AN EVALUATION OF
A. J. AYER'S VERIFICATION PRINCIPLE

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ABSTRACT

This article focuses on an evaluation of verification principle as articulated by A. J. Ayer. Ayer is a prominent member of contemporary philosophical movement known as logical positivism. Verification principle is the basic principle of logical positivism. Ayer articulated and developed the verification principle, and made distinctions between practical verifiability and verifiability in principle as well as strong verifiability and weak verifiability. The basic questions that are scholarly indispensable in this article are: What actually is verification principle as articulated by Ayer? What is the criterion or yardstick for distinguishing meaningful statements from meaningless statements? What is the philosophical background of Ayer's verification principle? What are the problems associated with Ayer's verification principle? These questions and other related ones are the basic concern of this article. Employing analytical and critical methods, this article examines Ayer's verification principle. The researcher discovered that there are problems associated with verification principle, and as such it is not completely acceptable as the criterion for the determination of meaningfulness or meaninglessness of statements. The article argues that despite such problems, A. J. Ayer made significant contributions towards the advancement of knowledge in contemporary philosophy of science through his innovations in the articulation of verification principle.

Keywords: Verification, Science, Ayer, Principle and Empirical

INTRODUCTION

Science attains knowledge of phenomena in the universe through experimentation and observation. Scientific knowledge is very unique. The uniqueness of science lies in its method of knowledge acquisition. Science employs empirical approach in its investigation of phenomena. According to Okasha (2002), "Scientists do not simply record the results of experiment and observation in a log book- they usually want to explain those results in terms of a general theory."(p.2) This has enabled science to offer useful explanations of phenomena in the universe, and to predict future events or occurrences.

Scientific knowledge is different from non-scientific knowledge. Philosophers of science have tried to identify the distinguishing or distinctive feature of scientific

knowledge. The issues of demarcation between science and non-science as well as demarcation between meaningful statements and meaningless statements have been controversial issues among philosophers of science. The logical positivists or logical empiricists came up with the verifiability principle as a method of demarcation between meaningful scientific statements and meaningless metaphysical, ethical as well as religious propositions. Alfred Jules Ayer, who belong to the philosophical movement of logical positivism, articulated and developed further the verification principle. Contrarily, Karl Popper proposed falsifiability principle as a method of demarcation between science and pseudo-science. Consequently, Karl Popper maintains that every scientific theory must be falsifiable. However, this article focuses specifically on an evaluation of verification principle as articulated by A. J. Ayer.

A. J. Ayer argues and insists that only statements that are empirically verifiable or analytically true are meaningful. With the exception of the above, other statements are meaningless. In other words, it is only empirical statements and tautological statements that are meaningful, and their meaningfulness as well as truth value can be ascertained through either empirical or logical method. Thus, Ayer identifies the verification principle as the criterion for demarcating meaningful statements from meaningless statements. The fundamental questions are: What actually is verification principle as articulated by Ayer? What is the philosophical background of Ayer's verification principle? To what extent is Ayer correct in his verification method? What are the strengths and weaknesses of Ayer's verification principle? These and other related issues are the major focus of this article. Certainly, such issues are to be given scholarly and detailed attention in this study.

This article is partitioned into four sections. The first section focuses on the philosophical background to A. J. Ayer's verification principle. The second section examines A. J. Ayer's verification principle. The third section examines A.J. Ayer's basic forms or types of verification principle. The fourth section is the evaluation as well as conclusion of the article.

PHILOSOPHICAL BACKGROUND/ANTECEDENTS TO A. J. AYER'S VERIFICATION PRINCIPLE

Alfred Jules Ayer is a renowned 20th century British philosopher, born on October 29, 1910 in London. He is a famous scholar in contemporary philosophy of science, and made notable impact on the development of knowledge in that domain. Ayer belongs to a group of philosophers known as logical positivists. He is a strong and influential member of logical positivism. His publication of the very influential book, *Language, Truth and Logic* in 1936, distinguished him and at the same time made him very popular in philosophical circle. Ayer is an empiricist, and as such his approach to knowledge is basically empirical. He was one of the members of the *Vienna Circle*. It ought to be noted that the *Vienna Circle* were mainly philosophers, scientists and mathematicians who gathered in Vienna (in the 1920s and 1930s), with

Moritz Schlick as the leader of the group. They are the original *Logical positivists or Logical empiricists*. In the words of Okasha (2002):

