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The reflection of Comte's Positivism in humanities and educational sciences: The example of Türkiye

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Abstract

Positivism, founded by Comte, became a profound philosophical movement by creating a wide sphere of influence in the nineteenth century and beyond. Positivism classified types of knowledge according to its own principled approaches, reduced existence to the factual and tried to explain humans with the physics of society. Positivism aimed to reshape the ideal of social development and progress with a secular understanding in order to guide humanity. The principles of positivism have also influenced educational theories. This study examines the impact of positivism on education on a theoretical and educational sciences basis, starting from the transformation that began in the field of education in the early years of the Republic of Türkiye. The traces of positivism's fundamental philosophical views and its compelling views in education, as well as its reflections within educational sciences, have been sought based on its approach to humans. In line with this quest, empirical and positive scientific methods, as well as reflexive and critical methods, are considered two separate tendencies within educational sciences. As a result of the study, it has been determined that despite reflexive and critical methods in understanding humans, educational sciences could not escape the guidance of positivism and could not carry humans beyond positivist definitions.

1 Introduction

Kant (2007) says that humans become human through education (p. 27), and the word reveals the indispensability of education in the process of human development. The meaning of the concept of human that this word points to is an essential debate in itself for education. Many definitions have been made about humans in the history of thought. However, many standard views have yet to be formed in the definitions. When the question of what a human is meets education, we encounter new questions. For example, what is the true meaning of education, what kind of understanding of knowledge and values should it contain, and what should its purpose be? These are questions that depend on the question of what is human. As Hamm (2005) also stated, the difficulty and historicity of the question of what is human requires rational, systematic, and rational

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decision-making. In the face of such a question, the reasons for focusing on philosophy in the field of education are also understood (pp. 1-5). On the other hand, it is necessary to focus on both philosophy and the question of what is human in order to find the positivist traces in general educational sciences and educational purposes.

Historically, two main tendencies in education can be mentioned: basing it on philosophy or science. One of these two trends is in a more dominant position. This study assumes that the success of positivism in the nineteenth century was influential as one of the reasons for the dominance of prevailing educational models. The problem situation is also based on two different main trends in academic theories. Today, there is a view that approaching education from a theoretical perspective and questioning existing educational approaches with philosophical reflection and critical methods is gaining more and more significance with each passing day. On the other hand, dominant educational science models make it difficult to go beyond the empirical and positive science understanding. Moreover, the dominant models emphasize the need to strengthen rather than critically approach the projections of science in the field of education.

This study, which takes the example of Turkey as a concrete starting point, argues that the ideas put forward by positivism as the only method in educational sciences limit the question of what is human and the human training system. The justifications for this thesis can contribute to many professionals involved in educational sciences and, therefore with humans. It may enable professionals to form some judgments about the positive or negative aspects of the impact of positivism on education. The focus of this study is to make a philosophical evaluation of Comte's positivism and educational sciences. It is aimed to evaluate the reflections of Comte's positivism on educational sciences through the understanding of human beings from a philosophical perspective, considering the example of Türkiye. As a method, a fundamental theoretical research example is presented. Based on the technique of writing a philosophical essay based on discussion, the study is constructed in a speculative style on the structure of the thesis and argument. No study with such a purpose and content has been found in the literature.

Based on the problem statement, thesis, purpose, and method, the more specific questions of the study are as follows: Does the influence of Comte's positivism, particularly in terms of method and the importance attributed to method, still persist today? Is Comte's understanding of human nature valid in today's education systems, or does today's education system have a sense of human nature? The answer to such particular questions can be found within the flow of division and argument. The sections consist of five subheadings. Despite the passing of several centuries, it will be demonstrated under the subheading "The Impact of Positivism and the Example of Turkey" that Comte's positivism is still worth examining. The justifications for the thesis of the study will be presented in the following subheadings. In the subheading "Science and Human Science in Positivism", the general views in the classification of positivism regarding the starting point of positivism in science and the distinction and connection between nature and human will be presented. Following this subtitle, an approach to humanity will be presented under the title "Social Development and Secular Human" based on positivist views on science. Based on these two subheadings, the educational thought will be revealed under the subheading "Comte Positivism and Effective Views in Education". In this context, the purpose of education, the priorities and omissions in the curriculum content, the relationship between school and state, and the assumptions related to education management will be evaluated. Then, within the subheading "Finding Positivism Within Educational Sciences," the connection of Comte's positivism with disciplines such as educational sociology and educational psychology, which add scientificity to

education, will be presented. It is clear that Comte's positivism, being a society-centered movement, places it at a point particularly related to educational sociology in terms of education and educational sciences. However, considering that educational psychology also occupies an essential place within educational sciences, it is worth examining whether Comte's positivism has a connection with educational psychology. In the studies related to the sociology of education and educational psychology, the fundamental views on the establishment of the field of educational sciences in Turkey will also be included. The "Results and Evaluation" section will discuss whether the connections between Comte's positivism and the basic views of today's Educational Sciences mean a dominant educational model by addressing alternative opinions.

2 The impact of Positivism and the case of Türkiye

The nineteenth century has witnessed many philosophical movements. Most existing philosophical movements had certain degrees of influence in the nineteenth century. There are differences between these currents. However, there is also an everyday basis in many currents regarding the assumptions of modern science. On the other hand, movements that put forward opposing views to the assumptions of modern science were also seen in the nineteenth century. Positivism, according to Comte (2019), emerged as "the shaping of different parts of a general research plan bound to a single method with the expression of positive philosophy resembling positive sciences" (p. 10). In this case, positivism also stands out, especially regarding its effects on the scientific field. Positivism, in terms of determining human life, has sought to bring science and philosophy closer together. It also claims to explain human beings and society definitively through a science like sociology.

