

A PHILOSOPHICAL RECONSTRUCTION OF METAPHYSICS IN SCIENCE

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Abstract

There have been various attempts at eliminating metaphysics by some philosophers such as Hume, Kant, Ayer, to mention a few. For the logical positivists such as Ayer, metaphysical statements are meaningless. Since metaphysics is chiefly concerned with the "Unobservable", it is not worthy to spend precious time on it unlike science, which consists of observable statements. It is this 'unobservable' nature of "Being" that has marked metaphysics out for study. For instance, since Hume's philosophical idea is based on experiment and observation, so it has no place for metaphysics. This paper therefore examines the criticism against metaphysics and the attempted revival of metaphysics due to its importance.

Introduction

Different definitions of the branch of Philosophy known as metaphysics have been offered by different philosophers but there seems to be a consensus that metaphysics is concerned with the study of totality of Being that is, the meaning of nature and structure of ultimate reality. It tries to determine what is in the world as opposed to what merely appears to be. It deals with reality from a holistic perspective unlike other disciplines which deals with fragments of reality in isolation. This is why Anthony Quinton defines metaphysics as "the attempt to arrive by rational means at a general picture of the world". (Anthony 1973, 235). However, there is no agreement among metaphysicians on the actual nature of ultimate reality. For instance, we have the debate between the monists and the dualists. The former are of the conviction that reality is one while the latter on the other hand are of the view that reality is plural. Among the Monists are Democritus, Leucippus, Aristotle, Berkeley, Heppel and Bradley while a good example of the dualists is Descartes.

This controversy is unconnected with the fact that metaphysical issues are perennial in nature and do not have final solutions. For instance, most of the metaphysical issues raised in the time of the ancient philosophers such as Heracitus, Plato and Aristotle are still begging for classification or solution till today (Ayo 2004; 19; Omoregbe 1990; 160).

The result of this is that each metaphysical school of thought propounds theories to justify its views and position. Moreover, each school appears in most cases to be able to show that there are serious difficulties with others views but does not at the same time seem to be able to develop a satisfactory justification of its own.

Conclusively, some philosophers such as Hume, Moore to mention a few have thought that there is something wrong with metaphysical reasoning. These set of philosophers thought that metaphysical reasoning by nature leads to unsatisfactory results and decided to find out why it has not yielded substantial result.

This paper will consider some of these philosophers' claims or arguments and the indispensability and attempted revival of metaphysics as an important branch of philosophical thinking. In addition the paper will express the author's opinions on the matter.

Criticisms of Metaphysics

Hume's criticism of Metaphysics derives from his empirical and skeptical point of view. Knowledge, according to Hume, can only be attained by means of the empirical, experimental method or the mathematical method. So Hume leaves no room for metaphysical speculation. He laid emphasis on observation and experiment. For Hume, metaphysics is not a source of knowledge (Hume 1963; 12,3,25, 132). Hume's contention is based on the fact that only sense impressions or mathematical concepts are meaningful, sense impressions are meaningful because they can be tested by observation while mathematical concepts are meaningful because they express relationship between ideas that we can intuitively see to be true and certain. For Hume, since metaphysics does not contain relation of ideas or matters of fact, then it is not a source of knowledge because on Hume's account knowledge is derived only from relations of ideas and matters of fact (Hume 1963; 25). This is often referred to as Hume's fork (Makinde 1974; 36).

The question now is whether Hume's criticism of metaphysics is justified. This is because metaphysics is concerned with the whole of ultimate reality and not segments of it such as biology, chemistry and mathematics. In addition metaphysics consider many things through its holistic view of reality - such things as feeling {not only reason} the metaphysical, the spiritual, the mystical and so on. So it is doubtful whether the same method of verification can be appropriate for doing science, metaphysics and mathematics. Hume also overlooks the fact that there are various experiences apart from sense experience. He ignored metaphysical, extra sensory, mystical and other kinds of experiences that we can have. This point is reinforced by Quantum physics as it questions our current observations.

So, the way individuals perceive reality based on observation if Quantum physics is something to go by may not be correct, our perception may be wrong (Stump and Abel 2002; 215-216).'

