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**CONTEMPORARY
MANAGEMENT
FROM A DIFFERENT
PERSPECTIVE: THE
SCIENTIFIC METHOD**

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Abstract: The administration is immersed in a dynamism that forces it to adapt to the demands imposed by globalization. This gives rise to the processes that derive from the application of this are carried out according to a scientific methodology that allows them a solid support and that in turn can distinguish the difference between the scientific and the technical; This duality has resulted in scientific administration, distinguishing itself as the greatest exponent of Frederick W. Taylor. The administrative process is subject to a scientific methodology that allows it to be the basis of modern administration, representing the most tangible proof of its usefulness, but above all of the success achieved with the scientificization of administration.

Keywords: Management, administrative process, scientific method, globalization.

INTRODUCTION

Administration is a discipline that is part of the doing and chores of individuals, therefore it is a science in which social changes have an impact on it, since administration is an eminently social discipline, since the main element is individuals, who are part of the organizations, which in turn represent the object of study of the administration.

The scientific method is no stranger to administration, and offers this discipline, what the environment demands, the way to give appropriate answers based on science. It can be established that the process begins with a decision-making and programming phase (planning), continuing with communication (organization and direction) and to conclude with the evaluation phase (control), so this is unequivocal proof that the administrative process starts from the scientific methodology. Therefore, the product of this scientificity is nothing other than the administrative process, which is the cornerstone of administration and is where the doing and knowing of modern

organizations rests, the object of study of the discipline in question in this article.

HISTORICAL EVOLUTION OF THE ADMINISTRATION

METHOD DESCRIPTION

Organizations have evolved and transformed rapidly, placing themselves in front of new ways or models of action. Organizations have gone through different phases that stress and emphasize an important aspect of management. (López D., Arias Montoya, & Rave Arias, 2006). The pioneers of scientific administration are Frederick Winslow Taylor (1856-1915) (Hernández y Rodríguez & Palafox de Anda, 2012), (known as the Father of Scientific Administration) and Henry Fayol, who with their contributions to the discipline enabled the mechanistic paradigm, these phases are displayed in Table 1:

Regarding the concept of administration, it is necessary to point out its significant evolution, from the beginning of the 20th century, where its frame of reference began to be built, with the proposals of those already mentioned, as exponents of Scientific Administration and Industrial Administration respectively (López & Mariño Arevalo, 2010). It is noteworthy that the modern conception of administration takes up concepts of driving and direction, therefore the connotation of the word evokes management as one of the primary activities of administrative science, this activity is also part of the evolutionary process of the discipline that allows, among other things, the generation of scientific knowledge inherent to the administration.

Phases	Representatives	Characteristics
The classics	Frederick Taylor y Henry Fayol	It constitutes the first attempt to formulate a theory of administration, the concern to create a science of administration and the emphasis on tasks.
The humanists	Elton Mayo	The approach of an informal organization with a human face and that seeks to respond to the problems of productivity and organizational efficiency.
The structuralists	Etzioni Amitai, Peter Blau y Richard Scott	They seek to interrelate organizations with the environment. From there arises a new concept of the organization and a new concept of man.
The neoclassical	Peter Drucker	Through a holistic conception of the organization, he defines it as an open, flexible system that depends on changes in the environment and technology.

Table 1 - Historical evolution of the administration

Source: Prepared by the authors

THE SCIENTIFIC METHOD AND THE ADMINISTRATIVE PROCESS

Idalberto Chiavenato (Chiavenato, 2001), seeks a more inclusive definition by pointing out that: administration is the process of planning, organizing, directing and controlling the use of organizational resources to achieve certain objectives efficiently and effectively.

Starting from Chiavenato's concept, and starting from the premise that this definition presented by the author is inclusive, since it considers the administrative process as the basis of the scientific nature of the discipline, the scientific structure can be perceived when enunciating the administrative process and its purpose within the organization.

It is noteworthy, within the historical evolution of administration as a scientific discipline at the dawn of the 20th century, the appearance of new proposals such as benchmarking, total quality, empowerment, downsizing, coaching, balanced scorecard, whose purpose is to provide administrators the necessary tools to achieve the objectives of the organization.

The administration plays a very important role in the development of today's society, which is the result of globalization, where the premise that speaks of the process of scientificization of the administration is distinguished: administrators, administer; and normally they do not think with theoretical rigor what administration is (Slva Camarena, 2003), the above, gives way to the fact that, due to the demands of the environment, the administration begins to visualize not only its etymological origin, but also its epistemological origin, its *raison d'être* as a science and the result of that *raison d'être* in the administrative process as a result of the application of a scientific method.

