Ever since the time of Aristotle, we have heard that man is a rational animal and in this rationalization process, his distinctive characteristic is his reason. In fact in the history of philosophy of science, rationality has been treated as the most important distinguishing quality of the human being from the rest of living creatures. As it is seen in Aristotle's classification of souls — vegetated, sensitive, and rational, or in Plato's notions of three parts of soul — the desiring part, the spirited or assertive part, and the reasoning part, this quality of man emerges as a major thrust in the theory of knowledge against theological and empirical schools of epistemology. This school today is represented by contemporary logical positivists. In a sense, rationality is the recognition and practice of the intellectual power of the mind as a universal objective guide to man and society, freed of all subjective and traditional elements. In this sense, it can be argued that the world of mankind is living an age of rationalization as illustrated by the dominance of technology in human life and the restructuring of societies according to a rationalized and idealized plan.

Turning from the philosophical background of rationality to its specific meanings in social sciences, we find the term is understood in two main senses: «functional rationality» and «substantial rationality» in Mannheim's terminology (1), or «formal» and «substantive» rationalities in Weber's (2) and «instrumental» and «co-


prehensive" rationalities in Etzioni's (4). By substantially rational is meant «an act of thought which reveals intelligent insight into the interrelations of events in a given situation.» (4) In other words, substantially rational thought is rational in respect to both ends and means of actions; that is to say, substantial rationality is present to the extent that all objectives pursued in the situation are logically compatible with a given situation. On the other hand, functional rationality is related to the attainment of a definite goal through the calculative coordination of actions. According to Mannheim, functional rationality by no means increases substantial rationality. He asserts that as society gets industrialized, the division of labor in organizations will be greater, and society will be more functionally rational.

According to economists, the «economic» man is assumed to behave as making consistent choices when confronted with a variety of alternatives. He can foresee the set of consequences of each alternative and has the ability to rank alternatives against each other. (5) Here again, logical elements are analyzed and man's rational capacity is considered as unlimited.

The fundamental question for the purposes of this study is to what extent these notions of rationality reflect the actual patterns of organizational behavior? To answer these and similar questions about the validity of the rational-economic man approach for organization theory and its implied motivational and cognitive assumptions requires of us an analytical and descriptive presentation of what is understood of this «man» in organization theory, and what kinds of structural and behavioral patterns are prescribed to accommodate him into our organizational environment.

Ever-increasing awareness of the shortcomings of over-rational approaches to organizations has led social scientists to examine the underlying assumptions, patterns and structures of organizations from another perspective, which we do not intend to cover in this paper. The logical, rational, and structural approaches range from Weber's (4) sociological analysis of bureaucracy to the functional

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school of management, which was initially developed through the efforts of Taylor and Fayol (7). This rational emphasis was very apparent in the writings of some later authors, such as Urwick Gulick, Mooney, Koontz and O'Donnell, Davis, Brech, and Allen. (8) In the more recent literature of behavioral sciences, what McGregor calls «Theory X,» Shepard «Mechanistic Systems,» Gouldner «Punishment-Centered Bureaucracy,» Likert «exploitive-authoritative system,» Argyris «directive leadership,» Simon and March «physiological organization theory,» and so on, ad infinitum, is presented in a way to describe and evaluate rational management philosophy whose main assumption is «rational-economic man» and whose ultimate goal is machinelike efficiency in organizations. (9)

The concept of rational-economic man is nothing more than the application of the pessimistic view of man to organizations. Some of its implicit and explicit assumptions may be summarized as follows:

1. The individual is inherently lazy and competitive. Unless programmed in advance and controlled regularly and tightly, he will tend to deviate from the established pattern of the organization. Thus, it is the responsibility of the top management to indoctrinate, train and supervise him constantly to keep his deviation at a minimum and to secure his loyalty to the organization.


2. Man is self-interested. By providing greater economic incentives, his satisfaction in the organization will be achieved, which will eventually motivate him to give his best in return.

3. Man's feelings and desires are irrational. His capacity to perform and his potential to grow are also limited. On the other hand, complex organizations are confronted with complex problems. Thus, these complex tasks should be simplified and routinized to a degree that the employee can effectively carry out his part. By routinizing jobs and by breaking them down into their «scientifically» simplest component parts, it will be possible for top management to prevent man's irrational motives from intervening in the effective role performance which is expected of the employee.

