

NATURE

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LEADERSHIP AND INCENTIVES IN INDUSTRY

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THE attention which has in recent months been focused on management, as shown, for example, in the formation of the Administrative Staff College, of which Mr. Noel F. Hall has recently been appointed principal, in the recommendations of the Percy Committee on Higher Technological Education regarding training for management, and in the proposals of the Baillieu Committee for the establishment of a British Institute of Management, has sprung from two main roots. First, there is wider recognition of the importance of a higher standard of management if we are to increase the technical efficiency of British industry and to secure the best use of our resources of man-power and woman-power. This approach is emphasized, for example, in the report of the Working Party for the Cotton Industry which, welcoming the formation of an Administrative Staff College, urged also that the central body for the industry should direct attention to arrangements for providing instruction in the principles of management. The second factor is the realization of the important contribution of management in establishing the right relations and co-operation on which industrial efficiency depends, particularly in the changed social conditions of a state of full employment.

Both these factors are discussed by Colonel L. Urwick in a stimulating paper, "Administration and Leadership", contributed to a recent issue of the *British Management Review*, and they are reflected in a series of monographs on higher management which are being published by the Department of Industrial Administration of the Manchester Municipal College of Technology. These monographs are the outcome of a conference of industrialists in the Manchester area during May 1945, which resulted in a course of four lectures for senior executives, the first of which was delivered by Colonel L. Urwick on "Patterns of Organisation", the subsequent ones being by Sir Arthur Fleming on "The Impact of Science on Industry", Mr. T. G. Rose on "The Measurement of Management", and Mr. C. G. Renold on "The Employer and the Social Fabric". It is also intended to include in the series reports and pieces of research work undertaken by the staff of the Department and its senior research students. The monographs thus represent a definite step towards providing the instruction in the principles of management suggested by the Cotton Working Party in its report and also towards encouraging the research on matters affecting industrial employment which the Working Party likewise recommended.

Colonel Urwick, in the paper first mentioned, maintains that administration and leadership are the two principal functions of those whose responsibility it is to govern, or participate in the government of, social groups. By administration he understands the aspect of management or government which is concerned with the activities of forecasting, planning, organising, commanding, co-ordinating and controlling the work of the group, whereas leadership is

concerned with the personal, human, dynamic aspect of the total task of government, which renders such aspects an art rather than a science. Further, he believes that the central industrial problem of our time is how to present the purposes of our co-operative systems of an executive character so that they gain and retain the willing, spontaneous co-operation of those who do not participate and cannot participate in determining those purposes. Pure administration is not enough, nor is trying to imitate the processes of political democracy; and accordingly he maintains that the most important subject for industrialists to study to-day is leadership.

Colonel Urwick expounds Mr. Ordway Teed's definition of leadership as winning the will to co-operate from those whose co-operation is needed, and making the purposes of the joint undertaking explicit and continuously attractive to those who share the burden of attaining them. The core of sound human relations in any form of organised endeavour lies in the identity of the individual with the purposes of the group, opportunity for the individual to grow within the group and equity in the treatment of the individual by the group. Colonel Urwick, stressing that every business must have a social purpose, suggests that British employers are missing an opportunity for leadership in this direction. Unless the leader is convinced of the rightness of the cause, he cannot convey that conviction to others, and these are the essential conditions if he is to represent the group he leads.

Next among the functions of leadership, Colonel Urwick places initiative; third comes administration—a complementary part of the process of government—and finally the function of interpretation, which joins hands with the initiative function and is of vital importance in the task of education and the creative settlement of dispute. It is only through personal leadership of this type that he thinks it is possible to satisfy the aspirations towards a more democratic spirit in the ordering of our systems of co-operation for executive purposes; and he concludes by emphasizing the importance in facing the difficulties in the transition from war to peace of an adequate supply of leaders at all levels. That involves four things: the arrangement of our organisations so that the opportunity for, and the responsibility of, clear-cut executive leadership are obvious at every level; the utmost care in selecting future leaders; use of equal care in developing subordinate leaders; and perfecting and expanding our arrangements for the formal training of leaders. It is probably in the last respect that we are weakest. Much can be done to develop the natural qualities of a potential leader by systematic study, and Colonel Urwick urges that we need a national staff college for industry, comparable with the Staff College at Camberley. Strong executive leadership, he maintains, is essential to democratic government to-day—in industry no less than in politics.

