

Huxley: the presence of the 'S' in UNESCO is largely due to him

JULIAN HUXLEY was the leading experimental biologist of his day at a time and in a place in which the ever more detailed validation of the concept of evolution was still thought of as the principal task of biology. The supplanting of comparative anatomy by what everybody came to call 'experimental biology' is a fascinating episode in the history of ideas. In the early days of the Darwinian revolution the elucidation of homologies and the working out of family trees had the same kind of appeal and confident self importance as molecular biology has today, and I know from personal conversations with him that E. S. Goodrich, the former Linacre Professor of Zoology and Comparative Anatomy at Oxford and the only British comparative anatomist of the same stature as Gegenbaur and van Wijhe, still regarded himself even quite late in life as a torchbearer and adventurous pioneer of the great new doctrine.

But, alas, comparative anatomy became an abuse and an impediment to progress, just as comparative physiology became in the next quarter of a century and as molecular biology will surely become in 10 or 20 years (for I foresee clearly a time when, regardless of what major problems in biology remain to be attended to, the sequencing of a protein will still be regarded as an intrinsically meritorious activity which will be taken to represent the courageous holding aloft of the banner of what was once a great revolution in biological ideas).

Because of his intellectual vitality and the great compass of his interest and understanding Huxley rightly earned for himself the position of acknowledged leader of the newer biology. Certainly nobody since has made contributions of comparable magnitude to fields so diverse as ethology (his papers on the courtship behaviour of the great crested grebe are acknowledged classics); physiological genetics; developmental physiology including the study of allometry or differential growth; and ecology, especially in relation to speciation.

And then again, Huxley was, as his grandfather had been, a great expositor of the notion of evolution, although sometimes his ideas on the subject were felt by his juniors, rightly or wrongly, to be wrong-headed—mainly because Huxley never really mastered the modern population-dynamical approach to evolution theory; and so great was Huxley's enthusiasm for the idea of evolution that he came in his later years to treat evolutionism as a sort of secular religion.

Huxley was a great tutor in the old

Oxford style, a man who, because he loved it, chose to teach the whole of his subject instead of teaching only the parts of it that interested him and for the remainder farming out his students to specialists in other fields. The influence of a really good tutor lasts through many generations of pupils, pupils' pupils and so on. It is pleasing therefore to reflect that through a lineage which can be worked out with names and dates in detail, Julian's son Francis was his own great grand-pupil. (The lineage is Julian Huxley—Gavin de Beer—J. Z. Young—P. B. Medawar—Francis Huxley.)

With these qualities of character it is not at all surprising that Huxley was kind and helpful to the young, for although people in his position are bombarded from all quarters of the Earth by manuscripts of which the authors profess to seek their recipient's candid opinion, Huxley bore with this kind of imposition very handsomely and often made the time to answer his correspondents at length—sometimes in his own handwriting.

I do not know and cannot imagine any scale of evaluation of scientific merit along which Huxley would not stand out as one of the foremost biologists of the 20th century. □

Peter Medawar

THE contribution that Julian Huxley made to the work of UNESCO in the field of science was remarkable and, in several respects, decisive.

In the first place, he fought to ensure that science was given a place among the organisation's concerns on an equal footing with education and culture. Thirty years ago, when the conference convened to adopt the Constitution of UNESCO was about to meet in London in November 1945, the issue was still in the balance. On one side, the followers of the classical humanist tradition thought it better to deal only with education and culture, since they both centred on the preservation and development of moral values. On the other, some scientists took the view that science had become far too complex as an intellectual and social activity, and too important on account of its practical applications, to be only one of the fields of competence of an institution; they looked for a distinct organisation solely and totally concerned with science. Huxley was one of those who checked these separatist tendencies. The presence of the 'S' in UNESCO is largely due to him.

Had the organisation restricted itself to dealing with education and culture,

it would have been no doubt easier to manage, with probably a greater immediate efficiency. But none of the difficulties encountered outweighs, in my opinion, the paramount advantages and significance of the existence of an organisation which embraces, through the inter-relationship of its various fields of competence, the comprehensive unity of the minds as a whole.

Once this inter-relationship of education, science and culture was adopted as the fundamental principle of UNESCO, no one could have been better qualified than Huxley, with his manifold gifts, varied experience and wide-ranging earlier ventures, to provide the framework of the new organisation's programme. And that was the main task to which he devoted the best of his energies and abilities, as Secretary-General of the Preparatory Commission (1946) and thereafter as the first Director-General (1946–48).

In the field of natural sciences, with the help of Joseph Needham, he devoted special attention to the restoration and reshaping, in collaboration with the International Council of Scientific Unions (ICSU), of the international scientific community which had been shattered by the war. But Huxley was no less interested in the social sciences, which he thought should have a part to play in all sectors of UNESCO's activities. Thus, he put an ethnologist in charge of the first 'fundamental education' pilot project in Haiti. His efforts to bring together scientists, educationists and users of the mass media in a wide-ranging movement for the modernisation of science teaching and, more generally, for the popularisation of science, provides another instance of his multidisciplinary approach to problems.

Science for him was not merely a body of knowledge and skills; it was the most advanced form of culture, the very basis of all values. This feeling of the close kinship of science and culture suggested to him the idea of a *History of the Scientific and Cultural Development of Mankind*. He put the proposal to the General Conference at its first session in 1946 and succeeded—though not without difficulty—in securing its adoption. And after he had relinquished his functions as Director-General he played a very active part in carrying it out as Vice-President of the International Commission which had the editorial responsibility for the work.

One final aspect of his contribution to UNESCO's science programme which deserves special mention is that he wished the organisation to foster among both governments and the