

Management Services: A Magazine of Planning, Systems, and Controls

Volume 5 | Number 1

Article 7

1-1968

What People Are Writing About

John Dickhaut

Follow this and additional works at: <https://egrove.olemiss.edu/mgmtservices>



Part of the [Accounting Commons](#)

Recommended Citation

Dickhaut, John (1968) "What People Are Writing About," *Management Services: A Magazine of Planning, Systems, and Controls*: Vol. 5: No. 1, Article 7.

Available at: <https://egrove.olemiss.edu/mgmtservices/vol5/iss1/7>

This Article is brought to you for free and open access by eGrove. It has been accepted for inclusion in *Management Services: A Magazine of Planning, Systems, and Controls* by an authorized editor of eGrove. For more information, please contact egrove@olemiss.edu.

what people are writing about

BOOKS

Computers and Management: The Leatherbee Lectures 1967 (sponsored by Harvard University Graduate School of Business Administration), Division of Research, Harvard Business School, Boston 63, Massachusetts, 121 pages, \$3.50 (paperback).

This brief collection of talks on the computer's significance for management contains more good sense than has ordinarily been published on this subject in a decade.

The speakers in this lecture series were told to talk as managers, not computer specialists, to an audience of generalists who wanted to know how to use electronic data processing to increase the profitability of the business. That is precisely what they did, and the result is a vivid picture of where the computer stands today as a management tool. Here are a few vignettes:

Hershner Cross, vice president and group executive, General Electric Company: "Companies . . . that put in very heavily automated production lines . . . discovered . . . some rather severe shortcomings . . . a very high investment . . . very

high costs every time they wanted to improve the system . . . a built-in inflexibility for design changes and model mixes. . . . We turned to a concept we called 'islands of automation.' This approach of using building blocks may be equally applicable to the so-called Integrated Management Information System. Possibly it is a goal which still requires many years to attain."

Donald I. Lowry, manager of technical staff divisions, Procter & Gamble Company: "Our approach has been to build a structure, block by block, resting on basic source data and topped with some pieces of management information which can be split off of the blocks be-

REVIEW EDITORS

In order to assure comprehensive coverage of magazine articles dealing with management subjects, MANAGEMENT SERVICES has arranged with fifteen universities offering the Ph.D. degree in accounting to have leading magazines in the field reviewed on a continuing basis by Ph.D. candidates under the guidance of the educators listed, who serve as the review board for this department of MANAGEMENT SERVICES. Unsigned reviews have been written by members of the magazine's staff.

JIM G. ASHBURNE, *The University of Texas, Austin*
E. J. BLAKELY, *University of Wisconsin, Madison*
THOMAS J. BURNS, *The Ohio State University, Columbus*
GEORGE PRATER, *University of Washington, Seattle*

ROBERT L. DIXON, *University of Michigan, Ann Arbor*
LEONARD A. DOYLE, *University of California, Berkeley*
DALE S. HARWOOD, JR., *University of Oregon, Eugene*
H. P. HOLZER, *University of Illinois, Urbana*
WALTER B. MEIGS, *University of Southern California, Los Angeles*
HERBERT E. MILLER, *Michigan State University, East Lansing*
JOHN H. MYERS, *Northwestern University, Chicago*
CARL L. NELSON, *Columbia University, New York*
MICHAEL SCHIFF, *New York University, New York*
WILLIARD E. STONE, *University of Florida, Gainesville*
RUFUS WIXON, *University of Pennsylvania, Philadelphia*

low... These blocks do not come quickly or easily and in many cases cannot as yet be justified... [We] build in standard blocks of programing so that systems can be easily maintained and kept up to date at a high rate of change. To build an elaborate, complex, sophisticated, ideal system that does everything is a poor investment if everything it is doing is out of date... Shipping data... are taken to the warehouse by taxicab... An electronic transmission system would be technically feasible—but the taxi is cheaper and meets the time requirement. In the sense of complete mechanization, we do not ever expect to have a 'total system.'”

