Classical Organization Theory: From Generic Management of Socrates to Bureaucracy of Weber

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Abstract

Organization is a relatively young science in comparison with the other scientific disciplines. (Ivanko, 2013) Accounts of the growth of organizational theory usually start with Taylor and Weber, but, as Scott (1987) mentions, organizations were present in the old civilizations which goes back to Sumerians (5000, BC) and which experiences its maturation phase with Taylor, Fayol and Weber, continuing to come up to present with modern management methods and principles. The modern organization may be the most crucial innovation of the past 100 years and it is a theory which will never complete its evolution as the human being continues to exist. Understanding how organizations work has been the focus of scientists and scholars until the early part of the 20th century. Just as organizations have evolved, so to have the theories explaining them. These theories can be divided into 9 different "schools" of thought (Shafritz, Ott, Jang, 2005): Classical Organization Theory, Neoclassical Organization Theory, Human Resource Theory, or the Organizational Behavior Perspective, Modern Structural Organization Theory, Organizational Economics Theory, Power and Politics Organization Theory, Organizational Culture Theory, Reform Though Changes in Organizational Culture and Theories of Organizations and Environments. This paper will concentrate on the very beginning theory namely classical organization theory and is divided as follows. The introduction talks about the developments of the organization and organization theory from its early stages with detailed definitions. In section 2, theoretical roots in other words literature review on the subject will be presented. At further section, by looking at the perspectives of the 15 pioneering people (Socrates, Smith, Owen & Babbage, McCallum, Towne, Watt, Metcalfe, Fayol, Taylor, Gantt, Gilbreths, Barth, Weber, and Gulick) main principles of the classical organization theory are presented one by one. Section 4 mentions strengths and weaknesses of the classical organizational theory and section 5 discusses and concludes the paper.

Keywords: Classical, Organization, Organization Theory.

I. INTRODUCTION

Man is intent on describing himself into a web of collectivized patterns. ``Modern man has learned to accommodate himself to a world increasingly organized. The trend toward ever more explicit and consciously drawn relationships is profound and sweeping; it is marked by depth no less than by extension.`` This comment by Seidenberg summarizes the influence of organization in many shapes of human activity.

Some of the reasons for hectic organizational activity are found in the main transitions which revolutionized our society, shifting it from a rural culture, to a culture based on technology, industry, and the city. From these shifts, a way of life occurred and characterized by the proximity and dependency of people on each other. Proximity and dependency, as conditions of social life, harbor the threats of human conflict, capricious antisocial behavior, instability of human relationships, and uncertainty about the nature of the social structure with its concomitant roles.

Of course, these threats to social integrity are still exist to some degree in all societies, ranging from the primitive to the modern. But, these threats become serious when the harmonious functioning of a society acts upon the maintenance of a highly intricate, delicately balanced shape of human collaboration. The civilization we have generated depends on the preservation of a precarious balance. Hence, disrupting forces impinging on this shaky form of collaboration must be prohibited or minimized.

Traditionally organization is seen as a intermediary for accomplishing goals and objectives. While this approach is nifty, it tends to obscure the inner workings and internal aims of organization itself. Another fruitful way of behaving organization is as a mechanism having the ultimate aim of offsetting those forces which undermine human collaboration. In this approach, organization sloping towards to minimize conflict, and to lessen the meaning of individual behavior which deviates from values that the organization has established as worthwhile. Further, organization increases stability in human relationships by decreasing uncertainty regarding the nature of the system's structure and the human roles which are inherent to it. Parallel to this point, organization enhances the predictability of human action, because it limits the number of behavioral alternatives available to an individual. (Scott, 1961)

Furthermore, organization has built-in safeguards. Besides prescribing acceptable shapes of behavior for those who elect to submit to it, organization is also capable to counterbalance the

effects of human action which transcends its established ways. Few segments of society have engaged in organizing more strongly than business. The reason is clear. Business depends on what organization offers. Business requires a system of relationships among functions' it requ stabires stability, continuity, and predictability in its internal activities and external contacts. Business also appears to need harmonious relationships between the people and processes which creates it. In other words, a business organization has to be free, relatively, from destructive tendencies which may be caused by divergent interests. (Scott, 1961)

As a main principle for meeting these needs build upon administrative science. A major element of this science is organization theory, which gathers the grounds for management activities in a various number of crucial areas of business endeavor. Organization theory, however, is not a homogeneous science based on generally accepted principles. Different theories of organization have been, are being evolved and continued to be evolving. (Ibid.)

If it is needed to give detailed definition of organization and organization theory; there are various definitions. To start with organizations, organizations are universal phenomena in human social and were explained by March and Simon (1958) as a systems of coordinated action among individuals who differ in the dimensions of interests, preferences and knowledge. Who holding the same philosophy included Arrow (1974), Mintzberg (1979), et cetera. Organizations exist when people interact with one another to implement essential (Daft,2007), they are social units of people with recognizable boundary to reach certain goals (Robbins,1990). Organizations are the unities composed of mental activities of member with same goals and technologies and operate in the clear relationship mode (Liu,2007). On rational, natural, and open system perspectives, there are various emphasis in the definitions of organizations. The rational perspective sees an organization with tool which is designed to meet the pre-defined goals; the natural perspective underlines that an organization is a group; and the open system perspective concentrates on that an organization as a sef-regulation system and an open system, exchanging with its external environment.

