

THE ALIENATED SUBJECT IN MODERN SCIENCE AS THE PROBLEM OF HUMANITY

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Abstract: *The core idea of this article is that such different perspectives embedded in mainstream modern science as secularism, positivism, scientism, reification, and skepticism are rooted in the alienated subject in an epistemic process of scientific presuppositions and method. In this context, what is called secularization is essentially the epistemic alienation process of the knowing subject from science as a product of man. Human consciousness and creativity have been long neglected and disposed in any popular scientific endeavours. Through phenomenological epistemology approach as well as logico and socio-ethical analysis, this reflexivity-based research discovers the dangerous impacts of the alienated subject process in secular-modern science that threaten the existence of humanity in the future. This latent alineated subject process has led a number of scholars to witness growing appearance of skepticism operating in various forms and realms. There are two realms of skepticism, i.e., theoretical and practical. Theoretical realm includes ontological and epistemological sections. Practical level encompasses ethical and social dimensions. The theoretical level is that secular-modern science has lead scientists as well scholars in general become skeptical of their own ability to improve the contemporary human condition. There are two stages of secularization (the alienated subject) of science. The first stage is the early secularization from by the time modern scientific worldview dominated across the world to the Second World War in which many people still believe in modernism project. The second stage is the late secularization that emerges after the Second World War along with the wave of growing skepticism on truth and rationality of science. The practical level is the total submission of scientific enterprises into neo-liberalism and capitalism. There is an insidious and overarching tendency of the direction and application of scientific research to market forces. This phenomenon serves to dissolve any unified sense of human welfare into merely a set of discrete exchanges between knowledge “producers” and “consumers”.*

Keywords: *The Alienated Subject; Modern Science; Scientism; Skepticism; Problem of Humanity*

Introduction

The discourse on issue of secularization of science is commonly trapped in focusing solely on theological, metaphysical and cosmological discussions. It is undoubtedly that we are extremely in need of raising those accounts, which have been ignored completely over the last three centuries since the rise of secular-modern science. The great efforts that Muslim scholars have been pursuing this path relentlessly such as Seyyed Hossein Nasr, Ismail Raji’ al-Faruqi, Mehdi Golshani as well as Syed Muhammad Naquib Al-Attas, Kuntowijoyo, Osman Bakar and Mulyadhi Kartanegara in Southeast Asia region must be much appreciated. In reference to Harvey Cox’s claim on secularization as “the liberation of man from religious and metaphysical control over his reason and his language”¹, Syed Naquib Al-Attas

¹Harvey Cox, *The Secular City* (New York: McaMillan Company, 1965), 2.

highlighted the loss of transcendent vision as well as metaphysical dimension which secularization primarily stood for.²

Appreciating the theological-religious critiques of the secularization of modern science, this paper raises a further approach on this issue, which is still rarely brought up, namely, the perils of secular-modern science towards humanity in epistemological framework. It neither says the previous account lacks human concern nor claims as the new critique on secularization of science. Such works of Nasr as *Islam and The Plight of Modern Man* and *Man and Nature: The Spiritual Crisis in Modern Man* are full of explanatory human concern. We may say even that Nasr's indepth analysis of the inquiry of science both in its traditional meaning and modern form is occupied with profound human narrative. When identifying the modern conception of man as Promethean man Nasr portrays:

Promethean man is a creature of this world. He feels at home on earth, earth not considered as the virgin nature which is itself an echo of paradise, but as the artificial world created by Promethean man himself in order to make it possible for him to forget God and his own inner reality. (*Knowledge and the Sacred*, 1981)³

The point of this paper is focused on the ways of bringing up the issue of secularization of science for which we are required to exercise. The first, rather than simply introducing the established metaphysical and cosmological doctrines in dealing with modern science through a top-down route, this article appeals to those who want to back up the criticism of secular science for undertaking a bottom-up approach. By the term 'bottom-up approach' it means as an elaborate response that starts from the contemporary problems surrounding modern science and comes to philosophical and critical analysis of foundations of actual conditions of secular science.

