

Humanism is not Anti Natural Science

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Abstract

This article is on the in-depth analysis and exposition of the core tenets of humanism and natural science as major players in the production, dissemination, and utilization of knowledge and its by-products (beliefs and technologies) in human societies. Humanism is an attitude of thought that gives primacy to human beings. It is a democratic and ethical belief that affirms that human beings have the right and responsibility to give meaning and shape to their lives. Natural science on the other hand is a problem-solving and information-providing enterprise. It is a means of understanding nature. And since every human age in history has certain problems and challenges, it follows that there has always been a scientific tradition in every age of human history and that man has the natural inclination to seek for understanding and explanation of the world around him. Using the analytic method, the paper argued that humanism is not anti-natural science. Rather, it tries through its different 'manifestos' to raise societal consciousness about the inevitability of a world where natural science reign supreme in all 'matters of fact or ideas' but playing down on unverifiable metaphysical and religious assumptions. The paper opines that Humanism champions untrammelled use of the mind and wants it applied not only in natural science, but also in social and political reforms; encourage individual creativity and exalt the 'active' over the 'contemplative' life.

Keywords: Humanism, Natural science, Humanist manifesto, Atheistic humanism, Theistic humanism, Active life.

Introduction

Humanism began as a protest against the authoritarian and tyrannical nature of religion. It repudiates mental subjugation and slavery, like philosophy, humanism abhors presupposition, dogmatism, imposition and irrationality. Humanism aims at objective analysis of perceived experience; experience based on

natural phenomena. Natural phenomena reside in the domain of natural science and are intended according to Karl Popper to represent only one world, the real world or the world of our experience (16). The world of our experience is the natural world. The deliberate study of natural science is a branch of science that is concerned with the description, prediction and explanation of natural phenomena based on empirical evidence from observation and experimentation. This article will treat the hermeneutic exposition of the fundamental tenets of humanism and natural science. Along the line of this objective, the notion of humanism shall be discussed; science will also be examined with particular emphasis on its basic assumptions. The link between humanism and natural science shall be highlighted including the divergences.

Humanism

Humanism is a derivative of the Latin word *humanitas* which translated means “human nature.” It is a philosophical doctrine that gives primacy to human beings; a democratic and ethical life stance that holds that human beings have the right and responsibility to give meaning and shape to their lives. According to Corliss Lamont, “in its primary connotation, humanism simply means – *human-being-ism*- that is, a devotion to the interests of human beings wherever they are and whatever their status” (17).

Kolenda Konstantin in the *Cambridge Dictionary of Philosophy* sees humanism as a set of presuppositions that assigns to human beings a special position in the scheme of things. For him, it is not just a school of thought or a collection of specific beliefs or doctrines; rather, Humanism is a general perspective from which the world is viewed. He is of the opinion that this perspective furnishes a central leitmotif of western civilizations with focus on two competing positions that include: 1. Emphasis on the supernatural transcendent on divine order and 2, the tendency to treat humanity scientifically as part of the natural order at par with other living organisms (396). Humanism as a philosophical and literary movement originated in Italy in the second half of the century that coincides with the era of development in Western Europe known as the renaissance. The renaissance was a cultural and intellectual movement that also began in Italy. Its main feature was a heightened interest in classical Greco-Roman learning and culture including philosophy,

mathematics and natural science. Simply defined as a revival in learning; “the renaissance brought a new belief in man and his worth, in striking contrast to the biased medieval emphasis on the sinful nature of man. Man was now considered infinitely great and valuable” (Gaarder 199). Among the notable figures of renaissance humanism were Marsilio Ficino and Pico Della Mirandola - who wrote a work, entitled *Oration on the Dignity of Man*.

