

HARRINGTON EMERSON
and
THE PRINCIPLES OF EFFICIENCY

Part 1 TIME PERIOD 1900-1913

- A. SOCIAL: Music - Ragtime, "By the Light of the Silvery Moon;" Theater - Ziegfeld Follies; Movies - Ben Hur, Nickelodeons; Literature - "Muckrakers," The Jungle by Upton Sinclair; 1st State Workmen's Compensation Law (1902) in Md.; Organized Labor - I.W.W.
- B. POLITICAL: Republicans - McKinley (1900) - Dept. of Commerce and Labor; Roosevelt (1904) - Trust busting, "big stick" diplomacy - Panama Canal; Taft (1908) - Commission on Efficiency and Economy (govt. budget), Dollar Diplomacy. Democrats - Wilson (1912) - 16th Amend. - Income tax, 17th Amend. - popular election of senators - moral diplomacy.
- C. ECONOMIC: Population - 40% agriculture, 25% manufacturing, and 35% in services. Era of prosperity except for brief financial crises 1903 & 1907, recession 1910-11, Federal Reserve Act - government controlled decentralized banking (1913). Industry - Birth of capital intensive industry - U.S. Steel (1901), automobile (460,000 by 1910); Taylor and Scientific Management.
- D. TECHNOLOGICAL: Airplane an actuality, Electric power in plants, synthetics and plastics - rayon (1902), X-ray 1913.

Part 2 THE MAN - Harrington Emerson (1853-1931)

The son of a Presbyterian Minister from Trenton, N.J., he was active in teaching, banking, real estate, and industrial production before he became a consulting management engineer in 1901. Although a contemporary of Taylor's, he developed his ideas independently. Often referred to as the "high priest" of efficiency, Emerson was the first to use the term "efficiency engineering." In his words, efficiency was "Conservation -- The elimination of 'wanton wicked waste.'" This included the depletion of natural resources, inefficient use of men and machines, and wasteful government. Emerson was one of the first to establish a set of management principles and to emphasize the universal function of management. His other works include: The Scientific Selection of Employees, N.Y.: Emerson Co., 1913; Course in Personal Efficiency, 1921; twelve articles.

Part 3 THE WORK: The Twelve Principles of Efficiency. New York: The Engineering Magazine Co., 1913.

Introduction: by Charles Buxton Going

In this book Emerson expands the concepts developed in his first book Efficiency as a Basis for Operation and Wages (1900 & 1911). This work presents a philosophy which reduces efficiency to a code. Five principles are concerned with employer-employee relations and the rest with methods and systems. The principles are interdependent, stand in a logical sequence, and may be applied to all types of organizations. "The doctrines of efficiency . . . set forth a morality, and provide practicable measures for its attainment."

Preface: ". . . The age of muscular human effort . . . is passing away . . . ; the age of supervision . . . , is in full advance. The principles are designed to extend the dominion of man over uncarnate energy and its use.

Chapter I. "Organization and Principles - The Prime Instruments for Efficiency"

Case examples of inefficient organization and principles. "Efficiency is a state an ideal, not a method . . ."

Chapter II. "The Type of Organization Through which Efficiency is Attained"

Two forms of organization - (1) Line Organization - the destructively offensive are characterized by arbitrariness, misuse of power, harshness, cruelty and anarchy. Men assume positions through spoils system and nepotism. "The man at the bottom with the least . . . time to plan, the least training, the least compensation runs the whole affair." (2) The staff organization - the constructively offensive. People assume positions based on knowledge, skills, and performance. Employee's duty is to supervise equipment. ". . . the task of the modern organization is to control millions of details through a staff of specialists who supplement each working unit . . . up to the president." Applying the 12 principles-one can build from the bottom up. Requires the use of a controlling efficiency engineer.

