

**NATURALISING EPISTEMOLOGY:
AN EXAMINATION OF WILLARD VAN ORMAN
QUINE'S THEORY OF KNOWLEDGE //**

**BY
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**Dissertation Submitted in Partial Fulfillment of the Requirements for the
Award of the Degree of Master of Arts in Philosophy in the Department of
Philosophy and Religious Studies of the University of Nairobi**



DECLARATION

This dissertation is my original work and has not been presented
for the award of a degree in any other university

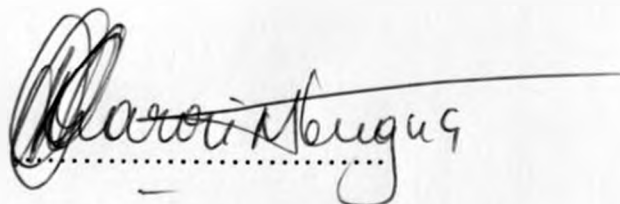


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..14TH OCTOBER 2009

Date

This dissertation has been submitted for examination with my
approval as the supervisor



Dr. Karori Mbugua

October 14, 2009

Date

DEDICATION

To my Late Mother,

Josephine Kahenda Ifedha,

**Mom, this is in your memory, for your constant reminder that I must remain
where I belong - the Academy**

ACKNOWLEDGEMENT

I am greatly indebted to the University of Nairobi and various persons whose assistance enabled me to pursue my studies. First I appreciate the University of Nairobi, through the Department of Philosophy, for awarding me a scholarship for my graduate studies. I thank my supervisor Dr. Karori Mbugua without whom this thesis would not have been completed. His constant guidance has seen me through. I am grateful to Dr. F.E.A. Owakah, Dr. Joseph Situma, and Oriare Nyarwath who took time to read this work and offer insightful advice.

My gratitude to the other academic staff members of the Department for introducing me to the discipline of Philosophy; I am indebted to Prof. Joseph Major Nyasani, Prof. Solomon Monyenye, Prof. Jack Odhiambo, Dr. Patrick Ouma Nyabul, Dr. Wafula Muyila and Dr. Juma Ndhovu for their tireless efforts and guidance; all of you turned my head for my eyes to see the light thus freeing me from the captivity of shadows like the freed slave in Plato's *analogy of the cave*.

I do not take for granted the support from my family and friends. I am grateful to my father Titus Ifedha Kiganda and my brother Ken Ambani, for their daily concern, encouragement and support; my brothers Galerwa, Osigo, Lundu and

Mahasi, and my sisters Jahenda, Anni and Martha Jadevera, my lovely young sister, named after my beloved grandmother, for giving me the sense of belonging. I appreciate my good friends; Ombati Basweti, for his insurmountable support and for reminding me that I have a deadline to beat, and Shilabukha Khamati and Allan Korongo for their consistent encouragement. Finally, I thank my aunt, Jessica Ongachi, the only sister to my late mother, for her moral support and prayers.

Sincerely, to all of you, I owe this work; however, I take full responsibilities for the errors of interpretation, analyses, commission or omission that may be herein.

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ABSTRACT

This dissertation is a critical examination of W.V.O. Quine's notion of a naturalised epistemology. Since its formulation, naturalised epistemology has and still attracts criticisms and counter criticisms for and against it. The main objection which seems to have defied several responses, including Quine's, is that naturalised epistemology abandons normativity which is critically essential to epistemology.

Quine's epistemological theory is a radical shift from the traditional foundationalist approach to epistemology. His proposal for naturalisation of epistemology is based on the argument that the classical foundationalist approach to epistemology with its key pursuit of *a priori* propositions for the establishment of a foundation for knowledge is an untenable venture as exemplified by the predicament that befell David Hume and later on Rudolf Carnap. For epistemology to progress, he asserts, we must avoid the Carnapian fate, where reduction efforts to translate scientific discourse into sensory evidence fails, by adopting the method of science.

This study discusses two main objections against naturalised epistemology as formulated and presented by their main proponents; Jaegwon Kim, the normative charge and Barry Stroud, the sceptical charge. Kim argues that Quine's departure from the classical foundationalist epistemology with its

justification centered component amounts to purging off epistemology its normativity. He asserts that Quine's naturalised epistemology means dispensing with justification which is the normative element of the concept of knowledge.

Stroud on his part accuses Quine of inconsistency. He argues that Quine's claims that there is no appeal to scientific knowledge that can non-circularly validate scientific knowledge in the presence of the traditional epistemological skeptic is quite in contrast with his other claim in "Roots of Reference" that we should seriously embrace the project of validating our knowledge of the external world. Quine's claim of embracing validation in his project, seem to endorse the basic question of traditional epistemology which is validation. This in itself is a contradiction since Quine's naturalised epistemology is anchored on the impossibility of realizing a first philosophy or *a priori* knowledge.

The thesis argues that Quine's naturalised epistemology is normative by demonstrating the existence of justification and scepticism, the twin processes that entrench normativity. It emerges that in naturalised epistemology, beliefs are held as reliable only after being subjected to a vigorous scrutiny akin to scientific experimentation to establish their accuracy, reliability, consistency and non-arbitration in as far as their representation of the world is concerned.

Beliefs are always held sceptically just like scientific hypotheses until they are subjected to the process of justification to establish their status as either, reliable and therefore true and/or knowledge or unreliable and therefore false and/or devoid of knowledge until proven otherwise. Beliefs that cannot be subjected to the process of validation are beliefs that cannot generate knowledge just like theories that cannot be tested and therefore cannot qualify as scientific theories.

The research concludes that contrary to the objection that Quine's naturalised epistemology is non- normative, it can account for normativity since it does not in any way do away with the normative concepts of scepticism and justification. Furthermore, it recommends that since the objective of epistemology is to establish a criteria for beliefs that qualify as true and therefore knowledge, any theory of epistemology should go beyond focusing on the criteria and assess how the beliefs are formed.

DEFINITION OF TERMS

Naturalised Epistemology

The term naturalised epistemology in this study means a theory of knowledge as proposed by W.V.O. Quine, which emphasises the use of natural scientific methods in seeking to understand the origin, nature, scope, possibility and legitimacy of human knowledge; and generally in attempting to resolve the philosophical problem of knowledge. Naturalised epistemology in this case seeks to replace the classical foundationalist theory which is in pursuit of the realisation of *a priori* propositions for the establishment of a foundation for knowledge, a venture that has been proven untenable as demonstrated by David Hume and later on Rudolf Carnap.

Normative

Normative in this study refers to a criteria or standard in epistemology which beliefs must comply with in order to qualify as either true/reliable and therefore knowledge or false/unreliable and therefore devoid of knowledge. Epistemology in this case is essentially a normative enterprise and one cannot envisage a situation where a non-normative epistemology exists.

Foundationalism

Foundationalism refers to the view that, in epistemology, some beliefs are justifiably held directly on the basis of sense perception or rational intuition.

These are the self- evident, self-justifying, certain or indubitable beliefs that are *a priori* and therefore provide the basis from which other beliefs are inferred.

Justification

Justification in this study is a normative concept that refers to the process of validation of beliefs in order to realize those that either qualifies as true/reliable and therefore knowledge or as false/unreliable and therefore devoid of knowledge. Justification in epistemology is triggered by skepticism.

Scepticism

Scepticism in this study is a normative concept in epistemology that refers to the process that triggers justification of beliefs to ascertain their reliability or truth value in as far as their epistemic status is concerned. Scepticisms and justification occur concomitantly in the epistemological enterprise.

CHAPTER ONE

INTRODUCTION TO THE RESEARCH

1.1. Introduction to the Study

When Edmund Gettier¹ in his short three-page paper of 1963 exposed the insufficiency not only of the tripartite account of justified true belief (JTB) as an epistemological theory, but also attempts by Roderick M. Chisholm² and A. J. Ayer³ to state necessary and sufficient conditions for knowing a proposition within the tripartite account, he triggered a new wave in epistemology. His "Gettier cases" started what Michael Huemer refers to as "a cottage industry of knowledge-analyzers"⁴

Gettier's paper put to doubt an otherwise long-standing tradition regarding the correct analysis of knowledge. The tradition, traceable to Plato's dialogue *Theaetetus*⁵, asserts that what distinguishes knowledge from mere true belief and lucky guesses is justification. Accordingly, knowledge is defined as justified true belief (JTB). In this case, to claim that *S* knows that *P* implies that the proposition fulfills the following three necessary conditions:

¹ Edmund Gettier "Is Justified True Belief Knowledge?" in *Analysis* 23, 1963, pp 121-123

² Roderick M. Chisholm. *Perceiving: A Philosophical Study*. Ithaca, New York: Cornell University Press, 1957 p. 16

³ A.J. Ayer. *The Problem of Knowledge*. London: MacMillan, 1956, p. 34.

⁴ Michael Huemer and Robert Audi (eds.) *Epistemology: Contemporary Readings*. London & New York: Routledge, 2002 , pp 436-437

⁵ Plato. *Theaetetus*. Indianapolis & New York: Bobbs-Merrill Company Inc., 1949

- i. P is true
- ii. S believes that P and
- iii. S is justified in believing that P

These conditions demand that for one to claim knowledge of a particular proposition, first, the proposition must be true - one cannot know that which is false, even though one may believe that which is false, one cannot be allowed to claim knowledge of that which is false; secondly, one must believe the proposition that one knows - one cannot know something and at the same time not believe it; thirdly one's belief of the proposition must have a reasonable account, it should not be out of mere chance.

To demonstrate the inadequacies of the tripartite analysis of knowledge, Gettier constructed two counter-examples in which a person would have justified true belief but lack knowledge. He pointed out that since *S is justified in believing that P*, is a necessary condition for *S knowing that P*, there is a possibility for a person to be justified in believing a proposition that is in fact false or a person may derive a proposition that happens to be true from a wrong proposition.

Gettier's paper elicited varied and overwhelming responses. Whereas some epistemologists termed his counter-examples defective, others have accepted

his argument. Among those who sided with him was a group that resolved that although justified true belief (JTB) is a *conditio sine qua non* for the definition of knowledge, it is not sufficient. They henceforth proposed a fourth condition to make the account sufficient. This view was held by Michael Clark⁶ and the duo of Keith Lehrer and Thomas Paxson.⁷

Clark proposed that the condition *S's believes that P* should be fully grounded such that there are no false beliefs in the reasons that make *S* to infer that *P*. He argues that the lack of false beliefs in the held reasons would effectively eliminate the Gettier cases. Thus there would be no incidences where knowledge is inferred from a false belief.⁸

Lehrer and Paxson proposed a more complex fourth condition. They argued that for the condition *S believes that P* to achieve the status of knowledge, there should be no defeaters for *S's* justification for *P*.⁹ In this case knowledge should be undefeated justified true belief (undefeated JTB). That is, justified true belief can only count as knowledge if and only if it is the case that there is no further truth which if the subject knows, would defeat the subject's justification for the held belief.

⁶ Michael Clark. "Knowledge and Grounds: A Comment on Mr. Gettier's Paper" in *Analysis* 24, 1963, pp. 46-48

⁷ Keith Lehrer and Thomas Paxson "Knowledge: Undefeated Justified True Belief" in *The Journal of Philosophy*, 1969 pp 225-237.

⁸ Michael Huemer and Robert Audi. *Epistemology: Contemporary Readings*. London & New York: Routledge, 2002 pp. 436-437.

⁹ *Ibid.*

Another group suggested the replacement of the third condition, justification, with something else entirely. This group had philosophers such as Alvin Goldman and Robert Nozick. Goldman called for the replacement of the third condition with a causal connection. This was to be such that a proposition *S* knows that *P* is true, if and only if, there is a causal connection between *S*'s belief and the fact that makes the belief true.¹⁰ In this case, a subject's belief is justified if and only if it is the truth of the belief that causes the subject to hold the belief.

Nozick on the other hand insisted that the third condition be replaced with the process of truth-tracking since knowledge entails tracing the truth.¹¹ He proposed the introduction of subjunctive conditions which would ensure that the proposition *S* believes that *P* is sensitive to the truth value of *P*; that it is sensitive to either *P*'s falsity or truth. In this case the analysis of knowledge would be such that *S* knows that *P* if:

- i) *S* believes that *P*
- ii) *P* is true
- iii) If *P* were false, *S* would not believe that *P*, and
- iv) If *P* were true, *S* would believe that *P*

¹⁰ Alvin Goldman. "A Causal Theory of Knowing" in *The Journal of Philosophy* 64, 1967 pp. 357-372

¹¹ Robert Nozick "Knowledge" *Philosophical Explanations*. Cambridge: Cambridge University Press, 1981

The most radical proposal, however, was that of W.V.O Quine¹² who called for the abandonment of the whole classical foundationalist account with its consistent pursuit for the *a priori* propositions, for an entirely different approach. He observed that traditional epistemology focused on the foundation of science with a view of demonstrating how the foundations of mathematics or natural science reduce to certainty. This in essence was to refute the Cartesian sceptic in order to obtain an indubitable foundation upon which other truths would be realised. He argued that, unfortunately, these endeavours had failed since traditional epistemology would never succeed in refuting the sceptic. Mathematics can only reduce to set theory and not logic, thus the impossibility of the establishment of mathematical certainty. In Quine's words:

Reduction in the foundations of mathematics remains mathematically and philosophically fascinating, but it does not do what the epistemologist would like of it: it does not reveal the ground of mathematical knowledge; it doesn't show how mathematical certainty is possible.¹³

¹² W.V.O Quine "Epistemology Naturalized" in S. Bernecker and F. Drestke (Ed) *Knowledge: Readings in Contemporary Epistemology*. New York: Oxford University Press, 2000, pp. 266-297.