The humanist mode of thinking according to Konstantin deepened and widened with the advent of 18th century thinkers that included Voltaire, Diderot and Rousseau, Bentham, Hume, Kant and so on. Although these thinkers did not always agree with each other’s view, nevertheless, they formed a family united in support of such values as freedom, equality, tolerance, secularism and cosmopolitanism (397). They championed untrammelled use of the mind and wanted it applied in social and political reforms, encourage individual creativity and the exaltation of the active over the contemplative life. They attribute special importance to education and encourage freedom of thought and opinion, the use of intelligence and pragmatic research in science and technology. Humanists believe that it is possible to live confidently on the earth without metaphysical or religious certainty and that all opinions are open to revision and correction. Corliss Lamont in regard to Renaissance humanism was very blunt when he declared that “Renaissance humanism was first and foremost a revolt against the other-worldliness of medieval Christianity, a turning away from preoccupation with personal immortality to making the best of life in this world” (21). In his definition of humanism Lamont writes: Humanism is the viewpoint that men have but one life to lead and should make the most of it in terms of creative work and happiness; that human happiness is its own justification and requires no sanction or support from supernatural sources; that in any case, the supernatural usually conceived of in the form of heavenly gods or immortal heavens does not exist; and that human beings using their own intelligence and cooperating liberally with one another can build an enduring citadel of peace and beauty upon this earth. (14)

Lamont’s view represents to a large extent the 20th century conception of humanism. It is intended to set humanity free from

the stranglehold of religion and beliefs in the supernatural thereby enthroning reason and human capabilities as a means to liberation as well as tools to conquer nature. This view is further substantiated by Robert Ingersoll cited in the work of Fredrick Edwards: When I became convinced that the universe is natural, that all the ghosts and gods are myths, there entered into my brain, into my souls into every drop of my blood the sense, the feeling, the joy of freedom. The walls of my prison crumbled and fell. The dungeon was flooded with light and all the bolts and bars and manacles became dust. I was no longer a servant, a serf or a slave. There was for me no master in the entire wide world, not even in infinite space. I was free – free to think, express my thoughts, free to live my own ideal, free to live for myself and those I loved, free to use all my faculties, all my senses, free to spread imagination's wings, free to investigate, to guess and dream and hope, free to judge and determine for myself ... (par. 2). The deductions from Lamont and Ingersoll's submissions can be summed in two words; happiness and freedom for man. Lamont believes that Humanism will provide humanity happiness and freedom in its existence as contrasted with salvation for the individual soul in a future existence and glorification of a supernatural being (248).

Basic Assumptions of Humanism

There are basic assumptions that are central to the humanists. These assumptions are outlined in documents signed by self-confessed humanists and adopted as a working principle simply called the Humanist manifesto; it is made up of three documents signed at different epochs. The central theme of all three manifestos is the elaboration of a philosophy and value system which does not necessarily include belief in any personal deity or higher power. (Humanist of Utah)

First Humanist manifesto: The first manifesto was written in 1933 by Roy Wood Sellars, Raymond Bragg and was published with 34 signatories including the philosopher – John Dewey. It was entitled A Humanist manifesto.

Second Humanist Manifesto: The second manifesto came into being in 1973 and by Paul Kurtz and Edwin H. Wilson and intended to update and replace the previous one. Initially published with a small number of signatories, as the document was circulated, it

gained thousands more signatures. Among the often quoted lines from the 1973 manifesto are “No deity will save us; we must save ourselves,” and “We are responsible for what we shall be”.

Third Humanist Manifesto: Successor to the Humanist manifesto of 1933 was published in 2003 by the American Humanist Association (AHA) and was written by a committee. Signatories included 21 Nobel Laureates. This 2003 document is shorter than the 1973 and lists seven primary themes of humanism. These themes include:

1. Knowledge of the world is derived by observation, experimentation and rational analysis.
2. Humans are an integral part of nature, the result of evolutionary change, an unguided process
3. Ethical values are derived from human need and interest as tested by experience.
4. Life’s fulfillment emerges from individual participation in the service of human ideals
5. Humans are social by nature and find meaning in relationships.
6. Working to benefits society maximizes individual happiness.
7. Respect for differing, yet humane views in open, secular, democratic, environmentally sustainable society (Humanist of Utah).

