CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

The break from British Idealism which originated from Hegelianism and propagated by McTaggart, F.H Bradley and Bernard Bosanquet was made possible through the works of G.E Moore and Bertrand Russell at the dawn of the 20th Century. These works and the general revolt against Hegelianism brought back empiricism and were responsible for the birth of analytic philosophy and pragmatism. One major effect of this is the realization of how much most disciplines, especially philosophy and science, needed each other for exchange of knowledge and results of inquiries. This made scholars to exhume Kant's separation of analytic statements and synthetic statements considering that such separation favoured scientific inquires since synthetic statements/truths, aligned with inductive processes, would be in tune with the climate of science. This favoured the logical positivists who had from the 1920s been meeting in Vienna to discuss scientific language and scientific methodology.

The positivists accepted Kant's distinction between analytic and synthetic statements and favoured the latter considering their rejection of Metaphysics and acceptance of scientific knowledge and methodology. Willard van Orman Quine tried to modify the positivists' position through his 1951 paper, Two Dogmas of Empiricism. In that paper, Quine criticized two main doctrines of the empiricists, namely: the distinction between analytic statements and synthetic statements as well as reductionism which he says is the belief that the meaning of a statement lies in the logical construct of its terms that must be linked with immediate experience. Quine stated in that paper that his intention was to blur the supposed boundary between speculative metaphysics and natural science. He also stated clearly that it was also a shift toward pragmatism.

Willard van Orman Quine stated clearly that there is no distinction between *analytic* and *synthetic*. He holds that the term analyticity is meaningless considering that no coherent definition of it had ever been given and that its meaning, built around definition, explication and synonymy are not coherent. He also stated through his *web of beliefs* and confirmation holism that there is no distinction between *analytic* and *synthetic*. However, the reactions of philosophers to these claims of Quine snowballed to the debate on whether or not there is a distinction between *analytic* and *synthetic*. This debate with the entire philosophical climate that led to it forms the background of this dissertation. Yet, the questions begging for answers include: is there anything like the analytic? Can analyticity and apriority be proved beyond all reasonable doubts? Is there any distinction to be made between *analytic* and *synthetic*? What is actually the relationship between *analytic* and *synthetic*? These and many more are research questions that guided the research in this dissertation.

1.2 Statement of the Problem

In modern time, outstanding growth and breakthroughs in science and technology established beyond all doubts the dominance of science in knowledge and information about the world. The streak became more pronounced from the last century and ensures more robust future in terms of knowledge and information at the disposal of man. The result of this is a change in academic direction; there was a gradual but steady shift from disciplines nurtured on conceptualization and rationalization like philosophy and theology to science-based disciplines and pragmatism. These happenings questioned the relevance of such disciplines as speculative metaphysics and philosophy in general. The situation became worse with the emergence of the positivists and other schools of thoughts that upheld scientific knowledge as the only valid source of truth. This

is to the detriment of those other disciplines like philosophy. Yet, Quine, who in his paper "Two Dogmas of Empiricism", stated his intention of bridging the gap between science and speculative metaphysics, created more problems for the non-inductive disciplines through his rejection of analyticity and the distinction between *analytic* and *synthetic*. This and other developments widened the gap between science and those disciplines. The result is the relegation to the back of those disciplines especially Metaphysics and Analytic Philosophy and denying scholars their rich heritages and contributions to learning and knowledge. This is the problem.

The problems this research addressed include those created by so much emphasis only on science and technology occasioned by the works of Quine, the positivists and other scholars. The dissertation particularly addressed the problems raised by Quine's rejection of analyticity and the distinction between the analytic and the synthetic. It also treated some specific issues raised by Quine's notions such as definitions, synonymy, explications, meaning, shift from meaning to sentence, the relationship existing between *analytic* and *synthetic*, etc.

1.3 Purpose of Study

This work made a critique of Quine's rejection of analytic-synthetic bifurcation and those of other philosophers whose views have by any means a relationship to it. The work brought to the fore the stage on which the analytic-synthetic bifurcation debate is at moment and charted a course on the nature of its future. I am convinced that the dissertation will make people have a clear perception of the debate and incentives for further inquiry into the matter. Its purpose had been to address the problems raised by Quine's rejection of analyticity and the analytic-synthetic distinction with the aim of finding the best way of fostering a good relationship between science

and non-inductive or speculative disciplines. Such relationship will enrich humanity with information and knowledge sharing between science and those other disciplines.

1.4 Scope of the Study

Though this work centers on Quine's rejection of analytic-synthetic bifurcation, it made an x-ray of all works that are related to the debate bordering on whether or not there should be a distinction between *analytic* and *synthetic*. The period emphasized in this research began with the time of Kant to the present time. The works of philosophers within this period fall within our research period. Again, there will be an explanation to be made in all topics found relevant on the course of the work especially those of philosophers like Kant, Leibnitz, Russell's logical atomism, logical positivism of the men of the Vienna Circle and others. My investigation and research will be limited to the works of W.v.O Quine and those of other philosophers like Ayer, Carnap, etc who have common interest in the topic.

1.5 Significance of the Study

Many philosophers insist that the emphasis of philosophy should be on "argumentative clarity and precision rigour, theory, and truth,"[1] analysis of language and concepts among other things. Hence, the clarification and suggestions given by this dissertation on such burning issues as analyticity, syntax, semantics, formal logic and the relationship between *analytic* and *synthetic* will be of immense value to philosophers especially those who specialize in Metaphysics and Analytic Philosophy. . The relevance of this work also lies in the fact that major successes in analysis of propositions will result in a better understanding of the claims of analytic philosophy "…(whose) practice and ideologies in recent times are (said to be) moribund"[2] Again,

philosophers who have interest in science and its relationship with philosophy will also find the research useful considering that it tried to blend both disciplines without the extreme positions of the positivists, Quine and adherents to rationalism and speculative disciplines. It will also be of immense benefit to scientists especially mathematicians and logicians who stand to gain from the methods, theories and knowledge offered by the various branches of philosophy.

1.6 Methodology

The concept of analysis, from which came analytical method to be used in this research, is derived from the Greek word *analusis* which literally means dissolving. It is relatively new but the understanding of its meaning and its application in philosophical problems date back to ancient Philosophy. It is defined as "…the separation of a whole into its constituent parts for individual study"[3] or as "the process of breaking a complex topic or substance into smaller parts in order to gain a better understanding of it"[4]

The concept of analysis as a method is used in various disciplines in relationship to such meaning as the decomposition of a whole into parts. For instance, in Chemistry it could mean "The separation of a substance into its constituent elements, usually by chemical means, for the study and identification of each component"[5] (qualitative and quantitative analysis). Qualitative analysis determines what substances are present in a compound while Quantitative analysis determines "how much of each substance is present in compound".[6] Again, it could be used in medical diagnosis as medical analysis, analysis of the mind and unconscious as psychoanalysis, mathematical analysis such as what is done in calculus, radiochemical analysis, etc. yet, the focus here is philosophical analysis.

As stated above, the philosophical method that will be used in this work is analytical method. It is a method that makes it possible to know and assess the logical components of a concept or statements or philosophical ideas. It is a generic process combining the power of the scientific method with the use of formal process to solve any type of problem. It is intended that there will be an exposé and appraisal of Quine's position on the analytic-synthetic debate and those of the other philosophers whose works are related to the topic and are of relevance to the discussion. This research is aimed at finding a solution to the problem and making recommendation for a possible future research on the issue.

This dissertation is divided into five Chapters. Chapter one involves a general introduction in which the background, objectives for the research and the methods to be used in it are discussed with other themes. Chapter Two, is a review of relevant literature. It centers on the analysis of the contributions of many philosophers on the debate of whether or not there should be a distinction between analytic statements and those of synthetic statements.

The third chapter focuses on the foundations of Quine's rejection of analytic-synthetic distinction. Here, the various philosophical doctrines that influenced Quine are discussed. These doctrines include: understanding of analytic statements before Quine, the naturalism of the positivists and their separation of analytic and synthetic statements and the positivists' principle of tolerance.

Chapter Four discusses Quine's reasons for rejecting the distinction between analytic statements and synthetic statements. It focuses on Quine's doctrines of confirmation holism, web of beliefs and others. Chapter five focuses on evaluation and conclusion.

1.7 Definition of Terms

A priori

A priori literally translates "from what is before" and means knowledge that is totally independent of particular experiences. *A priori* proposition is not grounded on experience or rely upon experience but is said to be logically necessary. It is "known to be true independently of or in advance of experience of the subject matter; requiring no evidence for its validation or support"[7]

A posteriori

A posteriori literally translates "from what is after" and means knowledge that is derived from experience. *A posteriori* propositions are validated by, and grounded on experience. Therefore, it is logically contingent. It is defined as "relating to or involving inductive reasoning from particular facts or effects to a general principle…requiring evidence for its validation or support; empirical; open to revision"[8]. In other words *a posteriori* moves "from particular instances to a general principle or law; based upon actual observation or upon experimental data"[9]

Analytic Statements

Analytic statements are propositions whose meaning is not dependent on facts of the extended world while the ideas expressed in their predicates are said to be contained in their subject. The statement "man is a rational being" is analytic because the predicate "rational being" is implied in the subject, "man" and does not depend on experience for its meaning. Apart from the expressions of this type, the truths of mathematics and logic are generally believed to be analytic.

Synthetic Statements

Synthetic statements are statements that have reference to experience. The ideas in the predicate of such statements are not implicit in the subject. The expression "all visible objects have weight" is synthetic because the idea of weight is not contained in the subject but is got through experience.

Synthetic a priori

Kant holds that some statements could be both analytic and synthetic at the same time. Such statements are said to be *synthetic a priori* propositions. He holds that the predicates of *synthetic a priori* are not logically or analytically contained in the subject and that their truth is not verifiable independently of experience.

Contingent Analytic

This is a term coined by Kaplan, D., an American philosopher that describes some kinds of sentences that portray different things in different contexts. They are taken to mean different things when they are used by different people or are used at different times or different places. The examples given by Gillian Russell, another American philosopher, include: 1. I am here. 2. That (the shortest spy) = the shortest spy. 3. Tomorrow is two days after yesterday.

Definition

A definition is an expression that states the meaning of a term/word, phrase and other forms of symbols. It is divided into intensional definitions which give the sense of a term as well as extensional definitions which lists the objects which the term describes. There is also ostensive

definitions which describe the meaning of a term or word by giving examples of the term or word.

In other words, definitions attach meaning to a word or groups of words. The word or words being defined is called *definiendum* while the word or words or actions that define the word or words is known as *definiens.*

Some philosophers believe that definition is limited in many ways. Some hold that since ordinary languages have finite number of words, the definitions involving those words must be circular. This is such that if every word in the *definiens* should be defined, there will be a difficulty of continuing *ad infinitum.*

Some philosophers believe that it is safer to leave some words without defining them. It is in view of this that most scholastic philosophers give the opinion that the highest genera such as being, unity, etc. cannot be defined. Again, Locke holds that names of simple concepts cannot admit any definition while Wittgenstein says it is not plausible to think of undefined simple considering that what passes as simple in one circumstance may not be so identified in another circumstance.

Analyticity

Analyticity is the condition or property of being analytic. This means the feature of a truth that is not grounded in experience and whose negation leads to contradiction.

Synonymy

A synonym is a word or phrase that means exactly or nearly the same as another lexeme (word or phrase) in the same language. Words that are synonyms are said to be synonymous, and the state of being a synonym is called *synonymy*.

Formalism

Formalism in Philosophy is a doctrine associated to Gottlob Frege which lays emphasis on form and technique rather than the contents of a statement. Formalism is concerned with the rules of the game and the fact that there is no other external truth that can be achieved beyond those given rules. In this sense, formalism lends itself well to disciplines based upon axiomatic systems.

Logical Empiricism

Logical empiricism is also known as logical positivism. It is a philosophical movement which has its origin in Vienna in the 1920s which posits that scientific knowledge is the only reliable knowledge of facts and that all traditional metaphysical claims should be rejected as meaningless. It emphasizes experimental verification over personal experience and that metaphysical doctrines are not false but meaningless.

Logical Constants

These are those parts of language that do not "point" or "function referentially," that is, aiming to refer to something in the world, in the way that ordinary nouns, verbs and adjectives seem to do. They include, 'and', 'or', 'some', 'all', and 'not'.

Solipsism

Is a belief that the only thing one can be sure of its existence is oneself; true knowledge of every other thing is not possible. In philosophy, it is an extreme subjective idealism which holds that there is no valid ground for the human mind to believe in the existence of anything else apart from itself. It is one of the solutions proffered for the problem of the possibility of human perception of the extended world. Bertrand Russell expresses it in these words, "…indeed there is little but prejudice and habit to be said for the view that there is a world at all"[10]

Neutral Monism

Monism is derived from the Greek word *monos*, meaning single. Opposed to dualism and pluralism, monism in philosophy holds that reality is made of one substance. The term monism was first used by the German philosopher, Christian von Wolff, to describe the attempt in philosophy to eliminate the distinction made of body and mind.

Radical Reductionism

Reductionism, seen as "one of the most used and abused terms in the philosophical lexicon",[11] is the notion which holds that objects of a certain kind are mere collections of objects of more basic kind. While ontological reductionism holds that the whole of reality is constitutive of a limited number of parts, methodological reductionism is "the attempt of scientists to provide explanation of objects in terms of ever smaller entities."[12]   The theory of reductionism holds that "new theories reduce old ones to more basic terms without replacing or absorbing them."[13]

Vagueness

Vagueness is to be contrasted with ambiguity and generality. It describes the condition in which the extension of a concept lacks clarity and refers to a situation in which there is "…uncertainty about which objects belong to the concept or which exhibit characteristics that have this predicate (so-called "border-line cases"), or if the Sorites paradox applies to the concept or predicate."[14] A term is vague if it has borderline cases. Borderline cases involve statements or sentences whose truth or falsity cannot be established easily because of its unclear contents.

Indexicality

In philosophy of language and linguistics, indexicality is the condition in which a sign points to or identifies an object within the context it is found. Hence, an indexical is a sign that points out an object indexically. The reference of an indexical in an expression can shift from context to context. One speaker can use the same indexical to mean different things in different linguistic expressions while two persons who utter the same sentence which has an indexical in it can mean two different things. This is why scholars believe that an indexical has two types of meaning. The first type of meaning is called 'linguistic meaning' while the second meaning is known as 'content meaning'.

Holist underdetermination

The doctrine of underdetermination holds that there is always a rival theory to any scientifically based theory. Such rival theory could be supported by evidence and could be logically maintained in the face of any new evidence. What this means is that we know a conclusion that is underdetermined when there is a rival conclusion that is equally supported by sufficient

evidence. Duhem's doctrine of confirmation holism holds that hypotheses or theories are not tested empirically in isolation but in groups or in collections.

Maxim of minimation

Maxim of minimation is a system through which a concept is explained with the simplest possible terms. It was coined by Willard van Orman Quine on his process of ascertaining the possibility of giving precise meaning to the concept of analyticity. He divides the system into two, namely, simplicity maxim of minimation and the principle of minimal destructiveness. Concerning the first, Quine opines that a very simple explanation of an unfamiliar proposition or notions, for instance, with the most basic vocabulary is more effective than complex ones. Also, he explains the second aspect of the maxim of minimation as a means of explaining a concept with the least destruction of its precise meaning.

Verificationism

The verification principle or verificationism, also called the verifiability criterion of meaning, holds that a statement is meaningful only when it is empirically verifiable. Apart from such statements, the positivists who posited this doctrine also recognizes truths of logic but dismisses as 'meaningless' statements bordering on metaphysics, ethics, aesthetics and theology considering that they cannot be verified empirically though they are quite significant in matters concerning emotions or behaviour.

Endnotes

1. Avrum Stroll, *Twentieth-Century Analytic Philosophy* (New York: Columbia University Press, 2000), p. 5

2. Colin McGinn, *The Making of a Philosopher: My Journey Through Twentieth-Century Philosophy* (New York: Harper Collins, 2002) p. xi

3. Theordore Jerkings, *Analytic Philosophy*, (New York: William Collins Sons & Co. Ltd. 2012) P.76

4. Loc. Cit.

5. John Williams, *Random House Dictionary*, (New Jersey: Random House, Inc. 2015) P.89

6. N. Carter, (ed.) *The American Heritage Stedman's Medical Dictionary*, (New York: Houghton Mifflin Company. 2013) p. 236

7. Ibid. p. 341

8. Loc. cit.

9. Georges Rey, The Analytic-Synthetic Distinction, *The Stanford Online Encyclopedia of Philosophy*, http://plato.stanford.Edu/entries/analytic-synthetic/ (23/6/2015)

10. Bertrand Russell, *The Scientific Outlook*, (New York: W.W. Norton & Company, Inc. Publishers, 1931). p. 98

11. Michael Ruse., "Reductionism", In Ted Honderich.(ed.) *The Oxford Companion to Philosophy*, 2nd Ed. (Oxford: Oxford University Press, 2005). p. 793

12. Alyssa Ney. "Reductionism". Internet Encyclopedia of Philosophy http://www.iep.utm.edu/red-ism/ *Retrieved March 13, 2015)*

13. Loc. Cit.

14. T. Wiiliamson, *Vagueness,* (London: Rutledge Press, 1994,). p.48

CHAPTER TWO

LITERATURE REVIEW

The understanding of the debate on the relationship between analytic and synthetic statements hinges on the understanding of the meaning of both sentences. Synthetic statements have reference to experience while analytic statements are such that their truth or falsity is not dependent on the extended world. Both statements have always been recognized but not compared from the ancient time. The issue of whether or not the independence of knowledge on experience is possible has always been affirmed by philosophers along the history of the discipline. Plato in his books *Meno and Phaedo* postulated that a recollection of our experience in our previous existence and deep reflection on the world of forms could give us such knowledge as geometrical truths[1] while medieval philosophers exemplified in Augustine were of the opinion that God is the source of the knowledge which does not have reference to experience.[2] To them, God gives intellectual illumination to people who by means of that acquire such knowledge.

At the dawn of modern philosophy, one would consider Hume's ideas bordering indirectly or close to the issue in debate. Quine observes that Hume didn't perceive the dichotomy between the analytic and synthetic sentences though his postulations recognize them. He writes: "Hume….(was) unclear on the dependence on meanings of what he called "relations of ideas," as opposed to "matters of fact," in inquiry. But it fits his point of view. All that is certain (apart from isolated immediate experience) is analytic. And this is the creed likewise of the empiricists today." [3]

David Hume in his book divided truths into two major groups; relations of ideas and matters of fact. This is such that nothing exists that does not fall into any of these groups. Hence, he writes

concerning such perceived truth that does not belong to any of the two classes: "Commit it then to the flames, for it can contain nothing but sophistry and illusion".[4] By "relations of ideas", Hume meant truths and statements that are abstract (analytic, necessary, a priori) and have no reference to the objects of the extended world while by "matters of fact" he meant truths or statements that are concrete or have to do with the synthetic, the contingent and the *a posteriori.*

Leibniz made a distinction between *truths of reasoning* and *truths of fact*. He holds that the explanation of truths of reasoning is discovered through the analysis of the concepts or notions and the resolving of it into simpler ideas and simpler truths until we reach the primitives. He maintains that every truth of reasoning could be resolved into primitives or identities. However, he says that the reason of truths of fact cannot be discovered by means of the process of analysis or resolutions of notions.

