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AN APPROACH TO THE ORGANIZATION ECONOMY

—THE DEVELOPMENT OF BARNARD'S THEORY—

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1. INTRODUCTION

Professor Kenneth R. Andrews of Harvard University, sees Barnard's theory as the binding and central theory relating present diverse schools of business administration thought in his introduction of "The Functions of the Executive". He stated that; Barnard's theory is important for several reasons. It combines Taylor, Fayol and their followers' classical approach not only with Koontz and O'donnel's neoclassical approach which originated from the classical one, but also with the approach of a group of behavioral scientists, such as Argyris, Bennis, McGregor, Roethlisberger, Whyte, Zalesnick and so on. It combines the classical approach with various approaches of the decision-making school, including two families—the family of management science and the family of Carnegie-Mellon colleagues represented by Simon, Cyert and March. It further encompasses the approaches of case studies and theories of practical businessmen, such as Copeland, Learned, Smith, Christensen, Sloan, Chandler, Drucker and so on.

Professor Andrews shows that it is through Barnard's basic concept of the importance of purpose that the various kinds of modern approaches can be related to the classical one represented by Taylor and Fayol. He notes as follows: "The strength of Barnard's concept of cooperative systems and of his explanation of the essential conditions for rarely attained effectiveness and efficiency seems to me to lie in the idea that purpose is central. He believes the definition of organization purpose to be peculiarly an executive function, made necessary to give meaning to the rest of the environment, to serve as unifying principles. Toward the end of the book, in passages where his personal convictions become visible, he couples purpose with responsibility—'the quality which gives dependability and determination to human conduct, and foresight and ideality to purpose'. He was willing

to rest his theory of cooperation upon an ethical ideal. I will try to establish later the enduring importance of the idea in the literature of organization.¹⁾” He closes his introduction introducing Barnard’s organization purpose and criticising it. Thus we, who study business administration as the study of individual economy, agree with Andrew’s opinion that Barnard’s theory is the fundamental study for several schools of modern business administration and the organization purpose is a central concept of Barnard’s theory. This paper aims to consider the problems presented by Barnard and the development of approaches after Barnard stressing Barnard’s concept of organization purpose, the balanced concept of organization economy.

2. BARNARD’S ORGANIZATION ECONOMY THEORY

Barnard bases his theory of organization economy on the model of a realistic man who is moved by various needs and has only limited abilities. This is a departure from the traditional concept of the economic man model which economics has traditionally assumed. Barnard says that such a man or realistic man having free will or private purpose, and having abilities limited by various factors, such as physical strength, adaptability, sensibility, memory, imagination, selection and so on, cooperates with others to overcome the limits of his abilities in order to get better results for his efforts. Therefore, each man cooperates only to satisfy his private needs under the situation that “the result of a group effort is superior to the aggregate result of individual effort”. Therefore the ultimate purpose of cooperation is then efficiency, namely, to satisfy the needs of participants in a cooperative action. This purpose will be attained by taking effective cooperative actions and dividing its results to the participants through the distribution process.

Thus, two kinds of goals exist, the first is to satisfy private desires of participants in the cooperation system and the second is to promote cooperation itself. These goals are created by the existence of the cooperation itself and therefore they should be understood not as participants’ respective purposes but as the purpose of the cooperation system. By the way, Barnard defines organization as “a system of consciously coordinated activities of two or more persons,” combining physical systems, social systems and personal systems. Consequently, we conclude that the purpose of a cooperation system is actually the same as the purpose of organization. We find the following; “In the case of organizations, however, all ends of action are arrived at by social processes. . . in most cases the ends of organization action are the unique results of action of organization itself. The ends are in part limited

¹⁾ K. R. Andrews, “Introduction to The 30th Anniversary Edition”, pp. xi-xii, C. I. Barnard, *The Functions of The Executive*, 1968.

by the ideas of the individuals participating, in the sense that their willingness to participate is often affected by the nature of the cooperative objective; but the ends are not determined by such limits. On the contrary they evolve to their precise form, except insofar as they are affected by the means and conditions of cooperative action, on the basis of the 'good' of the organization. 'Good' may have reference primarily either to the internal equilibrium of the organization as affecting its relations with participants, or to external equilibrium as affecting its relations with the general (including the social) environment¹⁾".