Organization theories comes from organization practices and in turn serve practices. Nicholson explains them as ``a series of academic viewpoints which attempt to explain the multiplicities of organizational structure and operating process (Nicholson, 1995).`` In other words, organization theories are knowledge systems which study and explain organizational

structure, function and operation and organizational group behavior and individual behavior (Zhu, 1999).

Complete organization science should include 4 layers: philosophy, methodology, theory and application, and organization theory takes place on the third layer, under the direction of methodology, it builds various management theories, management methods and management techniques by management practices. The relationship of them shows as the following figure:

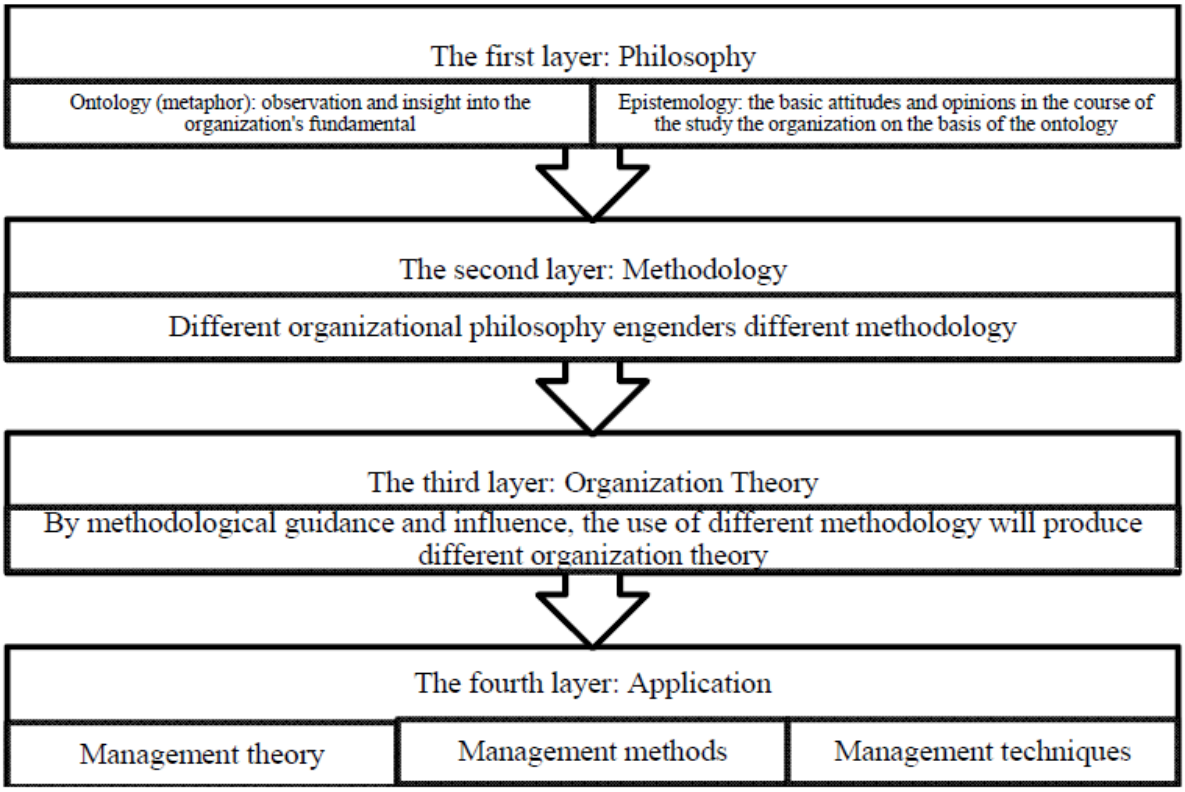

Figure 1. The layers of organization science

II. LITERATURE REVIEW

Classical organization theory was the first and main theory of organizations. The classical theory found itself in the industries of the 1930's and still has great influence today (Merkle, 1980). The classical theory is including professions of mechanical and industrial engineering and economics. The theory is based upon: (Shafritz, Ott, Jang, 2005).

- Organizations occur to implement production–related and economic goals.
- There is one best way to organize for production, and that way can be found via systematic, scientific inquiry.
- Production can be maximized through specialization and division of labor.

- People and organizations act in accordance with rational economic principles.
- Workers were seen as interchangeable parts in an industrial machine in which parts were made of flesh only when it was impractical to do them of steel.
- Power driven machines resulted in production workers, and, in turn, shifted individual craftsmanship.
- Factory system: resulted in capital intensive, highly coordinated production.
- Organizations should work like machines, using people, capital, and machines as their inherited parts.
- Industrial and mechanical engineering-type thinking dominated theories about 'the best way' to organize for production.
- Deal with primarily the anatomy, or structure, of formal organizations.
- The job of the scientific manager, once 'one best way' was found, was to impose this procedure on his or her organization. Classical organization theory comes up from a corollary of this proposition. If there was one best way to implement any given production task, then correspondingly, there must also be one best way to accomplish any task of social organization – including organizing firms. Such principles of social organization were assumed to be exist and to be waiting to be discovered via diligent scientific observation and analysis.
- Organizations should be based on universally accepted scientific principles.

Moreover, classical organization theory is based on four key pillars. They include division of labor, the scalar and functional processes, structure, and span of control. Given these major elements just about all of classical organization theory can be derived.

