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SOCIAL SCIENCES IN TEACHING BENEFIT FROM THE NATUREL SCIENCE- EXAMPLES OF HISTORY OF SCIENCE

Abstract:

There was proximity between natural and social science in the history. It couldn't be say that, this proximity continues now. Because sciencis were divided into specialist areas. Scholar who lived even in the middle age or new ages could have profound knowledge in the field of social sciences and natural sciences. While explaining social science scholars that could benefit from the basic information in the field of natürel science.

Social science concepts can be intangible. At this point it may be necessary to explain some concepts concretization. It makes it easier to understand and permanence of the affects if we tell you a thing or terminology by concretizing. For this, social science was used from natural science terminology that time to time. We could give some example for this hypothesis. An example of relationship between sociology and biology or political science and sociology-biology-physics which was particularly marked. Especially middle age and eastern scientists have put forward opinions about relationship between social and natural science. For example, Ibn Khaldun, likened the individual to the state. These smilarities has established relevance between science of political and science of biology. On the other side the west scholars have demonstrated many examples of ideas or hypotheses that relationship in new age.

Keywords:

Social Science, Naturel Science, History

JEL Classification: I29

Introduction

There are interdisciplinary relationships and they are continuing. But, it can be necessary for this to occur in institutional meaning as well. Different institutes can move with their own scientific infrastructures. This situation can reduce the effectiveness to be obtained. It is possible for the institutes to share the scientific development they obtain and then to integrate it. Also, interdisciplinary relationship should not be limited with only scientific articles. Also during the education, this relationship should be utilized.

The history of social sciences is examined in three historical periods and dates to the present day from 20th century. It gained a scientific identity in 20th century. Social sciences were made systemic. While the sciences are classified, they were divided into human sciences, natural sciences, and mathematical sciences. Each discipline became a science with the technique and method it formed for itself. Becoming multi-causal engendered interdisciplinary relationship. Complex problems were tried to be solved by bringing the sciences into together. Scientific branches underwent the division within themselves. Law philosophy, law sociology, new age, modern age, and, thus, specific examination area have emerged. It was begun to be utilized the terminology of natural sciences (Bilgili, 2015; 19-22)

Research Question

From the early 20th century to the present day, the sciences move on their own methods, opinions, frameworks, and thought axes. This situation pushes sciences to solitude. A case similar to this is also existent in the social areas. There is individualization phenomenon in social science and industrial revolution and technologic developments, etc. take individuals solitude. Maybe, this has also some advantages. Perhaps, this state makes individuals more free. But, it leaves deep traces in the psychological meaning. This has also some advantages and disadvantages. For example, individuals can specialize in a certain area. But, from the other aspect, sciences, collecting the scientific results they obtain, cannot make a common evaluation. Cooperation of disciplines taking place either in social sciences and physical sciences can provide important gains.

Aim of Research

The aim of the study, while describing or teaching the subjects of social sciences, is to demonstrate how it utilizes physical sciences from historical point of view. In history, important scholars lived and died. While these scholars described their theories, they wanted to embody the matter. They gave some examples for this and selected the examples, utilizing the works of the different scholars.

Setting out from here, during education, increasing the interdisciplinary cooperation can be useful. As was in the past, also in the present day, similar methods can be followed. Thus, explanations can be more understandable.

Findings

While describing their opinions, there were also scholars utilizing the relationship between social and physical sciences in the east and west civilization. In this scope, the first example can be given from sociology and biology. While scholars describe a sociological phenomenon, they can enter the subjects of biology. Spencer is one of these scholars.