> The dominant philosophical movement in the English-speaking world in the post-war period was *logical positivism*. The original logical positivists were a loosely knit group of philosophers and scientists who met in Vienna in the 1920s and early 1930s, under the leadership of Moritz Schlick…Fleeing persecution by the Nazis, most of the positivists emigrated to the United States, where they and their followers exerted powerful influence on academic philosophy…(p.78)

Generally, logical positivists are mainly empiricists. Hence, it could be said that logical positivism is an off-shoot of empiricism. Most of their principles are empirical in nature. They have strong interest in natural sciences, and at the same time, they held natural sciences in high esteem. This may probably be as a result of the objectivity as well developments in natural sciences. Such interest enkindled and motivated their determination to make philosophy more scientific. Among the major tenets of the logical positivists is the verification principle. The Vienna Circle identifies verification principle as a criterion for distinction between meaningful statements and meaningless statements. It is likely that Ayer's insight to articulate and develop verification principle can be attributed to the Vienna Cirle. Attesting to this, Ogar, Idagu and Asira (2016) note that "…it could be said that Ayer's intellectual formation and solidification was attained by his contact with Moritz Schlick, with other members of the Vienna Circle."(p.70) Hence, the influence of the Vienna Circle (early logical positivists) on A. J. Ayer's philosophical doctrine is very obvious. The Vienna Circle provided the foundation as well as the motivation for Ayer's philosophy. In his very influential book, *Language, Truth and Logic*, A. J. Ayer articulates the Verification principle in which he identifies the criterion that demarcates meaningful statements from meaningless statements. Ayer (1971) upholds empirical verification as the criterion for determining meaningful statements as well as meaningless statements. Certainly, his criterion of meaning identifies verifiable scientific statements as meaningful, while unverifiable metaphysical and religious statements are classified as meaningless. Ayer's innovations in the understanding of verification principle is quite remarkable in contemporary philosophy of science.

EXAMINING A. J. AYER'S VERIFICATION PRINCIPLE

A. J. Ayer is one of the strong proponents of verification principle in the contemporary philosophy of science. The Vienna Circle had enormous influence on Ayer's articulation and development of the verification principle as already demonstrated in this article. His articulation of verification principle is very interesting. According to Ayer (1936):

> To test whether a sentence expresses a genuine empirical
> hypothesis, I adopt what may be called a modified

> verification principle. For I require of an empirical hypothesis, not indeed that it should be conclusively verifiable, but that some possible sense-experience should be relevant to the determination of its truth or falsehood. If a putative proposition fails to satisfy this principle, and is not a tautology, then I hold that it is metaphysical, and that being metaphysical, it is neither true nor false but literally senseless. (p.9)

From Ayer's specification, only empirical statements and tautologies can be said to have truth value, while metaphysical statements cannot be said to have truth value. Sense-experience is a necessary instrument of the verification principle in the determination of truth value of statements. It becomes obvious that the verification principle is basically empirical in nature, and it could be said to be a notable off-shoot of empiricism. The Verification principle is geared towards distinguishing meaningful statements from meaningless statements. It holds that only statements that are empirically verifiable and tautologies are cognitively meaningful. Thus, for a statement to be meaningful and at the same time have truth value, its method of verification must at least be conceivable. Elaborating further on verification principle, Ayer (1936) states:

> The criterion which we use to test the genuineness of apparent statements of facts is the criterion of verifiability. We say that a sentence is factually significant to any given person, if and only if, he knows how to verify the proposition which it purports to express- that is, if he knows what observations would lead him, under certain conditions, to accept the proposition as being true, or reject it as being false. If, on the other hand, the putative proposition is of such a character that the assumption of its truth, or falsehood, is consistent with any assumption whatsoever concerning the nature of his future experience, then, as far as he is concerned, it is, if not a tautology, a mere pseudo-proposition. (p.16)

Hence, this principle rejects metaphysical propositions as senseless and meaningless. Metaphysical propositions are rationalistic in nature. The empirical feature of the verification principle is opposed to metaphysical propositions. This stems from the fact that the truth value of metaphysical propositions cannot be ascertained through empirical means. Ayer (1936) criticized metaphysics and argued that "…many metaphysical utterances are due to the commission of logical errors…" (p.13) This goes a long way in demonstrating Ayer's disregard for metaphysical statements. He argues that metaphysical statements make reference to things that are not within the sensible world, and as such they cannot be empirically verifiable. Metaphysical statements, for him, are nonsensical because they refer to

things that transcend the empirical world. Thus, they are classified as meaningless statements which cannot be subjected to empirical verification. In the words of Ayer (1936):