The bearing of Colonel Urwick's remarks on the current situation is even more apparent in the emphasis which he places on the separation of the policy-making or planning level from the operational

or executive level. The distinction is vital if we are to avoid either endless confusion as to what is involved in the nationalization of industry, or hopelessly to prejudice the work of the joint industrial councils or other means of securing the common outlook and co-operation upon which industrial and social efficiency alike depend. Both Colonel Urwick and Mr. Renold drive home this same point in their lectures in the series of monographs on management. "It is not government which is inefficient," Colonel Urwick points out, "but forms of organisation which fail to distinguish between planning and performance, between political and administrative processes"; and he proceeds to emphasize both the inefficiency which results from a board of directors muddling executive management instead of sticking to policy, and the dangers which lie in the tendency for the spheres of political and business leadership to become more and more intermingled.

But there is much else in this lecture which provides food for thought at the present time. Quoting the considered opinion of Lilienthal that, in creating the Tennessee Valley Authority, "Congress adopted and wrote carefully into law the basic principles and practices of modern management", Colonel Urwick notes that the common weakness in such public corporations is failure to provide for adequate executive leadership of the group as a whole. Using his study and experience of military organisation, Colonel Urwick here develops ideas which are as pertinent to industrial organisation as to the regional organisations which we must now contemplate in the development of health services and the reorganisation of local government in Britain.

It is, in fact, in this second part of his lecture, in which after discussing the unit he turns to what he calls the formation, that Colonel Urwick is most suggestive and stimulating. Insisting on the vital importance of a proper balance and integration of theory and practice, he argues trenchantly for the new staff college for industry, and suggests that if its graduates are not successful when they go into industry, then the blame may well be the short-sightedness of business leaders who refused to devote sufficient time for the purpose. He would prefer to start with few students and little publicity, relying on the effect of turning out a first-class product as the result of the first two or three courses.

Colonel Urwick does not forget that business can offer few positions comparable with that of the staff officer in the Services, but he remarks pertinently that it is only by taking thought that any man can add to his administrative stature; and his observations on the concealed losses of human quality due to mechanical supervision and lack of imagination and critical thinking are much to the point. Similarly, in the first part of his lecture, he stresses the biological analogies in discussing human systems of co-operation, and his enunciation of the principles of organisation and of the methods of grouping activities whether by kinds or by levels of authority and responsibility, keeps this aspect clearly in mind; similarly, he picks out the critical points in the normal development of an economic undertaking

from small beginnings as a one-man affair. The scalar principle, the principles of specialization, of correspondence of authority and responsibility, and of the span of control, are expounded as clearly as in his earlier writings; and in pointing out the dangers which attend the growth of any undertaking, Colonel Urwick gives clear guidance as to the ways in which these dangers can be avoided, and new and appropriate patterns of organisation developed.

Mr. Renold's approach to his subject is of a different order but no less suggestive. Mankind, he holds, has struck its tents and is seeking new pastures, a new mode of life, a new world; and in reviewing some of the changing features in our industrial system, he stresses first the emergence and general acceptance of the conception that the industrial worker has citizen rights in industry. Such rights must clearly be associated with duties; but Mr. Renold points out, though less lucidly than Colonel Urwick, that the analogy between the political and the industrial field breaks down at the executive level. Unless there is agreement on common objectives, the claim that employees should participate with employers in the appointment of management officials becomes farcical.

Mr. Renold stresses the importance of seeking objectives in industry which are acceptable to the public, the workers and the owners, and meanwhile he points out that it is quite practicable to reach agreement between management and representatives of the various grades of employees on what may be termed domestic law, such as the works rules, terms of employment and the like. Administration is a different question, and because of its repercussions on efficient administration and particularly in team-building, he questions the practicability of an independent judiciary for breaches of domestic law. The problem is, of course, part of the difficult one of building up general morale, and becomes less acute as we succeed in finding common objectives; and Mr. Renold has much to say about the development of new loyalties, which he ranks high among the duties forming the counterpart of rights in the conception of industrial citizenship.