So then what is the good of organization in the purpose of cooperation system in Barnard's theory?

To answer this question, let us look back to Barnard's analysis in which he divides the system function into three parts; the creation, the transformation and the exchange of utilities. From these points of view he sees the organization economy as the economy of organization itself.

As is widely known, organization economy in his theory is a pool of synthetic utilities balanced by three kinds of economies; these material, social and individual economies in a cooperation system and organization yield many material and social inducements or incentives to members of organization from its pool of utilities. In other words, the utilities of the organization mean more than the value of the individuals compose the organization. His theory encompasses the whole value that the organization gives to the physical and the social environment, and the contribution factors from individuals and the various payments to individuals, according to the coordination as an organization action of its own. Now because the continuation of the organization depends on the participants' contribution actions, we can expect the organization to be maintained and developed only when the organization secures the surplus of organization utilities. This surplus provides as a source of inducements for contribution actions. If the quantity of organization utilities needed to pay inducements is larger than the total organization utilities produced from the organization, the organization will sooner or later decline. As a result, we can conclude that the good for the organization is the balance between income and outgo of utilities of an organization economy.

Barnard describes this organization economy is as the pool of relative utilities balanced by three fluctuate unit systems: "The organization economy is the pool of the utilities assigned by it to (1) the physical material it controls; (2) the social relations it controls; and (3) the personal activities it coordinates. It is the pool of values as assessed by the organization as

1) C. I. Barnard, *op. cit.*, pp. 200-201.

a social system. It is the aggregate of the judgements or decisions as to the comparative utilities of noncomparable elements.”²⁾ And, “Underlying this quadruple economy of all organization is the essential fact that it is impossible to balance output and input in detail.”³⁾ Therefore, it is thought as follows: “The only statement of the organization economy is one that is in terms of success or failure; and the only analysis of that economy is the analysis of the decisions as to action of the organization.”⁴⁾

In short, the purpose of organization is assumed to maintain balance in an organization economy, but unfortunately there is no direct method or unit to measure this state of balance. Barnard uses an “analysis of the decisions as to action of the organization” to overcome this problem and create a measure. Moreover, he suggests that decisions in organizations should be evaluated by two factors, the efficiency of detail and the creative economy of the whole. “Since the details cannot be summed up into a whole, and the results of cooperation cannot be known except by the event, the final efficiency of organization is dependent upon two quite different factors; (a) the efficiency of detail; and (b) the creative economy of the whole.”⁵⁾

In his theory, then the purpose of organization can be seen as the maintenance of organization economy created by organization action itself and analysis of organization action systematically from this point of view. To those who try to understand the action of business organization from the point of view of business management, this concept of organization economy can provide the measurements and the means of evaluating of the action of each business organization. It demonstrates why the study of business administration, based on the concept of organization economy, should be developed as a separate discipline. At the same time, it suggests that business administration should make a study, not only of business enterprises, but also of schools, government offices, domestic economies etc., since organization economy common to all cooperation systems. Barnard himself further suggests that the study of business administration should be developed centering around the problem decisions in formal organization.

According to Barnard’s analysis of the decisions, the study of efficiency in the process of utility distribution can be, first of all, evaluated in terms of efficiency of details. This is well known as “the Economy of Incentives”, comparing the paid inducements and the obtained contributions from the organization economy’s point of view.

2) *ibid.*, p. 242.

3) *ibid.*, p. 252.

4) *ibid.*, p. 244.

5) *ibid.*, p. 253.