Spencer, who is engaged in the science sociology, simulate the society to a living organism, and describes the society as a whole of differentiated functions completing to each other. Each social element has a function. Thus, it initialized functionalist stream. Metron also mentions about the functions of the parts forming social system. He uses the term rupture, while describing anomy. He says that the rupture in the social and cultural relationships will not occur as long as supervision relationships function (Bilgili,2015;134-138)

So, an individual being born as a biological entity, participating in the various social groups in socialization process, gains the different roles and statues and become a social entity within social relationships. However, the biological characteristics the human, who passes from a biological entity to a social entity, carries via heredity throughout generations should not be ignored (Burcu,1998; 176)

Another example can be given from the disciplines of sociology and physics. Auguste Comte, while describing the society, utilizes the terms physics.

Auguste Comte uses sociology as a term. He gives place the concepts of social physics. Static sociology is used in examining static social order and dynamic sociology social development. He says that human thought passes through three stages. Conte applies the process he describes as theological, metaphysics, and positive to the technology and states that social phenomena pass through the stages in this process (Bilgili, 2015;134-138)

In 19th century, again making analogy with nature, the history was regarded to as a nomothetic science. Gradually increase of reliance to the natural science resulted in 19th century and in the early 20th, the views of A. Conte, Spengler, and other scholars, based on enlightening ideals, who divided the history into phases, became dominant. These can be classified as materialist and organist views (Aşkın,2008;4)

Conscious psychology or structuralism related to the nature of mind: This is established by Wilhelm Wundt and he says that the nature of mind is understood with internal observation. Mental processes including internal emotions, intuitions,

and thoughts were examined and the developments on the areas of physics and chemistry were influenced.

Another example can be given from the disciplines of medicine and psychology. Psychology and physiology were being considered together until XIX. century. Farabi had dealt with biology, physiology and psychology (Kaya,1995; 151). İbn sina likewise mentions of the psychological causes of some diseases

Kindi said that, if you don't know math, you can not be successful in philosophy. According to Farabi enter the philosophy with geometry and logic information, but can not show any asset of being this area would not be possible without knowing physics (Kaya,1995;148).

Demography is also a discipline of social sciences. The data it uses are quantitative but their results are evaluated in the social area. In this example, a convergence is seen between demography and mathematical sciences.

According to Malthus, population increases geometrically and foods arithmetically. He mentions about the danger of starvation. Mill argued social justice. From the other aspect, he views liberalism necessary and, dependent on, intervention in economy (Bilgili, 2015;105-107)

English Thomas Malthus (1766-1834), in his article, titled "An Essay on Population from the Point of Its Effects on the Future Development of Society", he wrote in 1789, says: "While the population is increasing as a geometric sequence, food materials are increasing as arithmetical sequence. If actions are not taken, the danger of starvation will be faced." This theory has become famous as Malthus Theory. (Çamucu, 98)

Although economics is also engaged in quantitative data, it is a social science. Another example introduces the relationship of economic and medical sciences. Convergence here is between social sciences and health sciences.

Quesnay, likening economy to blood circulation in human body, formed a table regarding goods transfer between the various parts of national economy (Bilgili,2015;105-107)

Historians, who go toward history with deterministic laws, and build the historical philosophies on deterministic base, carried a label depending on the ideas of obligatory law. They thought of these laws, which determine the history as in the nature, sometimes as metaphysical – biological, sometimes mechanical – biological, and sometimes as psychological. The common part of these views moving from these various planes is that they hold on to the thought "change" from its one side (Aşkın, p.7)

Another example of cooperation is between political science and biology. One of the most leading concepts of political science is state. That state is

considered as a biological entity shows this cooperation. Among those making evaluation in this way, there are also scholars such as İbn Haldun and Katip Çelebi.