¹³ W.V.O. Quine *Ibid.*, p. 267.

On the basis of this failure in reduction to certainty, Quine was quite categorical that epistemology, as it is traditionally pursued, is mistaken for it is based on the untenable concept of foundationalism. He argued that the Cartesian foundationalism had failed- "the Cartesian quest for certainty is a lost cause hence should be abandoned". In its place he proposed naturalised epistemology.¹⁴

Naturalised epistemology is a shift from the purely prescriptive account of epistemology to a descriptive causal-nomological account of cognition. Central to this shift is the claim that epistemology is a branch of psychology since, as Quine contends, "the stimulation of his sensory receptors is all the evidence anybody has had to go on, ultimately in arriving at his picture of the world"¹⁵.

The natural epistemologist therefore seeks to decipher how the theoretical output is caused by the sensory input. He/she studies the causal relationship between the meager input and the torrential output. It is in this sense, that epistemology is conducted in a scientific manner hence its naturalisation.

¹⁴ *Ibid.*, p.269

¹⁵ *Ibid.*, p. 269

1.2. W. V. O. Quine: A Proponent of Naturalised Epistemology

Quine's idea to naturalise epistemology must have emanated both from his academic background as a mathematician and the early influence he received as young and upcoming scholar. In order to understand his thinking, it is imperative to be acquainted with his academic biography.

Willard Van Orman Quine was born on 25th June 1908 in Akron, Ohio, USA. He began his philosophical studies at Oberlin College, where his attention and interest was drawn to Bertrand Russell; a philosopher of Mathematics. This influenced him to major in Mathematics with Philosophy of Mathematics as a supplement. He graduated in 1930 with a degree in Mathematics and was awarded a scholarship to pursue his Ph.D. at Harvard University.

At Harvard, Quine, who studied under Alfred North Whitehead, managed to meet Bertrand Russell who visited to give a lecture. These two philosophers who had co-authored *Principia Mathematica* were later on to have a great influence on Quine's philosophical development. In fact, for his doctoral dissertation, Quine made an attempt like "Principia" to comprehend the foundations of Logic and Mathematics and ultimately the abstract nature of science.

From Harvard with his doctorate, Quine went to Europe on a Sheldon Travelling Fellowship. He spent the whole year visiting Vienna, Prague and Warsaw, where he studied, lectured and met and interacted with fellow philosophers. In Vienna he met and discussed with the various membership of the Vienna Circle of Logical Positivists among them Philip Frank, Moritz Schlick, Alfred Tarski, A.J. Ayer, Kurt Godel and Rudolf Carnap. In fact, it is the numerous philosophical discussions with Carnap, a prominent logical empiricist, that Quine admitted inspired him intellectually. It is during this time that Carnap lent him the typescript of the book that Carnap was writing page by page from the typewriter as Carnap's wife, Ina typed. This gesture enhanced the beginning of a personal and professional relationship between the two men. He became an ardent disciple of Carnap and despite the fact that they later on became increasingly combative philosophically; their friendship stood the test of time.

After the European trip, which he described as the most intellectually rewarding, Quine returned to a Junior Fellowship at his *alma mater* Harvard, where he carried out uninterrupted research for three years. In 1936 he began his teaching career at Harvard University as an instructor. He rose up the ranks to become a Full Professor in 1948. In 1955 he was appointed the Edgar Pierce Professor of Philosophy, a position he held until his retirement in 1978.

Quine's teaching at Harvard was only interrupted by his extensive travels world wide to receive academic medals, awards and honours; to give lectures all over the world; and his four year stint in the military at the height of the Second World War, where he served as a navy officer. His main duty in the military was to decipher the communication codes used by the German submarines.

Quine's interest in Mathematics and Philosophy enabled him to begin his philosophical career as a mathematical logician. His initial research interests and publications, which consist of his honours thesis, doctoral dissertation and his first five books, were all devoted to logic. Later on he developed interests in Philosophy of Language where he acquired an acclaimed reputation. He further carried his experience and gains in Philosophy of Language to Epistemology.

His main epistemological contribution is a radical departure from the classical approach to epistemology. He claimed that the main role of epistemology is to describe the way knowledge is actually obtained. Accordingly, epistemology should describe how present science arrives at the beliefs accepted by the scientists.

Quine, a thorough going empiricist and logician was consistent in developing his philosophical outlook known as naturalism. At the centre of naturalism is the unity of philosophy and natural science. He perceived Philosophy as an activity within nature whereby nature attempts to know itself. This was clearly exhibited in his preferred Neurathic analogy that *we are sailors forced to repair our ship while at sea, where there is no secure position or dry dock thus we are forced to remain afloat as we build the ship plank by plank*. This analogy asserted that there is no external vantage point, or first philosophy, by which to remodel or rebuild it from outside.¹⁶

This is a radical departure from those who distinguish philosophy from science and place philosophy in a special transcendent position for gaining knowledge. To Quine philosophy is contiguous with science. It is not a separate privileged field that should provide an independent foundation for the other areas of study.

By advocating that philosophers embrace the methods of science in philosophy, Quine was an empiricist with a difference. His kind of empiricism differed from the traditional one which takes sensory evidence as the basic unit of thought. His empiricism took account of the theoretical as well as the observational aspects of science. It is holistic - the unit of empirical significance

¹⁶ See Oscar Neurath in Cohen and M. Neurath (Ed.) *Oscar Neurath Philosophical Papers 1913-1946* (Ed.). Dordrecht, Holland: Reidel, 1983

is not a single observation, but whole systems of belief. He also stressed the fact that each belief in a system is in principle revisable.

Quine's prolific output entrenched his reputation. He published more than twenty books and numerous articles in refereed journals. Most of these publications have been reprinted in multiple editions and several translated into as many as eight languages. His titles include *Mathematical Logic* (1940), *Method of Logic* (1950), *From a Logical Point of View* (1953), *Word and Object* (1960), *Set Theory and its Logic* (1960), *Ontological Relativity and Other Essays* (1969), and *Philosophy of Logic* (1970). His autobiography, *The Time of My Life* (1985), details his numerous traveling expeditions as a philosopher to lecture, receive awards and honours, and meet fellow philosophers as well as to quench his passion for travelling.

With a long consistent and illustrious career in scholarship, Quine, undoubtedly one of the greatest philosophers of the twentieth century, passed on at age 92 in Boston on Monday the 25th December 2000.

1.3. Problem Statement

Quine's radical proposal to abandon the classical foundationalist approach that is crystallized in the justified true belief (JTB) theory has generated a heated and persistent debate. Quine argues that the classical foundationalist approach assumes the existence of a privileged class of self-justifying and infallible truths that are necessary and sufficient for deducing all other truths. This assumption to him is implausible, since even if such self justifying truths were to exist, he doubts their adequacy in deducing other truths.

Quine dismisses the general conception of foundationalism according to which an epistemological account of how we ought to arrive at our beliefs must precede a commitment to a substantive belief about the external world. He contends that epistemology is a branch of natural science which should not be based on ideal abstract conditions. That epistemology should be based on scientific research in the process underlying human perception and cognition; it should not be concerned with how we *should* form beliefs, rather, it should be concerned with how we *do* form beliefs. It is on this account that he categorically asserts that "epistemology in its new setting...is contained in natural science, as a chapter of psychology"¹⁷.

¹⁷ W.V.O Quine Ibid., p. 274

The most trenchant and recurrent criticism to Quine's naturalised epistemology is that, by abandoning the classical foundationalist approach, naturalised epistemology is rendered incapable of dealing with the question of norms which are integral not only to the conception of knowledge but also to the definition of its possibility and existence. Naturalised epistemology in this perspective therefore fails to adequately provide answers to the essential questions of epistemology such as "What is knowledge?" "What does knowledge consist of?" and "What makes knowledge possible?" all of which are fundamental such that each and every epistemological theory must strive to answer.

Jaegwon Kim, a prominent critic of Quine argues that naturalising epistemology by making it a chapter of psychology restricts Quine to the business of examining the mere causal relationship between the cognitive input and output. This in itself is an abandonment of the essential concept of justification which accords both the concept of knowledge and the entire inquiry that is epistemology normativity¹⁸

Kim notes that naturalisation limits epistemology to the *description* of how beliefs are formed and not to *prescription* of how beliefs *ought* to be generated, which is the crux of epistemology that enables the discipline to define

¹⁸Jaegwon Kim. "What is Naturalized Epistemology?" in S. Bernecker & F. Drestke (ed.) *Knowledge Readings in Contemporary Epistemology*. New York: Oxford University Press, 2000. pp279-297

knowledge and address the possibility of knowledge¹⁹. The relegation of epistemology to description further denies epistemology the realisation of *a priori* knowledge which is paramount in the setting of the foundation not only for the deduction of further knowledge, but also for justificatory purposes.

Kim emphasizes the fact that beside the concept of justification, the concept of belief has a normative dimension and that any epistemology that wishes to dispense with normativity must also dispense with belief. This puts to question the success of naturalised epistemology that seeks to study the relationship between the inputs and psychological outputs.

The non-normative charge leveled against naturalised epistemology has elicited responses from various epistemologists including Quine, a principal proponent of the theory. Quine's response which entails an attempt to assert the normativity of naturalised epistemology is a clear indicator of the essence of normativity to epistemology. Epistemology is essentially normative and one cannot conjure a situation where a "non-normative epistemology" exists since the so called "non-normative epistemology" is something else other than epistemology.

¹⁹ *Ibid.*

Quine claims that "naturalisation of epistemology does not jettison the normative and settle for the indiscriminate description of ongoing procedures."²⁰ He argues that normativity in naturalised epistemology is contained in the technology of truth seeking.²¹ This response seems not to suffice at all since the non-normative charge continues to rear its head calling for the interventions of other naturalist in epistemology.

In defense of Quine, Bredo C. Johnsen²², Hillary Kornblith,²³ Phillip Kitcher²⁴ and Larry Laudan²⁵ argue that the claim that naturalisation entails dispensing with normativity in epistemology is baseless since the normative can also be naturalised. They craft ways in which normativity might be naturalised although their efforts only manage to generate more criticism. Bonjour²⁶ and Siegel²⁷ assert that any attempt to naturalise the normative is bound to fail utterly since such an attempt will be met by daunting counter examples which will best lead the whole process to a vicious infinite regress.

²⁰ W.V.O Quine "Reply to Morton white" in dans L.E Hahn & P.A.Schillip (ed) *The Philosophy of W. V. Quine, La Salle: Open Court* 1986. pp.664.

²¹ W.V.O Quine Ibid pp.663-665

²² See Bredo C. Johnsen "How to Read Epistemology Naturalized" in *Journal of Philosophy* 102, 2005, pp. 78-93

²³ See Hillary Kornblith *Naturalizing Epistemology.*, Cambridge: MIT Press, 1985

²⁴ See Phillip Kitcher "The Naturalist's Return" in *Philosophical Review* 101, 1992, pp.53-113

²⁵ See Larry Laudan "Normative Naturalism" in *Philosophy of Science* 57, 1990, pp. 44-49

²⁶ See Laurence Bonjour "Against Naturalized Epistemology" in *Midwest Studies in Philosophy*, 29, 1994 pp. 283

²⁷ See L. Siegel "Laudan's Normative Naturalism" In *Studies in History and Philosophy of Science*, 21, pp. 295-313

Other than this, proponents of naturalisation such as Bradie²⁸ have also argued for justification within the Quinean naturalistic framework. Since justification is a normative epistemic concept which critics of naturalism argue that naturalised epistemology dispense with, any successful attempt to accommodate it within the naturalistic approach to epistemology, will hence forth normalize naturalised epistemology.

From these criticisms and counter criticisms, we can deduce that there are conflicting views not only on the normative status of naturalised epistemology but also on the possibility of normativity, if at all naturalised epistemology is non-normative. This is a clear indication that there exists a problem of understanding and/or interpreting Quine's naturalised epistemology and what it entails.

This study critically examines Quine's epistemological theory; naturalised epistemology, with a view of establishing its normative status through demonstrating its entailment of justification and scepticism, the twin processes that entrench normativity in epistemology.

²⁸ See M. Bradie, "Normalizing Naturalized Epistemology"
<http://www.bu.edu/wcp/paper/iknodarw.htn,2005>

1.4. Objectives of the Study

This study examines Quine's theory of knowledge - naturalized epistemology - with a specific view of establishing its normative status. The study also examines how the theory responds to the fundamental epistemological questions that each theory of knowledge must endeavour to answer.

