

# Keeping Current/Articles in Brief

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## *Review of recent literature*

Steven Flax, "An Auto Man Tunes up Warner-Lambert," *Fortune* 111(5):70-78, March 4, 1985.

Without layoffs or investment in new technology, Warner-Lambert has saved approximately \$300 million a year by applying Japanese automaking techniques to the production of pharmaceuticals and consumer goods. These techniques are applied mainly in inventory control; more than half of Warner-Lambert plants are using them. In the past, when the cost of money was 2-5 percent, processing delays causing inventory buildup were of little concern. But now the cost of money has risen to 20 percent. The company hired the services of a consultant who had a background in the auto industry and had conducted research on Japanese automaking. He instituted a four-phase program concentrating on manufacturing processes—scheduling, purchasing lead time, inspection, suppliers, and technology. The program has been in place for three years, and now the competition has begun to consider similar schemes.

R. Bruce Holmgren, "All-New Operation Starts off Fast Pace for Vicks Tempo," *Packaging* 30(2): 25-29, February 1985.

The engineering staff of the Health Care Division of Richardson-Vicks, Inc., planned and equipped from scratch a complete packaging operation for a new product, Tempo. The system's efficiency is consistently almost 100 percent, and the staff attributes this to preventive maintenance. The system is described in detail, and so is the packaging room, which contributes to the overall peak line output. As packaging was an unfamiliar func-

tion to workers at the plant, a key phase of worker training concentrated on quick response to a stop or a problem. Operators are rotated from machine to machine to maintain performance, and to identify where coaching or corrective training may be needed. Records have been developed on every part of the system in recognition of the need to anticipate part replacement, and so forth. Machines rarely stand idle; use is rotated so that all machines run on a regular basis for more or less equal amounts of time.

Donald B. Thompson, "Back to Basics; Confronting the Competitive Challenge," *Industry Week* 223(6):73-80, December 10, 1984.

Allegheny Ludlum Steel Corporation has boosted productivity by 35 percent in the last five years; unit labor costs have been reduced by 20 percent and 1984 sales are expected to be up more than \$35 million over 1983. These successes are attributed to a back-to-basics management approach involving the identification, measurement, and costing out of every detail of the business to aid in decision making. Other companies have recovered productivity and competitiveness through the application of a similar philosophy—among them are Rockwell International and Westinghouse. At Rockwell, cellular manufacturing, quality circles, and new employee communications programs were introduced. Westinghouse has seen a 7-percent productivity increase in the last three years. This rise is attributed to the promotion of programs geared to a new perception of quality. The lesson is that companies must change with the times; in fact they must institute change in order to survive.

Rosabeth Moss Kanter and John D. Buck, "Reorganizing Part of Honeywell: from Strategy to Structure," *Organizational Dynamics* 13(3):4-25, Winter 1985.

A planning model was applied to a department in Honeywell's largest division (Defense Systems) through a self-study strategy. The framework viewed the department as an independent organization operating in its own market with its own customers. Such models and studies are normally based on entire business units. However, the time chosen for this study was particularly appropriate, as all the major factors conducive to a successful self-study at this level were present. Five standards to ensure a productive self-study were used. Recommendations were made at three levels—mission and charter, organization design or structure, and communication/coordination/planning processes. The justification for conducting such a study at the departmental level is that it can be used to ensure that all parts of a given organization are aligned with each other and with the organization's overall strategies to increase the effectiveness of the whole.

James S. Howard and John Emery, "Strategic Planning Keeps You ahead of the Pack," *D&B Reports* 33(2):18-21, March/April 1985.

Most of America's growth companies are engaged in strategic planning and use its tools intensively. One formula for such planning involves the following four points: (1) know your company; (2) determine corporate and personal objectives; (3) consider future possibilities and chart a course; and (4) anticipate how the plan will be implemented, and what feedback controls will be needed.