The second, we need to consider that the discourse of secularization of science is neither in a vacuum of social context nor devoid of dynamic interaction between philosophical foundations and science. Just as Peter Berger's explanation on dialectics between moment of internalization (individual is the product of society) and that of externalization (society is the product of individual)⁴, there is a working interchange between philosophy and science through which philosophical implications of science as well as philosophical foundations of science pertain to the discussion. The mode of relationship between science and philosophy is dialectical, a two-sided intersection rather than a one-way course.

Method

This research is designed to employ reflexivity within phenomenological epistemology approach in parallel with the logical and socio-ethical analysis. In reference to Husserl's *Logical Investigations* (1901), deductive logic and epistemological

²Syed Muhammad Naquib Al-Attas, *Islam and Secularism* (Kuala Lumpur: ISTAC, 1993), 17–18.

³Seyyed Hossein Nasr, *Knowledge and The Sacred* (Lahore: Suhail Academy, 1981), 161.

⁴Peter Berger and Thomas Luckmann, *The Social Construction of Reality: A Treatise in the Sociology of Knowledge* (New York: Anchor Books, 1967), 61.

investigations are occupied to work together with phenomenological analysis to describe the structure of consciousness.

The inquiry starts from own author's critical reflection on the limitation of science critiques, which is considered having overlooked the epistemic root cause of the legitimation crisis of contemporary science. The standpoint of this research is that secularism, scientism, reification, and skepticism are impacts of the process of alienation of the subject of science. Socio-ethical analysis is employed to expound the development of science and technology under the secularist-scientism worldview has led to grave consequences for humankind.

Result and Discussion

Secularization as the Process of Alienation of the Subject

The basic standpoint of this paper is to argue that the alienated subject in modern scientific enterprises is the epistemic root cause of the legitimation crisis of contemporary science. In this context, what is called secularization is essentially the epistemic alienation process of the knowing subject from science as a product of man. The alienation, in fact, is a dehumanizing process of abstraction and idealization of presuppositions of science. Edmund Husserl debunked the positivistic reduction of the idea of science to mere factual science with void of consciousness of the subject. He ascribed the modern science suffering a serious crisis and described it as the loss of its meaning for life⁵.

What Husserl wanted to combat is *scientific objectivism*, a naive character of scientism. By the term *scientism* it is the belief that science as theory would be capable of solving all riddles of human existence.⁶ Michael Peterson *et al.*, wrote that scientism is the idea that science tells us everything there is to know about what reality consists of.⁷ Roger Trigg asserted that scientism consists of the view 'science is our only access to reality'.⁸

According to Mikael Stenmark, there are numerous definition of scientism. *Epistemic scientism* is defined as "the view that the only reality that we can know anything about is the one science has access to".⁹ *Rationalistic scientism* is defined as "the view that we are rationally entitled to believe only what can be scientifically justified or what is scientifically knowable".¹⁰

⁵Edmund Husserl, *The Crisis of European Sciences and Transcendental Phenomenology* (Evanston: Northwestern University Press, 1970), 5.

⁶Stephan Strasser, *Phenomenology and the Human Sciences* (Pittsburgh: Duquesne University Press, 1963), 193.

⁷Michael Peterson et al., *Reason and Religious Belief: An Introduction to the Philosophy of Religion* (Oxford: Oxford University Press, 1991), 36.

⁸Roger Trigg, *Rationality and Science: Can Science Explain Everything?* (Cambridge: Blackwell, 1993), 90.

⁹Mikael Stenmark, *Scientism: Science, Ethics and Religion* (Aldershot: Ashgate, 2001), 4.

¹⁰Stenmark, 6.

For Roger Trigg, refutation of metaphysics in the name of scientism is a suicide action for scientific knowledge itself.¹¹ Without metaphysical reflection, there would be no suitable intellectual resources for grounding science. Trigg continues his elucidation,

We need an assurance of a link between science and the way things are, between reason and reality. Above all, we need an assurance that there is a reality to be known. If reality were unstructured and disorderly, indeterminate and fundamentally chaotic, science would be impossible. It is through metaphysical reflection that we see the precondition of science.¹² Otherwise, we have no framework in which the scientific project can make sense and be legitimized¹³

In debating with Daniel Dennett, a tough advocate of positivism who is hostile with any idea of there being a self, the knowing subject, Trigg ascribes the rejection of metaphysics as the destruction of the subject.¹⁴ He reminds that science is a product of human consciousness while consciousness is the necessary pre-condition for rational reflection as well as any rational judgments which are inevitably occupied in any scientific enterprises.