The word positivism, derived from the verb "Ponere", means to preach, to place in view, to put forward, and to oppose in Latin. The concept originated from the third-century thinker Sextus Empiricus and the ancient Greek Sophists. As a philosophical movement, it was systematized by Comte and also referred to as Comte's positivism. (Cevizci, 2010, p. 1298). It can be said that the 1789 revolution in France impacted Comte's systematization of positivism. The revolutionary France initially fell into great confusion and chaos. Once upon a time, the harmony provided by the church was broken, and disorder began to spread in society like a disease. This situation prompted the intellectuals of the period, including Comte, to develop ideas to ensure definite order and stability. The six-volume 'Course of Positive Philosophy' and the four-volume System of Positive Polity', written by Comte in his mature years, are efforts to establish both the concrete and abstract theory of human order. These works have left their mark on their era and influenced many thinkers and scientists (Korlaelçi, 2002, pp. 84-98). For example, J. S. Mill supported positivism on the grounds that it would eliminate harmful and false social doctrines. Claude Bernard, with his work titled 'Introduction to the Study of Experimental Medicine', advocated for positivism's application in the biology field. Darwin's theory also bore the mark of positivism (Mardin, 1992, pp. 76-77). These examples do not mean that the widespread acceptance of the current is solely due to the current's own views. This is so much so that these examples, which consider the trend, have also created a rather wide sphere of influence. Therefore, these examples demonstrate the direct and indirect breadth of the influence of positivism.

The impact of positivism on educational theories is also noteworthy. For example, the views of Condorcet, who became the head of the National Education Committee after the French Revolution, are also notable. Condorcet's efforts to free education from scholastic influences in the name of progress paved the way for Comte's positivism with an emphasis on progressive

history and advocated a secular, national view of education like Chalotais (Bayraktar, 2002, pp. 191-192). It is similar to positivism. In this study, the impact of positivism on education will be examined by taking into account more recent dates.

When the Republic systems based on the national model were adopted in many countries in the West and the East, positivism began to become a considered thought. The Republic of Turkey can be given as an example in this situation. In Türkiye, it is an essential debate whether the educational thought of the Republican era should be determined in line with the principles and views of positivism or pragmatism. The dominant view is that the philosophy of education should be based on a positivist universalist understanding of science. However, it cannot be said that positivism functioned as a general ideology after the Republic was established (Direk, 2001, p. 74). In addition, during this period, the pragmatist thinker and progressive education theorist John Dewey was asked for the 'Report on Turkish Education' (Dewey, 1939). In fact, "Many studies in Türkiye have focused on Dewey's report" (Ata, 2001, pp. 193-207). Although it is an essential debate in the field of educational philosophy as to which movement was influential in the formation of Turkish educational thought, it can be argued that both positivism and pragmatism were influential (Uludağ and Bayraktar, pp. 43-62). At this point, it is noteworthy that pragmatism, an influential movement of the twentieth century that eventually surpassed positivism in terms of influence, also references positivism with some of its views.

In the works of W. James or J. Dewey, there are views that differ from Comte's positivism and views that overlap with it. Both currents exclude metaphysics as the acceptance of existence and evaluate physical phenomena in the identity of reality. According to James (2018), who determined the principles of the pragmatic method, the reality of something emerges with its practical results, but the relationship between reality and science is still fundamental. According to James, who sees religion as merely a cosmic feeling, thought gains reality and meaning through actions. Apart from financial situations, any concept that transcends physics is an area that should be ignored in practice as it does not cause any change (pp. 60-66). Similarly, Dewey (1910) argues that idealist doctrines stem from desire-based imagination. He says there is no "different reality beyond and behind nature" (p. 32). In the context of pragmatism's emphasis on the practical concept, the practical person wants "something definite, concrete, and probably attainable that he can work on" (Dewey, 1922, p. 274) can be considered as a few examples regarding the connection points of positivism and pragmatism.

According to Bayraktar (2022), in the last twenty years, despite adopting constructivism, which contradicts modern science's methodological assumptions in Türkiye, the influence of behaviorism in Turkish educational thought still persists. The connections between positivism and behaviorism, an essential educational approach, are also meaningful. Considering the connection between behaviorism and positivism, positivist influence in the field of education can be mentioned as a shortcut. This clear connection is emphasized in many studies establishing the connection between positivism and education. However, until reaching this connection, there are many issues to be evaluated regarding both positivism and the relationship between educational sciences and positivism. Moreover, educational science circles in Türkiye adhere only to the scientific method and maintain the human-related assumptions that come with this method.

3 Science and human science in Positivism

Comte's positivism states that the only source of actual knowledge is the natural sciences (experimental sciences). According to him, science should only be concerned with directly

observable quantities that can be known through experimentation. It is imperative to set aside the information learned in the past but doubtful and unproven (Korlaelçi, 2002, p. 7). Philosophical inquiry alone has no value in terms of knowing. Comte proceeds from the idea that if there is something, it can be measured, and if it can be measured, it can be predicted. Accordingly, things that are predictable can be modeled (Kirman, 2011, p. 257). From this perspective, positivism draws clear boundaries between metaphysics, which has a highly abstract quality, and science. It is based on modern science and values the scientific. The problems of the metaphysical and religious field are obstacles to human progress since they cannot be solved by means such as experiment and observation (Cevizci, 1999, p. 292).

