A Comparative Study of Functions of Management and Organization Theory Paradigms

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ABSTRACT

Paradigm, which is considered as a set of fundamental beliefs and assumptions in Ontology, Epistemology and Methodology, has been a dominant concept in the philosophy of science. In the science literature of organization and management, dominant paradigms include Positivism, Interpretivism, Critical theory, Post-modernism and Chaos theory. This paper with explaining each paradigm, its trifold pillars and their function in the organization, concludes that every considered paradigms are usable and applied according to relative subject and purpose.

INTRODUCTION

Management has been always in the life of human as "management practice": but as a science, it is just introduced one century before. In its short life as a science, it has shined significantly, solved many complicated problems of human organizational life and guaranteed the implementation of its goals. Management is "a technology which ensures the implementation of society goals", an organizational society, which its goals are defined in the goals of organizations. Along with the advances in this science, a question rose in the mind of thinkers about why these advances have been accrued. Explaining these advances and differences, facilitates the process of management science and as a result, the prediction of its future procedures. In another words it gives researcher an external understanding, without internal understanding of management. Common analysis in this subject, attribute these revolutions to the environment changes, but more and careful analysis show the origin of these advances in the deep ideas of thinkers, where science is considered as a product of thought and links to the deeper philosophical layers: ontology, epistemology, methodology. This kind of treatment in the management is the product of recent years and is not a new method.

In fact understanding management is a superficial and consumption-oriented understanding, without regarding its origins and thoughts. Productive understandings, which can play a role in science producing, require a thoughtful and philosophical view. It is "the philosophy of management science", which gives the thinker the ability to understand, critics, and produce science and involves him in the process of thinking. This paper explains each of these paradigms and analyses their function.

Paradigm:

Paradigm was used in 15th century for the first time in the English language in the meaning of "Example or Pattern", which is used now with the same meaning. From the beginning of 1960, it was used in the philosophy of natural science and changed into a theoretical and intellectual framework. In other fields, it means common viewpoint about a topic. In its metaphysis concept, it is a set of common beliefs, myths, new status of insights, Models, and procedures for analyzing problems. In sociological viewpoint, paradigms consist of "known achievements" embodied in a particular domain of thought and solve regular and certain problems without any
competition between science activities models. In structural viewpoint, paradigm consists of regular frameworks of rules, procedures and research tools for solving problems in a certain paradigm (Mirzayi, 2002:7). Paradigms are always ruling over scientific theories in which they locate. It means that scientific statements in a paradigm are in parallel to common insights. Therefore, when a ruling paradigm get an essential infect, its parallel theories would get infect too. In short, paradigm can be defined as a set of essential believes and assumptions which guide the actions of individuals in private and scientific life. These beliefs and assumption are conceptualized in three essential categories of ontology, epistemology, and methodology. In another words, paradigms answer to three questions according to these assumptions (answers are the expressions of paradigms):

1. What is recognition nature (recognized phenomenon) or "cognition nature"? Or what is the reality nature? (Ontology).
2. What is the nature of relation between researcher and recognizable? (epistemology)
3. How a researcher should recognize a recognizable?

There are different categories of the paradigm, generally in human science and in management specifically. Some of paradigms in in the domain of management science and organization are Positivism, Interpretivism, Critical theory, Post-modernism and Chaos theory.

Paradigm of Positivism:

This viewpoint, relying on experiment as the only resource of knowledge, stressed on inductive thinking, instead of analogical thinking. According to this school, natural sciences, for achieving real knowledge and science, should just resort to the observation and experience, social sciences should follow natural sciences and just explain and analyses empirical findings [2]. In this view, positivism is a trend according to which philosophy should avoid claims of achieving knowledge by non-empirical and non-scientific method, and should just explain science limits and methods.

In fact, positivism origins in the thought and writings of Rene Descartes, and almost derived from Isac Newton. Most of researches in the management areas are done in this paradigm and most of management theories including theories of conflict and power, are codified in this paradigm.