In terms of the Critical Theory, disappearance of human subjectivity in scientific enterprises and works is a form of reification. Inspired by Friedrich Holderlin's *Hyperion* (1795), G.W.F. Hegel's *Phenomenology of Mind* (1807), Karl Marx's *Economic and Philosophic Manuscripts of 1844*, scholars of Critical Theorist depict modern science embedded in capitalism-dominated social structure led human being to be estranged from the products of his own creativity, from his/her humanity; this is called alienation.¹⁵

Rooting alienation within the structure of consciousness is seen as insulating it from reality, from its inner being. Alienation brings about reification, a term used by Georg Lukacs in *History and Class Consciousness* (1923)¹⁶ to describe the 'tendency of socially authored structures to appear as real, as external to and independent of, individuals'. In this context, many contemporary wo/man treat science along with its products as merely solid-material things which are independent from human consciousness and creativity. In turn, this reified consciousness led them to glorify the product of science and treat it as sacred object (*commodity fetishism*).

Humanity is the Core Problem

Through the above-mentioned description, the author would like to identify and elaborate the current condition of the alienated subject in secular-modern science as the problem of humanity and civilization. At least, there are four consequences of

¹¹Trigg, *Rationality and Science: Can Science Explain Everything?*, 225.

¹²Trigg, 224.

¹³Trigg, 210.

¹⁴Trigg, 206.

¹⁵Stephen Eric Bronner, *Critical Theory: A Very Short Introduction*, vol. 263 (Oxford: Oxford University Press, 2011), 35–50.

¹⁶Bronner, 263:44–45.

the alienated subject, namely (1) secularization; void of transcendent vision; (2) refutation of metaphysics; scientism; (3) alienation-reification-fetishism; and (4) skepticism; relativism; nihilism. The last item will be enumerated in the next section.