Kâtip Çelebi considers the nature of state as if it is a biological entity, because in his nature of thought, a link is made between state and human lifetime. Çelebi states that the researchers make a connection between the social state and individual state of human. He expresses that they reveal that the social state of human are equivalent to its individual from many aspects and even equals to each other from many aspects. Çelebi states that the natural lifetime of human is bestowed in three stages as development, standstill, and regression. According to him, albeit there are three stages above mentioned in the lives of people, when considered that the states of powerfulness and weakness are contrary to each other, the collapse of a fine bodied individual becomes earlier than an stalwart individual. In the same as this, social structure of a state, which consists of people, forms from three periods. These periods are development, standstill, and regression age. But, the periods under consideration show differentiation according to the structures of societies, because some societies entered regression age in a short time and some part of them disappeared in standstill age due to imprudence. Some of them, as in the example of Ottoman State, because besides they have a strong structure, they are based on durable principles, experienced a long standstill period. Hence, three stages above mentioned have idiosyncratic indications in both individuals and societies (Sözen, 2009;13).

İbn Haldûn also makes a relationship between the lifetime of state and human lifetime. According to him, just as each individual has a lifetime, states also have certain lives. Just as a human is born, grows, develops and, finally, dies, states are also founded, develop, standstill, and collapse like an organism, Hence, this state expresses that state passes from an attitude to the other attitude.¹⁴ According to İbn Haldûn, who accepts that state also has a lifetime like individuals, except for rare conditions like the biblical flood, the humans survive maximum 120 years. Like this, the lifetimes of states do not exceed three generations. Generation consists of middle of human lifetime, which is 40 years. İbn Haldûn, showing a verse from Quran as an evidence, says that 40 years are maturing period of human. He, also stating that the lifetime of state cannot exceed three generations, says that this covers a time of 120 years. Thus, he limits the lifetime of state as a slice of time not exceeding 120 years (Sözen, 2009; 15-17)

While İbn Haldun describes his ideas, he does not remain limited with only the relationship between the sciences of sociology and biology. He, making a relationship between social sciences, explains his thoughts. For example, in explaining social events, he gives place to the psychological dimensions. Each event has a psychological part. From the other aspect, he examines the relationship between the economic structure and social and economic events in multi-

dimensionally. He also makes the relationship of economic structure with psychology. (Kozak, 1999; 2)

In Western thought, beginning from 19th century, due to the difficulties in applying the mechanist views of Descartes to social sciences and also extraordinary influence of Darwin, in social sciences, organismic view highly gained weight. Thus, sociologists such as Comte, Spencer, Spengler, Durkheim, Marx, Pareto and Malinowski approached the similarities between the structure and development of society and organism from the various aspects. Among these, the approach of Spengler is close to that of İbn Haldun (Yıldız, 2010; 51)

According to Saint-Simon, besides that humans are idiosyncratic original entities, they are entities subjecting to determinism that prevails in nature. As in the law of gravity center in the areas of physics and chemistry, there is an progression law managing the societies. We see this progression law in the political, moral, and economic events. This is the reasons for why sociology is an observation science adopting the historical method. It, describing this progression law with an orderly method, tried to obtain the general laws of the social and political evolution of European civilization (tr.wikipedia.org).

When the works of Farabi is examined, it is seen that there are studies on very different areas of social sciences. Among the works of Farabi, more than hundred, there are disciplines such as philosophy, logics, religion, and linguistic (Akyüz, 1982; 81)

Farabi explaining the government, takes in terms of bio-organic. In their heart, brain, and in function to those with various internal and external organs work in a coordinated manner in the heart of the brain, its also human beings to control sample area to other organs may have been carried out in the state (Kaya, 1995; 153) Thus, the development of the state, is likened with the domination of human organs

Results

Beginning from 20th century, that social sciences becomes a specific area increased the importance of this area.. A direct contribution was made to the area and a number of study emerged. Social sciences strengthen the relationship of human and society with the social life. Of course, together with this, an in-depth contribution will be obtained. But, that social sciences and physical sciences completely distinct from each other means that these scientific branches utilize each other

In teaching of social sciences, several concrete data and examples of physical sciences and natural sciences can be utilized.. This is an application made in the past. Also today, for some abstract information belonging to social sciences to be more understandable and be kept better in mind, utilizing the content of the physical and natural sciences will strengthen interdisciplinary relationship

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