A corollary of this is that Hume also lay unnecessary emphasis on observation. Science may be done without observation today. Thus today, reality in science is taken a different turn. It goes beyond perception or observation because our observations aren't that reliable (Fodor 1994; 200).

In his own criticism of metaphysics (Kant, 1976; Ando 1974; 43) argues that metaphysical reasoning is a futile exercise, which ends up in illusion. This is because the mind can only grasp anything after applying the categories of human understanding to it. The categories can only be applied to things that appear in space and time that is, the phenomena according to Kant (Kant 1976; vi). What this means is that we cannot know realities that are not perceptible to the senses - realities that do not appear in space and time. Such realities, if they exist are outside the scope of human knowledge. So any attempt to know them will be unfruitful since they are beyond the scope of the realities that the categories can be applied. This is precisely what happens when we apply metaphysical reasoning to know realities that are not perceptible to the senses of realities in the neumenal world.

While Kant's effort is commendable because he recognizes, unlike Hume, the spiritual dimension in man but his theory is grossly unsatisfactory because of the

contradiction and inconsistency inherent in it. According to Kant, the noumenal (things as they are in themselves) is unknowable since it does not appear in space and time. The question is: how do we know it exist at all? There is a contradiction and inconsistency in saying it exists since it is unknowable. That is, there is a contradiction in saying that we know the unknowable because the noumenal (its reality or existence) does not appear to the senses {space and time} however if we can know that the noumenal exists, then they are knowable and so the metaphysicians are right in studying it. It should also be noted that knowledge goes beyond reasoning {mind} alone. Mystical experience also yields knowledge of certain things {or information} so also is religious experience.

In his criticism of metaphysics, Auguste Comte argues that the world had developed beyond the stage of explaining the natural world by metaphysical principles or 'method' or religious principles. This is because the human mind had developed beyond the earlier stages of religion and metaphysics which were the first two stages of the development of the human mind. The mind is now at the third stage of development - the scientific stage which uses the scientific method. So, the human mind now confines itself to what is empirically verifiable, since only the scientific method can yield genuine knowledge of the world. This is because the human mind in the course of its development through the early two stages discovered that the religious and metaphysical stage could not yield knowledge.

So far this paper has shown that Comte's theory is materialistic because it fails to recognize the spiritual dimension in man which is superior. It fails to realise that the deep yearnings of the spirit and soul cannot be satisfied by science and technology. According to Nwoko "Technological production has extensively advanced the material well-being of man but the question of his dignity, his rationality and his destiny is another thing...Technological production generally has tended all along to elevate and emphasize only the material aspect of human life to the neglect of the other aspect, the spiritual which is higher and superior" (Nwokolo 1992; 111-112).

In his own attack on metaphysics due to his dismay at the claims of metaphysicians, Moore, (1903; 433-453) who was initially not a philosopher expressed his shock at the way philosophers such as Berkeley (1956), McTaggart (1968, 86-97) and others set aside common sense knowledge by claiming that matter was unreal, time was unreal, the universe was spiritual and so on. All this for Moore (1903; 433-453) amounted to a denial of common sense (Schlip, 1952; 14). So Moore made a number of assertions which he called "Truism". For instance, before he was born, many people had lived on this earth; he was living on the surface of the earth and so on. All this, he asserted to show that matter exists and that time exists, and he challenged idealist metaphysicians to refute them. Furthermore, thinking that Berkeley's dictum "essest percipi" {to be is to be perceived} is the basis of British neo-idealism which he detested; Moore went on in his article "The Refutation of Idealism" to show that the act of perception is distinct from the object of perception (Passmore 1966; 204). In the first instance, it should be noted that Moore misfired because Berkeley's dictum is not the foundation of British neo idealism which had its roots in Hegelian idealism.