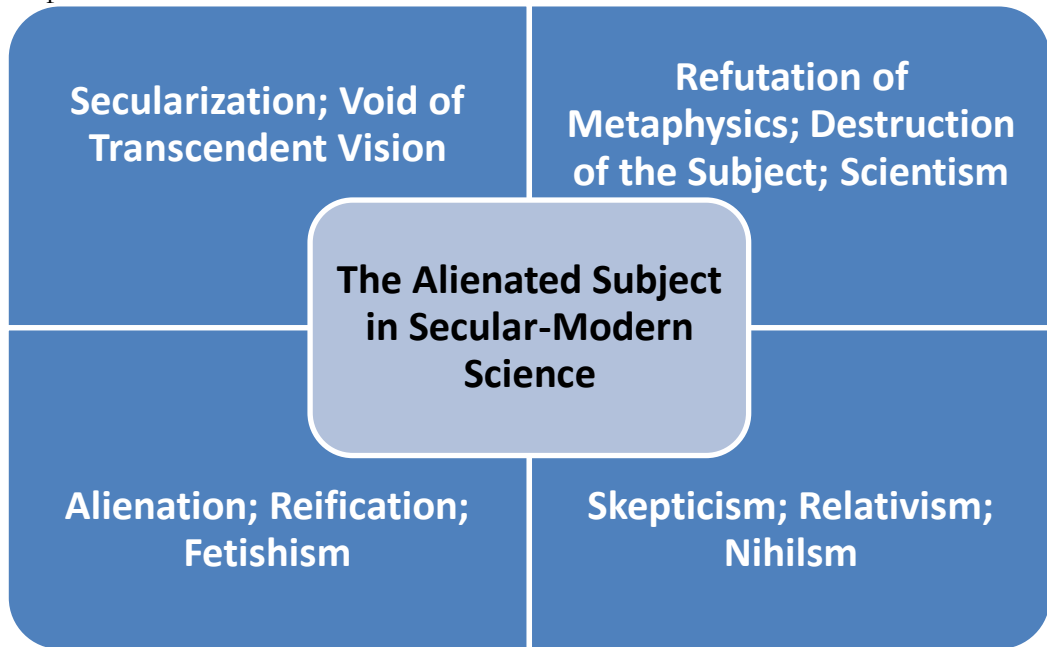


Figure 1. The Consequences of the Alienated Subject of Secular-Modern Sciences

The core thesis of this paper is that secular-modern science imperils the existence of humanity and civilization rather than the existence of God. In fact, this process is a historical course that is neither given nor unshakable. In reference to the richness of Islamic thought and tradition, we still have true faith and great hope that the secularization is not the end of history of mankind. Rather, it will be exposed clearly as a myth of modern epoch.

From Scientism to Skepticism

Ever since the renaissance in Europe in which modern science had departed from religion radically and pursues its own course, a great optimism arisen in the enlightenment period that science could solve all the problems of humanity. As a matter of fact, however, today we are witnessing a great crisis caused by science and the optimism has been substituted by skepticism. The ecological crisis, growing poverty, a great gap and injustice leading widespread devastation around the world, systematic and institutionalized violence, wars, arms race, etc have put humanity today in serious crisis that had never experienced.

This paper is to reveal the dangerous impacts of the alienated subject in secular-modern science that threaten the existence of humanity in the future in two levels, they are, epistemological and ethical ones. The first is that secular science has lead scientists

as well scholars in general become skeptical of their own ability to improve the contemporary human condition. Positivism, an epistemological basis of secular science, paves the way for appearance of skepticism, relativism, and nihilism in which postmodernism suggests those ideas as well.

The second is the total submission of scientific enterprises into neo-liberalism and capitalism. There is an insidious and overarching tendency of the direction and application of scientific research to market forces. This phenomenon serves to dissolve any unified sense of human welfare into a set of discrete exchanges between knowledge “producers” and “consumers”. This tendency is natural and logical implication of secular science in the practical level, something inevitable.

The importance of Islamic viewpoint in this problem is that Islam is capable of providing a broader framework to eliminate the negative effects of secular science whereas it can also establish sacred-religious science accommodating the need of human being for knowledge and science. Islam has profound epistemology, which is appropriate to overcome the skepticism and relativism as well as it also has rich sources and great authority to establish system of ethics and code of conduct for scientific enterprises. Ontological consciousness-based rationality is main characteristic of Islamic epistemology that enables it to contain various problems and different levels of difficulties in philosophical realm.

Why Does Skepticism Appear at the Late Secularization of Science?

It is deplorable that the secularization process of science at the present-day is driven largely by side effect of the modernism project that fails to solve humankind problems as it promises since the Scientific Revolution of the 17th century. Instead of reaching its great optimism, modern Western scientific worldview produces an alien thought for human being, namely, what is called postmodernism. Postmodernism is the name for a movement in advanced capitalist culture, particularly in the arts from which the term postmodernism originated. At the same time as modernism is the culture of modernity, postmodernism is the culture of postmodernity.

A leading postmodernist, Jean-Francois Lyotard, in his masterpiece entitled *The Postmodern Condition: A Report on Knowledge*, attacks the legitimating myths of the modern age such as the progressive liberation of humanity through science and the idea of universality and rationality of humankind. In part of Introduction he acknowledges the skepticism as a product of progress in modern science.

I define *postmodern* as incredulity (skepticism, doubt) toward metanarratives (modernism ideas, projects). This incredulity is undoubtedly a product of progress in sciences: but that progress in turn presupposes it. I have decided to use the word *post-modern* to describe the condition of knowledge in the most highly developed societies.¹⁷

¹⁷Jean-François Lyotard, *The Postmodern Condition: A Report on Knowledge* (Minneapolis: University of Minnesota Press, 1984), xxiv.

