

EDITORIAL

Symbiosis between science and technology

Mankind was familiar with technology long before science. However, following the periods of the scientific revolution and the industrial revolution, there has developed an increasingly symbiotic relationship between science and technology. New scientific discoveries provide the impetus for their creative use in technology and new technology provides new areas for investigation and new tools to do so. For example, the concept of the wave-particle duality of electrons was an essential element in the development of the electron microscope, which in its turn vastly opened up the microscopic world beyond the capability of the optical microscope. Thus, the 'need to know' how and why nature operates the way it does (science) and the 'need to do' and manipulate nature (technology), feed on one another. Today, new knowledge and related new technology are being created at a dizzying speed which makes it difficult to be even

aware of important new developments other than in a narrow area of interest.

In this symbiotic relationship, technology is the component of major interest and concern to both government and industry due to its more obvious interaction with society. However, the line differentiating science from technology in many areas involving the application of science, such as gene technology, medicinal chemistry and semiconductors, is hazy. Often, the difference lies not in the methods, tools or theoretical background utilized, but in whether the focus is on a more distant potential outcome or on a more clearly defined immediate outcome. The rapid development of vaccines for COVID-19 was a clear example of how the symbiosis between science and technology benefitted mankind.

Ajit Abeysekera