As is apparent from the above discussion, the main concern of mechanistic organization theory is how to keep the human variables in line with organizational goals and how to construct the organization structure to control and neutralize this reluctant «ego».

The following will be a summary presentation of some organizational concepts and strategies founded upon the negative conception of man.

Mechanistic Organization Theory (10)

To insure that the individual will behave in a way that advances the organizational objectives rather than his own, there appear to be two groups of principles developed that are identified with the characteristics of formal, that is, essentially rational organizations: (1) structural characteristics; and (2) behavioral properties. This approach assumes that there is almost always one-best way for the performance of every task and every process and rationality can be attained through the ideal structural setup of the organization supported by a series of expected behavioral properties.

Structural Characteristics

Organizations are created with the purpose and intention of accomplishing certain goals. Rationality involves finding the best possible means-ends combination to which human adjustment is

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(10) This summary is primarily based upon the ideas of some classical writers such as Taylor, Fayol, Weber, Urwick, Mooney, and so on. The references to the sources can be seen on page 3. We, by no means, intend to make a comprehensive presentation.
expected. As the point was made earlier, the main emphasis in this means-ends scheme is placed upon efficient task performance. The overinvolvement of, mechanistic theory with the autonomy of the organization has led to a set of certain basic structural principles which identify the major functions of top management to direct and coordinate human and material resources toward the achievement of the prescribed goal of the organization.

In the case of Taylor, who is identified as the founder of Scientific Management, the aim was to increase organizational productivity through improving production at the shop level by utilizing time and motion studies, job analysis and organization and method techniques. Taylor's emphasis on «functional foreman» and the workshop deviates from other classical writers in the sense that in the case of the latter, the fundamental tendency is viewing the organization from the top down toward subordinate levels. Despite this distinction, all mechanistic approaches to organizations can be analyzed under one heading because of their primary consideration of practical efficiency and their inadequate conception of human nature. Additionally, the suggested structural principles are similar in terms of their intentionally rational characteristics with the prescribed organizational goals. To put it simply, mechanistic theory deals with the creation of an ideal, logical, and rational organizational design, a blueprint, to achieve given purposes.

Some structural properties of this rational design are the following:

1. Hierarchy: Formal structures are hierarchically organized on the basis of a firmly established superior-subordinate authority relationship. The manager, at the top of the hierarchy, has the responsibility of: (a) determining the goals, policies and programs; (b) organizing, directing and controlling the execution of the policies and the plans; (c) coordinating the interrelationships and functions of the parts to keep them in line with the objectives of the organization; and (d) motivating the employees — rewarding those who perform their jobs properly with economic incentives such as bonuses, higher pay and fringe benefits and punishing those who fail to fully carry out their functions.

Distribution of formal authority follows hierarchical lines. Authority is assigned to offices and positions regardless of individuals occupying them. A well-defined hierarchy of authority constitutes one of the basic dimensional characteristics of mechanistic organizations.
2. A corollary principle which logically follows the first one is related to unity of command and centralization of decision making. To put it simply, the principle of military-type unity of command stems from the need for coordination. Despite the detailed structural setup, the coordination of activities of different departments toward the achievement of the prescribed organizational goal still necessitates the concentration of decision-making authority in the hands of the people at the top of the hierarchy, in one center.

To insure that decisions will be carried out in such a way that advances the determined objectives, in addition to the formal authority structure, there needs to be a corresponding and parallel line of responsibility. Coordination which comes from the central authority in the organization structure operates through a formal process throughout all hierarchical levels of the organization. To assure that organization members will perform their work in the proper and standardized way, superiors are held directly responsible for overseeing the work of their subordinates and for preventing deviations from the formal orders.

A subsidiary principle is the «span of control» which simply states that no position holder at any hierarchical level can have more subordinates than he can effectively control and supervise. What is controlled and supervised is not only individual employees but also their role relationships. If a superior has more than five or six employees (considered optimum) under his supervision, effective control will be impaired, because the role and task relationships among his subordinates will increase geometrically.