In Comte's scientific approach, man can only attain knowledge of phenomena. However, this information is not as absolute and unchangeable as it is thought to be. Searching for the essence of a phenomenon by seeking the absolute is an empty endeavor pursued by theologians and metaphysicians. It is not the duty of positive sciences to show the first causes of phenomena or the causes that give rise to them. Positive sciences only relate events and phenomena in terms of similarities and successive developments. Thus, it aims to learn the laws of phenomena. Scientific knowledge aims to predict future events by determining the laws of phenomena (Comte, 2019, pp. 32-34). In this context, the purpose of science from Comte's perspective is to examine the "existing" situation. However, it is understood that he also wants to scientifically predict the "ought to be" situation in terms of associating science with the future.

After Comte determined the purpose of the sciences, he stated that all sciences have the same importance for human happiness. Also, with the universalization of positivism, sciences are considered as separate wholes. According to him, sciences should also be considered as branches of a single positivist body, and all sciences should be divided into branches. As the amount of knowledge humanity has acquired increases, a single mind becomes unable to process the information. As each part of the scientific system becomes enriched in terms of knowledge, it must be separated from the body. In this way, the complexity unique to Ancient Age science and philosophy can be avoided, and the path to scientific progress can be opened (Comte, 2019, pp. 50-53).

Comte limited human knowledge to the objective, experimental, and systematic stages of scientific understanding by seeing sciences as branches of positivism. He classified the sciences according to the degree of abstraction and concreteness in terms of their subjects. According to him, abstract natural sciences are based on numerical calculations. It aims to reach unknown numbers from known ones. Therefore, it is a rational effort that becomes independent of the nature of the matter. This type of science refers to abstract mathematics. Concrete natural sciences, on the other hand, are sciences such as concrete mathematics and concrete physics, which are dependent on the type of entity being studied and have an experimental character. Moreover, such a distinction in sciences does not mean that there is no connection between them. On the contrary, there are strong connections between the sciences. For example, all concrete sciences are built upon abstract sciences. Therefore, it is not correct to be limited to only practical studies in science. All essential practices derive from theories that have been elaborated for centuries without producing results. If the sole intention is to achieve benefit in practice, it becomes impossible for humanity to reach its goal. For instance, if it were not for the theoretical works of ancient Greek geometers, none of today's technologies would exist (Comte, 2019, pp. 81-96).

Comte also classifies the natural sciences methodologically. In his method, the most

straightforward and most general phenomena are taken as a starting point. The aim is to progress step by step towards the unique and complex. The functioning of this method primarily depends on separating phenomena into living and non-living entities. Since living beings are more complicated compared to non-living things, it is necessary to start examining the inorganic ones. At this stage, the debate about whether the nature of living and non-living beings is the same is unnecessary to the extent that it does not fall within positive thought. Because positive thinking neither takes into account the inner nature of any object nor believes that these phenomena should be examined separately (Comte, 2019, pp. 111-114).

Comte divides the sciences that study inanimate phenomena into fundamental earth physics and celestial physics and the sciences that study living phenomena into physiology and social physics. It structures all positive sciences hierarchically into five basic sciences. These are, respectively, astronomy, physics, chemistry, physiology, and social physics. A particular order must also be followed when examining these sciences, which are positioned hierarchically. Astronomy and physics must be studied before chemistry can be studied. A previous one is always a prerequisite for the next one. If the proper order is not followed, the renewal of scientific education and the mental system cannot be achieved (Comte, 2019, pp. 128-144).

After determining the boundaries, subject, method, and purpose of positivism, Comte extends the positivist approach established in the natural sciences to understand humans and human communities. According to him, just as nature becomes understandable through the experimentalism of the scientific method, individuals and societies can also be known through the same experimentalism. So much so that individuals and societies are predictable in terms of future behaviors. Because the human mind can quickly produce solutions on topics that even theology would admire. The human mind has enough power to discover the laws of phenomena to reach a theory. Stepping outside this power is an obstacle to science. Moreover, every scientific theory is a phenomenon of logic that contains objectivity. All logical facts are obtained through observation. Methods that do not provide material for observation, such as introspection, offer speculative information by moving away from objectivity. For this reason, positivism makes visible the material of knowledge in natural research. The visible behaviors of humans and societies can also provide valid, solid, and objective data. Information about these can be processed through a mind strictly tied to what is visible. Upon this basic approach, Comte lays the foundations of social physics, later known as sociology and considered the most complex of the sciences (Comte, 2019, pp. 56-62). From the perspective of human science, the point Comte reached has specific goals for society and a definition of a human being.

4 Social development and secular human

As can be understood from his pioneering a social science like sociology, the essential element in Comte's eyes is society. Humans cannot speak of it. Only 'Humanity' can be mentioned because the individual can continue their existence thanks to the species, and the individual owes their development entirely to society. Focusing on the individual as a single person is unnecessary (Comte, 2019, pp. 292- 297).

Comte has defined human beings as social, historical, and secular entities within their own era. According to him, society and history establish an organic connection with humans. Humans, independent of these two bonds, can neither be defined nor understood. The individual is not an actor on the stage of history but a result of the historical development that flows according to its own internal laws. Humans are not the makers of history but only carriers and transmitters of lived

histories. Therefore, if one wants to have knowledge about humanity, it must be explained according to its historical development stages (Gökberk, 2011, p. 415).

Comte establishes a relationship between the developmental stages of humanity and methods of thought. Accordingly, the evolutionary process that the human mind has undergone and the historical process that societies have undergone are similar to each other. To see the similarity, it is necessary to first identify the stages that the intellectual methods used as a source of knowledge by humanity have gone through and then to determine the similarity between them and social evolution.