The analysis of the creativity of decision-making of the whole is considered the problem of the coordination field. This is a problem of securing effective combinations of various elements in an organization to produce organization utilities. Securing the efficiency of details is a matter of highly developed techniques, which Barnard describes as follows: "Creative efficiency on the other hand, although it may involve the invention of techniques as result, is essentially non-technical in character. What is required is the sense of things as a whole, the persistent subordination of the part to the total, the discrimination from the broadest standpoint of the strategic factors from among all types of factors—other executive functions, technology, persuasion, incentives, communication, distributive efficiency."⁶⁾ The problem of the process of the coordination, particularly in Barnard's theory, is important because it is this process which will generate the surplus of organization economy. The function of the top executives is to occupy the central position of the communication system in an organization in order to feel proportions of the whole organization and keep them in proper balance. In fact, since coordination cannot be measured objectively until the balance of organization economy shows either a decline or a growth, the top executives must find the unbalanced aspect by intuition and devote themselves to correcting it. But once such an unbalanced aspect is perceived, the subsequent disposal of it can be carried out systematically and the goals of concrete action can be established by objective and rational analysis of one problem after another.

Thus Barnard's balance theory of organization utilities can be divided into two fields, distribution efficiency and the process of coordination. Barnard analyses these separate fields from two different point of view. In his "Theory of Opportunism", he seeks some objective techniques to establish general purposes and to help discover restrictions upon achieving these purposes. But the establishment of organization purpose is concerned with future, so decisions in organization must be based on a kind of foresight or ideal. Therefore we cannot deny the necessity of analysis from another aspect, the so-called "moral sector" which deals with the executive leadership.

Finally we can better understand Barnard's theory of the balance in organization economy if we consider two more analysis of the decision-making process. The first is the theory of opportunism based on objective technology, the other, according Barnard, a theory of "morality" based on executive responsibility.

Accordingly Barnard's theory is significant because it systematically clarifies the concept of organization economy. It suggests ways to understand

⁶⁾ *ibid.*, p. 256.

these concepts. It establishes the basic theory of the modern business administration and suggests how to further develop it.

But if we re-examine his theory from the theory that we have so far been developing in this paper, we can find many weakness. Andrews says as follows: "His treatment of purpose acknowledges its centrality, to be sure, but does not include attention to the choice of purpose in a changing world or to the processes of formulating goals and objectives for the organization. Although he must be credited with readmitting man to organization theory, he seems much less interested in a living, growing person than in the abstract individual. He is not much concerned about personal involvement. His analysis of motivation suggests responsive behavior rather than full participation in the administrative process; it makes no room for the development of individuals, for the maturing of their needs, and for the dilution or strengthening of their commitment. The definition of authority understates the role of objective authority and appears to assign individuals the choice of acceptance or rejection rather than participation in the active integration of conflicting alternatives and interpretations."⁷⁾ He continues: "Perhaps because the goals of his own organization were relatively constant, he does not give full descriptive or prescriptive attention to the processes of formulation; how it is, how it may be, and how it should be formulated, and how it may be and should be—given an explicit set of values—evaluated for quality, relevance, and durability."⁸⁾

Particularly the meaning of sense which he uses to describe the feeling of an organization as a whole, should be described in more operational terms. Therefore let's examine the theories of business administration developed from Barnard's theories. Let us see if they have developed his theories' weak points and have approached the concrete meaning of organization economy or not.

3. THE DEVELOPMENT OF THE THEORY OF OPPORTUNISM

Barnard's study of organization economy has influenced many economic scholars, particularly Carnegie-Mellon colleagues leading Simon. This group has based its studies on the premise of the limited ability of the human being which is one of the characteristics of Barnard's human model. It is well known that March, Cyert and Ansoff's studies have further developed Barnard's theories with their analysis of how business organizations establish their goals. Penrose's analysis¹⁾ is also a worthwhile addition to the develop-

7) K. R. Andrews, op. cit., pp. xiii-xiv.

8) *ibid.*, p. xix.

1) E. T. Penrose, *The Theory of The Growth of The Firm*. 1959.

ment of this study. Many subsequent studies are greatly influenced by Penrose. According to Barnard, Penrose sees a business organization as an area of authoritative communication. She sees the purpose of business enterprise as growth and goes on analysing the characteristics of each enterprise which result in its growth. She concentrates on the inner resources of the business enterprise, particularly on the executive experience, accumulated knowledge and their ability to grow.