3. Division of labor: Functional specialization and standardization of role patterns.

As stated earlier, the most important property and the initiating impulse of mechanistic organizations is the emphasis that is placed upon creating a structural blueprint to maximize rationality in achieving organizational goals. The obvious question is related to the operational definition of rationality. As Lowi observes about the markets of industrial society, perhaps the most important application of rationality is differentiation which can be considered as the operational implication of «the principle of division of labor applied to any and all aspects of life.» Lowi finds four forms of differentiation in industrial society:

(1) Multiplication and specialization of the units of production and distribution; (2) multiplication of individual roles; (3)
multiplication of the units of social control; and (4) spatial differen-
tiation. (11)

By far, specialization and standardization of role patterns constitute more significant aspects of organizational rationality in mechanistic theory and in actual practices of formal organizations as well. The principle of specialization requires the breakdown of all operational tasks into their simplest components. The work of an employee is confined only to the performance of one of these elementary components of an operation so that his concentrated effort on one single element will increase the quantity and the quality of output. By the same token, the activities of departments and subdepartments as well as the activities of groups have been divided and specialized on the basis of function, service, clientele, process, time, and the like.

The rationale behind specialization is that it will increase speed and efficiency and reduce the skill requirements of employees. Eventually, specialization will require shorter training and adjustment time for the employee, which would lead to the better accomplishment of organizational objectives.

As tasks become fractioned, it will be possible scientifically to determine the «one-best way» of performing them; then their performance can become standardized and prescribed into the organizational positions which, with their own enforcement procedures and norms, constitute standardized organizational role patterns. Mechanistic theory requires clear definition of the duties and obligations of organizational roles so that it may be possible to eliminate vagueness and create precision. Roles are also provided with necessary authority to carry out functions. Role expectations, organizational rules, and regulations are documented in writing. The clear description of roles and positions then enables the organization to select the right man for the right job.

Behavioral Properties:
Assumed Functional Aspects

As has been stated earlier, the main concern of mechanistic theory is to improve overall organizational effectiveness through effici-

ient task performance by applying prescribed structural principles, some of which have already been discussed. Before we move into the analysis of the inconsistencies, fallacies, and inadequacies of this mechanistic theory, it would be appropriate to provide a brief summary of what is expected.

Blau strongly claims that bureaucracy as it is defined by Weber (with characteristics similar to those analyzed in the preceding section) is «the organization that maximizes efficiency in administration.» (12) His argument is that modern, large-scale organizations require a high degree of specialization which necessitates coordination of performances for which bureaucratic structures effectively provide the means. (13)

What is intended by theorists of mechanistic organization and by Blau is to define this type of organization in terms of achievement of objectives. We have talked about the structural properties in some detail. Now, the question is what are the behavioral qualities that enable the formal organization to achieve its objectives?

Perhaps, one of the rather significant behavioral qualities is organizational impersonality. Role patterns backed by a system of rewards and sanctions together with structural arrangements, based upon rules and regulations, aim at the acquisition of impersonality through the imposition of control and discipline mechanisms. In other words, role standardizations and expectations are determined regardless of the personal characteristics of individuals who will occupy and perform them. The individual, his desires and needs, and perhaps more importantly, his capacity to perform an assigned task, are not considered.

In order to eliminate «human irrationality» or to keep it to a minimum, to secure the individual’s devotion and conformity to established organizational patterns, and most importantly, to accommodate this «competitive, lazy, aggressive and self-interest oriented» man into the organization, the loyalty of the individual is directed to an impersonal order, to a superordinate role position, not to the person who occupies it. Superior-subordinate relations have an impersonal character because of rational rules. There is not much room for individual discretion and initiation. Standardized role patterns and strict procedural rules are aimed at the elimination of human

deviant behavior and discretion. Particularly, formal mechanistic organizational impersonality reveals itself in the objective methods for selecting employees, the objective standards of discipline and control. Evaluation of employee performance and control of employee behavior are achieved through the development and utilization of objective standards.