Chapter III. The First Principle: CLEARLY DEFINED IDEALS

Clearly defined ideals important in large organizations where those who execute are distant from those who formulate policy. In absence of ideals people will substitute their own which may be in conflict with those of firm. Appropriate ideals are economy, efficiency, promptness, and the best method for doing or making something. American business is guilty of inappropriate ideals because, ". . . not being composed of specialists, they are unable to curb the initiative of a strong willed leader." The efficiency engineer can help by comparing management's ideals to the other principles to see if they meet criteria; then they should be communicated throughout.

Chapter IV. The Second Principle: COMMON SENSE

Two types of common sense: (1) near common sense - a natural ability, an alertness - provides us with a short run view; thus, we obtain high output at high input costs i.e. depletion of resources. American business tends to equate material assets with progress, therefore, they overequip and underorganize. (2) supernal common sense - developed by learning skills appropriate to task - consider long run effect of actions. ". . . a manager must be born again, forgetting much that he thought of value, adopting, adapting becoming adept in new lines of thought . . ." Begin by selecting proper form of organization.

Chapter V. The Third Principle: COMPETENT COUNSEL

"Early American manufacturers . . . relied on his own skill and knowledge." He saw no need for use of accountants, lawyers, etc. Heads of large firms have ". . . acquiesced in the innovation of specially qualified advisors, however, they must be careful that one-sided specialists do not cause anymore trouble than they cure." Should extend the use for competent counsel to include an efficiency engineering department to advise in application of the principles.

Chapter VI. The Fourth Principle: DISCIPLINE

Discipline - a definite, regulated life, conduct and observance. Near discipline - is that which cannot pass the test of the other principles.

- 1) Purpose - overcome crises, build esprit de corps, order, and save time
- 2) Results - obedience, teamwork, and common ideals
- 3) Key to discipline is the proper selection of personnel. "The way to guard against trouble is to make the position desired by a superior man, to allow it to be filled only by a superior man."

"It is the spirit of discipline, not its letter, that counts, and the spirit is reciprocal from bottom to top."

Chapter VII. The Fifth Principle: THE FAIR DEAL

- 1) Selection - "The more select the force the greater its efficiency." Demands that industry use selection procedures like tests, physicals, background checks, and above all the use of specialist who can judge the aptitudes and "inner proclivities" which make up the person.
- 2) Supervision - A manager should possess the following - sympathy, imagination, and a sense of justice.
- 3) Work Conditions - good working conditions, pay, and hours provide a fair deal in the interest of efficiency not patronage. Called for standardized wages for comparable work, decimal wages, 9-10 hour day. "Workers do consider and reciprocate to high or low treatment . . ."

Chapter VIII. The Sixth Principle: RELIABLE, IMMEDIATE, ADEQUATE, AND PERMANENT RECORDS

"Records are anything that give information"

- 1) Purpose - Facts to base a decision on; ". . . to annihilate time, to bring back the past; to look into the future; to annihilate space."
- 2) Types - (a) Cost = standard quantity of material x price + standard quantity of time x wage rate + standard quantity of equipment time x rate/hr.
(b) Efficiency = efficiencies (eff.) of material use x price + eff. of time x eff. of wage rate + eff. equipment time x eff. of equipment use.

"Records as to each detail, aggregated into records as to the whole, are one of the efficiency principles; . . . records as to each and all items throughout a long period of time."

Chapter IX. The Seventh Principle: DESPATCHING

Scientific planning of each small function to enable the organization to achieve its objectives. Use a despatching board to keep track of details in implementing a plan. "Must be a perfect balance between all work credited to operations and charged to orders, also . . . between wages and other accounts charged and totals credited to work in progress and delivered since last balance."

Chapter X. The Eighth Principle: STANDARDS AND SCHEDULES

A method and time for performing tasks. Use of time and motion studies to develop proper standards. "Increased result comes from lessened effort" The effort applied should be neither too little nor too great. "The schedule must fit the man and the man the schedule; there is no such thing as a universal schedule." Piece rates stimulate increased effort, ". . . when what we want is a betterment of conditions so as to achieve greater result with less effort."

