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THE SEMANTICS IN NATURAL PHILOSOPHY AND PHILOSOPHY OF PHYSICS

John Nwanegbo-Ben. Ph.D.
Directorate of General Studies,
Federal University of Technology, Owerri, Nigeria.

Bonaventure .I. Ozoigbo.Ph.D
Directorate of General Studies,
Federal University of Technology, Owerri, Nigeria.

ABSTRACT: *The semantic content in the nomenclature natural philosophy and philosophy of physics revolve on epistemological leanings. This leaning is motivated by the growth of knowledge within the natural sciences. The yearning for specialization in specifics within the content of nature revolving around matter and energy precipitated the leap from the broad based natural philosophy to the philosophy of physics. This leap is based on the proposition that knowledge is dynamic and grows by accretion.*

KEYWORDS: Natural, Artificial, Physics, Motion, Science.

INTRODUCTION

The unhidden facts of change inherent in reality can be expressed in all facets of development. This development should be in the realm of corporeal or experiential sciences or within the confines of incorporeal or meta-physical understanding of reality. The discipline natural philosophy and our contemporary epistemological understating of philosophy of physics are products of the fact that knowledge grows by accretion through problem solving. Contemporary scholars bereft of the scientific background and character of modern philosophy and the physical sciences may be through orientation be intellectually dislodged with the concept of scientism devoid of the metaphysical background of the physical sciences. The contention of this paper is to draw a melting point between philosophy of the natural sciences and philosophy of physics and that the change is a matter of semantics and predicated in the growth of knowledge.

The Scope and Concept of Nature

Discussion of this nature within the parlance of philosophy may tilt towards a descriptive analysis of the content of this discuss. The reason is that the work is an exposition of few philosophical conundrums bordering on philosophy of science. Our work shall begin with an explanation of the concept-Nature. The questions are what actually is nature? Can we really understand what natural philosophy is without knowing what nature is? In explicating this, we will be able to comprehend Natural Philosophy, Philosophy of Nature which invariably is physics that has prided itself in the study of matter and later became that aspect of science, which deals with the study of changes that do occur in nature.1

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Nature can be referred to as the physical world and also to life in general. The study of nature is an enormous part of science. This means that humans are part of nature and human activities is often understood as separate category from other natural phenomena. In ancient times, Nature literally mean "birth" derived from the word "natus".2

The goal of natural science is to know what nature is and to know this we will be concerned to understand our surroundings which includes the artificial and the Natural environment. We can understand this by distinguishing the artificial from the natural and to see if it is something made by human design or is something that is the "handiwork of God".Natural things have been named by man, such things as the earth, air, water, fire, sky etc. The tree and plants, the sun, moon and stars, the birds, animals, fish and man are natural things.The artificial things and the Natural things in our environment have one thing in common and that thing is that they are material and perceptible to our senses. We can touch, see or hear them or even taste and smell them.To comprehend them intellectually, we must abstract from the sense knowledge in so far as it tends to individuate, but we cannot abstract from the clear fact that matter is sensible and of certain color, shape or sound.

Thus, whether we know the Natural things or artificial things around us, we must always recognize that they are material and that we cannot conceive of them without including that matter is considered by us.

The Distinction between the Natural from the Artificial

Natural things cause men to experience a feeling or wonder, we wonder about the nature of the sun in the cosmos, whereas artificial do not. It is said that the reason for this is that man knows immediately that an artificial thing is man-made and that he can easily find out what it is made of. He observes that ultimately all the artificial things in his environment are made of natural things that are either of metal, wood or water. On the other hand, men cannot easily know or comprehend the composition of natural things or how they are made. It is on these bases that the Greeks Philosophers asked themselves saying, what is the original or primary stuff (the urstuff) of which all things were made. What is the ultimate building block of nature? Thales regarded as the first philosopher inquired concerning "the nature of things. What is everything made of, or what kind of "stuff" goes into the composition of things?"3

Another important question is what makes them go, why do they move in the way they do and how can this motion be accounted for or predicted?We really do not have these questions as regards artificial things because they are man-made, the woks of our hands, thus we know what their motion should be on their direction. Reasons are that we determine and know how to use it. A plane is an artificial thing; we know that its motion is to transport men or things from one place to another. It will not begin or execute its motion unless there are pilots, men or women who are able to start it up and navigate it to where they want it to go. This is clear evidence as regards the difference between the artificial and natural. The artificial has no motion of its own like the sun, stars or heavenly bodies when left on their own, the natural does. This is in fact the first reason for our philosophical wonder about them, because we do not know the source of the motion of natural things.

