Address by Prof Peter Doherty at the Launch of the Academy on 5 September 2000

We have been living through extraordinary times. The past 100 years has seen us change from an anglo/celtic culture linked to the "homeland" by steam ships and telegraph lines to an independent, multicultural nation within 24 hours flying time of the major centres in Europe and North America. The revolution in communications means that we have instant "conversations" with friends and colleagues around the world. The developments in scientific medicine over the past 100 years have been enormous. Our children survive as a consequence of vaccination. Antibiotics protect us from bacterial infection. We are starting to see drugs that are specific for some of the viruses, particularly the human immunodeficiency viruses and influenza. The ravages of cardiovascular disease that killed so many of our parents generation are kept at bay by the statins and cardiac bypass surgery. The next 20 years are likely to see enormous advances in the treatment of cancer, genetic deficiency and degenerative neurological disease. We stand at the beginning of the first science based millennium.

This is all very exciting, but we should remember that Chinese curse "may you live in interesting times". It is obvious that we face real dangers that stem from the application and exploitation of these new technologies. In some areas the potential consequences are being faced head on, like the ethical implications of the genomics revolution. The human genome project had a substantial ethics component built in from day one. Others slipped by us almost without notice. Think of the effect that the information technology revolution has had, for example, on banking services in rural areas and thus on life in the smaller towns in Australia and the USA. Nobody foresaw what would happen.

A very real need is to bring together the total spectrum of human intellectual activity as we face these new possibilities. The opportunities for providing human beings with healthier and more informed lives are enormous. The need is to maximize the good effects, while minimizing the potential for malevolent use. The different ways of thinking that come from the visual and literary arts, philosophy, the social sciences, the biological and physical sciences, all have their contribution to make as we face this enormous challenge. The societies that prosper will be those that network, share diverse insights and bring to bear a spectrum of skills as we face this challenging future.

The idea that the arts and sciences have common cause was central to the thinking of the enlightenment, that 18th century movement that give birth to, among other major achievements, the Bill of Rights and Constitution of the United States of America. At the time of the American Revolution, John Adams, John Hancock and a number of the founding fathers came together to form the American Academy of Arts and Sciences. Their charter of 1780 states: "The end and design of the institution is … to cultivate every art and science which may tend to advance the interest, honour, dignity and happiness of a free, independent and virtuous people". We could use the same words as we launch this new academy, though the emphasis on virtue and dignity might seem old fashioned to many. The US Academy of Arts and Sciences survives as a thriving institution, with more than 3600 member and 600 foreign honorary members.

What is the purpose of the Academy? The oldest of the major scientific academies, the Royal Society of London (RS) was founded under the Patronage of King Charles II in 1660. We should bear in mind that London of 1660 was a considerably smaller city than Brisbane in the year 2000. The Royal Society was initially a discussion group for gentlemen interested in the natural sciences. Even so, it embodied from the beginning the essence of the scientific method. The motto is, "nullius in verba", which means "nothing by words alone" or, to put it in contemporary terms, "you have to do the experiment". This is the basis of modern science. The US National Academy of Sciences (NAS) was founded about 200 years later, in 1863, by Abraham Lincoln. A primary function of the RA and the NAS is to recognise high achievement. Of the 2200 living members and foreign associates of the NAS more than 170 have Nobel Prizes. However, the RS and the NAS are much more than senior honour societies. Both Academies, like the Australian Academy of Sciences which has about 300 members and started in 1954, also play a major role in providing advice to government. All 3 academies are heavily committed to the cause of science education from primary school through to University, and are vitally concerned with raising consciousness and bringing positive messages about science and discovery to the general public.

The next century is likely to be about communication and knowledge. The nature of the internet is such that a great deal of the information that we receive will be global, and will be filtered in ways that may not necessarily serve our best interests. Informed, local networks are going to be enormously important as we attempt to deal with this new era. The Queensland Academy of Arts and Sciences has the potential to be a powerful force for the future well-being of this community.

Peter C. Doherty
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Peter Doherty graduated from the University of Queensland in Veterinary Science and became a veterinary officer. Moving to Scotland, he received his PhD from the University of Edinburgh Medical School. He is the first person with a veterinary qualification to win a Nobel Prize.

Professor Peter Doherty shared the Nobel Prize in Physiology or Medicine in 1996 with Swiss colleague Rolf Zinkernagel, for their discovery of how the immune system recognises virus-infected cells. He was Australian of the Year in 1997.