According to Comte, in the positive stage, the human mind has reached the stage of examining events and phenomena within an experimental framework and on a rational plane. Before the positive period, it left behind two opposing methods of thought and sources of knowledge called theological and metaphysical. The first period is based on the theological method, which it claims to be the necessary starting point of the human mind. This belief system is oriented towards the first and last causes of everything and absolute knowledge. This system consists of three stages, from simple to complex. It is accepted that all phenomena in the universe occur through the wills of living, intelligent, and powerful beings. 'Fetishism', which characterizes all entities with vitality, is the most primitive form of this type of knowledge. Polytheism, which explains the universe on a polytheistic axis, is a higher step of this. Monotheism is the highest level, which is believed that a single god created existence and that the same God also maintains the existential order (Korlaelçi, 2002, p. 70). In the second period, there is the metaphysical method, which is a transitional process. In the theological method, gods are conceived as persons, and their emotions, such as anger, desire, and mercy, are perceived as abstract forces in metaphysics. Instead of gods, nature itself is attributed with many qualities. For example, the idea of a God governing ocean events transitions to the idea that oceans possess an abstract life force. The positivist method is the settled and definite state of reason in the third period. The human mind understands that it cannot reach absolute truths, unchanging principles, or first and last causes. He accepts that there is no reality outside of phenomena. It limits the world of knowledge to the field of phenomena and makes learning the functioning of this field the subject of science (Gökberk, 2011, p. 414).

According to Comte, every science that has reached the positive stage has passed through the first two stages. Every period left behind has contributed to achieving a positive period. People must inevitably understand the facts by associating them with certain principles while observing them. With theory at the beginning, observations are meaningful to the observer. For this reason, observation is needed to make theories real. Similarly, theories are required in order to engage in observation. The first method, the theological state, provides humans with the theories they need - whether they are right or wrong - in a ready-made form. These are the first steps that, while being the first philosophy, lead to a positive process (Comte, 2019, pp. 17-24).

According to Comte (2019), these three periods and methods of thinking are a historical process that is valid not only for sciences but also for societies and individuals (p. 22). In his view, society is a living organism that begins to be born and develop at a particular time. Humanity has also passed through theological, metaphysical, and positive periods in terms of political, legal, and social aspects on the road to contemporary civilization. Therefore, history is divided into three significant historical and spiritual periods. First, the theological period covers the religious and military age. It extends from the beginning of the world to the 1300s AD. During this period, all thoughts in society are in a supernatural order. The commands from God are accepted

dogmatically. Conquest is the primary goal of society. All productions are aimed at meeting the minimum necessary for humans. Secondly, it is the metaphysical period covering the years from the 1300s to the 1800s. It is a transition to the last period. It is a period related to law as well as metaphysics. In this period, which was dominated by the European feudal structure, there was a close relationship between the theocratic structure and the military order. In the third positive period, humanity reached the positive scientific stage. The French Revolution initiated this period. It was a period when industry gained superiority, society tended towards organization, and industrial magnates dominated instead of aristocrats. It is also the period when the experimental method took precedence and social events began to be addressed in a rational and cause-effect relationship (Sunar, 2018, pp. 75-78).

Comte uses the three stages he employs as a guide in explaining society (although he does not explain the individual and its development in detail) to describe the development of individuals as well. Individuals go through these three stages from the moment they are born until they grow up. According to him, "When each of us takes a look at our resume, in terms of our most important notions, respectively; we were theologians in our childhood, metaphysicians in our youth, and physicists in our adulthood" (Comte, 2019, p. 22) we remember.

According to Comte, in the positive period, the individual is a worldly being, free from metaphysical and theological elements. The individual is a movement or an extension of society. For the sake of progress, the individual must completely dedicate themselves to humanity. He explains this dedication with the concept of 'altruism.' In dictionary terms, altruism is defined as "behavior that considers the interests and benefits of others, generally thought to be the opposite of egoism, selfishness, and individualism" (Marshall, 1999, p. It is expressed as 152). For Comte, altruism is a virtue that determines the fundamental tendencies of humanity, shapes its behaviors, and creates its value judgments in a secular manner. Altruism is the foundation of morality and the gateway to the religion of humanity.

Comte is aware of the power and function of religious and moral authority in establishing and maintaining order and unity based on social progress. According to him, religion, on the one hand, as a supreme authority, sets limits to the individual's egoism under its sovereignty. Religion forces the individual to live in harmony and balance with other people. On the other hand, it offers humanity a purpose to which it can cling passionately and for which it can use all its strength and competence. Thus, while providing him with the greatest happiness, religion also derives the highest yield from him. However, the positive period has shown that religions based on theological and metaphysical foundations are invalid. Science is the proper guide. All religious beliefs of the past are a preliminary preparation process for the transition to the 'Religion of Humanity' to be established based on science (Caird, 2003, pp. 29-32). Comte hopes that humanity will form an actual divine command with altruism, which has moral, intellectual, and material aspects. Thus, the inadequacy of the Gods of divine religions can also be remedied.

In Comte, who places man under the command of humanity, which he calls the great being, the true God of the new religion is 'Humanity.' What he means by humanity is not the people who have lived from the past to the present but only those who serve humanity in general. According to Comte, this secular God is far from the God of theologians, who is an absolute being, difficult to understand, and cannot be proven. The new God arises from objective evaluations that are certain. Because, in reality, a person has nothing but humanity. Also, Comte, who reports that in religions, apart from God, there are also some guardian angels mentioned, secularizes the

guardian angels of the new religion and represents them with the members of the family institution: mother, wife, and daughter. Comte divides the worship ritual in religions into two forms: public and private worship, which should be performed thrice daily. The private ones are performed as worship of the woman within the family, while the public ones are performed as worship of Humanity. Comte, who developed a religion paradigm based on worldly phenomena and values, saw himself as the prophet of this religion. Women appoint angels, and generally Humanity, to be the God of religion (Korlaelçi, 2002, pp. 19-25).