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In contrast however, there are differences in motions of natural things. Some of them such as men and animals evidently have a motion of their own, which are initiated within them and easily observed, but other natural things such as wood, rocks or even water, do not have a proper motion in the same sense. They do move but the motion does not seem initiated in them. Thus, we may classify them as inanimate or non-living. On reflection, thinking more strictly, we recognize that each of these natural things is said to be natural as having a nature and nature therefore it not the generalization but the source of naturalness.

Philosophy of Physics

In trying to comprehend philosophy of nature, we shall draw a good influence from our understanding of nature is. Thus, philosophy of nature is the part of philosophy which studies natural things which have their own motion or are mobile. It proceeds to penetrate the nature or source of this motion in these things.

The term Natural philosophy can also be referred to as philosophy of nature. It should be known that right from the ancient Aristotelian philosophy to the 19th century, the term "Natural philosophy" was the common term used to describe the practice of studying nature.4
The concept "Science", which etymologically is taken from the Latin word "Scientia" literally means "knowledge", received its modern conception with the emphasis on definite methodologies that are assumed to be "Systematic" study of nature. The term gained more meaning with emphasis on experimental method.

Etymologically, physics is taken from the Latin word "Phusis" which means nature. Natures however, have been the subject matter of philosophy from the earliest Greek philosophical speculations. All that has to do with nature was studied under the rubrics of natural philosophy. Natural philosophy became science (Scientia, which means knowledge) when language acquisition through experiments (special experiences) regulated by the scientific method became its own specialized branch over and above the analysis and synthesis of experiences of which philosophy partakes. In the mid 19th century, it became increasingly unusual for scientists to contribute to both physics and chemistry. "Natural philosophy" came to mean just physics and the word is still used in that sense in degree title at the University of Oxford. The Chair of natural philosophy at the oldest University in the world is occupied by Professors of physics. We are aware of Sir. Isaac Newton's book titled "Mathematical Principles of Nature philosophy "similarly the renown chemist, Robert Boyle (1627-1691), is called a natural philosopher in the Encyclopedia Britanica.5

The term Natural philosophy or philosophy of Nature preceded our contemporary understanding of natural science which otherwise is referred to as empirical science. Natural philosophy within the 14th and 15th centuries was just one of the many branches of philosophy and was not a specialized field of study.The scope of natural philosophy dates back to Plato's dialogues in his Timaeus. It was particularly his theory of form that rendered science as an exact mode of knowledge. The real world, he said, is the world of forms, whereas the visible world is full of change and imperfection. Yet, it is about the visible world of things that science seeks to build its theories. Cartesian Dualism described two kinds of substances, matter and mind.

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According to this system "matter' is deterministic and natural, hence is part of natural philosophy, while mind is non-natural and has nothing to do with philosophy of nature.6

The growth of knowledge is responsible for change and interpretations of concepts to meet changes in the world. We are aware that knowledge grows by accretion through problem solving. O'hear quoted Karl popper and posited that "scientific knowledge has grown in the sense that the number and diversity of phenomena that have been brought under scientific explanations have constantly increased.7.Poppers verisimilitude posits that as more theories are falsified, the more we know their limits, and thus increase our approximation of their truth content.

The semantics involved in the discipline natural philosophy or philosophy of physics is predicated on the problem of understanding that comes down to word selection or connotations. With the growth of knowledge within the scientific enterprise, ideas become more focused on specifics. There is in fact considerable overlapping of subject matter from one science to another. If, however all of the natural sciences are really identified with natural philosophy, so that all are really one science, these difficulties no longer exist.

The philosophy of physics as against natural philosophy (which is an older designation for natural sciences8 which studies natural things which have their own motion) emphasizes especially the fundamental philosophical question boarding on modern physics; the study of matter and energy and how they interact. The main question that philosophy of physics address are the nature of space and time, atoms and atomism, cosmology, predictions and the explanation or interpretation of the results of quantum mechanics, causality, determinism and the nature of physical laws. It should be noted that this change was not abrupt, but came into play to explicate the content of specialization and advancement of a segment of the discipline of natural science.

CONCLUSION

The nomenclature natural philosophy and philosophy of physics is predicated on the developmental strides in scientific knowledge. This position was reached with the belief and conception that knowledge grows by accretion and with the intent for specialization on specifics; the Natural Scientists narrowed their search for objectification and clarity. This clarity needed a semantic explanation or understanding, thus the perceived change of the otherwise natural philosophy or philosophy of physics.

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