- The division of labor is without doubt the cornerstone among the four elements. From it the other elements flow as corollaries. For example, scalar and functional growth needs an specialization and departmentalization of functions. Organization structure is naturally base upon the direction which specialization of activities travels in company development. Finally, span of control problems result from the various number of specialized functions under the jurisdiction of a manager.
- The scalar and functional processes deal with the vertical and horizontal growth of the organization, respectively. The scalar process means the growth of the chain of

command, the delegation of authority and responsibility, unity of command, and the obligation to report. The division of the organization into specialized parts and the regrouping of the parts into compatible units are elements of pertaining to the functional process. This process concentrates on the horizontal evolution of the line and staff in a formal organization.

- Structure is the logical relationships of functions in an organization, arranged to implement the objectives of the company efficiently. Structure accomplishes system and pattern. Classical organization theory mostly works with two basic structures, the line and the staff. However, such activities as committee and liaison functions fall quite readily into the purview of structural considerations. Again, structure is the intermediary for introducing logical and consistent relationships among the diverse functions which comprise the organization.
- The span of control concept relates to the number of subordinates a manager can effectively supervise. Regardless of interpretation, span of control has importance, in part, for the form of the organization which evolves via growth. Wide span yields a flat structure; short span results in a tall structure. Further, the span concept directs attention to the complexity of human and functional interrelationships in an organization.

Classical organization theory is dealt with hierarchical levels of authority and coordination along with horizontal differentiations between units (Shafritz et al., 2005). Early structural theorists include Adam Smith, Daniel McCallum, Fredrick Winslow Taylor, Max Weber, and Henri Fayol. Smith's (1776) division of labor underlines the positive effects of specialization in regards to overall productivity within the organization. This work came at the dawn of the industrial revolution and is the most serious and influential statement on the economic rationale of organization (Shafritz et al., 2005). McCallum (1856) dealt with general principles of Smith's organization, concentrated on the flow of information up and down and is credited with designing the first organizational chart (Shafritz et al., 2005).

``Taylor expanded on the work of Smith and McCallum by focusing on increasing output by using scientific methods to discover the fastest, most efficient, and least fatiguing production methods (Shafritz et al., 2005).`` Taylor's (1916) approach underlines scientific management

and its use in making the worker more efficient, thereby generating more wealth for themselves and the world. Taylor looked for to find the most advantageous vehicle to get work done with in the design of the organization. Weber took a more macro view at the organization, drawing upon studies of ancient organizations in Egypt, Rome, China, and the Byzantine Empire (Shafritz et al., 2005). Weber (1922) defines a bureaucracy, a specific set of structural arrangements, and how those in the organization function. Fayol focused his study on the theory of management within the organization and believed that his concept of management was universally applicable as well (Shafritz et al., 2005). His primary contributions were his 14 principles that caused clear organizational success (Fayol, 1949). Each of these men built their theories through using each other's work. These theorists sought organizations as machines requiring boundaries between units. They based upon predictability and accuracy, achieved via control, specialization, the vertical flow of information, and limited exchanges with the external environment (Kuk, 2012).

The importance of these works is their collective progression explaining the efficiency of work and the definition of organizations. ``The maturation of classical organization theory parallels the development of student affairs organizations in that they have both expanded with time. Individual deans of men and women broadened into personnel departments and, eventually, divisions dedicated to student services (Ambler, 2000).`` As these new organizations developed, they used scientific management and established bureaucracy to more efficiently serve students, while their demands for service increased and diversified.

As one would expect, people are seen as a means to an end under this theory. Very little thought is put into how workers feel about doing a job or the ideas they may have for developing them. The main focus is on maximizing efficiency in order to meet financial goals. For each job there is thought to be one best way for achieving the goal. Specialization also defines this theory. The production worker, who is a specialist in only one or two steps of the process, is quickly replacing the craftsman, who in the past would implement a series of tasks to produce a product.

Structures are seen as the basic intermediaries for organizations to achieve the bounded rationality. In classical organization theory, the rationalization of organizational structure is the main object. Organizational issues are researched on static-structure-legal perspective, and the core is the rationalization. Classical organization theory underlines the organizational

specialities are impersonal and rational; concentrates on the organizational structure designing, the basic principle and the basic management function of organizations. The classical organization theory is the typical management philosophy in the perspective of Human-Machine relationship, which based on the hypothesis of 'economic man'. People lost their humanity in society, into a machine, and lost initiative in the work.

III. MAJOR THEORISTS AND CONTRIBUTIONS

1. Socrates - Generic Management

History demonstrates that management was involved whenever people wanted to implement something by means of joint effort. Think, for example, of the building of the pyramids in Egypt, the Coliseum in Rome or the Great Wall of China. When we consider how the stones were cut and transported over great distances in order for them to be used in such impressive construction projects, it is clear that leading and masterminding these projects must have demanded excellent management skills. No doubt that in the ancient documents of philosophers like Plato and Xenophon, we see passages which are devoted to management (Keuning, Bossink and Tjemkes, 2010).

For example, in one of his debates on management, Socrates says:
... if a man knows what he wants and can get it, he will be a good controller, whether he controls a chorus, an estate, a city or an army. Don't look down on businessmen ... for the management of private concerns differs only in point of number from that of public affairs ... neither can be carried on without men ... and the men employed in private and public transactions are the same ... and those who understand how to employ them are successful directors ... and those who do not, fail in both ... Taken from Socrates' debates as recorded by Xenophon in Memorabilia (III.IV. 6-12) and Oeconomicus.

Socrates also adds that if a manager could cope well with one organization, he/she would be able to cope with others, even regardless of purpose and function.

