The Value - Fact Dichotomy:
A Post-modern Perspective on the Crossroads of Religion and Science

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Abstract:

Today's world is changing at an unprecedented pace, in all the quarters of life. Today's science is not a mere provider of the amenities of life, but has become a weltanschauung, touching and transforming all the human value system, meaning system, expectation level, etc. It is posing questions, tougher than ever before and offering opportunities, brighter than ever before. The development of science and technology has made the world a 'Global Village' which is no more a metaphor, but a reality in which we find ourselves in. Due to the vast social changes and the rise of materialistic trends, religions have lost their meaning.

In such a situation the most impending danger to the current human society all over the world is that the traditional conceptions of values have been replaced with postmodern values which are influenced by science and which are merely facts, figures, numbers and statistics that are quantitative and accumulative. In order to bring back values to mankind, which are qualitative and meritorious, there is an urgent need to a dialogue between religion and science. Arriving at the crossroads of religion and science will make the science - religion dialogue sensible.

This research speculates on the dilemmas created by the value - fact dichotomy and envisages on the need of arriving at the crossroads of religion and science for a dialogue. Such a study takes a wholistic and integral approach to the religion and science, and to values and facts.

Key Words:

Dilemma; Ultimate; Uni-dimensional; Nihilism; Obligation; Weltanschauung;

1. Introduction

The debate on value - fact dichotomy is conventional and at the same time recurring. The contemporary human society is in a crisis situation due to the dilemmas created by the promethean nature of science and technology. Science is considered now as the sole redeemer of mankind which promises everything for mankind: mass-scale food production, new medicine and health expertise, new warfare technologies to defend the borders of the countries, aeronautic researches, new communication and entertainment facilities, etc. However, there are doubts raised as to whether the science will be able to contribute much to the fundamental issues of mankind. Many thinkers are skeptical about the contribution of science for the human race in an integral sense.

The most impending danger to the current human society all over the world is that the traditional conceptions of values have drawn minimal attention in all circles. The anxiety is that science could give mankind more facts, figures and numbers, statistics, that are mere quantitative and accumulative. Therefore there is an urgent need to appeal to religion and philosophy to bring back values to mankind which are qualitative and meritorious. Humanity cannot solve any problems of ultimate principle until getting back to the sources of the concepts, in other words, until the phenomenological method and the qualitative analysis of experience are used.

In this research, an attempt is made to study the value - fact dichotomy as a conjunction debate between religion and science. A comparative study between religion and

science is made to analyze their ends, that is, 'value' for religion and 'fact' for science. The title entails some areas which need to be clarified: clarification of terms (what are values? and what are facts?), clarification of the crossroads of religion and science and clarification of the postmodern perspective on values and facts.

2. Clarification of Terms

2.1 What is 'Value'?

The term 'value' etymologically means 'to be strong' or 'to be worth' (Valere, in Latin). There is no unambiguous and precise definition for the term value.

Generally, value refers to the 'worth of a thing' and valuation is the 'estimation of that worth'. In the western thought, from the ancient times of Plato many inquiries were made on the term 'value' and many words like good, end, right, obligation, virtue, moral judgment, aesthetic judgment, beauty, truth, etc., were used synonymously. The core meaning of the term 'value' signifies to what ought to be, or what is required of (requiredness) and not what was, is or will be.

Value, in a narrower sense, refers to what is good, desirable or worth; there can be many classifications or kinds of values: Utility (or usefulness) for some purposes; Extrinsic (or instrumental), where something is good as a means to do something desirable; Intrinsic (or being good or desirable), either as an end, or in itself; Inherent (or goodness), like aesthetic value of an art work; Contributory, the value that contributes to something as a whole.

Value in a wider sense it refers to all kinds of rightness, obligation, virtue, beauty, truth, holiness etc. Human experience teaches that it is easier to stand on the extremes. One can easily hold relativistic approach completely or an absolutistic approach completely. With regard to values also, one can take an extreme view to say that they are relative: that means values are totally subjective, personal and individualistic; another can take other extreme view to say that they are absolute: that means they are objective, social and eternal. However, most of the religious and ethical doctrines edify that virtue stands in the middle. So concluding the debate just saying virtue stands in the middle, will it be alright in all the cases? How to decide in certain grey areas? What are the criteria for such decisions? Are those criteria applicable in all the cases, at all times and for all the peoples? Therefore to discuss and decide what a value is, the domains of sciences, social and cultural studies, bunch of religions and schools of various spiritualities have their inevitable share.

