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Unemployment and Hope.

EVEREN the most strictly scientific mind may, at the approach of spring, be allowed to wander somewhat out of the old and beaten track—indeed the scientific mind should be constantly on the search for new tracks—to indulge in flights of imagination and of hope, especially of hope. It is the season of new hopes, new resolves, new thoughts, and though the hardened cynic may smile at their apparent futility, yet, however often we fall and fail, it is best to go on trying and keep the shining portals of hope, far distant though they be, still in view. *Dum spiro, spero.* So, in our title we have included hope, even in connexion with unemployment, and thus very flagrantly broken that excellent rule of the strictest school of economics which would rigidly exclude from consideration everything outside the indicative mood, and certainly everything appertaining to the optative mood (*vide* Prof. Florence in his recent work on statistical method in economics).

In the following few notes and crude suggestions the point of view is taken that we should make the best of our present industrial civilisation, that that best is better than is often imagined; that perfect safety in the cosmic adventure, perfect ease, pleasure, and a generally 'soft time' for everybody, are unattainable; that danger and difficulty are always present and will increase in proportion as we advance; and that this progressive advance in the face of increasing danger and difficulty is the thing best calculated to develop a nation's highest qualities. Nothing revolutionary is proposed, for a fairly thorough comparative study of economic systems past and present, including many so-called Utopias, has convinced us that nothing revolutionary can be proposed on any rational basis.

Our present industrial society has many elements of strength and stability, and even of nobility, to which attention has been only slightly or not at all directed, and many elements of weakness on which attention has been unduly concentrated. There is much that is sound and healthy, as is evidenced by the amazing fact that, despite the overwhelming ills with which it is supposed to be afflicted, society has continued as a going concern to this day in wonderful vigour, whereby millions are enabled to live a fairly healthy, active, and more or less happy life, and wherein hundreds of thousands find scope and opportunity—of which, to their unbounded credit, they fully avail themselves—for exercise of the highest virtues of integrity, skill, and courage. These elements and

scope for their exercise can be increased almost indefinitely, and much that is evil will thus automatically be reduced or held in check; but not, perhaps, altogether exterminated, for the mysterious shadow of evil remains a sinister spectre in the background of all man's endeavour, leading him constantly into danger, and spurring him ever to greater efforts. It is well that it is so.

The aims of industry are, or should be, as indicated in a previous article, chiefly two: (1) to furnish a field for exercise of faculty and growth of character; and (2) to produce commodities to satisfy man's varied wants, mostly of a material kind, though of course there are large exceptions outside the material category, and the term 'material' is here used in no derogatory sense. Attention has hitherto been directed mainly to (2) and the primary aim of industry has been ignored. Such one-sided view of industry coupled with a too narrow use of the much abused word 'evolution'—as we shall see later—has led to over-concentration on quantity and mass production and a ridiculous neglect of the human element; and there can be no doubt that had a little thought been given to the first aim, then the second would have been much more completely and satisfactorily attained; also unemployment would not have been heard of, and, as pointed out, too, in the article referred to, the right use of leisure would have been treated rationally as a dominant factor.

Revolution being excluded, one has naturally turned to evolution as correctly expressing society's progress, assuming that progress in the right direction is being made; Ely's "Studies in the Evolution of Industrial Society" being a noteworthy contribution to the evolutionary view. But the use of the term evolution should not lead us to suppose that modern industry is evolving into some perfect and complete type or consummation. Existence would be very dull and dreadfully boring when such a state had been reached, with nothing left to hope and strive for. Then again, the best form or type of industry may not be and surely is not necessarily one particular fixed static type or form only, but may consist of many different and constantly changing forms, distinguished above all things by adaptability and elasticity—a living organism.

The prevailing idea, with exceptions here and there, appears to be that industry is evolving and must evolve towards one fixed type, for example, that of large-scale production, with division of labour and specialism and consequent monotony of work pushed to still more disastrous extremes. But it is doubtful if this supposed ideal or consum-

mation would work very long, or prove to be the best even from the merely material point of view of quantity production, and it would of course altogether ignore the spiritual aims of industry, namely, scope for development of faculty, character, and sound citizenship. This latter is a vital consideration, for the political strength of a nation is dependent on a spiritual or ethical view of industry.