When Comte's explanations about the individual within the religion of humanity are combined with the idea of not focusing on the inner aspects of the human in line with the scientific view, what the understanding of humans is becoming approximately clear. Accordingly, a human or individual has dedicated themselves to society and scientific progress. However, individuals can realize themselves with this dedication and service to humanity (society). In the positive period, a person with a scientific temperament, who emphasizes social aspects instead of individuality and is completely separated from religious commandments, is in question. At this point, one is faced with a rather limited view in terms of the material and spiritual dimensions of the human being. Moreover, a human being is not a being whose meaning we reflexively seek based on their inner aspects. Humans are beings, and we can present our knowledge through social sciences and explain every aspect of it. Social physics removes the explanation of humans in all aspects from being a Gordian knot. These views of positivism indicate that the type of person positivist education aims to cultivate is assumed to be an attainable target, along with the scientification of educational processes.

5 Comte's Positivism and his influential views in education

What kind of education model does positivist philosophy foresee? What principles does it aim to plan, execute, and evaluate learning on? What does it prioritize in the curriculum, and what does it ignore? To be able to answer such questions, it is necessary to determine which essential criteria can be reached based on the evaluations of the positivist philosophy presented above.

Comte, who put forward the idea of progress within the law of three stages (Özlem, 2008, p. 67), sees the source of positive philosophy as the sciences gained through experimentation. Thus, positivism states that it is important to observe, analyze nature, and know the immutable laws in nature (Çubukçu, 1986, p. 55). Science considers the activity of reaching laws consisting of empirical judgments through the method of induction (Özlem, 2010, p. 80). In this sense, it explains the limits of human knowledge with concrete, factual reality. It aims to identify events and reach a single correct norm. Therefore, metaphysical teachings cannot be the subject of experience, science, and knowledge. Religious matters, on the other hand, are the unseen truths behind the material and are outside the definition of reality (Çubukçu, 1986, p. 55). Therefore, the exclusion of traditional religion and metaphysics by positivism means excluding many ancient approaches and techniques, as well as many lessons and subjects related to human education and upbringing. Especially in line with the new human and new humanity religion, and for the progress of humanity, many traditional and old elements that constitute the human should be abandoned entirely.

On the other hand, positivism claims that there is an unbreakable structure between knowledge and sensuality. According to positivism, the analytical method, which is used in sciences such as physics, chemistry, etc., and is the only valid way of acquiring knowledge, should be used in all fields of knowledge. As in natural sciences, a single method should also be followed in social

sciences. In particular, examining social events with a causal link leads to an objective analysis (Çiftçi, 2003, pp. 98-99). Social events can be resolved with given ready facts. It is assumed that this method and understanding of knowledge of social science will also rationally shape cultural life (Çubukçu, 1986, p. 55). As can be understood, the limits of the human mind in obtaining knowledge and building life upon this knowledge are determined by external reality.

Reality exists independently of human thought. Reality is in a state of waiting to be discovered in nature. Generalizations are made from the observation of reality. Information can be obtained through induction, which includes reason and observation. This scientific method can discover the laws of both natural and human phenomena. This makes controlling and predicting human behavior possible (Peca, 2000, p. 7). Therefore, the understanding of education also considers humans as determinable beings. Accordingly, it is possible to achieve the desired results for the individual after certain factors are ensured in the education process. Considering Comte's view of society, it can be said that the desired outcomes for the individual are in complete harmony with the roles and duties assigned to society. In order to raise an individual according to a scientific society, education must also be purely scientific in both its theoretical and practical dimensions.

In light of this information, the purpose of education and the individual it aims to cultivate in positivism (also considering societal acceptance) are understood. Positivist education considers modern science's assumptions and goals as unchangeable guides. He thinks of religious content with no empirical aspect as superstitious and metaphysical arguments. He sees everything that is the opposite of progress as reactionary and wants to leave it out of life. In this context, positivism intends to educate the individual in a way that perceives, judges, explains, and assigns meaning and value entirely from a rational perspective (Kale, 2014, p. 294).

For this purpose, positivist education avoids religious and idealistic discourses while organizing the curriculum. He chooses topics that encourage students to think scientifically. Designs all teaching and learning materials according to features that will be objectively verifiable from an experimental perspective (Toprak et al., 2010).

In positivist education, it is seen that the aim and the content of the curriculum are tried to be formed according to the facts. Accordingly, it is necessary to carry out the measurement and evaluation phase, which allows for feedback and correction in education and shows how successful the learning is, with objectivity. As Bayraktar (2022) also stated, the results to be obtained on the trained subject must be predetermined according to scientific judgments and must be definitively observable when obtained. Therefore, according to positivist education, learning/teaching has only occurred in the context of observable behavior change.

Positivism also reflects its unique characteristics in educational stages, such as planning, observation, and feedback. Positivism, which does not accept any theoretical and practical assumptions other than scientificity, equates modernization and progress with scientific understanding. He wants to establish a paradigm that is strict enough to prevent elements that disrupt modernization and progress from being involved in the process. According to positivism, education and schools have a significant role in the goal of modernization and progress. For a solid positivist paradigm, there is only one truth: the scientific one. The only correct understanding brings with it a single center. In school and classroom management or in the regulation of relationships between administrators, teachers, and students, there is a pre-defined and clearly delineated understanding of human beings. Due to such acceptances, positivism has to take central power and authority as its basis (Şişman, 1998, pp. 403-404). Therefore, a direct

relationship between the state and the education system is essential. A person is raised within an education system clearly defined by the state. According to Fırat (2006), this view manifests itself as the reductionist aspect of positivism. Reductionism can be detected in the connection between the individual and society. In positivist reductionism, each part is divided into its smallest subparts. Even the most minor component must serve the main principle and perform its duty according to it. This view results from the hierarchical separation of students, teachers, and administrators in formal and non-formal education. Classes should be divided into different levels, and lessons should be divided into various units. Moreover, each microstructure must successfully perform its tasks (p. 42).