Ontology of positivism is based on this hypothesis that there is a reality, which is understandable through unchangeable natural mechanisms and laws. The main feature of this ontology is the Reduction of phenomenon and human behavior. Although positivism origins in the Physics, views social world as a social world and claims that the behavior of social phenomenon should be explained just through universal laws and realities. Therefore, positivism has a behaviorist approach, since it seeks for explain human behavior through causal relations. Also, Positivism is essentially "Rule-based ", because it is based on observable and testable realities through which it provides theories for explaining natural and social relations and behavior.

In the case of methodology, positivism is based on this hypothesis that researcher can study the phenomena, without influencing on it and being influenced by it. Therefore, the relation between testable and researcher is a subjective and invaluable relation. So it can be stated that in this epistemology, being scientific of a research depends on a separable relation between researcher and under-studied phenomena.

In addition, according to the ontology and methodology of the positivism, this approach uses Physics methodology including "controlled tests" and "repeatable procedures", based on which every time "controlled tests" have a similar results.

The process of analogy in positivism approach requires that researcher makes a hypothesis based on a theory, which should be testable later for explaining a certain phenomenon. In other words, at first, a theory is inferred and then it is tested in empirical world. It should be noted that in positivism approach, researcher often uses qualitative methods and collecting data methods in this paradigm include: questionnaire, observation, documentary analysis, test and quasi-experiment. Analyses are done by using statistic calculations and result in numerical data [6].

Some critics follow an approach that the only standard is sheer observation and experiment. This approach has been challenged seriously and results in this question that whether sheer observation and experiment realizable?

According to some of these critics, there are several trans-empirical and trans-observational factors, which determine the received knowledge of observation and experiment. These factors have located beyond mental field of researcher and will be activated in the time of selecting hypothesis, choosing research field, approving or rejecting hypothesis, or interpreting and explaining considered phenomena. Therefore, a research can be passive in the time of observation. In short, proposed critics on the empirical approach of positivism can be summarized as follow [1]:

A: social realities can be separated from theories: the behaviors of individuals, as social and individual actions, are not limited to the physical moves. Understanding human actions needs understanding the Will and Intent factors.
B: there is a bilateral interaction between researcher and under-research subject: several non-cognitive factors can have effect on the process of research, so that researcher, in collecting data, involves in his all having.

C: the effect of values in the process of research: some concepts are valuable in applied areas, so it is tried to separate organizational researches from meaningless and unjustified values. Values have been formed in an organization and they formed its identity.

D: Prediction difference in human and natural sciences: In fact, prediction is an important test for any explanations, which clarifies what predictions can be made by an explanation. Positivism insists on a point that above steps should be applied in human science too. But there is a problem in human sciences that is controlling influencing factors on human behavior is very difficult. These influencing factors are so wide and diverse that made predicting public human behavior very hard. Therefor the numbers of human behaviors based on which future behavior can be predictable are very few.

**Interpretive Paradigm:**

In the late nineteenth century, Max Weber and Wilhelm Dilthey, by providing cognitive theory based on interpretation, proposed interpretive method, as a certain method, instead of explanative method. They believed that the subject in the human science, contrary to natural science is not tangible, so the only way for understanding it is interpretive method [2]. In fact, since positivism approach has a limited explanation power, scientist’s proposed interpretive science.

Interpretive paradigm have features like realistic ontology (existence of multiple reality), mind-oriented epistemology (creating perception by recognizer and testable) and is based on nature-oriented methods. Some of the main differences of this paradigm and positivism paradigm are: existence of a multiple reality for explaining a phenomenon instead of a causal relation or a theory, using qualitative methodology instead of quantitative one, subjective research process instead of objective one and collecting data with an internal view instead of external one. In fact, interpretive paradigm views world as a construction of multiple reality in which researcher explain natural phenomena with an inductive approach (Part to whole). Resulting explanations can be bases of theories [6].

