

tions made for the great adventure in the middle of the past century, and the extent to which the Welsh emigrants were misled before they left their native land, concerning the geographical conditions they were going to find in their new homeland in the South Atlantic.

### MONETARY THOUGHT AND MONETARY POLICY IN ENGLAND

THE purpose of Prof. R. S. Sayers's presidential address to Section F (Economics) is to review the theoretical approach to the problems of monetary policy, in the light of changes in the institutional and political environment. It is confined to questions of internal policy: the theory is that of a closed system.

Since 1800 all policy has been based on a broad quantity theory approach: a simple supply-and-demand analysis, in which money is regarded as basically different from other commodities. Although the abstract sense of money, as the unit of account, is unambiguous, money in the concrete sense—the medium of exchange—has no parallel sharpness. It is impossible to identify money either by reference to use, or by the absence of interest, and the distinction between active money and idle money is only notional and may mislead.

For the purposes of policy we have to think of the pressure of total demand, and for this purpose all claims potentially useful for incurring market commitments are relevant. This includes the gross volume of trade credit, variations in which can dwarf variations in bank credit. Non-bank credit has no regular proportionality to bank credit. If all these problems are re-formulated with the use of the conventional concept of velocity of circulation, the conclusion remains the same, and there remains the question whether any disturbance sets up equilibrating forces.

The question of the relation between an acknowledged kind of money and other assets with some monetary quality has been debated continually since 1800, sometimes (as in the 'Currency School' period) with great vigour; these controversies are reviewed in some detail. It is argued that the equilibrating mechanism depended on the power of bank rate to instil fears of trade depression, that during a long period this mechanism was overlaid by the extraordinary power of bank rate over the foreign exchange situation, and that the power has been undermined by the 'full employment' policy.

In the inter-war period more attention was given to the equilibrating mechanism, and ideas about the function of the rate of interest in this mechanism were developed particularly by Keynes. These developments in monetary thought are briefly reviewed, and it is shown that the formulations then used continued to depend on the notion that the supply of the means of final payment was of critical importance. The dangers of this kind of analysis have since been underlined by the development of financial intermediaries and by the behaviour of trade credit. In a rising boom, the sources of liquidity broaden, and the rising demand for the means of payment comes too late and is too easily satisfied.

These developments have tended to make the banks relatively less influential, and to narrow the basis on which direct authoritative action has

traditionally been imposed. This negative conclusion is the most important of the examples given to show how the shape of theoretical analysis bears upon the practical problems of policy.

### STATICS AND THE ENGINEER

SIR ALFRED PUGSLEY'S presidential address to Section G (Engineering), which is prefaced by an indication of the notional difficulties that arise in statics when divorced from engineering and is closed by an emphasis on the power and grace of statics, touches on the interests of schoolboys, mathematicians and engineers alike.

An introductory section brings out the way in which mathematics, and particularly statics, entered into constructional engineering, and seeks to show how the relation between theory and practice in engineering has changed from one in which mathematicians were imposed on engineers to one in which, at least in statics, engineers themselves embrace the theory and seek to advance it.

The outcome of this change is then illustrated in some detail by reference to developments in applied statics in a number of fields. The new understanding of solid friction is seen as the result of a replacement of the smooth rigid body notions of classical mechanics by the realistic, rough and deformable-body ideas of the engineering subject of strength of materials. The limitations of nineteenth-century methods of analysing frameworks, based upon classical statics, are seen to fade before the more general energy methods of this century, linked with ideas of elastic strain-energy; and these energy methods are themselves seen to develop—albeit hesitantly—in the hands of engineers. Some attention is also given to the efforts of engineers to achieve economy in the arrangement of their frameworks.

It is an easy transition from the problems of the plane and space frames of great bridges and airships to those of modern suspension bridges. Here there is added to the usual linear problems of strain energy a non-linear gravitational energy problem due to the great weight of the bridge itself compared with the applied loads arising from crossing traffic.

The development of statics for and by engineering works is further illustrated by the problems that arise in the thin tubular structures of ballistic missiles, the reinforced shells of submarines, and the bathyscaphé cabins of Piccard and his successors for deep-sea exploration. The static stability problems of such tubular and shell-like structures are briefly examined and seen to present new challenges for the future.

### THE PEASANT AND THE PAST

PROF. ESTYN EVANS, in his address to Section H (Anthropology), spoke of the peasant and the past, and the significance of present-day folk-life studies for the interpretation of archaeological evidence and the better understanding of the food-producing societies of Neolithic and later times. An intense interest in the whole past of man on Earth was a feature of the present age, stimulated on one hand by a growing sense of world unity, and on the other by discoveries which had brought the means of giving precision to the chronology of human history in