The impact of positivism on education is also felt in the dimension of educational administration. In the field of educational administration, the practical feature of positivism being more robust than its theoretical basis is decisive (Çelik, 1997, p. 35). The classical organization theory, influenced by the positivist theory, has long served as a guide in the training of educational administrators in countries like Türkiye. Accordingly, the individual who does the work is responsible to the extent of their authority. Division of labor is made by considering areas of expertise. Actions should be developed according to the fixed rules and regulations for the specified purposes (Fırat, 2006, p.). 42). Therefore, this organizational theory aims to explain and control behavior (Şişman, 1998, p.). 401). If the most effective method of action can be discovered within the cause-effect relationship, it can be accepted that this discovered method is applicable to everyone.

6 Finding Positivism in educational sciences

Finding positivist assumptions within educational sciences primarily involves understanding the transformation of education into scientific content. Transfer of knowledge and values to younger generations in line with certain expectations (Cevizci, 2010, p. The use of the term' educational sciences' for education, which is seen as 165), is relatively new. It is seen that one of the first to use the term educational science was Otto Willman in the nineteenth century. When using this expression, Willman wants pedagogy to be seen as part of the social sciences. Accordingly, the theory and practice of education should be limited to explanations related to social and cultural realities. Educational science should be concerned with what is and should make experimental, analytical, and inductive explanations about what is (Brezinka, 1992, p. 37). Today, in line with Otto's approach, educational science conducts methodical and systematic research on the basic concepts of education (education, teaching, student, teacher, etc.). Educational science is a discipline that leads to new findings, theories, and models and, in this respect, guides the practice of education (Erdoğan, 2021, pp. 3-4). However, it may be thought of as a contradiction that educational science, as a discipline concerned with what is, should guide what ought to be. In this contradiction, it can be said that the positivist philosophy's provision of a determined content for human life is also valid for educational sciences at this time. While particularly interested in the natural sciences, it can offer law-level certainty about the future (what ought to be) instead of making any inferences about what ought to be. However, social sciences find it challenging to discover such laws. It is a possibility that individuals can make inferences about what should be from social sciences on their own. Every individual interested in social science can establish their own paradigm within many different theories. Positivism, which is in favor of a single truth and a single center, does not allow individuals to make such choices. In this sense, an educational science woven with a positivist approach becomes a field that directly intervenes in human life

rather than being a discipline that only deals with what is and then withdraws (Bayraktar, 2022, p.).

After the scientific momentum of education, Friedrich Schneider states that pre-scientific pedagogy was not carried out according to a specific theory and method and was based on several intuitive experiences. According to Schneider, the educational practices of old pedagogy are unscientific (Erdoğan, 2021, p. 4). Positivism; also accepts the view expressed by Schneider, more or less, in terms of seeing the single truth and single center view and the positivist period as the final stage. In this respect, it is possible to say that according to a science of education woven with positivism, it is also an intuitive experience and unscientific for the individual (teacher, administrator, etc.) to make a choice according to himself.

Although the term educational sciences emerged in the nineteenth century, educational activity is more comprehensive than in the last two centuries. Humanity's educational experience is quite deep-rooted. However, the positivist paradigm is engaging in a confrontation with these deep-rooted assumptions. A positivist paradigm and method-based educational science criticize the principles, theories, and practices that determine educational activities before the scientific consideration of education.

It is possible to find an example of the three periods of positivism in Sadrettin Celal's views on the scientification of education. Celal (1929) argues that each professional field first emerges operationally, then develops to gain a scientific dimension, and thus perfects itself. The evolution of professions is also possible for education. Celal states that education has reached a scientific level by passing through practical and philosophical stages. In the practical phase, past experiences have been added to the current ones in measuring traditions and customs. In the philosophical stage, many philosophers such as Spencer, Monteny, and Rousseau have contributed to education with their critical attitudes. The scientific stage is a process in which positive results are achieved through examinations and research (Celal, 1929, pp. 8-9; Erdoğan, 2021, s. 4). According to Celal (1929), the biggest obstacle to education and training in schools is religious influences. The influence of religion does not befit a secular state, which separates religious (ladini) and worldly affairs and considers it its duty to engage only in earthly matters. Celal argues that instead of a spiritual understanding in education, the dominance of a scientific mindset opposed to religion should be taken as the basis (p. 55-56). In this sense, it is seen that Celal criticizes traditional education in parallel with the criticism of the metaphysical and theological period of positivism.

Similar ideas are also found in Hasip Ahmet's work Yeni Umumi Pedagoji (1923). According to the methods, pedagogy is divided into five ph: philosophical or rational pedagogy, empirical pedagogy, practical pedagogy, developmental pedagogy, and scientific pedagogy (p. 11). Hasip Ahmet states that, based on this classification, the purpose of education should only be determined by scientific (academic) pedagogy. From this perspective, it regards scientific pedagogy as superior to others. According to him, scientific pedagogy does not only consider the interests of specific individuals or groups. On the contrary, it is impartial because it uses the most objective methods. Because it is unbiased, it takes into account the interests of all individuals and society. The path followed by scientific pedagogy is the method that can elevate the state to the level of civilization (Ahmet, 1923, pp. 56-58). It is observed that H. Ahmet also addresses the idea of gaining scientificity in education in Comte's positivism. An association is established between the objectivity of science and social classes through neutrality. This relationship means that the state

will directly impact the entire society or all individuals through education in a way that will serve the state's progress by following the scientific path.

