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- REITMAN, WALTER R. *Cognition and thought: an information-processing approach*. New York: John Wiley & Sons, Inc., 1965, \$7.95, 312 pp.
- STAGNER, ROSS AND MJALMAR ROSEN. *Psychology of union-management relations*. Belmont, California: Wadsworth Publishing Company, Inc., 1965 (paper), 147 pp.
- WATERSON, ALBERT. *Development planning: lessons and experience*. Baltimore, Maryland: The Johns Hopkins Press, 1965, \$10.75, 706 pp.

ANNOUNCEMENTS OF PUBLICATIONS

Survey of Scientists

A survey of the activities and attitudes of 4,751 U.S. scientists and research managers in the major disciplines of biology, chemistry, mathematics, and physics is available through the Clearinghouse, U.S. Department of Commerce. The study shows that most of the biologists and mathematicians are employed by universities, the chemists by industry, and the physicists about evenly by colleges, industry, and the Federal Government. One scientist in 20 is a woman, and a majority of both male and female scientists have doctorates in their fields. Those in all four professional groups are more likely to be interested in remaining in research positions than in moving into management, and a sizeable number of research managers wish to return to nonmanagerial posts in the future.

To get the report order *AD-620 376 WORK ACTIVITIES AND ATTITUDES OF SCIENTISTS AND RESEARCH MANAGERS: DATA FROM A NATIONAL SURVEY* from Clearinghouse, U.S. Department of Commerce, Springfield, Va. 22151, price \$6.00 . . . Stanford Research Institute, Menlo Park, Calif., for the Air Force, May 1965, 223 pages.

New Management Magazine

MANAGEMENT SERVICES is the title of a new magazine for accountants, business executives, and management experts. More information about this new bimonthly publication can be obtained by writing: MANAGEMENT SERVICES, 666 Fifth Ave., New York, N.Y. 10019.

Man-Machine Communication in English

Recent U.S. Government-sponsored R&D has advanced the field of man-machine communication to the point that computer systems can now be built using conventional English for instruction. This is a significant development because present-day computers require highly specialized language prepared by programmers.

A report available from the Clearinghouse U.S. Department of Commerce describes the work of General Electric for the U.S. Air Force on the DEACON (Direct English Access and Control) experimental computer model. Although this model has not been perfected, GE says it clearly establishes the feasibility of using conventional English for input and control, and it points the way toward the design of a prototype computer that will work.

To achieve understanding, the computer will come equipped with counterparts to conventional English, and it will be able to interpret sentences fed to it. Thus, within a limited vocabulary, the computer will make decisions not only about the particular spatial relationships of the words in a sentence, but also about the

meaning of the words and the semantic implications of the structure in which they are found.

Besides permitting communication with the computer in English, a prototype developed from DEACON would permit a staff of managers to communicate with each other through the computer. It also appears that the managers would not require the special services of a programmer to communicate with the computer. They would need only a little training in the vocabulary the computer can handle and in the manner of phrasing instructions.

Each office using a given information system would have a computer console with a typewriter wired directly to the computer. Either automatically or as requested by input, information both newly acquired and stored would be typed out or displayed at other consoles.

As to the limitations of the present DEACON experimental system, GE points out that the input-output is not as yet through remote typewriters and displays. This will be an ultimate goal of the program. In addition, DEACON grammar has not been completed to the point where it can handle all grammatical constructions likely to arise from the current limited vocabulary.

But, GE continues, the experimental model, a so-called breadboard system, has nonetheless shown "beyond any doubt that the basic techniques are adequate for the development of a system which will allow access and control of digital computers through the use of largely unconstrained English."

Further, the direct access and control is compatible with great extension of vocabulary and is essentially independent of the organization, reorganization, and extension of the underlying data within wide latitudes, depending on the nature of the application.