1.5. Hypothesis

Quine's naturalised epistemology is normative.

1.6. Justification and Significance of the Research

The main concern of epistemology is to establish criteria for which beliefs are to be held as certain and therefore knowledge. In this quest, justification has emerged as a cardinal process thus making epistemology an enterprise in pursuit of how we are justified in holding various kinds of beliefs and/ or propositions we have about the world. In this case, justification is a concept of epistemic permissibility; it prescribes what beliefs qualify as true. Justification therefore is an epistemic norm. It is a normative concept that each epistemological theory must contain.

Quine's epistemological theory has attracted many responses for and against it. Critics such as Kim argue that the theory does not have room for justification

which is a normative concept that is inseparably tied to the concept of knowledge and which accords epistemology normativity. On this basis they dismiss the theory as something else other than a way of doing epistemology. On the contrary, supporters of the theory such as Johnsen, Kornblith, Kitcher, and Laudan dismiss the critics by arguing that naturalisation of epistemology does not entail dispensing with normativity since the norms can also be naturalised.

The numerous responses for and against Quine's theory clearly indicate a controversy. Since epistemology is essential normative and we cannot conjure a situation where a non- normative epistemological theory exists, this study seeks to examine Quine's epistemological theory with a view of ascertaining its normative status.

1.7. Literature Review

As aforementioned, Quine's naturalised epistemology has elicited a lot of responses. The literature in this area is both abundant and varied. However, most scholars writing on this topic can adequately be categorised into two general groups. First, the group of scholars who are utterly opposed to naturalisation of epistemology, and secondly, the scholars who are in total support of naturalised epistemology, as an alternative epistemological theory. The latter group can further be divided into two. One, the scholars who

conceive and argue for Quine's naturalised epistemology as being adequate as he proposed it and two, the scholars who advocate for amendment of the theory in order to make it comprehensive and capable of addressing the fundamental epistemological questions. This study shall venture into reviewing the literature that exists in these categories.

Kim²⁹ who is considered a prominent critic of naturalised epistemology argues that making epistemology a chapter of psychology restricts Quine to the mere examination of the relationship between cognitive input and output. This is in essence the abandonment of the most essential normative concept of justification which not only accords the concept of knowledge normativity: but also the entire inquiry that is epistemology. He is very categorically that:

...Normative epistemology is concerned with the evidential relation properly so called-that is, the relation of justification - and Quine's naturalized epistemology is meant to study the causal-nomological relation. For epistemology to go out of the business of justification is for it to go out for business.³⁰

²⁹ See Jaegwon Kim Op. cit

³⁰ Ibid., p. 228

Kim fortifies his case by claiming that other than justification, the other concept that has a normative dimension is belief. He maintains that any epistemology that wishes to dispense with normativity must also, as a matter of fact, dispense with "belief". This puts the natural epistemologist who would wish to study epistemology through a psychological approach in an awkward position. It is quite evident that whoever would want to study the relationship between sensory inputs and cognitive outputs cannot achieve this in neglect of the question of belief.

Darwish,³¹ delineates two points against naturalised epistemology. These two points upon which his arguments are founded are: Firstly, epistemology is a distinct province of inquiry. The traditional questions of epistemology are indispensable and they occur in every attempt to construct an epistemology. The questions are both pre-and extra-scientific, they are beyond the scientific domain thus according epistemology a very distinct province of inquiry.

Secondly, the question of justification is equally indispensable to epistemology. He contends that no naturalistic account can be given as an answer to the question. He uses Goldman and Haack's account to illustrate his point. He claims that the traditional demand for justification is to start from nowhere,

³¹ See B. Darwish "Two points against Naturalized Epistemology", <http://www/by/edu.wcp/paper/tknoDarw.htn.2005>

whereas naturalizing justification is to start from somewhere. These two approaches are therefore incompatible with each other.

Darwish asserts that Quine's naturalisation of epistemology does not replace epistemology with psychology but simply and squarely eliminates epistemology. He maintains that if we were to believe in Quine's thesis of naturalising epistemology as constructed in appeal to Darwinism, the epistemological enterprise would not be replaced by psychology. It would be tout court discarded. He captures this in his argument;

If nature as Quine says, endows us with a predisposition for believing truths and that we actually arrive at our beliefs by the same processes by which we ought to, then what is the merit for psychology? Why do we need to discover our processes? If we guarantee that our beliefs are true, what do we need psychology that helps in discovering the beliefs-generating processes, for? Epistemology would not be replaced by empirical psychology, but would be totally eliminated³²

Although he notes that Quine would accept such a condition for, Quine, sees the question of justification as the original problem that is not to be dropped from epistemology but only to be neutralised, in order to eliminate

³² Ibid., p.3

epistemology. This to Darwish is equally impossible. The problem of justification cannot be given a naturalistic answer.

Darwish is categorically that traditional questions of epistemology cannot be eliminated. Each and every attempt to construct an epistemology is in itself an assumption of the very questions. He drives his point home by reiterating the main concerns of epistemology which are the pursuit of the nature, sources, limits and possibility of knowledge. It is at this juncture that he sides with Bradie in faulting Karl Popper who asserted in *The Logic of Scientific Discovery* that the problem of epistemology is and has always been the growth of knowledge. Darwish insists that:

....these questions which I like to call external, are inevitable, indispensable and cannot be eliminated from epistemology in two senses; (1) in the sense that they are assumed in every attempt to construct an epistemology, (2) in the sense that they still remain as one consciously probes them in theorizing about knowledge and even sometimes lead to such a task³³

Darwish maintains that epistemology cannot wholly be naturalised. This is because it deals with questions which are distinct from the scientists' practices.

³³ See Ibid., p.4

The distinct questions accord it a distinct subject matter. He posits that whether the naturalist attempts are not directly intended to probe these questions, they necessarily lead to asking and answering them; which support his claim that the questions are not easy to eliminate thus they form a distinct province of inquiry.

If Quine would argue that the naturalist tackles the questions empirically using the *a posteriori* methods instead of the *a priori* thus remaining in the wide domain of science, Darwish argues that even if one would accept that epistemology uses the *a posteriori* method this would not prevent it in any way from having its distinct subject matter. He says:

....if one accepts the epistemological problems to be tackled *a posteriori* epistemology still retains its distinctness from all sciences in that while science claims to yield knowledge of the world, epistemology is a reflection on knowledge³⁴

Graf³⁵ appreciates Quine for coming up with a new epistemological theory. The gist of his paper however, is to assess the extent to which naturalised epistemology attempts to answer important epistemological questions. His

³⁴ See Ibid., p.5

³⁵ See L.Graf "Theories of Knowledge: Is Naturalized Epistemology Bound to Leave Unanswered some important Epistemology Questions?" <http://ww2.uni-jena.de/philosophic/phil/tr/21/graf.php>.

argument is that since traditional epistemology is pursued *a priori*, whereas naturalised epistemology utilises empirical investigations, if there is an area of epistemological investigations which can only be approached *a priori*, then naturalised epistemology is rendered unable to answer some epistemological questions.

Further, he maintains that if the questions that traditional epistemologists ask are vital to any theory of epistemology, it follows that important epistemological questions are left unanswered. He identifies the question left unanswered as the question of scepticism and the existence of the world and the question of justification. The two are questions that accord epistemology normativity.

Stroud³⁶ maintains that Quine's attempt to validate inference in "The Nature of Natural Knowledge" fails since as much as we can see how others acquire their belief; we are denied any evidence of the correctness of such beliefs about the world. This, by implication means that we have no grounds for thinking our own beliefs are better off.

³⁶ Stroud, B. "The Significance of Naturalized Epistemology", in French, P.A. Uehling, T.G. and Wettstein H.K.J.R. *Midwest Studies in Philosophy*. Minneapolis: University of Minnesota Press, 1981
J.R. *Midwest Studies in Philosophy*, Minneapolis: University of Minnesota Press, 1981 pp. 456-471.

Further, Stroud assesses the consequences of philosophical scepticism in Quine's naturalised epistemology. He faults Quine's argument that all attempts to find out about ourselves and the world must be made from within the conceptual and scientific resources we have already developed for finding out about anything. He notes that the argument makes it look as if Quine is simply changing the subject, a situation that would leave open the possibility that scepticism is and remains the only answer to the traditional questions. All this is despite the converse view that naturalised epistemology resists scepticism³⁷.

Kornblith sides with Quine's view about the conception of an epistemology that makes justification of science and consequently the study of human knowledge in general, being located within Science itself. He refers to this as the "replacement thesis" which is the purported replacement of epistemology with psychology. In arguing for justification within the scientific approach to epistemology, Kornblith joins the group that argues categorically that naturalization of epistemology does not dispense with normativity³⁸.

³⁷ Barry Stroud *The significance of Philosophical Skepticism*. Oxford: Oxford University Press, 1984.

³⁸ See H. Kornblith Op. cit

Bradie³⁹ argues for justification within the Quinean naturalistic framework. Since justification is a normative epistemic concept which critics of naturalism claim that naturalized epistemology dispense with, any successful attempt to accommodate it within the naturalistic approach to epistemology will henceforth normalize naturalized epistemology.

Further, Quine and Ullian attempt an explicit depiction of how normativity arises and works in epistemology naturalised. They outline what they consider to be five major virtues that all scientific theories should have to maximize: conservatism, generality, simplicity, refutability and modesty. They argue that in deciding between two scientific theories or in formulation of a scientific theory, one ought to ensure that the theory satisfy as much as possible the five virtues. Since the idea here is that the theory ought to satisfy as much as possible the five virtues, the insistence of this and the use of the word "ought" secures normativity.⁴⁰ This is what Quine refers to as "the technology of truth seeking"

From the foregoing literature review there is no clear agreement on the normative status of naturalised epistemology. This study therefore seeks to critically examine Quine's naturalised epistemology, with a view of

³⁹ See M. Bradie, "Normalizing Naturalized Epistemology"
<http://www.bu.edu/wcp/paper/iknodarw.htm>, 2005

⁴⁰ See W.V.O Quine and J.S Ullian. *The Web of Belief*. New York: Random House Press, 1970.

establishing its normative status through demonstrating its entailment of justification and scepticism, the twin processes that entrench normativity in epistemology.

CHAPTER TWO

EPISTEMOLOGY: A HISTORICAL OVERVIEW

2.1. Introduction

This chapter traces the practice and development of epistemology from the Pre-Socratic era all the way to the Classical, Medieval and the Modern period. Throughout the historical periods, the chapter singles out some of the major philosophers of the day clearly highlighting their philosophical positions and in particular focusing on their significant epistemological achievements which have informed and shaped the practice of epistemology to date.

2.2. Epistemology in the Pre-Socratic Era

Epistemology or theory of knowledge, whose etymology can be traced back to two Greek words: *Episteme*, meaning knowledge and *logos* meaning reason, is a branch of Philosophy that studies the origin, nature, scope, possibility and legitimacy of human knowledge. It attempts to answer questions such as: *What is knowledge? How can we know that we know? What are the most secure and reliable sources of knowledge? And is there certain knowledge?*

The earliest attempts to epistemology can be traced back to antiquity with the pre-Socratics such as Anaximander, Anaximenes, Thales, Heraclitus and Parmenides. These philosophers rejected the traditional, sensual and

mythological explanation of reality and in its place, sought to understand and explain reality on the basis of reason. Their main pre-occupation was to find out the pre-mordial element from which everything else ensued, and to establish what reality is and how it is. ⁴¹

This group of philosophers was followed by another group of pre-Socratics referred to as the sophists. Prominent among them was Protagoras and Georgias. The sophists developed their epistemological thought which borrowed heavily from the Heraclitean thesis that "everything is in a state of flux". In this case, they conceived knowledge as highly subjective and extremely relative. ⁴²

It is within this context that Protagoras uttered his famous dictum that "*man is the measure of all things, of things that are that they are, and of things that are not that they are not*". This meant that there is no objective or absolute truth. In a case where two people hold divergent knowledge of the same thing since each one of them is an equal measure of the truth; thus holds the truth according to oneself. This view not only conceived knowledge as highly subjective and

⁴¹ See Friedrich Copleston. *A History of Philosophy*. Vol. 1. London: Search Press, 1946. pp 13-26; Bertrand Russell. *History of Western Philosophy*, London and Newyork: Routledge, 1946. pp. 33-59

⁴² Bertrand Russell. *Ibid.*, p. 83

extremely relative but also sceptical, since everyone was permitted to doubt utterly whatever else someone other than oneself held as true. ⁴³

2.3. Epistemology in the Classical Era

The discipline of epistemology took shape in the classical period when Plato formulated and attempted to answer its basic questions which are: *What is knowledge? How much of what we ordinarily know is indeed knowledge? Do our senses provide us with knowledge? What is the relationship between knowledge and true belief?* With these questions taking centre stage of the inquiry, the main concern of epistemologists since then has been the **analysis, nature and variety** of knowledge, and how knowledge relates to the concepts "true" and "belief". This has been with a view of seeking to provide a general basis that would ensure the possibility of knowledge and consequently address, albeit in an attempt, its nature and scope.

