chapter, "Principles of Monistic Transitionism", designed presumably to bring some unity to an otherwise loose ensemble.

JOHN COHEN

EVOLVING THE RULES OF WORKING TOGETHER

Industrial Relations in Engineering

By Arthur Marsh. (The Commonwealth and International Library of Science, Technology, Engineering and Liberal Studies.) Pp. xxiii+362. (London and New York: Pergamon Press, Ltd., 1965.) 30*s*. net.

IN the words of the author, the purpose of *Industrial Relations in Engineering* is to examine the present-day workings of industrial relations and to encourage trade unionists, managers and students of industrial relations to discuss the strength and weaknesses of the system.

The rate and pressure of technical change, particularly automation, which is likely to affect the jobs of many people, the need for a critical look at craft apprenticeships and retraining within industry and the impact of national planning, are all factors which stimulate interest and direct attention to what is undoubtedly the most important factor in the evolution of modern industrial life.

It would not be untrue to say that 'industrial relations' is, when brought down to factory level, where all negotiations begin, but another term for 'personnel management', the emphasis being placed on the aspect of employee relationship rather than executive policies and activities that are set up to foster good relations. Both are clearly allied to morale and good morale makes for effective work and economical operation.

Arthur Marsh in his study has drawn on his wide knowledge gained while developing extra-mural classes for industry at the University of Oxford, and quite logically his opening chapters deal with the historical background of trade unionism, the problem of defining engineering and the slow but steady emergence of Union organization and negotiation procedures from the early local committees to a national body in the form of a federation which is described in the Trades Union Congress Report (1947) as "a loose form of industrial unionism" and is a compromise between *ad hoc* working arrangements and a complete amalgamation of associated bodies.

In this role, the Confederation of Shipbuilding and Engineering Unions (C.S.E.U.) serves a very good purpose and prevents inter-union competition and overlapping.

The next chapter summarizes the general position and function of the C.S.E.U. and is followed by a description of the nature and origin of the managerial side of industrial relations. The role of the Engineering Employers' Federation, expressed in the simplest possible terms, is that it acts as the trade union for management.

The chapter dealing with the history and operation of the Engineering Employers' Federation is one of great interest, as it explains very clearly the reason for the defensive role undertaken in labour relations and why the local association structure of the organization has survived and continues. The comments of the author on the future of the Federation could be the subject for much comment and debate, but it is Chapter 8—"The Engineering System in Perspective"—which discusses the reaction of those inside and outside the industry to the many features in the Unions' and Federation's handling of disputes which is most important and gives scope for criticism and an urge to reorganize. The final paragraph of the chapter which deals with the influence exerted on industry by Government could quite easily have been considerably extended and perhaps in time this aspect of the subject will merit a volume to itself. The author mentions the Industrial Training Act, which is just beginning to bite and has received a mixed reception from employers but so far little published reaction from Unions.

The activities of the National Board for Prices and Incomes and the effect of restraint on prices without effective control of wages indicate that more Government pressure is essential if its policies are to be effective. Government influence is becoming a third factor in industrial relations, as since 1945 and especially since 1961 both Conservative and Labour Governments have found it necessary to intervene more directly in the affairs of industrial relations.

The latter part of the book is taken up with appendixes A to D, and these give much valuable information on the main negotiating bodies, procedures and agreements from the year 1898 to the 'packaged deal agreement' of December 22, 1964, and in a section labelled "Miscellaneous" there are notes on apprentice indentures, training of shop stewards, collective bargaining and procedures for dealing with redundancy.

There are all too few books written on industrial relations. This subject should be more widely known, understood and discussed: Arthur Marsh's book, although written primarily to advance teaching to a selected readership, can be of great interest to a broader section of the community—those who, while having no part in the engineering industry, are nevertheless affected by industrial disunity.

The arrangement of chapters and the details given in each will enable a reader to build up, step by step, a picture of the complex negotiating machinery and the code of behaviour evolved over a period of one hundred and fifty years of industrial growth to give Britain her present organization and procedure.

In this book we have all the history, the rules of the game, and an introduction to the characters and organization, and in studying it a reader can form his own opinion of a relationship which can affect us all, our work, our money, and our security and future.

L. E. JARMAN

INTRODUCTION TO NEUTRON RADIOGRAPHY

Neutron Radiography

Methods, Capabilities and Applications. By Harold Berger. Pp. vi+146. (Amsterdam, London and New York: Elsevier Publishing Company, 1965.) 50*s*.

HAROLD BERGER has produced an authoritative and clearly expressed book which provides an excellent survey of neutron radiography for the non-specialist reader and a thoroughly worth-while reference book for the worker in this comparatively new field. The value of *Neutron Radiography* to the specialist is considerably enhanced by a comprehensive and up-to-date bibliography.

After an introductory chapter in which the role of neutron radiography as complementary to X- and γ-radiography is reviewed, the author discusses the use of accelerators, radioactive sources and reactors as sources of neutrons for slow neutron radiography. Emphasis is placed on the use of reactors because of the higher fluxes available, and here the author could possibly be criticized for underestimating the potential use of low-energy accelerators which have the advantage of cheapness and mobility and which are gradually being developed to produce higher neutron yields. The comment has perhaps more relevance to the potential user in Britain where research reactors are less readily accessible to industrial research teams.

An excellent chapter deals with photographic methods for neutron detection, and here Harold Berger demonstrates to the full his ability to write for the specialist and non-specialist reader. His somewhat superficial treatment