> …that no statement which refers to a 'reality' transcending the limits of all possible sense-experience can possibly have any literal significance; from which it must follow that the labours of those who have striven to describe such a reality have all been devoted to the production of nonsense. (p.14)

Hence, Ayer maintains that metaphysical propositions are mere 'nonsense'. It ought to be noted that Ayer's description of metaphysical proposition as 'nonsense' leaves much to be desired, and it is not acceptable. This will be given a more detailed attention in the later part of this article.

Furthermore, just like other logical positivists, Ayer rejected theological as well as ethical statements, and also classified such statements as meaningless. This stems from the claim and insistence that such statements are not empirically based, and thus do not have truth value. They cannot be subjected to empirical verification. It is argued that any statement that does not have truth value is not a good statement. Certainly, and without any doubt, Ayer and other logical positivists admit that theological and ethical statements may be helpful in the domain of influencing beliefs as well as human conducts, but cannot in any way be said to have the attribute of meaningfulness.

Contrarily, scientific statements fulfill the requirements of the verification principle. Ayer argues consistently that scientific statements are empirically verifiable, and as such they are meaningful. He further argues that the method of verification of scientific statements is at least conceivable. This distinguishes scientific statements from other statements. The meaningfulness of scientific statements is rooted in the fact that they are based on empirical data. Scientific statements are quite different from metaphysical statements. The difference is as a result of the fact that metaphysical statements have nothing to do with empirical data. This explains why Ayer insists and maintains that the examination as well as analysis of scientific statements should be the basic occupation of philosophy. This goes a long way in demonstrating Ayer's high regard for scientific statements.

In order to elucidate further the verification principle, Ayer as well as other logical positivists distinguished between synthetic and analytic statements. Such distinction throws more light to the understanding of verification principle. Analytic statements are just tautologies, and have nothing to do with sense-experience. The predicate of an analytic statement only explicates or explains what is already contained in the subject. Hence, an analytic statement is necessarily true. Contrarily, a synthetic statement is empirical, and it drives its meaningfulness as well as truthfulness from

sense-experience or empirical data. The verification principle upholds the 'factual' meaningfulness of synthetic statements and, at the same time, the 'formal' meaningfulness of analytic statements. The implication of this is that synthetic statements are said to be factually meaningful, while analytic statements are said to be formally meaningful. It ought to be noted that the factual meaningfulness and truthfulness of empirical statements are derived from empirical facts, while the formal meaningfulness as well as truthfulness of analytic statements are derived from logic. Analyzing the logical positivists' verification principle and the criterion of meaningfulness, Stumpf (1994) states:

> From this distinction between analytic and synthetic propositions, the positivists formulated their conception of cognitive meaning or literal significance. Analytic propositions…have a formal meaning, since their meaning derives not from facts but from the logical implications of words and ideas, as in mathematics, logic, and the formal sciences. On the other hand, synthetic propositions have a factual meaning, because their meaning is based upon the empirical observation of the objects referred to in the statements. Synthetic statements are the language of the factual sciences, physics, biology, psychology, and so on. It was at this point that the principle of verification had its decisive application. (pp.457-458)

Ayer developed this principle further by identifying different forms or types of the verification principle.

A. J. AYER'S BASIC FORMS OR TYPES OF VERIFICATION PRINCIPLE

Ayer identified different forms or types of verification principle. The different forms or types of verification principle provide more insight to the understanding and application of the principle. Firstly, he made a distinction between practical verifiability, and verifiability in principle. Practical verifiability has to do with statements concerning matters of fact which one can actually verify, while verifiability in principle has to do with statements concerning matters of fact which one cannot actually verify probably due to lack of adequate practical means of doing such. These types of verifiability are the variations of the verification principle. In his words:

> In the first place, it is necessary to draw a distinction between practical verifiability, and verifiability in principle. Plainly we all understand, in many cases believe, propositions which we have not in fact taken steps to verify. Many of these are propositions which we could verify if we took enough trouble. But there remain a number of significant propositions, concerning matters of fact, which we could not verify even if we chose; simply because we lack the practical