More importantly, Moore's criticism of metaphysicians of his time shows his superficial understanding of metaphysics. No metaphysician denies the existence of

the world or time. We are all living and doing our activities in the world, just like any other person. No metaphysician denies some people had lived on the face of the earth before Moore was born {that is, that time exists} what metaphysician like McTaggart, Augustine, Kant were saying was that time has no objective reality. It should be noted that the phrase "the time" is different from the word, "time" (Pantelon 2004; 22). Furthermore, while the idealists (who were Hegelian - Thomas Hill, Craig etc) say the universe is spiritual, what they are saying is that the earth is a manifestation or self-projection of the ultimate reality, which is spiritual. So it takes a metaphysician to criticise metaphysicians. So Moore's truism and arguments missed the point.

Ludwig Wittgenstein's critic of metaphysics arose from his claim that language is a mirror of the world. So a simple statement pictures a simple state of affairs in the world (Wittgenstein 1963; 5:1). It is the function of language to picture facts in the world. So anything that is not a fact in the empirical world cannot be pictured by language. Since there are nothing like metaphysical state of affairs in the world, then language cannot picture them, even if there is something like that at all. Any attempt to talk of such state of affairs which do not exist results in meaningless utterances. For Wittgenstein metaphysical propositions are meaningless.

It should be noted that Wittgenstein's critique of metaphysics stems from his erroneous premise that language is designed to communicate only sense experience as if sense-experience is the only experience that man has. Man W various experiences such as mystical, religious, metaphysical, psychological etc. Since language derives from human experience and language is man-made according to Quine then language is designed to communicate all human experiences not just only one experience (Quine 1961; 41). So metaphysical utterances are meaningful. Wittgenstein however corrected this view later in his work *Philosophical Investigations* where he developed a new theory of language, the language game according to which language perform different functions and meaning depends on usage (Wittgenstein 1953; 27). On this note, metaphysical reasoning is a legitimate enterprise because the meaning of its statements depends on (metaphysical) usage. So, metaphysics is a worthwhile venture.

Ayer in his book, *Language Truth and Logic* submits that metaphysical propositions are meaningless. He argues that there are two types of propositions - those dealing with matters of fact and those of mathematics and logic. The former are synthetic while the later are analytic and tautological. The synthetic propositions are verifiable by experience and so meaningful. The analytic propositions cannot be confirmed by experience but tautological and so meaningful. He argues that these are the only meaningful proposition and any proposition that does not fall within these two are meaningless (Ayer, 1946; 114). Since metaphysical propositions are neither synthetic nor analytic, they are therefore nonsensical.

It could be seen that Ayer arbitrarily restricted the concepts of meaning and knowledge in favour of empirical experience alone. Why must empirical verification be the only form of certification of the truth or meaning of a statement? It should be noted that Quine has argued in his *ontological relativity* that meaning is relative (Quine 1969; 49-50). So, you cannot apply verification principle to spiritual and metaphysical propositions or issues. Ayer has refuted his position when he admitted later also admitted that his position is not true. According to him, "I think that the

people called metaphysicians were perhaps not doing exactly what I described in the book" (Bryam 1971; 55).

On the issue of observation in science, the logical positivists such as Ayer and empiricists such as Hume seem to have overemphasized the role of experience and observation in science. This is because observation does not mean perceptual data or perception. It has been shown that observation goes beyond perception. According to Jerry Fodor, the data that inform our science do not have to be perceptual and often they are not. According to Fodor, we can have experimental science that relies upon data that do not consist in having experiences. Perception is not the only source of empirical data. So Fodor claims that the data that confirm a theory are just whatever confirms the predictions of a theory and these can practically be anything. Consequently, to think that data must be observable, according to Fodor, is the third dogma of empiricism (Fodor, 1994; 200).

The fact that we do not have the experience or perceptual view or observation of something, it does not follow that it does not exist and at par with those that can be perceived directly. The fact that when we see a person, we do not perceive his character likes and dislikes, emotions, temperaments etc does not mean they are not there just as tables, chairs, etc. are in our rooms.

It might be argued that data in form of chairs and tables can be seen or perceived (observed) directly unlike metaphysical facts. This is not true of all scientific data, there are some that are not perceived but are accepted as natural facts. A physicist who perceives a streak of light in a gas chamber as proton does not see proton and yet claim that there is proton before him because of the language game of physicists.

