

**INDIGENOUS KNOWLEDGE AND EPISTEMIC JUSTIFICATION**

**BY**

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## ABSTRACT

Indigenous knowledge system, a strand of social epistemology, emphasises a socio-cultural dimension to the acquisition and justification of human knowledge. Previous studies have focused on traditional epistemology which searches for a universal condition for all human knowledge. However, inadequate attention has been paid to socio-cultural factors involved in the justification of human knowledge. Social epistemology, which accommodates social factors in human knowledge, also marginalised indigenous knowledge system because most of its projects revolve around the issue of social foundation or justification of scientific knowledge. This study was, therefore, designed to examine the nature of indigenous knowledge, with a view to bridging the gap created by various social epistemological approaches, and provide a more comprehensive account of human knowledge.

Richard Rorty's Contextualist Theory, a brand of social epistemology which admits socio-cultural and contextual justification of human knowledge, was adopted. Ten texts in social epistemology, including Rorty's *Philosophy and the Mirror of Nature* (PMN), Goldman's *Epistemology and Cognition* (EC), Schmitt's *Socialising Epistemology: Social Dimensions of Knowledge* (SESDK), Longino's *Science as Social Knowledge* (SSK), Kuhn's *The Structure of Scientific Revolution* (SSR), Bloor's *Knowledge and Social Imagery* (KSI), and six texts in indigenous knowledge, including Hountondji's *Endogenous Knowledge* (EK), Masolo's *Self and Community in a Changing World* (SCCW), Joseph's *Interrogating Culture: Critical Perspectives on Contemporary Social Theory* (ICCPST), and Sogolo's *Foundations of African Philosophy* (FAP), were examined. These texts interrogate the issue of human knowledge and its justification. Data were subjected to qualitative analysis using the philosophical tools of criticism, conceptual analysis and reconstruction.

The PMN, SSK and KSI revealed that knowledge is a social phenomenon, and that the acquisition and justification of human knowledge is socio-culturally determined. An understanding of the social dimension of human knowledge, which is missing in traditional epistemology and other recent epistemological orientations such as

naturalised epistemology and evolutionary epistemology, is indispensable towards the realisation of an adequate account of human knowledge (SSR, EC, SESDK). The SCCW and ICCPCST established that reducing the project of social epistemology to the task of social justification of scientific knowledge is too limiting and that employing scientific principles as paradigmatic method of validating all knowledge claims is also inadequate. Many aspects of indigenous knowledge system are essentially metaphysical with far-reaching social and psychological implications. Hence, their epistemological justification ought to be within the contexts of metaphysical, social and psychological conditions (EK, FAP). Critical intervention shows that indigenous knowledge, which admits of epistemological pluralism by accommodating two or more justification conditions, bridges the gap created by other social epistemological approaches to human knowledge.

Indigenous knowledge admits of the metaphysical, social and psychological conditions of knowledge, thereby bridging the gap created by previous epistemological approaches to the acquisition and justification of human knowledge. Therefore, it provides a more comprehensive account of human knowledge than other theories of knowledge.

**Keywords:** Traditional epistemology, Epistemic justification, Epistemological pluralism

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## CERTIFICATION

This is to certify that this thesis was carried out by Ademola Lukman Lawal with matriculation number 86814 under my supervision in the Department of Philosophy, Faculty of Arts, University of Ibadan, Ibadan, Nigeria.

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## **DEDICATION**

This thesis is dedicated to my dearest wife, Latifa Jumoke and my wonderful children,  
Kamila Omobolanle and Abdul Basit Omobolade

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## GENERAL INTRODUCTION

### 0.1 Background to the study

The idea of indigenous knowledge system is as old as humankind itself, but the academic discourse on it is relatively a recent phenomenon.<sup>1</sup> The academic interest in the field of indigenous knowledge system has only become popular in the last few decades. Three basic phases are recognised in indigenous knowledge system, although all three are not necessarily in the historical order as outlined in this study.

The first phase constitutes an interesting example of colonial discourse analysis, applied to issues of culture, power and knowledge.<sup>2</sup> This phase constitutes the discourse on the idea of indigenous knowledge which was a reaction to the deliberate ideological framework that underlined European colonisation, which denied Africa and other continents' civilisation, history and rational thoughts.<sup>3</sup> This phase supports the quest for the revival of indigenous knowledge system that reflects both the insights and the weaknesses of colonial discourse and how it constitutes an attempt to counter colonialists' political and cultural domination. One of the major arguments against European cultural domination is that the wisdom embedded in indigenous knowledge system should be preserved for the world and that the independent identity of colonial societies could only be built around their culture and way of life.<sup>4</sup> Hence, the quest for the revival of indigenous knowledge system emerged as a protest against derogated Eurocentric remarks and attitudes or, simply put, colonial myth on Africa.

The second phase focuses on the models of development and new technologies introduced, especially with the emerging interest in international business environment and sustainable development agenda.<sup>5</sup> Like the other, it can be argued that the relative

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<sup>1</sup>Horsthemke, K., 2004. "Indigenous Knowledge'- Conceptions and Misconceptions." *Journal of Education*, No.32pp. 31-48.