Leibniz distinguishes between true and false ideas. He holds that an idea is true when its notion is possible whereas it is false when it involves a contradiction. He also opines the possibility of the knowledge of ideas could be established a priori and a posteriori. This is expressed in these words:

> On the one hand, we can know *a priori* that something is possible if we can resolve it into its component notions which are themselves possible and if we know that there is no incompatibility among those component notions. On the other hand, we know *a posteriori* that something is possible merely through experience, for the actual existence of a thing is proof of its possibility.[5]

The history of the distinction between analytic and synthetic statements cannot be made without reference to Gottfried Wilhelm Leibniz, a German rationalist who lived in the 17th Century. He made a distinction between "truths of reason" and "truths of fact". Truths of reason, according to him, are truths arrived at by intellection while truths of fact have reference to experience.

However, related to this is David Hume's distinction between "relations of ideas" and "matters of fact." It is also believed that a logician and epistemologist from Prague, Bernard Bolzano, added a third category which he calls the analytically false. He was a Bohemian mathematician and theologian who provided a more detailed proof for the binomial theorem in 1816 and suggested the means of distinguishing between finite and infinite classes. He was also said to have made a distinction between finite and infinite classes and was the first to explain analytic statement. Bolzano, was of the opinion that a sentence is analytically true "…if either (1) its propositional form is true for all values of its variables or (2) it can be reduced to such a sentence"[6]

Rene Descartes holds that the ideas that form the basis for a priori knowledge are innate in human mind.

In his book, De Corpore, Thomas Hobbes statements of necessity are possible based on fact that they are nothing but the by-products of the rules or conventions resulting for our use of language. However, Saul Kripke on his attempt to state the relationship between analytic and synthetic statements in refutation of Kant's synthetic a priori holds that some statements are necessarily true and could only by known a posteriori while some are contingently true but knowable a priori.

However, logicians of recent times believe that analyticity does not belong to judgments, sentences or even definitions considering that judgments are too psychological, sentences belong to language while definitions are all about words and not objects. To them, analyticity belongs to statements which revolve around meanings of sentences. However, Gottlob Frege

with reference to meanings in this regard, added "general logical laws," these two references being the only requirements for the proof of an analytic statement."

Willard van Orman Quine holds that analyticity is meaningless because there had never been any coherent definition, explication or synonymy that gave precise meaning of it. He says that the very concept of meaning on which the account of analyticity is based is problematic and that every explication or definition of the analytic makes appeal to the necessary or *a priori* which means that the meaning of the analytic is presupposed even before its definition or description is made considering that *a priori* (presumed in the definition or explication as a synonym of the analytic) is used for its description.

Quine also holds that our knowledge is holistic and should not be grouped into the analytic and the synthetic and that sentences or statements are not confirmed in isolation but rather in union with every other sentence. Quine's other doctrine, web of beliefs, states that in terms of revisability, there exists no difference between claims of the analytic and well-established universal beliefs. He concludes that there exists no boundary between the analytic and the synthetic.

Philosophers involved in the debate on the distinction between analytic and synthetic statements could be grouped into three. The first group of philosophers involves those who accept everything Quine says about there being nothing like analyticity or distinction between *analytic* and *synthetic*. The second group involves philosophers who say that the concept of analyticity is real and meaningful and that the distinction between the analytic and the synthetic are very obvious. Yet, there is the third group that stand mid-way between the first and the second group. However, Quine's attack on the distinction between analytic and synthetic statements began with

his denial of analyticity. That is why some philosophers like Hilary Putnam began with a critical examination of Quine's position on the analytic.

Hillary Putnam holds that Quine in his paper uses analytic truth in two senses. The first use is in relationship to Kant's account of analyticity with reference to tautology while the second use is in relation to apriority. He says that Quine in the first four sections of his paper, the *Two Dogmas of Empiricism*, uses analytic truth in relation to Kant's account of it with reference to tautology. In the light of Kant's account, analytic truth involves true statement which could be derived from a tautology. Such derivation is possible by putting synonyms for synonyms. The negation of such truth itself is a contradiction. For instance, when one considers the statement, 'all bachelors are unmarried men', and replaces 'all bachelors' with 'unmarried men' one would have such statement as 'unmarried men are unmarried men'. The second use of analytic truth by Quine in Putnam's account is in relation to apriority. In this use, analytic truth is seen as a truth that is confirmed no matter what condition is involved. For instance, this mathematical statement 3+5=8 contains analytic truth and at the same time is an *a priori*. He also observes that the last two sections of Quine's paper treat analytic truth in relation to apriority. Again, he says that Quine's arguments in the last two sections are independent of the ones in the first four sections. Putnam's argument here is that Quine actually attacked two different notions. He recognizes Quine's wrong use of "analyticity" and "apriority" as meaning exactly the same thing suggesting that analytic truth defined with reference to a true statement that is derived from a tautology by means of putting synonym for synonym indicates Kant's account of analytic truth -a truth whose negation is a contradiction. He also says that on the other hand, the analytic truth defined as a truth confirmed no matter what, borders on the traditional account of the *a priori*. Putnam also maintains that "(while) the (use of analyticity in the) first four sections of Quine's paper concern

analyticity, (its use in) the last two borders on *a priority*."[7] He considers Quine's argument in the last two sections as being independent of the argument in the first four sections. The implication of this observation is that Quine's premises are wrong and that it would be difficult to make good judgment from wrong premises. However, he gives credit to Quine observing that he (Quine) "…is the first major philosopher to reject apriority and then produce a methodology that does not depend on it"[8]

Again, Hilary Putnam accuses Quine of giving innocuous examples of analytic truths by having 'one-criterion' concepts of them. He says that Quine does not have a diversified approach to the analytic since he has only one way to tell what applies as criterion for analyticity. He gives the example of 'bachelors are unmarried men' and sentences like that claiming that Quine does not explore other criteria involved in analytic statements. Again, J.D Fodor in his book Concepts: *Cognitive Science Went Wrong*, aligns with Putnam saying that any criterion that is analytic must be such on which other criteria depend but does not depend on other criteria. He gives the instance of the statement 'bachelors are unmarried men'. Here he maintains that checking the gender and marital status of the person involved is a criterion on which other criteria such as asking the friends of the person involved depend. Other criteria, here, depend on the ability to ascertain the person's gender and marital status. He maintains that what makes a statement analytic is the consideration of the criterion on which other criteria depend. This is what he calls 'assymetric dependence theory of content'. However, Peter Hylton gave response to this criticism saying that such assymetric dependence among criteria alone is not unique to the analytic, it is also related to other non-analytic statements. However, one other area many philosophers argue with Quine's opinion is his rejection of the notion of *analytic* being true by virtue of meaning alone. Quine says that *analytic* is not true by virtue of meaning alone but also

by convention. For instance, he says that the word 'bachelor' is taken to mean 'unmarried man' because it is what the users of the word take it to mean.

Many philosophers have problem with Quine's notion of a sentence being true in virtue of meaning and convention. Quine also used the notion of convention to explain why he says that all truths and statements (including truths in mathematics and logic) are revisable in the face of compelling new discoveries. This is the area that many philosophers find unacceptable. They are also against the idea that convention adds to the meaning of *analytic*. The criticism leveled against convention in this context is that the referent of the phrase *unmarried men* in all ordinary languages is bachelor or whatever it may be called in those other languages. This means that it is not convention in English language that contributes to the expression being true. Sober, for instance, made an illustration with the expression, 'all bachelors are unmarried' and asked whether the sentence was true by virtue of the conventions governing the English word 'bachelor'. He asked whether the conventions governing the languages like French do not hold the same. He writes:

> Are we really to suppose that, prior to our stipulating a meaning or the sentence Either snow is white or it isn't the case that either snow was white or it wasn't? isn't it overwhelmingly obvious that this claim was true before such an act of meaning, and that it would have been true even if no one had thought about it, or chosen it to be expressed by one of our sentences?[9]

One other postulation of Quine that attracted the attention of philosophers is his notion that a sentence is true by virtue of meaning as well as by the state of the world. He says that since a sentence including analytic statements is true by virtue of meaning and because of the way the world is, then all sentences are synthetic. For instance, if the expression 'all bachelors are unmarried' is true. It isn't meaning alone that makes it true; one factor that contributes to it being

true is the way the world is. Now, asks Quine, if this is true, then what makes it analytic considering that what characterizes the synthetic is the state of the world? Recall also that it cannot be by convention added to meaning since words such as 'bachelor' and 'snow' are not governed by the conventions of only a particular language. One of the philosophers who is against the addition of state of affairs to the conditions that give meaning to the analytic was Boghossian. He says that the human mind has the ability to conceptualize even without recourse to the state of the world. He gave example with statements in mathematics. To him, statements in mathematics are analytic and do not depend on state of affairs. However, pro-Quinine philosophers posit that the mind cannot conceptualize without appeal to the objects of the extended world. For instance, the statement 3+7=12, has no meaning unless one already has in mind that if one adds three objects/stones to four objects/stones the result would be seven objects/stones. They conclude that every sentence including analytic statements has appeal to state of affairs.

Many philosophers agree with Quine's notion that analytic sentences are not true in virtue of meaning and conventions but in part by meaning and in part because facts about the world are the case. They agree that the meaning of the sentence can only be partly responsible for its truth whereas the nature of the world constitutes the other part of the truth. Yet, they disagree that all sentences or statements are synthetic as postulated by Quine. The views of Quine attracted reactions from many philosophers notably Gillian Russell, a famous American philosopher with specialization in Analytic Philosophy.

Gillian's position on analyticity appears first to align with Quine's. That is why she thinks that to consider the truth of a sentence based partly on the meaning and partly on the state of affairs in the world boils to the negation of analyticity considering that the result is always synthetic

sentence. However, she went further than this position of Quine, and, to clear the ground for her position, she gave an instance with an abstract (mathematical) expression. She holds that to get to her own position, we should multiply two numbers together to get their product and then ask the question of why we got that product. The answer would be that we got the product by pointing to the values of the first argument and the second argument. For instance, in the expression 4 x 3 = 12; 4 multiplied by 3 results to 12. According to Gillian, the first argument is 4 and the second argument is 3. The first argument, on its own alone cannot determine the value (product). She holds that there is another scenario in such expression as 0 x 3 = 0, where the first premise 0 can determine the value of the function all on its own irrespective of any other premise (number) involved. Here, the first premise determined the value of the function without requiring that the second argument has a certain value. In fact, though the second argument was needed, it did not matter which number was involved. She then concluded that a sentence can be true by virtue of meaning alone. She writes, "…similarly, a sentence may be true in virtue of meaning – in the sense required for analyticity- if its meaning is sufficient to determine the value *true* regardless of the worldly facts"[10]

To drive home her point, Gillian took another course, this time, less abstract. She did this by having recourse to the kind of sentence Kaplan calls 'contingent analytic' in 'Demonstratives' which, he maintains, "… say different things on different occasions of use."[11] They are said to 'express different positions relative to different contexts of use, i.e. "…when said by different speakers or in different places or at different times, etc.)."[12] Gallian gave example with three sentences, namely, 1. I am here 2. That (the shortest spy) = the shortest spy. 3. Tomorrow is two days after yesterday. Here, she says that what makes these sentences and other similar ones

analytic is that in any context they are found, they produce a proposition that is true in that context. She writes:

> What makes them analytic is that in *whatever* context they are used they express a proposition that is true relative to *that* context of use. The result is a sentence whose meaning is sufficient to guarantee its truth –even though it does not determine the truth of the proposition it expresses. As with *I am here*, the sentence had to be true, but the proposition that it expresses did not- and of course, the meanings of the English words did not somehow bully me into sitting in this café. [13]

Gillian concludes in the following words:

> … though many find Quine's arguments concerning truth in virtue of meaning compelling, I've argued that they shouldn't. Rather the main lesson we should take from them is that it is sentences, not propositions, which are true in virtue of meaning, and I've used examples from Kaplan (Kaplan, 1989) to argue that this special status is compatible with their being unable to alter the truth-values of the propositions they express. [14]

One major doctrine of Quine which philosophers criticized much with reference to his rejection of the distinction between the analytic and the synthetic is his circularity argument. The circularity argument holds this way: if necessity can only be explained in terms of analyticity, then it is absurd to define or make explication of the analytic with reference to necessity which can only be explained in terms of analyticity.

Gillian Russell agrees with Quine's postulation in his circular argument which holds that analyticity does not make sense considering that it has no reference determiner and that every explanation of analyticity has recourse to necessity and vice versa. She points to the fact that every expression owes its meaning to its reference determiner. She indicates that if an expression does not have reference determiner, then it would have no reference. She gives an example with the words uncle and aunt. She holds that if a new term *ancle* is introduced to mean either an aunt or an uncle (like a neuter) the reference determiner of *ancle* is an aunt and an uncle because it is with reference to the two terms that the meaning of *ancle* is determined. This is such that any

expression involving the extension of *ancle* revolves around the fact of the union of the extension of aunt and the extension of uncle.

Gillian Russell postulates that Quine may have concluded that the analytic is meaningless because it has no reference determiner; any explanation made of it has recourse to the necessary or the *a priori* as stated above. It is in view of this, Gillian observes, that Quine says that the argument involving the analytic is circular because it does not have reference determiner. She writes: "…so here is what I think Quine might have been thinking: he thinks that the reference determiner for *analytic* is circular. And if he is right, then there is no fact of the matter, for any sentence, about whether it is analytic or not."[15] However, Gillian says that there are some expressions that do not have reference determiner yet, they are meaningful. An instance of this is 'hello'. Again, she says that speakers must not know the reference determiner as suggested by Quine. She writes, "… speakers do not always know the reference determiners for their words, and so relying on their intuitions –and even their philosophers' intuitions- to tell one about the reference of their words in certain cases is risky truth in Virtue of meaning."[16]

Again, philosophers like Gillian Russell, H.P Grice, P.G Strawson, and E. Sober have the opinion that Quine had some unusually strict ideas about what reference determiner should be. He thinks that the condition on which the reference determiner should be built on is the speaker's dispositions to behave or the use of extensional concepts alone. It is in view of this that Gillian writes:

> I side with Grice, Strawson and Sober in holding that this is too restrictive. I am unable to give a definition of bachelor in terms of extensional concepts or speaker's dispositions to behave, and if Quine's critique applies to this respectable word, as well as to the racier and analyticity then there is something wrong with the critique –it proves too much.[17]

Gillian and other philosophers in her camp, as I observed above, found *analytic* wanting in terms of reference determiner. Yet, they do not think that it is unintelligible on this account. It is in view of this that H. P Grice and P.F Strawson writes: "…granted that analytic does not meet these requirements, it is still meaningful"[18]   Again, concerning this, Miller writes: "Our conclusion is that Quine's Socratic requirement on the legitimacy of concepts appears to be unreasonable and unmotivated. The fact that *analytic* does not meet the requirement does not establish that it is unintelligible."[19]

Aside the reference determiner argument, there are other arguments raised against Quine's rejection of analyticity and the analytic-synthetic distinction. Gillian Russell was also among those who argued on this account. She captures Quine's arguments in a syllogistic form. In this style, she observes that Quine first posited that sentences are never confirmed or disconfirmed in isolation. She said that Quine's position is that it is rather the entire theories of the world that receive confirmation or disconfirmation in the process of data analysis. This is because most of our sentences are linked with our beliefs of the world or theories we already have arising from our knowledge of the world.

Gillian Russell reconstructed Quine's arguments in the following way:

Premise1: confirmation holism: it is only entire theories, not individual sentences, which are confirmed or disconfirmed by data.

The second premise, drawn from Quine's arguments by Gillian, is based on the logical positivists' verification theory of meaning which holds that 'the meaning of a linguistic item is the set of data that would confirm it paired with the set of data that would disconfirm it'.

Gillian observes that by the combination of these two premises, Quine indicates that the empiricists ought to be led to radically new understanding of meaning. It is an indication that since single sentences in isolation cannot be subjected to confirmation or disconfirmation, they do not have meaning in isolation. What should be said to have meaning are the entire theories.

Starting from the two premises given above, according to Gillian, Quine moved a bit forward in relation to analyticity. This is indicated in the third premise which runs as follows: 'an analytic sentence is one which is confirmed come what may'. Here, many philosophers, in the words of Gillian Russell, are at a loss concerning Quine's conclusion that analyticity has no meaning. She says that if Quine himself defined analytic sentence as 'a sentence which is confirmed come what may' then it would be absurd for him to conclude that it has no meaning or that only synthetic statements have meaning. Her reason here is that 'come what may' indicates unrevisability which excludes matters of fact since the latter are revisable. She holds that the mere understanding of statements that are not synthetic calls to mind the analytic. She also says that it follows that Quine is wrong to conclude that analyticity has no meaning.