Corollary to impersonality are unity, continuity, reduction of conflict, and the like. Strict subordination and the elimination of ambiguity in expected role behavior through precise role and procedural patterns and rational rules do not leave much room for frictions and arbitrary actions. Ultimately, they provide a high degree of predictability and reliability in anticipating future organizational behavior, because the subjective values of individuals would be eliminated by routinizing work tasks.

Another significant property of mechanistic organizations is technical superiority. As will be recalled from the earlier discussions, organizational rationality is attempted through the application of internal division of labor and functional specialization and through depersonalization of relationships and strict devotion to rules. By reinterpreting Durkheim (14) we could assert that internal division of labor would be the basis of organic solidarity and cohesion in formal organizations. Division of labor refers to the breaking down of tasks into their simplest components. The one-best-way of performing one of the most elementary fractions of tasks would be scientifically determined on the basis of the consideration of the ability and skills of an ordinary employee. Then, this best way of performing a task would be standardized through formalized role patterns. Internal division of labor and specialization (simplification of complex tasks) backed by a system of objective standards based on technical knowledge for job performance, control, and discipline (impersonality); a high degree of predictability of response and an attempt to eliminate human discretion and arbitrary action with a premium placed on speed, precision, efficiency, continuity, and reliability, would constitute the most essential rational aspects of the formal organization. This blueprint would be technically superior to any other form of organization for the obv-

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(14) According to Durkheim, division of labor constitutes the basis for organic solidarity in modern society as opposed to mechanical solidarity in primitive communities which is achieved and maintained through shared sentiments and values. For details see, Emile Durkheim, The Division of Labor in Society, trans. by George Simpson (New York: The Free Press, 1964).
ious reason that it would fulfill all the requirements of organizational rationality, which is considered to be vitally necessary for achieving organizational goals.

**Dysfunctions and Pathological Behavior of Mechanistic Organizations**

To sum up the argument so far, mechanistic organizations, whether explicitly or implicitly, are based upon a negative, inadequate misconception of human nature. The organizational implications of this pessimistic rational-economic man approach have been such that through the application of rational structural techniques of impersonality, specialization, and standardized role patterns aimed at the avoidance of any arbitrary action, human discretion and deviation, it is assumed that an organization's output would be qualitatively and quantitatively greater, which eventually would result in greater material rewards for the individual employee. Since man is economically self-interested, greater monetary rewards would lead to greater satisfaction to which the employee would respond with the maximum performance and the recyling would start all over again. However, organizational reality is not as simple as this indicates, for there are unintended consequences arising directly from this rational blueprint as dysfunctional by-products. In analyzing some of the dysfunctional aspects of mechanistic theory, the categories will be the following: (1) unresponsiveness, (2) inconsistencies and paradoxes, and (3) employee alienation and incongruencies.

(1) **Unresponsiveness**

To comprehend organizational phenomena requires of us a careful analysis of man, organization, and the environment, their interactions and exchanges. Organizations function in a dynamic physical, technological, and cultural environment which is characterized by an accelerating rapidity of changes. The constantly changing environment necessitates continuous changes in the organization. Mechanistic theory does not adequately consider technological and environmental imperatives and their implications for an organization's vitality. The transactions between the organization and the environment also are not left much room for analysis and elaboration in this theory. In addition to the characteristic of being closed to the environmental challenges, this machine theory does not provide the opportunity to an organization's members to initiate changes internally. What is expected of the individual employee is strict and complete adherence and conformity to established organizatio-
nal patterns and norms, not deviant behavior or intraorganizational conflict. Indeed, the rigid, static and impersonal structural tenets of this theory are not conducive to flexibility and continuous adjustment. Organization is not seen as an organic entity, but rather as a structural and mechanical arrangement of parts which implies the notion of static equilibrium, not easily breakable for adaptive purposes.