<sup>2</sup> Joseph, S. 1998. *Interrogating Culture: Critical Perspectives on Contemporary Social Theory*. London: Sage Publications. p. 90

<sup>3</sup> Udefi, C.A. 2005. "Theoretical Foundations for an African Epistemology" in Akanmidu R. A., (ed) *Footprints in Philosophy*. Ibadan: Hope Publications.pp.74

<sup>4</sup> Joseph Sarah 1998. *Interrogating Culture: Critical Perspectives on Contemporary Social Theory*.p90

<sup>5</sup>Agrawal, A. 2002. "Indigenous Knowledge." *International Social Science Journal*, 173. p. 286.

failure of development strategies based on modern science and technology in many colonial states underscores the quest for the adoption of indigenous knowledge system in development strategies, especially when multinational corporate interests began to explore business possibilities, which might be opened up by incorporating knowledge from other systems and cultures.<sup>6</sup> It is for this reason that the United Nations Educational Scientific and Cultural Organization (UNESCO), for instance, focused its attention on two core issues: the eradication of poverty and the development of a knowledge society,<sup>7</sup> therefore, prioritising indigenous knowledge system as an integrated body for combating marginalisation and impoverishment.<sup>8</sup>

The third phase is epistemologically inclined. The debate on the idea of indigenous knowledge involves those core epistemic issues and problems on the acquisition and justification of human knowledge. It follows that the quest for the recognition or placement of indigenous knowledge system in the epistemological discourse emerges from recent developments in epistemology with a view to addressing some pitfalls in Western philosophy. For instance, epistemological orientations such as Naturalized, Evolutionary, Genetic, Virtue, Feminist, and Social Epistemology emerge to provide some remedies for intractable problems associated with the Traditional Epistemology. This study therefore argues that these epistemological orientations have made different efforts at repairing the inadequacies of Traditional Epistemology with a view to securing an adequate conception of knowledge. Also, these orientations are being vigorously pursued and explored in modern epistemology with the view of enriching and expanding the field of epistemology. This is different from the way it was a few decades ago. Yet, efforts to get an epistemological platform for a holistic or adequate account of human knowledge remain a mirage.

One needs to reiterate that the debate on the idea of indigenous knowledge is premised on the inability of the traditional epistemology and other recent orientations to provide a holistic or adequate account of human knowledge. This study therefore argues that most of the recent epistemological orientations mentioned above undermined socio-

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<sup>6</sup> Agrawal, A. 2002. "Indigenous Knowledge."

<sup>7</sup> Agrawal, A. 2002.

<sup>8</sup> Agrawal, A.2002.

cultural factors which provide justification for human knowledge. The analysis of human knowledge, which is peculiar to the traditional epistemology and other epistemological orientations, is such that a subject is detached from the object of knowledge, human interests and other socio-cultural factors.

Similarly, a number of orientations earlier mentioned emphasised the use of scientific methods or principles in validating all knowledge claims. They suggest that genuine-knowledge claims can only be acquired and justified by appealing to principles of natural sciences. Simply put, scientific rationality. In its quest to break away from the shackles of traditional and naturalized epistemology, for example, insists that it employs the cognitive science, which helps in the adoption of the substantive claims of science in the account of human knowledge. This quest insists that since psychology is systematically concerned with how knowledge is acquired, it is thus capable of handling some perennial problems that traditional epistemology is grappling with. With this development, we examined the idea and concern of social epistemology in order to provide the theoretical foundations for the idea of indigenous knowledge.

The idea of social epistemology deals with socio-cultural relations, values, and institutions to knowledge via a normative study. This is different from the sociology of knowledge in a number of ways. For instance, sociology of knowledge deals with contingent social issues.<sup>9</sup> The issues on the idea of social epistemology revolve around the question of whether human knowledge is achievable merely by studying psychological and cognitive faculties alone or through a proper understanding of multi-dimensional socio-cultural factors, which are involved in the beliefs and justification of human knowledge. Therefore, this study emphasises the fact that the prominence accorded the psychological and scientific prospects in Western epistemological discourse could undermine the importance of other dimensions of social epistemology. The study also argued that social epistemology ought to constitute a complete epistemological platform for understanding different dimensions that the acquisition and justification of beliefs and human knowledge can take.

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<sup>9</sup> Bloor, B. 1991. *Knowledge and Social Imagery*. Chicago: University of Chicago Press. p.5

## 0.2 Literature review

It is important to highlight some issues and dimensions of social epistemology in order to establish its relationship with the idea of indigenous knowledge. Knowing-Subject in both traditional as well as some modern epistemological accounts of human knowledge is socially and historically detached from the object of knowledge. Also, some Western epistemological projects, which aimed at providing an adequate account of knowledge, are inadequate because they neglect socio-cultural factors in the account of human knowledge. It is true however that the relevance of human interest and other concrete human situations in the production, dissemination, and justification of human knowledge cannot be overemphasised. Therefore, in view of the neglect of socio-cultural factors in the acquisition and justification of human knowledge, the Western epistemological-paradigmatic projects are yet to realise a holistic account of human knowledge.