2.2 What is 'Fact'?

The term fact etymologically derives from the Latin 'factum', neuter past participle of 'facere' means in English 'to do'. Fact is sometimes used synonymously with truth, as distinct from opinions or falsehoods. Alternatively, fact may also indicate an allegation or stipulation of something that may or may not be true. Therefore a fact can be either true or false.

Fact may also indicate findings derived through a process of evaluation. Fact is checked by reason and experiment and therefore it is known to be consistent with objective reality and can be proven to be true with evidence. Fact is something that is known or proved to be true. Though it is directly observable, it can also be inferred logically. Questions of objectivity and truth are closely associated with questions of fact. In science, a fact is a repeatable careful observation and it is also called empirical evidence. In a most basic sense, a scientific fact is an objective and verifiable observation, in contrast to a hypothesis, which is intended to explain or interpret facts.

3. The Value - Fact Dichotomy

The value - fact dichotomy is previewed as the distinction between things that are personal preferences of individuals and things that can be known to be true. The term 'value' has a clearly subjective element. It can vary from person to person and from situation to situation. The term 'fact' as opposed to values, refers to a truth about the world, a statement about some aspect of objective reality.

Despite important differences, values and facts are often confused; a conflict of values may be thought to be a conflict of facts, or vice versa. Therefore many conflicts involve disputes about values and facts.

The value - fact distinction is the thin line between what right is and what truth is. It is the source of conflict between ethics and science. In its most basic sense, fact can be defined as the inarguable truths of the empirical world. Value, on the other hand cannot be empirically accessible. It can only be derived through one's own subjective reasoning. Unlike fact, value cannot be proven true or false by any sort of scientific method. Rather, it must be compared against one's own faith or ethical worldview in order to draw personal conclusive results.

Many moral philosophers of modernity have debated whether values are objective and thus factual. Among them David Hume (1711 - 1776) insisted that there is a logical gulf between facts and values, such that it is fallacious to attempt to derive values from facts. In his *An Enquiry Concerning the Principles of Morals* (1751) he argues that human beings are unable to ground normative arguments in positive arguments, that is, to derive 'ought' from 'is'. Thus Hume was skeptical about the place of values when confronted with facts.

However, Friedrich Nietzsche (1844 -1900) who published the obituary for the death of God and proclaimed the hovering of nihilism over the world accepted the existence of hierarchy of values which make the human society functional. This is named as Nietzsche's 'Table of Values'. In *Thus Spoke Zarathustra* (1885) he exposes that what is common among different peoples is the act of esteeming, of creating values, even if the values are different from one society to another. Therefore he asserts that what made people great was not the content of their beliefs, but their act of valuing them.

A century ago, nearly all of those who wrote about the nature of science would have been in agreement that science ought to be 'value-free'. Science deals with facts and facts and values are irreducibly distinct. Facts are objective; they are what is sought in human knowledge of the world. Values are subjective; they bear the mark of human interest; they are

the radically individual products of feeling and desire. Fact and value cannot, therefore, be mixed. Value cannot be inferred from fact; fact ought not to be influenced by value.

However, the contemporary philosophers of science while accepting the independent nature of values and facts are also asserting their interdependency. Hilary Putnam (1926 - 2016) an American philosopher insists that if values like goodness, kindness, etc., are a bit suspect from a narrowly scientific point of view, the so-called scientific values, like justification, coherence, truth, etc., are also having the same fate. In *Realism with a Human Face* (1990) he affirms that human beings make not only values, but also facts. Moral images are human creations, but they are not arbitrary. As the knives that we make do satisfy real needs and can certainly be better or worse, the values we create can also be better or worse. He declares, therefore, that the traditional distinction of subjective and objective is in total collapse. All values, including the cognitive ones, derive their authority from our idea of human flourishing and our idea of reason. But both facts and values are thoroughly interdependent.