To this extent, an epistemologist is not interested in whether or how we can be said to know some particular truth, but with whether we are justified in claiming knowledge of some whole class of truth or whether knowledge is actually possible, and if so, what it is.

⁴³ Ibid., p. 83

Plato through his paradigmatic *Socratic elenchus* advances his epistemological theory in *Meno*, *Cratylus*, *Theaetetus*, *Protagoras*, *Parmenides* and the *Republic*. He dichotomises the world into two: the world of Intelligible Forms/Ideas and the world of images/reflections. The world of Form/Ideas is the world of knowledge that is true, infallible, unchanging and of the good. This is *episteme*; it is the knowledge that is obtained from archetypes (*archai*) or the Forms/Ideas through the process of recollection. ⁴⁴

Plato vividly illustrates the process of recollection in *Meno*, where Meno's slave boy, who does not possess any formal education and who, in particular, has never studied geometry is led by Socrates to answer correctly a geometrical problem whose answer is based on the Pythagorean's theorem. In this episode, Plato is stressing the fact that knowledge is acquired not through the sense or information acquired from one mind to another, but by recollection of the knowledge acquired by the soul in the World of Forms/Ideas prior to its reincarnation.

Plato further postulates that the world of images/reflections provides us with knowledge of representations or shadows of the World of Forms/Ideas. This knowledge is merely reflections or opinions and therefore subject to distortion. It is therefore knowledge of a lower level as compared to *episteme*. He

⁴⁴ See Plato. *The Republic*. Penguin, 1974, Book 5; Plato. *Parmenides*

demonstrates through the "analogy of the cave," the "analogy of the sun" and, the "analogy of the divided line" the process of acquiring *episteme* thus moving from the bondage of knowledge of the senses - *doxa*.⁴⁵

In the *Theaetetus*, Plato attempts to define knowledge by first of all refuting all "false" definitions that had been put across. He dismisses Protagoras' claim that knowledge is perception which implies that what appears to an individual is true to the individual. The rejection is based on the view that the definition relegates knowledge to subjectivity yet knowledge is essentially objective and universal.

Although the dialogue in *Theaetetus* leads to the definition of knowledge as "true belief with an account", this definition is found to be insufficient thus rejected. The main idea from the dialogue is that knowledge is more than just "true belief with an account." Unfortunately, at the end of the dialogue it is not clear what the extra requirement or condition that would make the definitions sufficient, amounts to. This being the case, the attempts to define knowledge in *Theaetetus* are hardly accomplished.

⁴⁵ See Plato. *The Republic*. Ibid ; Plato *Theaetetus*. Indianapolis & New York. The Bobbs-Merrill Company Inc., 1949

Aristotle like Plato holds that knowledge is universal. Accordingly, to know a particular thing/object is to know it in an instance of a universal. Aristotle argues that universals are inherent in particulars. He is emphatic that the universal exists only through the particular, and we can access it through sensible reality.⁴⁶ This is contrary to Plato's conception of knowledge through the dichotomization of the world into: the World of Forms/Ideas and the world of reflections/images, where universal knowledge exists exclusively in the World of Forms/Ideas.

For Aristotle, we acquire knowledge through a process that starts with sense experience and culminates with the realization of the essence of the object under perception. He describes this process of synthesising the essence from the object perceived as actualization of potentiality. He further notes that using the universal and essential insights, we can attain more knowledge through making valid logical inferences.⁴⁷

Aristotle claims that realising the essence of things involves the explanation of its causes. To this extent therefore, he claims that we possess knowledge in the primary cause when we can give the cause of the thing. To give the cause of the thing entails demonstration of its essence from first principles, which is a

⁴⁶ See Aristotle. *Metaphysics*. Oxford: Clarendon Press, 1953, 1006

⁴⁷ *Ibid*; 10056

function of science. To know first principles one has to embrace a form of intuition, thus one can only see their truth in their instances. Although Aristotle permits the explanation of principles of one science using another science, he insists that this process must at some point be concluded. He dismisses scepticism by arguing that it contradicts and refutes itself in daily life.⁴⁸

2.4. Epistemology in the Medieval Era

The Medieval philosophers paid little attention to the central concerns of epistemology. As a result not much was developed and advanced during this period. St. Augustine; who philosophized in this era was categorical that, knowledge more so knowledge of God, is possible. He argued that God is the cause of being and the cause of our knowing that which is. He opposed the view that our senses provide us with knowledge on the basis that the objects of our senses are mutable.

St. Augustine refuted the sceptics' view that certain knowledge is impossible. He was emphatic that even though our senses deceive us, we cannot doubt our own doubt, thus our own existence. It is in the context of refuting the sceptics that he pre-echoed Descartes by arguing "*Si Fallor Sum*" that if "*I err, I exist*".

⁴⁸ Ibid.,

On the basis of this argument, he emphasised that one's own existence is certain.⁴⁹

Aquinas, like Aristotle, argued that we gain knowledge through sense experience. He held that nothing is in the intellect without first being in our senses. That through sense experience we receive direct impressions of perceptible phenomena. He admitted the universality of knowledge by arguing that from the sense impressions of perceptible phenomena, the intellect recognizes common traits in the various phenomena and formulates concepts. These concepts are the universal aspects of knowledge.⁵⁰ This view is similar to Aristotle's where the universal is inherent in the particular.

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2.5. Epistemology in the Modern Era

Epistemology regained its momentum in the 17th Century when Rene Descartes revisited its central concerns such as the possibility of knowledge, and how to distinguish knowledge from illusions and deceptions. He was very categorical that knowledge is possible, it is certain and it is indubitable. His contribution coming immediately after the renaissance period (15th and 16th C), in which science emerged, was greatly influenced by the method of science.

⁴⁹ Gunnar Skirbekk and Nils Gilje. *A History of Western Thought: From Ancient Greece to the Twentieth Century*. London and New York: Routledge 2001. pp 116 – 118.

⁵⁰ *Ibid.*, pp. 130 – 132.

As a mathematician, Descartes observed that there were a number of mathematical principles which mathematicians across the divide agreed on. From these agreed principles, they would then derive other truths deductively. This was contrary to philosophy, where philosophers did not have any principles that they agreed on and held in common as the basis of deriving other truths.

Descartes observed that the lack of common principles in philosophy made the practice of the discipline a venture full of contradictions and lots of scepticism. He thought it wise therefore to extrapolate the practice in the field of mathematics to philosophy so as to develop a method that would grapple with problems of philosophy. He therefore developed his methodic doubt that sought, through skepticism, to establish axioms - clear distinct ideas, from which other truths, whose validity is indubitable would be derived.

In this endeavour Descartes was guided by four rules: Never to accept anything as true except that which is clear and distinct; to divide complex problems to simple ones and in as many parts as possible so as to allow proper resolutions; to proceed with reflection from simple problems to complex; and

to make constant checks and reviews so as to be sure of that which is accepted as certain or rejected for being uncertain.⁵¹

In the application of the "Methodic Doubt", Descartes was sceptical about everything he had come to believe and hold as knowledge. He granted possibility to the view that everything in his mind might be no more than mere dreams and illusions. He doubted the existence of the world and even his own existence.

While deeply immersed in scepticism, he came to the realisation that as much as he could doubt the existence of everything, there was one thing that he could not doubt without contradicting himself – the fact that he doubted. For him to think, he must first and foremost exist. Thus it was clear, distinct and certain that "*Cogito ergo Sum*" ("I think, therefore I am"). Descartes wrote:

..I became aware that, while I decided thus to think that everything was false, it followed necessarily that I, who thought thus must be something; and observing that this truth: *I think therefore I am*, was so certain and so evident that all the most extravagant suppositions of the

⁵¹ See Rene Descartes. *Discourse on Method*. New York: The Liberal Arts Press, 1951, Discourse Two.

sceptics were not capable of shaking it, I Judged that I could accept it without scruple as the first principle of Philosophy I was seeking.⁵²

Having proved his own existence, in the same way, Descartes went ahead to prove the existence of God as a Supreme, All -Perfect and Non-Deceiving Being. He then proceeded to demonstrate how we acquire knowledge of matter through his analysis of wax. With these, Descartes felt that he had succeeded in at least establishing an infallible foundation of knowledge, reconstructing knowledge, and demonstrating the existence and acquisition of certain knowledge.

Locke in his *Essay Concerning Human Understanding* clearly stated his objective as "to enquire into the original, certainty and extent of human knowledge: together, with the grounds and degrees of belief, opinion and assent."⁵³ In his pursuit he was out to justify claims to knowledge as well as to determine the limits of human knowledge. This would then go ahead to rid of human beings from what they believe incorrectly to be true.

Locke employed what he termed as the "historical plain method" to set down any measures of certainty in human knowledge. The method consisted in

⁵² *Ibid.*, Discourse Four.

⁵³ John Locke. *An Essay Concerning Human Understanding*. Oxford: Clarendon Press, 1969, Book II, Chapter 1 Section 2.

classifying different ideas and identifying their source before making any assessments of claims to different knowledge. This method enabled him to distinguish between ideas of senses and ideas of reflection. Ideas of senses are received through the process of sensation whereas ideas of reflection originate from the operations of the mind upon ideas of the senses.

He further distinguished between simple and complex ideas. He observed that simple ideas are acquired through external perception (sensation) and internal perception (reflection), while complex ideas are formed by the mind actively processing and compounding simple ideas.⁵⁴

Locke therefore, went ahead to dismiss views held by his predecessors, in particular Descartes, on innate ideas. He argued that there are no ideas in the mind which are received through any other means other than sensation and reflection. He regarded the human mind as "*tabula rasa*" or an empty slate upon which all contents inscribed are derived from experience.⁵⁵

Locke observed that we justify our claims to knowledge of particular sensible things by showing that our ideas correspond to things that cause them. However, he also noted that complex ideas may not necessarily correspond to

⁵⁴ Ibid, Chapter 1

⁵⁵ Ibid.,

the things that cause them due to the process of reflection (reasoning) they undergo in the mind. This implied that reason can also be a source of knowledge. Locke therefore seemed to accept all kinds of knowledge that Descartes' epistemological theory allowed, although, unlike Descartes, sense knowledge remained his sole arbiter of truth.⁵⁶

Berkeley who came after Locke constructed his epistemological theory on the foundation laid by his predecessor. His objective, just like his predecessor's, was to avoid scepticism and to establish certainty in knowledge. This would then affirm theism, which he was out to preach, against atheism.

Berkeley criticized Locke's materialism which claimed that there is a distinction between how the world appears to us through sensation and reflection, and how the world actually is, independent of our perception. He also rejected both the view that matter is something different from properties and the interpretation of properties as sense impressions. He asserted that sense impressions are the final and only basis of knowledge.⁵⁷

To distinguish reality from illusions, Berkeley argued that the sense impression which appear regularly and devoid of our will represent reality while

⁵⁶ Ibid, Book IV

⁵⁷ George Berkeley. *The Principles of Human Knowledge*. Fontana, 1962. pp. 110-150

impression which appear irregularly and may be out of our will represent the unreal. To claim something is real therefore implies that under normal circumstances it can be perceived by a normal being. Conversely, that which cannot be perceived does not exist. Thus Berkeley's principle; *esse est percipi*- "to be is to be perceived".⁵⁸

The principle "to be is to be perceived" did not imply that existence depends on perception; rather it meant that, there is someone who perceives. In this case, the perceiver is either the human consciousness or God or both. God is the consciousness that perceives everything that is perceptible; reality. All things therefore exist in as far as they are comprehended by God. God is the unperceived cause of all perceptions, the perceiver of all sense impressions and the cause of all of our sense impressions. With this, Berkeley thought that he had attained his theism and got rid of all uncertainties in knowledge since God being source of knowledge was certain. To Berkeley therefore, sense perception gives us the complete knowledge of reality.

Hume modeled his epistemological theory on the foundation laid by both Locke and Berkeley, whose principle ideas were that we derive knowledge from sense experience and that at the most initial stage in our lives, the mind is a blank slate. He concurred with Berkeley that there is nothing in nature that

⁵⁸ Ibid.

lies beyond the reach of our senses. However, unlike Berkeley, he was swift to claim that human understanding is very limited such that scepticism is the only reasonable attitude to adopt towards knowledge.

In *A Treatise of Human Nature*, Hume claims that "All the perceptions of the human mind resolve themselves into two distinct kinds which I shall call *impressions* and *ideas*. The difference between these consists in the degree of force and liveliness with which they strike upon the mind and make their way into our thought or consciousness".⁵⁹ He goes ahead to explain that impressions are the perceptions which enter the mind with more force and violence while ideas are faint images of impressions in thinking.⁶⁰

He further explains that whereas simple perceptions of impressions and ideas are resistant to distinction, complex perceptions of impressions and ideas can be distinguished into impressions of sensation and impressions of reflection, and ideas of memory and ideas of imagination respectively.⁶¹ In this case, imagination and memory entail the mental process of thinking.