This position is tenable because knowledge is derived from specific human interests and should be viewed as a socio-cultural project. As a corollary, individuals possess socially situated knowledge because our social situation affects how we think, what we think about, our belief, as well as our knowledge claims. Indeed, components of knowledge such as: truth, rationality or justification, and knowledge are socially and contextually determined or justified. The fact that knowledge is a socially created human affair suggests that when there is need for an analysis of human knowledge, it should be done without “being overly rigid and without cutting the knower off from the real world he seeks to know.”<sup>10</sup> Thus, the whole Western epistemological projects in seeking absolute epistemic foundations or the misleading image of the “autonomous epistemic agent” ought to be replaced with the social conception of knowledge that encourages multi-dimensional analysis of human knowledge.

The summation from the above assertion is that, an analysis or account of human knowledge must be done in a way that accommodates human interests and socio-cultural factors. This means that a justification of knowledge-claims should not depend

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<sup>10</sup> Goldman, A. H. 1988. *Empirical Knowledge*. USA: University of California, Berkeley. p22.

solely on individual subject-object relations' account; rather, it must include the relationships of knowers, socio-cultural factors with the forms of life of a people. Richard Rorty, for instance, emphasises the need to eschew epistemological rigidity on the analysis of truth, rationality, and knowledge and concentrate on social factors and context in which these epistemic concepts are derived. Rorty further opines that reality is a description of many because human beings have different purposes. It is further inferred from this that social considerations can further illuminate the general conditions encouraging or discouraging the acquisition, dissemination, and development of human knowledge. To this end, the value of social epistemology in the analysis of human knowledge cannot be undermined.

At this juncture, it is important to examine the concept of social epistemology and what it stands for. Different scholars on social epistemology have different conceptions of the term 'social' and this inevitably has led to different conceptions of social epistemology. In other words, social epistemology covers different approaches. It investigates social aspects of inquiry and discusses justification of human knowledge. There are different dimensions of social epistemology that would be highlighted and explained. These Western social epistemologists such as Thomas Kuhn, Richard Rorty, Alvin Goldman, Helen Longino, Lorraine Code, and Steve Fuller have adopted different approaches in their conceptions of social epistemology. Alvin Goldman and Helen Longino, for instance, conceive the project of social epistemology as an extension of traditional epistemology with a view to correcting its extreme individualistic orientation. Their conceptions of social epistemology also retain the thought that knowledge and justified belief are essentially linked to *truth* as an epistemic goal of inquiry. For example, Goldman's approach to social epistemology seeks to justify the social nature of truth and its regulatory role. According to Goldman, epistemology is divided into two branches namely: individual and social epistemology.<sup>11</sup> He argues that both branches identify and assess processes, methods, or practices in terms of their contributions either negative or positive to the production of true belief. For Goldman, individual epistemology, for instance, would need the help

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<sup>11</sup> Goldman, A. 1986. *Epistemology and Cognition*, Cambridge Mass: Harvard University Press. p1.

of cognitive sciences. That is, individual epistemology would identify, evaluate and process the occurrence of epistemic subject via a psychological perspective.

On the other hand, social epistemology focuses on the identification and evaluation of the social processes through which epistemic subjects interact with other agents who exert causal influence on their beliefs. Goldman, for instance, argues that, both in everyday life and in specialised arenas, true belief rather than false belief or mere opinion is placed on certain values. This type of value is called veristic value.<sup>12</sup> According to Goldman, the veristic approach to the study of epistemology is evaluative as well as normative. It is concerned with the actual prospective practices in terms of their effects on truth versus beliefs. The truth does not have any explanatory role on the studies of knowledge but a regulatory one.<sup>13</sup>

Thomas Kuhn also expressed the relevance of social factor in scientific knowledge. According to Kuhn, knowledge generally and scientific theory specifically is human-centred. This suggests that knowledge is a function of social forces in their multidirectional evolution.<sup>14</sup> In the same vein, Helen Longino seeks to establish that understanding relationship among two or more individuals targeted at epistemic justification or rationality of beliefs is a crucial factor in knowledge claims. Longino's conception of social epistemology involves the establishment of knowledge and objectivity in the activities of the community of scientists. In her view, a scientific belief is justified if the application of 'objective' methods is truthful. Also, that a theory or hypothesis "was accepted on the basis of 'objective methods' does not guarantee that such theory is truthful. In addition, if such is truthful or justified, it does, because such justification is grounded in community of scientists asserting that it is true and not individual scientist."<sup>15</sup>

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<sup>12</sup> Goldman, A. H. 1988. *Empirical Knowledge*. USA: University of California, Berkeley. p22.

<sup>13</sup> Code, L. "Second Persons" in Hanen and Nielson Eds. *Science, Morality and Feminist Theory*. pp374-378.

<sup>14</sup> Kuhn, T. 1962. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press. p.68.

<sup>15</sup> Goldman, A. 1986. *Epistemology and Cognition*. Cambridge Mass: Harvard University Press. p1.



The issue here is that the social dimension of scientific knowledge, according to Longino, is reflected in the point that objectivity is a basic characteristic of a community's scientific practice rather than an individual scientist. In her view, the processes that make inquiry possible are called social. The social helps to sustain a number of people. These processes help not only in the facilitation of inquiry but also ensuring the results of inquiry, which are mere subjective opinions; thus, they deserve to be called knowledge. Another important approach to explaining the 'social' nature of knowledge is to construe the project of social epistemology as a radical departure from traditional epistemology. While some social epistemologists have articulated that there are objective norms of rationality that social epistemologists should aspire to articulate in epistemology, the radical approach focuses on the epistemic goal of having justified or rational beliefs but in a rather different manner. This radical conception of social epistemology has no regard for universal or general account of concepts like truth, justification and rationality as an independent foothold for justification of knowledge. It also rejects the existence of objective norms of rationality. This approach to social dimension of knowledge would simply involve what is believed, or what culture, society, community, or context says.