From this point of view, there is no logical gulf whatsoever between the facts and values as David Hume thought. Truth is linked to reference and reference is related to the reasonable intentions of the speaker. Being 'reasonable' is a value question, and therefore facts and values are inter-related. Therefore though the values and facts are independent, there is interdependency and interpenetration of facts and values in every area of human life.
Thus it is clear that the value - fact dichotomy can be reduced to the dichotomy of subjective and objective. There is no distinction between scientific discourse as objective and cognitive and religious discourse as subjective and non-cognitive. Both science and ethics are only relatively objective.

Thomas Samuel Kuhn (1922 - 1996) insists that in science the theory choice cannot be done on the basis of 'logic and experiment alone'. The community decides upon some criteria for theory choice, precision, wider scope, better formulation, accuracy, simplicity and prediction. In *The Structure of Scientific Revolutions* (1996) he treats them as values, not as norms. Norms determine actions, whereas values don't, because two can prefer two different actions to protect a same value.

The traditionally cherished distinction between objective scientific discourse and subjective religious discourse seems to grow weaker, as both science and religion are only relatively objective. Value - fact dichotomy blurs the human conception of reality. There is always interpenetration and several interpretations at that, of facts and values in every area of human life.[1] Such dichotomy between value and fact can be reduced to the dichotomy of subjective and objective, but the dichotomy of subjective and objective steadily loses its grips in the contemporary science. Quantum physics seems to clearly show that the reality cannot be known in its objective sense, without somehow the subject involved in the very act of knowing.[2] The investigation essentially involves the investigator and the investigated.

What is right or wrong, or what should be held with regard to other things, is purely subjective. It is worthwhile to note that 'ought to' statements differ from 'fact' statements. For example, because it is true that somebody set fire to my house, I am in danger. However,

[1] Railton, P., (1986), "Facts and Values", in *Philosophical Topics*, *14*(2), 25.
[2] Healey , R., "Quantum Theory: a Pragmatist Approach", in *The British Journal for the Philosophy of Science*, 63 (4), 740.

whether or not it is a value for someone to burn my house, it does not affect the fact that I am in danger.[3]

The consideration of value - fact distinction is important for contemporary life situations, for without value there would be no culture. As science slowly progresses in gaining knowledge about issues where religion or cultural norms once dominated, it is affecting ethical decisions by showing humanity what is physically possible or impossible. However, there will always remain ethical frameworks which cannot themselves be proven or disproven by science.

4. Value - Fact Dichotomy on the Crossroads of Religion and Science

To the elementary question "what is science?" a generic definition can be given as follows. "A profession in which individuals cooperate together in order to advance human knowledge, eliminate ignorance, and solve practical problems."[4] However, it is not easy to give a definite answer to the question "what is religion?" As there are various definitions involved for religion, it is not an easy task to define it. Religion can be defined from the point of view of sociology, psychology, anthropology, philosophy, etc. In general "A religion involves a system of beliefs and practices primarily centered around a transcendent reality, either personal or impersonal, which provides ultimate meaning and purpose to life."[5]

However, in the post-modern era the definitions of science and religion have got mixed up and science is viewed as a new religion for the contemporary humanity. In the traditional sense religion was considered as a personal experience in the processes of human life. Now after the post-modern explanation, religion is seen as love of God, not love of any religious systems.[6] In this sense, even an atheist can be a religious person and can have religious experience.

What is meant by crossroads of religion and science here is the science - religion dialogue with regard to the perspective of values and facts. Basically science - religion dialogue is an academic exercise to pave the way for a better world and humanity, by trying to bring together the recent advancements of the contemporary science and the noblest and deepest insights of religions and philosophy. It aims at harmoniously unifying the fundamental elements of matter and spirit, the human and the divine, the values and the technology, the scientific achievements and the deepest longing for meaningfulness in life.

Why such a dialogue between religion and science is needed? Enlightenment and modernity saw religion as the enemy of science and even ridiculed religion as a bundle of superstitions. On the other hand, during the contemporary era people are becoming aware of the shortcomings of the advancement of science and technology. While they have solved the problems of humanity, they have also created newer ones; the invention of atomic energy and weapons, the ethical issues arising from the break-through in biomedicines, the

[3] O'Hear, A., (2000), *Philosophy, the Good, the True, and the Beautiful*, Cambridge: Cambridge University Press.
[4] David B. Resnik., (2005), *The Ethics of Science: an Introduction*, London: Routledge, 37.
[5] Chad Meister, (2009), *Introducing Philosophy of Religion*, London: Routledge, 6.
[6] Joe Arnun, (2009), "The Post-Modern God: Ways of Being Religious in the Postmodern World", in *Vidyajyoti – Journal of Theological Reflection*, vol. 73, 570.

environmental crisis due to the boom in the industrial and transportation arena, etc. As a result people realize that they have become the victims of the one-sided growth of science and technology.