In ontology viewpoint, researcher, in interpretive paradigm, enters into social environment to implement “internal understanding” and becomes one of the important roles in the society. In another words, research makes a mental relation with testable and does not rely just on questionnaire. In methodology aspect, this paradigm uses qualitative method, so for collecting data, he uses from collaborative observation, deep interviews, case studies, and perceiver research groups.

Interpretive approach is developed in some areas of organizational studies and management like organizational culture, symbolism and aesthetic. It can be said that organizational culture and symbolism are the widest areas in organizational studies on which interpretive approach has influenced.

Along with the growth of interpretive approaches and theories in literature area, studying orientation of organizational studies, influenced by this growth, changed from linguistics category to narrative category and from the meanings of expressions to self-reflection. This orientation made the interests of researchers in organizational studies and interpretive approach shift to linguistics and semantic theories. As a result, some methods have formed based on which researchers began to make organizational realities in their writings. Narrative linguistics and self-reflection forms resulted in writing and storytelling [1]. Some of the main criticisms on symbolic interpretive approach are as follow:

A: there is a link between behavior and will and intent: contrary to the hypothesis of this approach, behavior relates not to a certain kind of will and intent. But there is possibility of wide range existence of wills and intents for each behavior. Interpretivism, at first, considers the individual behavior, and then it tries to understand his internal behavior. Finally, it understands the behavior as it exists. But, sometime, considering the importance of internal behavior makes the understanding of that behavior very weak. In another words, behavior is as important as its will and intent. Sometimes the domain of behavior limitations is so beyond which understanding the intent of that behavior is impossible. In addition, sometime, individual’s wills are competing and changing constantly. Therefore, it cannot be possible to rely just on the intents to explain behavioral phenomena. This criticism does not undervalue interpretive approach, but just reduces its effectiveness as the only guide of researchers.

B: the only necessary condition for explaining behavior is will and intent: it means that although will is important in giving meaning to behavior, it is not the only necessary factor. While different wills can result similar behaviors, similar wills can result in different behaviors. Therefore, for understanding a behavior, in addition to will and intent, beliefs and expectations of actor should be considered too.

**Critical Paradigm:**

This paradigm is derived from Frankfort school and has origin in the works of Karl Marx. Critical theory, like interpretive paradigm, has origin in real world and considers individuals as persons who think and then
react, not persons who follow defined rules and regulations. Therefore, critical theory is different from interpretive paradigm since it claims that research should result in a change. This theory also criticize interpretive paradigm as it values all phenomena with the same extent instead of using research for empowering minority groups. Therefore, critical researchers considered research as a tool for removing all problems and make changes in the world.

Critical theory, with a deep and critical view toward social realities and exploring their structural relations in Power and wealth institutes, wants to increase awareness among all people. They want people to fight against conditions in which capitalist powers can utilize all aspects of individual and social for their interests. This theory also seeks for a social balance between personal authority of an individual and public correlation. Therefore, it believes that individualism is formed just through pluralism. Otherwise, this individualism serves capitalism. Capitalism, by its advertisements, keeps people in a consumer society. Critical school considers this individualism as a "false individualism" which is formed through personalized goods and products. Critical theories are constantly seeking for improving fighting thoughts and activities against those powerful groups, which keep society in their claws with the help of capitalism or government mechanisms. Since Critical theories are seeking for a humanitarian, intellectual and reparable society, try to provide greater social cohesion by observing moral effective values. In a comprehensive view, Critical theory believes that people in some cases follow a meaning system, which is contrary to their interests. This following is the result of false awareness about their interests (People do not know anything about their interests, but wrongly think that they know). It should be noted that thinkers of positivism approach believed in a common meaning system among all people, and thinkers of interpretive approach believed that people have different perceptions of the world because of their different lived experiences and there is not any common meaning system among all people of a society. The view of critical theory thinkers toward false awareness is derived from Marx ideas, and the concept they introduce in this subject, is somehow continuation of Marx ideas about "Class awareness". Marx thinks that Ideology is a false awareness and believes that ideology has neither intellectual cause nor empirical cause.