A. R. Zipf, executive vice president, Bank of America National Trust and Savings Association: “When one considers on-line transaction processing the first question which must be asked is, ‘What is the need?’ And, surprisingly, in commercial banking there is relatively little need... [As for] the checkless and cashless society... one fundamental point seems to have received relatively little attention, and yet it is decisive, for it is the question of return. Any of the systems contemplated involve very substantial investments, and without a satisfactory return these investments simply will not be made.”

George Kozmetsky, dean of the University of Texas College of Business Administration: [In cost-effectiveness analysis] “the computer served a very important function other than being a calculator or a problem-solver as directed by human beings. The computer was used as a coordinating device... Top management... was able to relate the parts to the whole system.”

Robert N. Anthony, Assistant Secretary of Defense—Comptroller: [With a multiple-access time shared data bank] “we will no longer need to design systems by first answering the question, ‘What does management need to know?’ The plain fact is that the system designer

needs to know... It is futile to ask managers what data they need; they simply cannot foresee... The alternative of analyzing information needs in terms of job content or organizational relationships does not provide the answer either... Reports typed on pieces of paper are necessarily highly structured, whereas the data library... would be relatively unstructured.”

This is a provocative and interesting volume for the general as well as the business reader.

Management Planning: A Systems Approach by NORBERT L. ENRICK, McGraw-Hill Book Company, New York, 1967, 213 pages, \$12.

Despite its far-reaching title, this is a simple book about a restricted subject — mathematical programing and its application to business.

Mathematical programing (linear programing and related techniques for determining the maximum or minimum-value combination of a group of interrelated variables) has become one of the most widely used management science tools in business. This book is an attempt to explain it to the business manager.

Actually to solve a mathematical programing problem of any appreciable scale requires a good deal of mathematical sophistication. But, as Dr. Enrick points out, the businessman himself need not have much knowledge of mathematics to authorize—and profit from—a mathematical programing analysis. What he needs to know are the answers to questions like these:

Where is a mathematical programing analysis needed and likely to be of value? What types of data will have to be gathered? Which interlocking functions must be analyzed? How are the results to be interpreted? How can the MP solution be adapted to practical realities and applied? These are the

questions that Dr. Enrick seeks to equip the manager to answer.

The book describes various techniques of mathematical programing (including the graphic, Simplex, and Transportation Methods) and such related techniques as sequencing control, probability analysis, and ratio analysis (for approximating). Then the techniques are applied to case examples illustrating problems of product mix, inventory planning, maintenance scheduling, and quality assurance. For those who want to go further, there are one mathematical chapter and a group of problems requiring varying levels of mathematical skill.

The style is simple although somewhat compressed. With a little concentration the beginner in the field should have a fairly easy time grasping it.

MAGAZINES

The Effects of Goal Difficulty on Performance: A Field Experiment by ANDREW C. STEDRY and EMANUEL KAY, *Behavioral Science*, November, 1966.

The authors hypothesize the impact that combinations of different goals may have on performance and test their hypotheses in a field experiment involving varying goals for rework and productivity among 19 foremen. Only the hypothesis that performance on easy goals would be significantly greater than performance on impossible goals was confirmed.

This is an attempt to deal with a multi-goal environment, an environment with different areas of performance which have separate goals. The main variables upon which the hypotheses are based are the following: (1) the difference between a given goal in a performance area and previously attained goals in that area, (2) the recipient's probability of achieving the goal, and (3) the relationship be-

tween the different goals set in different performance areas.