What is to be more specifically understood as elasticity in the industrial structure is the provision of opportunity for other forms than that of large-scale production only, to develop and see what they can make of themselves. Beside large-scale production, or, more strictly, large-scale capitalistic production, there is co-operative production, which of course may be only another variety of large-scale working but may also include much on the small scale. Large scale also may mean a conglomeration of several small and nearly independent units, such as an association of small dairy farmers, small village artisans or handicraft workers, and many such like. Elasticity further means the possibility of reviving, under new and improved forms to meet modern conditions, two at least of the older types of industry which are supposed to have been superseded or rendered obsolete by modern large-scale production; namely, (1) small cottage industries or handicrafts, sometimes known as 'village industries' or 'home work' (in the factory inspector's reports) and sometimes as 'sweated industries'—as many of them are, though they need not, of course, be 'sweated', for this is an evil excrescence not essentially inherent; (2) a combination of manufacturing with agricultural or garden industry, including the possibility of providing the industrial classes with some form of land interest (see NATURE, Mar. 9, 1929, p. 341). If the evolutionary doctrine, as applied by Herbert Spencer and others to the social body, means that these and perhaps other and older forms of industry are useless anachronisms and may not contain something of vital value at the present day, then its application here has been profoundly erroneous and disastrous, stupid and short-sighted. Industry still has its roots firmly and deeply fixed in the past, and foolishly to tear up a great part of those roots as old and useless is the surest way to weaken the industrial tree. Perchance the source of the unemployment curse is to be found here.

The restitution of these two principles of an older industrial order, so essentially and characteristically English, under improved forms made possible by modern scientific achievement, including notably



electrical power distribution, would furnish, in the first place, a new and almost infinite field for human employment of all kinds, absorbing all or most of the present unemployed, giving extra occupation to those on short time; also scope for much organising talent and business ability now running to waste—a lot of it among the idle or leisured classes—through lack of opportunity. By unemployed we mean chiefly the unemployed in Great Britain only, but it would be vastly better to extend our consideration to cover unemployment throughout the whole world. For, first, this would provide a splendid additional bond for international co-operation and friendship, of which we cannot have too many; and, secondly, the solution or even partial amelioration of the unemployment problem in other countries would be bound to have advantageous repercussions on unemployment in Britain.

By accepting these two principles as a basis, with or without some kind of financial reform in the direction of a measurable amount of inflation, possibly on the lines suggested by Arthur Kitson, Douglas, and others, an approach can be made to the unemployment problem, as was done a few years ago rather successfully with the Greek refugees. The application of these two principles to unemployment is, of course, only one part of their scope, for they have a far wider range even than this, especially in counteracting one of the greatest evils of modern industry, namely, extreme specialism, monotonous work, and lack of scope for developing skill, with all that that implies.

Amid much controversy on unemployment, its causes and cures, one fact stands out in unmistakable clearness, and may safely be taken as a starting-point. That is, the unemployed must have the wherewithal to live—food, raiment, shelter, and probably a few things above this wretched minimum. Can they be put in a position to supply most of these things for themselves? At present they lack a market for their labour, and yet they are themselves a huge potential market for labour and the products of labour. Another indubitable fact, standing clear above controversy even though it comes from the realm of economics, is that the instruments of production are land, labour, capital, and organisation or management. There is plenty of land available or reclaimable in Great Britain. Millions of pounds of capital could be provided by capitalising the 'dole' for five or ten years. The requisite organising and managerial ability is doubtless also in existence, but will have to be diligently sought out: much of it would probably be found or developed among the unemployed them-

selves, who also would supply the greater part of the labour.

The aim would be to establish a vast productive organisation, consisting in the main of village communities and garden cities, containing both large factories—if need be—and also cottage or home industries and handicrafts. A considerable amount of whole-time intensive farming probably on a large scale, together with market gardening and fruit growing, would be provided for; but a fundamental feature of the scheme would be a land interest for everybody, mostly a part-time interest wherein they could spend much of their leisure, and would include the possibility of owning home-steads containing up to quarter of an acre or more of land, part of which would be orchard. Training in some form of skilled handicraft would also be available to everybody.

These ideas could of course be applied to British industry generally, and not only to the organisation above mentioned, and thus some sort of antidote at least would be provided against two of the most serious evils of modern industrialism—complete alienation from the land and all that this means, on one hand, and entire lack of scope for exercising skill, on the other. A further evil, that of fluctuating employment, could also be met and means afforded for absorbing or 'damping out' a great part of these miserable fluctuations in labour demand; and something would have been done towards encouraging the right use of leisure, a vital matter in modern society, the implications of which are as yet too little appreciated. Science and research would play a dominating part, and large research institutes, especially in connexion with horticulture and growing under glass, would be established; also electrical or other forms of power would be utilised to the utmost, and though the term 'handicraft' may well be retained, it is fully intended that all the resources of modern science and engineering should be applied and every encouragement given to the further development of such resources.