However, I understand Quine here as saying that since analytic sentence is to be understood as a sentence that must be confirmed 'come what may', yet, no sentence can be confirmed or disconfirmed in isolation, then the ideals we have of analytic sentences is not tenable considering that it cannot be confirmed or disconfirmed without reference to synthetic statements. This line of thought cannot be out of the way considering that Quine himself says that there is no statement that is not revisable. He also dismissed analyticity based on this notion saying that the general notion of analyticity is that which is unrevisable. Again, he holds that if reference must be made to synthetic statements or matters of fact in the case of the analytic considering that no sentence can be confirmed or disconfirmed in isolation, then the sentence to be confirmed or

disconfirmed is not analytic considering that experience is at play here. Here, Gillian observes that Quine concludes in the following words that there should be no distinction between the analytic and the synthetic since all claims bordering on both have appeal to experience:

> …it becomes folly to seek a boundary between synthetic statements, which hold contingently on experience, and analytic statements which hold come what may. Any statement can be held true come what may, if we make drastic enough adjustments elsewhere in the system. Even a statement very close to the periphery can be held true in the face of recalcitrant experience by pleading hallucination or by amending certain statements of the kind called logical laws. Conversely, by the same token, no statement is immune to revision. Revision even of the logical law of the excluded middle has been proposed as a means of simplifying quantum mechanics,…[20]

Many philosophers were not comfortable with Quine's arguments as presented by Gillian in the three premises stated above. For instance, Sober observes that Quine's notion which holds that "it is only entire theories, not individual sentences, which are confirmed or disconfirmed by data"[21] will not go down well with philosophers of science considering that though scientific theories are related to each other, each could be confirmed in isolation from others. This does not take away the fact that they are related to each other. Again, philosophers like Gillian Russell observe that the ideas of confirmation and disconfirmation on which Quine builds his arguments evoke the issue of the principle of verifiability which is itself erroneous. She writes:

> Verificationism is anathema to most philosophers of language, and the definition of analyticity will seem sloppy to contemporary readers since it fails to distinguish it from necessity or a priority. So, personally I am inclined to think all three of the premises in the Argument from Confirmation Holism are false'[22]

Just like Gillian Russell, some philosophers believe that Quine's presentation cannot be without refutation. They do not accept Quine's presentation, especially the second part of the Two Dogmas of Empiricism, as adequate arguments to reject analyticity or distinction between analytic-synthetic statements. However, they are quick to observe that rejecting Quine's

premises does not mean the rejection of his entire presentation in that second part of the two Dogmas of Empiricism. The presentation and contents are work of genius in that it shows how the entire world works. This is evident in the following words:

> …the last part of 'two Dogmas' does more than merely present an additional argument against the analytic/synthetic distinction, it presents a new picture of how the world –but more especially epistemology in the world- can work, and offers an alternative account of the status of logical and mathematical truths. Whenever we encounter what Quine calls a 'recalcitrant' experience, one which does not fit with our overall theory of the world, there will be – consistently with confirmation holism- several different ways to adjust that web so that it no longer conflicts with the new datum.[23]

Gillian Russell also observes that Quine's works show that when some truths do not conform to the theories or beliefs we have of the world, we could look for more plausible truths that could bring us back to the data we have of the world. Quine indicates that normally, people favour some changes or alterations that comply with the principles of conservativeness and simplicity. And, he is right considering that such changes that involve mathematical truths and logical truths would be very difficult. For instance, to say that the addition of three and four no longer results to seven would bring changes in not only the basic principles that constitute mathematics itself but our beliefs involving how to count numbers, day to day accounting system ,etc. It is in view of this that Quine observes:

> It is extremely unlikely that we will relinquish them, given our commitments to simplicity and conservatism in belief change. We have had a tendency to exaggerate this status to being such that they will be confirmed come what may. But really they are just much less likely to be given up than statements at the periphery of the web such as *there are brick houses on Elm Street.*[24]

In the passage above, I presented, in the passing, Gillian Russell's reconstruction of Quine's presentation (premises 1, 2 and 3). Here, I will present her (Gillian's) view on the doctrines of the positivists and Quine's reaction to logical positivism. Gillian's presentation termed 'third picture,' is very fascinating considering that while not rejecting both views entirely, she (Gillian)

delves into alternative world view. She began by acknowledging that "…(what) both the positivists and Quine's views have in common is the assumption that the epistemological, semantic and metaphysical distinctions all track together"[25] She observes that the positivists believe in two kinds of truth, namely, the *priori*/analytic/necessary truths and the a *posteriori*/synthetic/contingent truths. She also observes that Quine believes only the later. Quine rejected analyticity based on the points he gave as detailed in this research. But, for him to assign the central position in his web of belief to the necessary truths or truths that cannot easily be revised shows that he recognizes the *a priori*/analytic/necessary truths; he would not have assigned such important position to something that is not intelligible. I believe that Quine's 'sin' or position is that one cannot talk of the analytic in the very strict sense of it, especially in the notion of the positivists, considering that such truths would eventually have some implications with experience. Recall that confirmation holism, which is an accepted epistemological nuance holds that no sentence or claims of truth is confirmed or disconfirmed in isolation. This would also have implication with synthetic/*a posterior* sentences or claims. However, the interpretation of Quine's views is not the focus of this section. Rather, I intend to present at this point Gillian Russell's view on Quine's notion of analyticity.

Gillian observes that Quine's notion of confirmation holism points to the fact that it is the entire theories that are confirmed or disconfirmed by observation. Her (Gillian's) view is that it is the entire models, or pictures of how things are that are confirmed or disconfirmed by evidence. Also, she observes that Quine's confirmation holism vividly shows how things worked in mathematics and logic but quickly observed that it is quite plausible when logic is involved.

Another philosopher that contributed meaningfully to the debate on the analytic-synthetic distinction is Scott Soames. He, in his earlier works, accuses Quine of rejecting the logical

positivists' distinction of analytic and synthetic propositions, yet, building his own doctrines on theirs. He holds that the central theses of the positivists could be summed in the following words: All necessary (and all *a priori*) truths are analytic. To him, "analyticity is needed to explain and legitimate necessity."[26] Soames maintained that Quine's doctrine or argument can only hold if those theses are presupposed as being true. He went further to say that Quine's position on 'analyticity and necessity' is not something wonderful considering that it is not a problem to explain necessity without analyticity even if analyticity presupposes necessity. However, Soames later rejected the two statements that sums up the central theses of the positivists. He writes "very few philosophers today would accept either [of these assertions], both of which now seem decidedly antique."[27] Concerning this, Jerrold writes:

> Again, Scott Soames argued that for Quine's circularity argument to be effective, there is need for the logical positivists' central theses. These theses hold on the one hand that "all necessary truths as well as all *a priori* truths are analytic" and on the other that "Analyticity is needed to explain and legitimate necessity". Scott believes that it is only when these assumptions are accepted that Quine's argument holds. He went further to say that to hold that the notion of necessity is presupposed by the notion of analyticity if necessity can be explained without analyticity is still plausible. However, it is to be noted that he (Scott) latter held the notion that the two statements written above are antiquated.[28]

Another interesting evaluation of Quine's reasons for rejecting analytic-synthetic distinction is given by Chomsky, a renowned American linguist. He asserts that the proper subject matter of linguistics are the generative rules that constituted their underlying "competence". His main focus was on the syntactic properties of natural language. But he broadened this to include some words he termed analytic such as 'persuade,'' 'intend', believe, etc. He holds that these 'analytic' words can be expressed in purely linguistic terms. He writes: "it seems reasonable to suppose that semantic relations between words like persuade, intend, believe, can be expressed in purely

linguistic terms, namely: If I persuade you to go, then you intend to go…."[29]   He posits that within the syntactic framework of natural language are structures that express analyticity. Again, some post-Chomskyian thinkers such as J. Karz believe that within the structures of languages are frameworks of analytic expressions that are clearly distinct from synthetic expressions. Also, P. Pietroschy observes this in his efforts to show that Katz's theory that relates syntactic with semantic structures are in line with Chomsky's doctrines. He expressed this in these words: "Katz drew attention to related semantic data, such as subjects' agreements about, e.g., synonymy, redundancy, autonomy, and implication, and developed a theory systematically relating syntactic and semantic structure to account for them."[30]

Many philosophers accept the existence of a special language faculty as suggested by Chomsky, which suggests that the principles or rules of that faculty determine whether a sentence is grammatical or not. In matters concerning firmly-held belief, or claims about concept-dependent statements, it is possible to make a distinction between the analytic and the synthetic, but on claims of concept-independent domains, there is a general belief that it is problematic making a distinction between the analytic and the synthetic. It is very problematic going beyond a mere theorizing about them. It is in view of this that Georges Rey observes that: "we would just have to be satisfied with theorizing about the concept independent domains themselves, without benefit of knowing anything about them 'by virtue of knowing the meanings of our words alone.'"[31] However, I am of the view that if one reflects deeply on philosophers' use of the word for centuries, it's not clear why anyone would really want to insist otherwise.

Some of the philosophers who raised objections to Quine's rejection of analytic-synthetic distinction were the neo-Cartesians. Their areas of interest in this matter border on Quine's circular and uncircular arguments in his article, *Two Dogmas of Empiricism*. They hold that there

exists 'an inner faculty of intuition' whereby the truth of certain claims is simply 'grasped directly' without reference to experience or state of affairs. Here, since what is involved has to do purely with the analytic and not the synthetic, it would not be plausible to think that the analytic does not exist and that every knowledge is grounded on experience as Quine holds. Bonjour, one of the neo-Cartesians, holds that such process of intuition by means of which one grasps directly analytic truths is possible through "… an act of rational insight or rational intuition… (that) is seemingly (a) direct or immediate nondiscursive, and yet also intellectual or reason-governed… (which) depends upon nothing beyond an understanding of the propositional content itself…."[32]   what this means is that the truths in the predicate of analytic statements need not be contained in the subject concept to be grasped. They are grasped by means of intuition; propositional contents are understood by means of intuition. It is in view of this that J. Katz made appeal to intuition in his explanation in his semantic theory[33] while Peacocke says that "… possession of certain logical concepts requires that a person find certain inferences 'primitively compelling', or compelling not by reason of some inference or in any way that takes, their correctness… as answerable to anything else".[34]

As I stated earlier, Strawson does not believe that there is nothing like the analytic as suggested by Quine. In his 1959 book, *Individuals,* he uses the term 'descriptive metaphysics' to portray his questioning or notion in contrast to what he termed 'revisionary metaphysics'. He understands metaphysics in relation to abstractness and generality. He also sees his notion being described in *Individuals* in the light of abstractness and generality. He emphasizes that the method employed in notions bordering on abstractness and generality are quite different from the methods employed in less abstract conceptual questions. These two forms of truth in Strawson, issues on abstractness and generality and issues of less abstract conceptual concerns, imply the notions of

the analytic and the synthetic. Again, Strawson holds that there exists a universal conceptual scheme which human beings share and that humans are aware of the possession of this scheme. He opines that it is the function of 'speculative metaphysics' to describe and analyze this universal conceptual scheme. It is in view of this scheme that he writes:

> … here is a massive central core of human thinking which has no history—or none recorded in histories of human thought; there are categories and concepts which, in their most fundamental character, change not at all. Obviously these are not the specialties of the most refined thinking. They are the commonplaces of the least refined thinking; and yet are the indispensable core of the conceptual equipment of the most sophisticated human beings.[35]

Most philosophers believe Kant influenced Strawson's universal conceptual scheme. Kant, in his *Critique of Pure Reason,* had argued that sensation had a spatiotemporal character and that the categories of the mind provide the template on which the concepts of one's experience adheres to provide perception. To him, the understanding also provides empirical concepts by means of which we judge objects or identify the properties of our representations. Strawson also speaks of spatio-temporal framework of the mind in his universal conceptual scheme. He opines that referential thought rests on a spatio-temporal framework only if it rests on thought about bodies. Yet, to the question of if it is possible for there to be thought about objective entities which relates in no way to spatial terms, Strawson gives the following explanation:

> …although spatio-temporal thinking rests on bodies, objective thinking cannot be shown to require spatio-temporal thinking per se, but even in cases where there can be objective thought without spatio-temporal thinking, there must be something in the subject's way of thinking which performs a role analogous to the role that thought about space performs for us.[36]

There are philosophers who propose a mid-way between the positivists' radical separation of analytic and synthetic statements and Quine's total rejection of such distinction. One of such

Philosophers, example Diana Mertz Hsieh, a professor of Philosophy in Washington University.

In his academic paper The Analytic-Synthetic Distinction, A Critique and An Alternative

Hypothesis, he holds that it is safer to stand mid-way. Mertz observes that though analytic

statements are those statements whose truth value are knowable without reference to experience,

every statement necessitates some appeal to experience unless one has a commitment to innate

concepts. He then posits that the acceptance of this empirical position means the acceptance of

the fact that there exists no difference between analytic and synthetic statements. He agrees with

Quine that the analytic and the synthetic share some features and are in the same spectrum of

Quine's web of belief but quickly observes that there are still some features unique to both the

analytic as well as the synthetic statements. His distinction between analytic and synthetic

statements could be seen clearly in the following words:

> On the analytic end of the spectrum are those statements which require, in
> order to determine their truth value, no more experience than was necessary
> to form the concepts, whereas synthetic statements are those which do
> require experience in addition to those required by the concepts
> themselves.[37]

Diana Mertz Hsieh's main contribution to this debate is his suggestion that two main factors

make not just the relationship between the analytic and the synthetic but their positions in the

spectrum relative. His position could be seen in the following words:

> …there is a continuum of statements, based on the amount of information
> which establishing their truth value requires. The distinction/continuum is
> also highly relativistic, not just in the sense that statements can shift their
> position on the continuum through time, but that positioning will inevitably
> vary from person to person, based on their knowledge of (the referents of) a
> given concept .[38]

One of those scholars who take a mid-course in the debate on the distinction between analytic

and synthetic is John Searle. He holds that the major success recorded by Quine's analysis is that

it reminds philosophers that progress in philosophy is achieved when previous assumptions are questioned and reasons proffered to show that the otherwise could be the case. He maintains that Quine's attack should be recognized as having some force, yet his dismissal of analyticity is completely unacceptable. However, Prof. Massimo Pigliucci accepts that a sharp distinction should not be made between analytic and synthetic statements considering that the two are related in many ways. His reason could be seen in these words:

> But even if we admit that 'all bachelors are unmarried' eventually does connect to some empirical fact of the matter necessary to anchor the meaning of the phrase, it is somewhat daft to claim that there are therefore no interesting distinctions between that sort of sentence and more obviously synthetic ones like 'Saturn has rings.' Moreover, it seems that mathematics and formal logical truths still stand very much in the realm of analyticity, Quine's stamping of his feet notwithstanding. [39]

Quine rejected analyticity based on the fact that there is no difference between firmly-held beliefs termed synthetic such as "the world exists" and analytic truths such as "men are rational animals" considering that a refutation of both is self-contradictory and that both share the central part of his *web of beliefs* which is also assigned to necessity and apriority. He also holds that every truth, including mathematical truths and logical truths, is revisable and is grounded on states of affairs. His reason is that those mathematical or logical truths and axioms are issues of convention and that there could be conditions in the future that could warrant their being revised. There is no doubt that to revise both statements is very difficult. For instance, it would be very difficult to assume that the sum of three and four is no longer seven. Yet, it would also be irrational to say that there will never be any condition in the future that could provide a platform for revising such truths in the future. A credit also goes to Quine for saying that though some firmly-held beliefs are synthetic, it could be as much difficult revising them as the analytic statements and even those mathematical and logical truths and axioms. For instance, when one

says 'the earth has been existing for more than five years', one speaks of a firmly-held belief that is synthetic. And, it would prove to be a herculean task to say that such statement is no longer plausible. However, the difficulty of revising both (analytic statements and some synthetic statements) does not warrant the classifying of the analytic as meaningless based on the fact that they share such similar features.

This dissertation after examining the opinions of philosophers on Quine's rejection of the distinction between the analytic and the synthetic discovered that Quine was wrong to say that analyticity is meaningless based on his rejection of definition, synonymy and explication as being able to give a precise account of the meaning of the concept. However, the research also discovered that Quine's work established in clear terms the relationship between the analytic and the synthetic in such a manner that has never been done. It highlights the need to make adjustments on certain beliefs, even those considered unrevisable, in the light of compelling new discoveries. The dissertation concludes that there is no sharp distinction between the analytic and the synthetic and proposes "exclusive-intersection bi-set" as an axiomatic system that describes the relationship between the analytic and the synthetic. This axiom, explained in details later in this dissertation, holds that the analytic and the synthetic share many features, yet, they remain unique individually.

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CHAPTER THREE

QUINE'S OBJECTION TO KANT AND THE LOGICAL POSITIVITS' DOCTRINES

It must be clearly stated that Quine's paper Two Dogmas of Empiricism in which he rejected the analytic-synthetic distinction is a reaction against the doctrines of the positivists led by Rudolf Carnap and other philosophers whose works bordered on the subject. Hence, I find it imperative here to bring to the fore Quine's reactions to the basic doctrines of Kant, the logical positivists and few other philosophers that prepared ground for his rejection of analytic-synthetic distinction.

3.1 Quine on Kant's containment metaphor

The background of the debate on the analytic-synthetic distinction is Kant's separation of analytic statements and synthetic statements in his book, *Critique of Pure Reason*. Hence, to understand the academic events and postulations that culminated in the debate on the distinction of the analytic and the synthetic, Kant's containment metaphor and Quine's reaction to it will be discussed here.

Kant was the first to make an explicit distinction between the analytic and the synthetic in his book, *Critique of Pure Reason* in which he made an elaborate distinction between analytic and synthetic statements. The former, according to his distinction, are statements whose predicates are contained in the subject while those whose predicates are not implicit in the predicate are said to be synthetic statements. For instance, the statement "all men are rational" is analytic because the attribute of rationality is implied in the subject "all men" and does not depend on experience for its meaning. On the other hand, however, "all objects have weight" is synthetic because the

idea of weight is not contained in the subject but is got through experience. Kant explained both statements in the following words:

> In all judgments in which the relation of a subject to the predicate is thought (if I only consider affirmative judgments, since the application to negative ones is easy) this relation is possible in two different ways. Either the predicate *B* belongs to the subject *A* as something that is (covertly) contained in this concept *A*; or *B* lies entirely outside the concept *A*, though to be sure it stands in connection with it. In the first case, I call the judgment analytic, in the second synthetic.[1]

Again, stating the relationship of the predicate of an analytic proposition to its subject or the first concept of the statement, he writes:

> I need only to analyze the concept, i.e., become conscious of the manifold that I always think in it, in order to encounter therein...I merely draw out the predicate in accordance with the principle of contradiction …, and can thereby at the same time become conscious of the necessity of the judgment.[2]

Kant holds that synthetic statements contain truths that are grounded on experience and that analytic truths are necessary truths, a doubt of which is a contradiction. He also associates analytic truths with *a priori* and notes, however, that some *a priori* claims are actually synthetic. He gives the instance of such mathematical expression as 7+5=12. Here, he observes that the idea of 12 is not found in 7 or 5 or even + as the predicates of the analytic propositions are meant to be contained in the 'subject-concept'. To arrive at 12 is to subject the mind to a kind of active synthesis. The result is what he calls the 'synthetic *a priori*'. This is because, as he observes, important samples of *a priori* knowledge in Mathematics, geometry, philosophy and ethics are arrived at by synthesis. Immanuel Kant went further to say that *Synthetic a priori* is a proposition in logic whose predicate is not logically or analytically contained in the subject (synthetic) and whose truth could be verified independent of experience (*a priori*).

Philosophers, after Kant, observe some flaws with his concept-containment explanation of analytic truths and his notion of synthetic *a priori*. Res Georges observes that "the criterion in which the predicate as contained in the object concept would need to be freed of "psychologistic" suggestions, or claims about merely the accidental thought processes of thinkers, as opposed to claims about truth and justification that are presumably at issue with the analytic"[3]. He, Georges, rightly notes in this regard that of much interest is that mere associations are not always matters of meaning. This is such that, for instance, that someone regularly associated the word bachelor with the concept of 'unmarried' wouldn't, on a serious note, make for its meaning. Again, he observes that despite the fact that the denial of a genuine analytic truth could be a 'contradiction', it is not yet established why it should be so.[4] He observes this in the following passage:

> There is no *explicit* contradiction in the thought of a married bachelor, in the way that there is in the thought of a bachelor who is not a bachelor. "Married bachelor" has at least the same explicit logical form as "harried bachelor." Rejecting "a married bachelor" as contradictory would seem to have no justification other than the claim that "All bachelors are unmarried" is analytic, and so cannot serve to justify or explain that claim.[5]

Gottlob Frege and other philosophers on discovery of these problems posed by Kant's notion of 'analytic' made attempt to correct the errors. Yet, the problem of applying Kant's concept of containment in all analytic propositions, in the understanding of Kant, such as 'all bachelors are unmarried men' also becomes a tedious task. Philosophers observe that Kant's 'containment' concept cannot be applied to all cases in the same way.