The hypotheses are these: (1) In each measurable performance area, a goal which represents an increase in performance over previously attained levels, if it is perceived as having a "sufficiently high" probability of attainment, will improve performance relative to a goal which represents little or no change from previous levels. If, however, the perception of probability of attainment is not "sufficiently high," performance will diminish relative to a goal which represents little change from previous levels. (2) Performance in one of the measurable areas will be higher where the effort allocation to the other measurable area is less. In other words, when the goal in the other area is perceived as being so high that no effort is justified, all of the effort is available for allocation to performance improvement in the first area; less effort will be available for the first when the other is a goal requiring an increase in performance which is perceived as having a sufficiently high probability of attainment. (3) Where increases in performance are required by goals in both of the measurable areas, the perceived probabilities of the attainment of one will be likely to be adversely affected by the perceived effort required to attain the other. Then, a greater proportion of insufficiently high probabilities of attainment will be expected.

Testing hypotheses

The experiment used to test the hypotheses involved varying the goals set for rework and productivity among 19 foremen. The initial distinction between goals made by the experimenters was a distinction between normal and difficult goals. Normal goals consisted of goals for rework and productivity similar to the average goals attained in the previous six months. Difficult goals involved goals in the highest quartile of performance achieved in the previous six months.

The groups of foremen were set up in such a way that one group had a normal rework goal and a normal productivity goal; another had a normal rework goal and difficult productivity goal; a third group had a difficult rework goal and normal productivity goal; and a fourth, both difficult rework and productivity goals.

Following this initial distinction, the experimenters subdivided the goals on the basis of the foremen's managers' interpretations of these goals. The difficult goals were reclassified into impossible and challenging goals, while the normal goals were called easy goals.

Using a working comparison test procedure, the experimenters tested whether (1) performance in regard to challenging goals would be significantly greater than performance on easy goals and (2) whether performance on easy goals would be significantly greater than performance on impossible goals. The first test failed, and the second was confirmed. Another test concerning the relationship between impossible and easy goals, namely, that the easier goals would result in better performance when they were combined, was unconfirmed.

The authors conclude that new investigations should be undertaken concerning the effect of possible goal revisions when an impossible goal is perceived by the foremen. They also suggest that a new theory should incorporate what is termed a "total challenge" as some function of all goal perception.

The research represents an extension of a study previously done by Mr. Stedry. In that study, he found that individual performance was dependent upon the relationship between the budget level and an individual's aspiration level. The present study incorporates a new variable, namely, an alternative goal, which should eventually increase understanding of accounting data in a multi-dimensional environment.

JOHN DICKHAUT

The Ohio State University

CLASSIFIED ADVERTISING

HELP WANTED

MANAGEMENT CONSULTANT WESTERN NEW YORK

Are you qualified to assist our clients in improving their —

**Production Scheduling
Inventory Control
Work Measurement
Industrial Engineering**

An exceptional opportunity has developed in the Management Services Department of a national CPA firm for a person to develop our practice in the above four areas. Travel is limited to Western and Central New York.

If you are interested in a rewarding career with advancement and responsibility based solely on capability and performance, send your resume and salary requirements to

Box 124

EDP SYSTEMS ANALYSTS—\$15-\$20,000. Fee paid. Corp staff AAA-1 company. Installing 10 360/30's. Send resume in confidence to: Don Kaye, Executive Search Div., Columbia Agency, Inc., 342 Madison Ave., New York City.

SYSTEMS MANAGER — Consulting firm. \$30,000+. Mfg. & EDP orientation. Small staff. Fee paid. Send resume in confidence to: Don Kaye, Executive Search Div., Columbia Agency Inc., 342 Madison Ave., New York City.

SYSTEMS MANAGER — South American, Spanish helpful. All expenses paid \$25,000+. Send resume in confidence to: Don Kaye, Executive Search Div., Columbia Agency Inc., 342 Madison Avenue, New York City.

RATES: Help Wanted, Professional Opportunities and Miscellaneous 50 cents a word. Situations Wanted 30 cents a word. Box number, when used, is two words. Classified advertisements are payable in advance. Closing date, 5th of month preceding date of issue. Address for replies: Box number, Management Services, 666 Fifth Avenue, N. Y. 10019.