Types of Humanism

Corliss Lamont in his philosophy of Humanism characterized humanism into; scientific humanism, secular humanism, naturalistic humanism or democratic humanism. There are however two major types of humanism that has developed over the years. These include atheistic humanism and theistic humanism.

Atheistic Humanism

The central idea of atheistic Humanism is the idea that the individual is prior to society, and freedom can be enjoyed only by the individual. Thus, the amount of freedom available to an individual is the measure of a free society. Atheist humanists advocate the rejection of orthodox religious ideas and traditions. For them, faith in the

supernatural does not allow the search for the causes of natural phenomena in nature. They believe strongly that religion will certainly be liquidated by the rise of science because scientific knowledge enables mankind to answer questions which were earlier assumed to be supernatural forces. Those that subscribe to atheistic humanism include Bertrand Russell and Manbrenda Roy amongst others (humanist of Utah).

Theistic Humanism

Theistic humanists believe in the existence of God in all its ramifications. Theistic humanism as encapsulated in UdoEtuk's *The New Humanism* acknowledges and confesses the Most-high God of heaven and affirms that religion is man's quest for the divine while the environment is God's gift to man. God is the supreme designer of the universe according to theistic humanism (179 – 186). Theistic humanism insists that there is a limit to scientific reasoning. Contrary to atheistic humanists' view that reason and science are the foundational structure of humanism, the theistic humanist 'affirms that as important as science has been in human development, science is not everything'. According to this thesis, man is an artistic, political and rational being; therefore, man cannot get all his nourishment from science alone, otherwise, malnutrition will set in. There are other spheres of human existence where science is inadequate as an umpire; for example, axiology. Science does not impart values. Its technological by-products do not have the capacity to inculcate such values as love, respect, integrity, amongst other values. These, according to Etuk are the domain of religion. For him, theistic humanism challenges man to believe in the existence of God for a realization of the brotherhood of man whose image bestows inestimable value and dignity (182).

Science

The word science is derived from the Latin word *Scientia* which means 'knowledge'. On the simplest level, science can be defined as knowledge obtained by observation and testing of facts. Its origin is often linked with the origin of philosophy. Both arose as a result of civilization and man's quest to know. Historically, all knowledge was integrated into the guiding principles of philosophy; there was no clear-cut distinction between philosophy and scientific

procedures. Ancient philosophers had to grapple with numerous questions that are today studied under different nomenclatures. From the beginning of the 17th century, science began to gradually and systematically remove itself from the grips of philosophy. From its appellation as ‘natural philosophy’, it became a field of its own and became known as science with several subdivisions to emphasize the core of its investigations. In this regard, Izu Marcel Onyeocha opines that “even more frequently, its meaning has been narrowed down to refer almost exclusively to the physical sciences like physics, biology, chemistry or astronomy” (201). This is because science deals with experiential phenomena; it has no dealings with metaphysical or immaterial objects.

Branches of Science

There are two fundamental ways of grouping disciplines that fall under the banner of science: the formal sciences and the empirical sciences. The formal sciences include mathematics (i.e. geometry, algebra, trigonometry and arithmetic), logic, theoretical physics and statistics. According to Nwala, science is said to be formal if its content, arguments and procedures obey certain rules, if the result and conclusions of such sciences are valid and authentic and if and only if they conform to those rules (1-6). The empirical sciences on the other hand are those bodies of knowledge (physics, chemistry, biology and so on) that study objects and phenomena which can be observed with any of the senses and that can be tested with instruments such as telescope, microscope, ruler, tapes and scales. This simply means that whatever that cannot be observed with the senses of sight, touch, taste, smell and sound or with instruments such as microscope or telescope and so on is outside the purview of science. The empirical science deals with natural phenomena. They are concerned with perceptible and experiential objects or events that are found in nature; hence they are also referred to as the natural sciences.