> means of placing ourselves in the situation where the relevant observations could be made. A simple and familiar example of such proposition is the proposition that there are mountains on the farther side of the moon. No rocket has yet been invented which enable me to go and look at the farther side of the moon, so that I am unable to decide the matter by actual observation. But I do know what observations would decide it for me, if, as is theoretically conceivable, I were once in a position to make them. And therefore I say that the proposition is verifiable in principle, if not in practice, and is accordingly significant. (Ayer 1936: pp.16-17)

This implies that one can verify a statement practically, and also the verification can only be in principle. It becomes obvious from Ayer's specification that a proposition which is not practically verifiable may be verifiable in principle. It seems that practical verifiability guarantees greater certainty than verifiability in principle. However, there are some propositions which are not in any way verifiable either practically or in principle. Metaphysical propositions, for Ayer, belong to this category. Such propositions are senseless, and as such meaningless. According to Ayer (1936):

> On the other hand, such a metaphysical pseudo-proposition as 'the Absolute enters into, but is itself incapable of, evolution and progress', is not even in principle verifiable. For one cannot conceive of an observation which would enable one to determine whether the Absolute did, or did not, enter into evolution and progress. (p.17)

The method of verification of metaphysical proposition is not in any way conceivable. This implies that any effort geared towards the verification of metaphysical proposition is completely a futile effort. It is a mere waste of time and mental energy. This stems from the fact that there is no observation that can enable one to undertake such verification.

Besides distinguishing between practical verifiability and verifiability in principle, Ayer also distinguished between 'Strong' verifiability and 'Weak' verifiability. This distinction further elucidates the verification principle. Whether it is in the strong sense or in the weak sense, verifiability is implied. Hence, a proposition can be strongly verifiable or weakly verifiable. Strong verification is more definite than weak verification. Be that as it may, a proposition or a statement is said to be verifiable even if it is just in the weak sense of it. Ayer (1936) states thus:

> A further distinction which we must make is the distinction between the 'strong' and the 'weak' sense of the term 'verifiable'. A proposition is said to be verifiable in the strong sense of the term, if, and only, its truth could be conclusively established in experience. But it is verifiable, in the weak sense, if it is possible for experience to render it probable. (p. 18)

It becomes obvious that experience is the basic criterion or yardstick for verification both in the strong sense and weak sense of it. This further demonstrates the empirical nature of verification principle. Certainly, there are difficulties associated with verification principle. Such difficulties have necessitated criticisms of verification principle by some scholars. In his later book, *The Central Questions of Philosophy*, Ayer (1973) articulated the difficulties associated with the verification principle thus:

> Even in its weaker form, in which it is designed only to demarcate literal sense from nonsense, the verification principle runs into difficulties. For one thing, it has never yet been adequately formulated. The suggestion that a sentence is factually significant to a given person if and only if, he knows what observations would lead him to accept or reject the proposition which he takes it to express, is not satisfactory, because it does not take account of the fact that people may behave irrationally. Someone may be disposed to accept a proposition on the basis of observations which do not genuinely support it. (p.26)

Actually, one may claim that a particular observation actually supports a given proposition, while another person may not be eager to accept that such observation supports the proposition in question. This kind of scenario creates difficulties in the application of the verification principle. It also questions the verification principle. Furthermore, Ayer (1973) identified an objection which is commonly raised against the verification principle. According to him:

> An objection which was often raised against the verification principle was that its own status was dubious. It did not seen to be necessary, in the sense that the denial of it was put forward as an empirical hypothesis about the way in which the word 'meaning' is actually used, the very fact that it denied meaning to statements which many people regarded as meaningful could be taken as evidence that it was false. (Ayer: 1973, p.34)

The above objection revolves around the fact that the verification principle is not necessarily true. Since it is dependent on experience, it can also be contradicted by experience. Ayer (1937) responded to the above objection by stating that "The only answer that could be made to this objection was that the principle was advanced as a stipulative definition. It did not describe how the word 'meaning' was commonly used, but prescribed how it should be." (p.34). It is obvious that the verification principle as articulated by Ayer has some problems, and as such, it is a controversial principle. It is necessary to undertake a scholarly and detailed evaluation of the verification principle.