(2) Inconsistencies and Paradoxes

The principle of hierarchy and graded authority is incompatible with the principle of specialization. (15) Increased specialization leads to a corresponding increase of expertise. Expertise is one of the basic sources of authority. Very specialized employees enjoy a control over not only the particular technical know-how, but also over information on which the central authority relies to make decisions. As Presthus observes: «There is an inherent tension ... between those in hierarchical positions of authority and those who play specialized roles. (16)

Another unexpected consequence of large-scale organizations is explained by Michels «iron law of oligarchy» (17). Michels contends that large organizations by their very nature develop oligarchic tendencies. As an organization develops, its tasks and duties are enlarged and specialized to such a degree that it is no longer possible for an individual without technical knowledge and training to grasp them. The increasing complexity of organizational obligations and tasks makes it very difficult to comprehend them. Even in organizations with the democratic spirit, direct participation of organization members in important decisions is not practically possible. The need for delegation arises. Coupled with the complexity or organizational problems, the preparation for and carrying out of the most important decisions is left in the hands of a few individuals at the top. Thus, the leaders at the top control the entire affairs of the organization. Other members do not have much chance of participating in decisions that affect their organizational life.

Whether or not one agrees with Michels is beside the point. His main intention was to point to the bureaucratic structural tenden-

cies in organizations. Mechanistic theory does not provide any opportunity at all for employees to participate in meaningful decisions, let alone the consideration of the technical and practical impossibility of individual's objective involvement in decision-making processes.

Merton calls attention to an unintended and dysfunctional outcome of bureaucratic structure in his concept, «displacement of goals» (18). Mechanistic theory aims to reduce the variability of human behavior to attain precision, reliability, and efficiency. Toward this end, the bureaucratic structure exerts a constant control upon the individual through rule enforcement. In order to secure discipline, reliability of response and strict devotion to regulations, standard procedures are outlined and strict control and supervision mechanisms instituted. This overemphasis of mechanistic organizations on the obligations of the individual member to prescribed role patterns leads to «a transference of the sentiments from the aims of the organization onto the particular details of behavior required by the rules.» Hence, rules and rule enforcement become and end-in-themselves. The unintended consequence is displacement of organizational goals. Through rigidity, instrumental means (rules) become terminal goals, which fosters inefficiency in most instances.

Selznick, like Merton, pointing out the inadequacies of machine theory, calls attention to a central dilemma in bureaucracy arising from the need for delegation of authority to the lower levels of the organization. (19)

According to Selznick, the increasing complexity of organizational problems necessitates the delegation of power and functions to lower roles and formal positions. However, these positions are held by individuals who have their own goals which do not always coincide with the goals of the organization. Additionally, delegation tends to increase the bifurcation of interests among the subunits of the organization. The commitment of the subunits is to the subunit goals rather than to the goals of the central system. Internalization of subgoals by participants originates a process of «organi-


zation paradox," that is, a process of goal displacement whereby subgoals become terminal values in themselves, which necessitates more control mechanisms. The self-reinforcing pattern of rules makes organization tasks more complex, which eventually results in the increased delegation of authority. Like Merton, Selznick correctly points out the unanticipated outcomes of control techniques in mechanistic organizations and the consequent and eventual displacement of terminal values (organizational goals) by instrumental means (control through rule enforcement).

Gouldner spells out other unintended consequences of rationalization by stressing the dialectic nature of bureaucratic rules which are central to mechanistic theory. In addition to functional effects, impersonal work rules serve as the perpetuating source of pathological behavior mainly for two reasons: first, by specifically defining the unacceptable behavior, rules enable the individual employee to understand the minimum acceptable level of performance. Minimum performance tends to be readily acceptable by employees as the maximum standard. The person who works above the minimum acceptable standard becomes a "rate buster" or "workhorse." However, the more common tendency is to accomplish the minimum performance required. Second, low level of performance creates the pressure for closer supervision by the superior on the subordinate, which in turn increases interpersonal conflict and tension. The dynamics of this situation are illustrated by the following figure:

Low motivation and low role performance — supervision — Tensions — Rules

(reinforce) (mitigate)

The summarizing point derivative of the above arguments is that rationalization (rules) in the mechanistic organization tends to have functional and dysfunctional consequences in respect to the accomplishment of organizational goals. It may contribute to their realization, and perhaps more significantly through the inherently and logically natural process of goal displacement and through the self-defeating aspects of rule enforcement, it may lead to their deflection.

Employee Alienation and Incongruencies

As Simmel observes, the eighteenth century called upon a man to free himself of all the historical bonds and beliefs in religion, in morale and in the state. In addition to this liberation, the nineteenth century demanded functional specialization of man and his work. Since then rationality has dominated all aspects of life.