Let's summarize the theories we've as far been developing, Ansoff has brought Barnard's abstract theory of executive direction of a business organization down to the concrete level. He analyzes the items of business balance sheets, profit and loss statements and other statistical processes and attempts to locate problems by comparing achieved levels with "the acceptable threshold" and "the highly desirable goal" of each item respectively.²⁾

We can use the results of Ansoff's analysis to find the balance of organization economy that Barnard speaks of, although his approach are very different. Ansoff bases his studies on the premise of the maximization of the profit rate of net worth. Barnard on the other hand bases his studies on the premise that the purpose of enterprise lies in the pursuit of the surplus of organization utilities and it is possible to measure the degree of success only by either, the growth or the reduction of the organization. So we can conclude that the various items which Ansoff uses to analyse organization purpose can serve as an indirect index of Barnard's measurement of the growth or reduction of a business enterprise.

If we accept Barnard's theory of organization utility as being created by the whole balance of economies of some subordinate systems, the absolute values of the individual item in Ansoff's analyses are not important. But the significance of each item lies in its comparison to the same items of other businesses and industries, past and present.

The Carnegie-Mellon group develops and clarifies the concept of official authority in Barnard's organization theory. It maintains that executives must understand their organization, their subordinates and their organization's communication system to successfully operate. According to Carnegie-Mellon group, the knowledge of subordinates is the premise of delegation of authority and is therefore very important. Also important thing is a knowledge of unused service or resources and of organization slack. Cyert and March have remarkably developed Barnard's theory that the contributors at the lowest level of an organization are a strategic factor in the organizations relationship to the external environment. They bring the organization

²⁾ H. Igor Ansoff, *Corporate Strategy* 1965.

³⁾ Cyert and March, *A Behavioral Theory of The Firm*, 1963.

the information about the external environment which is used to establish its administrative purposes. Cyert and March make clear this process.

I think we can assume that the study of establishing goals for a business enterprise, based on the Barnard's theory of opportunism, has been brought to the concrete level by the Carnegie-Mellon colleagues.

On the other hand, the goal-finding is influenced by the estimation of the future. This in turn greatly influenced by contributor's (employee's) morale. This is what Barnard calls the moral element of organization purpose.

Penrose and Carnegie-Mellon colleague's studies in this field are quite insufficient. They point out that the demand of the enterprise (hence, its market) can never exist until the executives perceive it. They state the collection of necessary information is influenced by the degree of internal contributor's (employee's) interest and the communication and the interpretation of this information are influenced by the degree of internal contributors' (employees) special knowledge of the customs, habits and knowledge of each organization. Carnegie-Mellon group pointed out these relationships but did not analyse deeply enough the mechanism of the moral elements involved.

At this point, March-Simon's analysis of employees 'motivational constraints' in their book "Organizations" (1958) is a noteworthy development. This analysis deals with some elements which influence two kinds of employee decision-making. The first decision is whether or not an employee will continue to participate. The second is the degree of the individuals contribution to the business purpose. March-Simon clarify how those elements function from participants' view point. March-Simon develop Barnard's organization balance theory from the point of view of employee participation. Their study analyses only the functional aspect of inducements which motivate participants' contribution, action, but it doesn't really develop Barnard's overall theory of balance of organization utility which is a balance between inducement and contribution in organization economy. Therefore we can only conclude that their study is an analysis of a part of individual economy, which is the sub-system that supports Barnard's theory of organization economy. They do not analyse the combined effect of many kinds of inducements and their multiplier effect.

Barnard maintains that the executive with the special and the general abilities, should influence his follower's emotions through countless channels of physical, biological and social experiences. In the end, they should create a common understanding, a conviction of success, and a belief that individual desires will be achieved. As a result, the executive should make his followers believe that the organization's purpose is more important than the individual's. Barnard insists, "It is impossible by definition that formal

organization can act without the moral element.”⁴⁾

The strategic purpose of business enterprise, as Ansoff points out, is to analyse synergy effects by analysing the merit and demerit of each enterprise. Unused services or organization slack in a business enterprise are very important. By developing each internal contributor's abilities (which can be one of such “slack” elements), we can not only eliminate organizational slack but improve the accuracy of decision-making. The Carnegie-Mellon group does not analyse such moral aspects which create large unused services or organizational slack. To this problem we will now turn our attention.