From the above, Hume's position is that all our knowledge is derived from impressions which are the immediate data of sense experience. Therefore

⁵⁹ David Hume. *A Treatise of Human Nature*. Penguin. 1969 p. 49

⁶⁰ Ibid

⁶¹ Op cit

knowledge can be analysed in a reducible structure from a complex idea to simple impression(s). A complex idea can be broken down into simple ideas either of memory or imagination which can then be broken further into simple impressions of sensation or reflection. Thus, Hume asserts:

....the rule here holds without any exception, and that every simple idea has a simple impression which resembles it, and every simple impression a correspondent idea.⁶²

Hume categorises all objects of human reason or inquiry into "Relations of Idea" and "Matters of Fact". The first kind contains truth of logic and mathematics, and all affirmations which are either intuitively or demonstratively certain. These are the kind of truths that are obtained through the mere operations of thought devoid of dependence on anything existent on the universe. The second type, "Matters of Fact" contains truths derived from experience. Unlike the truths of "Relations of Ideas" whose negation implies a contradiction, the negation of "Matter of Fact" is possible and may not necessarily lead to a contradiction. For instance the proposition "It will rain tomorrow" is as intelligible proposition as its negation "It will not rain tomorrow," and does not imply a contradiction. If this proposition was

⁶² Op cit 52

demonstratively false, then it would imply a contradiction thus it would not be distinctively conceived by the mind.⁶³

He argues that all reasoning concerning matter of fact seem to be founded on the relation of cause and effect; and that by means of such relation alone, we can transcend the evidence of our memory and senses. A belief in a matter of fact is founded on another fact. Thus it is supposed that there is a connection between the fact held and the fact from which it is inferred. In this case, Hume asserts that all reasoning in matters of fact is based on the causal inference or induction.⁶⁴

Hume claims that we arrive at the knowledge of cause and effect through experience when we find that any particular objects are constantly conjoined and not by reasoning *a priori*. The idea of causation is derived from impression(s) such as contiguity, temporal priority and constant conjunction. Thus for him there is no necessary connection between ideas; what exist is mere factual spatio-temporal relations.

This being the case, Hume argues that the principle of causality lacks a rational ground for its anchorage. The principle cannot be intuitively certain since even

⁶³ David Hume. *An Inquiry Concerning Human Understanding*. New York: Bobbs-Merrill, 1985p. 40.

⁶⁴ Ibid pp. 41-42

the popular supposition that the future resembles the past is not firmly grounded but derived wholly from habit and stretched into the future. The assumption in this case is that whatever trend of objects we are accustomed to are bound to be replayed in future *ad infinito*.⁶⁵ This is also based on the assumption of the uniformity of nature. But are we sure of nature's uniformity?

With all these, Hume categorically rejects the principle of causality and its consonant principle of induction. He notes:

Let men be once fully persuaded of these two principles, that there is nothing in any object considered in itself, which can afford us a reason for drawing a conclusion beyond it; and that even after the observation of frequent constant conjunction of objects, we have no reason to draw any inference beyond those of which we have experience.⁶⁶

The rejection of these two principles led to the utter demolition of the foundation of empiricism upon which Hume's philosophy and in particular all knowledge was founded. With this problem of induction, Hume had exposed the human limitation of possessing certain knowledge or knowing certainly.

⁶⁵ *Ibid.*, pp. 183-184

⁶⁶ *Ibid.*, p. 189

He thus put to jeopardy the whole epistemological enterprise which is in pursuit of establishing certain knowledge and defining knowledge.

2.6. Epistemology in the Contemporary Era

Taking over from Hume's exposure, Quine criticized the traditional approach to epistemology which he argued is bound to stagnate as had been demonstrated by Hume. He argued that the Humean condition is the human condition and therefore called for a different approach to epistemology.

With the problem of induction, Hume exposed the human limitation of establishing a criteria by which we ought to accept or reject beliefs as certain or uncertain. This put to jeopardy the whole epistemological enterprise which is in pursuit of not only realising certain knowledge but also constructing an unshakable foundation for our knowledge.

Quine criticised and called for the abandonment of the traditional approach to knowledge, which he argued was destined to fail as demonstrated by Hume. He therefore proposed a radical shift from the traditional foundational justification approach to his scientific description explanation of knowledge.

2.7. Conclusion

From the foregoing it is clear that the discipline of epistemology overtime has been in search of establishing a criteria by which we can either accept or reject beliefs as certain or uncertain thus realising certain knowledge. This is well captured by Plato and Descartes. However, Hume comes into the picture to demonstrate the futility of this endeavour arguing that it is impossible for the human being to obtain certain knowledge. Quine, follows suit using both Hume's and Carnap's epistemological discoveries to assert his case that " the Humean condition is the human condition" and therefore epistemology as it is traditionally pursued with a view of establishing the certainty of beliefs thus certain knowledge is bound to fail.

Faced with such a scenario, Quine goes a head to propose a different way of pursuing epistemology which he insists must replace the traditional approach if the practice of epistemology is to progress.

CHAPTER THREE

QUINE'S EPISTEMOLOGICAL REVOLUTION

3.1. Introduction

This chapter discusses Quine's epistemological theory - naturalised epistemology - which is a radical shift from the traditional foundationalist approach to epistemology. Quine proposes this theory after demonstrating the desperation of the traditional foundationalist theory to realise *a priori* truths necessary for setting and establishing a foundation for knowledge.

3.2. The Failure of Traditional Theory of Epistemology

Quine starts his essay "Epistemology Naturalized" with the claim that "Epistemology is concerned with the foundations of Science."⁶⁷ In this case epistemology is focused on deriving beliefs about the world from beliefs about our sensation; that is to establish an epistemic foundation and justification for all our scientific knowledge. He proceeds to draw parallels between Mathematics and Epistemology to explain how the epistemological project is traditionally conceived. He notes that both disciplines are foundational studies

⁶⁷ W.V.O. Quine "Epistemology Naturalized" in *Knowledge: Readings in Contemporary Epistemology*. (ed) Sven Bernecker & Fred Dretske, New York: Oxford University Press, 2000 p266

hence divide symmetrically into two sorts; conceptual and doctrinal studies; which are concerned with meaning and truth respectively.⁶⁸

The conceptual studies are concerned with the classification of concepts by defining them, some in terms of others while the doctrinal studies are concerned with the establishment of laws by proving them some on the basis of others. Thus, the obscurer concepts are defined in terms of the clearer and distinct ones in order to maximise clarity and the less apparent laws are proved from the more obvious ones so as to enhance clarity.⁶⁹

For Mathematics, the doctrinal studies engage in proving mathematical truth whereas, the conceptual studies concentrate on clarifying the meaning of mathematical terms. In this case, doctrinal studies aid the conceptual studies in defining obscure terms in reference to clearer ones in order to establish the relationship between obscure mathematical claims and the more obviously true claims. However, it has come to the realisation of mathematicians that mathematical concepts can only be reduced to set term and not logic proper.

It is however, important to note that reduction in this case enhances clarity, but not because the end term of the analysis are clearer than others, but because of

⁶⁸ Ibid

⁶⁹ Ibid

the interrelations that emerge. The truths of set theory are therefore less obvious as compared to the mathematical truth. Thus the evidence of the failure of the conceptual studies frustrating the efforts of the doctrinal studies emerge.⁷⁰

Traditional epistemology like mathematics as noted has a bifurcate structure of conceptual and doctrinal studies. Conceptually, epistemologists had their aim set at explaining the notion of body in sensory terms; that is realising the meaning of the terms of empirical knowledge in particular the notion of body, in sensory language. Doctrinally on the other hand, epistemologists were out to justify our knowledge of truths of nature in sensory terms by identifying ultimate justifiers of empirical knowledge in the sense data.⁷¹

Quine argues that traditional epistemology in its pursuits had met the same fate that befell mathematics. The Humean predicament is the human predicament; the doctrinal side had hit a snag as clearly demonstrated by Hume that the generalisations and prediction could not be deduced to sensory experience. On the conceptual side, Quine observes that there has been advancement from the "Humean project" which ventured between bodies and impressions to the method of contextual definition and use of set theory. The

⁷⁰ Ibid., p 267

⁷¹ Ibid., p. 267

method of contextual definition explains terms by translating whole sentences in which they appear while set theory is used to expand the project's analogical resources to include not only impressions but also sets of impressions.

Carnap's work applied these new advancements in an attempt to elicit and clarify sensory evidence for scientific discourse. Even though this attempt fell short of obtaining certainty, Quine argues that it was the peak of the empiricist conceptual epistemology. Quine further admits two cardinal tenets of empiricism: that whatever evidence there is for science is sensory and that all inculcation of meanings of words must rest ultimately on sensory evidence.⁷²

3.3. The Failure of Carnap's Conceptual Project

Quine argues that Carnap's project did not achieve its objective. He points to the failure of Carnap's reduction efforts in *Der logische Aufbau der Welt* to translate scientific discourse into sensory evidence. He argues that Carnap carried out his translational reduction in a mere pragmatically useful manner other than as required. In Quine's words, Carnap:

...was seeking what he called a *rational reconstruction*. Any construction of physicalistic discourse in terms of sense experience,

⁷² Ibid., p. 269

logic, and set theory would have been seen as satisfactory if it made the physicalistic discourse come out right.⁷³

To accentuate his position, Quine further notes that the critical problem with Carnap's translational reduction arose when Carnap sought to explain how to assign sense qualities to positions in physical space and time without offering any key to translating the sentences of science into terms of sense experience, logic and set theory.

Carnap, later on, in 1936, despaired of his project when he introduced in *Testability and Meaning* "reduction forms" of a weaker type than definition. These "reduction forms" merely gave implications of sentences in question rather than straight equivalences. The abandonment of the translational equivalence thus rendered Carnap's rational reconstruction an unworthy pursuit since its only advantage was its acclaimed legitimation of scientific terms by elimination in favour of the equivalent sensory, logical and set theoretic terms.

Quine is highly convinced of Carnap's failure. Citing Pierce, he claims that the only meaning a sentence can have is its empirical implication. And since implications of a sentence are many and even endless as explained in Duhem's

⁷³ Ibid., p. 269

argument of holism, where theoretical sentences have their empirical evidence or implication not in isolation as single sentences, but only through their interconnection with other sentences as larger blocks of theory, Quine clearly denies Carnap any chance of success. Carnap's failure in this case is therefore guaranteed because individual sentences can only have meaning through the interconnection with other sentences; they have no meaning of their own in isolation.

Quine is categorically that if each sentence fails to have a unique meaning in isolation then the prospects of carrying out a successful conceptual reduction as demanded by traditional epistemology are as good as impossible. Further to this, Quine argues that since all our beliefs are subjected to the tribunal of experience for assessment, no sentence is exempted from revision. This is clearly an assertion that there are no *a priori* truths or self evident truths that are a prerequisite for setting and establishing a foundation for doing traditional epistemology.

3.4. Epistemology as a Chapter of Psychology

Having demonstrated the failure of Carnap's project hence the failure of the entire traditional foundationalist approach to epistemology, Quine goes ahead to call for its abandonment. In his article, "Epistemology Naturalized", Quine is clear that the traditional approach to epistemology as exemplified in Hume,

Descartes and Carnap's pursuits is untenable and should therefore be abandoned for a better approach to epistemology.

Prior to this radical stand, Quine wonders why Carnap in the process of his conceptual reduction engaged in a "make-believe creative reconstruction" instead of using a reconstruction that mirrors how we actually construct theories as it is demonstrated by empirical psychology. Quine in fact advises that:

....the stimulation of his sensory receptor is all the evidence anybody has had to go on, ultimately, in arriving at his picture of the world. Why not just see how this construction really proceeds? Why not settle for psychology?⁷⁴

Quine's argues that we should replace the traditional approach to epistemology with the natural approach. The failure of the traditional approach does not stop the pursuit of epistemology. In his words:

....epistemology still goes on, though in a new setting and clarified status. Epistemology, or something like it, simply falls into place as a chapter of Psychology and hence of natural science. It studies a natural

⁷⁴ Ibid., pp. 269-270

phenomenon, *viz*, a physical human subject. This human subject is accorded a certain experimentally controlled input - certain patterns of irradiation in assorted frequencies, for instance - and in fullness of time the subject delivers as output a description of the three-dimensional external world and its history. The relation between the meager input and the torrential output is a relation that we are prompted to study for somewhat the same reasons that always prompted epistemology; namely, in order to see how evidence relates to theory, and in what ways one's theory of nature transcends any available evidence.⁷⁵

Quine's naturalised epistemology is a radical shift from the purely prescriptive account of epistemology to a descriptive causal-nomological account of cognition. Thus, Quinean epistemology seeks to study how human beings develop beliefs, and not how human beings ought to develop beliefs. It is on this basis that Quine asserts that:

The old epistemology aspired to contain, in a sense, natural science; it would construct it, somehow from sense data. Epistemology in its new setting, conversely, is contained in natural science, as a chapter in psychology.⁷⁶

⁷⁵ *Ibid.*, pp 273-274

⁷⁶ *Ibid.*, p. 274

In this case, naturalised epistemology and traditional epistemology still share interest in as far as explaining how evidence relates to theory. However, naturalised epistemology, unlike traditional epistemology, does not seek to elucidate the criteria that the relationship between evidence and theory must meet in order for a theory to qualify as knowledge. Instead, naturalised epistemology seeks to describe the psychological process involved in the construction of theories based on empirical evidence. Naturalised epistemology therefore does not in any way lose focus of epistemology in as far as seeking to understand how we derive and justify the beliefs we hold about the world.