Something much more than profit-sharing or co-partnership is required: it is fundamentally the question of arousing interest in a man's daily work. A common objective, a conviction on the part of each member that he has a personal contribution to make, and the knowledge that his contribution is recognized: these are essential conditions for successful team-building and the inherent loyalty it implies. Mr. Renold suggests that the Training within Industry Scheme offers possibilities in this connexion; but commenting on the extreme complexity and close integration that now characterize economic life, he believes that a national wage policy is also essential. The settlement of wage disputes can no longer be left to the process of collective bargaining, because the community as a whole has just as vital a stake in the outcome as the parties themselves. In this he is in agreement with Prof. H. S. Kirkaldy, who insisted in his inaugural lecture at Cambridge that this is one of our most urgent needs. Finally, he

points to the growing acceptance of the idea of a social purpose in industry, and suggests that the general set-up of industry should be such as to provide a soil in which the spirit of service can grow, and that the conduct of industry should be such as to cultivate that growth. Nationalization, he believes, may provide an answer to the institutional or formal aspect, but is liable to fail in regard to conduct or leadership, and he suggests that both the forms of industry and the leadership must be modified.

Mr. Renold may be too confident of the ability of private enterprise to provide the leadership that is required. Given the training and the sense of common purpose, leaders of the right calibre would probably be thrown up in similar proportions by public or private enterprise: the emphasis comes on enterprise and initiative, and the form of organisation must be such as to promote these. But this lecture, and those of Colonel Urwick, are a challenge and a stimulus to constructive and creative thinking on both the forms and the practice of management, and they reinforce all those arguments which have been advanced in the report of the Baillieu Committee, the report of the Percy Committee on Higher Technological Education, and in those of the Working Parties for the Cotton Industry, the Boot and Shoe Industry and the Pottery Industry, for greater attention to this question of the quality of management and the closer investigation of the many factors that affect the health, efficiency and interest of the workers.

The monographs which the Department of Industrial Administration of the Manchester College of Technology has thus initiated are both a useful contribution to the literature of industrial management in Great Britain, the quality of which was adversely criticized by the Percy Committee, and also a welcome indication of the increasing extent to which the nation is prepared to support the newly established Administrative Staff College and the British Institute of Management. The Department's activities hold promise of a solid contribution to the work of building up a new structure in industry which will satisfy alike the demands for increased mechanical efficiency and the human needs and social purposes of an era of full employment. The Tavistock Institute of Human Relations is also breaking fresh ground in setting itself the task of finding out more about the underlying psychological factors in social relationships such as industrial groups, and removing some of the obscurity which clouds human motivation. Lord McGowan has testified to the discipline, the desire to work and the greater sense of responsibility observed in those returning from the Services to work in the great firm of which he is chairman, and he has referred also to the urgent need for industrialists to make an intensive effort to break down fears of unemployment, to uproot suspicion and to arouse interest in efficiency and production.

Much more time must indeed be devoted by management to explaining the problems and operations of industry to the employees, and the proposals for the training of managers and administrators will not by themselves suffice. There must be a simul-

taneous effort to provide the technical training in management that is required at lower levels; for example, at what may be termed the 'non-commissioned officer' or foreman level of industry. More than good personnel management, however, is essential if effective incentives, and especially the social incentive, are to be developed in industry. Simultaneously, research must proceed into operating conditions and problems of human relations, so that the trained managers at every level may have fuller facts at their command in reaching decisions and framing or executing policy. Above all, there must be enlisted the interest and co-operation of the trade unions themselves, both in the selection and training of men and in the research into human and operating problems, in order that we may build up the sense of common purpose, the understanding and good will which form the basis of morale in industry as elsewhere. The achievement of such an end demands also open mindedness and the readiness to discard prejudices, obsolete forms and practices, no less on the side of the workers than of management, and for their contribution to that end alone these monographs deserve a warm welcome.

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THE LEPIDOPTERA OF SWEDEN

Svenska Fjärilar

Systematik bearbetning av Sveriges Storfjärilar, Macrolepidoptera. Av Frithiof Nordström och Einar Wahlgren. Pp. iv + 86 + 354 + 50 plates. (Stockholm: Nordisk Familjeboks Förlags A.-B., 1941.) 115 kr.