4. THE DEVELOPMENT OF THE THEORY OF MORAL ELEMENT

Barnard maintains executive leadership is important because the organization constituents cannot display their abilities satisfactorily without “faith”. As this is the problem of motivation in a broad sense, it is obvious that it requires understanding of the participants' private desires or needs. Barnard uses an actual man model who is moved by various needs instead of the previous concept of an economic man who is moved only by money. Barnard develops a plane understanding of man's desires or needs. That is to say, he arranges man's various needs and inducements at the same level. But his statement lacks an analysis of mutual interrelation of these inducements and needs or an evaluation of their influence on each other.

Maslow's theory of needs hierarchy seeks to analyse these interrelationships. In the 1960's, the Pittsberg group,¹⁾ led by Herzberg, further improve this theory. It provides a theoretical basis for the development of new management systems, such as management of small groups, management of divisionalised organizations, job enlargement systems, management by results, project teams, task forces etc.

The history of industrial psychology in this field relatively new and many scholars are still debating the merits of Herzberg's theory. There still much room for improvements in this field.

Belcher develops Barnard's theory of inducement based on a realistic man model who has many desires or needs and he gives us many suggestions. He is known to the Japanese people as a representative scholar of wage and salary administration. Wage and salary are considered a representative inducement that business enterprise distributes to its employee to stimulate their willingness to serve. Belcher, who has been studying the management of such wages and salary, says, in the Preface of his second edition, “Wage and Salary Administration (1962)”: “The process of deter-

⁴⁾ C. I. Barnard., op. cit. p. 201.

¹⁾ Herzberg, Mausner, Snyderman, *The Motivation to Work*, 1965.

mining and administering remuneration in employment has changed greatly since the first edition of *Wage and Salary Administration* appeared in 1955. Perhaps the most pervasive change has been in the nature of remuneration. Neither of the terms wages nor salaries suffices any longer to denote the subject matter under consideration. Employee compensation, a much broader term encompassing direct financial payments, indirect payments in the form of employee benefits, and nonfinancial rewards, is not only more appropriate but is more able to reflect continuing change in pay resulting from employment. ... Perhaps the most important but least appreciated change is the gradual convergence of compensation theory and compensation practice. In the past, the fact that compensation policy and practice appeared unrelated to wage theory was a source of concern to both theorists and thinking practitioners.²⁾

He has taken up only the management of monetary inducements as remuneration for employees paid by an enterprise. But, because "an explanation of wages in purely economic terms is impossible"³⁾, he considers some non-monetary inducements. Consequently, in the second edition of his *Wage and Salary Administration*, he adds two chapters entitled "Compensation Theory" and "Nonfinancial Rewards".

Particularly in the chapter, "Compensation Theory", he presents a tentative model which shows his idea about deciding wage level, the choice of internal wage structure of a business enterprise, and the effectiveness of money as motivation.⁴⁾ This tentative model is, though Belcher's intention is not clear, useful in creating a model of inducement distributions to employees for Barnard's theory of organization economy.

Let us consider, as does Belcher, that the theory of inducement includes not only monetary factors but non-monetary factors and let us call this theory the "compensation theory". The theory of compensation has been developed by the Michigan group,⁵⁾ especially from the some point of view of executive. This group pointed out the importance of the intervening variables, such as employee's allegiance, attitude, motivation, aspiration level of work, mutual effects, cognizance, communication and so on. These variables are between the stimulative variables, represented by executive behavior (causal variables) and the final result variables. The stimulate or causal variables seeks to stimulate the group productivities and the result variables are the costs, returns, industrial relations etc, which the group achieves. The Michigan group analyses the mechanism where the causal variables affect the inter-

2) D. W. Belcher, *Wage and Salary Administration*, Second Edition 1962, p. V.

3) *ibid.*, p. 30.

4) *ibid.*, pp. 65-66.

5) R. Likert, *New Pattern of Management*, 1961.

vening variables and the intervening variables determine the result variable's operation in relation to time.