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2. Adam Smith – Of the Division of Labor

The famous and known Scottish economist Adam Smith was one of the first to look at the effects of various manufacturing systems. He compared the relative performances of two different manufacturing methods. The first was similar to crafts-style production, in which

each employee was responsible for all of the 18 tasks involved in producing a pin. The other had each employee implementing only one or a few of the 18 tasks that go into making a completed pin.

Smith found that factories in which employees specialized in only one or a few tasks had better performance than factories in which each employee implemented all 18 pin-making tasks. In fact, Smith could reach the result that 10 employees specializing in a particular task could, between them, make 48 000 pins a day, whereas those employees who performed all the tasks could make only a few thousand at most. Smith questioned that this difference in performance occurred due to the employees who specialized became much more skilled at their specific tasks, and, as a group, were thus able to produce a product faster than the group of employees in which everyone had to implement many tasks. Smith concluded that increasing the level of job specialization the process by which a division of labor occurs as various employees specialize in different tasks over time increases efficiency and causes higher organizational performance. (Wren, 2009)

Based on Adam Smith's observations and experiences, early management practitioners and theorists focused on how managers should organize and control the work process to maximize the advantages of job specialization and the division of labor.

Smith's underlying assumptions are as follows: (Shafritz et al., 2005)

- This great increase of the quantity of work, which, in consequence of the division of labor, the same number of people are capable of performing, is owing to three difference circumstances; first, to the increase of dexterity in every particular workman; secondly to the saving of the time which is generally lost in the passing from one species of work to another and lastly, to the invention of a great number of machines which ease and abridge labor, and enable one man to do the work of many.
- It is the great multiplication of the productions of all the various arts, in consequence of the division of labor, which occasions, in a well-governed society, that universal opulence which extends itself to the lowest ranks of the people.
- "If we examine, and consider what a variety of labor is employed about each of them, we shall be sensible that without the assistance and cooperation of many thousands, the very meanest person in a civilized country could not be provided, even according

to, what we very falsely imagine, the easy and simple manner in which he is commonly accommodated.``

3. Owen and Babbage - On the Division of Labor

In the nineteenth century, Robert Owen and Charles Babbage seriously dealt with the quest for the development of management theory. Owen was an entrepreneur and social reformer while Babbage was a noted mathematician with a strong managerial interest.

Robert Owen's ideas originated from his ownership of a cotton mill in New Lanark, Scotland where he developed a strong interest in the welfare of the 400 to 500 child employees. Owen spearheaded a legislative movement to limit child employment to those over the age of ten while reducing the workday to 10 1/2 hours.

In 1813 Owen published a pamphlet, A New View of Society, where he explained his vision of society. He also became active in developing living conditions of employees via the accomplishment of developments in housing, sanitation, public works and establishing schools for the children. Owen strongly believes that character is a product of circumstances and that environment and early education is critical in forming good character. While being extremely controversial during his lifetime, Owen is known as with being the forerunner of the modern human relations school of management.

Charles Babbage, a noted English mathematician, is credited as being the "father of the modern computer" for implementing the main research for the first practical mechanical calculator as well as doing basic research and development on an "analytical engine" acknowledged to be the forerunner of today's modern computer. His interest in management came largely from his concerns with work specialization or the degree to which work is divided into its parts. This is now recognized as being the forerunner of contemporary operations research.

Babbage's other major management contribution stemmed from the development of a modern profit-sharing plan including an employee bonus for useful suggestions as well as a share of the company's profits. While both Owen and Babbage were significant nineteenth century management innovators, their efforts lacked the central tenets of a theory of management.

Owen was primarily known as with making specific suggestions regarding management techniques in the areas of human relations while Babbage is credited with developing the concepts of specialization of labor and profit sharing. These pre-classicists paved the way for the theoretical ferment of the classical school of management. (Ibid.)

4. Daniel McCallum – Superintendent's Report

The Scot, Daniel McCallum, was general superintendent of the Eric Railroad in the USA. In the years between 1827 and 1861 railways were occurred as American's first "big business." By the 1850s major railways were emerging which were over 500 miles (800 km) long and with thousands of employees. Modern management concepts had their beginning as ways had to be found to operate these entire new and large and complex organizations. Daniel Craig McCallum was faced with this problem. McCallum was self-taught architect and civil engineer and in 1854 he became the general superintendent of the Erie Railroad. McCallum quickly gained reputation for being an innovator in railway operations and administration.

He adapted the electric telegraph to railway operations and management. Use of the telegraph in train dispatching made operations safer and more efficient and daily reports from train conductors and station agents covering all crucial matters of train operations, passenger movement and freight handling tabulated in the statistical data provided minute and accurate information which management required for complex business decisions. Furthermore, McCallum sharpened lines of authority and communications in the management structure of the Erie Railroad.

McCallum concluded this overall concept of corporate management in 1855 in six general principles of administration: (Sibul, 2012)

- A proper division of responsibilities
- Sufficient power conferred to enable the same to be fully carried out, that such responsibilities be real in their character
- Means of knowing if such responsibilities are faithfully executed
- Great promptness in the report of all derelictions of duty that the evils may be corrected

- Such information, to be obtained through a system of daily reports and checks that will not embarrass principal officers, nor lessen their influence with subordinates
- The adoption of a system, as a whole, which will not only enable the General Superintendent to detect errors immediately, but will also point out the delinquent.