Studies on Administration can be divided into those whose purpose is the design of tools for their application in professional practice in organizations, on the one hand; and on the other, in those whose purpose is to analyze their behavior in general, as well as the impact that the implementation of each of said administrative tools has on their performance, in particular. Studies of the first type are of a propositional nature; while those that focus on investigating the behavior and performance of organizations, depending on the research methods they use, are in turn subdivided into descriptive and explanatory, when they apply qualitative or quantitative methods, respectively (López-Herrera & Salas-Harms, 2009).

As mentioned by Gregorio Klimovsky (Klimovsky, 1997), the scientific method is

defined as follows:

By scientific method or process is understood those practices used and ratified by the scientific community as valid when proceeding in order to expose and confirm their theories. Scientific theories, intended to somehow explain the phenomena we observe, may or may not be supported by experiments that certify their validity.

Francis Bacon defined the scientific method as follows:

- 1.- Observation: Observing is carefully applying the senses to an object or a phenomenon, to study them as they actually appear.
- 2.-Induction: The action and effect of extracting, from certain observations or particular experiences, the particular principle of each one of them.
- 3.- Hypothesis: Approach through observation following the norms established by the scientific method.
- 4.- To test the hypothesis by experimentation.
- 5.- Demonstration or refutation (antithesis) of the hypothesis.
- 6.- Thesis or scientific theory (conclusions).

Derived from the previous definition, the administrative process is the result of the application of the scientific method in the multi-cited discipline, based on the premise that it is applicable not only in the business field but in all aspects of human life for Therefore, it is extremely important to start from the general observation of the phenomena that occur in reality in order to understand the environment. The administration includes these steps, even when talking about the school of scientific administration, rationalization is used where its main characteristic is the rationalization

of its processes, that is, from this current, the use of science to the selection and preparation of operators, establishment of production standards and salary incentives, which Frederick Herzberg later called “hygienic factors” (Hampton, 2003). As a result of these contributions of the scientific administration, the scientificization of the processes in the administration of the current businesses becomes more imminent, and therefore the cornerstone of the modernization of the administration in the organizations. Derived from the above, the administrative process as an integral part of the technique used for managerial decision making in the first instance as the necessary step to achieve the objectives.

On the other hand, Henry Fayol, based on his own work experience, proposed those that are still recognized today, with some variations, as the basic components of the administrative process: Planning, Organization, Direction, and Control (Rios A. & Mustafá Iza, 2004)., which are the very product of the evolutionary process of administration and which are the focal point of administrative science as such. Each phase of the administrative process allows entities to adapt them to the characteristics of the environment, and as a whole transform the reality in which they perform.

In table 2, we can observe the various proposals of the administrative process according to contemporary authors, based on the scientific administration approach proposed by Taylor and continued by the aforementioned Fayol:

Author	Years	Stage
Henry Fayol	1886	Planning, organization, command, coordination and control.
Harry Arthur Hopf	1935	Planning, organization, coordination and control
Lyndall Urwick	1943	Organization, command, coordination and control
William Newman	1951	Planning, organization and obtaining resources, direction and control.
R. C. Davis	1951	Planning, organization and control.
Koontz y O'Donell	1955	Planning, organization, integration, direction and control.
John E. Mee	1956	Planning, organization, motivation and control
George R. Terry	1956	Planning, organization, execution and control
Louis A. Allen	1958	Planning, organization, motivation and coordination and control.
Dalton McFarland	1958	Planning, organization and control.
Agustín Reyes Ponce	1960	Forecasting, planning, organization, integration, direction and control
Isaac Guzman Valdivia	1961	Planning, organization, integration, direction and control.
J. Antonio Fernández	1967	Planning, implementation and control
R. Alec Mackenzie	1969	Planning, organization, integration, direction and control.
Robert C. Appleby	1971	Planning, organization, direction and control.
William P. Leonard	1971	Planning, organization, direction and control.
Sisk y Severdlidk	1974	Planning, organization, leadership and control.
Leonard Kazmier	1974	Planning, organization, direction and control.
Robert F. Buchele	1976	Planning, organization-staffing, leadership and control.
Burt K. Scanlan	1978	Planning, decision making, organization, direction and control
Eckles Carmichael y Sarchet	1978	Planning, organization, coordination and control

Table 2 - Various criteria in the stages of the administrative process

Source: Fundamentals of Administration, (Münch Galindo & García Martínez, 2012)

The phases of the process presented by the various authors of the discipline, focus on scientific methodology, and based on this assertion, it can be established that the process begins with a phase of decision-making and programming (planning), continuing with communication. (organization and management) and to conclude with the evaluation phase (control), so this is unequivocal proof that the administrative process is based on scientific methodology.