On science Lyotard argues that during the last forty years the leading sciences and technologies have become increasingly concerned with language: theories of linguistics, problems of communication and cybernetics, computers and their languages, problems of translation, information storage and data banks. Referring to Wittgenstein's idea about *language games*, he rejects the reality of knowledge because knowledge is merely a kind of discourse, which we produce by means of language and communication.¹⁸

For Lyotard, scientific knowledge does not represent the totality of knowledge; it has always existed in competition and conflict with another kind of knowledge which he calls narrative. Lyotard believes that the nature of knowledge cannot survive unchanged within the context of general transformation. The status of knowledge is altered as societies enter what is known as the postmodern age. He predicts that anything in the constituted body of knowledge that is not translatable into quantities of information will be abandoned and the direction of new research will be dictated by the possibility of its eventual results being translatable into computer language. Knowledge is already ceasing to be an end in itself. It is and will be produced in order to be sold.¹⁹

The brief account of Lyotard's idea above lead him to talk about what he calls the *mercantilization of knowledge*. With the Industrial Revolution it was found that a technical apparatus requires an investment, but since it optimizes the efficiency with which the task to which it is applied is carried out, it also optimizes the surplus value from this improved performance. It is at this moment that science becomes force of production, a moment in the circulation of capital. Thus, the game of science becomes the game of the rich, in which whoever is wealthiest has the best chance of being right. It is that an equation between wealth, efficiency and truth is established.²⁰

In other words, we can say that the goal in contemporary science is no longer truth but performativity, that is, the best possible input/output equation. Scientists, technicians and instruments are bought not to find truth, but to expand power. Since performativity increases the ability to produce proof, it also increases the ability to be right; the technical criterion cannot fail to influence the truth criterion. This shift of attention, from truth to performativity, has impact in present-day educational policy. It has been clear for some time that educational institutions are becoming more functional; the emphasis is on skills rather than ideals.²¹

The aforementioned description of postmodernism thought, which is represented by Lyotard, leads us to come some conclusions as follows:

Postmodernism is a mode of response to modernism (particularly, modern Western scientific worldview)

Postmodernism embraces skepticism, relativism, subjectivism

¹⁸Lyotard, 9–10.

¹⁹Lyotard, 4.

²⁰Lyotard, 31–47.

²¹Lyotard, 47–53.

On the one hand postmodernism is a cynical criticism to modernism, but on the other hand it is a much more radical form of modernism in the term of secularization of science. It even does not simply refute the reality of metaphysics but also the rationality of science.

As a result, there are two modes of secularization of science as follows:

The first mode is the early secularization from by the time modern scientific worldview dominated across the world to the Second World War in which many people still believe in modernism project.

The second mode is the late secularization that emerges after the Second World War along with the wave of growing skepticism on truth and rationality of science.

The following table is to depict some characteristics of two modes of secularization:

Early Secularization (the alienated subject)	Late Secularization (alienated subject)
Refuting metaphysics, asserting science Rejecting spirituality, declaring rationalism of <i>cogito</i>	Refuting metaphysics and science Rejecting spirituality and rationality
Promoting scientism, positivism	Promoting skepticism, relativism, pragmatism
Being skeptical on God’s existence	Being skeptical on human ability to know God as well as Reality as such
Promoting universality	Promoting particularity
Working in the content (message)	Working in the message and medium
Being institutionalized (state, academe)	Being un-institutionalized (individual choices)
Occurring mainly in educated man	Occurring in educated man and mass people
Driving capital and market	Being driven by capital and market
Science is a representation of reality	Science is a fabrication of reality

Table 1. Characteristics of Early and Late Secularization of Science

In spite of different background and characteristics, both secularizations make the world at stake seriously and they in turn threaten the future existence of humanity and civilization. Furthermore, it is clearly identifiable that the late secularization is more dangerous and devastating because this mode is much more pervasive that pass through different cultures, diverse people from any educational background, different levels of society and country around the world. In cooperation with the dominance of capitalism and neo-liberalism, this second stage of secularization creates such global calamities as environmental destruction, over-whelming injustice, vast violence and terrorism, moral disorientation, and other social malaises and devastations. Because of which we may say that secular science imperils the existence of humanity and

civilization because it creates the survival of the world in severe danger we had never experienced in the past.

Considering the focal point of this paper as well as limited time for presentation in this conference, I would like to describe a brief elucidation of appearance of humanity problems and difficulties that brought about by the massive process secularization of science. For this explanation, I just focus on its relation to the actual conditions of contemporary science.

