

# Science and Meta-Science

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**Author: Mohsen Abbasnejad**

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### 1972-Mashhad

Mohsen Abbasnejad was took his BS in Mechanical Engineering but continued his studies in Philosophy. Having studied Islamic Jurisprudence and Usool in seminary under the great contemporary jurist and philosophy under a distinguished philosopher of the eastern world, he passed the highest levels of the seminary with flying colors.

Having authored number of works in such field as philosophy, philosophy of science and Hadith, and Jurisprudence, Abbasnejad is now serving on Quran and epistemology, and the director of the Quranic Research Foundation.

In addition to penning a six-volume collection on the basics of inter-relating science and the religion, some of his other books are as follow:

- Principles and basics of the Quran and Modern Science,*
- Imam Ali (A.S.) Managerial Approach,*
- Imam Ali (A.S.) Personal Lifestyle,*
- Basic Rights within religious Approach,*
- Some Elaborations on the Principles of Islamic Jurisprudence (3 Vols.)*

# About the book:

The present book examines the relationship between science, values, metaphysics, and culture. In the section devoted to the philosophy to science. The characteristics of the positivistic epistemology as well as the critical views of Popper and Cohen regarding the influence of meta-scientific affairs such as values and metaphysics on science are carefully examined. Reviewing the ideas of such sociologists of knowledge as Marx, Dilthey, Nietzsche, Max Scheler, and Karl Mannheim as well as the strong project in the sociology of knowledge and the social identity of knowledge are examined in another section. Investigating the role of presuppositions in understanding through examining hermeneutics and viewpoints of Schleiermacher, Dilthey, and Gadamer is another issue which is fully discussed in a separate section. In Postmodernism section, the views of Nietzsche, Heidegger, Frankfurt School, Habermas, Michel Foucault, Lyotard, and the traditionalists concerning the influence of power and Myth on the knowledge are studied. The effect of values, metaphysics, culture and other meta-scientific affairs on knowledge is facing with such challenges as self-conflict, relativism, and discourse aversion which are fully discussed in the book. Finally, the chosen view of the author himself is proposed as the "Demarcation Theory", according to which the intervention of such meta-scientific affairs as metaphysics, values and culture in scientific researches is inevitable in some areas which are thereafter referred to as " the Permissible areas" of the relationship between science and meta-science, being in contrast with the impermissible ones based on which any intervention of the

meta-scientific affairs in scientific researches is logically impermissible and unacceptable. What matters most in this theory is the limitation of the permissible and impermissible areas in such a relationship and the determination of some indicators for demarcating those areas which can help us identify the reasonable areas for the intervention of metaphysics, values and culture in scientific studies.

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# Expert of the Book:

## **The Challenges of Linking Science and Metaphysics**

### **A review of the research background**

We reviewed the most important opinions on the relationship between science and metaphysics in the previous section. We saw that the standard view of science emphasizes the independence of scientific activity from the observer's intention and suggests that the scientist, through close inspection and without prejudice, can come up with the laws of nature. Therefore, there is a clear separation between science and metaphysics and any other metaphysical topic; and if a link is found between them, it means that the scientist has theorized outside of the permissible scientific framework and its native rules. But major trends in the philosophy of science, sociology of knowledge, hermeneutics and the so-called postmodernism movement, especially since the twentieth century, have challenged the standard doctrine and stressed the influence of metaphysical matters such as the impact of metaphysics of values and culture on science and scientific activity.

### **Philosophy of science and metaphysics**

Popper's philosophy of science explained the importance of metaphysics and its significance in science and provided a setting for it in the field of discovery, rather than judgment. He criticized the inductive logic and emphasized the difficulty of observing from the theory and departed from the standard view of science that assumed observation was the beginning of the scientific activity. But the person who had the most influence in this situation was Cohen and his famous idea of the "scientific revolutions", which started a wave of rethinking the standard view of science in various fields.