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None of these steps is as easy as it sounds. Key people in the organization must be introduced into the planning process; they must be inspired and committed. Examples of entrepreneurs who have benefited from strategic planning are discussed. Conclusions drawn from failed strategies are listed. Good strategic planning is a permanent process, and its core building-block is reliable information.

"A Full Measure of Warehouse Standards," *Distribution* 83(11): 40-47, November 1984.

Dissatisfied warehouse stock-pickers at Merchants Distributors, Inc., demanded engineered work standards, so the company hired the services of an industrial engineer consultant firm. One of the innovations resulting from the work-measurement analysis was the creation of a warehouse within a warehouse, a smaller area where the fastest-moving items were stored exclusively. Every routine was carefully examined and several changes put into operation. From an efficiency score of somewhat below 60 percent, the MDI warehouse has jumped to an average of 115 percent. The program designed by the consulting firm has turned out to be an excellent management tool; one of the major advantages was morale improvement throughout the company.

James P. Morgan and Ernest L. Anderson, Jr., "Purchasing Productivity: What's Par?" *Purchasing* 97(10):57-67, November 15, 1984.

Indexes of par for the productivity of purchasing departments were developed for comparison purposes. A survey sent to purchasing departments elicited 1,257 responses. Useful data were produced, as well as surprises and disappointments. The data presented include tabulation of aggregate averages for all industries and by in-

dividual industry affiliation. These industry tabulations allow managers to redesign report formats for higher management. Further studies will be performed with the aim of refining these indexes and developing tools for service-level measurement.

Gifford Pinchot III, "Promoting Free Intraprise," *Across the Board* 22(3):32-39, March 1985.

An intrapreneur is an internal entrepreneur who is given the freedom and incentive to act independently for his or her own profit, as well as that of the company. In a large organization, it is wiser to "let the doer decide," that is, to avoid stifling innovation by subjecting the innovator to an endless series of approval mechanisms. Where it is imperative for an ultimate decision-maker to give approval, then the intervening levels of communication between the doer and the approver should be eliminated. Decision speed coupled with innovation is desirable; time should not be wasted trying to plan innovation that is inherently unplannable. A useful strategy is to start small at low cost; it's easy to change later and restart in another direction. In the past, this strategy has led to the creation of new industries.

Michael Beer and Bert A. Spector, "Managing Human Assets—It's Time for New Thinking," *Office Administration and Automation* 46(3):26-29+, March 1985.

American business executives have realized that improvements in productivity and quality cannot be achieved without major changes in the relationship between workers and management. To retain competitiveness in today's markets, human assets must be managed differently. A more highly educated work force is less receptive to the traditional authority relationship between manager and subordinate. Assembly-line workers have

been highly paid to compensate for the absence of any potential for advancement; thus, automobile companies have lost their competitive advantages. A framework developed at the Harvard Business School helps managers to rethink their human-asset management practices. This model has four areas—human resources flow, reward systems, a work system, and human-assets management. These areas include examination of education, job rotation, involvement, challenge, responsibility, recognition, motivation, teamwork, and technology. Companies availing themselves of these techniques will probably experience increases in productivity and increased employee satisfaction.

Henry P. Sims, Jr., and James W. Dean, Jr., "Beyond Quality Circles: Self-Managing Teams," *Personnel* 62(1):25-32, January 1985.

Quality-circle (QC) successes have prompted the question, What next? A possible answer is the self-managing work team, an innovation that bestows much greater decision-making authority on the team. Such a team has twelve typical functions, from budgeting to training. Management should gain through increases in productivity, decreases in conflict, overhead reduction, and quality improvement. Employees will be attracted to the team approach because it offers greater control. Many managers believe these teams can provide a 20-40-percent productivity edge over traditional methods. There are also other benefits. The team concept is an evolutionary advance over QC in that, with the team, the cooperation takes place on the job in real time, not elsewhere at a predetermined single time period each week. Moving from QCs to a team is logical, but not easily done; the team approach may require managers who believe strongly in the power of worker participation.

