the prize money for each of the prizes now amounts to 10 million Swedish crowns.

For a cosmopolitan like Alfred Nobel, it was natural to give the prizes an international character. For Sweden this was also, in spite of what the King had said, a success, at least in the long run. The Nobel Prize gave Sweden an international reputation in the scientific world, and it gave science a position in Swedish society. In the years since 1901, the prizes have firmly established themselves as the world's highest civic honours. The announcement of the prize-winners is awaited eagerly each October, while the award ceremonies in Stockholm and Oslo in the presence of royalty and international dignitaries have become events of great social prestige.

The donor could hardly have dreamed of the significance that his philanthropy would have for future generations. And because of his shyness and modesty he would probably not have attended the ceremony himself!