The physicist does not see proton to believe that proton exists. So, the data that inform our science does not have to be observational. Though it is true that scientific theories are typically constrained by experimental data, it is false that the experimental data are typically observational according to Fodor. Data may not be observable. According to Fodor, (1994; 201) when conducting an experiment, we are not providing the scientist opportunities to have experience rather we are putting ourselves in an environment that would enable us to be caused to have the beliefs (Fodor 1994; 200).

Thus it is not all scientific data that are directly perceivable. There are some data like proton etc. which are deduced from seeing a "streak of light" which are directly perceivable. Proton is not perceivable yet it is an empirical data. If we cannot deny the existence of protons, we cannot deny the existence of metaphysical entities.

Though it might be -argued that we perceive (observe?) some things around us through our natural perceptual apparatus either artificially aided or unaided. For instance, with the aid of a powerful microscope, we see more than we ordinarily see. Our argument here is that there are so many things we cannot see even under the most powerful microscope and which we do not need to perceive to know that they exist. For instance just as we do not see proton under the most powerful microscope so we cannot see a person's character, temperance, likes and dislikes, loves, hatred etc. to know that they exist. When we see a person, the fact that we do not see all

these does not mean they do not exist or are not out there. Just as we cannot perceive protons (which is out there), so is character.

In the same vein, no matter how we watch or look intently at a child or children plant we cannot perceive the moment of "gradual growing" of the child (children).or plant. The fact that we do not see this does not mean there is no moment of "gradual growing". The same thing with metaphysical entities. They exist, hence the indispensability of metaphysics.

For these reasons and related ones, attempts to dislodge metaphysics which is the heart of philosophy have not been successful and seems indispensable and is not fated to die.

The Indispensability of Metaphysics

As we have seen in the previous section the arguments of critics of metaphysics are unsatisfactory and unsound. For this reason and for the facts that metaphysics is indispensable, the attempt failed. For instance, Metaphysics is the core of philosophy. Any call for the elimination of metaphysics is therefore a call for the death of philosophy. In the words of Barnes (1947; 26) "Metaphysics is the heart of philosophy, its most vital and sensitive organ - people have, shot at it but it is not fated to die". So philosophy without metaphysics is a corpse. Philosophy cannot be done without metaphysics.

Immanuel Kant (Wundt 1924; 158 see also Ayo 2004 Rep. 2008; 110) in his own contribution argues that the phenomenon is not all that are in existence and so there is man's propensity to transcend the realm of the physical. For him this need has made metaphysics a necessary part of human knowledge. So for Kant, to eliminate metaphysics completely is impossible because it also plays a regulatory role in man epistemological framework.(Prince 1935; 316)

Even the logical positivists such as Schlick, recognize that metaphysics cannot be eliminated. For instance Schlick made it clear that "if we are to obtain any scientific knowledge at all, that we must also accept as real some things that are not given otherwise empirical science will come to an end". (Stegmulla 1959; 269).

In fact Philip Frank in his article "Foundation of Physics" blames physicist for using equations containing terms such as "coordinate", "time", "force", "magnetic field", "intensity" etc (Neurath 1971; 45) which cannot be checked to see whether they correspond to physical facts. This paper observe that using this concept and terms which are unobservable in theory constitution is inevitable. This is because knowledge extends beyond the physical and empirical and so metaphysics is indispensable. As a matter of fact, mathematical statements are tautologies and as such do not picture facts in the world. This is why Charles Sanders Peirce says metaphysics is the ape of metaphysics (Prince 1935; 314). So, any attempted elimination of metaphysics, many disciplines will go. This is because metaphysics is the foundation of other disciplines. While other disciplines study one-aspect things as we see it {appearance} metaphysics studies reality as distinct from appearance. This explains why there is metaphysical element in every discipline and why there is philosophy of every discipline such as philosophy of science, law, social science etc.

Philosophy studies the metaphysical elements underlying those disciplines. Metaphysics goes beyond the realm of sense perception and matter that science itself cannot go beyond and in search of truth and solutions to questions that science and other disciplines cannot answer due to the limit of their methodology. This is why Jacques Maritain ranks metaphysics as the highest science, higher than empirical science.