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James F. Leonard, "Striking Harmony with Unions," *Training and Development Journal* 39(3):72-74, March 1985.

Lack of union support has been a perceived major cause for the failure to implement quality-circle (QC) programs. Before deciding to institute a QC program, the major components of the relationship between labor unions and management must be analyzed. There are four steps to obtaining union support. These steps concern the need for top management, as well as union leadership, support; a provision for equal representation at the top of the QC organization; judicious and flexible appointment of QC leaders; and the selection of both hourly and salaried personnel as facilitators. Effective training does improve quality and productivity, but barriers to successful QC programs must be identified and addressed in the beginning.

Gary N. Brayton, "Productivity Measure Aids in Profit Analysis," *Management Accounting* 46(7): 54-58, January 1985.

Less than 3 percent of U.S. businesses have systems for measuring total productivity, and few executives have the means to analyze the effect of productivity changes on profitability. The accounting firm Touche Ross & Co. has designed a system for identifying opportunities to increase productivity. This system is based on a division of the total production units of goods and services by the total resource units required for production. The system enables companies to locate reasons for changes in profitability, to assess the impact of productivity and pricing fluctuations, and to monitor efforts to improve productivity. Without a system like this it would be difficult to remain competitive.

James G. Woods and Theresa Dillion, "The Performance Review Approach to Improving Productivity," *Personnel* 62(3): 20-27, March 1985.

The employee performance appraisal system developed at Reading & Bates Petroleum is designed to achieve objectives based on research into employee performance evaluation. This research showed that performance evaluation should focus on the job responsibilities rather than the personalities of the incumbents. Under this appraisal system, job descriptions were the focal point of the review; the performance rating-scale was integrated with the salary administration policy; both supervisors and employees were trained; and the system's effectiveness was constantly monitored. All the initial objectives at the company were met, and there were supplementary gains. The level of awareness of the needs of all staff members was raised, and new solutions were found for old problems. The system allows constant accurate monitoring of relationships between performance levels and position.

Marjory Blumenthal and Jim Dray, "The Automated Factory: Vision and Reality," *Technology Review* 88(1):29-37, January 1985.

Automation is not as simple as is sometimes imagined. In a discussion of computer-aided design and robotics, the point is made that on many factory floors, machine tools are the most important part of the operation. These tools have been automated. Known as numerically controlled (NC) and computerized numerically controlled (CNC) tools, they are described. These tools are not as widely used as might be generally thought. In any case, the presence of a human operator is frequently required to monitor

them. One of the most advanced factories in the world—a Japanese factory where CNCs and robots are made—has several sections that are not automated. Its main automated section is a flexible manufacturing system (FMS). FMSs cost from \$600,000 to \$800,000 per machining work station, with a minimum expenditure of from \$3 to \$4 million per system. An FMS allegedly can cut total production time by half, reduce the number of machine tools and workers needed, and cut costs. However, there are as yet no reliable figures to support these claims. The ultimate stage in industrial automation will be computer-integrated manufacturing; this is not yet a specific technology and may not exist until the next century.

William G. Stoddard and Nolan W. Rhea, "Productivity in Manufacturing: Survival Strategy for U.S. Industry," *Material Handling Engineering* 40(1):54-64, January 1985.

Manufacturing in the U.S. is disappearing because our costs are out of control. We have problems in the areas of quality, customer service, and flexibility. We have no complete understanding of why these difficulties have arisen. Arthur Andersen & Co. believes that the solutions are material requirements planning (MRP), Just-in-Time (JIT) manufacturing, and factory automation. Without applying these new strategies of survival, we will go the way of Great Britain, where more than half of goods sold are imported. The application of these strategies must have the cooperation of all levels—workers and managers—to generate beneficial results. Management, in particular, will have to master the complexities of the strategies before they will pay off in productivity and profitability.