3.5. Conclusion

From the foregoing it is evident that Quine's reason for naturalising epistemology is the failure of the traditional approach to knowledge to realise its quest for the foundation of knowledge. He distinguishes two parts of the traditional foundationalist theory as conceptual and doctrinal reduction. Conceptual reduction seeks to reduce the meaning of physical and theoretical terms, through definition, to the meaning of terms that refer to the phenomenal features of sensory experience. Doctrinal reduction on the other hand seeks to reduce theoretical and physical truths to truths concerning sensory experience. According to Quine, Hume's discussion of induction had proved that the

doctrinal reduction could not be completed. Our generalisations and prediction of nature cannot be reduced to sensory experience.

On the conceptual side, Quine acknowledges advancements from the Humean Project. He observes that the method of contextual definition explains terms by translating whole sentences in which they appear while set theory is used to expand the project's analogical resources to include both impressions and sets of impressions. In fact he acknowledges that Carnap applied the same in his work and that although he failed, his attempt was the peak of the empiricist conceptual epistemology.

For Quine the failure of the traditional epistemological program leaves the epistemologist with two options; to renounce epistemology altogether or to conceive the epistemologist's task in a new way. Quine's option is the second one, where epistemology still goes on but in a new setting and clarified status; where epistemology or something like it simply falls into place as a chapter of psychology. Naturalised epistemology in this case seeks to replace the classical foundationalist approach to knowledge; however, it still shares an interest with traditional epistemology in as far as demonstrating how evidence relates to theory.⁷⁷

⁷⁷ Ibid., pp. 273-275

CHAPTER FOUR

THE NORMATIVE AND SCEPTICAL OBJECTIONS TO QUINE'S EPISTEMOLOGY

4.1. Introduction

As observed in the previous chapters of this work, Quine's revolutionary attempt to naturalise epistemology has elicited and continues to elicit numerous criticisms and counter criticisms. Since the publication of "Epistemology Naturalized" four decades ago, two resilient objections, the normative and the sceptical have defied many responses to the point of assuming the position of stock objections to Quine's epistemology.

This chapter discusses the two charges as formulated and presented by their main proponents; Kim, the normative; and Stroud, the sceptical. Further to this, the chapter discusses the responses accorded to the charges by Quine, who insists categorically that at no point does his epistemological project ignore the sceptic and dispense with the normative. In fact, he demonstrates the position of the sceptic and the normative in his naturalised epistemology as a response to his critics.

4.2. Kim's Normative Charge

Jaegwon Kim is no doubt the premier principal proponent of the normative charge against Quine's naturalised epistemology. In his essay "What is 'Naturalized Epistemology?', Kim advances the argument that Quine's radical departure from the traditional approach to epistemology with its justification centered component for naturalised epistemology, amounts to purging off epistemology, that very component that makes it epistemology.

He argues that epistemology is essentially normative through its integral concept of justification. Quine's proposal to abandon the traditional approach to epistemology means dispensing with the normative concept of justification which is the normative element of the concept of knowledge. This implies that Quine's naturalised epistemology is non-normative and therefore devoid of any room for genuine knowledge. In Kim's words:

If justification drops out of epistemology, knowledge itself drops out of epistemology. For our concept of knowledge is inseparably tied to that of justification.... (K)nowledge itself is a normative notion. Quine's non-normative naturalized epistemology has no room for our concept of knowledge. It is not surprising in describing naturalized epistemology,

Quine seldom talks about knowledge; instead he talks about "science" and "theories" and "representations."⁷⁸

Kim also argues that besides the concept of justification, the concept of belief has a normative dimension, and that since Quine's naturalised epistemology is out to dispense with normativity it must, as a matter of fact, dispense with belief and anything to do with belief. This puts into jeopardy the pursuit of naturalised epistemology as proposed by Quine. To Kim:

...the concept of belief is in itself an essentially normative one, and in consequence that if normativity is wholly excluded from naturalized epistemology it cannot even be thought of as being about beliefs. That is, if naturalized epistemology is to be a science of beliefs properly so called, it must presuppose a normative concept of belief.⁷⁹

Kim asserts that making epistemology a chapter of psychology restricts Quine to the mere description of the causal relation between cognitive input and output, which is totally unlike the case of the traditional approach whose mandate, is to prescribe criteria or conditions under which beliefs or set of

⁷⁸ Jaegwon Kim "What is "Naturalized Epistemology?": in Sven Bernecker and Fred Drestke (ed) *Knowledge: Readings in Contemporary Epistemology*. New York: Oxford University Press, 2000 p. 286.

⁷⁹ Ibid, p. 228

beliefs ought to be held and accepted or rejected as knowledge. The mandate of epistemology as a discipline is particularly to establish a criterion of realising knowledge in its absolute sense. In this case it is clear that Quine's naturalised epistemology is in pursuit of a different objective as compared to epistemology.⁸⁰

In fact, Kim argues that Quine's naturalised epistemology in establishing a causal relation between the "meager input" and "torrential output" - a *qua* causal relation, is not interested and has no business in assessing whether and to what extent the input "justifies" the output. That, naturalised epistemology does not interest itself in assessing how a given irradiation of the subject's retina makes it "reasonable" or rational for the subject to emit certain representational output. Rather, it is strictly interested in the causal and nomological - how the patterns of law like dependencies characterise the input - output relations for a particular organism and others of a like physical structure.⁸¹

On this basis, Kim dismisses Quine's attempt to compare his naturalised epistemology to traditional epistemology. He unequivocally denies the existence of any relationship between the study of causal connection between

⁸⁰ Ibid, pp. 287

⁸¹ Ibid p. 287

Physical stimulation of sensory receptors and the resulting cognitive output and the study of how evidence relates to theory in an epistemologically relevant and permissible sense. He emphasises that the causal relationship between sensory input and cognitive output is a relation between evidence and theory; it is not an evidential relation.

That, the nomological patterns that Quine's naturalised epistemology studies are bound to vary from species to species depending on the particular way each biological and even non-biological species processes information. This is unlike the evidential relation - that traditional epistemology pursues - which in its proper normative sense must abstract from such factors and concern itself only with the degree to which evidence supports hypothesis - our concept of evidence in this case implies nothing else other than the concept of justification.⁸²

To Kim, traditional epistemology and Quine's naturalised epistemology are distinct disciplines which investigate different relations. Traditional epistemology is concerned with evidential relations - the relation of justification- thus making it a normative discipline, while Quine's naturalised epistemology studies the causal -nomological relation. Kim therefore argues that due to the differences in the concerns of these disciplines, none of them can

⁸² Ibid pp. 287-288

replace the other as suggested by Quine. Furthermore, Kim is emphatic that for epistemology to abandon normativity as seen in Quine's case is for the discipline to go out of its business; we cannot conjure a situation where epistemology is non-normative. A non-normative "epistemology" is something else other than epistemology.⁸³

4.3. Stroud's Sceptical Charge

One of the main tasks of epistemology in the endeavour to realise true knowledge is to refute the sceptic. The sceptic in epistemology triggers the process of justification which in essence is the process of validation of beliefs that are true and ought to be held as knowledge or that is false and ought not to be held as knowledge. The sceptic denies that we actually know things we take ourselves to know because we cannot rule out the logical possibility of being utterly deceived.

In this case, the sceptic argues that we cannot be sure of what we hold to be true because we might either be victims of a powerful evil demon who is in total control of the nature of our experiences or Putnam's brains-in-a-vat whose, apparent experiences of an apparent external world, are just but mere mechanisation by a scientist using electrodes or chemicals.

⁸³ Ibid pp.286-296

Barry Stroud in "The Significance of Naturalized Epistemology" launches the skeptical charge against Quine's naturalised epistemology. Stroud accuses Quine of inconsistency. He argues that Quine's claims that there is no appeal to scientific knowledge that can non-circularly validate scientific knowledge in the presence of the traditional epistemological sceptic is quite in contrast with his other claim in "Roots of Reference"⁸⁴ that we should seriously embrace the project of validating our knowledge of the external world.⁸⁵ Quine's claim of embracing validation in his project, seem to endorse the basic question of traditional epistemology which is validation. This in itself is a contradiction since Quine's naturalised epistemology is anchored on the impossibility of realising a first philosophy or *a priori* knowledge.

Quine clearly proposes his natural approach method as a way of doing epistemology, on the basis of his demonstration that the traditional approach, with its validation process had overtime, proved futile from Descartes to Hume to Carnap. He in fact wonders:

Why all this creative reconstruction, all this make-believe? The stimulation of his sensory receptors is all the evidence anybody has had to go on, ultimately, in arriving at his picture of the world. Why not just

⁸⁴ Barry Stroud "The significance of Naturalized Epistemology in Hillary Kornblith (ed) *Naturalizing Epistemology*

⁸⁵ Robert Almeder : "On Naturalizing Epistemology" in *American Philosophical Quarterly*, Vol 17 No. 4 October 1990, P. 265

see how this construction really proceeds? Why not settle for Psychology? ⁸⁶

Stroud further argues that Quine's attempts in "The Nature of Natural Knowledge" to validate scientific inference by explaining the route from meager input to torrential output fails. He argues that to explain the origin of a subject's knowledge, it is imperative that two conditions must hold without failure: First the explainer must know that the subject's belief is true; and secondly, the explainer must be able to demonstrate that indeed, the belief as held by the subject is true, and not an accident, by demonstrating its connection to the truth. This is unlike Quine's naturalistic investigations where, although, we can see how others acquire beliefs, we are denied any evidence to prove that the beliefs are correct beliefs about the world. ⁸⁷

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Further, if we follow Quine's instructions and view our position as similar to the position of other subjects as he emphasises, then we too cannot fulfill the two cardinal conditions. In this case, just the way we are unable to understand how other subjects' knowledge or even true belief is possible, is the same way we cannot understand how our own true beliefs are possible. This implies that

⁸⁶ W.V.O Quine. "Epistemology Naturalized" in Soren Bernacker and Fred Drestke (ed) *Knowledge: Readings in Contemporary Epistemology*. New York: Oxford University Press, 2000, p. 270

⁸⁷ Rober Almeder "On Naturalizing Epistemology" in *American Philosophical Quarterly*, Volume 27, No. 4 October 1990 p. 265

we cannot therefore determine whether or not other subjects or we ourselves have knowledge. In Stroud words:

The possibility that our own view of the world is a mere projection is what had to be shown not to obtain in order to explain how our knowledge is possible. Unless that challenge has been met, or rejected, we will never understand how our knowledge is possible at all.... [I]f Quine's naturalized epistemology is taken as an answer to the philosophical question of our knowledge of the external world, then I think that for reasons I have given, no satisfactory explanation is either forthcoming or possible.⁸⁸

Despite acknowledging Quine's assertion in "Roots of Reference" that sceptical doubts are scientific doubts, Stroud goes ahead to observe that neither does the scientific source of the doubts have an anti-sceptical force in itself nor does it establish the relevance and legitimacy of a scientific epistemology as an answer to the traditional epistemological questions. He claims that since Quine has not demonstrated the illegitimacy and /or irrelevance of the traditional epistemological question; and his attempts to resolve sceptical doubts as scientific doubts within science prove unattainable, then we can deduce that

⁸⁸ Barry Stroud. "The Significance of Naturalized Epistemology" in Hillary Kornblith (ed) *Naturalizing Epistemology*. Boston MIT Press, 1985 p. 83

his naturalised epistemology fails to address fundamental epistemological questions to which even his conception of knowledge submits. Stroud argues:

If Quine is confident that a naturalized epistemology can answer the traditional questions about knowledge, he must have some other reason for that confidence. He believes that skeptical doubts are scientific doubts and he believes that in resolving those doubts we may make free use of all the scientific knowledge we possess. But if, as he allows, it is possible for the skeptic to argue by *reductio* that science is not known, then it cannot be that the second of those beliefs (that a naturalized epistemology is all we need) follows from the first.⁸⁹

Stroud submits that until the traditional philosophical questions are exposed as illegitimate or incoherent, there will always remain an intelligible question about the human knowledge in general, which a naturalised epistemology cannot answer.