To get a copy of the report describing the breadboard, order *AD-612 165 DEACON BREADBOARD PROCESSING* from Clearinghouse, U.S. Department of Commerce, Springfield, Va. 22151, price \$3.00. (Prepared by General Electric Co., Santa Barbara, Calif., for the Air Force, Sept. 1964, 94 pages.) A companion work, *AD-612 171 DEACON BREADBOARD GRAMMAR*, 165 pages, is also available for \$5.00.

The Placement of Engineering Graduates

Students graduating from the nation's engineering schools in 1965 experienced no difficulty in obtaining desirable jobs at the highest starting salaries to date, according to a placement survey just conducted by the Engineering Manpower Commission of Engineers Joint Council. Only 1.1 percent of the graduates reported that they had no job offers or specific plans, and over 87 percent had made definite commitments by the time of graduation.

More engineers than ever before—one out of every four for whom information was available—are going on to graduate school. This is an increase of 3.1 percentage points over last year and marks a continuing trend toward advanced education for engineers. Over 5 percent of the 1965 engineering graduates are continuing their education under graduate programs sponsored by their employers. This category also increased over last year.

The percentage of graduates actually employed decreased from 54.3% last year to 52.6% this year because of the greater number going on to graduate school. The "average engineer" still appears to be anxious to seek employment immediately after graduation, despite the rising enrollments for advanced degrees. Salary offers for engineers with bachelor's degrees averaged \$634 per month, an increase of 3.5% over last year. Engineering continues to be one of the best paying fields for the new college graduate.

The placement survey, which is conducted annually by the Engineering Manpower Commission as a service to its member societies, includes data reported by 186 engineering colleges and universities and covers almost 20,000 graduates.

Copies of the report are available to interested persons at \$1.00 each, prepaid, from the Engineering Manpower Commission of Engineers Joint Council, Dept. P, 345 East 47th Street, New York, N.Y. 10017.

Employee Displacement

Industry is making rapid progress in developing positive programs to counteract and minimize the adverse effects on employees when layoffs become necessary, according to a report just issued by the National Association of Manufacturers.

The NAM study points out that many factors, such as the size of the company and the community, have a direct bearing on policies to alleviate problems arising from manpower reductions; it follows that each company must make its own decisions based on its own economic and market conditions.

Designed as a checklist for employers, the study discusses various techniques which industry has used through the years to minimize the adverse effects of employee displacement: utilization of the skills of employees through transfer to other departments or plants; institution of retraining programs in anticipation of actual employment cutbacks; emphasis on early retirement with offsetting compensations; development of programs to instruct employees in job-searching techniques; long-range planning and allowance of natural attrition to minimize displacement.

For more information, write: Industrial Relations Committee, National Association of Manufacturers, 277 Park Ave., New York, New York 10017.

Educational Films

The Data Processing Management Association has compiled a booklet, entitled *Audio-Visual Aids*, listing nearly 100 data processing systems and automation films. The booklet was designed as a guide to DPMA education program chairmen in selecting films of interest for the chapter members. It should also be of interest to others in the same fields, as well as educators.

Films listed in the booklet are available from equipment manufacturers or independent producers for rental or in most cases free of charge. A brief account of the contents of the film accompanies each listing. The booklet also includes a list of addresses of the film producers as well as an index by title of the films listed.

The booklet is available to members of DPMA and to the general public at .50¢ a copy at DPMA Headquarters, 524 Busse Highway, Park Ridge, Illinois 60068.

Research Idea Bank

San Francisco, Dec. 2—A nationwide, computerized "Idea Bank" to save and re-evaluate research projects, was suggested here today by William F. May, Chairman of the American Can Company.

Speaking at the 20th Meeting of Stanford Research Institute in San Francisco's Fairmont Hotel, Mr. May said "research-rejects are shelved after they've failed to solve the target project problem. We should not let this research brainwork go to waste."

In his address, titled "Research Into Research—Profit-Oriented R&D and Its Evaluation", American's Chief Executive called for greater profit pay-out from corporate research and development.