Pope John Paul II when addressing to an international group of scientists taking part in the Marcel Grossman Meeting on Relativistic Astrophysics, on 21 June, 1985 warns about the growth of science; "While science develops at ever-increasing speed, other fields of human endeavour remain relatively dormant or even regress. In the absence of a mature interaction between science and the practical and theoretical endeavours of politics, economics, art, philosophy, ethics and theology, the new vision and the new technological powers provided by science can lead to unprecedented human catastrophe." (*L'Osservatore Romano*, July 15, 1985)

There are several attempts to reconcile science and religion. Some say that the conflict between them started with the execution of Galileo by the Church. But the fact is that Galileo did not find any conflict between scientific findings and religious beliefs, because he was sure that the Bible is not meant for scientific facts but it aims at truths that are beyond the reach of reason.[7]

Religion is in search for the 'Ultimate Reality'; science aims at organized knowledge about the physical reality, by observation and experimentation, describable in quantitative terms of laws and hypothesis. Both converge in humanity for its very survival and well-being. Both should not be in conflict, but have to enrich each other. Religions gave birth to sciences; the discoveries of sciences furnished religions. Modern science has its roots in philosophy and religious thoughts. Paul Davies argues, "Science emerged from medieval Europe, under the twin influence of Greek philosophy and the Judeo-Christian thought.[8]

However, the uni-dimensional growth of science is not good and possible. Since the human beings are limited, finite and fragile, there is an innate deep yearning for meaning and fulfillment in life.[9] Therefore there is an urgent need to curb the uni-dimensional growth of science and bring back the religious and ethical values. The facts provided by science are needed while they go in line with the religious and ethical values.

The dialogue between science and religion will eliminate the value - fact dichotomy and unify them to serve humankind. The collaboration between science and religion is not an encroachment on another's court, but a mutual help to enrich humanity and cosmos. As N. Whitehead observes, "When we consider what religion is for mankind, and what science is, it is no exaggeration to say that the future course of history depends upon this generation as to the relations between them."[10] Science - religion dialogue is not an option, but an obligation; it is urgent and necessary, because as Fritjof Capra rightly noted "Science does not need mysticism and mysticism does not need science, but man needs both."[11] Arriving at the

[7] The famous saying "Bible teaches us how to go to heaven and not how the heavenly bodies go about" has to be taken into consideration. Like Galileo, there were some scholars in the Church who did not find any conflict with regard to religion and science. Pope Sylvester (999-1003) had an incomparable scientific knowledge. He was a leading mathematician and astronomer during the 'dark ages'.

[8] Paul Davies, (1994), "The Mind of God", in *Physics and Our View of the World*, ed., Jan Hilgvoord, Cambridge: Cambridge University Press, 231.

[9] John Cottingham, (2003), *On the Meaning of Life*, London: Routledge, 36.

[10] A. N. Whitehead, (1983), *Science and the Modern World*, New York: Simon and Schuster, 181.

[11] Fritjof Capra, (1977), *The Tao of Physics*, New York: Bantam, 297.

crossroads of religion and science will resolve the dilemmas created by the value - fact dichotomy. Such a dialogue at the crossroads will infuse a wholistic and integral approach to religion and science, and to values and facts.

5. Post-modern Perspective on Values and Facts

When one speaks of values and facts, immediately one becomes aware that many different disciplines are coming together. The study of values and fact involves science and religion. It is both a phenomenological and transcendental study. Therefore only an interdisciplinary approach is feasible to address the issues involved.

Today's world is changing at an unprecedented pace, in all the quarters of life. Contemporary science is not a mere provider of the amenities of life, but has become a weltanschauung, touching and transforming all the human value system, meaning system, expectation level, etc. It is posing questions, tougher than ever before and offering opportunities, brighter than ever before. The development of science and technology has made the world a 'Global Village' which is no more a metaphor, but a reality in which we find ourselves in. Due to the vast social changes and the rise of materialistic trends, religions have lost their meaning.