Social epistemology of this strand, for example, seeks to understand a selected community norm of rationality but rejects the notion that there are any 'universal' or 'objective' norms of rationality, or criteria of truth. From this standpoint, it has been argued that since rationality or justification of certain beliefs is context-dependent because there is "no 'ultimate' or 'foundational' criteria of rationality which could serve as the standard by which all forms of belief-system could be judged as rational or irrational."<sup>16</sup> It might be impossible to decree that certain practices are more rational or more truth-conducive than others. Thus, with the lack of context-free or super cultural norms of rationality, concepts such as truth, rationality, justification, and knowledge are socio-culturally determined.

This perspective can be discerned from some of Rorty's pronouncements in epistemology. According to him, knowledge involves "the social justification of belief,

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<sup>16</sup> Irele, D. 1997. "Essentially Contested Concepts and the Question of Rationality in Traditional African Thought." *Ibadan Journal of Humanistic Studies*. p28.

and rationality and epistemic authority is supposed to be explained by reference to what society lets us say.”<sup>17</sup> Contrary to some traditional and modern conceptions of knowledge, Rorty argues that “epistemic justification is not a matter of a special relation between ideas (or words) and objects, but of conversation, of social practice.”<sup>18</sup> With the aforementioned approaches on the idea of social epistemology, what then is the theoretical gap that this work identified and intended to fill from the literature reviewed?

### **0.3 Statement of the problem**

While it is noteworthy to state that many approaches to social epistemology in Western philosophy contributed immensely to debates about the social factors in human knowledge, it is equally necessary to state that most of these approaches to social epistemology focused mainly on social factors involved in the acquisition and justification of scientific knowledge. Perhaps it can be argued that one of the reasons for the prominence accorded social factors in scientific knowledge in social epistemological debate in Western philosophy is connected with the tremendous practical successes of science in the modern period which cannot be underestimated. Indeed, many practical successes and achievements of science have encouraged and portrayed the belief that science is the only paradigm or standard for realising or validating all knowledge claims.

It must be noted that the prominence accorded to social factors in scientific knowledge which had been portrayed as the major conception of social epistemology is too limiting and has made social epistemology less successful in its attempt at providing an epistemological platform for an adequate conception of knowledge. This means that social epistemology, within the context of Western philosophy, has not been adequately explored. The social factors canvassed by some social epistemologists, especially in favour of science as the paradigmatic knowledge producing enterprise, are too narrow and even dismissive of other non-scientific routes to knowledge. One of such neglected but significant social routes is the indigenous knowledge system, which

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<sup>17</sup> Rorty, R. 1979. *Philosophy and the Mirror of Nature*. Princeton: Princeton University Press p.174.

<sup>18</sup> Rorty, R. 1979. *Philosophy and the Mirror of Nature*.

suggests that scientific knowledge with its methods reflects or explains an aspect of reality. Consequent upon the inadequate attention given to the indigenous knowledge system, there is a tendency to foreclose the possibility of moral, religious, and other forms of non-scientific knowledge systems.

Indeed, the areas of knowledge already mentioned constitute bulk of what social epistemology should cater for because they are equally significant for the realisation of different dimensions in which social factors in the acquisition and justification of human knowledge can take. For instance, an epistemic community employs a communal standard to affirm, correct or even deny the existence of knowledge, especially with regards to moral and religious knowledge. These areas of knowledge have not been adequately addressed in Western social epistemological tradition. In sum, Western social epistemological debate has marginalised and greatly undermined various non-scientific socio-cultural epistemological practices, values, beliefs and other methods of justifying knowledge claims.

It is thus clear that previous attempts to give an adequate account of knowledge are bedevilled with myriad of problems. To state in clear terms, the traditional epistemology and other recent epistemologies' definitions or accounts of knowledge are socio-culturally blind and laden with individual cognitive processes. For instance, traditional epistemology was preoccupied with the individual knower as well as putting emphasis on the search for absolute, rigid, and universal conditions for all knowledge claims. It de-emphasized social factors or dimensions of knowledge. Also, social epistemology which attempts to correct some of these problems also paid inadequate attention to indigenous system of gaining and justifying human knowledge. Social epistemology like other approaches is deficient because it undermined the essential indigenous means or route to the acquisition and justification of human knowledge that other modern epistemological orientations failed to provide an adequate account of human knowledge. Hence, the current study focuses on the nature of indigenous knowledge which social epistemology within the context of the Western tradition of philosophy has understudied.

Thus, the set of background questions that this research critically examined includes the following: how should knowledge be construed? To what extent have the traditional epistemology and other recent epistemological orientations been successful in providing an adequate account of knowledge? To what extent have social epistemology overcome the various problems associated with previous epistemological frameworks? How does indigenous knowledge overcome the various problems associated with social epistemology in Western philosophy especially with regard to the possibility of moral, religious and other forms of socio-cultural or indigenous systems? It is believed that examining these questions would not only clarify the invaluable roles of indigenous knowledge in social epistemology but would also help to provide an epistemological platform for an adequate or holistic account of human knowledge.