The administration, in any of its facets, whether public or private, always requires scientific methodology, this as a result of the demands imposed on modern organizations, to identify and verify in a logical, adequate, orderly and systematic way their operations and processes to offer concrete results to the impositions of the dynamics of the present millennium and of which all the disciplines of human knowledge are part and of which the administration is not the exception, but, on the contrary, it is one of the disciplines that is constantly changing.

ORGANIZATIONS IN THE 21ST CENTURY

Organizations of the 21st century are characterized by being the tangible result of the advances that have been made in administration, which has gone from being a technique whose philosophical foundation was experience to becoming what it is today, a scientific discipline. This migration occurs after the Industrial Revolution (Hampton, 2003) and is the preamble for the paradigms that have given answers to the questions that the administration raises due to its scientific nature to begin to take shape.

The administration in its process of scientificity, has given rise to organizations also being immersed in constant change, we speak then of reengineering, which is the fundamental review and radical redesign of

processes to achieve spectacular improvements in critical measures. and contemporary performance, such as costs, quality, service and speed (Mariño-Arevalo & Rodríguez-Romero, 2011), reengineering is the result of the application of the administrative procedure, which is in turn the direct consequence of this administrative evolution. that has been mentioned so much throughout this article and that allows organizations to be in conditions of competitiveness against others for a space in the environment.

One of the external factors that has caused the scientificization of the administration and, consequently, set the course of organizations in the 21st century, is globalization, which, according to Ramírez Faundez and Ramírez Martínez (Ramírez Faundez & Ramírez Martínez, 2004), presents the characteristic that the most important and immediate effect of globalization is precisely the reduction of the economic distance between countries, regions and between economic actors, thus increasing the dimensions of markets and economic interdependence, synthetically, is expressed as the removal of barriers to free trade and greater integration of national economies. The changes that arise in the business environment, derived from the globalization process itself, are those that have caused the processes in the administration to have increasingly complex scientific dimensions.

The foregoing has reached dimensions that place organizations in entities whose management is based on leadership based on competencies (Crissien Castillo, 2005), due to humanist management styles that have allowed the development of organizations. This administration based on leadership by competences, allows not only the achievement of the objectives, but also the models by which the knowledge has to be transmitted and the way in which it has to be assimilated by the members of the organizations and their

application in the administrative process as part of the dynamism that serves as a reference for the entire procedure to migrate to an environmentalist paradigm where the environment plays an important role as part of the development of organizations and that allows them to be in search of continuous improvement as part of the process described throughout this essay.

The direction of the scientific nature of the administration is closely linked to the demands of the organizations and these, in turn, to the needs imposed by globalization.

CONCLUSIONS

Scientific disciplines, with the passage of time, evolve and migrate so that the apprehension of reality that is made through them, allows a level of understanding of it and therefore is in a position to make a judgment, that translated into a theory or law, will allow the improvement of the procedures that are inherent to the discipline, therefore, the administration is not the exception, since the evolution of the administration has allowed to verify what we have commented in previous lines, and that is evident in the administrative process.

The epistemology of administrative science, as a theory of knowledge; deals with problems such as the historical, psychological and sociological circumstances that lead to the obtaining of knowledge, and the criteria by which it is justified or invalidated, as well as the clear and precise definition of the most usual epistemic concepts, such as truth, objectivity, reality or justification, derived from the above, and considering that administrative discipline complies with these premises, it is possible to affirm the scientific nature of the administration in the expression of the administrative process, which is the cornerstone of this area. of knowledge.

The scientific nature of the administrative

process has allowed organizations, since the beginning of the last century, to be in a position to offer those answers that society demands regarding goods and services, but above all, to be able to establish and define what their courses of action will be. action to establish the guidelines for competitive advantages that will allow you to be different from other organizations. It is important to note that, like the history of administration, the phases of the administrative process have undergone changes derived from this genesis that has allowed administration to migrate from a technique to a science.

The scientific method has privileged the work of the administration to the degree of giving it the hierarchical level within the context of the sciences by allowing them to define steps or phases that require exhaustive analysis, which is characteristic of the administration to be able to build judgments based on observation., experimentation and conclusion of the phenomena, facts or

events that rose the administrative processes as we know them today and that make the organizations distinctive but above all provide them with the necessary elements that allow them to be competitive, but above all continue in the context of the evolution that marks the administration as a scientific discipline.

The 21st century is the century of transformations, where technological tools allow the interrelation of the various economic agents, among them the entities that produce goods and services that will seek, based on already scientific and sophisticated administrative processes, the immovable position of These organizations, within the market in which they have to participate, and adapt their processes to the globalizing conditions of the environment in which they operate, this as a result of the paradigms in which both administrative science and companies of the 21st century have evolved.

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