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"To the solid ground
Of Nature trusts the mind that builds for aye."—WORDSWORTH.

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CONTENTS

Production and Planning

GRADUALLY the industrial and commercial world is being brought round to the acceptance of the idea of the wisdom of, and the necessity for, planning. Planning is being tried in many ways and described by many names. Sometimes trade interests suffice to exercise the necessary control; more often Government intervention is necessary.

Fundamentally, the fact is that at long last it is being recognised that the excessive individualism either of a person, a firm, an industry or a country may be a danger to a nation or to the world, even to the extent of becoming a social crime. National interests are being regarded as a higher ideal than individual interests, while vested interests are viewed with increasing suspicion: the most enlightened think internationally, of mankind. The Fascists' plan to establish the corporate State with limits, within which interests may operate, laid down by the Government, is receiving increasingly serious consideration and support. The limits will be the welfare of the nation as a whole, to which all lesser interests whether of the Right or Left, whether they be employers or workpeople, bankers or other professional men, are subordinate. The 'small man' has become alarmed at the fact that the old system of government has proved quite unable in the last decade to prevent the world, and to a lesser extent Great Britain, being nearly ruined by an abundance which is produced below cost.

The combination of three factors, ample finance, applied science and industrial technique, including improved transport, has enabled the world to produce goods at an extraordinary rate: rationalisation of industry has added to the power to produce goods, but unfortunately there has been no corresponding machinery to enable the goods to be consumed.

Such ingenious attempts to solve this problem as buying by instalments or hire purchase have not really affected consumption as they have chiefly been confined to luxury articles. The outstripping of demand by production of the primary commodities has piled up a world unemployment problem of disastrous magnitude, and a vicious circle has been set up of falling prices and unemployment which is proving hard to break.

How planning can be most satisfactorily attempted is the question which awaits an answer. The form must undoubtedly vary according to the commodity. In Britain we all agree as to the danger of too much initiation, control or regulation by Government departments—a fact which has recently been acknowledged by Mr. Runciman. Business men seek beyond all else to avoid Government interference, but their freedom from this control must in return involve some obligation on their part not to over-produce.

As one illustration of the kind of thing to be avoided, what is happening in the lead industries which manufacture white lead and a variety of products from the metal may be cited. The existing old-established firms have been seeking successfully to combine into one organisation during several years past, so as to weld a previously competitive trade into an up-to-date organisation engaged in manufacture, treatment and distribution of lead products on a reasonable manufacturing scale and profit basis. Owing perhaps to the large amount of capital at present existing for which no useful outlet can be found, experimental efforts are now once more being made to establish further plants which, as the existing plants are not fully occupied, are in fact surplus. Such unregulated over-production by newcomers can only lead to disorganisation and loss of capital: it is a fallacy that new processes must of necessity show reduced production costs. The lead industry is setting a good example in going into the titanium paint trade jointly with Imperial Chemical Industries and others, instead of each company acting individually: a healthy industry giving steady employment and manufacturing economically is likely to be set up without detriment to the consumer in regard to the price he will be asked to pay.

The public is already acquainted with the restriction schemes in force for tea and tin, both of which are successfully acting to rescue these industries from impending disaster. The new international scheme of rubber control can be described as highly scientific. Its object is to restrict production so as to bring it into line with consumption and to lessen the present unduly large stocks. Having fixed export quotas for the various producing countries, these are to be maintained at 100 per cent for two months, reduced to 90 per cent for two months, to 80 per cent for two further months and then to 70 per cent. The gradual reduction avoids too great a dislocation at the plantations and likewise prevents too rapid an advance in price at the outset of the scheme which might hinder manufacturing operations. It is expected to take eighteen months at least with export quotas at 70 per cent to bring the world stocks of rubber down to normal. The scheme not only balances output as between the respective producing countries, but also between the plantations and the native small producers: it is a remarkable example of the principles of give and take in the common weal, enforced, let it be said, only with difficulty after all concerned have drunk deeply of the cup of adversity. There are no doubt faults and loopholes for evasion in such a scheme, as Sir Eric Geddes has pointed out, but it is for all concerned to carry it out loyally, for without it the rubber industry could scarcely survive.