This study shows how some executive's behavior patterns, which stimulate employee's various needs, produce high group productivity. Therefore, we can say that various inducements given through executive actions influence not only the efficiency of detail but also the creative economy of the whole in Barnard's sense. Likert's intervening variables represent an indirect barometer of the increase of organization utilities.

Nevertheless their study does not go far enough in its analysis of the mutual influences between various factors. Only the time factor in relation to business performance or organization economy is fully developed. In other areas, the study only shows general tendencies. They analyze only leadership patterns of executive behavior. Therefore, Zaleznik states as follows: "All the causal variables Likert excludes from consideration are indeed crucial to the profitability and viability of an organization"⁶⁾. In any case, Michigan group's study analyzes only non-monetary inducement's effects which result from executives' daily action and therefore doesn't analyze the whole system of various monetary and non-monetary inducement effects.

In these fields, it is important that Belcher as I mentioned above, points out Jaques' study⁷⁾ as a modern representative development of his theory. Jaques does not regard wage themselves as a positive motivation element, he develops the idea of consciousness of fair wages. He found fair wages could be calculated by looking the money value of the resources controlled by an employee for a certain time span and multiplying this amount by the current interest rate. At the same time, he insisted on the importance of keeping the dynamic balance between job rank and employee's capacity.

Therefore Jaques' analysis can be regarded as a clinical experimental example of Belcher's tentative model. The dynamic balance between job rank and employee capacity can be regarded as a development of Barnard's theory. This theory brings out two special points; the special knowledge and general superiority of action necessary for executives, and the necessity of keeping a balance between employees' capacities and their jobs.

But Jaques successfully developed this theory on the basis of mutual understanding and positive cooperation between labor and management. His hypothesis that an employee's absolute wages are amount of company resources which every employee controls multiplied by the rate of interest, cannot be accepted immediately because business enterprise exists in a market economy. Its capacity to pay wages is decided by a market which is different

⁶⁾ A. Zaleznik, "The Human Organization; Its Management and Value By Rensis Likert," *Industrial and Labor Relations Review*, July 1968, p. 625.

⁷⁾ Elliot Jaques, *Measurement of Responsibility*, 1962.

from the total sum of individual employees' contributions.

As I mentioned above, analysis of employee motivation, which Barnard suggests, has been developed to a considerable extent. Frankly speaking, however, it is relatively undeveloped compared with analysis developed from the theory of opportunism. In order to make clearer the organization economy, we should pursue research with the moral element in mind. This would be mainly a personnel-management approach.

5. CONCLUSION

We mentioned above that we thought the central problem of the theory of business administration is the balance of organization utilities. This is the central problem of Barnard's theory and, according to Barnard, we have found a clue to solving the problem in analysing organizations decision-making processes. We trace the development of recent approaches in two aspects of analysis, the theory of opportunism and the theory of the existence of moral elements.

To grasp the meaning of the balance of organization economy, the results of the balance of organization economy, the results of both approaches must be brought together. In conclusion, therefore, we need not only to demonstrate the importance of these two theories' approaches but also to develop ways to unify their results.

I have only found one attempt that has been made to unify the results of the two approaches. This is Kazka and Kirk's approach¹⁾ in which they try to demonstrate a relationship between the character of a work group and the achievement of an organization. To do this they employ a complicated operating simulation model which combines Cyert, and March's model of the firm, Bonini's model of information and the decision systems in the firm, and Likert and Seashore's model of cost control.

Their analysis reflects the limitations of the data upon which it is based, and the results of their analysis are further limited by the small number of motivation elements used. However it will represent a very significant attempt to unify the analysis of the decision making which have been independently developed.

Kazka-Kirk's analysis represent a significant development but we should not stop with it. We should seek to develop other ways of unifying the two approaches. A theory which relates the theories of opportunism and the moral elements is necessary—particularly with respect to the latter, which, is still relatively undeveloped.

¹⁾ E. E. Kaczka and R. V. Kirk, "Managerial Climate, Work Groups and Organizational Performance," *Administrative Science Quarterly*, Sep. 1967.