Before Cohen, scientific activity was a rational matter based on its internal logic, and values and metaphysics had no place at the core of scientific activity, but Cohen's view of science spread the practice of metaphysical matters to all of science and described the research as a result of metaphysical obligations rather than a rational activity. In his opinion, scientists are confined to their particular paradigms and their activities go hand in hand with the accepted values and practices of the paradigm. They justify incompatible evidence until a crisis, through a scientific revolution, introduces the alternative paradigm. Accordingly, whether at the stage of choosing the problem, or the stage of theorization, or judgment phase, the values and norms of the ruling paradigm will determine the results, and empirical evidence has little to do with this. The philosophers of science after him, especially Feyerabend, continued his path. Feyerabend defended the incommensurability of scientific paradigms and competing arguments. In his opinion, science does not have any special rules and principles, in other words, everything is good for science. The standard view of science, which considers the scientific activity to be a methodologically relevant method obeying special empirical rules, is a myth. A myth that itself has emerged from a complete metaphysics.

### **Sociology of knowledge and metaphysics**

Also, in the sociology of knowledge, research on the links between science and metaphysics continued. While until the beginning of the twentieth century and under the influence of the Positivists movement on science, scientific thinking was outside the scope of sociological research; but by the advances in the field of history and philosophy of science, especially from the 1960s, research began on the relationships between social affairs and science. While Mannheim saw the form and content of knowledge as a social matter and saw natural science independent from the group perspective; the sociology of knowledge strong programme, also included science as subject to general rules of social knowledge. They argued that science is

not a knowledge that can only be gained through experience and contemplation, but science is a form of knowledge that is created through social mechanisms. According to Mulki and other theorists of the sociology of knowledge strong programme, the choice of the research subject and epistemic claims are influenced by the social context. Everyday knowledge and society's prejudices affect scientific activity, and even the criteria for the truthfulness and judgment of scientific theories are different in every group.

### **Hermeneutics and metaphysics**

Except for the philosophy of science and the sociology of knowledge, hermeneutics also contributed greatly to the determination of the relationship between science and metaphysics. Hermeneutics initially sought to determine the text interpretation principles, but with Dilthey, attained the position of the methodology of human science. Then with the emergence of Heidegger, it became a full-fledged ontological philosophy. In the later hermeneutics, human behavior is as meaningful as text and must be subject to the act of understanding which itself is the subject of the hermeneutical method. Since the prejudices of the author are influential in every understanding, the study of the prejudices which are largely metaphorical matters was included in the agenda of hermeneutical studies. First, Dilthey explained the meaningfulness of human behavior, and in contrast to the dogmatic Positivist viewpoint which summarized everything intangible events and the appearance of human behavior and was going to convert human sciences to natural sciences, emphasized the need to know the hidden aspects of human behavior through empathy and reconstruction of the author's world. A world that can be understood through an understanding of his values, metaphysics, and social status. In the following, Gadamer stressed the inefficacy of the empirical method to understand human phenomena. In his opinion, hermeneutical understanding and experience follow a dialectical model, which in itself arises from the author's prejudices or the so-called interpreter's horizon, which in turn is influenced by the particular

hermeneutical and historical position of the interpreter. Tradition is a collection of metaphysical and non-empirical matters such as the worldviews and traditions of the interpreter's community and his specific values, interests, and expectations. The emphasis on the interpreter's values, interests, and expectations in the idea of understanding an application of the text, deems futile the dream of achieving objective knowledge regardless of any non-scientific affairs. The standard view of science, more than anything else, emerged from the mindset of thinkers in the modern age which is naturally and fiercely criticized in the postmodernism through the critique of the foundations of modernity.