Background to the Development of Natural Science

Science is a massive problem-solving and information-providing enterprise (Thompson 1). It is in this sense that we appreciate the role of science in human civilization as a means of understanding nature. And since every human age in history has certain problems

and challenges, it follows that there has always been a scientific tradition in every age of human history. This is so because man has the natural inclination to seek for understanding and explanation of the world around him. This according to Uduigwomen is because "man ... has been a scientist since his appearance on this planet. This idea is supported by the fact that man's attempt at building, construction, agriculture and health-care through the use of herbs has scientific bearings" (18).

The early human civilization as pioneered by science is traceable to the Babylonians and Egyptians. They were said to possess a considerable body of knowledge to the extent of being able to invent some instruments with which they understood, explained and solved certain challenges posed by their environment. Titus, Smith and Nolan articulate the scientific achievements of the Babylonians and Egyptians in early civilization as follows:

More than two thousand years before Christian era began; the Babylonians and Egyptians possessed a considerable body of knowledge. They used fixed units of measurements, such as standards of length, weight, and volume, multiplication table, tables of squares and cubes, and a decimal system based on man's ten fingers. In Egypt, the periodic rise of the waters of the Nile, resulting in loss of boundary marks, led to a system of land-surveying that stimulated the growth of geometry. Instruments such as set squares; levels, beam balances, and plumb lines, as well as a considerable amount of mathematical knowledge, were needed to build the pyramids. Weaving and spinning were practiced and wheeled chariots were in use. (218)

Following the scientific activities of the Babylonians and Egyptians is the genius of the Greeks; with the Greeks, human consciousness and interest in man and nature expanded rapidly. This expansion according to Uduigwomen was so massive that the development of science in the Western world is often traced to ancient Greece. This became a necessary historical practice as the postulations of the pre-Socratic philosophers indicate a paradigm shift from a tradition of mythological explanation of the universe to a natural, humanistic and rational one (18).

Early Greek Thinkers

The history of the development of science is usually traced to the pre-Socratic philosophers in ancient Greece, particularly the

Milesians; Thales, Anaximander and Anaximenes whose philosophical speculations were mainly attempts to naturally explain the origin and structure of the universe different from the gods of Homer. These philosophers in the opinion of (Idang 31) were concerned with the scientific study of the universe, its origin and development. Prior to the pre-Socratic philosophers, all natural events were attributed to supernatural causes and things were only understood through a mythological explanation of phenomena. The universe was believed to be inhabited by all sorts of gods, goddesses, demigods, demons, ancestral ghosts, and a host of other spirits. It was concluded then that events happen because they are willed by these supernatural forces. For instance, it was believed among the Greeks that if lightning strikes, then, Zeus has hurled another thunder bolt; when the sun moves through the heavens, all knew that Apollo is driving in his fiery chariot. Thus, natural occurrences were explained through the activities of the gods who inhabited the natural world. For this reason, Ozumba concludes that “before the ancient period of philosophy, the thoughts and contemplations of the universe were steeped in mythology and superstition” (49). This mythological conception of the universe was given a literary authority by Homer and Hesiod in their poetry.

Dissatisfied with this mythological explanation of the universe the pre-Socratic philosophers, particularly the Milesians; Thales, Anaximander, and Anaximenes sought a different kind of explanation; a naturalistic approach to the understanding of the universe. This substantial departure became necessary when they (the pre-Socratics) could not see any rational justification for the mythological views of their forebears. As such, they embarked upon the task of articulating a more rational, plausible and defensible explanation of the natural world. Popkin and Stroll writes of the scientific spirit of the Milesians as follows: The thinkers who began the philosophical quest were those who found that when they scrutinized these beliefs they were seen to be inadequate...the explanations were always based upon insufficient evidence, and could never adequately account for all the information people had acquired about the world. Philosophers, to the dismay of their contemporaries, challenged the believers in mythology to prove their views, or to find a better theory, one that would satisfy reasonable people. Out of this rejection of traditionally accepted beliefs, and the search for more plausible or more defensible theories, came the

attempts of thoughtful people to explain the natural world in some consistent and rational fashion (xvi).

