

## **LAUNCHING OF THE ACADEMY OF SCIENCES MALAYSIA**

ISTANA HOTEL, KUALA LUMPUR, 8 SEPTEMBER 1995

I would like to thank the Academy of Sciences Malaysia, for inviting me here to officially launch the Academy of Sciences Malaysia and confer certificates of appointment to founder members of this Academy. It is indeed a pleasure to be among such distinguished scientists. To all those leaders in the field of academic sciences who have come from all over the world, I bid them a warm 'Selamat Datang'.

2. The growth of science has been exponential in character to the extent that it is now hardly possible to apply a new discovery to practical use before a new discovery is made. Technology now enjoys a synergistic and symbiotic relationship with science. If the pre- 20th century technology was merely the result of utilitarian application, with limited understanding of the mechanisms involved, e.g. the steam engine, telephone and chemical technology-the technological applications of today is much more scientific with true understanding of the scientific principles on which they are premised. Science i.e. its study and research has in turn benefited from the products of technology in terms of new materials, new devices, new designs and new machines. The ever increasing role of computers in scientific research provides a very good example of how technology accelerates the advancement of the sciences. We are now at the end of the 20th century and already we have seen the advent of the atomic age, the space age, the age of electronics, the age of biotechnology, the age of advanced materials and above all the information age. With such a tremendous pace of growth, it would be foolish for a nation not to be an active participant in this rapid development, for otherwise the nation would be handicapped, economically, technologically and culturally.

3. Asia has been the home of ancient civilisations-Persians, Arabs, Chinese, Indians and Javanese-and for a considerable period Asia led the world in the sciences and technology. We gave to the world the alphabets, the numerals and the units of tens, algebra, astronomy, celestial navigation, paper and gun powder, amongst other things. This leadership was lost momentarily and we suffered a period of colonialism due to the technological superiority of others. We are, however, proud that in general we had not used our technology for the purpose of improving our capacity to destroy Man and his civilisation. Asian scientists should cherish the high purpose of their scientific learning and not be made the instruments of people with ruthless ambition. With the current political stability and conducive economic climate in the major part of the Asian continent we may now return to the moral high ground of applying learning for the betterment of mankind. We in

Malaysia must now generate our own home-grown science and technology to a level comparable to those of Europe, North America and Japan. We must all look forward to the healthier and more constructive relationship between nations that will benefit all mankind.

4. Malaysia has a strong commitment to the development of science and technology. We are aware that we cannot provide for the welfare of our people unless we can develop and sustain a strong technological and scientific base. Malaysia has been an independent country for less than four decades. During that period we have made quite unprecedented progress. However, we must not be complacent. As latecomers, we realise that the world is not waiting for us to catch up and pass those ahead. To ensure a more intensive process of building on endogeneous science and technology, we must shift the majority of our school children and university graduates to the scientific stream so that instead of the present 25 percent, we should have in excess of 50 percent in the near future. This requires the propagation of a value system that encourages scientific scholarship with excellence.

5. At another level, the Government has allocated a substantial amount of money for long-term scientific research under the Intensified Research in the Priority Areas (IRPA) programme for the past few Development Plans. To be effective and to ensure a sustainable growth of scientific research within the capabilities of the country, we will reexamine, and where necessary, revise our strategies of allocating funds in accord with the latest trends. This is not an easy task, particularly in finding the right balance between applied and basic research. For industries, there is a slightly more defined task to generate products and processes that sell, and as such, investment in applied research and technological innovations should be given priority. Longer term benefits for the nation are, however, much harder to ascertain since, in addition to the economic dimension of the research, there is the nebulous cultural dimension that may be beneficial by acting as a catalyst to further scientific enquiry. This is particularly true for the basic researches whose output may not be of commercial value today but may yield greater economic benefits in the future. Here, the Academy can play a major role as a body of scientific experts in assessing researches being done here and so guide the country towards strategic areas of benefit to the nation's progress. The government will be willing to support any promising research, including those which will ensure sustainable growth of scientific knowledge and technology which can put the nation at the cutting edge of modern science.

6. The public should be made aware of what could happen to their lives and future generations given that science has the power to affect human society and the world systems in a very major way. A scientist has the ethical responsibility to ensure that his research does not have negative effects, either in the form of potential environmental degradation, invasion of privacy, or violation of human rights. Here the Academy Secretariat can help in communicating with the public through their own scientific bulletins and colloquiums.

7. Development of science should always be balanced. While there may be priorities, no one science can be developed at the expense of another. Science should be understood as a unity. This is particularly true today where different disciplines of science have come together for mutual support and some eventually will give birth to new fields and disciplines.

8. It is true that we in Malaysia have mostly been the consumers of technology. But looking at the numerous inventions and innovations at this years 'Mindex' Exhibition, I am hopeful that the central stress on science and technology will pay off handsomely and more and more Malaysians will develop an enquiring mind and dare to venture into newer fields of scientific knowledge. However, science for the sake of science is sterile and may even be harmful. At all times Malaysian scientists must be moved by a desire to apply science for the good of mankind.

9. On this note, I have the pleasure of launching the Academy of Sciences Malaysia.