The Late Secularization in Overwhelming Blindness of Vision Skepticism: The Problem of Humanity

Today, we live in the world with which anonymous worldviews largely driven by blind forces with no true knowledge, justifiable ideology, real faith or truthful commitment. For large numbers of people, the present day it seems that life is blind, irrational, and purposeless as the poet A.E. Housman lamented (quoted in John Cottingham, *On The Meaning of Life*, 2003):

.... nature, heartless, witness nature,
Will neither care nor know
What stranger's feet may cross the meadow a lot of
And trespass there, and go
Nor ask amid the deus of morning
If they are mine, or no²²

Morris Berman (*The Reenchantment of the World*, 1981) outlines that the modern scientific worldview is a kind of alienated consciousness that leads to feeling of total reification: everything is an object, alien, not-me; and I am ultimately an object too, an alienated 'thing' in a world of other. This world is not of my own making; the cosmos cares nothing for me, and I do not really feel a sense of belonging to it.²³

Modern thought, which was established through the phase of skepticism following the collapse of the Church authority with respect to the scientists, in fact remains generating the virus of human thought for our civilization today. Modern skepticism has metamorphosed into postmodern skepticism, which contaminates human reason, intellect, and conscience in more devastating and pervasive way.

According to Wittgenstein (read: later Wittgenstein), an influential pioneer of postmodern movement, our basic religious and moral commitments can make no claim to truth. He points out that there is no rational criterion of correctness of religions. He also denies the basic principles of science, which certainly can be given only by rational justification, something he refutes.

The idea of Wittgenstein is the path to total skepticism about the possibility of human knowledge. Let us read an exposition of Roger Trigg in his work *Rationality and Science* (1993) on Wittgenstein's idea:

²²John Cottingham, *On The Meaning of Life* (London: Routledge, 2003), 3.

²³Morris Berman, *The Reenchantment of The World* (New York: Cornell University Press, 1984),

Reason and philosophy are put in jeopardy by Wittgenstein. In fact, so is any notion of reality. He was convinced that we cannot discuss how far one view or another may 'agree with reality'. For him, all justification has to come to an end. Regarding the principles of science, he calls them as the rules of the scientific language-game.²⁴

This growing appearance of skepticism operates in various forms and different levels. Generally, there are two realms of skepticism, i.e., theoretical and practical. Theoretical realm includes ontological and epistemological sections. Practical level encompasses ethical and social dimensions. This essay focuses on exploration of two realms of skepticism, which will be occupied in interconnected way. They are: (1) Epistemological analysis; (2) Ethical analysis

Epistemological Analysis: False Identification Leading Skepticism

The main question that one raises is that why and how skepticism appears in the modern-postmodern world after the great success of scientific advancement in the last three centuries. Why does modern man comeback to initial condition by the time the Scientific Revolution and the Enlightenment drive the path of modernity? This query in fact needs a long explanation. The author tries, however, to clarify it in short exposition.

At least there are two main factors behind the collapse of the Enlightenment dream. The first is the internal factor, namely, the great progress of science itself. The amazing development of modern science have led a numerous scientist to address a lot of fundamental questions, which are deeper, radical, and more mysterious, demanding philosophical and theological discussions. Those questions have been raised by physicists about quantum and relativity theories, by cosmologists about our enormous universe, and by biologists about our evolutionary past and future.

Unfortunately, those queries cannot be grasped clearly because positivism, scientism or mechanistic-deterministic worldview as the dominant paradigm of modern science is not compatible with these deeper questions. Positivism, an epistemological basis of secular modern science, was stuck in deadlock stance in which it has no capability to accommodate those scientific questions. As a result, positivism as well as scientism collapses due to overlooking knowledge and reality in deeper level.