In an attempt to solve this problem, Frege made very notable contributions to the development of modern symbolic logic. His notion of 'formal' language as being characterized by the form of its expressions and his account of syntax and semantics of the logical constants such as 'and', 'or',

'some', 'all', and 'not' is both innovational and had charted a more plausible course in dealing with the above problems. These constants, are defined as "…those parts of language that don't "point" or "function referentially," aiming to refer to something in the world, in the way that ordinary nouns, verbs and adjectives seem to do…"[6] They, especially the constants of first-order logic, do not refer to things in the world as terms like dog, Niger, Soyinka, etc. do. It is when these two groups, the logical constants and non-logical referring expressions, are differentiated that logical truth assumes such definition as a statement that is true irrespective of the non-logical expressions that occur in it.

Gottlob Frege sees the solution to the analytic-synthetic impasse achieved only when the 'analytic' and the 'synthetic' are properly analyzed within the perspective of modern logic. He appealed to definition and synonymy in this regard. He holds that definitions preserve meaning and, with reference to Kant's containment metaphor and in consideration of synonymy (and substitution) such as 'bachelor' and 'unmarried men', he posits that the non-logical analytic truths are those that can be converted to (strict) logical truths by substitution of definitions for defined terms, or synonyms for synonyms.

The culmination of the discussion involving analytic statements and synthetic statements is the logical positivists' separation of analytic statements from synthetic statements. However, though Willard van Orman Quine was influenced by the positivists' naturalism, he differs with them on many issues including this separation. His reasons are given in the chapter four of this dissertation. Yet, a brief discussion of his notions on the subject is necessary here.

Willard Orman van Quine holds that the term analyticity is meaningless considering that its meaning is based on obscure definition made with reference to the necessary and the *a priori* as

well as on synonymy. His view is that since the analytic is meaningless, then the statements that express the so-called analytic truths are meaningless; only the synthetic statements have meaning. Again, his doctrine of confirmation holism states that our knowledge is holistic and that the confirmation of a single sentence depends on the information furnished by every other sentence. Hence, analytic statements cannot be isolated from the synthetic statements. Also, his web of beliefs holds that the so-called analytic statements do not differ from firmly-held beliefs that are considered synthetic and so cannot be separated from it. Kant holds that synthetic statements contain truths that are grounded in experience and that analytic truths are necessary truths, a doubt of which is a contradiction. He also associates analytic truths with *a priori* and notes, however, that some *a priori* claims are actually synthetic. He gives the instance of such mathematical expression as 7+5=12. Here, he observes that the idea of 12 is not found in 7 or 5 or even + as the predicates of the analytic propositions are meant to be contained in the 'subject-concept'. To arrive at 12 is to subject the mind to a kind of active synthesis. The result is what he calls the 'synthetic *a priori*'. This is because, as he observes, important samples of *a priori* knowledge in Mathematics, geometry, philosophy and ethics are arrived at by synthesis. Immanuel Kant went further to say that *Synthetic a priori* is a proposition in logic whose predicate is not logically or analytically contained in the subject (synthetic) and whose truth could be verified independent of experience (*a priori*).

To determine a synthetic *a priori* propositions, Kant gave the following statement as an instance: 'the shortest distance between two points is a straight line'. He holds that an examination of this statement shows that it is first synthetic because the concept 'straight line' is not contained in the subject concept which is 'the shortest distance between two point'. He also says that it is an *a priori* because it is a necessary truth, hence, synthetic *a priori*. Another instance he gave is

7+5=12. To him, this, just like every other mathematical proposition, is synthetic *a priori* propositions. The obvious fact there, according to him, is that the concept 'equal to 12' is not contained in the concept '7+5'.

3.2. Quine and the positivists' notion of mathematics and scientific concepts

One major thing that prepared Quine in his rejection of the separation of analytic and synthetic statements is his response to the logical positivists' understanding and explanation of mathematical truths, logical truths and scientific concepts.

The logical positivists led by Rudolf Carnap accepted Kant's notion that logical and mathematical statements are *a priori* and that knowledge of them is possible. However, they believe that knowledge of logic, mathematics and other analytic truths such as 'all bachelors are unmarried men' do not come from complex metaphysics as Kant projected. Rather, they are the products of the conventions of language as well as what we take to be the meanings of concepts or terms. However, to avoid accepting the old empiricist notion that logical truths and mathematical truths could be reduced to experience and for them to avoid the criticism that if that is so, such truths could be revised in the future, the positivists posit that logical and mathematical truths have no need for confirmation by observation since they do not express state of affairs though they could hold for the combination of facts.

The logical positivists strongly believe that all our knowledge is derived from logic and experience and that the parts of our knowledge that is derived from logic include mathematical truths. They hold that our knowledge bordering on the sciences is derived from experience. Yet, the question that confronted them was how our knowledge of mathematics come since the truths

of mathematics cannot be subjected to test considering that their principle of verifiability holds that the plausibility of every knowledge lies in its ability to be confirmed or 'disconfirmed' empirically. Yet, they found the solution to this problem in the adoption of Frege's criterion for accessing of mathematical truths. They build on Frege's criterion for the perception of truths of arithmetic. Frege's criterion had indicated that truths of arithmetic could be reduced to logical truths by the means of substitution of synonyms for synonyms as in Kant's explanation of the analytic in terms of tautology. Yet, such substitution would require a strenuous process of logical analysis that could explain out such words as 'number', 'integral', 'plus', etc. An instance of a simple form of the logical analysis that could bring about the substitution of synonyms for synonyms in mathematics include such thing as: nine is the sum of four and five. Here, the term 'nine' could be substituted with 'the sum of four and five'. The substitution of synonym for synonym here as in 'bachelors are unmarried men' reduced to 'unmarried men are unmarried men' is 'the sum of four and five is the sum of four and five'.

Quine was quick to observe serious problems with Frege's criterion adopted by the positivists. He pointed out that the reduction of mathematical statements to logical analysis with the hope of substituting synonyms for synonyms could be possible in simple arithmetic statements not in complex ones involving complex issues. Yet, his major objection comes from the fact that it is even wrong to separate mathematical truths and truths involving state of affairs considering that our knowledge is holistic.

The positivists also state that some scientific and everyday concepts such as space, time, material objects, etc., are analytically related to experience by test. They propose verifiability theory of meaning which holds that the meaning of every sentence lies in the condition of its empirical

confirmation. For instance, to say that a material object is in front of an observer, then there should be certain patterns of sensation expected under certain circumstances. Such observation proves whether such material object is there or not. However, Quine's position on such condition of observation is not different from the positivists' position.

As I observed in the analysis of Quine's reaction to the logical positivists' position on mathematical and logical truths above, Quine did not entirely throw away the very issue of confirmation. His idea of confirmation holism, treated in details in the next chapter, comes to play. He holds that our knowledge is holistic and that concepts and terms in a sentence have meaning in relation to the entire sentence and that the so-called analytic as well as concepts of state of affairs cannot be confirmed or 'disconfirmed' in isolation. His position appears to have addressed the problems raised by the concepts of operationalism, analytical behaviourism and phenomenalism that came as a result of the positivists' efforts to defend the above-stated positions.

3.3 Quine and the positivists on analytic statements

Carnap agrees that any sentence can be revised, even the analytic ones, only when there is a change of language as well as the meaning of words used in the sentence. What this means is that as far as a natural language is concerned, analytic sentences are such in there nature that the idea of revision is completely out of place. However, what is obviously central in the debate over analyticity is the idea of meaning as well as the sameness of meaning.

Quine's rejection of analyticity and dismissal of the logical positivists' separation of analytic and synthetic statements signaled not only a departure from the discussion on the shortfalls of Kant's

concept-containment description of analytic statements but a revolution on how the whole of knowledge is viewed. It is in view of this that Peter Hylton observes that such work "… has been extremely influential and has done much to shape the course of philosophy in the second-half of the twentieth century and into the twenty-first".[7] However, to have a clear view of Quine's doctrines which he used to refute the distinction made between analytic statements and synthetic statements, I decided to discuss, in this chapter, the widespread discussion of Kant's concept-containment explanation of analytic statements during Quine's time. This discussion coupled with the postulations of the logical positivists, especially their doctrines of naturalism and separation of analytic and synthetic statements influenced greatly the writing of Quine's article, the Two Dogmas of Empiricism in which he rejected this separation and reductionism. .

Kant defines analytic proposition as that whose subject concept contains its predicate concept. For instance, a look at a sentence like 'all bachelors are unmarried' is an analytic proposition in this regard considering that the notion of 'unmarried men' which is the predicate concept of that expression is already implied in the very term 'bachelors' which is the subject concept. Another example is the sentence, 'all squares have four sides'. Here, one sees that the idea of a square implies a four sided figure.

Kant holds that for one to know an analytic statement and to know whether it is true or not, one needs to extract from the subject what is contained in the predicate. For instance, in the statement, 'all men are rational', one does not need experience to know whether or not the statement is correct because a look at the term 'all men' one finds the attribute of being rational.

Kant also defines synthetic proposition as that whose predicate concept is, though related to the subject concept, not contained in it. An example of synthetic proposition in this understanding

could be something like, 'all bodies have mass'. Here, though the predicate concept 'mass' holds true of all bodies, it does not stare back at someone who hears it as being contained in the subject concept.

Closely related to Kant's distinction between analytic statements and synthetic statements is his separation between *a priori* proposition and *a posteriori* proposition. He holds that *a priori* propositions though validated by experience are not grounded in experience. They are logically necessary while their justification does not rely on experience. On the other hand, however, *a posteriori* propositions are logically contingent and are grounded in experience while their justification also relies on experience. He goes on to say that all analytic propositions are *a priori* and that there is nothing like *a posteriori* analytic propositions while synthetic propositions are *a posteriori*.

Kant also holds that synthetic *a posteriori* is both possible and knowable. However, one Kantian concept that is very central in our discussion here is the *synthetic a priori* which he also says is possible and knowable. He claims here that all important metaphysical knowledge is of *synthetic a priori* propositions. Here he argues that if *synthetic a priori* propositions cannot be determined as being true, then the discipline of metaphysics is not possible.

One problem with Kant's concept containment is that it does not cover all expressions that could be termed analytic. There are so many expressions or statements that are analytic yet, their predicate concepts are not immediately given in the subject concepts. Even when there is an obvious case where such containment clause abides, the level at which the predicate concept is manifest in the subject concept among some expressions may not be the same. Let us take a look at some expressions given by Georges Ray: (a). If Bob is married to Sue, then Sue is married to

Bob. (b). Anyone who's an ancestor of an ancestor of Bob is an ancestor of Bob. (c). If x is bigger than y, and y is bigger than z, then x is bigger than z. (d). If something is red, then it's colored

Georges Ray observes that the containment rule is not applicable in the same way in all these expressions. He writes:

> The symmetry of the marriage relation, or the transitivity of "ancestor" and "bigger than" are not obviously "contained in" the corresponding thoughts in the way that the idea of extension is plausibly "contained in" the notion of body, or male in the notion of bachelor. (14) has seemed particularly troublesome: what else besides "colored" could be included in the analysis? Red is colored and what else? It is hard to see what else to "add"—except red itself![8]

Quine is not comfortable with Kant's containment metaphor. In the first place, he does not even recognize that there is anything like analyticity. The whole issue about his rejection of the analytic/synthetic distinction hinges on it. He does not agree that there is a clear-cut distinction between the analytic and the synthetic. His notions of confirmation holism and web of belief, treated in details below, gives his reason for not accepting Kant's concept containment and the analytic. However, his attack on Kant's concept containment is found at the first page of his paper, "Two Dogmas of Empiricism". Here, he evaluates Kant's doctrine in the following words:

> Kant conceived of an analytic statement as one that attributes to its subject no more than is already conceptually contained in the subject. This formulation has two shortcomings: it limits itself to statements of subject-predicate form, and it appeals to a notion of containment which is left at a metaphorical level. But Kant's intent, evident more from the use he makes of the notion of analyticity than from his definition of it, can be restated thus: a statement is analytic when it is true by virtue of meanings and independently of fact.[9]

Frege's argument against Kant's 'containment' metaphor is very significant. He holds that a mere association of a term with a concept does not always suggest meaning. Georges Rey explaining the situation gives an instance with the expression 'a harried bachelor'. Here, he finds the term 'married' associated with a bachelor, yet, it cannot replace the term 'bachelor'. This is such that, he asserts, "the expression 'a married bachelor' is not self-contradictory."[10]

Again, Frege holds that though it is taken for granted that the denial of analytic truths is a contradiction, yet, there is no clear account of why it should be so. For instance, Georges Ray writes in connection to Frege's appeal on this matter holds that for one to reject as contradictory the expression 'a married bachelor' presupposes the fact that the expression 'all bachelors are unmarried' is analytic. It is only this claim that justifies why 'all bachelors' should be said to be 'unmarried'. There is no sufficient reason to show why a denial of it is to be termed contradictory except that it is already presumed analytic.

Frege's attempt to solve the problem raised by Kant's containment metaphor led him to completely lay the foundations of modern logic or what is now known as modern symbolic logic. He gave account of 'formal language' the form of whose expressions mark out its features. He then laid out the syntax and semantics of the 'logical constants' of such 'formal language' in such a way that its statements would cover very wide valid inferences. Such 'logical constants include such terms as "or", "not", "and", "all" and "some". The following passage describes them:

> The constants can be thought of as those parts of language that don't "point" or "function referentially," aiming to refer to something in the world, in the way that ordinary nouns, verbs and adjectives seem to do: "Socrates" refers to Socrates, "dogs" to dogs, "clever" to clever and/or clever things, and even "Zeus" aims to refer to a Greek god, but words like

> "and" and "all" don't seem to function referentially at all: at any rate, it certainly isn't clear that there are "and"s and "all"s in the world, along with the dogs and their properties.[11]

Frege's attempt to solve Kant's containment metaphor problem also made him resort to definition and synonymy. He first stated that definitions preserve the meaning of what is being defined. Again, he says that the definition of a thing truly acts as its synonym while the process of defining and describing synonymy can also lead to logical truth. For instance, if a gynaecologist is defined as a doctor who specializes in women's health and their reproduction, then the term 'gynecologist' is a synonym to the expression, 'a doctor who specializes in women's health and their reproduction', which leads to a logical truth.

Frege went beyond Kant's concept containment to symmetry, transitivity, antonymy or negation. What this means is that apart from the conceptual containment of Kant, there are other logical forms that could include analytic truths that do not immediately show how the predicate concepts are contained in the subject concept of an analytic statement as suggested by Kant. Those conditions are symmetry, transitivity, antonymy or negation. Symmetry in this content refers to the property of two things being identical, while transitive law in mathematics and logic is defined as, "statement that if A bears some relation to B and B bears the same relation to C, then A bears it to C". Concerning antonymy or negation, the term 'bachelor' could be replaced with such expression as 'a man who is not married' which could also result to analyticity.

Again, Frege brought analytic statement into logical form to prove they are tautological. For instance, in the statement, 'all bachelors are unmarried men' he substituted the term 'bachelors' with 'unmarried men' since they are synonyms. This resulted to the statement, 'all unmarried men are unmarried', which is tautological.

Again, Kant holds that such mathematical truth as 7+5=12 does not obey the containment rule because it is analyzed and known synthetically. He calls such expression synthetic a *priori*. Yet, "Frege's logical semantics especially his concept of analyticity proves that such expression is an analytical a *priori* and not synthetic a *priori*. This is Rudolf Carnap's extended form of analyticity which goes beyond the conceptual containment. Frege's logical semantics, the mathematical statement 7+5=12 could be turned into this logical form 'all X that (F and G) are F'. In the case of the mathematical truths stated above, one would see such things as "all X (7+5) that are 12 are 12".

The reactions of Gottlob Frege and other philosophers on Kant's postulations, seen above, culminated in the traditional understanding of the analytic as synonyms of a priori and necessary truths and the synthetic as contingent truths. This view was initially accepted by Quine who, upon a long reflection, issued a paper in 1951 titled The Two Dogmas of Empiricism, to counter it as a philosophical doctrine.

3.4. Quine and Carnap on "true by virtue of meaning alone"

Quine's rejection of analyticity based on his insistence that analytic statements cannot be true by virtue of the meaning of its terms is a response to Carnap's doctrine on the same subject. Carnap's attention was drawn to statements that could be termed true or false only by virtue of the meaning of the terms in those statements and not by their reference to extralinguistic facts. He called those statements L-determinate, i.e L-true or L-false. His L-determinacy here refers to analyticity though at some points he would classify it as *a priori* and at other points other concepts. However, it is note-worthy to point out that he used the term, L-determinate, both in purely syntactical systems as well as in semantical systems such that it could be said that it is

characterized by means of syntactic or semantic rules. Carnap's use of the term could be said to be relative in that sometimes he used it in general semantics to cover all acceptable linguistic frameworks while at some other times he used it in special semantics in relation to a particular logical or linguistic framework. His use of L-determinate in special semantics is such that it is uniquely adopted as a concept that covers that particular system.

Sometimes, Carnap uses *analytic* as an equivalent of L-determinate but other times uses it in such a way that separates its meaning from the latter. At this point where he uses analytic not exactly as L-determinate, he sees it (analytic) precisely as "true by virtue of meaning" or concisely as "true by virtue of the rules of a linguistic framework".

One of the strongest arguments Quine posed against the positivists and in particular Carnap is his insistence that in the light of new empirical data, all statements in science are revisable. He also maintains the same in the laws of logic. However, Carnap also recognizes that this is the case with his doctrine of conventionalism. He writes: "… in logic, there are no morals. Everyone is at liberty to build up his own logic, i.e. his own form of logic, as he wishes."[12]   By   this, Carnap clearly maintains that one has the freedom of making up linguistic framework provided that one states clearly the rules of that framework. Hence, there is no analytic statements that cannot be revised since the notion of L-determinacy can only be defined in a particular linguistic framework. What this means is that some analytic statements could be false or meaningless if a new framework makes them so. Again, when Carnap uses L-determinacy in a general sense, i.e in general semantics, he still maintains the possibility of change or revision.