#### **0.4 Statement of the Thesis**

Based on the understanding that social epistemology has not sufficiently explored the importance of indigenous knowledge in the quest for a holistic account of human knowledge, this study examines what constitutes indigenous knowledge system as a veritable means of understanding the wide range of socio-cultural factors involved in the acquisition and justification of human knowledge in a way that have not been adequately addressed by other epistemological orientations in Western philosophy. The point here is that the search for an adequate or holistic account of human knowledge can be achieved if adequate attention is paid to indigenous socio-cultural factors involved in knowledge claims. Thus, the idea of indigenous knowledge, a strand of social epistemology, offers important insights into questions relating to not only how knowledge is socio-culturally generated and justified but also how an adequate or holistic account of knowledge can be realised.

In view of the above submission, this work engages the task of conceptual analysis of the idea of indigenous knowledge by examining various definitions or conceptions of indigenous knowledge. In this regard, we examined the definitions that place premium on the origin or source of indigenous knowledge in terms of geographical location and cultural context of the people. For instance, Louise Grenier describes indigenous

knowledge as the “unique, traditional, local knowledge existing within and developed around the specific conditions of women and men indigenous to a particular geographic area.”<sup>19</sup> Apart from conceptualisation of indigenous knowledge as being geographical-dependent, it can also be defined in terms of the transmission of its cultural elements. In this sense, Madhav Gadgil, et al considered indigenous knowledge as “the sum total of knowledge, skills and attitudes belonging to a community over generations. It is the expression of actions, objects and sign language for sharing.”<sup>20</sup>

Therefore, indigenous knowledge is the cumulative body of knowledge and beliefs handed down through generations by cultural transmission about the relationship of living beings, (including humans) with one another and their environment. Indeed, indigenous knowledge is an indispensable part of the heritage and autochthonous cultures that comprise all aspects of life in society and it constitutes largely an undocumented body of knowledge, wisdom, skills, and expertise that a given community has developed over time. It can be understood that the idea of indigenous knowledge represents the local, traditional and practical everyday life that is passed from one generation to other orally or otherwise. In view of the foregoing definitions, our working definition is that indigenous knowledge is a culture’s unique genius and distinctive creativity, which puts a characteristic stamp on the members in their context.

In spite of the above conceptual clarification, indigenous knowledge is further categorised into: practical and theoretical. Indigenous knowledge system involves practical (technical) and theoretical (non-practical) elements. The practical or technical element of indigenous knowledge is closely connected with craft traditions, artisans, technology, and other practices involved in finding a genuinely satisfactory solution to some problems by the indigenous people. For instance, there are indigenous knowledge systems of nature, environmental protection and sanitation, agriculture, health and illness as well as conflict management techniques. We argue that this class of indigenous knowledge systems or practices grew out of the ordinary ways of coping

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<sup>19</sup> Grenier, L., 1998. *Working with Indigenous People: A Guide for Researchers*. Ottawa, ON: International Development Research Centre.

<sup>20</sup>World Bank, 1998. “Indigenous Knowledge for Development: A framework for Action.”

with the environment or world at large especially as the knowledge helped in engaging successful agriculture, to work hides and metals.

It is an undeniable fact that different individuals possess technical know-how that enable them understand how to relate with their natural environment. Indeed, few scholars would deny that people survived millennia before Western science and technology arose because people in different societies often develop an indigenous knowledge system of their natural environment outside mainstream scientific enterprise. It is in this regard that many scholars have identified the invaluable contributions of the practical aspect of indigenous knowledge to human development. Paul Feyerabend, for example, points out several ways in which indigenous knowledge or craft traditions and technology development are historically vital to the emergence of new sciences in the sixteenth to the nineteenth centuries.<sup>21</sup>

It is important to highlight the common features of the practical or technical elements of the indigenous knowledge. These include the fact that many of the technical elements of indigenous knowledge system are generated through trial and error and practical demonstrations. For example, through trial and error method, the efficacy of plants in treating a disease is established among the indigenous people. Also, it is common to see that there are different forms of indigenous techniques or skills that are unique to particular cultures. These elements of indigenous knowledge systems are not distributed evenly across all cultures; thus, certain indigenous knowledge's practices have variations in social groups, status, ethnicity and gender.

Regardless of the fact that there are different practical or technical elements of the indigenous knowledge system across cultures, the relationship between social epistemology and indigenous knowledge system can be understood in terms of the fact that the core activities of indigenous knowledge acquisition are socio-culturally defined or justified. This means that knowledge-related practices are socio-culturally validated within a culture in which they are generated. It can also be argued in many ways that indigenous knowledge, through collective efforts, offers a genuine and satisfactory

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<sup>21</sup> Feyerabend, P. 2010. "Against Method." UK: Verso p.XXI & Bishop R. 2007. *The Philosophy of the Social Sciences*. London: Continuum International Publishing Group. p.9

solution to human and other existential problems. With this submission, we argued further that, since many activities about indigenous knowledge processes involve socio-cultural validation, this is enough to engage social epistemologists' attention.