In such a situation the most impending danger to the current human society all over the world is that the traditional conceptions of values have been replaced with post-modern values. The post-modern values have brought vast social changes. The obituary of the death of God and the arrival of nihilism, religions losing their meaning, change in economic patterns and the introduction of 'Homo Economicus', speaking of the history of insanity in the age of reason, proclamation of the death of the author and lamenting over the death of the salesman are some of the post-modern slogans that announced the social changes. These post-modern values affect views and lifestyles, which in turn determine how an individual fulfills his or her roles, meets his or her needs and grows and adjusts in different environment. New ways of thinking have developed with the advent of post-modernism.[12]

Virtually all post-modern philosophers affirm some sort of fact - value distinction, insofar as they distinguish between science and the so called 'valued' disciplines such as religion, ethics, aesthetics, fine arts, etc. However, philosophers of science like Hilary Putnam and Thomas Kuhn argue that the distinction between fact and value is not as absolute as Hume skeptically envisioned. In the post-modern background, pragmatism confounds values with usefulness. Pragmatists believe that true propositions are those that are useful or effective like the empirical states of affairs.

In this background, the post-modern mocking query "are values valuable today?" may create concerns. Thus the post-modern perspective on values and facts calls for a transformation of values and clarification of facts. The intensification of a 'valueless' condition in the contemporary society and the general attitude of the mass to be satisfied with mere 'facts' has created a confusion and chaos. Many conflicts of the contemporary world involve disputes about facts and values. Such confusions and conflicts in the present age have the capacity of destroying even fundamental values upon which humanity depends. The

[12] Angela McRobbie, (2005), *Postmodernism and Popular Culture,* London: Routledge, 98.

efforts to safeguard the values in the midst of value - fact dichotomy must be taken by formulating guidelines for a dialogue between religion and science.

Postmodernism is often criticized that it removes every foundation of life. Actually the postmodern view is that "any foundation is historically and culturally conditioned and sexually gendered. Therefore any philosophical and theological foundation has to be critiqued, not to destroy the foundation but to purify it."[13]

6. Conclusion

To create a better world religion and science have to come together. Too much of stress on the former, that is on religion alone will lead humanity back to being superstitious which will go against the very rational and thinking capacities of the human beings. Religion in its original purpose must be a bridge between humanity and divinity. It has secular and sacred aspects, where both are equally important. It has a vertical dimension, that is uniting humans with God and a horizontal dimension, which is uniting humans with other humans. Therefore religion has to address the practical and social issues. Similarly too much of stress on the latter, that is on science alone will lead the humanity to a state of being technologically far advanced but lacking in human and emotional aspects. Science is a social enterprise. Precisely because it is a social enterprise it automatically becomes clear that it has to concern itself with the welfare of the people. Science cannot disconnect itself from the social commitments.

The advice of Pope John Paul II to an international group of scientists taking part in the Marcel Grossman Meeting on Relativistic Astrophysics, on 21 June, 1985 is worth quoting here: "Science, however important, cannot be a substitute for other human activities. Above all it cannot substitute for faith, moral values, art or political science. The contribution that science can make, through its dynamism and its constant reaching out towards truth, is to give inspiration and a richer physical context or vision to other human activities. It can share with them the results it has derived from its continuing investigations of the universal laws of nature. Science can finally lead humanity to bow before the Creator of the universe, who, from the Christian viewpoint is revealed as the Redeemer of man." (*L'Osservatore Romano,* July 15, 1985)

Therefore this research envisages the dialogue between religion and science and emphasizes that the combination of values and facts are necessary for the human society. Its religio-scientific approach can provide such an ideological or theoretical forum in a situation where humanity as well as its social systems are entering into a nihilistic stage and being transformed into a 'vague valueless' entity.

In the contemporary society, there is a serious invitation for all, to reflect about the dilemmas in values and their potential threats to the future of mankind. Therefore this research challenges whether the contemporary society is ready to resolve the value - fact dichotomy at the crossroads of religion and science and contribute to the construction of a new humanism based on integral human values.

[13] Joe Arnun, (2009), The Post-modern God: Ways of Being Religious in the Postmodern World", in *Vidyajyoti – Journal of Theological Reflection*, vol. 73, 574.

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