As I stated above, Carnap classified as L-determinate statements that are true by virtue of the meaning of their terms and which do not rely on empirical facts. He also grouped the L-

determinates into L-true and L-false. Yet, in matters concerning the analytic as well as *a priori,* he used L-true in respect to both "true by virtue of meaning" as well as "true independent of empirical facts." He believes that "true by virtue of meaning" and "true independent of empirical facts", are equivalent. What this points to is that Carnap takes *a priori* statements as analytic. However, in his characterizations of L-determinacy as seen above, he grouped analyticity under one class and also characterized *a priori* differently but then, those characterizations could be examined under different circumstances. At a point, with Kant's synthetic *a priori* in mind, Carnap made a separation between logical analytic-synthetic distinction from epistemological *a priori-a posteriori* distinction. This is an outright distinction between the analytic and *a priori*. Such distinction is not surprising considering that both truths, though equivalent in some ways, are not actually the same in all contents. Quine accepts that both are not the same and that it is wrong to even define or explicate analyticity based on *a priori* or the necessary.

3.5 The Naturalism of the positivists and their separation of analytic and synthetic statements

One of the major influences on Quine's philosophy was the naturalism of the logical positivists. He was particularly drawn to Rudolf Carnap's doctrine of the scientific basis of knowledge. He accepts the logical positivists' idea that scientific knowledge is the true knowledge and should form the basis of other claims of truths. It is in view of this and description of naturalism that Quine writes, "…the recognition that it is within science itself, and not in some prior philosophy, that reality is to be identified and described"[13] He also maintains that all attempts at knowledge hinge at the standards of evidence and justification as presented in natural science and that philosophy and other fields of inquiries must imbibe what he termed "…the fundamental

conceptual scheme of science and common sense"[14] It is in view of this that he also writes: "In our account of how science might be acquired we do not try to justify science by some prior and former philosophy, but neither are we to maintain less than scientific standards. Evidence must regularly be sought in external objects, out where observers can jointly observe it…"[15]

The influence of the positivists' naturalism on Quine was much though their views in naturalism differ from his; he differs with them in terms of what constitutes science. The positivists see science as the empirical science but Quine has a broader understanding of science. However, it is in the relationship between analytic statements and synthetic statements that his notions stand more glaring in contrast with the views of the positivists though their doctrines influenced him. The positivists identify scientific truth with the synthetic, truths that have appeal to matters of fact or could be verified empirically whereas Quine, having dismissed analyticity, hinges all knowledge on the synthetic.

The logical positivists believe that all knowledge involves factual truths and are based on experience. To them, however, mathematical propositions and logic are *a priori* and do not need to be confirmed by observations because they are not factual truths. It is in view of this that Carnap writes, "...they do not state anything about the world of facts, they hold for any possible combination of facts".[16] They believe that knowledge of judgments like 'all bachelors are unmarried' and our knowledge of mathematics (and logic) are in the basic sense the same, Carnap says, "…all proceeded from our knowledge of the meanings of terms or the conventions of language."[17]

The positivists define analytic proposition in three different ways: "a proposition whose truth depends solely on the meaning of its terms; a proposition that is true or false by definition; and, a proposition that is made true or false solely by the conventions of language."[18] Again, they define synthetic proposition as "a proposition that is not analytic".[19] By these definitions of analytic and synthetic propositions, the positivists polarized knowledge or truths as either synthetic or analytic.

Again, the positivists separate analytic statements from synthetic statements considering the former as synonyms of the *a priori* and necessary truths and the latter as truths grounded in experience. Quine on the other hand does not even accept analyticity; he insists that the analytic and the synthetic must not be separated.

3.6 Quine's refutation of Rudolf Carnap's Principle of Tolerance

One of the doctrines that influenced Quine was Carnap's Principle of Tolerance. Though Quine rejected this doctrine, it lays at the background of his research into the nature of the analytic and the synthetic as well as their relationship.

Kant accepted Hume's empiricism and frowned at Humes' attitude of "…throwing away mathematics along with metaphysics."[20] The positivists in turn inherited Kant's notions of the analytic, the synthetic, necessary truths, contingent truths, *a priori, aposteriori*, etc and from these documents, observes Gary Ebbs, "…made a distinction between the analytic and the synthetic."[21] They also "made a distinction between primary intension and secondary intension which together form the meaning of propositions"[22] These and other documents of the empiricists influenced Quine especially the works of Rudolf Carnap. Carnap insists that there should be a separation between 'internal questions' (logical and factual questions) and external

questions (pseudo-questions and pragmatic questions). He holds that internal questions are questions entertained within a 'framework' whereas external questions, are questions entertained outside a 'framework'"[23] However, Quine did not accept this classification. He simply accepts as valid, synthetic truths. He also accepts Carnap's definition or expression of synthetic truths as a sentence that is true not just because "…the semantical rules of the system suffice for establishing its truth".[24] Also, Stephen Yablo here notes that "…the analytic and synthetic statements are not identical with the internal and external questions."[25]

Carnap is of the view that the duty of philosophy is to analyze and clarify the language of science and never to recommend any language since different languages serve different purposes. He is of the opinion that the philosopher's task is also the formulation and recommendation of alternative languages and that no single language, per say, is more correct than others. To him, languages differ in their expressive powers. This idea of tolerating the expressive powers of languages and not to recommend one above others is known as the principle of tolerance.

By means of the Principle of tolerance, Carnap holds that there is a clear distinction between the analytic statements and the synthetic statements of the same language. He made a clear demarcation between the two groups of sentences in such a way that a sentence in that language must fall into one or the other group. He posits that the analytic sentences are constitutive of the language involved in such a way that a change of mind of their truths results to a change of the entire language, the emergence of a new language altogether. Concerning this, however, Gorges Rey writes:

> Carnap speaks of a change of this sort as external, since it involves a change of language. A change of mind about an ordinary synthetic sentence is, by contrast, internal, since it takes place within a given language. External changes are a matter for tolerance, whereas internal

changes are correct or incorrect, not matters to which we should apply the Principle of Tolerance. For the principle to make sense, each sentence of the language must fall clearly into the one category or the other.[26]

Quine holds that the implication of the clear-cut demarcation between analytic sentences and the synthetic sentences of a language as envisioned by Carnap's principle of tolerance is that both are on different epistemological level considering that while synthetic statements are grounded in evidence, analytic statements do not require theoretical justification since it is "a matter of the choice of language". It is based on this that Quine posits that the epistemological difference envisioned in Carnap's principle of tolerance does not exist. He holds that there could be reasons why analytic statements could be rejected and reasons of the same kind that synthetic statements are rejected. Concerning Quine's opinion on this, Georges Rey observes the following:

> Quine rejected the idea that there is epistemological difference of this kind. Even if we can distinguish the analytic sentences from the synthetic sentences, we may still have reasons to reject an analytic sentence. And those reasons may be of the same kind that lead us to reject synthetic sentences. This point is hard to see if one focuses on examples such as "All bachelors are unmarried". The matter is otherwise if one considers examples   such as "Force equals mass times acceleration".[27]

Quine does not agree with Carnap's opinion that analytic statements are matters of choice of a language. He indicates that they are theoretically neutral since such statements cannot be based on theories. He (Quine) posits that the choice of language cannot be theoretically neutral considering that some choices definitely make better theory than others. His conclusion is captured by Georges Rey in these words:

> On the other hand, he (Quine) argues that the sort of 'pragmatic' factors which Carnap had accepted as playing a role in choice of language, such as simplicity, also play a role in the choice of a theory within a language. Hence, he claims, the two sorts of choice are on the same epistemological footing, and the Principle of Tolerance is unjustified.[28]

Also, the Principle of Tolerance holds that analytic sentences and synthetic sentences are on different epistemological footing. This is such that analytic statements do not require theoretical justification; they are just matters of the choice of language while synthetic statements have their bearing on evidence. However, this separation does not enjoy the acceptance of Quine. He holds that there could be enough reason to reject analytic sentences just as there could be to reject synthetic sentences, the fact that a change in analytic sentence could mean a change in the language notwithstanding. He opines that the choice of language is vital for the epistemological footing of a sentence. This is how Peter Hylton, observes it:

> Choice of language is not theoretically neutral: some choices will make for a better theory than others. On the other hand, he (Quine) argues that the sort of 'pragmatic' factors which Carnap had accepted as playing a role in choice of language, such as simplicity, also play a role in the choice of a theory within a language. Hence, he claims, the two sorts of choice are on the same epistemological footing, and the Principle of Tolerance is unjustified[29]

Again, Quine's concept of *holism* comes to play here. This doctrine implies that when most of our sentences are viewed unit by unit, isolated from one another, one discovers that they do not have implications for experience. To him, there should be a link between such units for there to be the grasping of the entirety of the knowledge of the things involved. He opines that what relates to experience is actually a larger chunk of theory. The implication of this is that the collection of empirical evidence does not justify a claim, other factors must be involved. These are the 'pragmatic factors' which Carnap believes play a role in matters concerning the choice of language and which Quine rather posits play a role in matters concerning the whole of knowledge. Hence, to Quine, if what is involved is not only the choice of language which borders on analytic statements as claimed by Carnap but the entirety of knowledge, comprising

of analytic truths and synthetic truths, then Carnap's external and internal changes should have the same epistemological status.

Another area, involved in this doctrine that Quine disagrees with is Carnap's postulations on Logic, mathematics and the formal sciences. Carnap placed the truths of logic and mathematics on the level of necessary truths that can only be discussed based on analyticity. Quine holds that logic, Mathematics and other formal sciences are accepted as *a priori* parts of human knowledge and that they do not explain out analyticity. They are, no doubt, necessary, the truth of which cannot be altered by experience since they are independent of experience. He made an appeal to his doctrine of *holism* which he used to refute Rudof Carnap. The doctrine of holism holds that the truths contained in a sentence can only be confirmed or falsified in relation to the truths in other sentences.

Again, Quine is of the view that Logic and mathematics are part of a wider spectrum of knowledge that includes knowledge of matters of fact. This is in contrast with Carnap's notion which assigns to the analytic a special status considering the fact that they are independent of experience. For this reason they are *a priori* because our knowledge of them are independent of experience and, as such, cannot be refuted by future experiential occurrences. However, Carnap made an explanation to this by "…appealing to the idea that accepting an analytic sentence goes with speaking the language, and to the Principle of Tolerance. Since choice of language is not justified by experience, the truth of the analytic sentences of a given language is not answerable to experience."[30]

3.7. Quine's response to a shift from meaning to sentence

Quine reflected on the distinction between the analytic and the synthetic for over twenty years before his epic paper, Two Dogmas of Empiricism, of 1951 in which he expressed his rejection of such separation. He had responded to various notions that lay at the background of the distinction. Yet, one of his responses was on Bertrand Russell's shift from meaning to sentences. The emphasis on meaning could be traced to David Hume.

The classical British empiricists, Locke, Berkeley and Hume believe that a name refers to an object directly but, Jeremy Bentham pointed out that there are names that are not committed to an object existentially. He holds that the word, 'two', for instance, points one to an abstract entity. Here Gottlob Frege's opinion is that names could be very ambiguous and that more than one name could refer to the same object while a name can also be used for several objects. However, the discussion on name took a more complex form at the dawn of modern empiricism with emphasis on the meaning of name.

The works of Bertrand Russell and G.E. Moore brought about the demise of idealism prevalent in their time and ushered in another phase of Empiricism. To account for ideas that have nothing to do with experience, Russell introduced a non-empirical mode of cognition. His further elaboration owes its origin to Frege's separation of *sinn* (the sense of the word) and *bedeutung* (the object it refers to). Here, Frege advocated for a shift from mental entities to verbal entities and from words to propositions. In line with this, Russell posits that the sentence, not the name, is the unit of meaning. It was at this juncture that Quine came in with his analysis of name and sentences.

Willard van Orman Quine observes that sentences do not fully solve the problem of names for two reasons. The first reason is that there are some sentences that commit one to abstract or fictitious entities. He gave an instance with such sentence as 'Pegasus is a winged horse'. His second observation is that "if a name is not absolutely referential, then there is the possibility of sentences not being meaningful considering that they would then refer to, denote or even commit one to nothing in such circumstance."[31]

 Quine maintains that the problem of names can be solved by a formula project, 'predication over designation'. This formula states that when an object is predicated in a quantified sentence, the problem of ambiguity does not arise. Again, the problem of abstract or fictitious entities does not also arise considering that all statements are translated phenomenologically. Here he holds that under this condition, names are not referential, yet the sentence is meaningful. This is because to be is to be the value of a variable. Yet, the change of emphasis that helped nurture Quine's position on the relationship between the analytic and the synthetic is the shift from words and meaning to the sentence.

The shift of emphasis of analysts from words and meaning to sentence is very significant to Quine's rejection of the distinction between the analytic and the synthetic. The problems posed by words and meaning occasioned the realization that the arrangement of words in a sentence, the function of a word or term in a sentence as well as the relation of the words to each other in a sentence matters a lot in the apprehension of the meaning of such words and the general meaning of a sentence or statement. It was such emphasis that resulted in the consideration of linguistic frameworks and kinds of sentences or statements. It is also responsible for the exploring of the benefits of the syntax and semantics of a sentence in cognitive processes. Such shift of emphasis

also aided in Quine's reflection on the cognitive properties of the analytic and synthetic statements and their relation to the extended world.

3.8 Quine and Rudolf Carnap on analyticity

Rudolf Carnap's argument against Quine's rejection of analyticity titled " Quine on Analyticity" was published in 1990. Quine had shown concern over the status of such sentence as "everything green is extended". Carnap indicates that the problem is not whether or not the sentence is logically correct but the indecision or difficulty in using the word "green" for something unextended. He argues that in daily life the word is never used for something unextended unless one thinks of an artificial language created for that purpose. To him, the impasse can only be resolved by an artificial language. Again, Carnap's reaction to Quine's rejection of analyticity based on the fact that sets of formal sentences are used to explain analyticity is that it is a method used to explicate a poorly understood notion.

3.9 Quine and Carnap on the analyticity of mathematical and logical statements

Carnap holds that claims in mathematics, except entities of physical geometry, are analytic but Quine strongly demonstrates that there exists a clear distinction between logic and mathematics and that mathematics is closer to the empirical sciences than it is to logic. He dismisses as meaningless the consideration of mathematics and logic as analytic.

Carnap made a distinction between physical geometry and mathematical geometry. In such distinction, Carnap intended to correct Kant's error which he (Carnap) points out as "a failure to realize that there are two essentially different kinds of geometry –one mathematical, the other physical" [32] Carnap holds that while mathematical geometry is based on axiomatic systems,

words in physical geometry refer to actual structures in physical space. He insists that approximations of points and lines, can be used in physical geometry since the values involved could be physically ascertained as in measurements. He says that terms like "'points' or 'lines' in geometrical axiom systems in mathematical geometry could have … an infinity of possible interpretations" [33] since what is involved is no mere measurements but mathematical postulations. He holds that mathematical geometry could be regarded as a part of logic considering that it (mathematical geometry) can proceed by means of logical derivation since the geometrical axioms are incorporated in its linguistic framework. However, by saying that mathematical geometry is a part of logic, Carnap maintains that its expression is an analytic statement.

Quine's response is that geometric entities such as points, space-time constructs, etc. point through their coordinates -that is, triplets or quadruples of real numbers. It is under such condition that it could be said that mathematical analysis is applied to geometry. He then maintains that mathematical analysis and other disciplines in mathematics such as number could be reduced to set theory and that what determines whether mathematical statements are analytic is whether or not we have an answer with regard to set theory. To this he answers in negation.

3.10 Quine and *a priori*

Kant and many philosophers after him understand *a priori* as beliefs 'justifiable independent of experience'. This is also the common understanding of the analytic afterwards. However, Quine has an aversion to that. He holds that *a priori* should be understood as beliefs 'unrevisable in the light of experience'. He says that it is more appropriate to describe *a priori* this way than

describing it in the light of 'justifiable independent of experience'. Again, this feature, he observes, is also attributed to the analytic. Yet, he says that such way of describing *a priori* is wrong. He points out that if such description should be correct, then, the belief in a certain *a priori* truth or analytic truth is infallible. This is because, if it is so, people could in future be unwilling to revise such beliefs in the light of compelling alternative evidence. The fact is that, according to him, a belief said to be analytic could be justifiable independent of experience without actually being unrevisable in the light of experience. He maintains that if nothing could be unrevisable in the light of experience, then no truth could be said to exist without an appeal to experience. This means that there is nothing like the analytic since it is a notion that does not appeal to experience.

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CHAPTER FOUR

QUINE'S REASONS FOR REJECTING ANALYTIC-SYNTHETIC DISTINCTION

4. 1. Quine on definition, explication and synonymy

Quine's rejection of analyticity began with his examination of the concept of definition. The first step he took in this direction is to examine attempts of philosophers to define analyticity or explain necessity and the *a priori* with analyticity. He holds that those definitions do not live up to the standards of clarity, rigour and metaphysical austerity. He then proffered his own dentitions which he also says are deficient. He first defined analyticity in relation to synonymy in these words "a claim is analytic if it may be transformed into logical truths by substituting synonyms for synonyms"[1] His argument against this definition is that it presupposes that we already know what synonym means. He holds it would be difficult to define synonym and such definition if at all possible could be of three kinds, namely, lexigraphical definitions, explications and abbreviations. However, after faulting those kinds of definitions, he proposed the abandonment of definitions in favour of explaining synonym with reference to necessity. It is in view of this that he defined synonym holding that "two expressions are synonymous if they may be substituted for each other in a sentence beginning 'necessarily' without change of truth-value. Again, he rejected this definition based on the fact that it shows that we have made sense of 'necessarily', made satisfactory sense of 'analytic'.[2] Quine's notion that making sense of 'necessarily' presupposes making sense of 'analytic' is in response to the then doctrine of Necessary Truth of the positivists who posited that a sentence is meaningful only when it could be verified or falsified empirically; that is, with reference to experience. Yet, they admitted that mathematical and logical sentences cannot be verified or falsified with empirical data. They are

said to be necessarily true because they cannot be possibly negated or disconfirmed with empirical data. This is summed up in the following words:

> … claims of arithmetic and logic are analytic, or true in virtue of their meanings alone. This explains both their necessity and our knowledge of it; if a sentence is true in virtue of its meanings alone, then it doesn't matter what the world is like the sentence will still be true –hence it is necessary. And if it is true in virtue of what it means, and (as we'll assume for argument's sake) speakers are acquainted with the meanings of the expressions they use, then they are likely to be able to work out that the sentence has got to be true without experiencing of the world. Hence the widespread belief amongst empiricists of the time: what it is to say that a truth is necessary is to say that it is analytic.[3]

In relating definitions to synonymy, Quine suggests that there could be appeal to definitions when one wants to give explanation to synonymy. An example is: 'rational animal' could be seen as the definition of 'man'. He maintains that synonymy is actually involved in every definition except in a situation where a word is abbreviated. What this means is that the only case in which definitions do not presuppose synonymy is when an abbreviation is ascribed to a word by pure convention. In such case, the word cannot be said to be synonymous to the abbreviation. For an instance, Ai is said to be the abbreviation of Abakaliki. It would be wrong to say that Ai is synonymous to Abakaliki. Quine concludes that definitions rest on synonymy rather than explaining it. The result of this is that definition does not properly explain the meaning of a concept.