### **Postmodernism and metaphysics**

Postmodernism is a movement that considers the principles, methods, and ideas of modern culture as past history, and criticizes the ideals and principles adopted from the Age of Enlightenment onward. As an example, postmodern philosophers challenge the idea of purity of science and its independence from any kind of metaphysical subject. Nietzsche, who is commonly known as the founder of this movement, considers the truth as a metaphor. Hence, each person interprets the truth based on his own perspective. Nietzsche introduced the idea of Will to Power which got him close to one of the fundamental postmodern perspectives, i.e. the relationship between knowledge and power. Heidegger also sees the foundation of science in a metaphysical framework without an empirical basis which is just one of the possible forms of knowledge. Incidentally, this outlook, due to the destruction of nature within, is disastrous and distractive.

The Frankfurt School philosophers have also exposed the sources of modern knowledge and have pointed out that the myths of modern knowledge are derived from the Western capitalist society. In their opinion, the instrumental wisdom ruling the modern knowledge that merely sees the nature with a quantitative eye has lost its power to examine the scientific goals, and unintentionally serves the logic of

domination and capitalism. Hence, in the heart of such knowledge, there is nothing to condemn inhuman activities. Habermas, the last survivor of this school, also argued that science is a particular kind of interest and appreciation that glorifies domination of nature. Therefore, science and scientific method cannot help us in the field of historical and cultural sciences, because in that area, firstly, we face human affairs based on mutual understanding and interaction, and secondly, understanding of these phenomena is itself trapped within the cycle of fake ideologies that can be understood only through the critical method and the critique of ideology.

After the German circle of the postmodern movement, it is the turn of their French circle to analyze the relations between science and metaphysics from another point of view. In particular, Foucault has a special place in analyzing the relations between power and knowledge. Foucault's knowledge systems in every age, like the Cohen's paradigms, have their own truth systems and do not necessarily excel each other. With presenting the idea of discipline technology and the human sciences regime, he sees the knowledge system in each age as dependent on the ruling power regime in each era. Lyotard used another type of literature to show us the origin of modern knowledge. Lyotard holds that science, like other forms of knowledge, is based on particular narratives. Narratives are not scientific matters that originate from the context of reality, and they are based on presumptions accepted without proof. The traditionalists have a special place among postmodern circles because they emphasize the return to tradition along with the critique of Western civilization and the foundations of modern knowledge. The traditionalists point out the oddities of modern knowledge, especially the environmental degradation problem, and examine the fundamental differences between the modern and the old knowledge. In the old knowledge, everything was considered in its general structure and hierarchical position in relation to the whole creation and the sacred act, while the modern knowledge is de-mythicalized and secular, and assumes no place for the sacred act in its midst. Another thing is that in the ancient times, everything was a

symbol of the divine structure and therefore mankind had a sacred outlook of nature, while today nature is used as a subject for further penetration, plundering, and destruction. They have also examined the dominance of humanism on modern knowledge in order to show how mankind, instead of God, was considered as an absolute entity in modern knowledge. The movements that we discussed their ideas in the previous section are not the only movements that have focused on theorizing about science and the impact of extra-scientific matters on it. But undoubtedly, the above movements are considered the most important cases.

All of these movements have insisted on the impact of metaphysics, values, and society on science and scientific practice versus the standard view of science. As a result of their efforts, the naive Positivist vision of the early twentieth century has little support among today's researchers of science. Nevertheless, their ideas face major challenges that make it difficult to actually accept such ideas in scientific circles. Hence, most scientists still choose the standard view of science for their scientific activity. Some of these challenges address all perspectives, and some others borrow just a part of these views. In this section, we will examine the challenges that are more commonplace and therefore, the aforementioned perspectives must come up with some ideas to become popular and address those challenges.

**Contact Person: Majid Jafari Aghdam**

**[polliteraryagency@gmail.com](mailto:polliteraryagency@gmail.com)**

**Pol Literary & Translation Agency, Unit.3, No.108, Inghlab Ave,  
12Farvardin Str., Nazari Str., Tehran-Iran**

**[www.pol-ir.ir](http://www.pol-ir.ir)**

**Tel:+98 21 66480369, Fax: +98 21 66478559**

