

BOOK REVIEWS

information societies. It is for this reason the editors invited a number of authors known for 'their capacity to combine an academic approach with the familiarity of a user' to discuss central concepts of the information society. The essays were written in one of four languages, viz. English, French, Spanish and Portuguese, and a group of a dozen translators rendered each essay into the other three languages. The book is openly political. Based on the premise that technology is not neutral, the book aims to explain the words and phrases often used in international negotiations. The three editors, all French speaking, chose the authors of each essay carefully, based on suggestions from experts and an examination of their past writings, and commissioned them to write an essay on a given theme or concept – or to be precise a given word. The authors were asked to trace the history and evolution of the use of the word and the range of possible definitions together with a critical review of the formal definition generally used in international negotiations.

The objectives of the book are to bring into focus those controversies, the political significance of which is unknown or underestimated, to help social and civil movements understand the terms and to establish a vocabulary that would reflect their practices and political positions, and to help reinforce these movements and their capacity to build alternative platforms of political action. In my opinion, the editors have largely achieved their objectives.

Among the contributors are Sally Burch (information society and knowledge society), Carlos Afonso (Internet governance), Raphael Nitambue (infrastructure and universal access), Subbiah Arunachalam (public access to the Internet), Felix Stalder (open source intelligence), Michael Briand (citizen expression) and Marcelo d'Elia Branco (free software). Topics covered include cyber crime, information economy, intellectual property rights, knowledge management, communication rights, and virtual communities. Surprisingly, there are no essays on open access and telecentres, two of the most active movements today.

The book, like any other translated book, has problems with translation. For example, in the essay by Sally Burch, originally written in Spanish, Abdul Waheed Khan is referred to as 'general sub-director' of UNESCO (p. 54). Actually his designation is Assistant Director General!

This is a book I will strongly recommend to both academics and practitioners

in the field working in the area of information/knowledge societies. The wide range of topics dealt with and perspectives brought together will surely enrich their understanding. The Department of Information Technology or the Department of Culture, Government of India will do well to commission a translation of this book into many Indian languages.

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Annual Review of Biophysics and Biomolecular Structure, 2005. Douglas C. Rees *et al.* (eds). Annual Reviews, 4139 El Camino Way, P. O. Box 10139, Palo Alto, California 94303-0139, USA. Vol. 34. 489 pp.

In recent years there has been a perceptible shift in the mode of research in biology – a shift from a largely descriptive nature of biological research to a more quantitative approach. While we recognize that the traditional former approach has in fact provided us a wealth of information based on which the modern healthcare depends heavily, one often finds situations where the lack of strict quantification and physical modelling has hampered total understanding of many complex phenomena. In general, quantitative approaches in biology rely upon the use of sophisticated physical techniques as well as on the application of physics and physical chemistry to understand the biological world. Such activities have been traditionally labelled as biophysics, although more fashionable names such as 'physics of biology' are also encountered in recent times. Such renaming also coincides with the current changes in several universities and institutions, mainly in the Western world and to a lesser extent in India, where chemistry and physics departments are getting either merged with biology departments or renamed with a prefix 'bio'.

Fashions apart, these changes can be adequately justified by the observation that the complexities of the biological world offer tremendous intellectual challenges to bright minds trained in any area

of science and mathematics. In this connection, the *Annual Review of Biophysics and Biomolecular Structure* has been providing us both an ideal exposure and a comprehensive account of the current status of research in quantitative biology. The current issue, is no exception to this regular service.

This issue covers topics ranging from modelling of water to predictive models of mammalian cells. While it is easier to recognize the complexity of living cells and the need to apply a variety of theoretical models based on concepts such as graph theory, modularity in networks, etc. one may have assumed that the property of the biological solvent, water is well understood. The chapter (by Dill and others) on modelling water and solvation exposes the inadequacy of our knowledge concerning the effect of water in modulating the strength of interaction between various biomolecules such as proteins, ligands, nucleic acids and membranes. Another striking aspect of the various well-written chapters in this volume is the observation that several new developments have arisen not only from the use of state-of-the-art techniques such as single molecule spectroscopy and single-molecule manipulation, but also from the application of established older techniques such as NMR and EPR on novel systems with newer insights of interpretations. For example, the chapter by Charvin *et al.* describes the elegant experiments on micromanipulation of single DNA molecules to understand the mechanism of action of topoisomerases. In contrast, Malmberg and Falke bring out the use of an older technique, namely EPR, to bring out geometric parameters of membrane-docked proteins. Apart from these, the overall contents of this volume present a balanced approach to the various current and exciting areas of biological research. Thus this volume offers both a comprehensive account of current research to the practitioners in these fields and an exposure of exciting future potential of research in the interface of biology, chemistry and physics.

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