It is evident from the above that the Ionian philosophers established two basic traditions which have become an integral part of scientific practice. First is the critical attitude and zeal for rational explanation of natural events. This is manifested in their rejection of old assumptions and explanations and the adoption of a more humane, rational and defensible explanations. Second is the explanation of natural events from nature itself. That is, the shift of paradigm from a supernatural approach to a natural approach in the explanation of the universe. Hence, “the ancient Greek philosophers appear to have succeeded in recognizing the difference between a purely rational explanation of things as distinct from myth or religion” (Idang 41). This recognition was the catalyst to the idea of humanism; the doctrine that gives primacy to human beings.

The Notion of Natural Science

The Merriam Webster online dictionary defines natural science as “any of the sciences (such as physics, chemistry or biology) that deal with matter, energy and their interrelations and transformations or with objectively measurable phenomena. (Merriam-webster.com/dictionary...). Natural science is a branch of science that builds and organizes knowledge. It is concerned with the explanation, description, prediction and understanding of natural phenomena based on empirical evidence from observation and experimentation. Natural sciences deal with all natural objects. Under it are sub-branches such as:

1. Physical sciences which include disciplines such as physics, chemistry, geology, applied mathematics and astronomy.
2. Biological sciences which include biology, zoology, botany and microbiology. They investigate and study living bodies such as human beings, animals, insects and plants – biological sciences are also called life sciences.
3. Medical sciences: These include general medicine, anatomy, surgery, physiology and veterinary medicine
4. Pharmaceutical sciences: These include pharmaceuticals, pharmaceutical chemistry, pharmacognosy and pharmacology.

Basic Assumptions of Natural Science

Like Humanism, Natural science is a consequence of the renaissance and the age of reason; it should however be conceded that its development was a gradual process that began from the ancient period through the medieval period to a strong foundation in the modern period. It is clear that what is today known as natural science would not have been what it is, if the ancients did not develop, test and prove some scientific assumptions in one way or another through the ages. A scientific assumption pre-supposes that if something is true, something else will happen in a predictable fashion. The following are the basic assumptions of science:

1. **Nature operates uniformly throughout the universe in time and space:** When we speak of the uniformity of nature, we speak in terms of regularity, pattern, and structure. For example, when we look at the seasons (rain and dry) we assume that it is not just a random behaviour. We justify this assumption through observation by noting the patterns of behaviour, and thereby come to conclusions about their behaviour. The same applies to other natural phenomena in time and space.
2. **The world is real:** The physical universe exists apart from our physical experiences. Natural science assumes that the physical world is real and that we can learn about the world and natural law through observing it.
3. **All phenomena have natural causes:** Natural science assumes that nothing we see is unnatural. If it occurs within nature, then it is a natural occurrence, and if it is a natural occurrence, then we assume that it obeys some natural law, and that by observing it, we can learn about it.
4. **Nothing is self-evident:** The advancement of knowledge requires that we assume something we know could be wrong, and if that is the case, we should test it to see if it is true.
5. **Knowledge is derived from acquisition of experience:** Science assumes that learning is done through experience or observation. For example, we observe the season every year, and so predict that, based on past experiences, the rainy season will come and then the dry season.

6. **Knowledge is power:** This is a motivational assumption postulated by Francis Bacon. In this postulation, natural science assumes that knowledge of nature gives one power and mastery over it. Knowing more is better than knowing less. This is why we have schools and universities to transmit knowledge from one generation to another generation.

These assumptions of science are common-sensible, and they have held true over the years. After all, if these assumptions were not assumed to be true, then science itself could not have been successful in generating knowledge. We should note however that these are only the broad assumptions that natural science is based. There are other, far more specific assumptions that come into play in specific existential situations.