The dominance of this paradigm over the last two centuries, however, makes some scholars defend obstinately this worldview. This stubborn attitude might happen since they cannot lose their dream to establish a belief (a myth?) that the scientific method can solve all human problems. Let us scrutinize the following Richard Dawkins's stubborn claim,

So where does life come from? What is it? Why are we here? What are we for? What is the meaning of life? There's a conventional wisdom which says that science has nothing to say about such questions. Well, all I can say is that if science

²⁴Trigg, *Rationality and Science: Can Science Explain Everything?*, 29.

has nothing to say, it's certain that no other discipline can say anything at all. But in fact science has a great deal to say about such questions.²⁵

Stenmark categorizes Dawkins as a scientist who has the view of existential scientism: the view that science alone can explain everything and replace religion. He quotes Dawkins saying:

Science tells us that we are machines built by DNA whose purpose is to make more copies of the same DNA ... that is exactly what we are for. We are machines for propagating DNA, and the propagation of DNA is a self-sustaining process. It is every living object's sole reason for living.²⁶

Some scholars might be broken down on account of the failure of secular modern scientific worldview in providing them with proper clarification. In the word of Werner Heisenberg, they feel lost the ground for science.

The violent reaction on the recent development of modern physics (quantum theory) can only be understood when one realizes that here the foundations of physics have started moving; and that this motion has caused the feeling that the ground would be cut from science. ... Modern physics has in many ways increased the skepticism against precise scientific concepts²⁷

What is the ground of science that they mean? The ground is nothing but mechanistic-deterministic worldview, which is a main character of modern scientific paradigm. Some scholars who lost the ground, accordingly, bring up and endorse a shocked response to science and knowledge in general. They yell 'the end of science', 'the end of knowledge', and in turn they refute reason and philosophy as well as any meaningful term such as truth, faith, religion, human values, moral values, human conscience. For them, all are only product of social discourse. They claim that science and human knowledge generally is product of manufacture of reality. Human knowledge neither deals with reality nor truth. That is total skepticism.

Regarding this result, there will be a next question: why they do not shout 'the end of positivism' or 'the end of scientism' instead of 'the end of science'. Let us outline this query in brief.

According to Roger Trigg (1993), those who refute the value of knowledge as a result of the collapse of positivism have been misled by *the identification of science with reason, the identification of scientific knowledge with human knowledge*. What Trigg means is that many scholars have identified, gradually from the dominance of positivism without proper awareness, the scientific enterprise as the only reason activity. They think that rationality of science is identical to human reason. In fact, human reason is much broader than all scientific endeavours. Likewise, scientific knowledge is not identical with human knowledge; the first is part of the latter. Furthermore, Trigg points out that science itself depends on a rational understanding of the world.

²⁵Stenmark, *Scientism: Science, Ethics and Religion*, 19–20.

²⁶Stenmark, 13.

²⁷Werner Heisenberg, *Physics and Philosophy: The Revolution in Modern Science* (New York: Harper & Row Publishers, 1958), 201.

By means of a series of syllogism we may draw this process of identification in order to clarify why the collapse of positivism lead some scholars to endorse skepticism. They occupy several propositions as follows.

The only kind of knowledge we can have is scientific knowledge (identification of scientific knowledge with human knowledge)

Scientific knowledge is what can be scientifically justified

What can be scientifically justified is what compatible with positivistic paradigm (identification scientific justification with positivism)

The search of deeper questions on scientific discoveries cannot be accommodated by (is not compatible with) positivistic paradigm

Positivism is the true ground of science

The search of deeper questions on scientific discoveries is inevitably a true fact of science

First Syllogism

Premise 1: The only kind of knowledge we can have is scientific knowledge

Premise 2: Scientific knowledge is what can be scientifically justified

Conclusion: The only kind of knowledge we have is what can be scientifically justified

Second Syllogism

Premise 1: The only kind of knowledge we have is what can be scientifically justified

Premise 2: What can be scientifically justified is what compatible with positivistic paradigm (identification scientific justification with positivism)

Conclusion: The only kind of knowledge we have is what compatible with positivistic paradigm

Third Syllogism

Premise 1: The only kind of knowledge we have is what compatible with positivistic paradigm

Premise 2: The search of deeper questions on scientific discoveries cannot be accommodated by (is not compatible with) positivistic paradigm

Conclusion: The search of deeper questions on scientific discoveries is not scientifically knowable (the knowledge that we can have)

Fourth Syllogism

Premise 1: Positivism is the true ground of science

Premise 2: The search of deeper questions on scientific discoveries is inevitably a true fact of science

Initial Conclusion: Either positivism or the search of deeper questions on scientific discoveries is true

But, since this initial conclusion is contrary to Proposition 4, then the final conclusion becomes: *Neither positivism nor the search of deeper questions on scientific discoveries*

is true. And then some scholars come to introduce another way of justification, namely, what they called ‘consensus criteria’. Thus, both propositions might be true if there is consensus. Here the concept of ‘true’ does not longer deal with truth or correspondence with reality but just a result of discourse, a product of bargaining, or maybe an object of trading. That is clearly a kind of skepticism about the value of knowledge.