The words used by Quine on synonymy is 'interchangeability'. He holds that words are synonymous when, in all contexts, they could be said to be 'interchangeable'. Yet, he was quick to observe that the word interchangeability is a broad word and cannot be used to demonstrate synonymy. His reason is that even if two words have similar truth values and could be substituted for one another, they have different significance in terms of holistic account of

experience and would be of different relevance in the consideration of the interrelated network or spectrum of revisable statements. What this means is that the degree or possibility of their revisability would be different; they cannot be the same in all possible ways. To demonstrate this, he gave an instance with the statement: 'bachelors are unmarried man'. He says that if synonyms are said to be interchangeable in all contexts without the change of truth value, then, 'unmarried men' and 'bachelors' which have different number of letters and words cannot be interchangeable in all contexts. He also asks if the word 'bachelor' as the subject of the statement 'bachelors are unmarried men' can also replace the same word in such phrase as 'bachelors of arts'. However, he admits that one can overcome the last problem by saying that the term in 'bachelor of arts' is a complete word whose meaning is different from the earlier statement.

One major area that Quine identifies the problem of synonymy concerns his account of what he termed 'cognitive synonymy'. He says that cognitive synonymy is the case in which analytic truth could be turned into logical truth by means of putting synonyms for synonyms. For instance, the statement 'men are rational animals' could be turned into such logical truth as 'no non-rational animals are rational animals'. Now, Quine says that for one to explain 'cognitive synonymy' contained in the presumed analytic statements, there should be the assumption that one knows what analyticity means, that is, that it is a necessary truth. What this means is that one cannot think of replacing 'bachelors' with 'unmarried men' without presupposing that the statement 'bachelors are unmarried men' is a necessary truth, that is, analytic truth.. Again, Quine asks the question of whether it is possible to give an account of cognitive synonymy by means of appealing to interchangeability without our minds on analyticity. Here Quine says that it is not possible. He then thought of a way of making such expression without one's mind on

analytic. With this in mind he gave an example with an expression like: 'necessarily all and only bachelors are unmarried men'. Here he says that this does not appeal to definition or synonymy but simply to the meaning of the words and with the consideration that the statement 'bachelors are unmarried men' which comes from a natural language is turned to 'necessarily all and only bachelors are unmarried men'. Here, the word 'necessary' still makes it analytically or logically true. What this means is that, once again, one presupposes the notion of analyticity or the necessary to come to terms with the analytic or define cognitive synonymy.

Quine divides analytic truths into two, namely, logical truths which he calls 'analytic statements of the first class' and other analytic truths that are not logical truths which he calls 'analytic truths of the second class'. He then says that the first form of analytic truths (logical truths) are not problematic. To him, where the problem lies is when it has to do with the analytic truths of the second class. It is in view of this that he states that the problem of the defining of analyticity is actually the problem of explaining what it takes to be analytic truth that is not of the first class. Here he says that for one to explain analyticity without reference to the notion of necessity and apriority, one has to explain in clear terms the concept of synonymy and definition.

On the relation of logical truths to other analytic truths, Quine posits that one can explain synonymy in terms of a definition. He writes:

> There are those who find it soothing to say that the analytic statements of the second class reduce to those of the first class, the logical truths, by definition: 'bachelor', for example, is defined as 'unmarried man.'… who defined it thus, and when? Are we to appeal to the nearest dictionary…? Clearly, this would be to put the cart before the horse. The lexicographer is an empirical scientist, whose business is the recording to antecedent facts; and if he glosses 'bachelor' as 'unmarried man' it is because we of his belief that there is a relation of synonymy between those r forms… prior to his own work.[4]

Quine posits out that it is difficult to rest the meaning of analyticity on definitions and synonymy considering that the two (definitions and synonymy) are problematic/obscure. He first observed that to have the definition of a concept, we turn to a lexicographer's account of the concept in a dictionary which we take as law. Quine observes that this would be to put the cart before the horse. The reason is that the lexicographer himself is an empiricist scientist whose duty is to record antecedent facts. Now, if the lexicographer should define a bachelor with the phrase "unmarried man" the reason for this is that he believes that there is a relationship of synonymy between the term "bachelor," and the phrase "unmarried man". Quine states that the lexicographer's belief in this "relationship rests on the meaning of such word or concept among its users".[5] He then concludes: "The notion of synonymy presupposed here has still to be clarified, presumably in terms relating to linguistic behavior. Certainly the "definition" which is the lexicographer's report of an observed synonymy cannot be taken as the ground of the synonymy." [6]

Quine also observes that synonymy itself is obscure while the connection that appears between two synonyms are only matters of convention and the definitions taken to give that account of synonymy report nothing but how they are being used. He writes

> Just what it means to affirm synonymy, just what the interconnections may be which are necessary and sufficient in order that two linguistic forms be properly describable as synonymous, is far from clear; but, whatever these interconnections may be, ordinarily they are grounded in usage. Definitions reporting selected instances of synonymy come then as reports upon usage.[7]

Having rejected definition, Quine turned to explication which he says is a higher version of it. He observed that the purpose of the explication of a concept or terms is not just to paraphrase the *defeniendum* into an outright synonymy, but to add more information to the *definiendum* by

refining or supplementing its meaning. He holds that the function of explication is to preserve the favoured contexts of a word to be explicated and sharpen the usage of other contexts so as to make the favoured contexts of the *definiendum* taken as a whole to be "synonymous with the corresponding context of the *definiens*. But Quine has problem with this. He then rejects explication in the following words:

> Two alternative *definientia* may be equally appropriate for the purposes of a given task of explication and yet not be synonymous with each other; for they may serve interchangeably within the favored contexts but diverge elsewhere. By cleaving to one of these *definientia* rather than the other, a definition of explicative kind generates, by fiat, a relationship of synonymy between *definiendum* and *definiens* which did not hold before. But such a definition still owes its explicative function, as seen, to pre-existing synonymies.[8]

Quine, discovering that explication does not resolve the issue on ground, resorted to what he termed extreme sort of definition which he says does not depend on prior synonymies. He explained this form of definition and made this conclusion contained it in the follows words:

> There does, however, remain still an extreme sort of definition which does not hark back to prior synonymies at all; namely, the explicitly conventional introduction of novel notations for purposes of sheer abbreviation. Here the *definiendum* becomes synonymous with the *definiens* simply because it has been created expressly for the purpose of being synonymous with the *definiens*. Here we have a really transparent case of synonymy created by definition; would that all species of synonymy were as intelligible. For the rest, definition rests on synonymy rather than explaining it.[9]

After his analysis of definition and explication, he abandoned definition on the basis that "…notation of definition does not hold the key to synonymy and analyticity"[10] He then turned to the role of definition in formal work. He holds that it is wrong to have definition built on synonymy since the synonym of the word being defined is already in use. But then, he turned to expressions in logical and mathematical systems. In both systems, Quine holds that we can either

strive after the economy of practical expression which calls for easy and brevity in the statement of multifarious relationship or on the contrary, economy in grammar and vocabulary which calls for looking for a minimum of basic concepts. He then says that though both economies are incompatible, there is the custom among scholars to continue both or utilize their separate benefits to form a notation built on two languages. The result is that:

> The *definiens* may be a faithful paraphrase of the *definiendum* into the narrower notation, preserving a direct synonymy as of antecedent usage; or the *definiens* may, in the spirit of explication, improve upon the antecedent usage of the *definiendum*; or finally, the *definiendum* may be a newly created notation, newly endowed with meaning here and now. [11]

Quine's view on synonymy, as I observed above, begins with his postulation that synonyms should have a type of interchangeability in all contexts without there being any change in their truth value. Such interchangeability, Quine observes, is such that is expressed by leibniz *salva veritate*. He writes: "a natural suggestion, deserving close examination, is that the synonymy of two linguistic forms consists simply in their interchangeability in all contexts without change of truth value –interchangeability, in Leibniz's phrase, *salva veritate*."[12] Here he observes that the synonyms "bachelor" and "unmarried man" and other similar synonyms are not interchangeable *salva veritate*. He observes that the usage of 'bachelor' as could be seen in 'bachelor of art', or 'bachelor's buttons', and 'bachelor is an unmarried man' do not even mean the same thing. He says that even chargeability *salva veritate* has the weakness of a "drawback of appealing to a prior conception of word; which can be counted on to present difficulties of formation in its turn[13] Quine also observes that he was not after such synonymy that is too perfect in these words; "a synonymy in that sense of complete identity in psychological associations or perfect quality. "[14] He was of the opinion that no two expressions are synonymous in that regard. He then turned again to cognitive synonymy with the hope of finding meaning in analytic statements.

Cognitive synonymy, in the account of Quine and as I have stated above, is such that it would be possible to turn any analytic statement into logical truth by putting synonyms for synonyms. He analyzed the situation and presumed initially that cognitive synonymy does not presuppose analyticity. He recognizes the fact that interchangeability *salva veritate* is sufficient condition for cognitive synonymy. He says that to turn "all bachelors are unmarried men" into cognitive synonymy we write "necessarily all and only bachelors are bachelors". This, he says, "… is evidently true, even supposing 'necessarily' so narrowly construed as to be truly applicable only to analytic statements. Then, *if* 'bachelor' and 'unmarried man' are interchangeable *salva veritate*, the result: *Necessarily, all and only bachelors are unmarried men"* [15] should be presumed analytic statement. Yet, he maintains that this is not so and observes that the type of language that supports interchangeability *salva veritate* is an extensional language. Yet, he says that extensional language cannot give cognitive synonymy what is desired. He writes

> For most purposes extensional agreement is the nearest approximation to synonymy we need care about. But the fact remains that extensional agreement falls far short of cognitive synonymy of the type required for explaining analyticity in the manner of Section I. The type of cognitive synonymy required there is such as to equate the synonymy of 'bachelor' and 'unmarried man' with the analyticity of (3), not merely with the truth of[16]

Quine says that for an extensional language to have interchangeability that could have sufficient condition of cognitive synonymy needed for analyticity, adverbs like "necessarily" must be there. Yet, he observes, if that adverb is there, then it is taken for granted that "the notion of analyticity is already clearly understood in advance."[17] However, all said and done, Quine concludes that synonymy does not give good account of analyticity.

Quine also suggested that for one to understand what it means for two concepts or expressions to be synonymous, one need not take recourse to the suggestions of a lexicographer concerning the

words in the expression; one should rather study the features of those words with relation to which judgments could be correctly made.

The conclusion Quine draws from the analyses carried out concerning the effectiveness of definition, explication and synonym in determining analyticity is that it does not exist and that its expressions (analytic statements) are baseless. He posits that what holds is the synthetic. This means that it is meaningless to make any separation between both statements since one of them does not even make sense.

4.2. The circularity argument.

The circularity argument was used by Quine in the first part of his paper The Dogmas of Empiricism to show that analyticity does not make sense. This is when he had explored fruitlessly the use of meaning, synonymy, necessary, semantical rule, 'self-contradictory' and definition to establish analyticity. Quine posits that a definition in terms of the speakers' disposition or sometimes a definition in terms of extensional concepts, would be required to make analyticity to be accepted as a meaningful concepts. Yet, he says that more of these have been made with reference to the necessary.

To understand Quine's rejection of analyticity and his reason for such rejection, one has to be acquainted with the general understanding of analyticity and its relationship with the necessary in Quine's days. There is the general assumption that all necessary truths are analytic and that if necessity can be explained, it can only be explained in terms of analyticity. This is the basic assumption of philosophers in Quine's time. Soames attests to this in these words: "… modern philosophers should be aware of the following assumptions in Quine's time: *all necessary truths are analytic*, and, *if necessity can be explained, it can only be explained in terms of analyticity"*

[18] Now, the circularity argument holds this way: if necessity can only be explained in terms of analyticity, then it is absurd to define or make explication of the analytic with reference to necessity which, according to the assumptions stated above, can only be explained in terms of analyticity. Gillian Russell states this in these words: "If one accepts …if necessity can be explained, it can only be explained in terms of analyticity then an explanation of analyticity in terms of necessity will be circular, but if, as some believe today, necessity can hold its own without a defense in terms of analyticity, the circularity can be avoided." [19] However, philosophers believe that what is responsible for the circularity of the analytic argument is because of the absence of reference determiner.

Quine believes that the reference determiner for *analytic* is circular. This is because it points also to the necessary or apriority. He also says that speakers know how the referents of their words are determined yet analyses of *analytic* show that for one to establish the reference determiner for *necessary* one has to make reference to *analytic.* This means that the reference determiner for *analytic* is circular. Again, Quine insists that there is hardly any way one can find the reference determiner for the analytic without recourse to *necessary.* He concludes that since the reference determiner that should have given meaning to *analytic* is faulty, then *analytic* is meaningless. Again, he maintains that any expression that does not have reference determiner equally does not have referents. Yet, he says, the *analytic* should have had referents.

Quine's conclusion is that since analyticity does not make sense due to lack of reference determiner, it is not plausible to make a distinction between the synthetic and the analytic when the latter is a misnomer.

4.3 Arguments against Truth in virtue of Meaning alone

There is a divergent view of what constitutes the concept of meaning; many scholars have varied understanding of it. This is such that any consideration of whether or not definition or convention touches on the very fabrics of the meaning of analyticity depends on one's background. For instance, if one agrees with the fact that the definition of a concept carries with it the entire meaning of a concept, then there is hardly any ground for insisting that definition gives no credible account of the meaning of a concept. Again, if we agree, on the other hand, that what constitutes the meaning of a concept lies in the integration of the units of the expression in question, then one could see why Quine holds that definition does not give any dependable meaning of a word. What this means is that what constitutes the meaning of a concept is the ability to establish the basic units of a concept and to differentiate the properties of those units and those of other things. This is why David Ross argues in favour of the objectivists that it is not plausible to give truth status to the definition of a concept. [20]

Quine posits that only three plausible theories of meaning include, reference, mentalism, and intentional object theory. The first, which is the reference theory holds that the meaning of a word truly refers to what the word represents. Here, Quine points out Frege's distinction between meaning and reference and the unreliability on the word due to its ambiguity as stated above. With this in mind, he maintains that synonymy cannot reliably be based on the reference theory. He also dismisses the mentalist theory which makes meaning a mental entity or thought chord that is provoked by the word. His reason is that if meaning were to be based on the mentalist theory, then communication would be subjective and private. Again, meaning would be arbitrary. Quine's analysis of the intentional theory is that it makes the act of knowing very difficult and impossible to be ascertained since what is involved here is someone's intention. However, the

analysis of these three theories of meaning was used by Quine to show that analytic statements cannot be true by virtue of meaning. This is another reason given for the rejection of analytic-synthetic distinction. He argues that what should be established, in the first place, is not whether or not there is a distinction between the analytic and the synthetic but whether there is anything like analyticity. He maintains that there is nothing like analytic truths and that the statements that express any claim of such truth is not logical. His most compelling arguments against analyticity are not found in the "Two Dogmas of Empiricism". Such arguments dubbed *arguments against truth in virtue of meaning alone* are also found in two of his books, "Truth by Convention," and "Carnap and Logical Truth."

Quine reiterates that analytic proposition is generally defined with respect to "true by virtue of meanings"[1] He says that the problem with this identification of the analytic proposition with meaning is that the nature of meaning itself is obscure and that meaning and reference are two distinct entities. It is in view of this that he writes:

> A felt need for meaning of entities may derive from an earlier failure to appreciate that meaning and reference are distinct. Once the theory of meaning is sharply separated from the theory of reference, it is a short step to recognizing as the business of the theory of meaning simply the synonymy of linguistic forms and the analyticity of statements; meanings themselves, as obscure intermediary entities, may well be abandoned[21]

Quine also reflected on the semantics of language for the possibility of a good account of analyticity. He holds that if one should turn to a natural language or a formal language with semantical rules in mind one would still face a deadlock in matters of ascertaining the meaning of analyticity. He holds that if one creates an artificial language *Li* whose semantical rules specify the statements that are analytic, the extension definition of the analytic in *Li* presupposes an intentional meaning of those statements in the semantical rules of *Li*. What this means is that

the one constructing those rules already presupposes the meaning of the analytic which guides him to know the kinds of statements to be set apart as analytic statements. This is not to be so since it is presumed at that stage that the analytic is not known.

Quine also suggests the adoption of semantical rules that do not specify the statements that should be branded analytic but are simply true. He proposes that this set should not include all truths but just a certain set of truths. Hence, analytic statements could be defined as the statements that fall into this group, or, more technically, statements could be said to be analytic if it is true in accordance with this semantical rule. Here, Quine also identifies another problem; he asks, how can statements be grouped into this class of truths without the intentional meaning of the word 'analytic' presupposed.

Again, Quine observes that the problem with analyticity is the problem of the relation between statements and languages, both natural and artificial languages. He says that the discussion of this problem when what is involved is artificial languages and semantical rules began with Carnap. He says that Carnap's semantical rules take many forms and that taking some of the rules as indicating that "such and such statements, and only those, are the analytic statements," poses such difficulty of containing the word analytic which one does not understand. He then says that even if the rules did not indicate the term analytic but says that such and such statements are true according to the semantical rule, there is still no progress. His reason is:

> Instead of appealing to an unexplained word 'analytic,' we are now appealing to an unexplained phrase 'semantical rule.' Not every true statement which says that the statements of some class are true can count as a semantical rule -- otherwise all truths would be "analytic" in the sense of being true according to semantical rules. Semantical rules are distinguishable, apparently, only by the fact of appearing on a page under the heading 'Semantical Rules'; and this heading is itself then meaningless.[22]

Quine also says that for semantical rules to determine the analytic statements of an artificial language, it means that we already know what analytic means. He also noted that recourse to hypothetical languages cannot help the matter either. He writes

> Appeal to hypothetical languages of an artificially simple kind could be conceivably useful in clarifying analyticity, if the mental or behavioral or cultural factors relevant to analyticity -- whatever they may be -- were somehow sketched into the simplified model. But a model which takes analyticity merely as an irreducible character is unlikely to throw light on the problem of explicating analyticity [23]

Again, Quine accused Carnap of making the mistake of confusing meaning with naming and posits that meaning and naming mean different things. His observation could be seen in these words:

> Meaning, let us remember, is not to be identified with naming. Frege's example of 'Evening Star' and 'Morning Star' and Russell's of 'Scott' and 'the author of *Waverly*', illustrate that terms can name the same thing but differ in meaning. The distinction between meaning and naming is no less important at the level of abstract terms. The terms '9' and 'the number of the planets' name one and the same abstract entity but presumably must be regarded as unlike in meaning[24]

Quine also says that the meaning or the 'intension' must not be confused with it extension, that is, the group of particular things to which the term applies. He then states that the general term "creature with a heart" should not be taken to mean the same thing with "creature with kidney" because though both have the same extension or reference considering that anything that has heart must have kidney, they do not mean the same thing. He concludes that intensions should be differentiated from extensions just as meaning should be differentiated from references.

