

John Avery, *Space-age science, stone-age politics*

Review by *Chris Langley*, *Scientists for Global Responsibility* 20.1.2006

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Albert Einstein wrote, in a telegram to leading Americans in May 1946: "The unleashed power of the atom has changed everything save our modes of thinking and we thus drift toward unparalleled catastrophe".

Einstein saw clearly the profound difference between the speed, power and impact of the advances which science and technology were making and the ways that our political and moral apparatus addresses and manages these changes. The tempo of the rate of the knowledge production and the power of science and technology has increased massively in the sixty years since Einstein sent his telegram.

The management of the practices and products of science, engineering and technology for our common good and that of the biosphere has been less than effective in the past century. Similarly public debate about the path trodden by science and its products has been partial at best. Such debate is often clouded by special interests. We are seeing various disasters unfold before our eyes because of the failure to grasp the issues which science and technology have played a part in producing. Such effects could be more powerfully addressed by us all and we know that climate change, loss of biodiversity, population growth and the massive power of modern weaponry are merely some of the more urgent dilemmas which we face.

Space-age science, stone-age politics takes a long and detailed look at the behavioural and other tools which we have inherited and how they are in desperate need of updating. Humans behave, individually and as social groups in ways determined by our genes, culture and history.

It is the stark contrast between the power of science and its various disciplines and the Neolithic mindset and the institutional, personal and political mechanisms in place which is the essence of this finely-crafted book by John Avery, who is Foreign Member of the Royal Danish Society of Sciences and Letters and Associate Professor Emeritus, H.C. Ørsted Institute, University of Copenhagen.

In two hundred and seventy pages, arranged in ten chapters the author carries the reader through the various processes which result in a number of profound dilemmas. These include the normalisation of war (also described by many of Chomsky's books) and the costs of being locked in an old and wholly inappropriate grasp of what to do. Whilst many have pointed to the role which dysfunctional human behaviour and world-view have played in the 'inevitability' of war, Avery's skills lie in the thoroughness of his

description and his calm analysis of how we might change the process and build peace and security. The book points to the need to make use of a firm base of social justice and to relearn our role in the world. Given some of the limitations which we have inherited (both in our genes and the culture in which they interact) but conscious of how the power and tools of science can be brought to change the ways in which we frame our problems, the overall message of *Space-age science, stone-age politics* is a positive one, supported by a variety of examples.

The book opens with a challenging call to envisage some of the problems which we face and how things might be different given our abilities and inclinations. Many situations calling for only a slight change of perspective, whilst others need a profound reorientation. Avery asks us to simply pause and to think outside the box on matters which appear 'inevitable'. Security figures largely in the scenarios in this engaging chapter. Such brain storming throws up twenty-eight cameos which are explored in subsequent chapters. They range from military spending and poverty, the common but devastating diseases of poorer countries, to the need for better communication and tolerance. Areas familiar to readers of this Newsletter.

Avery describes in elegant fashion our misguided views, so frequently supported by the scientific and technological communities, and how these, through economic globalisation, impact on the rest of the world. The disasters of Iraq, Africa and Afghanistan owe their initiation and continuation in some degree to the expertise of science, but by altering our perception we can as scientists, designers and engineers see how to play a role in changing these disasters into opportunities to share expertise and make a positive impact on global security in its various manifestations. The tools to start making a change are detailed in Chapter Nine which suggests the need for a re-direction of education toward building and maintaining peace.

John Avery's arguments are clear, pertinent and never shrill or simplified. As Camus wrote after the US bombing of Hiroshima and Nagasaki, and quoted on page 111 of Avery's book: "Our technical civilization has just reached its greatest level of savagery. We will have to choose, in the more or less near future, between collective suicide and the intelligent use of our scientific conquests".

This excellent and well crafted book should be read by all who are in any way involved with science and technology. Especially those who teach the ethics and policy dimensions of the subject and those who are concerned by the profound changes which have come about in the culture and funding of science. Those from the research funders who read the book will find ways in which research might usefully be linked to the creation of a balanced and more equitable world. It is still not too late to change matters and to build an open and ethical science. This book should be in the tool-kit of all who wish to play a role in making such changes happen.