It is seen that Celal and Ahmet's approaches coincide with positivism. The adaptation of the scientific method to education is considered in terms of leaving traditionalism behind. Paul Lapie's view also confirms this observation. According to Lapie, the science of education, whose main lines are determined, has borrowed its method from positive sciences by eliminating metaphysical-based explanations and literary texts (Mialaret, 1999, p. 318). At this stage, discussing whether it is possible to approach education scientifically is essential.

One side of the debate is some of the criticisms directed at the acceptance of educational science. This side only partially recognizes the possibility of education becoming a science. Accordingly, the structuring of educational sciences cannot be entirely evaluated within a scientific category. For example, Montessori thinks that pedagogy has never been based on a clearly defined foundation. Montessori believes that education should develop from the results of experimental sciences in order to be scientific. However, he also states that the current studies have yet to be able to become scientific enough. Benfeld, who advocates a similar view, attributes the non-scientific aspects of education to the lack of an empirical basis. Benfeld sees pedagogical assessments as literary works on education. On the other hand, the other side accepts that education exists as a science. However, they believe that most of the publications on the subject are of low scientific quality. For example, Aloys Fischer and Brauner object to the scientific value of the educational sciences literature (with exceptions) because they are not based on observation and logical analysis. As a third party, some argue with a much more radical attitude that an autonomous science of education is neither necessary nor possible. Third parties are acting on the premise that the existence of the phenomenon of education does not necessarily require the existence of educational science. This approach suggests that educational activities can benefit from various sciences but cannot be a completely separate science. They find the effort to establish an autonomous educational science unnecessary. According to them, education consists of psychological, social, historical, and even philosophical issues, depending on the approach. Education science's claims are mostly the subject of other mentioned fields and are not scientific in nature (Brezinka, 1992, pp. 2-3).

Today, this debate has deepened, and the arguments have diversified. The empirical basis of education is the focal point of the discussion. The different views within the discussion base the debate on the possibility of education being entirely experimental. As Mialaret (1999) also touched upon, education has many functions and situations, such as system, process, content, product, decision-making, management, and implementation. Each of these affects the other. Moreover, there are countless external factors. Contrary to what is thought, it is not easy to scientifically analyze all these educational situations that arise to achieve a specific purpose and under one particular organizational framework. However, Mialaret also states that this is not impossible. According to him, the systematic analysis and evaluation of the internal structure, functioning, and outcomes of educational situations through observation can be carried out concretely at all levels. On this subject, especially the historical development of the science of psychology provides serious resources (p. 321-322).

It can be said that the influence of psychology is more significant than other sciences in terms of looking at education from a scientific method. After establishing psychology, scientists quickly established the relationship between education and psychology. The idea that the individual

should develop as a whole in terms of physical, cognitive, emotional, and social aspects through education has been accepted by thinkers from the past to the present. Moreover, psychology closely relates to these development processes (Can, 2018, p. 43). Specifically, the data from Development and Learning Psychology can be used to determine the interests and attitudes of the student and identify how personality and character develop. In the field of education, various studies in the field of psychology are utilized, and educational practices are guided accordingly (Büyükdüveci, 2019, p. 81).

What makes psychology so important? Can psychology be one of the turning points in the scientification of education? Answers to these questions can be sought based on the transformation experienced by psychology.

Psychology's historical foundations are traced back to much earlier times, to the works of Plato and Aristotle (Bruno, 1996, pp. 6-15). Before psychology, what was taught under the name of psychology was philosophy (Jung, 2006, p. 93). W. James, with his observations on the principles of psychology, has opened the door to a different method in social sciences. W. Wundt, with the first psychology laboratory he opened, endeavored to examine consciousness from an experimental perspective and steered psychology onto a path separate from philosophy (Bayraktar, 2022, p. 245). Wundt's theory is fundamentally based on a new definition of consciousness. He defines consciousness as "the sum of the realities we are aware of" (Wundt, 1924, p. 1) he/she/it says. Also, "All objects of experience have this property; that is, we cannot really define them, we only point to them, and if they have a complex structure, we analyze them according to their separate attributes" (Wundt, 1924, p. 1) included the statements. With these statements, Wundt advocated the idea of studying mental phenomena that turn into experience instead of the soul within metaphysics in psychology. More than a century ago, this approach, which manifested itself with the efforts of Weber and Fechner, is compatible with the metaphysical principles of positivism. In the ongoing process, Gestalt psychology has focused on the experiential dimension of the cognitive system. Then, behaviorism and Pavlov's conditioned reflex experiments claimed that psychology is an objective science of behavior. The aforementioned psychological approaches are different from each other. It can be said that despite the differences, psychology is the science of behavior that investigates all processes and actions occurring inside or outside the individual and their internal and external causes (Altıntaş, 1989, pp. 1-3). According to Guenon, psychology has broken away from the unchanging understanding of metaphysics under the influence of 18th-century Anglo-Saxon empiricism and has shed pure spirituality. Psychology has moved away from the fixed, absolute truth quest of metaphysics and has settled into the orbit of the world of phenomena that express multiplicity (trans. Bayraktar, 2002, p. 245). Psychology has led to the emergence of a sub-discipline such as educational psychology, which has a solid empirical aspect due to the applicability of its findings to the field of education.