It is probable that, under the more bracing atmosphere of varied work and interest and skill thus envisaged, the inventive faculties of mankind would be greatly stimulated, and a much-needed spur be given to originality. It is doubtless difficult enough to generalise in regard to such an elusive thing as a nation's inventive talent or to trace the laws of its rise and fall; but it does seem to keen observers that, in view of the attention now devoted to education and research, the amount of originality and creative talent shown is a little



disappointing. We refer not only to the mechanical or physical realm—perhaps it is fairly satisfactory here—but also to other departments of intellectual activity. In the social sciences particularly, the lack of originality is deplorable, and outside empiricists are allowed to have their own way without let or hindrance or effective rejoinder.

If there is any such decline in originality and inventiveness, the chief cause is probably extreme specialism. In Adam Smith's time, division of labour may have been rightly included among the sources of invention: to-day, in its present extreme form, it is very likely a potent agent of torrefaction, and the springs of intellectual creativeness are dried up. But never before in the history of the world has there been a greater or more urgent need for originality and freshness of view than now; and freshness of view includes seeing old ideas in a new light, old principles in new applications and environment.

W. G. LINN CASS.

### The Structure of St. Paul's Cathedral.

*St. Paul's Cathedral.* By Arthur F. E. Poley. With introduction by Sir Reginald Blomfield. (Printed for the Author, "Willowbank", Hampton Hill, Middlesex.) £7 7s. net.

**T**HE author of this magnificent monograph to the genius of Sir Christopher Wren, as exemplified in the neo-classic masterpiece of St. Paul's Cathedral, has produced with immense skill a work adequate for its subject. Just and yet sensitive feeling, a perfection of refinement in draughtsmanship, and a devoted patience in execution, are distinctive throughout this work. The standard set is high indeed and has reached the peak of accomplishment; it has been held there throughout, with an almost grim determination. If there is a sense of effort in the monograph—a feeling as of a continuous striving—throughout this great record, which is not too apparent in the original work itself—that must be set down to the invariable difference between the soaring accomplishments of genius and those of the more mundane service of the historian; which last must pursue naturally a more pedestrian route, and follow the way of prose. This, of course, will always be apparent unless the supreme artist enlightens us with his appraisal and knowledge, as reflecting on the work of another artist; for he alone could bring to the matter that unimpeachable intuition of the artist and the craftsman, native to the medium in which both work.

The text of Mr. Poley's monograph is also  
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excellent; but its outstanding merit is the painstaking, amazingly patient, and skilful draughtsmanship reproducing with complete accuracy all the details of this supreme work of architecture.

The volume contains matter historical and biographical, with building accounts and practical data, all entirely admirable in their way, but, perhaps wisely, no attempt has been made to examine into and explain the vast statical problem which faced Sir Christopher Wren in the technical resolution of his design.

Wren was a fine mathematician, and it is perhaps fair to assume that coming comparatively late to the practice of architecture, he was not intimately acquainted with the practical science of the nature of materials and their behaviour under loading, or their interaction when erected into a structure in intimate association; all parts of the problem of architecture which call for the closest scrutiny into their maximum resistances under compressive and tensional stress.

As a slight evidence of this supposition, witness Wren's surprising action in building into the eight great piers supporting the immense load of St. Paul's dome (some 50,000 tons approximately), a core of rough-mortared, uncoarsed and unbonded fragments of soft Caen stone, and indurated chalk, many fragments calcined by the fire of the old cathedral, and all taken from the demolished building which preceded his own.

It might well have been thought that Wren would have recognised that such a core would be unequal in bearing capacity to the external skins of his piers, faced with Portland stone. This one factor in the problem of the preservation of St. Paul's must have presented a serious difficulty to the highly expert committee dealing with the repair of the Cathedral, and must indeed remain a matter of anxious concern for all those in charge of the structure in the future.

Again, Wren in his work at Hampton Court suffered odium from his enemies as a result of the fall of the east wall of the Palace consequent upon his building this wing across the recently filled section of the long canal at its west end.

At St. Paul's, Wren apparently built the foundations of his mighty church partly on soil compressed and loaded by the previously built cathedral, and partly upon unloaded and virgin soil, inevitably incurring a risk of relative settlements, as can indeed be found to have occurred in an examination of the structure to-day.

Instances of this apparent lack of the strictly technical or merely practical knowledge of the use