In ontology viewpoint, Critical theory is based on this hypothesis that world is a complicated phenomenon which is organized through clear and hidden structures of power. In another words, according to this theory this is powers which make realities and minority groups doesn't play any role in making realities, so these realities are not real.

In ontology viewpoint, according to the position of critical paradigm between "Objectivism and Subjectivism", the process of research needs an interaction between researcher and considered minority group and the values of researchers are a main part of research. Therefore, since the general purpose of the research is making a revolutionary change in society, the findings of the researcher should improve the considered group and their social conditions. Also, considering the interactive nature of critical theory, it can be said that the methodology of this approach needs a dialectical discourse between researcher and testable of the research to change current misunderstanding into a kind of awareness. Therefore, used methods of researcher in these paradigms include: participant observation, deep interview, focus groups, and Delphi Panels and perceiver researches for clarifying oppression, subjugation and exploitation of minority groups.

In short, it can be stated that using critical paradigm in organizational and management researches means that interests and needs of organizational minority groups will be realized to provide grounds for their work improvement. Therefore, a critical theorist uses qualitative methodology methods for collecting data related to organizational changes. In this research, researcher becomes a member of the group and analyzes the considered phenomena through collaborative observation and deep interview. Critical paradigm is suitable for analyzing phenomena, which make revolutionary changes in minority groups (Like women, low level workers...).

Post-Modernism Paradigm:

Different theories have been proposed about the history and the concept of Post-Modernism. This concept shows a philosophical, political, cultural and intellectual movement which in recent years is considered too in the literature of management. Some people consider it as a movement against modernism, some as a movement in continuation of modernism, and some a movement after modernism, which is emerged for solving the problem, resulted from modernism. Post-modernism does not provide a systematic and comprehensive theory and believes in different perceptions, recognitions, realizations and pluralism. Post-Modernism considers the environment of an organization flustered and variable and is opposed to providing any comprehensive theory about management. Piterz believes that: scientific and social concept of Post-modernism emerged in 1965 decade with question about the dominance of intellect and any comprehensive and absolute theories. It related to two factors:

1- Change in economic structure:
2- Fighting against any modernist fundamental theory.

Modernism is a cultural phenomenon in America and has origin in the late 19 century. Modernists believe that dominance over nature and society is achieved by technological development and intellectual management. They provide principles like: equality, intellectuality, not being personal, component-oriented rationality. The
result of modernist development was the belief in the poser of empirical-intellectual science in controlling social and natural world. A modernist believes in an objective reality which is defined through intellect and reasoning and applies management teaching for using technical intellect in organizations. But modernism is relativistic and exalts mental realities, which are defined by experiments, and becomes happy by removing absolute power. The main difference between modernism and post-modernism is in the change of metanarrative. In modernism narrative, scientific management and human relations formed the purposes of the manager. Individual was a mechanical tool, which was controllable scientifically. Jobs should be formalized, standardized, centralized and specialized. Post-modernism narrative stresses on a networked organization with flat lines, Horizontal coordination and temporal relations between seller, consumer and personnel; a respondent, temporal and sectional network, which removes all organizational borders (Bouj and Denehy, 2000:12). Peter Draker in 1992, by proposing questions discussed about Post-modernism management: Are we beyond Machine Age? Beyond the time in which no one has skill in no jobs? Does working in autonomous teams, a flat and universal network and in open relations, make people more capable and more self-controller who exploit less. He continues: "in the revolution of Post-modernism, different parts understand that words like comprehensive quality management, social technical systems, and empowering and flexible production systems are the substitutes of words like modernist control and commanding or even pre-modernist domination and coercion. Bouj and Denehy believe that: "pre-modernism is a skill-oriented management, Modernism is a Pyramid-oriented management and Post-modernism is a network-oriented management. But, post-modernism is not just a management system and a flat networked organization, rather it is a method for exploring and challenging different kinds of exploitation".