In the future it should be possible to put through similar schemes for other commodities with less difficulty. We hold it improper for one nation to hold up any scheme which is in the interest of the world at large merely in order to bargain for better terms. It is likewise improper for a farmer who is planting a restricted acreage by agreement to increase his normal crop on the smaller area by the unusual application of fertilisers. Such action is said to be nullifying many of the attempts to improve things for the farmers in the United States. It should be regarded as unsocial, and penalised accordingly: if the individual will not work for the common good, he invites drastic action by the State.

The world is populated by human beings exercising some degree of thought and not by mechanically controllable units. Consequently

there is always an opportunity for new fields of production which have mass appeal. Salesmanship, above all the selling of new ideas, is the need of the moment, and it is the profession which is the most highly rewarded financially: it should therefore attract the best brains. Motoring, gramophones, radio, the moving and the talking picture, have in turn captured the imagination and the purses of the multitude and given rise to an immense amount of employment. Who knows what other inventions applied physics or chemistry have in store for us? The decaying industries must also take salesmanship and science into partnership as, for example, the railways and shipping. What a difference the pleasure cruise has made to our idle shipping, and the railways will find that we are travel-minded on land too if they produce the right schemes.

A form of national planning which is under trial is that presented by the trade agreements which Great Britain is making with certain countries. The basic idea in these is to ensure more certain markets for certain British commodities, in particular coal, in return for the sacrifice of lesser industries to competition with the foreigner. It is the general view of industry that in the agreements so far made we have sacrificed more than we are likely to gain and that they have been entered into without sufficient expert advice from industry and consideration of their possible repercussions. The principle of these agreements is probably a good one and only experience can enable us to pronounce on their value, but the experiment is one which is undoubtedly well worth trying; nothing is more essential than to stimulate export trade between the nations. Quotas are also an example of planning by the State, though they are best regarded as an offensive and defensive weapon in tariff wars.

Of recent years Great Britain has never been able to make up its mind whether it is to be developed as an industrial or agricultural country. Politically it is the former so far as voting strength is concerned, and it is obvious that so long as our factories could be kept fully occupied in the export trade, it was convenient and necessary as well as cheap to take most of our food from abroad. In the measure that the export trade falls, it is no longer convenient to import and pay for large quantities of foreign food, whilst national considerations of safety in war time demand that a large proportion of our food be produced at home. In consequence partly of the long period of low prosperity, the organisation of agriculture in all its branches is on a much lower plane than that of industry, and in particular the costs of distribution are unduly high; there is unnecessary wastage and an undue proportion of the profits remain in quarters where the risk and the responsibility are least.

Most of these problems are capable of being solved by planning on a county or national scale, provided that the farmer, renowned as an individualist, is prepared to join loyally in co-operative action.

This analysis is of the slightest, but it would seem clear that individualism has failed, that it must be replaced by planning for the common weal. Such planning is best done on the small scale by industries, on the large scale by nations and eventually internationally. Here science can be helpful and it must not stand aside or let itself be held aloof; the problems are bigger ones than the politicians can envisage, and their solution must profit no party end but bring employment, peace and prosperity to all. Party politics are obsolete and harmful; they must be replaced by a government concerned only with the restoration of prosperity and possessing the ability to plan economic production without putting hindrances in the way of invention.

On Caviar for the Community

(1) *Major Mysteries of Science.* By H. Gordon Garbedian. Pp. 320+64 plates. (London: Selwyn and Blount, Ltd., n.d.) 18*s*.

(2) *Electrical Conceptions of To-day: a Lucid Explanation of many of the Latest Theories concerning Atoms, Electrons and other matters relating to Electricity.* By Charles R. Gibson. Pp. 284+8 plates. (London: Seeley, Service and Co., Ltd., 1933.) 6*s*. net.

(3) *Exploring the Upper Atmosphere.* By Dorothy Fisk. Pp. 166. (London: Faber and Faber, Ltd., 1934.) 6*s*. net.

(4) *The Progress of Science: an Account of Recent Fundamental Researches in Physics, Chemistry and Biology.* By J. G. Crowther. Pp. x+304+12 plates. (London: Kegan Paul and Co., Ltd., 1934.) 12*s*. 6*d*. net.

IT is something of a commonplace to say that we might well suspend research work and devote ourselves to the formidable task of ensuring