This splendidly printed and illustrated monograph, although bearing the date 1941, has only recently come to hand. It is under the general editorship of the well-known entomologist, Albert Tullgren, who contributes an introduction. Being of quarto size, a very large amount of information is provided in its 440 pages, and nearly every species of the Swedish Macrolepidoptera is figured in its fifty coloured plates. The so-called Microlepidoptera are left for future treatment. The monograph is divided into two parts which, for some reason or other, have separate pagination. Part 1 is devoted to general structure, habits, protective resemblance, distribution, etc., together with keys to the various families. It also contains a general bibliography of a limited kind; and runs to eighty-six pages with sixty-six text-figures and twelve distributional maps. In the latter, the range of each of the species shown is indicated by individual dots representing each locality, as has been done in E. B. Ford's recent volume on "British Butterflies". Part 2 constitutes the bulk of the monograph, and in its 354 pages (the subject-matter of which is arranged in double columns) will be found the essential information regarding the Swedish species, their range of distribution in that country, the larvæ and their food-plants. Some 369 text-figures portray genitalic characters and those features shown by the caudal extremity in great numbers of the pupæ. The coloured plates are of general all-round excellence: they are chromolithographs that give an accurate life-like representation of the adult insects and many of their larvæ. We do not recollect having seen finer coloured plates of their kind illustrating

Lepidoptera, notwithstanding the large number of works that have been published on this order of insects.

Beginning with the butterflies, these are divided into Rhopalocera and Grypocera. It is interesting to note that *Papilio machaon* ranges over the greater part of the country and that *Lycæna arion* is widely distributed over the southern half. The distribution of the various species of Lepidoptera, it may be added, is indicated by laens or districts (except in the twelve maps already alluded to). Apparently neither *Apatura iris* nor *Limenitis camilla* is found in Sweden; but the handsome *L. populi*, on the other hand, ranges over most of the southern half of the country besides being found in the islands of Öland and Gottland. Among species with a restricted range is *Polyommatus hylas*, which is confined to Malmöhus and Blekinge, together with the two larger islands just mentioned. Among the Vanessinæ, the genus *Brenthis* with nine species is well represented. One species, *B. frigga*, has a wide range north of Stockholm. Altogether some 108 species of butterflies are included as being Swedish. This relatively high number is partly accounted for owing to the arctic element in the fauna being well represented.

Among the moths, the account begins with the Sphingæ, which include the same species as those found in Britain. The Notodontidæ include our British species along with several others such as *Notodonta phæbe*. It is interesting to learn that *Leucodonta bicoloria*, so rare in the British Isles, is widely distributed in southern Sweden. The Lasio-campidæ and Lymantriidæ comprise all the British members, together with such striking species as *Dendrolinus pini* in the first-named family and *Dasychira abietis* in the latter. The Noctuidæ are very well treated. The genus *Catocala* has no fewer than seven Swedish representatives and, among them, *C. fraazini* seems to have the widest range. In addition to the last-named there are a number of other species that have but a casual or very localized foothold in Britain and a very extensive distribution in Sweden. Notable instances are *Athetis (Hydrilla) palustris* and *Zygæna meliloti*. The Arctiidæ are very well represented in the Swedish fauna by a number of striking members, including *Rhypparia purpurata*, *Hyphoraia alpina* and *H. festiva*, that do not range into Britain. The usual British Hepialidæ (here spelled Hepiolidæ) occur together with the local *Hepialus (Hepiolus) canna*. The Zygenidæ have nine species and the Aegeriidæ (or Sesiidæ) fourteen, while the Psychidæ also comprise fourteen species and the Taleporiidæ four. The last-named family follows the Psychidæ and is not regarded, therefore, as belonging to the Tineidæ as some authorities believe.

A well-worked group of insects such as the Macrolepidoptera affords admirable material for faunistic comparisons. In this connexion the present work is invaluable since it provides the relevant data in a concise form. While the majority of British Lepidoptera range into Sweden, the richer fauna of the latter country contains many species that are not to be found in Britain. Except for the handicap of being written in the Swedish language, British lepidopterists could adopt this volume as a general work of reference. For many, the plates alone would prove of great assistance for purposes of general identification aided by such a work as that of Meyrick. The nomenclature used does not agree in many cases with that adopted in the latest British list by Kloet and Hincks. It follows, in general, a less heterodox