Considering the above reasons, we can see that the attempted elimination of metaphysics is an effort in the wrong direction. Due to the indispensability of metaphysics and its role in life, there have been attempts to save it from some of the criticisms leveled against it.

The Revival of Metaphysics

Attempts to revive metaphysics in the contemporary times could be traced to philosophers such as Green, James McTaggart, Bradley and Whitehead, to mention a few. In contemporary times, Thomas Green's philosophy marked an important step in the development and revival of metaphysics especially Neo-Hegelianism in Britain (Omogbe, 1996; 193). Green's idealism started with a criticism of Hume's empiricism in which human ego disappears in mere perception. Green argues that this cannot be so because for the subject of perception to perceive series of perceptions, the subject of perception must be outside and beyond the series of perceptions. So we have to assume the existence of an infinite mind of which the human mind participates. The human mind tends toward the finite mind to attain the full self-realization in the infinite mind. In his own contribution, Edward Caird, having rejected Kant's unknowable thing-in-itself, sought the basic unity underlying the subject-object duality. This basic unity, he called God who manifest himself in subject and in object.

However, it is in James McTaggart we see full-blown Hegelianism (Omogbe, 1996; 94). For McTaggart, whatever exists is substance but there is a plurality of substance. There is one substance which unites all other substances, this is the all embracing substance {the ultimate reality} he calls universe which contains all other substances. This is a spiritual substance as well as the substances within it. So matter is spiritual.

Bernard Bodanquet's metaphysics like McTaggart's talks of the ultimate reality. However for him, the ultimate reality is the absolute which is the totality of being, this absolute is infinite and undergoes a process of self-development in and through finite beings which it-uses as means to achieve its goals.

In his attempt to revive metaphysics, Bradley defines metaphysics as an attempt to go beyond appearance and get to the reality which then reveals itself as a coherent totality, an unfragmented whole (Omogbe 1996; 196). For Bradley, the ultimate reality is one, the Absolute which is beyond mere appearing. The Absolute is an inclusive reality, it underlies all appearances, so finite beings are mere appearances.

However, discussion on the revival of Metaphysics in this contemporary period without mentioning Bergson and Whitehead the process metaphysicians is incomplete. They are philosophers of evolution and were influenced by the development in science. Bergson's metaphysical position for instance grew out of an

attempt to use scientific findings to sustain an especially anti-scientific conception of reality. While he denied capacity of reason to know the inner nature of reality, he argues and concludes: that intuition is the key to knowing it (Bergson 1912; 1-19). The question is what does intuition disclose the real to be? Duration is Bergson's answer. This duration, which flows and is also creative, is the underlying cause of the visible and studied in the sciences. So metaphysics is the study of this reality and thus the foundation of all sciences. To construct his metaphysics, each philosophers turn to his intuition within. And what he finds are "duration" "mobility" and "life" - an experience of change not of states that change rather, of change itself. It is an experience in which past infiltrates the present through and through that is, we have an experience of duration. This self {duration}, which is revealed in intuition, he maintained is the continuous unfolding of new experiences that include and incorporate the past while moving steadily into the future. So duration is the metaphysical principle according to Bergson, which explains all evolutionary change (Bergson 1912; 21, 39-40).

However, the problem with Bergson's position is that, the claim that species evolve is an empirical hypothesis, subject to verification or disverification by biological evidence, the claim that duration is underlying force behind this evolutionary development is not an empirical hypothesis but a metaphysical hypothesis' or claim for which there is no evidence for or against. So there is a leap from the empirical to the metaphysical. Be that as it may Bergson's attempt is commendable, as it represents an attempt to use scientific findings to explain and sustain anti-scientific conception of reality. We should also remember that he was influenced by the prestige accorded to the sciences during his period.