Quine also states that what a thing means should also be differentiated from the essential qualities the name/term of that thing has. This means that there is a clear difference between the

essential properties that identifies an object and the meaning of the word that denotes the object. He concludes that "meaning is what essence becomes when it is divorced from the object of reference and wedded to the word"[25] He means here that the meaning of an object should not be confused with that object in question. For instance, 'morning star' should not be confused with the object 'Venus'. He opines that what should be our preoccupation is the effort to understand when two words are synonymous or when they are said to be 'analytically' related. For instance, the word 'bachelors' and 'unmarried men' are synonymous.

In Quine's book Truth by Convention, he observes that people tend to defend the notion of sentences being true by virtue of meaning using definitions. The reason for this is that through definitions, in relation to meaning, the truth of a sentence or its contents is thought to be ascertained. There is also a prominent role accorded definition in both mathematics and the empirical sciences in such a way that doubting its efficacy in terms of ascertaining analyticity appears useless, especially in those disciplines. However, Quine does not doubt this fact. He rather says that defining a sentence is not true by virtue of meaning alone; facts about the world are also involved. Take for instance, if one makes a sentence like 'man is a rational being,' what makes the sentence true is not just that man is *defined* as 'a rational being' in the sentence but the facts in the world of man actually being rational. Again, if one says 'Venus is the morning star', in such a way that 'the morning star' identifies Venus or that it is the definition of Venus, then one must also know that the definition alone does not give the sentence its meaning; the facts of Venus being the star constantly perceived in the morning contributed to the sentence being true.

Quine extends the facts about the world that contributes to the meaning of sentences to logical truths. He holds that logical truths are true by virtue of what they mean as well as by virtue of the way the world is. He writes: "Consider, however, the logical truth, 'Everything is self-identical',

or '(x)(x=x)'. We can say that it depends for its truth on traits of the language (specifically on the usage of '='), and not on traits of its subject matter; but "we can also say, alternatively, that it depends on an obvious trait, viz., of everything actually being self-identical."[26]

Another important factor which Quine considers in relation to the meaning of sentences is convention. He says that we cannot for the fact that the meaning of 'bachelor' in the expression above points to the predicate 'unmarried man' and, because both are synonyms in the description of Kant, presume that the expression itself is analytic. He maintains that analyticity is presupposed already if we accept the fact that the expression is true. Yet, he notes, what lies at the background is that convention in the language gives 'bachelor' the meaning. This means, according to him, that meaning alone does not make a sentence true; convention is also involved. What this means is that what the users of a language agree upon as the meaning of a word identifies that word. Quine's problem with convention is that true account of a concept cannot come from what the users of a particular language agrees as its meaning. He observes that this is more problematic when natural or ordinary language is concerned. Yet, when the concept involved is an abstract entity, Quine argues that it should not be branded as mere analytic or dismissed as a meaningless venture as the empiricists do. However, with regard to this opinion concerning the empiricists he writes:

> Empiricists are in general rather suspicious with respect to any kind of abstract entities like properties, classes, relations, numbers, propositions, etc. … as far as possible they try to avoid any reference to abstract entities and to restrict themselves to what is sometimes called a nominalistic language, i.e., one not containing such references. However, within certain scientific contexts it seems hardly possible to avoid them. …probably they will just speak about all these things like anybody else but with a uneasy conscience, like a man who in his everyday life does with qualms many things which are not in accord with the high moral principles he professes on Sundays.[27]

Gillian Russell observes that the negative effects of the distrust of the positivists on the abstract is the failure to make a distinction between sentences and propositions considering that for one to distinguish between the two, one has to discuss both –which the positivists abhor since they do not have regard for propositions which borders on the abstract. She observes that discussions involving the positivists center on sentences and not interpreted sentences (propositions). It is also for this purpose that the positivists were not passionate in discussing meaning in general and would rather prefer to talk about conventions governing the use of words. G. Russell observes that it is because of this that the expression "truth by convention" was often treated as being interchangeable with "truth in virtue of meaning." This is expressed in these words:

> It was fairly easy then, to slide between two of these: the thesis that a sentence could be true in virtue of meaning, and the thesis that what the sentence says –the propositions it expressed, or its content- could be true by convention. But while the thesis that a sentence can be true in virtue of meaning is of great interest, the thesis that a non-metalinguistic proposition may be true by convention is implausibly strong.[28]

Quine's conclusion after the observations he made concerning the description of analyticity as being true by virtue of meaning alone is that there must be an appeal to matters of fact. And, if this is the case, then analyticity is meaningless since it is presumed to have no appeal to experience.

4.4 Quine's doctrine of holism

Carnap, just like other positivists, believes that the truths of logic and mathematics are independent of experience. He holds that they are necessary truths and cannot be altered in the future based on experience without serious epistemological consequence. They are also *a priori* because our knowledge of them is not dependent on experience. Here, Carnap postulates that

experience does not justify the choice of language considering that what lie at the very foundation of a language itself are analytic truths. He followed up this postulation with the notion that analytic statements in a particular language have nothing to do with experience. He also holds that speaking a language is in consonance with the acceptance of analytic sentence involved in the language. However, Quine disagrees with him here. His own opinion in the matter is expressed in his doctrine of holism.

The doctrine of holism by Quine partly implies that nearly none of our knowledge could be answerable to experience directly with the exception of what he terms 'observation sentences'. There is often an indirect relation in such a way that for a sentence to be answerable to experience, there must be the supposition of quite a chunk of theory. What this means is that for one to say that an observation such as 'this football is spherical' affirms or negates a particular theoretical claim (in this case, all things in the shape of a football is spherical), one implicitly talks in relationship to theoretical knowledge. Here, Quine claims that it is not only in a body of theoretical knowledge such we would have it in Physics or even formal sciences such as logic and mathematics that an observation corresponds to a theoretical claim such as "all bodies have weight and occupy space'. He postulates that the observations in almost all our sentences affirm or deny given theoretical claims. For instance, if one says, 'he has grey hairs' he is refuting the claim that human hairs should be dark and affirming the theoretical claim that the hair of an elderly should be grey.

Quine posits that all of our beliefs and, in fact, everything about our knowledge are interconnected with our sensory experience at the periphery. In view of this he writes:

> The totality of our so-called knowledge or beliefs, from the most casual matters of geography and history to the profoundest laws of atomic physics or even of pure mathematics and logic, is a man-made fabric which impinges on experience only along the edges. Or, to change the figure, total science is like a field of force whose boundary conditions are experience. A conflict with experience at the periphery occasions readjustments in the interior of the field. But the total field is so underdetermined by its boundary conditions, experience, that there is much latitude of choice as to what statements to reevaluate in the light of any single contrary experience. No particular experiences are linked with any particular statements in the interior of the field, except indirectly through considerations of equilibrium affecting the field as a whole.[29]

Quine concludes that a statement in mathematics such as 3+4=7 corresponds to a theory of mathematics, in this case, which fundamentally holds that the sum of 3 and 4 should be seven. He then holds that a close look at that expression shows an interplay between analytic truths (mathematical truth or theory that the sum of three and four should be seven) and a corresponding observation that the addition of three and four items results to seven items. He then says that any given analytic truth is part and parcel of our whole body of knowledge which also includes experience. Here, Quine explains that there are some sentences that contribute immensely to our whole body of knowledge. He gave an instance with elementary arithmetic which he says we cannot abandon without it completely affecting the whole system of our knowledge. This is such that those elementary arithmetic as well as other analytic truths cannot be separated from our whole system of knowledge including truths that depend on experience. Hence, it would be practically impossible to separate analytic statements (such as elementary arithmetic) from synthetic statements. It is in view of this that Quine writes:

> … it is misleading to speak of the empirical content of an individual statement -- especially if it be a statement at all remote from the experiential periphery of the field. Furthermore it becomes folly to seek a boundary between synthetic statements, which hold contingently on experience, and analytic statements which hold come what may. Any statement can be held true come what may, if we make drastic enough adjustments elsewhere in the system.[30]

Another important issue raised by Quine is that pure analytic truths such as logical truths cannot claim to have more attributes of necessity than some obviously and universally correct beliefs such as, 'the earth has existed for many years'. The first, logical truths, are not grounded in experience while the later, 'the earth has existed for many years', is justified through experience. Quine asserts that both truths differ, not in kind, but only in degree and have link with experience. Again, he holds that both are also revisable. He concludes there is no basis for making a distinction between analytic and synthetic propositions, especially as the positivists do.[31]

Yet, one disturbing fact about Quine's subjection of all truths to experience is the consideration of *a priori* truths. Carnap holds that logic, Mathematics and other formal sciences are accepted *a priori* parts of human knowledge and that they could also be termed analytic. They are, no doubt, necessary, the truth of which cannot be altered by experience since they are independent of experience. However, Quine disagrees with him on this matter. He accepts that those disciplines are presumed to be on the level of *a priori* as stated by Carnap. However, he questions the claim that they have no link with experience whatsoever. Again, he states clearly that there is no truth that is completely immune to revision. For these reasons he maintains that no distinction exists between the analytic and the synthetic.

4.5. Confirmation holism and ontological relativity

To understand the term confirmabillity from which the concept confirmation holism is built, recourse would be made to the meaning of the term verifiability which is a concept that explains the doctrine of the logical positivists' suggestion that a sentence is only meaningful when it

could be verified empirically. A statement is empirically verifiable when its meaning is grounded on evidence while it is tautological when its truth could be deduced from the meaning of the terms in such statement. An example of an empirically verifiable statement is 'the goat is white' while 'all bachelors are unmarried' is an example of a tautological statement. This is in consideration of the fact that one could see the goat spoken of to verify the truth of the first statement while the feature of being 'unmarried' is enshrined in the word 'bachelor'.

The principle of verifiability dismisses as meaningless all metaphysical statements as well as some statements bordering on ethics, aesthetic, and religious principles since these cannot be verified empirically and are not tautologies. It is imperative to note here that the positivists did not dismiss those metaphysical and theological statements outrightly, they merely hold that in terms of being true or false they are meaningless. They also teach that they border on or could influence feelings, beliefs and conducts.

The principle of verifiability met many glaring criticisms resulting to much individual and group modifications of the doctrine by the positivists. One of the major concerns of the criticisms borders on the kinds of conditions necessary for the purpose of verification in such a way that the required truth could be attained. This brought varied responses by the positivists themselves. These responses are summed up in the following words:

> Hans Reichenbach has maintained that verifying observations must be physically possible or compatible with the known laws of science, it has been more widely held that they need only be logically possible or conceivable in a noncontradictory way. Early exponents of the view that observation reports provide an indubitably certain foundation for knowledge held that verifiability requires that a statement be logically entailed by some finite set of observation reports[32]

The impossibility of the positivists to establish a consensus with this problem made them abandon the principle and settle for the view that a verifiable statement must be made evident or 'rendered probable by the relevant set of observations'.[33]

Again, the principle of verifiability is also criticized based on the fact that the principle itself is not an empirical statement and that it is itself on its own terms either meaningless or else tautologically true as an arbitrary definition of meaningfulness. However, the positivists replied that "the principle is indeed a tautology, though a nonarbitrary one in that it reflects actual usage and that it is strictly meaningless but to be taken as a recommendation for the conduct of scientific inquiry".[34]

The criticism leveled against the principle of verifiability made Rudolf Carnap propound in his essay, Testability and Meaning, the principle of confirmability as a better option. This doctrine is summed up in these words:

> Carnap argued that the terms of empirical science are not fully definable in purely experiential terms but can at least be partly defined by means of "reduction sentences," which are logically much-refined versions of operational definitions, and "observation sentences," whose truth can be checked by direct observation. Carnap stressed that usually such tests cannot provide strict proof or disproof but only more or less strong "confirmation" for an empirical statement.[35]

Quine responds to the principle of verifiability and confirmability through his doctrine of confirmation holism which he summed up in these words: "our statements about the external world face the tribunal of sense experience not individually, but only as a corporate body."[36] He did not reject the positivists' doctrine entirely, rather, he accepts a verifiability conception of meaning.

To understand Quine's confirmation holism, attention is required of Pierre Duhem's work. He (Duhem) posits that theories are confirmed by evidence in many ways. He also states that a hypothesis is confirmed by the consideration of the sum of experiments made and not each in isolation from the other. For instance, if the weight of a certain object is to be measured and it is placed on a scale while the balancing wheel is allowed to do its job, it is here presupposed that some conditions and theories are involved. First, presupposed here is the law of gravity which states that all bodies with weight are drawn down by the forces of gravity. Other conditions such as the nature of the materials used in building the measuring instrument and other conditions would have to be at the desired condition. Here, we notice that if the right condition is met in this experiment and the desired result is not achieved, then the theories involved in the experiment ought to be revised.

Quine insists by his confirmation holism that a sentence has link with other sentences. The verifiability of the truth or meaning of the sentence would have to involve other sentences as well. For instance, the verifiability of such sentence as, 'a black goat chews grass in the field', rests on such sentences as, 'goats chew grass', 'the field contains grass which goats could chew', etc. This also involves analytic statements according to Quine. He insists that this could be extended to the truths of logic and mathematics. For instance, the statement, 'the sum of four and five is nine', could be verified by the understanding of the values of four, five and nine as well as the knowledge of the meaning of 'sum'. Georges Rey writes that Quine insists that scientific theories along with their logic and mathematics, are confirmed only, as corporate bodies. Again, concerning this matter and how Quine might be right, Rey writes:

> Certainly, though, as an observation about the revisability of claims of logic and meaning, Quine's claim can seem plausible. As Putnam (1968

> [1975]) argued, enlarging on Quine's theme, it could turn out to be rational to revise even elementary logic in view of the surprising results of quantum mechanics (although it is worth noting how very rare such empirically motivated proposals have ever been, and that one needs to distinguish revising one's *logic* from revising one's *account* of one's logic[37]

Related to the confirmation holism is the underdetermination of theory. Quine holds that truth is immanent. Yet, he accepts with some elements of doubts, the underdetermination of theory by evidence. His little doubt on this is in consideration of the fact that such theories may not easily have the same observation categoricals. Hylton explains underdetermination of theory by evidence in these words: "… that two or more rival theories might have all the same observational consequences, and thus be empirically equivalent".[38] However, related to this theory is the Indeterminacy of Translation which refers to the situation in which two theories are said to be empirically equivalent when they imply intertranslateable observation categorical. In this situation, the theory being postulated is said to be empirically equivalent to its translation into any other language. Simply put, this holds that there is the possibility of making a translation into another language with the result of an equally correct concept or term. Yet, related to this is Quine's doctrine of ontological relativity and its antecedent, his doctrine of confirmation holism.

Confirmation holism borders on the idea that all theories as well as propositions that could be derived from them, are underdetermined by empirical data or evidence. It implies that no single theory is independent of other theories. For instance, the fall of a mango fruit from a mango tree entails theories concerning gravitational forces as well as theories involving mass and weight. These theories could involve laws on the calculation of acceleration and laws of masses.

Quine uses the doctrine of confirmation holism to explain his reason for the rejection of the distinction between analytic and synthetic statements. He holds that since no sentence cannot be

verified in isolation, then the so-called analytic statement, if there is anything like that, requires other sentences or statements including synthetic statements or sentences that have appeal to experience for its verifiability. Simply put, Quine holds that our knowledge of the world is a whole that cannot be compartmentalized into analytic and synthetic statements in its expression.

4.6. Quine's Web of Beliefs

Quine posits a web of beliefs or system whose central position is occupied by beliefs that are not easily revisable. At the periphery or edge of that system are beliefs that are easily revisable. At the central part are such beliefs as logical truths, mathematical truths, and generally accepted universal truths. What determines the position of a belief is not the matter of whether or not it is a necessary truth or contingent truth but its revisability property. However, Quine postulates that no sentence is immune to revision and that sentences are more or less revisable depending on whether they are at the 'central' or 'periphery' of the web of beliefs. Concerning this web of beliefs, he writes: "…the edge of the system must be kept squared with experience; the rest, with all its elaborate myths or fictions has as its objective the simplicity of laws."[39] He also holds that though the so-called analytic statements at the central part of the web of beliefs appear unrevisable, they can be revised due to a pressure from the peripheral forces of experience. Due to this reason, Quine maintains that all sentences are empirical and no sentence could be dubbed 'analytic' in the true sense of it.

The critique of Quine's web of beliefs comes from his own skepticism of analyticity. He had said that the concept of analyticity does not relate closely to centrality in his web of belief. What this means is that centrality is not unique to the analytic considering that there are some truths or sentences that are 'central' yet they are not analytic while some sentences that are analytic are

not central. For instance, sentences like, 'there have been goats', and 'the moon exists', are truths

that have bases on experience, yet they are central and cannot easily be revised without

contradiction. It is based on this that one can say that what is characteristic of the analytic is not

just the unrevisability of its truth but its intelligibility. Rey observes this in these words:

> It's not mere unrevisability that seems distinctive of the analytic, but rather a certain sort of *unintelligibility*: for all the unrevisability of "Some people have eyes," it's perfectly possible to *imagine* it to be false. In contrast, what's peculiar about the analytic is that denials of it often seem unintelligible: it seems impossible to imagine a married bachelor. Indeed, far from unrevisability explaining analyticity, it would seem to be analyticity that explains unrevisability: the only reason one balks at denying bachelors are unmarried is that *that's just what "bachelor" means!*[40]

Quine's conclusion concerning the debate on the distinction of analytic statements and synthetic

statements in relation to his web of beliefs is that since the central position and the periphery as

well could be occupied by the dubbed analytic statements as well as synthetic statements, no

distinction exists between both. He also points out that the analytic as well as the synthetic can

both be revised and that it is meaningless thinking of both separately in philosophy as well as in

science. To him, the analytic and the synthetic are both sides of the same coin. He writes:

> I am impressed also, apart from prefabricated examples of black and white balls in an urn, with how baffling the problem has always been of arriving at any explicit theory of the empirical confirmation of a synthetic statement. My present suggestion is that it is nonsense, and the root of much nonsense, to speak of a linguistic component and a factual component in the truth of any individual statement. Taken collectively, science has its double dependence upon language and experience; but this duality is not significantly traceable into the statements of science taken one by one.[41]

4.7. Quine's maxim of minimation

Having rejected definition and explication on the ground that they give obscure meaning to concepts and are not reliable in giving precise meaning to analyticity, Quine turned to what he termed *maxim of minimation* to ascertain if the impasse of the precise meaning of analyticity could be overcome. This maxim refers to simple explanation and could be grouped into two, namely, simplicity and the principle of minimal destructiveness. Concerning the first, Quine opines that a very simple explanation of an unfamiliar proposition or notions for instance, with the most basic vocabulary is more effective than complex ones. Also, he explains the second aspect of the maxim of minimation as a means of explaining a concept with the least destruction of its precise meaning. Quine says the second form of the maxim of minimation could be applied in the explanation of analyticity in such a way that it could have less revision with reference to the web of belief.