On the other hand, the theoretical or non-practical aspect of indigenous knowledge involves those elements that constitute the form of life of a people in which an intelligible explanation or justification for reality or knowledge is sought. This category of indigenous knowledge involves oral tradition. Oral traditions, though complex, comprise divination, proverbs, myths, parables, idioms, folktales, songs and stories. Thus, non-practical or theoretical aspect of indigenous knowledge system consists of the cultural elements or heritage of a people through which the basis for their thought system or conception of reality is encoded.

The epistemic justification of indigenous knowledge system, which this thesis attempts, focused essentially on the theoretical or non-practical aspect of indigenous knowledge. It argues since the culture of people plays a viable role in their conception of reality; it is thus germane to assert that there is need to be familiar with one's immediate culture. For instance, since every culture operates its own perception of objects and its own conception of reality, one can reasonably argue that an analysis of the ontological foundations of the traditional African thought would enhance the intelligibility of what appears bizarre and irrational about theoretical elements of the indigenous knowledge system. Nevertheless, an attempt is made to highlight some theoretical aspects of the oral traditions of the indigenous knowledge system.

### ***Oral text as a veritable source of knowledge***

Oral text or tradition can be regarded as an important cultural element where corpuses of knowledge and ideas are received, preserved and transmitted from one generation to another. Paulin Hountondji states in clear terms that oral cultures or theoretical elements of indigenous knowledge exist side by side with modern classification of technical know-how or practical knowledge in indigenous knowledge systems. His assertion indicates that as there are different cultures, there are corpuses of knowledge which are elaborate, faithfully transmitted from one generation to another. These

cultural knowledge often gained quality substance in the process of transmission from one generation to another.

Following Hountondji, Liz Gunner argues that oral culture of a people serves as a foundation for certain beliefs and practices that constitute the bulk of indigenous concepts in terms of generating meanings, which have guided and sustained people from one generation to another.<sup>22</sup> Also, oral culture is a means of transmitting historical facts and a modest approach to historical knowledge. Undoubtedly, it is a tradition that is widely practised in many societies especially in Africa. Indeed, for Gunner, the African continent, for example, can be regarded as ‘the oral continent per excellence.’ The justification for this assertion is informed by the fact that oral culture is used to control social activities in the past, present and future both in a formal and informal way and in the days of globalisation, orality is now being adapted into modernised African societies such that it became the conveyor of African cultural values. From the foregoing, attempts shall be made to explain some cultural elements in oral tradition. These elements include proverb, divination, and other practices that serve as important elements or sources of indigenous knowledge system.

### ***Proverbs***

As a theoretical element of the indigenous knowledge system in Africa, proverbs socialise, philosophise, and historicise values and issues across generations. They are transmitted from one generation to another. Proverbs give the gist of what one wants to say in a brief and unmistakable form. That is, they are used to express basic truths which may be applied to common situations or drive home a point in a few striking words.<sup>23</sup> It is in this sense that Claude Sumner posits that proverbs become necessary when people want to comment on issues or facts. Also, to use a proverb effectively, one must understand its signification, originality, pertinence, its dynamism and unity. Thus, proverbs enlighten the situation for those who understand them.

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<sup>22</sup> Gunner, L. 2004. “Africa and Orality.” Abiola, I & Simons, G. (eds). *The Cambridge History of African and Caribbean Literature* Cambridge: Cambridge University Press. pp. 1

<sup>23</sup> Biobaku, S.O. 1973. *Sources of Yoruba History*. Ibadan: University Press. P. 77



Generally speaking, proverbs in the African context are the wisdom and the experience of the African people. For example, in proverbs, we find the vestiges of the oldest forms of the traditional African philosophical heritage. Proverbs are integral aspects of discourse within the socio-cultural context. Through proverbs, knowledge, ideas and emotions are communicated. Proverbs are a reflection of the socio-cultural orientations, philosophy, and worldviews of the people that generally depict their experience. Also, the language of proverbs is figuratively pithy and generally insightful because it is an epitome of wisdom of experience.

One other vital point about proverb, according to Saburi Biobaku, is that it is used to bring out more sharply and clearly the point one wants to make than in ordinary speech or plain language. Hence, a proverb, as a horse, carries people swiftly to their place of destination. Proverb is a conveyor of social values and it is a means of preserving knowledge of a people. In a pragmatic sense, proverbs have been used to resolve many social and political conflicts in Africa. In a moral situation, for instance, the proverb, *iwa rere lesu eniyan* – which literary translated as *good character is the beauty of man* is employed philosophically to encourage people to be virtuous or modest. In socio-political situations, it is also used to caution or call somebody to order.

Another important point about proverbs is that it has a cognitive function. Proverb depicts and x-rays realities. This is because an experienced situation may not be intelligible directly and proverbs present or describe such situations in a more striking way. From Fayemi Kazeem's analysis, proverbs are a vital aspect of oral tradition that stores African socio-cultural world-views<sup>24</sup>. This means that the traditional African experience, culture and philosophy, for instance, could be easily found or retrieved through proverbs.

