

## BUCKY FULLER

### The Buckminster Fuller Reader

Edited by James Meller. Pp. 383. (Cape: London, February 1970.) 48s.

This is the first publication of Buckminster Fuller's work in Britain. It seems to be inexplicable and a sad comment on our ability to recognize creative ideas when they are presented to us. In architecture at least, however, there is probably a close parallel in treatment of the Bauhaus and Corbusier. As in Bucky's case, the local "hard cover" was preceded by several generations of disciples bearing the good news, but in his case he has ensured that great numbers of people, often of the most unlikely kind, have been exposed to his whistle-stop, seven hour "think-alouds". The continuous outflow of ideas, the manner of their presentation and the person combine to ensure a major impact and often a lasting influence on the ideas of his audience.

Bucky has often spoken to architects; he has sometimes been hailed as one. As a prime synthesist and coordinator, the title is appropriate, but his material has been ideas and the creation of profound insights based on a unique awareness of his world and times. That he has been publicly and primarily associated with the building of extreme lightweight dome structures is understandable, but I believe essentially misleading.

His main driving force has been the concern that all men might obtain "full, lasting, economic and physical success, plus enjoyment of all the Earth". He believes that Malthus could be confounded and that, by the application of man's present knowledge and skills, all men could enjoy and be served by the resources presently restricted to the industrialized nations. In this he distinguishes a crucial role for the designer, and his life has been a demonstration of the particular manner of design required: an utter lack of preconception, a most unusual depth of analysis of the problem, and a unique awareness of the accelerating trends in science and technology, with the ability to translate these trends into the "livingry" (as opposed to "weaponry") area of life. He believes so deeply that man can be a success by the design of his environment rather than by attempting to modify each other that he has invested most of the post-war years to working with students in all countries of the world to this end. He has also organized research in his own University of Southern Illinois and elsewhere, resulting in a flow of design and resource manuals of great value.

In the midst of this he continues to produce domes of increasing sophistication and gossamerlike nature, as at Montreal, underlining the gross inefficiency of conventional design.



Dr R. Buckminster Fuller, the American designer and engineer (photo by John McCann).

His springboard of New England seamanship and his identification with the cast of mind essential for advantageous survival at sea are made very clear in this book; likewise, the recurring concern for man's habitat. These are things usually overlooked in the popular mythology. In 1927 he passed through a deep personal crisis, also touched on in this book, and of which he has said: "I understood that from here on I must only speak the truth". This deceptively simple statement immediately resulted in a total recasting of language.

But one has only to study this book, let alone meet the man, to be impressed by the moral stature that is behind all his actions. If this book should be one's first acquaintance with the man and his ideas, the going is not easy. An unusual train of ideas and a personal language have to be absorbed. I can only urge such an acquaintance to stay with it; the ideas are exciting, profound and deeply optimistic in a world of growing gloom.

JOHN R. LLOYD

## Physical Sciences

### BRIEF LOOKS AT THE UNIVERSE

#### Cosmology

By W. H. McCrea. Pp. 18.

#### Status of General Relativity

By W. B. Bonnor. Pp. 19.

(Sigma Series of Science Surveys.) (Francis Hodgson: Guernsey, January 1970.) Both 40s.

Of all the sciences, cosmology, molecular biology and particle physics are concerned with questions so fundamental as to be nearly philosophical in nature. It is an understandable irony that cosmology, the oldest of these three, has been the last to develop. Only in the past two decades has there been a fertile tension between theory and observation. This tension is leading to rapid changes in our view of the universe.

These two reviews, by authors who have made important contributions to theoretical cosmology and general relativity, are excellent technical descriptions of the basic problems and recent confrontations between theory and observation. Only the briefest overview is possible,

however, when our knowledge of the universe is compressed into eighteen pages. Thus these surveys will be much more meaningful for the student, or scientist in a related field, who is already familiar with the physical and mathematical background, than for the general layman.

Both surveys discuss the same topics, but from complementary points of view. The *Status of General Relativity* by W. B. Bonnor first considers the astronomical and laboratory tests of general relativity, including the recent possible detection of gravitational radiation. This is followed by a section on the role of quasars, galaxy formation, and the background microwave radiation as cosmological tests of general relativity. There is then a description of several theoretical problems: singularities in space-time, gravitational radiation theory and recent ideas on tachyons—particles which, if they exist, have velocities greater than light. In so short a survey, only several paragraphs can be devoted to each topic, but more than sixty references to recent detailed discussions give a good key to the literature.

In his essay, W. H. McCrea reviews one of the great