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Keith Avery, "The Integrated Office Ties Technologies Together to Increase the Knowledge Worker's Productivity," *Communications News* 22(1):50-52, January 1985.

The objective of the integrated office is to increase productivity and reduce costs. Before the integrated office can become a reality, new technologies must be developed and refined; standards must be established. A multinational corporation would require more complex structures than a smaller-scale operation for the handling and transmission of information, usually in the form of a network of departmental clusters. Worker training must be reassessed; a minimal requirement, for example, would be proficiency in the use of ten-key numeric entry and typewriter keyboards. The foundation for such integrated offices, departmental clusters, and networks can be laid now in order to maximize benefits when the fully integrated office becomes a reality.

Richard W. Larson and John S. Fielden, "The Managerial Clerk Syndrome," *Business Horizons* 28(1):26-34, January/February 1985.

Many companies have erred by automating with a view to increasing productivity at lower-cost employee levels, to the detriment of the productivity of middle managers. This mistake occurs because of the misperception that administrative costs will be saved by such innovations as the introduction of word processors. Failing to distinguish two activities—document generation and document processing—can cause this misperception. Most of the work of generating a document is done before even a word of the document is written down. It is recommended that office planners examine closely the stages of document generation using a five-point framework of analysis. This will allow planners to distinguish the stages more

clearly, so that, when the time comes for support to be increased through automation, planners will know which areas need automation most.

John Couretas, "The Challenge to Marketing of Integrated Manufacturing Databases," *Business Marketing* 70(3):40-51, March 1985.

Computer technology is changing the habits of marketers; new electronic-based systems are forcing companies to become market-driven rather than manufacturing-oriented. There are now available dozens of manufacturing resource planning (MRP II) systems that integrate marketing, manufacturing, finance, engineering, and inventory control on a real-time basis and provide decision makers with instant information on the actual state of the business. MRP marketers have cut their lead time from months to weeks. Two primary advantages of the system are that it permits fine-tuning of short-term plans and reduces production time. Disadvantages are that it is costly and requires highly skilled operators. From the marketing point of view, MRP gives a marketer or a salesperson confidence that he or she can deliver instantly on a promise to a customer. This is major progress.

James N. Danziger and Kenneth L. Kraemer, "Computerized Data-Base Systems and Productivity among Professional Workers: the Case of Detectives," *Public Administration Review* 45(1):196-207, January/February 1985.

The effects of computing on the performance of workers at an intermediate level of a police department—the level of police detective—were examined empirically. The focus was on individual productivity. Data were collected from 40 cities and 374 individuals who use computerized information. Productivity improvements were defined as either better informa-

tion available to detectives, or improvements in specific measures of detective work. It was found that productivity enhancement depended on the interaction between the individual's computer expertise, the frequency with which computing was used, and the availability of expert assistance. The last finding confirms the common belief in the efficiency of providing "information centers" within an organization, and the recognition that it is not enough to invest in equipment unless expertise is simultaneously present.

Leon Taub, "The Outlook for Productivity Growth," *Planning Review* 13(1):12-17, January 1985.

Slow productivity growth rates in the 1970s have been blamed on a variety of causes, many of which are not the real culprits. The intensified shift from manufacturing to service industries, the lack of fixed business investment, the shortage of savings, and tight R&D outlays are typical of these supposed causes. Concrete evidence that these causes are to blame does not exist. Among the actual causes are environmental and safety control regulations and the influx of new workers. But the major source of the decline is the worldwide oil crisis. After 1973, productivity fell off sharply; since 1980, growth in manufacturing productivity has been satisfactory. Spreading inflation resulting from the oil crisis is also to blame for the productivity slump. Price shocks hurt capital intensive industries, but benefited others; the former experienced much worse productivity declines than did the latter. If the dollar declines, manufacturing profitability could increase, leading to productivity growth.

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