5. Henry R. Towne – The Engineer as Economist

Henry R. Towne, President of the Yale and Towne Manufacturing Company, published a paper on "The Engineer as an Economist." Towne (1886, pp. 428-429) observed that:
"there are many good mechanical engineers: there are also many good 'businessmen'; but the two are rarely combined in one person. But, this combination of qualities ... is essential to the management of industrial works, and has its highest effectiveness if united in one person... the matter of shop management is of equal importance with that of engineering... and the management of works has become a matter of such great and far-reaching importance as perhaps to justify its classification also as one of the modern arts . . . [and] essential to the efficient management of the business, and especially to increased economy of production". Since no other engineering group appeared to be concerned with management, Towne proposed that the ASME (American Society of Mechanical Engineers) create an "Economic Section" to act as a forum for "shop management" and "shop accounting."

Shop management would interest with the subjects of organization, responsibility, reports, and all that pertained to the "executive management" of works, mills, and factories. "Shop accounting" would treat the question of time and wage systems, determination and allocation of costs, methods of bookkeeping, and all matters that pertained to manufacturing accounts. Thus, a body of literature could be developed, existing experience could be recorded, and the ASME could provide for an interchange of ideas about management. Towne's paper was an important turning point in the development of management thinking because of his recognition that factories required engineers who would think in economic terms of efficiency.

Towne's underlying assumptions are as follows: (Shafritz et al., 2005)

- ``To ensure the best results, the organization of productive labor must be directed and controlled by persons having not only good executive ability, and possessing the

practical familiarity of a mechanic or engineer with the goods produced and he processes employed, but having also, and equally, a practical knowledge of how to observe, record, analyze and compare essential facts in relation to wages, supplies, expense accounts, and all else that enters into or affects the economy of production and the cost of the product.``

- ``There are many good mechanical engineers; -- there are also many good business men; -- but the two are rarely combined in one person. But this combination of qualities, together with at least some skill as an accountant, either in one person or more, is essential to the successful management of industrial works, and has its highest effectiveness if united in one person, who is thus qualified to supervise, either personally or through assistants, the operations of all departments of a business and to subordinate each to the harmonious development of the whole.``
- ``Under the head of Shop Management fall the questions of organization, responsibility, reports, systems of contract and piece work, and all that relates to the executive management of works, mills and factories. Under the head of Shop Accounting fall the questions of time and wages systems, determination of costs, whether by piece or day-work, the distribution of the various expense accounts, the ascertainment of profits, methods of book keeping, and all that enters into the system of accounts which relates to the manufacturing departments of a business, and to the determination and record of its results.``

6. James Watt – Steam Engine

James Watt was an inventor and mechanical engineer whose developments in steam engine technology drove the Industrial Revolution. Watt did not invent the steam engine. Steam engines were already in existence, mainly being used to pump water out of mines. He made crucial changes to the design, increasing efficiency and making steam engines cheaper to run. Watt was one of the individuals with Smith who was the most responsible for pushing the world into industrialization.

7. Captain Henry Metcalfe – The Cost of Manufactures and the Administration of Workshops

Metcalfe was urged managers to record production events and experiences systematically so that they could use information to improve production processes. He published *the Cost of Manufactures and the Administration of Workshops* and he was pioneered in the application of pre-scientific management methods to the problems of managerial control and asserted that there is a "science of administration".

8. Henri Fayol – General Principles of Management

Fayol discussed personal efforts and team dynamics create ideal organization. Before the publishing of "The Principles of Scientific Management" in the USA in 1911, Fayol was a successful French mining engineer and senior executive. Fayol believed into that management theories could be developed, then taught for the overall good of organizations and society. He advocated that if a manager wants to be successful, he is required to learn his main management roles-functions: to forecast and plan, to organize, to command, to co-ordinate and to control. Fayol thought that his principles would be useful to all types of managers, indeed 90 years passed his six principle roles of management are still actively practiced today.

He developed the first comprehensive theory of management. Believed his concept (6 principles) was universally applicable to every type of organization: (Ehiobuhe and Tu, 2012)

- Technical (production of goods)
- Commercial (buying, selling, and exchanging activities)
- Financial (raising and using capital)
- Security (protection of property and people)
- Accounting
- Managerial (coordination, control, organization, planning, and command of people)

His major emphasis was on people. It addressed such variables as division of work, authority and responsibility, discipline, unity of command, unity of direction, subordination of individual interest to general interest, remuneration of personnel, centralization, scalar chains, order, equity, stability of personnel tenure, initiative and esprit de corps.

Fayol's 14 principles are as follows: (Shafritz et al., 2005)