The other science that contributes to the strengthening of educational science thought is sociology. The importance of sociology is manifested in the context of aspects of education related to society. Educational statuses cannot be seen as a process that develops only within the school. The living environment in which the school is located is highly determinant (Mialaret, 1999, pp. 321-322). Sociology, which claims to be objective with Comte, systematically explains societies' life, behavior, and functioning forms. He sets these out with a general understanding (Wolf, 2012, p. 4). The need for education for information from sociology has led to the birth of the Sociology of Education, strengthening the goal of education to become a science. After Lester Ward, who first mentioned the sociology of education, essential figures such as John Dewey, E. Durkheim,

W. James, and G.S Pierce also ensured that educational events were examined within the possibilities and methods of sociology (Tezcan, 1985, p. 5).

In terms of the establishment of psychology and sociology, Comte's positivism precedes these two fields. The path opened by positivism is helpful for social sciences. The connection that positivism established between natural sciences and the social field has been a driving force for the establishment of social sciences. It may not be said that all approaches in sociology or psychology completely align with positivism. However, the acceptance of theories that prioritize the observable, that is, behavior, over the mind at certain stages of the history of psychology is an apparent influence of positivism. Moreover, even the approaches expressed as internalist in psychology, not deviating from experiment and observation, are also connected to positivist ideas. Similarly, sociology's effort to reach objective results through scientific techniques can be explained as an apparent influence of positivism. Educational sciences have intensely interacted with psychology and sociology to be more effective by providing reliable and precise information in the process of human development. Educational sciences, such as school, curriculum, method, technique, teacher, student, learning, academic structures and processes, and many other concepts or subject areas, have aimed to develop educational action on a scientific basis and to produce practical theories. This is why educational sciences have moved away from the philosophical aspects of old pedagogy that were seen as metaphysical or fictional. Criticisms directed at old pedagogy have also been made against old philosophy by philosophers like Comte. In other words, there is a parallel between the criticisms of old approaches in the history of philosophy and the criticisms of pedagogy. Moreover, one of the source points in these criticisms is Comte, the founder of positivism.

7 Results and evaluation

In Europe in the nineteenth century and in our country after the Tanzimat period, it is observed that the basic views of positivism, which began to make its influence felt, continued to exist in education through educational sciences. The study observed that the initial arguments for the establishment of educational sciences were based on a historical evolutionary model similar to Comte's law of three stages. The fact that education cannot be defined on any ground other than the scientific ground shows that this idea continues implicitly or explicitly. Considering the essential relationship between education and human beings, the positivist influence also shapes the assumptions that education puts forward about humans and the competencies it expects from them.

It has been understood that, based on the fundamental views of positivism regarding science, it is in favor of an education system that considers humans as determinable and shapeable in a desired manner. It has been observed that positivism considers the foundations of modern science as guiding principles and aims to raise individuals who reject religious and ambiguous elements. It has been understood that in positivism, the curriculum consists only of content that can be verified experimentally and objectively and that measurement and evaluation are carried out according to predetermined judgments. In addition to the contributions of positivism in the establishment of the fields of psychology and sociology, it has been presented with some reasons that educational sciences have also developed to a certain extent under the influence of positivism. It is possible to say that the influence of positivism still persists when all these connections are considered together with the limited methods and scientific content adopted by today's educational sciences.

There are two main trends in terms of the relationship between education and the ideal. The first

is the structuring of education as an ideal or near-ideal higher organization. The second is to build an educational environment that fully aligns with life instead of containing ideals. In one, education is seen as preparation for life, while in the other, it is seen as life itself. Education, while preparing a person for life, also aims to provide them with life content. The difference between preparation for life and being life itself is actually a difference created by pragmatism, the most influential movement in education of the last century, along with many other philosophical movements, especially positivism. In other words, all approaches except pragmatism somehow bring education together with the ideal concept. Because in almost every era, education is expected to perform a functional role in both individual and social domains. This expectation is adorned with the goal of education to maximize human potential. This expectation can also be expressed as the 'ideal of education.' It has been observed that positivism also acts with such an expectation to a large extent, setting goals such as science-based social development and progress before humans and education. It has also been observed that the boundaries of this expectation are drawn very strictly within the human view of positivism.

In terms of this study, it can be said that the idea that the meeting of education and ideals will benefit education systems is the basis. However, this basis differs from the meeting of education and idealism in positivism. The educational ideal of positivism is based on the idea that humans do not have an essential difference between living and non-living beings. The person born from this idea is considered to be explainable, predictable, and knowable in every aspect. In general, it is seen that the dominant approaches within social sciences and educational sciences aim to explain humans with these aspects. However, it is impossible to interpret education as an absolute field that develops only within its own scientific structure and is independent to the extent of being isolated from non-scientific elements. Therefore, limiting educational processes to merely scientific planning is a remnant of positivism. Moreover, it has yet to be guaranteed in the last century that this is a successful way of providing education. In many ancient philosophical traditions and today, human and education, will and freedom are also evaluated in terms of their dimensions. Will, freedom, possibility, potential, and unknowability are aspects that take humans beyond the boundaries that positivism tries to draw. In this respect, understanding and educating a person also becomes a matter of reflection and critical method.

In conclusion, it can be said that the connections between Comte's positivism and the fundamental views of today's Educational Sciences mean a dominant educational model. The features contained in positivism show that the education system in many different countries today is nourished by positivist philosophy and serves to create positive individuals in many aspects. More specifically, it is possible to reveal these connections by conducting academic studies that directly examine the positivist elements within the education systems specific to countries. The work in your hand serves as a basis for such studies.

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