Similarly, proverbs are concerned with dialectical relationships between an experienced situation and human spirit. Human situations are brought to the limelight through proverbs. Proverbs depict realities. According to Fayemi, for Africans, what is not expressive or intelligible in proverbs is not real. In expressing reality, a proverb

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<sup>24</sup> Fayemi, A.K. "The Logic in Yoruba Proverbs." *Itupale Online Journal of African Studies*. 2. (2010). pp1-14

helps to test both the linguistic and logical knowledge of a person. This is because proverbs help us to know whether one has the cognitive capacity to correctly associate the content of the proverb with the real life situations or not. Therefore, proverbs cannot be excluded from reality; hence, social realities are inherent in proverbs.

Additionally, proverbs serve as tools to provide evidence against ethnocentric arguments of Western scholarship that named precolonial Africans as pre-logical and irrational. As stated in the works of scholars such as Tylor, Durkheim and Levy-Bruhl, the only way to judge the intelligibility or rationality of any thought system is whether it conforms to the universal laws of thought or not. In his response to the issue raised by these European scholars, he extracts some Yoruba proverbs to vocalise logic structure of Yoruba thought and the acclaimed universal laws of thought. The already cited work of Fayemi is an attempt to examine the logical basis of some proverbs in Yoruba culture.

### ***Divination***

Divination is another resource through which the theoretical aspects of the indigenous knowledge system are apprehended. According to J. C., Woodford, divination possesses an understanding of reality in the present and future. Additionally, it is used to predict events in the future. Also, divination system, being a “standardise process derived from a learned discipline based on an extensive body of knowledge,<sup>25</sup> is a means through which epistemological substance of the non-practical and theoretical elements of the indigenous knowledge system can be understood.

Although it is quite complex to categorise divination because it has both practical and theoretical dimensions, yet it is generally regarded as “a primary institutional means of articulating the epistemology of a people...and a trusted means of decision making, a basic source of vital knowledge.”<sup>26</sup> The summation of this is that, divination system provides Africans with divine guidance such that there is a prediction on how to live

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<sup>25</sup> Peek, P. “Divination: A Way of Knowing”, in E.C. Eze (ed.) *African Philosophy: An Anthology*. UK: Blackwell Publishers. P. 172

<sup>26</sup> Murdock, G.P. cited in Peek, P. 1998. “Divination : A Way of Knowing,” in Eze , E. C. Ed. *African Philosophy : An Anthology*, UK: Blackwell Publishers p171.

and make good choices in life, especially, with a higher control over one's future. Thus, the system of divination is seen as one of the indigenous knowledge systems that constitute a special feature of knowledge found in many African traditional cultures.

While there are different types of divination systems, one which is prominent among the Yoruba is called *Ifa* divination system. In other words, *Ifa*, one of the divination systems or ways of knowing is traceable to the Yoruba, an ethnic group in South-Western Nigeria. Scholars have argued that *Ifa* is a composite body of epistemological, metaphysical and moral insights about nature, man and other phenomena. From the epistemological viewpoint, there is abundant evidence that *Ifa* divination is identified with the knowledge of all things and it is the answer to the various kinds of human problems. Thus, *Ifa* is described as a repository of knowledge that is inexhaustible. For Chukwudi Eze, *Ifa* divination system among the Yoruba is an epistemological process of explaining or understanding truth and reality. For Eze, *Ifa* divination constitutes the need for the meaning of life whether personal or communal. It rationalises and liberates the discernment of the pursuit of knowledge about destiny. It seeks for knowledge about human life in terms of action and inaction.

The fact that *Ifa* is considered to be an accepted authority and arbiter of truth and knowledge is entrenched in traditional Yoruba social fabric. That is, the fundamental and hard views about *Ifa* are so deeply rooted in the Yoruba culture and they are quite difficult to alter. One can argue that one of the reasons for relying on *Ifa* may be as a result of its practical usefulness in solving human problems.

### ***Paranormal Cognition***

Another important area of indigenous knowledge system is what J. B. Rhime called paranormal cognition or Extra Sensory Perception (ESP).<sup>27</sup> What this suggests is that reality consists of the visible and the invisible aspects. The visible is comprehended through sense, experience, and rational deliberation while the invisible, cannot be comprehended through all these media. However, it has been argued that there should

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<sup>27</sup> Rhime, J. B. in Mosley, A. 1978. "The Metaphysics of Magic: Practical and Philosophical Implication." *Second Order: An African Journal of Philosophy*, p. 6.

be a way through which invisible can be comprehended. Therefore, the strong belief in accessing knowledge at a level beyond empirical deliberation is justified by experience. Many Africans admit that paranormal cognition exists as a mode of knowing. Indeed, many African scholars such as Kwame Gyekye, Albert Mosley, and Martin Ajei affirm that, besides reason and sense experience, extra-sensory is the third mode of knowing in Africa.

It is generally believed that “paranormal” contradicts the fundamental ideas and principles of modern science. Thus, paranormal cognition has been considered as a source of knowledge that cannot be explained by scientific method or knowledge without the use of any known sense organ. In *Metaphysics of Magic*, Mosley supports Rhine as he distinguished into four categories of paranormal events or forms of ESP.<sup>28</sup>

They include the following: telepathy, clairvoyance, precognition, and psychokinesis

(i) Telepathy: The ability to perceive the content of another person’s mind is called telepathy. In other words, this term is a form of communication that exists between one mind and another. It does not use recognized channels of sense. In an ordinary parlance, we identify telepathic ability as the capability to ‘read or affect the content of someone else’s mind without sensory intermediaries.’