- **Division of Work:** The object of division of work is to produce more and greater work with the same effort. Division of work allows reduction in the number of objects to which attention and effort must be directed and has been recognized as the best means of making use of individuals and of groups of people.
- **Authority and Responsibility:** Authority is the right to give orders and the power to exact obedience. Authority is not to be conceived of apart from responsibility that is apart from sanction – reward or penalty – which goes with the exercise of power. Responsibility is a corollary of authority, it is its natural consequence and important counterpart, and wheresoever's authority is exercised responsibility arises. Nevertheless, generally speaking, responsibility is feared as much as authority is sought after, and fear of responsibility paralyses much initiative and destroys many good qualities. A good leader should possess and infuse into those around him courage to accept responsibility.
- **Discipline:** Discipline is in essence obedience, application, energy, behavior, and outward marks of respect observed in accordance with the standing agreements between the firm and its employees, whether these agreements have been freely debated or accepted without prior discussion, whether they derive from the wish of the parties to them or from rules and customs, it is these agreements which determine the formalities of discipline. Nevertheless, general opinion is deeply convinced that discipline is absolutely essential for the smooth running of business and that without discipline no enterprise could prosper. Discipline what leaders make it.
- **Unity of Command:** In all human associations, in industry, commerce, army, home, state, dual command is a main source of conflicts, very grave sometimes, which have special claim on the attention of superiors of all ranks.
- **Unity of Direction:** The principle is expressed as: one head and one plan for a group of activities having the same objective. Unity of direction (one head one plan) should not be confused with unity of command (one employee to have orders from one superior only). Unity of direction is provided for by sound organization of the body corporate, unity of command turns on the functioning of the personnel. Unity of command cannot occur without unity of direction, but does not flow from it.
- **Subordination of Individual Interest to General Interest:** This principle brings to mind the fact that in a business the interest of one employee or group of employees should not prevail over that of the concern, that the interest of the home should come

before that of its members and that interest of the state should have pride of place over that of one citizen or group of citizens. It seems that such an admonition must not need calling to mind. But ignorance, ambition, selfishness, laziness, weakness, and all human passions tend to cause the general interest to be lost sight of in favor of individual interest and a perpetual struggle has to be waged against them.

- **Remuneration of Personnel:** Remuneration of personnel is the price of services rendered. It should be fair and, as far as is possible, afford satisfaction both to personnel and firm (employee and employer). The rate of remuneration bases, firstly, on circumstances independent of the employer's will and employee's worth, cost of living, abundance or shortage of personnel, general business conditions, the economic position of the business, and after that it depends on the value of the employee and mode of payment adopted.
- **Centralization:** Like division of work, centralization relates to the natural order; this turns on the fact that in every organism, animal or social, sensations converge towards the brain or directive part, and from the brain or directive part orders are sent out which set all parts of the organism in movement.
- **Scalar Chain:** The scalar chain is the chain of superiors ranging from the ultimate authority to the lowest ranks. The line of authority is the route followed – through every link in the chain – by all communications which start from or go to the ultimate authority. This path is dictated both by the need for some transmission and by the principle of unity of command, but it is not generally the swiftest.
- **Order:** Material order means a place for everything and everything in its place. Social order means a place for everyone and everyone in his place.
- **Equity:** Why equity and not justice? Justice is putting into execution established conventions, but conventions cannot foresee everything, they need to be interpreted or their inadequacy supplemented. For the personnel to be encouraged to carry out its duties with all the devotion and loyalty of which it is capable it must be treated with kindliness and equity results from the combination of kindliness and justice. Equity excludes neither forcefulness nor sternness and the application of it needs much good sense, experience, and good nature.
- **Stability of Tenure of Personnel:** Time is needed for an employee to get used to new work and succeed in doing it well; always assuming that he possesses the requisite abilities. If when he has got used to it, or before then, he is removed, he will not have

had time to render worthwhile service. If this be repeated indefinitely the work will never be properly done. The undesirable consequences of such insecurity of tenure are especially to be feared in large concerns, where the settling in of managers is generally a lengthy matter. Much time is required indeed to get to know men and things in a large concern in order to be in a position to decide on a plan of action, to gather confidence in oneself, and in spite it in others.

- **Initiative:** Thinking out a plan and ensuring its success is one of the keenest satisfactions for an intelligent man to experience. It is also one of the most strongest stimulants of human endeavor. This power of thinking out and executing is what is called initiative, and freedom to propose and to execute belongs too, each in its way, to initiative. At all levels of the organizational ladder zeal and energy on the part of employees are augmented by initiative. The initiative of all, added to that of the manager, and supplementing it if need be, shows a great source of strength for businesses. This is mainly apparent at difficult times; hence it is required to encourage and develop this capacity to the full.
- **Esprit de Corps:** Union is strength. Business heads would do well to ponder on this proverb. Harmony, union among the personnel of a concern, is great strength in that concern. Effort, then, should be made for creation of it.

9. Frederick Winslow Taylor – The Principles of Scientific Management

Known as the father of the Scientific Management movement. His best work acknowledged as *the Principles of Scientific Management.* Pioneered time and movement studies – a.k.a. "Taylorism" or "Taylor system". Offered scientific management as the way for firms to increase profits, get rid of unions, "increase the thrift and virtue of the working classes," and raise productivity so that the broader society could enter a new era of harmony based on higher consumption of mass-produced goods by members of the laboring classes. Gathered credence for the notion that organizational operations could be planned and controlled systematically by experts using scientific principles. He concentrated on the notion that there was 'one best way' for implementing any given task, Taylor's scientific management sought to increase output by using scientific methods to discover the fastest, most efficient, and least fatiguing production methods. In some senses, he spread Adam Smith's "gospel".

