Neither the Nuffield College Statement nor the symposium in *The Universities Review* does much more than indicate the range of problems to be solved and the imperative need for dealing with them as a whole and not piecemeal. Both challenge creative thinking about the purposes and functions of a university. Both indicate the urgent need for decision as to the body to whom that overall review is to be entrusted and for swift action as soon as the facts can be fully assembled and considered judgment made. It seems equally clear that if the nation's reserves of intelligence are to be trained and distributed to the best advantage, in that review must be joined the best minds that not only the universities but also industry and the nation as a whole can supply.

EVOLUTION IN MANKIND

A New Theory of Human Evolution

By Sir Arthur Keith. Pp. x + 451. (London: Watts and Co., Ltd., 1948.) 21*s*. net.

THIS book is the fruit of a long life of scientific work and meditation by a distinguished thinker with strong intuitions, trying to look towards a synthesis as yet seen 'through a glass darkly', and trying to make that vision clearer without limiting possibilities of its future adjustment. There is no attempt to force the facts to fit preconceived dogma, no riding of a pet theory to exhaustion.

The basic idea is derived mainly from Darwin, Romanes and Gulick. It is that isolated small, inbred groups are likely to diverge. This view is strengthened by the work of the geneticists, who show that in such a group dominant genes are likely to spread generally among the members, especially if they carry some character of value in the environment concerned. Defective genes may bring rapid extermination, especially if emphasized by close inbreeding.

Keith emphasizes the smallness of the hunter-collector groups in several environments; and he might have made more of the probability that in that stage of social-economic development, Britain is not likely to have had more than a few hundred people in scattered small groups. He directs attention very justifiably to the territorial bases of the little early group which he, in common with all other scientific observers, regards as a basal feature of our heritage from prehuman ancestors. Society is not primarily a human construction, and whatever we may say about social elaborations, they are, as it were, shoots on a prehuman trunk. The territorial basis may be a hunting-range, including perhaps a water supply and so on; the group will typically resent intrusions of strangers and will combine to defend the territory. Here we have Spencer's code of amity within the group and code of hostility outside it, both features of the ethical make-up of mankind, the disharmony between which is our permanent problem. But Keith is concerned with the fact that the code of hostility promotes inbreeding and differentiation, in language and custom as well as in physique; and, at an early stage, the more diversity the less interbreeding. Differences of language and custom are thus factors of isolation which he thinks may be more powerful than mountain or desert belts.

The small group has tended to remain poor, and larger associations of groups have come into existence, with decreasing uniformity in physique, but sometimes enforced uniformity in language and custom. Inbreeding, dangerous as well as sometimes useful, is less and becomes less still when one group conquers another, and the conquerors, mainly young men, take to themselves the girls of the conquered people. The larger and more complex group has more to defend, and around this gathers the emotion of patriotism; this in turn promotes breeding within the group, so the self-conscious, patriotic group may differentiate itself, even physically, from others in the course of time. A tribesman, says Keith, is apt to transfer his own emotions and impulses to his tribe or group, and we know the power of that group impulse, especially in connexion with the code of hostility. Russel Wallace was the first to emphasize group-solidarity and the accompanying selection between groups as a factor of evolutionary differentiation.

Keith emphasizes fœtalization as a factor of evolutionary differentiation. The forehead and many other features in women are usually nearer the fœtal stage than those of men. Mongol features, so called, including a low and retracted nasal bridge, an epicanthic fold over the upper eyelid and protuberant eyeballs, are fœtal and transitory in a proportion of Europeans, but durable in parts of Eastern Asia and among the majority of Hottentots. These resemblances are not necessarily indications of close genetic relationship.

It has seemed best to try here to give a fairly general picture of Keith's views. The book reviews many stages of human social, as well as physical, differentiation and gives the author's considered opinions. He adheres, for example, to the view that the Piltdown skull and jaw belonged to one and the same individual, arguing against the opinion that they are of different species but not mentioning the bare possibility that the skull might be that of a female and the jaw that of a male.

Keith's idea of inbreeding groups as in process of differentiation leads him to think of them as possibly races in the making; but most groups of the present time are heterogeneous and likely to remain so, and it might be better to use some term other than that of race in this connexion.

The book is one for careful meditation, and is an interesting monument of a respected and beloved personality. H. J. FLEURE

TOWARDS A MATHEMATICAL SOCIOLOGY

Mathematical Theory of Human Relations

An Approach to a Mathematical Biology of Social Phenomena. By N. Rashevsky. (Mathematical Biophysics Monograph Series, No. 2.) Pp. xiv + 202. (Bloomington, Indiana: Principia Press, 1947.) 4 dollars.

IT is only in quite recent times that mathematical methods have been applied in the social sciences or, indeed, in those fields, such as psychology, where the natural and the social sciences overlap. The use of mathematical-statistical methods in the handling of data, as in biometrics or econometrics, has developed rapidly in recent years. The employment of mathematics as a tool of analysis in the development of theory has been neither as general nor as successful. Mathematical economics, like mathematical biology,