The main difference between the insights of pre-Modernism (classic), Modernism and post-modernism is in the change of narrative. In fact, post-modernism introduced the hypothesis of meta-narrative death and replaced it with some rival narratives. Modernist narrative aims at scientific and human relations management. Individual was a mechanical tool, which was controllable scientifically. In weber theory, big jobs, like ruling and extensive supervision should be formalized, standardized, centralized, normalized and specialized. In post-modernist narrative, individual, who is the victim of current scientific categories, should be released from prison of material world and organizational purposes. Post-modernism narrative stresses on a networked organization with flat lines, Horizontal coordination and temporal relations between seller, consumer and personnel; a respondent, temporal and sectional network, which removes all organizational borders. In this situation post-modernism related to environmentalism. Because of this environmentalism, consideration to diversity and difference increased which was in apposition of Modernist values. Therefore, Post-modernist management defines management factors in a different way. Factors like planning, organizing, commanding, collaborating, and controlling are provided in Post-modernism as such: innovation, active organizing, and persuasion, co-creating and self-controlling.

As it was stated, Post-modernist paradigm is essentially in the opposite of modernist paradigm and provides several criticisms against it. In another words, while modernism considers fact as an un-changeable reality, and relies strongly on science and knowledge, Post-modernism believes that there is not any unit reality describing social phenomenon, because all phenomenon are different. Post-modernism view the world as a flustered phenomenon without any predictable pattern and any relation between past and future. Therefor it challenges the verity of unchangeable reality of modernists.

In fact, the core point of post-modernism is making doubt about universality and comprehensiveness of productive knowledge in modernism. It should be noted that post-modernism automatically does not reject any methods of telling, rather it analyses standard methods to provide new methods, which can be criticized. In fact, in post-modernist paradigm all methods are equally subject of doubt and distrust. Therefore, post-modernist paradigm is a general expression because there is not any unit definition and reality of it. In fact, post-modernists in recognizing their surrounding environment believe in "being sections" principle. In another words they know reality in sections so that they cannot be understand through a unit definition.

According to what were stated, it can be understand well that ontology viewpoint of post-modernism is extremely subjective and researcher plays role in the process of research. In fact, post-modernist researcher describes his experiments through research reports and hid resulted knowledge is just one of the viewpoints of social world. Another point about this paradigm is that research findings can be provided in different forms, apart from scientific research reports or scientific papers like aesthetic papers, stories, movies and dramatic representations, and this one of the aspects of Post-modernism. In fact, post-modernist research, by deconstruction the phenomenon, tries to determine its main being. Therefor it is possible that different researchers get different results. All these results are equally valid in the post-modernism paradigm. In addition, in term of methodology, post-modernist researcher relies on those skills, which give him the opportunity to understand how reality and fact are reviewed constantly through enrichment of the text. Therefor he collects data by questionnaire and as it is stated by Richardson, he challenges methods and tries to introduce new methods for achieving knowledge.
Paradigm of Chaos Theory:

In the decade of 1960, some Meteorologists, Mathematicians, physicists and biologists received new evidences and discussions among them resulted in a range of irritations, interests, surprising and even anger. They could not believe that nature behaves in a way they observed recently. Experiments showed that nature has an unpredictable behavior and produces complicated and accidental patterns, which do not correspond to linear formulas and calculations. It branches in certain points and separates its way from predictable perspectives. Cloud, lightning and bubbles that are created at the waterfalls are among these phenomena. As a result, Chaos theory formed. But conceptualization of chaos theory is attributed to Edward Lorenz. He was a meteorologist and in 1965 repeating the simulation of atmospheric models, found that a very little change in a simulation equation, changes the results of patterns. His exploration named Butterfly effect and means that flying of a butterfly in Newzeland can make a storm in Amazon forests.