4.4. Quine's Response to the Charges

The two charges leveled against Quine's naturalised epistemology allege that the project abandons and/or fails to address adequately two important concepts; justification and scepticism, which are cardinal to the process of

⁸⁹ Ibid., pp. 85-86

doing and defining epistemology. This implies that the project fails to answer the important epistemological questions that any epistemology worthy the name must strive to answer. With these criticisms the whole project is relegated to something else other than epistemology.

The two concepts, justification and scepticism, are related to one another in a causal way. These are the concepts that establish the irreducible minimal qualification that a belief must hold in order qualify as knowledge. For any belief to be held as true and therefore qualify as knowledge, the sceptic must be defeated through the process of justification. Scepticism triggers the process of justification and the two thereon take place concurrently until the sceptic has no more room for doubt thus justifying the certainty of the belief as knowledge.

Since epistemology is essentially normative and it is clear that justification and scepticism accords it the normative status, the claim that Quine's epistemology abandons and/or fails to adequately address the two concepts implies that the venture engages in something else other than epistemology. In fact on this account the critics dismiss it with costs as a project that cannot serve as replacement or an alternative to the traditional way of doing epistemology.

Quine in responding to critics of his project is quite categorical that naturalised epistemology is normative and does not at any point ignore the sceptic or dispense with any concept that makes epistemology a normative discipline. On the sceptical charge, he asserts that his project does not either by nature, intention, accident or definition inhibit sceptical challenges arising within it and subsequently being pursued systematically as required in epistemological investigations.

On Stroud's charge that the use of scientific knowledge by epistemologists to counteract the sceptical challenges as advocated by Quine would result to circular relations thus the fallacy of *petitio principii*, Quine argues that all the traditional scepticism to epistemology arose innately within science and not internally to epistemology or philosophy in general. This being the case, he points out that there is no reason that inhibits naturalised epistemology to the access and use of the methods of science and its findings to respond to the sceptical challenges. He argues that if it is the case that science first articulated and found context and content for sceptical challenges, then it follows more than ever that epistemologists are legitimately permitted to revert to science in their quest for validation.⁹⁰

⁹⁰ See W.V.O Quine. *The Roots of Reference*, 1973

To further defend the use of science in epistemological pursuits, Quine insists that if we ignore science and its findings then we would not even access the information on the "meagre traces" required in the first place to prompt the sceptical challenge that aspires to know how science can say anything that is true or certain about the nature or existence of the external world and its objects therein.

To affirm his case for scepticism and to show cause as to why his project can hardly ignore the same, Quine in his "Nature of Natural Knowledge" opens up the article with a clear demonstration of how scepticism is inseparable from epistemology and how scepticism and epistemology causally occur to co-exist. He writes:

To doubt has oft been said to be the mother of philosophy. This has a true ring for those of us who look upon philosophy primarily as the theory of knowledge. For the theory of knowledge has its origin in doubt, in skepticism. Doubt is what prompts us to try to develop a theory of knowledge. Furthermore, doubt is also the first step to take in developing a theory of knowledge, if we adopt the line of Descartes.

But this is only half of a curious interplay between doubt and knowledge. Doubt prompts the theory of knowledge, yes; but

knowledge also, was what prompted the doubt. Scepticism is an offshoot of science.⁹¹

On the normative charge, Quine argues that "naturalization of epistemology does not jettison the normative and settle for the indiscriminate description of on going processes"⁹² He acknowledges that as much as naturalisation of epistemology is a radical departure from traditional epistemology out of the realisation of the desperation of achieving Cartesian-like foundation of science, this does not entail giving up on the normative. In fact, for Quine, the goals of naturalised epistemology are continuous and consistent with the traditional approaches thus securing and preserving the normative in his project.⁹³

However, it is important to note that Quine does not emphatically demonstrate this. His assertion of continuity is rather loose and more of an after thought. It is apparent that he is not sure when he claims that epistemology still goes on albeit in a new setting and clarified status. This unsure status is accentuated by his other claim that "epistemology or something like it, simply falls into place as a chapter of psychology and hence natural science."⁹⁴ Whatever Quine is

⁹¹ W.V.O Quine. "The Nature of Natural Knowledge" in James H. Fetzer (Ed.) *Foundations of Philosophy of Science: Recent Developments*. New York: Paragon House, 1993. p.441

⁹² W.V.O. Quine. "Reply to Morton White" In L.E. Hahn and P.A. Schlipp (Eds.). *The Philosophy of W.V. Quine*. La Salle, Illinois: Open Court, 1986, p.664

⁹³ W.V.O. Quine. *The Pursuit of Truth*. Cambridge: Harvard University Press, 1990, p.20

⁹⁴ W.V.O Quine. "Epistemology Naturalized" in Soren Bernacker and Fred Drestke (ed) *Knowledge Readings in Contemporary Epistemology*. New York: Oxford University Press, 2000, p. 273

referring to as "something like epistemology" cannot be epistemology. Epistemology is just epistemology and it cannot be whatsoever, something like epistemology.

Quine argues that at no point does his project abandon or even contemplate of dropping the normative. He equates what he refers to as the "normative side" of naturalised epistemology to the rules that guide the formulation of scientific theories. Thus the normative in this case is the prescription for constructing solid scientific theories. In his words:

.....naturalized epistemology on its normative side is occupied with heuristics generally - with the whole strategy of rational conjecture in framing of scientific hypothesis.⁹⁵

In *The Web of Belief*, the duo of Quine and Ullian explain and depict the way normativity arises and works in naturalised epistemology. They identify five major virtues that each and all scientific theories must aspire to maximize. These are: conservatism, generality, simplicity, refutability, and modesty. A good scientific theory *ought* to fulfill as much as possible all the major virtues.⁹⁶ It *ought* to be modest in its claims; it *ought* to have refutable claims; it *ought* to

⁹⁵ See Ibid.

⁹⁶ W.V.O. Quine and J.S. Ullian. *The Web of Belief*. New York: Random House Press, 1970

be general in its application and not particular; it *ought* to be simple to understand and apply and it *ought* to be conservative.

Quine, a number of times, has referred to this process where normativity arises in naturalised epistemology as "the technology of truth seeking" thus locating normativity in a branch of engineering. He claims that for his case normative epistemology is a branch of engineering. That, it is the technology of truth-seeking or, in more cautiously epistemic terms, prediction, where there is no question of ultimate value, as is the case in morals; in fact, he claims that it is a matter of efficacy for ulterior end, truth or prediction.⁹⁷

4.5. Conclusion

The two objections, the normative and sceptical, leveled against Quine's naturalised epistemology put to doubt the success of his epistemological project. Kim argues that the abandonment of the classical approach to epistemology amounts to dispensing with justification and belief which are normative concepts that accord epistemology its normativity. Thus, Quine's naturalised epistemology is something else other than epistemology. Since epistemology is essentially normative, we cannot conjure a situation where a non-normative epistemology exists.

⁹⁷ W.V.O Quine. *Op Cit.*, 1986, pp. 664- 665

Stroud in advancing the sceptical charge argues that Quine's epistemology inhibit both the occurrence and pursuit of sceptical challenges which are fundamental in the process of validation in epistemology.

Quine in response to these objections is quite categorical that naturalised epistemology does not either dispense with the normative or inhibit sceptical challenges from arising within it and being pursued systematically as epistemologically required. Further to this he claims that his project is epistemology since the goals of naturalised epistemology are continuous and consistent with those of classical approach to epistemology. However, despite these responses, the charges have persisted over time.

CHAPTER FIVE

THE NORMATIVITY OF QUINE'S NATURALISED EPISTEMOLOGY

5.1. Introduction

As discussed previously in this work, the most prominent objection to Quine's epistemological project is anchored on the view that since naturalised epistemology provides a scientific explanation of cognition it fails utterly to address the normative issues that are essential to epistemology. On this account, naturalised epistemology as advanced by Quine is dismissed as way of doing something else other than epistemology.

Normativity in epistemology, as noted, is secured through the twin process of scepticism and justification. In doing epistemology, the desire to know certainly or to acquire reliable knowledge is triggered by scepticism, which in turn activates the process of justification. These two processes are repeated throughout until either all the possible elements of doubt are erased and the beliefs or statements subjected to this rigorous exercise are held as true or reliable and therefore knowledge or the process fails to eliminate all the shadows of doubt and the beliefs or statements are dismissed as false or unreliable and therefore devoid of knowledge.

To deny Quine's epistemology normativity is to accuse it of ignoring or abandoning scepticism and justification; the two cardinal processes in doing epistemology. The numerous responses by Quine to address the normativity charge seem not to have quelled the accusation, since the charge has persisted over time. This chapter seeks to discuss how Quine's naturalised epistemology accounts for scepticism and justification thus entrenching normativity therein.

5.2. Epistemology in a Psychological Setting

Quine faults the traditional epistemological theory on the basis that it cannot accomplish its quest for the foundation of knowledge through realizing *a priori* propositions. He further discusses Carnap's attempts at reduction through a reconstruction of science, an endeavour that fails. He in fact wonders why Carnap had to engage in such a creative reconstruction while whatever evidence that there is in realising the physical world is sensory. He poses his famous questions:

But why all this creative reconstruction, all this make-believe? The stimulation of his sensory receptors is all the evidence anybody has had to go on, ultimately, in arriving at his picture of the world. Why not just

see how this construction really proceeds? Why not settle for Psychology?⁹⁸

With these remarks, Quine goes ahead to offer a way out the Carnapian quagmire by arguing that epistemology cannot be abandoned altogether rather it proceeds by employing the method of science, precisely, psychology. He argues:

... (E) pistemology still goes on, though in a new setting and clarified status. Epistemology or something like it, simply falls into place as a chapter of psychology and hence of natural science. It studies phenomenon, *viz* a human subject. This human subject is accorded a certain experimentally controlled input - certain patterns of irradiation in assorted frequencies, for instance - and in the fullness of time the subject delivers as output a description of the three-dimensional external world and its history.....Epistemology in its new setting, conversely, is contained in natural science, as a chapter of psychology.⁹⁹

Contrary to Kim's accusation that naturalised epistemology is a replacement of epistemology, Quine claims that naturalised epistemology is just a new and

⁹⁸ W.V.O. Quine "Epistemology Naturalized" in Sven Bernecker and Fred Drestke (Eds.) *Knowledge: Readings in Contemporary Epistemology*. New York: Oxford University Press, 2000, p269

⁹⁹ *Ibid.*, p.274

clarified way of doing epistemology which avoids falling back to the predicaments of Carnap. Epistemology in this new setting and clarified status is contained in science and the two are actually the same. The embrace of the method of science in this case does not, in any way, amount to the abandonment of normativity and thus epistemology as Kim would want us to believe.

In embracing the method of science, naturalised epistemology focuses on the study of human belief-forming mechanisms in the context of the external or physical world with a deliberate purpose of improving our cognitive practices. Naturalised epistemology is interested in scientific facts about human cognition and methodological questions about science. Since science has proven overtime to be an unusually successful knowledge generating mechanism, naturalised epistemology embraces it with a view of finding out why it works well and whether any of its methodological principles can be generalised to our every day thought.

Thus naturalised epistemology seeks to determine the best methods of forming and revising our beliefs. It seeks to test the reliability of our belief-forming mechanisms and investigates the causal link between the external /physical world and our beliefs.

5.3. Scepticism and Justification in Quine's Epistemology

Contrary to critics, Quine's naturalised epistemology is normative since it provides useful insights in accomplishing our cognitive goals which are geared towards realizing true and/ or reliable knowledge. Normativity in this approach is entrenched through science which enables the process of scepticism and justification to take place.

In "The Nature of Natural Knowledge", Quine asserts that "Doubt is what prompts us to develop a theory of knowledge" and that "Skepticism is an offshoot of science". This implies that where epistemology is concerned, doubt or scepticism can hardly be absent and that by embracing the method of science, where scepticism that triggers justification is an offshoot, then the two processes that account for normativity are well secured in naturalised epistemology.¹⁰⁰

Quine's advancement of naturalised epistemology is a rejection of the pretence of traditional epistemological approach to possess the ability to realise *a priori* and therefore analytic propositions and statements which purport to be water tight and therefore immune to revision. To Quine, all propositions and truths are subject to revision at the "tribunal of experiences" and one may consider a

¹⁰⁰ W.V.O. Quine "The Nature of Natural Knowledge" in James H. Fetzer (Ed.) *Foundations of Philosophy of Science: Recent Developments*. New York: Paragon House, 1993. p.441

given proposition or truth intra-theoretically. Psychology, the fundamental scientific aspect of naturalised epistemology, provides the ample forum where beliefs are generated, subjected to question, justified, sustained or revised and held.