EVALUATION

A. J. Ayer made remarkable contribution to the development of philosophy of science in the contemporary era through his further articulation and development of verification principle. It is obvious from the above discourse that verification principle is an attempt to demarcate meaningful statements from meaningless statements. The verification principle, as articulated by A. J. Ayer, is very captivating and interesting. It has identified the yardstick for verification of statements in order to ascertain their meaningfulness. It ought to be noted that verification principle is not completely original to Ayer as an individual. It is the brain-child of logical positivism as a philosophical movement or orientation, which Ayer is one of its prominent members. Ayer's further development of the principle made significant contribution towards refining and popularizing the principle. His innovations in the understanding of verification principle is quite very remarkable in contemporary philosophy of science. Certainly, verification principle distinguished Ayer as a renowned logical positivist and an outstanding empiricist. This stems from the fact that verification principle is empirically oriented, and it is based on the tenets of empiricism.

However, verification principle as articulated by Ayer is very controversial, and as such it has been subjected to severe criticism. This is as a result of the problems associated with the principle. Such problems render verification principle unable to demarcate properly meaningful statements from meaningless statements. In the course of Ayer's articulation of the verification principle, he condemned metaphysical proposition, describing it as 'nonsense' and 'meaningless'. Ayer's condemnation of metaphysical proposition is based on the premise that metaphysical proposition is not based on possible experience or empirical fact. Hence, Ayer adopted sense-experience or empirical observation as the criterion for the determination of meaningfulness. It seems to the researcher that Ayer is wrong in his condemnation of metaphysical proposition. It is not fair to describe metaphysical proposition as 'nonsense' and 'meaningless' just because of the fact that it is not empirically based. Metaphysical propositions have contributed immensely in shaping man's understanding of life as well as the universe in general, and as such should not be described as mere 'nonsense'. For instance, Anetoh (2019) argued consistently "that the metaphysical distinction between substance and accident could be of immense help in combating the problem of racism in the world." (p.44) Metaphysical propositions have contributed significantly in addressing the problem of humanity. Hence, Ayer's description of metaphysical proposition as 'nonsense' leaves much to be desired, and cannot be accepted.

Furthermore, Ayer's adoption of sense-experience or empirical observation as the basic criterion for determination of meaningfulness in his verification principle is questionable. Everything in the universe is not material, and as such not empirical. There are both material and non-material aspects of the universe. Eboh (1995) attested to this by stating that "The universe is much more than mere matter, especially when man comes into the scene. From our daily experience we know that man is omni-dimensional." (p.60). Everything about the universe as well as human

life is not empirical. Hence, Ayer's verification principle that classifies statements that are not supported by empirical data as meaningless is not completely acceptable. Meaningfulness should not be limited to statements that are empirically verifiable.

Also, the verification principle as articulated by Ayer may not be completely reliable. This stems from the fact that it is dependent on sense-experience for the determination of meaningfulness of statements. It ought to be noted that anything that is supported by sense-experience can also be contradicted by sense-experience. Besides, human senses can at times be defective, and may not be completely reliable in such situation.

It is possible that verification principle may at times lead to relativism. This is based on the assumption that an individual may claim that a particular statement is supported by certain empirical data. But another individual may not consider such empirical data as supporting the statement in question. This kind of situation unravels and portrays the indefiniteness of verification principle.

The basic questions that should be addressed are these: Is verification principle itself verifiable? How would one verify the verification principle? Which empirical data support the verification principle? A. J. Ayer and other logical positivists uphold verification principle as the criterion for distinguishing meaningful statements from meaningless statements, but did not adequately specify how to verify the verification principle itself. Hence, it could be argued that verification principle has fallen by its standard, and cannot even be said to be verifiable itself. It seems to the researcher that A. J. Ayer has unconsciously fallen victim of what he condemned and criticized.

CONCLUSION

This article has examined the verification principle as articulated by A. J. Ayer. The Verification principle provides the criterion for distinguishing between meaningful statements and meaningless statements. It maintains that only statements that are empirically verifiable and tautologies are cognitively meaningful. A. J. Ayer further developed verification principle, and identified different forms or kinds of verification principle such as practical verifiability and verifiability in principle as well strong verifiability and weak verifiability. There are problems associated with the verification principle as demonstrated in this article. However, this article argues that despite such problems, A. J. Ayer contributed immensely towards the growth of knowledge in contemporary philosophy of science through his further articulation and development of the verification principle.

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