Whitehead (1929, 520 - 531) unlike Bergson (1946; 206; Ayo, 2004 Rep. 2008; 96) was closer to Hegel by reaffirming the capacity of reason to know reality and sought to establish a new categorical scheme of metaphysically valid concepts. While Hegel derived his categorical scheme by reflecting on the meaning of an alleged identity-indifference, Whitehead attempted to generalize the concepts underlying modern physics. So Whitehead claimed to be empirical and scientific in a way Hegel had scorned. Whitehead rejects the dominant scheme because it makes (development in physics {in the 20th century} such as the discovery about the property of. electrons) interpretations in terms of simple location difficult - hopelessly complex and even contradictory. Furthermore, the dominant scheme will also create problems for induction because the idea that there is no connection between heres and theres means that inference from what happened at one instantaneous configuration of matter to what may happen at another is quite impossible (Whitehead 1919; 1-3). In addition, another difficulty with the concept of simple location is with regard to the theory of perception which holds that the subject {mind} which observe nature is supposed to be a different sort of things, {objects} from the nature it observes. This notion of 'bifurcation of nature' is hopelessly contradictory according to Whitehead. This is because the ordinary objects of sense perception {for example the house at a distance} are unreal according to this view. For Whitehead, "Such a philosophy is too simple minded or at least might be thought so (Whitehead 1919; 10-11). Consequently Whitehead proposed a new categorical scheme to replace the dominant scheme. This categorical scheme is not only the centre of Whitehead's philosophy but it represents the last of the great efforts of speculative philosophy (Jones 1952; 319-320).

Unlike in the dominant {old} scheme in which I see myself as different from what I see, the categorical scheme holds that everything is unified. What I am conscious of is merely the relation of my "bodily events to the simultaneous events throughout the rest of the universe (Whitehead; 1919; 13). So on the categorical scheme an event is the interpenetrating of all the infinitely various aspects of the universe at some particular standpoint. That is why he used 'Prehensions' instead of perceiving because the term prehension suggests the unifying function of perception and unconsciousness without definitely implying the perception and consciousness. In contrast to the very simple material points that the old scheme took as its ultimate reality, events are very complex affairs. The old scheme were dealing with simple locations which the new scheme replaced with organism which is simply an event that is coming into being of a prehensive unity whose present includes the past and also looks ahead into the future. So in Whitehead's metaphysics every event in the universe is interrelated. Nothing is isolated and the universe is therefore an organic whole. Unlike traditional metaphysics, which sees simple locations as static, on Whitehead's metaphysic reality and events are dynamic. However, Raymond Dovetterre, (1980; 309-322) in his article "Whitehead's metaphysics and Heideggers critique", criticise Whitehead's metaphysics as guilty of the Heddegerian charge of ignoring being itself while concentrating on the being of beings. Like traditional metaphysics, Raymond argues that Whitehead ignores being which the central problem of metaphysics is. However, I think Whitehead is right because by calling God an entity, an actual entity along with other entities, Whitehead is not taking God to be being itself which Heidegger is talking about (Whitehead 1938; 233-234). Since Whitehead does not separate being itself from beings as Heidegger does but ties them (beings) together in a pantheistic manner, so Whitehead ignores the distinction between Being itself and beings.

Conclusion

This paper observes that unlike Parmenides metaphysics, which concentrates on being, process metaphysics including Whitehead's concentrates on the being of beings. This notwithstanding, metaphysics still searches for ultimate reality even though process metaphysics is trying to see reality from a dynamic point of view rather than a static point of view of traditional metaphysics.

In both traditional and contemporary metaphysics, there is a distinction between appearance and reality, between common sense and reality behind it. So this distinction is still a basic feature of metaphysics. So metaphysics presuppose a distinction between appearance and reality. Thus, metaphysics is an investigation into the reality beyond appearance. It is the science of reality as distinct from appearance. This is because the understanding of the immediate brute fact requires its metaphysical interpretation as an item in a world with some systematic relation to it (Whitehead 1929; Partich.I). While the natural and social sciences study the brute facts or simple location, metaphysics study what is behind the brute fact - the reality behind the appearance. This is why it is the foundation of all sciences. Every science studies appearances in the possible world that is, things as they appear to us while metaphysics goes beyond to study the general truths about the actual things in the common world of activity.

Finally, once we accept the distinction between appearance and reality and admit that things are not always the way they appear to us to be, then we will appreciate the role and value of metaphysics as an indispensable discipline. Once we accept that there is more to reality than we can perceive with our sense, then we will see the importance of metaphysics in taking us beyond appearance to the reality itself.

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