Taylor's underlying assumptions are as follows: (Shafritz et al., 2005)

- ``What is the real meaning of this? All that you have to do is to bring wealth into this world and the world uses it. That is the real meaning. The meaning is that where in 1840 cotton goods were a luxury to be worn only by rich people when they were hardly ever seen on the street, now every man, woman, and child all over the world wears cotton goods as a daily necessity.``
- ``The one great thing that marks the improvement of this world is measured by the enormous increase in output of the individuals in this world. There is fully twenty times the output per man now than there was three hundred years ago. That marks the increase in the real wealth of the world; that marks the increase of the happiness of the world, that gives us the opportunity for shorter hours, for better education, for amusement, for art, for music, for everything that is worthwhile in this world.``
- ``Scientific management at every step has been an evolution, not a theory. That series of proper eliminations, that evolution, is what is called scientific management. Every element of it has had to fight its way against the elements that preceded it, and prove itself better or it would not be there tomorrow.``
- ``Scientific management does not exist and cannot exist until there has been a complete mental revolution on the part of the workmen working under it, as to their duties toward themselves and toward their employers, and a complete mental revolution in the outlook for the employers, toward their duties, toward themselves, and toward their workmen. ``
- ``The new outlook that comes under scientific management is this: The workmen, after many object lessons, come to see and the management come to see that this surplus can be made so great, providing both sides will stop their pulling apart, will stop their fighting and will push as hard as they can to get as cheap an output as possible, that there is no occasion to quarrel. Each side can get more than ever before. The acknowledgement of this fact represents a complete mental revolution…``
- ``These are things which make scientific management a success. These new duties, these new burdens undertaken by the management have rightly or wrongly been divided into four groups, and have been called the principles of scientific management. The first of the great principles of scientific management, the first of the new burdens which are voluntarily undertaken by those on the management side is the deliberate gathering together of the great mass of traditional knowledge which, in the past, has been in the heads of the workmen, recording it, tabulating it, reducing it in

most cases to rules, laws, and in many cases to mathematical formulae, which, with these new laws, are applied to the cooperation of the management to the work of the workmen. The next of the four principles of scientific management is the scientific selection of the workman, and then his progressive development. The third principle is the bringing together of this science of which I have spoken and the trained workmen. The fourth principle is the plainest of all. It involves a complete re-division of the work of the establishment.``

- ``Under scientific management you ask no one. Every little trifle, here is nothing too small, becomes the subject of experiment. The experiments develop into a law; they save money; they increase the output of the individual and make the thing worthwhile.``
- ``One of the first principles, we adopted was that no man in that labor gang could work on the new way unless he earned sixty percent higher wages than under the old plan.``
- ``Under the new, the teacher is welcomed; he is not an enemy, but a friend. He comes there to try to help the man get bigger wages, to show him how to do something. It is the great mental change, the change in the outlook that comes, rather than the details of it.``
- ``The very fair and proper question, the only question to ask is "Does it pay?" because if scientific management does not pay in dollars and cents, it is the rankest kind of nonsense. There is nothing philanthropic about it. It has got to pay because business which cannot be done on a profitable basis, ought not to be done on a philanthropic basis, for it will not last.``
- ``The case of which I am going to tell you is one in which my friend Barth went to introduce scientific management in the works of an owner, who, at between 60 and 70 years of age, had built up his business from nothing to almost five thousand men.``
- ``Scientific management makes no pretense that there is any finality in it. We merely say that the collective work of thirty or forty men in this trade through eight or ten years has gathered together a large amount of data. Every man in the establishment must start that way, must start our way, I do not care what it is, and we will make an experiment to see if it is better. It will be named after him, and he will get a prize for having improved on one of our standards. There is the way we make progress under scientific management. There is your justification for all this. It does not dwarf

initiative, it makes true initiative. Most of our progress comes through our workmen, but comes in a legitimate way.``

10. Henry Gantt - Gantt Chart

Henry L. Gantt worked with Taylor on several projects. But when he went out on his own as a consulting industrial engineer, Gantt began to reconsider Taylor's incentive system. Abandoning the differential rate system as having too little motivational impact, Gantt found a new idea. Every worker who finished a day's assigned work load would win a 50-cent bonus. Then he added a second motivation. The *supervisor* would earn a bonus for each worker who reached the daily standard, plus an extra bonus if all the workers reached it. This, Gantt reasoned, would spur supervisors to train their workers to do a greater job. Every worker's progress was rated publicly and recorded on individual bar charts, in black on days the worker made the standard, in red when he or she fell below it. Going beyond this, Gantt originated a charting system for production scheduling; the "Gantt chart" is still in use today. In fact, the Gantt Chart was translated into eight languages and used all over the world. Starting in the 1920s, it was in use in Japan, Spain, and the Soviet Union. It also shaped the basis for two charting devices which were created to assist in planning, managing, and controlling complex organizations: the Critical Path Method (CPM), originated by Du Pont, and Program Evaluation and Review Technique (PERT), developed by the Navy. Lotus 1-2-3 is a creative application of the Gantt Chart. (Witzel, 2012)

11. Frank Gilbreth & Lillian Gilbreth - THERBLIGs

Gilbreth was particularly dealt in how could decrease the unnecessary motions caused from bricklaying at a construction site; succeeded in reducing the motions from 18 to 4. Then proposed that each worker should took place in doing his or her own work, prepare for the next higher level, and training their successors. Time and motion study including THERBLIGs, “cheaper by the dozen” movie: raised dozen children through scientific management principles. (Shafritz et al., 2005)

Frank B. and Lillian M. Gilbreth made their contribution to the scientific management movement as a husband-and-wife team. Lillian and Frank collaborated on fatigue and motion studies and focused on ways of promoting the individual worker's welfare. To them, the ultimate aim of scientific management was to help workers reach their full potential as human

beings. In their conception, motion and fatigue were intertwined every motion that was eliminated reduced fatigue. Using motion picture cameras, they tried to find the most economical motions for each task in order to upgrade performance and reduce fatigue. The Gilbreths argued that motion study would raise worker morale because of its obvious physical benefits and because it demonstrated management's concern for the worker.