Quine concludes that even subjecting analyticity and *a priori* to the maxim of minimation does not solve the problem of their meanings being obscure. To him, they are fictitious and do not give account of reality. He maintains that since one of the two groups of statements (*analytic*) cannot be account for properly then any attempt at classifying or making distinction of the two propositions is not founded. This makes it possible for him to say that all sentences are revisable especially when new discoveries surface. Yet, this bold postulation would have been implausible if he had accepted analyticity and *a priori* in the first place. This is because the very nature of analytic truth expressed in statements or sentences precludes every possibility of revisability.

Endnotes

1. W.v.O Quine, "Carnap and Logical Truth," T*he Ways of Paradox and Other Essays*. (New York: Random House, 1954) P.113

2. Ibid. P.26

3. Gillian Russell, "Quine on the Analytic/Synthetic Distinction," in Gilbert Harman and Ernie Lepore (ed.) *A Companion to Quine.* (Chicago: Blackwell Publishers, 1969) P.48

4. Quine, 1954

5. Loc. cit.

6. Loc. cit.

7. Loc cit

8. Ibid. p. 4

9. Loc. cit.

10. Ibid p.5

11. Loc. cit.

12. Loc. cit.

13. Ibid. p.6

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16. Loc. cit.

17. Loc. cit.

18. Soames, S. Philosophical Analysis in the twentieth century; the Dawn of analysis. Vol.1, (Princeton, New Jersey; Princeton University Press. 2003) Pp.360/1.

19. Gillian Russell, Truth in virtue of meaning. (New York: Oxford University Press, , 2008) P.130

20. The Analytic-synthetic Dichotomy by David Ross Date: 26 Mar 1992 *Moderated Discussion of Objectivist Philosophy*

21. W. v. O. Quine., "From a Logical Point of View*": 9 logico-philosophical essays*. 2nd ed., revised. (Cambridge, Massachusetts : Harvard University Press, 1980) P. 21

22. Quine 1951 P. 9

23. Loc. cit.

24. Quine 1980 P.21

25. Ibid. P.22

26. W.v.O Quine, "Carnap and Logical Truth," T*he Ways of Paradox and Other Essays*. (New York: Random House, 1954) P.113

27. Rudolf Carnap, *Empiricism, Semantics and Ontology*, (Chicago: The University of Chicago Press, 1969) p.205

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CHAPTER FIVE

EVALUATION AND CONCLUSION

5.1. Evaluation

One of the problems I have with Quine's rejection of analyticity borders on psychology. My observation centers on conceptual presuppositions. These simply mean the experiences and the expression of those experiences through terms or concepts in ordinary language. I am convinced that there is an evidence of analyticity in our perception of matters of facts and the expression of such perception. There are in our languages some conceptions and expressions that, though used in the expression of our experiences of everydayness, have elements of the *analytic*. For instance, we experience men getting married and, also, men who are not yet married. Now, the expression of these experiences in such words like *bachelors are unmarried men* borders on analyticity while the experiences themselves are synthetic. That there is remote link with the experience (synthetic) does not make everything synthetic and make void the issue of analyticity.

It is to be observed here that when one describes synthetic as having appeal to experience, the word experience itself poses some problems. There is this difficulty of understanding exactly what the word 'experience' means precisely. Sometimes it could be taken to mean our encounter with objects of the extended world such as an orange on the table, a bucket of water on the floor, the weather observed at the sky,etc. This is described as perceptual experience. Yet, it could also be taken to mean the play of sense impressions that is revealed through a careful introspection. This form of meaning involves a 'myth of the given', or the presumption that there is something given in our experience that is not interpreted by our understanding. What is involved in this is conceptualization.

There is a sort of conceptualization involved in our experience of objects or simply, our observation of objects. For instance, observing the weather involves the conceptualization of the issue of sky and the concept of blue. Again, observing a bird in the air involves the conceptualization of something about bird as well as the concept of flying. Our everyday experience and its expression revolve around some kind of conceptualization which borders on analyticity. Again, psychological development recently unveiled sensory and motor 'modules' contained in human minds. The primitives of these 'modules' are said to be epistemically distinctive though with some limited conceptual interpretations. What this means is that there could be conceptualization without direct appeal to objects which is only possible if *a priori* knowledge is acknowledged as a possibility. It is based on this that this research questions Quine's rejection of analyticity and apriority.

Again, some philosophers who support Quine on his rejection of the separation fail to fault him on how he branded analyticity as a meaningless concept simply because defining it with reference to necessity and apriority means anticipating its meaning before the definition and based on the fact that it would be difficult to define without reference to the necessary and *a priori.* It should be noted that Quine also rejected the analytic based on the fact that definitions and explications do not give good account of the meaning of a word considering that to define a word means to take recourse to the lexicographer who only defines based on the general use of the concept. Quine fails to see that if analyticity is to be rejected based on these reasons then every other philosophical concept should be meaningless considering that their meanings also come from definitions and explications. Again, people do not even depend on definition to ascertain the meaning of a word that is already entrenched in a language for a long time. For instance, *analytic* has been in use in Philosophy from the time of Kant to Quine's time and does

not even require to be defined or explicated for its real meaning to be ascertained. Philosophers did not need a lexicographer for its meaning. Again, if every other concept in Philosophy such as the synthetic have also been defined, and their meanings ascertained by synonymy, then it would be wrong to dismiss *analytic* based on definition, explication, synonymy and even meaning being obscure as Quine proposed. The definition of a concept or word will always involve the use of similar words in relation to what is being defined. That is why it would be wrong to reject the definition of *analytic* with reference to the necessary and *a priori*.

The positivists hold that since Metaphysical truths or claims are not empirically verifiable they are meaningless. They also made a distinction between analytic statements and synthetic statements based on Immanuel Kant's classification. Willard van Orman Quine rejected this distinction and holds as meaningless the analytic. Such rejection of analyticity and the distinction between analytic and synthetic statements has serious philosophical implications. He appears to counter the doctrines of the empiricists but succeeded in undermining the importance of Metaphysics just like the empiricists. A denial of analyticity and grounding of all truths on experience, as Quine did, makes the claims and inquiries concerning Metaphysics a futile venture. This is because Metaphysics operates in such a way that deductive logical laws find their application to a set of axioms that are necessarily true. This application results to necessarily true propositions. Quine stated as his intention in the opening of his paper, Two Dogmas of Empiricism, "… a blurring of the supposed boundary between speculative metaphysics and natural science." I seriously doubt if there could be any form of Metaphysics, albeit speculative one, devoid of analytic or necessary truths.

Again, when the principle of verifiability, propounded by the logical positivists, was attacked from all fronts by philosophers, Rudolph Carnap, one of its leading figures settled for the theory

of confirmability. Related to this doctrine is also Pierre Duhem's confirmation holism concerning which he noted that theories are confirmed by evidence in many ways. He also states that a hypothesis is confirmed by the consideration of the sum of experiments made and not each in isolation from the other. Now, the originality of Quine's idea of confirmation holism is doubtful unless one agrees that his application of that same theory of confirmation holism is different.

Again, the relationship between the analytic and the synthetic as envisioned by Quine would have led him to the understanding that the notions of vagueness and externalism are here involved rather than his conclusion that there is nothing like the analytic. Just as I stated above, a term is vague if it has borderline cases. Borderline cases involve statements or sentences whose truth or falsity cannot be established easily because of its unclear contents. The debate on the distinction between analytic and synthetic statements clearly shows that what is involved are borderline cases; sometimes, it is difficult to see where the areas of synthetic statements end and where the ones of analytic statements begin considering that both, as could be seen in Quine's account, share much of cognitive features. For instance, the statements considered analytic statements as well as firmly-held beliefs have similar cognitive features in relation to revisability. This is such that a distinction between the two (analtytic statements and firmly-held beliefs) would be very difficult. On the other hand, however, a very close look at both shows also that they are distinct. The negation of analytic statements leads to an apparent contradiction; this is not the case with firmly-held beliefs. For instance, the expression 'all bachelors are unmarried men', as an analytic statement is such that one cannot have a reverse conception such as 'all bachelors are married men'. The expression 'the earth has been existing for over ten years' is a synthetic statement or a firmly-held belief whose case could have been otherwise. If one

considers some analytic truths expressed in such ways as: all men are rational, all uncles are men and 2+3=5 it would be an apparent contradiction for men not being rational, or uncles not being men or the sum of two and three not being five. On the other hand, however, let us examine these expressions: there have always been marriage contracts in Nigeria, the moon is the only natural satellite around the earth, and, there are black men in Nigeria. All these sentences are synthetic because they appeal to matters of fact. They are also universally accepted truths or, in the words of Quine, firmly-held beliefs. It is possible to think of there being no marriage contracts in Nigeria or the earth not having the moon as its natural satellite or Nigeria being devoid of black men.

The doctrine of externalism holds that the mind is constitutive of what goes on inside the nervous system (brain) as well as what exists outside the subject. The various versions of it have been accounted for earlier in this dissertation. However, the denial of analyticity and distinction between the analytic and the synthetic confers legitimacy to the claims of the externalists. This is in consideration of the fact that accepting only the synthetic statements as Quine did, casts doubt of the mind's ability to make abstractions and the legitimacy of *a priori* truths.

 I earlier observed that some of Quine's criticisms of the analytic/synthetic distinction and all that are involved in the debate could be found in his famous paper, *Two Dogmas of Empiricism*. In the first four sections of that paper, he argued against philosophers' attempt to define analyticity with reference to necessity and the *a priori.* In those sections, Quine raises questions and problems on any type of modality that is presumed to be grounded in analyticity as well as on Ayer's conventionalist theory of analytic truth. He also frowns at the attempt of philosophers to give a non-circular account of the distinction between analytic statements/truths and synthetic statements/truths. Here he attacked the very issue of analyticity and dismisses as 'meaningless'

any attempt to see analyticity as something prior to necessity and apriority in terms of explanation. He also argues that philosophers, in their attempts to define analyticity, make the mistake of resorting to 'the necessary' and '*a priori'* as terms that refer to the analytic. Quine argues that if actually we are to define or explicate analyticity without anticipating its meaning then analyticity itself has to be explained without reference to necessity and apriority. Here he observes that it is not possible to do so, that is, explaining analyticity without reference to necessity and apriority. My observation here is that though analyticity does not share the exact meaning with the necessary and the *a priori,* they are interwoven at some points. For instance, mathematical statements could express both analytic and *a priori* truths at the same time.

Another thing observed by Quine is that since analyticity cannot be defined, then it is meaningless. It is true that the analytic and the necessary as well as the *a priori* do not mean exactly the same thing and that defining the analytic with reference to the necessary is not the best way to define or explicate the analytic. However, considering that it (the analytic) has been in use for quite a long time in Philosophy, as I observed earlier, it does not have to be defined as being synonymous with the necessary before philosophers who use it know its meaning. In fact, that scholars know its relationship with the necessary and their point of divergence proves not only that there is a term like that and that it has been in use to mean a particular concept even before its rejection in Willard Qjuine's paper. I also observed earlier that a word that is entrenched for a long time in a language, be it ordinary language or technical language, would be such that people must have gotten acquitted with its meaning without having recourse to its definition. I do not believe that the analytic requires defining with reference to the necessary for its meaning to be grasped as Quine holds. This would have been different if the term the analytic is a new invention in philosophy. In such circumstance, of it being a new invention,

scholars would rely heavily on its definition or explication for its meaning. And, if such definition is not satisfactory, then it could be said to be meaningless as Willard Quine posits.

The empiricists' notion of the analytic is the same with Kant's idea of statements whose predicate is implicit in the subject. This could be seen in such statement as 'all men are rational'. Yet, in Quine's argument against this doctrine of the empiricists, he argues with reference to the analytic as meaning not only the analytic in Kant's understanding but also the necessary and the *a priori.* In the early part of his article, The Two Dogmas of Empiricism, Quine used the word analyticity with reference to Kant's concept-containment understanding while in the later part he used it as meaning the *a priori*. What this means is that he is inconsistent. If his use of analyticity is not the same with the use of analyticity by the empiricists, it means that his arguments are based on wrong premises. Hence, his inference cannot be correct considering that he argued from wrong premises.

Again, one of the reasons given by Quine on his skepticism about analyticity and his rejection of analytic–synthetic distinction is that, to him, there is no difference between analytic statements and statements concerning firmly-held beliefs. The former, analytic statements, such as 'all men are rational' and the latter (firmly held beliefs) such as 'the moon has existed for more than ten years' are truths that are universal and obvious. According to Quine's own doctrine of *web of beliefs*, both are central and cannot easily be revised though they are still revisable. Now, the question is how it is possible to make a distinction between the two, analytic statements and sentences expressing firmly held beliefs considering that Quine actually stated that they share the same cognitive features? His answer is that there is no distinction. This is true when a consideration is made with reference to both statements sharing the same central position in the

so-called *web of beliefs* in which he holds that the denial of both is a contradiction. For instance, the statement 'all boys are male children' is analytic whereas the statement 'the earth has existed for over twenty years' which is a firmly held belief, is a synthetic statement. Quine even went ahead to state that all statements are grounded in states of affairs. A credit could be given him here considering that philosophers had always seen analytic statements totally independent of experience. I believe in Quine's position that though analytic statements are not confirmed or denied with reference to experience, they cannot be said to have no reference what-so-ever to experience. For instance, the claim that all men are rational is based partly on the fact of having actually observed men in the past as being able to reason. Again, the statement 'all boys are male children' is an example of analytic statements. The fact that it is analytic is because it is tautological. Yet, it cannot be denied that such claim would not have been plausible without some observations in the past. Again, one of the reasons why Quine holds that there is nothing like analytic statements is the similarity that exists between the so-called analytic statements and firmly held beliefs as stated above and his claim that both have reference to the state of affairs. However, I concour on this similarity but think that analytic truths are still different from the firmly held beliefs; both could be at different epistemological level but are definitely not of the same kind.

5.2. Conclusion

Willard van Orman Quine argues, as I stated above, that definitions in general do not give reliable meaning to a concept. It is based on this that he holds that there is nothing like analyticity because all definitions and explications used with reference to it leads to obscure meaning of it. However, this dissertation, in consideration of the analyses given above,

concludes that there is indeed the analytic and that its long use in philosophy makes it comprehensible even without recourse to definition. Hence, Quine's argument that there is no distinction between the analytic statements and the synthetic statements based on there being nothing like analyticity is baseless. This dissertation also concludes that there are some propositional contents that are understood by means of intuition. And, such intuition can only be possible when there is analyticity or logical constructs of the mind.

Concerning Quine's postulation that it is only the entire theories or sentences and not individual ones that are confirmed or disconfirmed, I think there is an exaggeration here. It is not contestable that the theories or sentences are connected to each other, and needs beliefs expressed in each other for confirmation or disconfirmation. Yet, all the beliefs entrenched in all the theories and every other sentence do not come to play in the confirmation or disconfirmation of an expression. There are some terms that stand alone in a linguistic expression such as "come". These don't need every other theory for confirmation or disconfirmation.

That I reject Quine's postulation that there is nothing like analyticity and other claims in his paper, Two Dogmas of Empiricism does not mean that I do not recognize the work of a genius in that paper. First, his intention, suggested at the beginning of the paper, of "blurring the distinction between speculative metaphysics and the natural sciences" emphasizes the general need for cooperation between philosophy and science. A clear-cut separation between analytic statements and synthetic statements makes philosophy or disciplines given to speculation to stand apart from the sciences that are generally inductive.

Quine's work also addressed the question raised by Kant's doctrine of synthetic *a priori* which he says refers to the analytic that is known through synthesis. The implication of this is that the

analytic and the synthetic do not stand apart. Kant was taken aback by analytic statements that do not agree with his concept-containment rules and had to brand them synthetic *a priori* with the explanation that such analytic statements are arrived at by synthesis. Philosophers after Kant had contested this idea saying that no *a priori* is knowable through processes linked to experience as taught by Kant. But, Quine's rejection of the distinction between the analytic and the synthetic statements takes philosophers back to the ideals of the doctrine of synthetic *a priori.*

Quine's works show that when some truths do not conform to the theories or beliefs we have of the world, we could look for more plausible truths that could bring us back to the data we have of the world. Quine indicates that normally, people generally favour some changes or alterations that comply with the principles of conservativeness and simplicity. And, he is right considering that such changes that involve mathematical truths and logical truths would be very difficult. This is also the position of this dissertation.

Again, if we should accept that Quine's *web of beliefs* is true, then it would be very difficult even to determine the truths that should occupy the center considering that if the feature of 'difficulty in revising' should actually characterize the contents of such position, there would be the problem of underdetermination since both the analytic and the synthetic as well share in this feature and one would not know which in a particular context makes the list. The position of this research here is that an apparent contradiction exists in the negation of analytic truths unlike universally accepted truths. Hence, both are distinct

Again, Quine posits that there is nothing like analyticity/analytic truths or necessary truths. What this means is that the very foundation on which metaphysical claims rest is shaken; the deductive laws, the set of axioms and the propositions resulting from the application of deductive laws, as a

result, are implausible as I observed earlier. What this means also is that the endeavours of philosophers inclined to metaphysics are futile. However, considering all the points mentioned above, this dissertation concludes that Quine's rejection of analyticity in this context is unacceptable. Again, that there are borderline cases involved in the relationship between analytic and synthetic statements indicates the fact that truths involving both statements are interwoven in such a way that one would find it extremely difficult to indicate where synthetic statements end and where analytic statements begin in such cases involving firmly-held beliefs and analytic statements. And, as such, making a distinction between the two would be very difficult. Yet, a consideration of the analytic with reference to mathematical and logical statements and matters beyond Kantian concept-dependent metaphor, indicates that the distinction between it and synthetic statements is as clear as day. In consideration of how analytic statements and synthetic statements are interwoven at some points and separated at other points, this dissertation concludes that the relationship between both involve borderline cases. What determines whether there is a distinction or not is the type of analytic statement involved.

The axiomatic system proposed in connection to the conclusion of this dissertation is Axiom of By-intersection-set axiom. The Zermelo and Fraenkel (ZF) axioms that are closely related to the axiom of intersection are the axiom schema of specification and the axiom of pairing. The axiom schema of specification holds that set builder notation is used for the construction of subsets. An instance of this is the construction of even integers as the subset of integers. The axiom of paring holds that if m and n are sets, then there is another set that has m and n as elements. The axiom of By-Intersection Sets, which results from this research, states that for two sets x and y, there exists another set z that emerges from the union of the elements shared in common by x and y yet some elements (x_i and y_i) remain unique to set x and set y respectively. This is demonstrated in the

following Venn diagram. The Venn diagram of Bi-intersection set axiom. This axiom, as stated above demonstrates the relationship between the analytic and the synthetic. It clearly indicates that both intercept at a point (Z) but remain separate at some other points (xi and yi). It is in view of this that this dissertation concludes that there is no sharp distinction between *analytic* and *synthetic*.

This research proposes that further research of this topic should revolve around the relationship between the analytic statements and synthetic statements; their points of convergence and points of divergence have to be established.

Endnotes

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