

remedies might be tried. (Sir Julian even suggests that bodies like the World Health Organization should refuse aid to countries not "demographically creditworthy".) But the challenge may not be met in any way sufficiently "cybernetic" to fulfil the admirable aim stated on p. 57 of "achieving some sort of balanced relation between the rate of reproduction and the rate of production of food and other resources". Reactions to the population explosion might lead to famine and mutual extermination in fights for living space—Sir Julian obviously feels the horror of this possibility.

Yet "possibilities", when he is talking theoretically, are presumed to be good things: the word is taken to mean not just anything that may happen, but what it would be desirable to realize. So he advocates "Professorships of Human Possibility" (p. 38), saying "we certainly need a new branch of study concerned with man's potentialities and their realization". What sort of study would this be? Specialists in demography, economics, sociology, biology, town-planning, etc., should indeed be encouraged to look ahead, even to speculate more than they generally do, and to hold discussions about "human ecology" with perhaps a few psychologists and philosophers thrown in. But what sort of subject-matter are "human possibilities" *tout court*? I have an uneasy sense that when Sir Julian scents a "possibility" it soon slides into a kind of fact. For example, he says (p. 6) on the theory of probability there must be some other planets on which life has evolved. (Why "must"? Can we say more than there is a high probability?) He goes on (pp. 7-8) to say that on this planet the psycho-social evolution is restricted to man and his works "and we can be sure that only a very small minority of the planets habitable by life elsewhere in the cosmos have produced organisms of similar properties". How can we be sure that any have? And what about the ambiguity in "can" in the sentence on p. 27: "The overriding aim of the psycho-social process can only be to provide greater fulfilment for more human individuals and fuller achievement by more human communities"?

I have written critically; this does not mean I do not see that Sir Julian's vision is a noble one. He must be used by now to taking compliments for granted. But I wish he worried more over the various logical distinctions between what may be, what ought to be, and what is.

DOROTHY EMMET

ENGLISH MEDIEVAL MURALS

English Medieval Mural Paintings

By A. Caiger-Smith. Pp. xvii + 190 + 25 plates. (Oxford: Clarendon Press; London: Oxford University Press, 1963.) 45s. net.

FROM the title, it might easily be assumed that *English Medieval Mural Paintings* would be mainly of interest to art-historians. Without denying that interpretation, however, there is much in these pages which will appeal to scientists whose outlook includes a concern for the progress of techniques, and who will find, in the examination of English wall-paintings, a fascinating field of applied physics and chemistry.

These murals, with their characteristic structure, are largely conditioned by climatic considerations akin (roughly) to a process of natural selection and the survival of the fittest. This, of course, is independent of much destruction by iconoclasts, and of the neglect and lack of appreciation of this particular phase of British art until comparatively recent times. But, as the author points out, we have little to show on the scale of the great examples of France, Italy and Denmark—not to mention Yugoslavia. In those countries, conservation is largely the responsibility of the State, and it is scarcely to be wondered at that, in spite of generous help from certain charitable trusts, it is uphill work in Great Britain to cope with so many patients awaiting treatment.

One physical factor is significant; in Denmark, for example, much of the best work is on (later) Gothic vaulting, whereas in Britain a large proportion is on the inner surface of outside walls. Consequently, there is less resistance to attack from rising damp and penetration through the masonry of driving rain. Moreover, damp-courses are absent from medieval churches. Our quinquennial inspections (now a formal obligation) may be expected to help considerably in establishing and maintaining reasonable standards of dryness. It is clearly essential to attend to such matters before attempting any kind of prophylactic treatment of the paintings themselves, and, once done, the heating and ventilation of all buildings containing murals are subjects for special care. It is encouraging to note that some, at least, of the most barbarous systems previously in use are being gradually superseded.

In this connexion, when a building containing a certain amount of moisture within is dried, then a gradient is set up in the walls and water moves towards the interior surfaces. When evaporation eventually occurs, any soluble salts will be deposited as crystals, thus weakening the plaster and perhaps the surface-coating as well. The detrimental effect on any wall-paintings is obvious, and points to the need for care in the positioning of heating apparatus. Murals themselves do not fade; it is usually necessary for their well-being to remove any wax surfacing which may have been applied. Wax itself is stable; the difficulties met with in removing it are due to the presence of oils and resins which become progressively more insoluble with time.

The Romanesque period of architecture provided tremendous scope for artists on account of the large expanse of walls available for decoration. With the advent of the Gothic style, these large spaces were reduced with increased fenestration. Kempley, Canterbury and Durham provide outstanding examples of the former, and Chichester (Bishop's Chapel) of the latter. In all these cases, recent years have witnessed special efforts of various kinds to save for posterity these masterpieces of English art. But constant watch and ward are needed, reinforced by accurate recording, whenever conservational treatment is undertaken. When dossiers are faithfully kept, much of vital importance and interest to historians can be handed down.

English Medieval Mural Paintings treats the whole subject chronologically and iconographically; the result is a most readable and useful compilation. Not least among its merits is the selective catalogue of surviving examples with an indication of their condition. The traveller will find all that he needs, and not too much. In the Middle Ages, the south and east of England carried most of the population, so that churches, with their decorations, were few in the north and far west.

The bibliography is valuable, but the footnote on p. 118 is a little inadequate, since a great deal of information—in English—relative to materials can be found in *Technical Studies in the Field of the Fine Arts* (ten volumes, 1932-42), and in *Painting Materials* by Gettens and Stout (1942). It is characteristic of the subject in general that a close link exists between the investigation of art-history as such and an appraisal of the gradual development of technique. In fact, this two-way traffic is one of the means whereby humanists and men of science may find common ground. The investigation of murals reveals the way in which men's minds and hands worked through the centuries, giving us a heritage to cherish and from which to learn.

The illustrations in this book are well chosen, but one would have liked to see the forceful "St. Paul and the Viper" (about A.D. 1170) from St. Anselm's Chapel in Canterbury Cathedral included in the collection. The frontispiece, in colour, from Brent Eleigh, Suffolk, is an excellent example of an early Gothic mural, and beautifully reproduced.

F. I. G. RAWLINS