Chapter XI. The Ninth Principle: STANDARDIZED CONDITIONS

The Development of a uniform work environment by (1) standardizing ourselves and/or (2) standardizing that which surrounds us with the latter being the easiest to achieve. ". . . the man who would bring about standardized conditions, . . . must have conceptions of time, of effort, of cost; he must instinctively recognize that for each operation there is one combination of these three that is best for the ideal result."

Chapter XII. The Tenth Principle: STANDARDIZED OPERATIONS

The development of a uniform method. ". . . there must be a plan that reaches back to each detail of every operation." Methods employed by: (1) observing preceding 9 principles; (2) developing systematic methods for performing work; and (3)-developing individual skills.

Chapter XIII. The Eleventh Principle: WRITTEN STANDARD PRACTICE INSTRUCTIONS

The permanent laws and practices of the plant. Standardization is achieved by, ". . . the ratchet process, by holding onto every gain and by never allowing any slip back, these results being secured by a voluminous book of instructions and suggestions." In any undertaking when advances are recorded progress is retained and built upon. Those who record should have legal training, and the recordings should be approved by the highest official.

Chapter XIV. The Twelfth Principle: EFFICIENCY REWARD

"An efficiency reward is one which the worker can see and grasp during the effort, one that is paid to him for his individual excellence." Requirements of reward - relationship between pay and performance (quantity and quality) and equity. Efficiency reward includes: (1) a guaranteed hourly rate; (2) a lower limit of efficiency; (3) "a progressive reward beginning at a requirement so low that it is inexcusable not to average it;" (4) efficiency standards; (5) a time standard; (6) variation in standard for different work, machines, conditions, people, and schedules; (7) determine an average efficiency for each worker for all jobs over a long period; and (8) monitoring of standards.

Chapter XV. Efficiency Principles Applied to Measurement and Cure of Wastes

Ideal of 12 Principles = waste elimination.

Causes of Inefficiency = ignorance and/or lack of application of principle.

Test for inefficiency by (1) find out what is; (2) set up standards; and (3) insist on use of principles.

Three Conditions of work: (1) "There must be pleasurable work; it must be a game, not a task . . .;" (2) "There must be a definite end in view;" (3) it must have form-fluid motions.

Keep score for each principle on a checker board system.

Chapter XVI. Executive Control of Line and Staff

" . . . No highly complex human enterprise, though it uses all of the principles of efficiency can make any great progress unless guided by skilled intelligence."

Use staff to guide the line.

Conflicts: (1) among line over authority; (2) among staff over knowledge; and (3) between line and staff. "Problem with staff is that their duties and limitations are not so clearly defined." Staff and line speak a different language.

Need a strong controlling executive - "a man of supreme ability is the one who has supernal ideals . . . is one who can create and control an organization founded on and using principles to attain and maintain ideals . . ."

Comments

- 1) Critique - Emerson like others of his day attempted to develop a normative model of the one best way; he believed he had identified the basis of efficiency. He feels his principles of efficiency are not "vague platitudes," but I tend to disagree, for he often does not define them clearly nor are his examples always accurate, for cross cultural examples during different time periods are frequently compared. He feels that staff advisors are key to building safeguards against inefficiency, with their "good judgment," this seems both vague and also an attempt to make a case to ensure employment for his field - efficiency engineer. An over reliance on institutions in his 4th principle can lead to Whyte's organization man.
- 2) Precursor of future - In many ways his ideas are embedded in both past and future. His emphasis on the need for specialists hired on the basis of skills is akin to Weber's bureaucratic manager. Emerson recognizes the conflict between organizational and individual goals which organization theorists like Bennis were to elaborate. The philosophy behind despatching is similar to that of CPM and PERT. Emerson revealed an understanding of organization behavior in his principles of fair deal and efficiency reward - the importance of good supervision on motivation, rewards contingent on performance, use of unions to mitigate employer tyranny. The need to conserve human and material energy pervades his work - less is more.
- 3) Major-contributions - emphasized (a) importance of goals; (b) use of staff experts; (c) importance of organization structure; and (d) 12 principles of efficiency.