

this was the emphasis that he laid upon economy of motion; upon the fact that normal human beings are endowed with two hands, and that carefully thought-out arrangement of materials and implements at a specially devised workplace would enable the worker effectively to use both hands at the same time with a minimum of fatigue. Gilbreth was the first to respond to Taylor's oft expressed wish that something better than the stop-watch, or he expressed it, a time-study machine, might be invented. Previous to Gilbreth's conception of the use of the motion picture camera in conjunction with a suitable clock, the only means of measuring elementary operations averaging three hundredths of a minute or less was the laborious and not too accurate method developed by Carl G. Barth, which was first described by Taylor in "Shop Management," and which has been reprinted in almost every book and paper dealing with method and time study.

In this book as in previous presentations of the motion- and time-study technique developed by Gilbreth, the reduction of all motions made in the performance of any task to some eighteen true and basic elements of universal application, is dealt with at some length. These are what Gilbreth designated by the somewhat alarming term "therbligs." This reviewer is of the opinion that the promulgation of this idea—that the possible useful motions of the human body may be so analyzed, classified and timed, as to obviate the need for further time studies in order accurately to set the task time for any kind of an operation after the method has been decided—may constitute the most valuable element in the Gilbreth's contribution to scientific management. It is to be hoped that in any future edition of this book the matter of basic elements and their use in building up the standard time for specific operations may receive more consideration. Since the fundamental idea dates back to Taylor's early days at Midvale it is amazing that few of those engaged in the work of method and time study have understood or applied it. Let me quote from Taylor's paper "A Piece-Rate System" published in 1895: "No attempt is made to analyze and time each of the classes of work, or elements of which a job is composed; although it is a far simpler task to resolve each job into its elements, to make a careful study of the quickest time in which each of the elementary operations can be done, and then properly to classify, tabulate, and index this information, and use it when required than it is to fix rates . . . under the common system of guessing . . . in 1883 . . . it occurred to the writer that it was simpler to time each of the elements of the various classes of work . . . and then find the quickest time in which each job could be done, by summing up the total times of its component parts than it was to search through the records of former jobs, and guess at the proper price."

It is to be hoped that Mr. Mogensen's book may help to a more general and better understanding and appreciation of Taylor's basic idea, of which Gilbreth's "therbligs" are a logical and ultimate development, and that more "time-study men" may realize that work done in any trade consists of the performance in varying combinations of a relatively small number of elementary operations which may be isolated and studied independently; and that furthermore, these are made up of a still smaller number of true elements.

In view of the fact that credit for this conception of true elements has at times been bestowed elsewhere, the reviewer feels it his duty to state that it was discussed by Gilbreth with him during the earliest days of the former's association with the Taylor Group.

The book brings out the importance of a quality too often lacking in those who have to do with the improvement of methods and the establishment of production standards. This is the quality termed "motion-mindedness." The reviewer recalls in his own experience an instance in which, long before method and time study might have been wisely instituted in an organized way or an incentive wage system inaugurated, marked improvements in production resulted from cultivating "motion-mindedness" throughout the shop organization. In this instance virtually every foreman and workman became a methods man.

A reading of the book impresses one with the importance of creating a proper spirit of co-operation in any attempt to apply the technique of scientific management. Old as this truth is it cannot be too often repeated, as the minds of many executives even today work only in one direction when they think of co-operation.

Tucked away in Mr. Mogensen's text, in next to the last chapter, is a gem of thought, which if heeded, might be of incalculable value to manufacturers of many lines of equipment used in the production or handling of materials. It is this sentence: "Motion and time study also offers in the present business situation means of selling new equipment." With this as a text one might write a volume. What a vista it opens up—if one is willing to tax one's mind by thinking it through. The reviewer commends it to general managers and sales managers. It has possibilities far beyond what may appear at first glance.—By King Hathaway, Consulting Engineer, New York.

INDUSTRIAL RELATIONS: ADMINISTRATION OF POLICIES AND PROGRAMS. By National Industrial Conference Board, New York, 1931, pages xii, 114.