In naturalised epistemology, just as in the realm of scientific research, natural facts provide the best means to our cognitive ends. Quine thus equates the normativity of his epistemology to the rules that regard the formulation of scientific theories. This means that normativity in naturalised epistemology is accounted for in the prescriptions for construction of scientific theories. In Quine's words: "...naturalized epistemology on its normative side is occupied with the whole strategy of rational conjectures in the framing of scientific hypothesis."¹⁰¹

In naturalised epistemology, beliefs are held as reliable only after being subjected to a rigorous scrutiny akin to scientific experimentation to establish their accuracy, reliability, consistency and non-arbitrariness in as far as their representation of the world is concerned. Beliefs are always held sceptically just like scientific hypotheses until they are subjected to the process of justification to establish their status as either reliable and therefore true and/or knowledge or unreliable and therefore false and/or devoid of knowledge until

¹⁰¹ W.V.O Quine. *The Pursuit of Truth*. Cambridge: Harvard University Press, 1990, p.20

otherwise proven. Beliefs that cannot be subjected to the process of validation are beliefs that cannot generate knowledge just like theories that cannot be tested and therefore cannot qualify as scientific theories.

In scientific research, there is a high possibility of long standing theories being disproved by new observations or experiments which occasion revision of the theories or emergence of new theories. This is equally the case in naturalised epistemology, where beliefs that are held as reliable and therefore true and /or knowledge are not taken as ultimate since they are constantly liable to the tribunal of experience which may necessitate their revision and/or change to more reliable beliefs that are true therefore knowledge. It is during subjection at the tribunal of experience that scepticism and justification takes place until beliefs are proven and held to be more reliable to withstand doubt in conformity to experiences. Quine refers to this process as the technology of truth-seeking. He observes that:

For me normative epistemology is a branch of engineering. It is the technology of truth-seeking or, in a more cautiously epistemological term, prediction. Like any technology it makes free use of whatever scientific findings may suit its purpose... There is no question of

ultimate values, as in moral; it is a matter of efficacy for an ulterior end¹⁰².

5.4. Conclusion

This chapter has demonstrated the place of normativity in Quine's naturalised epistemology. By embracing the method of science, naturalised epistemology ensures that the processes of scepticism and justification, which are cardinal to normativity, are well accounted for. The occurrence of the processes of scepticism and justification in naturalised epistemology is what Quine refers to as "the technology of truth seeking" which leads to the realisation of highly reliable beliefs that can be held as true and therefore knowledge.

In Quine's epistemology, it emerges that, just as scientific theories are subject to revision and/or change due to the occurrence of new observations and experimentation, so are beliefs in naturalised epistemology which are constantly subject to the tribunal of experiences for validation. The method of science demands that scientific hypotheses and theories must be, as advanced by Karl Popper, falsifiable¹⁰³. Beliefs or set of beliefs in Quine's naturalized epistemology must be subjected to the falsification process akin to that of Popper in order to determine which one qualify as true and therefore

¹⁰² W.V.O. Quine. "Reply to Morton White", in L.E. Hahn and P.A. Schlipp (Eds.). *The Philosophy of W.V. Quine*. La Salle, Illinois: Open Court, pp.664-665

¹⁰³ See K. Popper. *Conjectures and Refutations*. London: Routledge and Keagan Paul, 1963

knowledge. This is not a one time process rather a constant process as necessity of proof of knowledge may demand or as new evidence either supporting or contradicting a belief or a set of beliefs may emerge. This is what Quine aptly refers to as revision of the beliefs at the tribunal of experiences, a process that may lead to either assertion of a belief or set of beliefs held as knowledge, or dismissal of a belief or set of beliefs as untrue and therefore devoid of knowledge, or adjustment or modification of a belief or a set of beliefs to enhance its representation of the world thus knowledge.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

From the foregoing analysis, we have demonstrated the value of Quine's naturalised epistemology as a theory of knowledge. It is not in doubt that Quine as an epistemologist, has made a significant contribution to the understanding of the problem of knowledge which has and continues to dog philosophers from antiquity to date.

Quine's proposal for naturalisation of epistemology is based on the argument that the classical foundationalist approach to epistemology with its key pursuit of *a priori* propositions for the establishment of a foundation for knowledge is an untenable venture as exemplified with the predicament that befell Hume and later on Carnap. For epistemology to progress, we must avoid the Carnapian fate. Quine proposes naturalised epistemology which is the adoption of the method of science as the way out.

He argues that Carnap's conceptual reduction is a "make-belief creative reconstruction" that cannot be achieved. In fact, he wonders why Carnap cannot adopt a reconstruction that mirrors how we actually construct theories as it is demonstrated by empirical psychology, where the stimulation of the

sensory receptors is what an individual relies on to comprehend the physical world.

Quine is a categorical that naturalised epistemology does not in any way jettison the normative. The embrace of the method of science by this approach ensures that scepticism and justification, the processes cardinal to normativity are well accounted for. In naturalised epistemology just like in scientific research, natural facts provide the best means to our cognitive ends. Quine thus equates the normativity of his epistemology to the rules that regard formulation of scientific theories. Normativity in this approach is therefore accounted for in the prescriptions for construction of scientific theories.

In naturalised epistemology, beliefs are held as reliable only after being subjected to a vigorous scrutiny akin to scientific experimentation to establish their accuracy, reliability, consistency and non-arbitrariness in as far as their representation of the world is concerned. Beliefs are always held sceptically just like scientific hypotheses until they are subjected to the process of justification to establish their status as either reliable and therefore true and/or knowledge or unreliable and therefore false and/or devoid of knowledge until proven otherwise. Beliefs that cannot be subjected to the process of validation are beliefs that cannot generate knowledge just like theories that cannot be tested and therefore cannot qualify as scientific theories.

Beliefs held as reliable and therefore true and/or knowledge are not taken as ultimate since they are constantly liable to the “tribunal of experience” which may necessitate their revision and/or change to more reliable beliefs that are true and therefore knowledge. This process is what Quine refers to as the “technology of truth seeking” which he expresses in his preferred Neurathic analogy that *we are sailors forced to repair our ship while at sea, where there is no secure position or dry dock thus we are forced to remain a float as we build the ship plank by plank.*

This is the same process that Quine also refers to as the revision of beliefs at the tribunal of experience. In this case, just as scientific theories are subject to revision and/or change due to the occurrence of new observations and experimentation, so are beliefs in naturalised epistemology which are constantly subjected to the tribunal of experiences for validation. The method of science demands that scientific hypotheses and theories must be, as advanced by Popper, falsifiable. Accordingly, one can in the Popperian perspective, tell whether a theory’s claim is a scientific explanation or not, even before subjecting it to test. A theory, in this case therefore, can not pass for a scientific explanation if it is not empirically testable.

Beliefs or set of beliefs in Quine’s naturalised epistemology must be subjected to validation, a process akin to Popper falsification, in order to determine

which one qualify as true and therefore knowledge. This is not a one time process rather; it is a constant process as necessity of proof of knowledge may demand or as new evidence either supporting or contradicting a belief or a set of beliefs may emerge. This process that may lead to either assertion of a belief or set of beliefs held as knowledge, or dismissal of a belief or set of beliefs as untrue and therefore devoid of knowledge, or adjustment or modification of a belief or a set of beliefs to enhance its representation of the world thus knowledge.

However, unlike Quine, Popper is interested in the growth of scientific knowledge, where the empirical test outcome of a scientific theory does not establish or verify the theory rather it only refutes or falsify the theory. Thus, for Popper, a theory is scientific if and only if it is refutable by a conceivable event; any credible test carried out on a scientific theory is therefore an attempt at falsifying or refuting the theory, and any genuine counter-instance falsifies the theory.

From the foregoing it is evident that to Quine knowledge is fallible and subject to revision from time to time. This is why he talks of revision of beliefs at the tribunal of experience at the same time alludes to the Neurathic analogy of a ship in the high seas which we must repair from time to time as we progress with our journey. Thus our body of knowledge is not water tight and complete;

we are ever enhancing and improving on it as we progress into experience and time.

Finally, this research recommends that since the objective of epistemology is to establish a criteria for beliefs that qualify as true and therefore knowledge, any theory of epistemology should go beyond focusing on the criteria and assess how the beliefs are formed.

BIBLIOGRAPHY

- Almeder, R. "On Naturalizing Epistemology" in *American Philosophical Quarterly* Vol. 17 No. 4, 1990
- Aristotle. *Metaphysics*. Oxford: Claredon Press, 1953
- Ayer, A.J. *The Problem of Knowledge*. London: Macmillan, 1956
- Berkeley, G. *The Principles of Human Knowledge*. Fontana, 1962
- Bonjour, L. "Against Naturalized Epistemology" in *Midwest Studies in Philosophy*, 29, 1994, pp.283-300
- Bradie, M. "Normalizing Naturalized Epistemology"
<http://www.bu.edu/wcp/papers/TknoDarw.htn>,2005
- Cassirer, E. *The Problem of Knowledge: Philosophy, Science and History since Hegel*. New Haven and London: Yale University Press, 1950
- Chisholm, R.M. *Perceiving: A Philosophical Study*, Ithaca, New York: Cornell University Press, 1957
- Clark, M. "Knowledge and Grounds: A Comment on Mr. Gettier's Paper" in *Analysis* 24, 1963
- Copleston, F. A *History of Philosophy*. London: Search Press, 1946
- Darwish, B. "Two Points Against Naturalized Epistemology"
<http://www/by/edu/wcp/paper/tknoDarw.htn>,2005
- Descartes, R. *Discourse on Method*. New York: The Liberal Arts Press, 1951

- Gettier, E. "Is Justified True Belief Knowledge?" in *Analysis* 23, 1963, pp.121-123
- Goldman, A. "A Casual Theory of Knowing" in *The Journal of Philosophy* 64, 1967, pp. 357-372
- Graf, L. "Theories of Knowledge: is Naturalized Epistemology Bound to Leave Unanswered Some Important Epistemological Questions?" <http://wwz.Uni-jena.de/phi/tr/21/graf.php>
- Hack, S. "Two Faces of Quine's Naturalism" in *Synthese* Vol. 23, 1993.
- Huemer, M and Audi, R. (eds.) *Epistemology: Contemporary Readings*. London and New York: Routledge, 2002.
- Hume, D. *A Treatise of Human Nature*. Penguin, 1969
- Hume, D. *An Inquiry Concerning Human Understanding*. New York: Bobbs-Merrill Company Inc., 1985
- Johnsen, B. "How to Read Epistemology Naturalized" in *Journal of Philosophy* 102 (2), 2005, pp.78-93.
- Kim, J. "What is Naturalized Epistemology?" in Bernecker, S. & Drestke, F. (eds) *Knowledge: Readings in Contemporary Epistemology*. New York: Oxford University Press, 2000, pp. 279-297.
- Kitcher P. "The Naturalist Return" in *Philosophical Review* 101, 1992, pp.53-113.
- Kornblith, H. *Naturalizing Epistemology*. Cambridge: MIT Press, 1992.
- Laudan, L. "Normative Naturalism" in *Philosophy of Science* 57, 1990, pp.44-59.

- Lehrer, K and Paxson, T. "Knowledge: Undefeated Justified True Belief" in *The Journal of Philosophy*, 1969, pp.225-237.
- Lehrer, K. *Theory of Knowledge*. Boulder and San Francisco, 1990.
- Locke, J. *An Essay Concerning Human Understanding*. Oxford: Claredon Press, 1969
- Cohen & Neurath, M. (Eds.) *Oscar Neurath Philosophical Papers 1913-1946*. Dordrecht, Holland: Reidel, 1983.
- Nozick, R. "*Knowledge*" *Philosophical Explanations*. Cambridge: Cambridge University Press, 1981
- Plato. *Theaetetus*. Indianapolis & New York: The Bobbs-Merrill Company Inc., 1949
- Plato. *The Republic*. Penguin, 1974
- Popper, K. *Conjectures and Refutation*. London: Routledge and Keagan Paul, 1963
- Quine, W.V.O. "Reply to Morton White" in Hans, dans L.E. and Schillip, P.A. (eds.) *The Philosophy of W.V. Quine*. La Salle : Open Court, 1986
- Quine, W.V.O. "Epistemology Naturalized" in Bernecker, S. and Drestke, F (eds.) *Ontological Relatively and others Essay*. New York: Oxford University Press, 2000, pp.266-278
- Quine, W.V.O. "The Nature of Natural Knowledge" In Fetzer, J.H. (ed.) *Foundations of Philosophy of Science: Recent Developments*. New York: Paragon House, 1993, pp.441-450

Quine, W.V.O. and Ullian, J.S. *The Web of Belief*. New York: Random House Press 1970.

Quine, W.V.O. *The Pursuit of Truth*. Cambridge: Harvard University Press, 1990

Russell, B. *History of Western Philosophy*. London and New York: Routledge, 1946

Siegel, L. "Laudan's Normative Naturalism" in *Studies in History and Philosophy of Science*, 21, pp. 295-313.

Skirbekk, G. and Gilje, N. *A History of Western Thought: From Ancient Greece to Twentieth Century*. London and New York: Routledge, 2001.

Stroud, B. "The Significance of Naturalized Epistemology", in French, P.A.

Uehling, T.G. and Wettstein H.K.J.R. *Midwest Studies in Philosophy*. Minneapolis: University of Minnesota Press, 1981, pp. 456-471.

Stroud, B. *The Significance of Philosophical Skepticism*. Oxford: Oxford University Press, 1984