The strongest metaphysical and ethical criticism against this ever-increasing rationalization of man's life has come from phenomenological and existentialist philosophies. Man is rational as well as irrational. Reason is only one aspect of human existence. If it is used indiscriminately as the key to all problems, it falsifies reality and masks the factual conditions of existence, that is, it identifies the laws of logic with the laws of reality as exemplified by Hegelianism. The existentialist views man as man-in-the-world, perceiving and responding in a situation. In this extremely rationalized and functionalized world of ours, man has lost his authenticity and has become a robotlike creature in the pursuit of meeting the certainty demand of rationality.

Lowi makes a similar observation:

Specialization reduces a man's chances of developing a whole personality; it can twist and depersonalize him. Men then become alienated from themselves; they become anomic. Men also become alienated from other men. Werk becomes a mere matter of compulsion.

Furthering the argument along the line of phenomenological and existential philosophies, we assert that man exists essentially as «becoming» rather than as a mere being. In contrast, our mechanistic organizations value «doing» rather than «becoming.» Man's drives are dynamic, they undergo manifold changes. Our organizat-

ious foster submissiveness and dependency. Such dependency is detrimental to the ability of the person to become fully what he is capable of becoming.

In the face of formal processes of «shoulds» and «musts» imposed upon him by his standardized role obligations, conjoined with the very nature of routine work he does, the person in the organization loses his identity. Following Mills's argument, as the organization becomes more rationalized and standardized in the process of self-rationalization, the individual loses his freedom to express, to develop, and to grow, and thus becomes alienated. (26)

Alienation as derivative of contemporary social structural features including impersonality, bureaucratized or mechanized roles and the like, takes several forms. Seeman suggests five distinguishable varieties of alienation, (27) which were later empirically found by Blauner in his study of four types of industrial workers. (28) As suggested by Seeman, the theory of alienation is a study combining contemporary social structure and assertions about the psychological effects of that structure with a resulting observed individual behavior. (29) As defined by Blauner, (30) the four psychological states that lead to different patterns of alienation in industrial organizations are: (1) powerlessness to be able to influence the work situation; (2) meaninglessness in the work; (3) social isolation; and (4) self-enstrangement in which work is simply an instrumental means; lack of self-involvement in work. (31)

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(30) Blauner, op. cit.

(31) In his insightful theoretical study, Etzioni provides a two-dimensional model for the comparative study of organizations. Along the horizontal dimension lie the kinds of involvement—alienative, calculative and moral. On the vertical dimension are the types of power strategy employed, coercive, remunerative, and normative. He hypothesizes that, based on the power strategy utilized, it would be possible to project the kind of corresponding employee involvement in an organizational setting. Briefly, coercive power tends to evoke alienative, remunerative produces calculative; and normative author-
To sum up the argument so far, the inadequate and unrealistic conception of human nature and of man as a "reluctant cog" has provided grounds for the establishment of standardized, rigid structures. Too much authority imposed from above and too little opportunity for self-growth and self-direction, conjoined with too much fragmentation of work function have led the individual to limit his involvement with his work and to consider it just a simple instrumental activity. The resulting employee behavior has been detrimental both to the effective accomplishment of organizational goals and to the realization of employee self-actualization. The basic reason for failure in this respect, we believe, lies in the misinterpretation of human nature.

Unresponsive, ineffective and internally inconsistent organizations cannot meet the challenges brought about by today's dynamic and knowledgeable society and its knowledgeable man. Mechanistic theory has proven to be inadequate in providing us with conceptual tools essential to build viable organizations. We need a new theory based upon a more realistic conception of man to enable us to meet contemporary challenges and to create internally and externally viable and effective institutions.

By results in moral involvement. Despite the risk of making a false generalization, we would tend to think that in a mechanistic organizational setting with routinized work patterns supported by a prescribed system of control and reward structures, the self-involvement of the employee in his work would be somewhere between alienative and calculative involvement of low density. For details, see Amitai Etzioni, A Comparative Analysis of Complex Organizations (Glencoe, 111. : The Free Press, 1961).