Chaos theory, as a general theory relating to the function of complicated and nonlinear systems, describes organizations in the general concepts of stability and instability, and decline and revival of the system. In another words, chaos theory describes a set of different organizational forces, which exist in active strains. These strains are set as a natural level of system development and finally result in higher level of system operations. In Chaos theory, turbulence of the behavior of different phenomenon is the symbol of a final turbulence. This turbulence is not accidental; rather it is a regulation in irregularity and an order in disorder. So manager should find this regulation in irregularity.

According to chaos theory, world is a non-linear, complicated and unpredictable system. This theory refers to systems, which show a hidden regularity in their irregularity and believe in a final regularity pattern in all irregularities. For these reasons, providing a model of chaos theory is very difficult. Therefore, it has been tried to show an aspect of turbulent systems through examples and computer models. Morgan exemplified these systems as a mass of birds, bats or fishes, which move, based on three laws: 1- moving without collision, 2- keeping move alongside each other, and 3- not getting very far from each other. This computer model shows a dynamic mass or a turbulent system detail of which is unpredictable, but has regularity in general. It should be noted that chaos theory is the antithesis of positivism paradigm. As it was stated above, according to positivist presumptions, world is under the domination of causal relations and natural laws and so it is unpredictable. While a chaos theory researcher values any changes in a system, because he believes that little changes have big effects in long time. Therefor it can be stated that while positivist paradigm claims that it is capable of observing and explaining the linear relations of all phenomena, Chaos theory paradigms claims that systems are instable and non-linear and can be observed actively.

It can be found that in the ontology of chaos theory paradigm, world is the combination of instable, active, non-linear, changeable systems and as a result is unpredictable and without any regularity. Therefor little event can produce unexpected effects.

In terms of epistemology, chaos theory is based on fractal geometry, which focuses on nonlinear and incorrect systems and descriptive algorithm, not on linear and correct systems of Euclidean geometry. In terms of methodology, chaos theory, because of the dynamic nature of researches use from this theory, researcher does not play role in the process of research, spends so much time in research field, and should guarantee that the experimented irregularities do not impose to the patterns and explanations.

About the function of chaos theory in organizations, scientists believe that chaos theory has more functions than Positivist approach in understanding organization and its management. According to Mc Karcher, since positivist approach is a limited approach, cannot determine the function of organization and management. Organization and management are variable phenomenons, which work, in an open system. In fact, since chaos theory explains the behavior of turbulent systems, the features of this theory, butterfly effect, compatible with the environment …, function in the management of organization and doing organizational researches. For example, by using the feature of butterfly effect, it can be found that which organizational phenomenon can be changed in a few time and energy, so that improves the performance of the system.

Conclusion:

Reviewing historical evidences, current situation and future perspective of organization and management shows that management science are always influenced by positivist paradigm and this paradigm is constantly seeking for a set of knowledge consisting of causal relations about organization and management. Its narrative is achieved through scientific and empirical methods and therefor is considered as Positivist. It should be reminded that there have been significant advances in the organization and management science using positivist approaches so that even now, if a manager wants to know the ideas of citizens about the considered organization, the suitable approach for this purpose is positivist approach. According to interpretive approach, world cannot be understand through natural and physics methods, and since human is meaning maker, the knowledge of human and society should determine that what is meaningful for people in a social situation. Achieving to this purpose requires the understanding how individuals and groups make meaning among themselves and express it. For example, when manager wants to know the real reason for low working of
personnel, he should analyze it by close relations with them, observation and interviewing with them; in this situation, interpretive paradigm has the most proper function. Critical theory is suitable when there is a controversial discussion in the organization. When managers need to destroy wrong customs in an organization, Post-modernist approach is needed. And finally, for understanding the effect of small changes in different systems of organization, it is used from chaos theory. Therefore it can be said that all five paradigms are applicable in the domain of management and organization science.

REFERENCES