Humanism and Natural science

1. The humanist is concerned about an understanding of human reactions to events and the meanings humans impose on experience as culture or life history whereas natural science is mostly concerned about prediction and explanation of all natural phenomena without bias or discrimination in regard to history or race.
2. Humanist source their evidence from written texts and human behaviour gathered under conditions of minimal control. Natural scientists on the other hand source evidence from experimentally controlled observations of material entities.
3. Humanists use concepts that refer to human behaviour and the events that provoke them with serious contextual restrictions on inferences. Natural scientist on the other hand uses semantic and mathematical concepts that refer to material entities of physics, chemistry and biology and is assumed to transcend particular settings (Kegan 4).

Conclusion

From the expositions thus made, it will not be out of place to posit that humanism is not anti-natural science. In fact one can infer that humanism is the uncelebrated mouth piece of natural science. It tries always through its different 'manifestos' to raise societal

consciousness about the inevitability of a world where natural science reign supreme in all 'matters of fact or ideas' but plays down on unverifiable metaphysical and religious assumptions. Humanism champions untrammelled use of the mind and wants it applied in social and political reforms; encourage individual creativity and without prejudice to theistic humanists, exalt the active over the contemplative life. It attributes special importance to education and encourages freedom of thought and opinion; including the use of intelligence and pragmatic research of the natural sciences to understand and solve human existential issues.

Works Cited

- Edwards, Frederick. "What is Humanism?" *Secularweb*. www.infidels.org, 1989. Web. July 2020.
- Gaarder, Joestein. *Sophies World*. Norway: Berkley, 1994. Print.
- "Humanist Manifesto". *Humanists of Utah*. www.humanistsofutah.org, 1994. Web. July 2020.
- Idang, Gabriel E. *Ancient Philosophy: A Text for Beginners*. Uyo: Inela Ventures & P, 2005. Print.
- Kegan, Jerome. *The Three Cultures: Natural Sciences, Social Sciences and the Humanities in the 21st Century*. Harvard: Cambridge University Press, 2009. Web.
- Kolenda, Konstantin. "Humanism". *Cambridge Dictionary of Philosophy 2nd Edition*. Ed. Audi Robert. Cambridge: Cambridge UP, 1999. Print.
- Lamont, Collis. *The Philosophy of Humanism*. New York: Harper and Row, 1979. Print.
- Nath, Ramendra. *ManbendraNath Roy (1887 – 1954)*. Patna: Patna University. www.iep.utme.edu/roy_mn/. Web. July 2020.
- Nwala, T. U. "Definition, Branches and Aims of Science". *History and Philosophy of Science*. Ed. Nwala, T. U. Nsukka: Niger Books, 1997. 1 – 6. Print.
- Onyeocha, Izu Marcel: *Introfil: A First Encounter with Philosophy*. Washington DC: The Council for Research in values and philosophy, 1996. Print.
- Ozumba, G. O. "Ancient Period of Philosophy". *Philosophy and Logic Today*. Ed. Innocent I. Asouzu. Calabar: Jochrisam, 2002. 48 – 82. Print.
- Popkin, Richard H. and Stroll Avrum. *Philosophy*. 3rd Edition. Oxford: Elsevier, 1993. Print.
- Popper, Karl. *The Logic of Scientific Discovery*. London: Routledge, 2002. Print.
- Thompson, Mel. *Philosophy of Science*. U.S.A: McGraw-Hill, 2003. Print.

Titus, H. H., Smith, M. S. and Nolan, R. T. *Living Issues in Philosophy*. 7th Edition. New York: D. Van Nostrand, 1979. Print.

Udo, Etuk. *The New Humanism*. Uyo: Afahaide, 2012. Print.

Uduigwomen, A. F. "An Overview of the Transition from Early Greek Science to Modern Science". *Philosophy and the Rise of Modern Science*. Ed. Uduigwomen, A. F. Uyo: El-Johns, 2011. 192 – 203. Print.