This appraisal of the current success of the administration of industrial relations in American corporations is a valuable asset and The National Industrial Conference Board has supplied a most informing and fair statement of the present situation. Its factual statement and its record of managerial results with personnel work are convincing and illuminating. They show that personnel work has achieved a degree of standardization and acceptance that entitles it to respectful consideration on an all but professional level.

I agree with the contention which it makes that the branch of this type of administration which is least satisfactorily standardized is "the interpretation to employes of management policy toward them and the means adapted for carrying out this policy."

I agree also that the reason for this is usually that there is not a consistent and sustained philosophy underlying managerial efforts in the personnel field. This book truly observes that "every industrial relations policy reflects the philosophy of human and industrial relationship held by those in whose hands the determination of the policy lies." There are, no doubt, many reasons for this failure to have a consistent philosophy and plan for personnel work, which will dominate a company's personnel efforts over a term of years. But one such limitation which is important enough to emphasize is included in the book itself. In summarizing the opinion of executives about the value of personnel work, it says that "the basic conception of fairness in the employment relationship, which underlies these programs, is a sound principle of doing business." My point is that conceptions of "fairness" and "justice" are so abstract and ambiguous that to invoke them as a principle underlying personnel work is in the last analysis to invoke practically no principle at all. Any sound philosophy of personnel administration today must be one which makes its motives concrete and its purposes intelligible to the normal self-interest of the employe rather than simply being a use of fine phrases.

It seems to me unfortunate, too, that the first organization chart given of the relation of the personnel activities to the rest of the executive organization should be one which is relatively untypical and functionally unsound. All the rest of the sample organization charts published reflect much more the best prevailing practice.

Regarding social insurance of all sorts, this book is guilty of a certain inaccuracy and exaggeration when it says that social insurance "places a heavy burden upon employers." It is a question of fact throughout European experience with social insurance as to the percentage of the pay roll which has to be set aside for this purpose and I believe it is inaccurate to say that this is considered in Europe as "a heavy burden."

These critical comments apart, the book is to be commended to everyone who wants to get a comprehensive picture of the present status of personnel work in American industry.—By Orduway Tead.

BALANCED EMPLOYMENT. By Lee Sherman Chadwick, The Macmillan Company, New York, 1933, pages viii, 234. (\$2.00)

This is a book by an industrialist who has applied some simple homilies, applicable to an individual business where one's opinions are unquestioned, to economic society as a whole. The author starts confidently by asserting his intention "to strip away some of the confusing details of our complicated system, so that we can view the simple basic principles that control our economic life." This bland assumption that there are a few simple and basic principles at once attracts attention. A wide range of discursive short chapters dealing with such varied problems as money, labor, efficiency, values, machinery, the jazz age, character, fear, disloyalty, the government, etc., lead to a chapter called "The Solution," which is to give the government power to vary the hours of industry up and down, without changes in hourly rates, in order to provide some employment, no matter how little, for all concerned. The author assumes that changes in wage rates are the cause of changes in prices, a confusion in cause and effect which would certainly not explain why wage rates lag behind in the cost of living in certain stages of the business cycle. His insistence on unchanged wages in boom times and depression is of little importance because it denies all government authority in the fixing of wages. The actual fluctuations of business are thus practically untouched. It simply disregards the price and money phenomena which are so large a part of the cause.—By Herman Feldman, Professor of Industrial Relations, The Amos Tuck School of Administration and Finance, Dartmouth College.

TO-DAY'S CHALLENGE TO MANAGEMENT. By Harry Arthur Hopf, H. A. Hopf & Company, 40 Rector Street, New York, 1932.

This address delivered in Baltimore and in Dayton before management groups brings out the need for management today to reconcile its profit motive with the advancement of social welfare and points to some of the means for achieving this end.

ESSENTIALS OF A PROGRAM OF UNEMPLOYMENT RESERVES. National Industrial Conference Board, Inc., New York, 1933. (\$1.00)

Here is a compact presentation of the fundamentals or basic principles of a sound and practicable program of unemployment reserves. Under the "Legislative Situation and Outlook" recent significant developments in Wisconsin, New York, Ohio, Massachusetts, Connecticut, etc., are outlined along with the development of the American Federation of Labor's attitude and other important events. A tabular analysis of private unemployment benefit plans is included as an index. Employers and public administrators will find this a helpful body of factual data.

