

Together through history

Juliet Clutton-Brock

In the Company of Animals: A Study of Human-Animal Relationships. By James Serpell. *Basil Blackwell:1986. Pp.215. £14.95, \$19.95.*

"A DOG is for life not just for Christmas." It is easy to believe that this epigram symbolizes a new concern for the welfare of animals and that this concern is an innovation of the Western world in the present century. Yet the earliest authors of the classical world gave instructions on the care and breeding of domestic animals and modern farmers could benefit from following the advice of the Roman writers Columella and Varro. Since the industrial revolution and the movement of people away from the land into the cities, however, there has been a loss of contact between humans and animals which has been, at least in part, responsible for the attitude that livestock are nothing more than food-producing machines. In his book, *In the Company of Animals*, James Serpell explores this development with a rather disordered but well-documented combination of history, philosophy and

animal behaviour.

There are three interwoven themes to the book. First, the history of the relationships between humans and animals from the hunter-gatherers of the early Holocene to the factory farms of today. Secondly, an analysis of the dichotomy between the economists who look only at the profit to be made from their animals and the pet-owners who will go to any lengths to ensure the well-being of their cat or dog. The third theme is concerned with observations on the behaviour of domestic animals and this is the most tantalizing because, in the burgeoning field of ethology, it is strange how very few studies have been carried out on the natural behaviour of domestic animals. Indeed, it appears not to be generally recognized that domesticates have any natural behavioural patterns. A dog is not looked at, even by an ethologist, as a social hunter but as a companion or nuisance; a cat is seen not as a solitary hunter but as a soft warm creature that requires milk at regular intervals.

The book begins with a summary of the behaviour of the wild boar, a sociable and intelligent animal, and this is followed by a description of the very unpleasant conditions that can prevail with the intensive rearing of its descendant, the modern domestic pig. This is contrasted with the excessive care that may be lavished on pets by their owners.

Serpell touches on almost all the rela-

tionships between humans and animals from ancient bear cults to the slaughter of exotic animals in Roman amphitheatres to present day pet-therapy. He analyses the neuroses of over-indulged dogs and describes the mechanisms by which people distance themselves from the animals they treat badly or kill. There is brief discussion on changing attitudes to anthropomorphism — a dirty word to the clinical scientists of the 1950s, but nowadays acceptable, so that it is again permissible, for example, to describe the mood of a dog as cheerful or jealous. Along with this changing attitude is a realization that humans have associated closely with other species of animals for thousands of years and that personifying them is a normal part of human behaviour. It is not eccentric and it may even be therapeutic.

Many of Serpell's observations are incontrovertible, perhaps because they appear to state the obvious, but they bear repetition because of the very real need to improve the standards of welfare of millions of animals. The founding of the first professorship in animal welfare in Britain (the Colleen Macleod Chair at Cambridge) reflects this need and it will be an added fillip if this book can help to inspire new work into the behaviour of domestic animals. □

Juliet Clutton-Brock is on the staff of the Mammal Section at the British Museum (Natural History), Cromwell Road, London SW7 5BD, UK.

THE MANAGEMENT OF AIDS PATIENTS

Edited by DAVID MILLER, JONATHAN WEBER and JOHN GREEN

The Management of AIDS Patients is the first comprehensive guide to the practical clinical management of patients with AIDS or HTLV III infections. The book avoids the sensational aspects of the disease, offering solid advice and information for all people involved in patient care.

The editors and many of the contributors come from St Mary's Hospital, London one of the foremost centres in Britain for the treatment of AIDS patients. The knowledge and experience of these experts has been combined to provide a much-needed book for doctors, nurses, dentists and indeed for health-care professionals everywhere.

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Stellar challenge

Eugene N. Parker

Physics of the Sun. Edited by P.A. Sturrock, T.E. Holzer, D.M. Mihalas and R.K. Ulrich. *Reidel:1986. Vol. I The Solar Interior, pp.257, £36.25, \$44.50. Vol. II The Solar Atmosphere, pp.385, £49.95, \$62. Vol. III Astrophysics and Solar-Terrestrial Relations, pp.287, £38.95, \$49. Set £99.75, \$125.*

IN RECENT years the physics of ordinary stars has developed into a flourishing subject. The Sun is the standard bearer — the only star that appears as more than a blur of light in the telescope. Close examination shows it to be a remarkable object, with a complicated personality and its own private secrets.

Outwardly the Sun shows enormously variable emission in the radio range and in ultraviolet rays, x-rays, γ -rays and cosmic rays. The source of these radiations is the active outer suprathermal atmosphere, which is produced largely by the magnetic fields that erupt through the surface in a remarkable fibril form. The activity of the Sun is driven by the fibrils, whose structure and motion is on so small

a scale that they can be observed only by a large telescope in space. The Solar Optical Telescope was designed to provide those essential observations, and when, and if, such an instrument is launched into space we should then be able to examine the inner workings of stellar activity.

Essentially all stars show variable x-ray emission, indicating that they are as complex as the Sun, and some much more so — but it is difficult to make much of their wide range of activity until the physics of the Sun is firmly in hand.

The observation of neutrinos from the Sun has established that there is something missing or mistaken in present theory of stellar interiors. The theoretical construction of the stellar interior is based on a number of reasonable assumptions, but it has failed to predict the observed neutrino emission by a factor of four or five. The difficulty may lie in a finite rest mass of the neutrino, with profound implications for both particle physics and cosmology. Or it may lie in an erroneous estimate of the helium content or in the theoretical opacity, or in the laboratory value for a nuclear reaction rate. It may, therefore, have a serious effect on our theoretical understanding of all stars. Fortunately, forthcoming observations of low-energy neutrinos and the new subject