Since then we come to see that the false identification conducted by positivists or empiricists have lead them and many modern scholars become skeptical about the value of knowledge to grasp reality and even about the ability of reason to discover the truth.

Ethical Analysis

The second factor why skepticism emerges in the modern-postmodern era is an indirect cause to scientific path. What I mean is the bad impact of the vast advancement of science and technology towards society, nature and humanity in general. Some wise scholars (scientists, thinkers, philosophers, religious scholars) respond to problems of humanity, which are set up by science along with its technological implications. Production of mass destruction of weapons, two world wars, a great gap between the rich and the poor around the world, the imbalance distribution and consumption of natural resources, and the environmental crisis are conditions to which people blame applications of modern science as the causal factor.

In this regard, Mehdi Golshani in his work *Issues in Islam and Science* (2004) says, There is no doubt that science and its technological offspring brought a lot of blessing or humanity, but the promised utopia – science can bring felicity and prosperity for humankind – did not materialized. Instead, science produced means of mass destruction and environmental pollution, and it disrupted the balance between the spiritual and the materialistic aspects of life and humanity witnessed world wars, poverty, injustice, moral-void, and violence.²⁸

Golshani correlates the actual condition of practice of contemporary science with philosophical foundations of modern scientific worldview. He expounds that the development of science and technology under the secularist-materialist worldview has led to grave consequences for humankind. In this worldview, the ethical, philosophical, and religious dimensions of science and technology are neglected and humankind’s physical comfort is confused with real happiness. The industrial world with all its technological superiority is crying out for meaning and purpose – things that scientific and technological advances have not provided for humankind.

This condition generates contemporary men in the threat of despair, hopelessness, and disorientation in life. Let us listen to the voice of desperation from Richard Rorty below: There is nothing deep down inside us except what we have put there ourselves; no criterion that we have not created in the course of creating a

²⁸Mehdi Golshani, *Issues in Islam and Science* (IHCS, 2004), 95.

practice; no standard of rationality that is not an appeal to such a criterion, no straight argumentation that is not obedience to our own conventions.²⁹

This skepticism generates worse actual condition of science in relation to ethical concern. Because just as the epistemological skepticism that demolishes the value of knowledge, this skepticism leaves no room for moral values and their magnificent role in human life. The principles of moral values will lose their intellectual basis. Universal norms of ethics completely will be meaningless and collapse into total indifference of moral consciousness. It is a condition that moralists say as moral disorientation. And this moral disorientation in turn brings about the deeper skepticism in which human being will be void of meaning of life, stuck in the corner of emptiness, desperation, hopelessness and nihilism.

Conclusion

Those above-mentioned condition in short are not taken it as a given but it is established by the long and pervasive process of secularization of science which is primarily characterized as the alienated knowing subject in mainstream scientific endeavours. Such science critiques as theology, metaphysics, cosmology and Critical Theory have overlooked to uncover this epistemic root cause.

Such global calamities as injustice, poverty, wars, organized violence, terrorism, arms race, moral disorientation, alienation, abuse of human rights, global warming, and severe damage to nature and environmental sphere are the end-products of complex process of secularization of science. R.D. Laing says “*we have destroyed the world in theory before we destroy it in practice*”.³⁰ To restore this condition, human being as a creator of scientific enterprises and products should be put in the center and axis of any scientific endeavours.

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²⁹Richard Rorty, *Consequences of Pragmatism* (Minneapolis: University of Minnesota Press, 1982), xii.

³⁰R.D., Laing, *The Divided Self: An Existential Study in Sanity and Madness* (London: Penguin Books, 1990), p. 67.

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