OPERATING RESULTS OF MANUFACTURING PLANTS IN MINNESOTA, 1926-1930. By George Filippetti, William Dachtler, Judson Burnett, Bulletin of the University of Minnesota, Employment Stabilization Research Institute, Volume I, Number 7, December, 1932, The University of Minnesota Press, Minneapolis. (\$1.00)

The factual data are presented as a basis for a voluntary co-operative regional plan in Minnesota. It is hoped that this presentation and analysis will lead to three things: (1) scientific research to develop new products to replace old; (2) more scientific management of individual enterprises to put them on a better competitive basis as compared with other regions, and (3) co-operative research agencies to guide management in meeting the complicated problems of the day.

UNEMPLOYMENT INSURANCE. By Mary B. Gilson, Public Policy Pamphlets No. 3, The University of Chicago Press, Chicago, 1933, pages ii, 30. (\$.25)

The case for unemployment insurance is here concisely put, backed by historical data which Miss Gilson, because of her wide experience in industry and thorough study of the system of

unemployment insurance in Great Britain, is particularly well qualified to summarize.

SALARIES AND COST OF LIVING IN TWENTY-SEVEN STATE UNIVERSITIES AND COLLEGES, 1913-1932. By Viva Boothe, The Ohio State University Press, Columbus, Ohio, 1932, pages xvi, 158.

This study compares the trend of cost of living with the trend in university salaries during the last twenty years. The analytical text is supported by numerous tables and charts made up from the material secured from the sending out of a questionnaire. The fact presented will be of interest and value in the academic field.

Notes

Reflecting the conditions and problems of the fourth year of the world-wide depression, the "Report of the Director" of the International Labor Office, Geneva, is of exceptional interest and importance. Because the situations reviewed imply that social problems are no longer sharply distinguishable from economic problems, the report concludes with a sympathetic consideration of the forms which economic planning is taking and the directions toward which its future development seems to be tending. In the United States the report (\$4.00) may be procured at the World Peace Foundation, 40 Mt. Vernon St., Boston.

A special report on the United States Census of Distribution has been issued by the International Management Institute, Geneva (pages 72; Swiss Fr. 2).

The "Social Work Year Book for 1933" in its 680 pages of material for social workers and other students even surpasses the high standard set by earlier editions as a result of new emphasis on utility. Russell Sage Foundation, \$4.00.

Books Received

Accounting Manual for Small Cities (Under 25,000 Population). By Carl H. Chatters, Municipal Finance Officers' Association of the United States and Canada, 850 E. 58th Street, Chicago, 1933, pages 79.

*The American Federation of Labor—History, Policies, and Prospects. By Lewis L. Lorwin, The Brookings Institution, Washington, D. C., 1933, pages xix, 573. (\$2.75)

*The Bank for International Settlements at Work. By Eleanor Lansing Dulles, The Macmillan Company, New York, 1932, pages xii, 631. (\$5.00)

A Call to the Teachers of the Nation. By the Committee of the Progressive Education Association on Social and Economic Problems, The John Day Company, New York, 1933, pages 31. (\$.25)

*Can Business Build a Great Age? By William Kix Miller, The Macmillan Company, New York, 1933, pages 320. (\$2.50)

*Can Business Govern Itself? By Edgar L. Heernance, Harper & Brothers, New York and London, 1933, pages xxv, 259. (\$3.00)

*Cost Accounting. By Charles Reittel, International Textbook Company, Scranton, Pa., 1933, pages viii, 441.

*Credit and Peace, A Way Out of the Crisis. By Feliks Mlynarski, George Allen & Unwin Ltd., London, 1933, pages 92. (\$1.25)

*Debt and Production, The Operating Characteristics of Our Industrial Economy. By Bassett Jones, The John Day Company, New York, 1933, pages xi, 147.

*Displacement of Men by Machines. By Elizabeth Faulkner Baker, Columbia University Press, New York, 1933, pages xxii, 284. (\$3.50)

*Economic Disarmament. By J. H. Richardson, George Allen & Unwin Ltd., London, 1931, pages 219. (£0/7/6)