12. Carl O. Barth –

Norwegian Carl Barth was born in 1860 and immigrated to the United States at the age of 21. Carl Barth gave up working directly with Frederick Taylor and Henry Gantt at Bethlehem Steel. Barth left Benthlehem Steel in order to continue at the side of his new mentor, Frederick Taylor. Eventually Barth went out his own helping firms adopt Scientific Management. He enjoyed great success accomplishing Taylor's version of Scientific Management, from which Barth rarely ever strayed. Barth shared his opinion that only those who personally knew and worked with Taylor could accurately teach the principles of Scientific Management (Wren, 2005). He also convinced Harvard Business School's dean to use Taylorism model for modern management.

13. Max Weber – Bureaucracy

Greatly influenced by Taylor, his work on implications of bureaucracy. He benefited from an ideal type approach to extrapolate from the real world the central core of features characteristic of the most fully developed bureaucratic form of organization.

Characteristics of Bureaucracy (Shafritz et al., 2005)

- There is the principle of fixed and official jurisdictional areas, which are mostly ordered by rules, that is, by laws or administrative regulations.
- The principles of office hierarchy and of levels of graded authority mean a firmly ordered system of super and subordination in which there is a supervision of the lower offices by the greater ones.
- The management of the modern office is act upon written documents (the files) which are secured in their original or draught form.
- Office management, at least all specialized office management and such management is distinctly modern usually presupposes via and expert training.

- When the office is fully developed, official activity demands the full working capacity of the official, irrespective of the fact that his obligatory time in the bureau may be firmly delimited.
- The management of the office follows general rules, which are more or less stable, more or less exhaustive, and which can be learned.

14. Luther Gulick - POSDCORB

Influenced by Fayol. He invented POSDCORB – the seven major functions of executive management appeared in the Papers of Science and Administration (1937).

POSDCORB: If these seven elements may be accepted as the major duties of the chief executive, it follows that they may be separately organized as subdivisions of the executive.

- Planning
- Organizing
- Staffing
- Directing
- Coordinating
- Reporting
- Budgeting

IV. STRENGTHS AND WEAKNESSES OF THE CLASSICAL THEORY

Strengths: (Shafritz et al., 2005)

• This theory has a narrow focus on developing production related economic goals (strength and weakness).

• It uses systematic, scientific inquiry.

• Helped to create division of labor, time and movement studies, and organized planning models (such as POSDCORB).

• Tested to address, and further, organizational functions when few resources existed.

Weaknesses: (Ibid.)

• This closed-system, rational theory is maybe too narrowly focused on production and reduces the human component to simply machines.
• This theory helped invent the industrial revolution, which led to deterioration of individual craftsmanship.
• It allows capital intensive economies.
• Classical theory is largely derived intellectually rather than empirically – this was the basis of much criticism.
• It is primarily concerned with anatomy/structure rather than individual needs and potentials.
• It did not take large-scale changes in environments into consideration too much.

V. DISCUSSION AND CONCLUSION

The classical thinkers of the late nineteenth and early twentieth century have made various valuable contributions to the theories and practices of management. But, their theories did not always achieve wanted results in the situations that were developing in the early twentieth century. Shifts were occurring in these fields that gave birth to new perspectives on management. The classical management theory was not only crucial in the past, but also continues to be crucial in present, both in the erection of modern-day edifices.

Successful management needs an understanding of the fundamental concepts of effective management techniques and principles. In order to gain such insight, and manage effectively and efficiently, managers must be having an awareness of past management principles, models and theories. From the turn of the 19th Century, the requirement for a formal management theory was growing evidence that organizations required a system to guide managers in an attempt to improve productivity and efficiency of workers. (Ehiobuche and Tu, 2012)

The classical theories are based on a pyramid, hierarchical structure and autocratic management, clear chain of command and short spans of control. Classical management theory is a group of similar ideas on the management of organization that evolved in the late 19th and early 20th centuries. As stated above in the paper Scientific, Bureaucratic Autocratic, Administrative are presented as the 3 main categories under classical theory. The predominant and common characteristics of all the 3 branches is they underline the economic

rationality of management and the organization. The economic rationality is based on the assumption that people are motivated to by the economic incentives and that they make choices that yield the greatest monetary benefits. Classical theorists recognized human emotions but also felt that a logical and rational structuring of jobs could control human emotions. The primary contribution of the classical school of management includes applying science in practical management, developing basic management function and processes, and determining the application of specific principles of management. (Ibid.)

In the modern world, the classical theory is greatly criticized as being out-dated. The notion of rational economic person is often strongly criticized. Reward based management might be 100% applicable in the 19th century and for few people/organizations today. This might not hold good in the current work where the aspirations and education levels of people has greatly changed. Also organizations have grown more complex and hence require more creativity, ownership and judgment from each of the employees. Classical theory also assumes that all types of organizations can be managed according to one set of principles, but this need not be true in all cases. With changes in objectives, structures and environment, Organizations have made changes in principle and how organizations need to be managed efficiently and effectively for better productivity. (Ibid.)

The principles detailed by the classical theory are not wholly scientific and also did not stand for the test of time. They reflected the individual's empirical observations and their own logical deductions and not a true scientific-based research and evidence. Although the classical theory is criticized as outdated and has become history, still this is the leading school of thought and the most popular kind of management found in practice in today's business structures even though they do not in practical terms reflect universal application and appeal.

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