(ii) Clairvoyance: the ability to perceive information available to no living person is called clairvoyance. It also refers to the ability of the mind to acquire knowledge of physical objects or events. This is different from mental ones without the use of the senses. In clairvoyance, the extra-sensory information originates from physical objects and that is the ability to be affected by information about a physical system that is otherwise not available to any mind, without sensory intermediaries. An example of clairvoyant ability is the one in which x’s has to state accurately the contents of a problem encountered in the first place.

(iii) Precognition: the ability to perceive information about events that have not yet occurred is otherwise called. This is the knowledge acquired about the future events. The knowledge does not use any recognized sensory channels or cues for inference.

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<sup>28</sup> Mosley A.G. 1987. “The Metaphysics of Magic.” *Second Order* Vol. VII, p. 3-19

(iv) Psychokinesis: This is the ability to bring about physical effects or influence physical states by psychic means.<sup>29</sup> This involves the movement of physical systems and objects by the use of psychic power. The belief that these events can generate knowledge is common in many cultures.

In addition to the foregoing, we can state further that comprehending these features requires a rigorous process of initiation as well as lengthy period of training in divination systems and other magical practices. In view of the rigorous training processes and rituals involved, these knowledge areas have been considered to be extremely esoteric, arcane, and impenetrable knowledge system. The fact that the systems are known to only the initiates or those that have been trained in them, it has become difficult for many scientifically inclined minds to understand their epistemic justification or rationality.

Going by the nature of cultural elements that constitute theoretical aspect of indigenous knowledge system, it would be necessary to expose the metaphysical foundations of indigenous knowledge system in general. What this means is that understanding the metaphysical foundation of the theoretical aspect of indigenous knowledge especially those that are derived from divination and other practices would provide an intelligible explanation or justification for beliefs, practices and bulk of what appears to be a mysterious phenomenon or reality in indigenous belief system. Hence, epistemic justification of the theoretical aspect of indigenous knowledge would require exposing metaphysical foundations. In fact, as Richard Kirkham argues, it is absolutely essential to any complete epistemology that it has answers to the metaphysical issues and indeed, it is impossible to fulfil the justification project without having first fulfilled the metaphysical project.<sup>30</sup>

The above submission is equally premised on the admission that metaphysics underlies not only all the other sub-divisions of philosophy but also lies at the very foundation of practically all human discourses and endeavours. This is because metaphysics as a

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<sup>29</sup> Ajei, M.O. 2007. *Africa's Development: The Imperatives of Indigenous Knowledge and Values*. PhD. Thesis, Department of philosophy. University of South Africa. pp. 1 – 243.

<sup>30</sup> Kirkham, R. 1992. *Theories of Truth: A Critical Introduction*. London: MIT Press, p. 43.

branch of philosophy deals with reality from a holistic perspective. However, ontology is an aspect of metaphysics that studies the nature of reality of existence. Ontology focuses on the whole range of existent beings and examines the cultural elements of indigenous knowledge systems, which constitute the form of life of a people. This can only be justified within the context of the ontological framework of the people's culture; it follows that an understanding of a people's conception of reality would provide a genuine and accurate account of what knowledge or reality is. In this regard, it is important to examine the ontological foundation of the theoretical aspect of indigenous knowledge system.

### ***Examining the Ontological foundation of Indigenous Knowledge System in Africa***

It is an undeniable fact that the quest for knowledge is natural to all human beings irrespective of the different ways in which different cultures define cognition. As such, it is noteworthy to state that human knowledge is always generated by presuppositions, prejudgments, interests and socio-culturally defined. Therefore, there is the need to examine the common features of African ontology that provides epistemic justification for indigenous knowledge. This is because an understanding of people's conception of reality would provide a genuine explanation of how they acquire and justify their knowledge claims. This suggests that the analysis of the ontological status of indigenous knowledge system involves explicating how cultural conception of reality is fundamental to knowledge claims. Simply put, the justification for theoretical elements of traditional African knowledge is rooted in African ontology.

It is pertinent to reinstate that while African ontology consists of how traditional Africans conceive reality as well as knowledge, there are several accounts of the ontological structure of the traditional African culture. The central concern is to examine the common features of African ontological framework that are fundamental to our epistemological inclination. To this end, it may be helpful to discuss some common features of the traditional African ontology which include: the nature of reality, nature of God and spirits

### ***The nature of reality***

There is no doubt that the controversy on the nature of reality in Western philosophy has polarised the discourse of metaphysics such that philosophers are categorised either as monists or dualists. The monists are of the conviction that reality is one, while the dualists maintain that reality is plural, that is, reality comprises two basic elements: the material and the spiritual. The implication of this categorisation and rigid adherence is that it has a reaching influence on what can be known or considered to be real in Western epistemological discourse. However, one of the essential features of African ontology that is fundamental to our epistemological discussion is that traditional Africans uphold a dualistic conception of reality. That is, they conceive of reality or existence as partly physical and spiritual. Adebola Ekanola submits that Africans believe that there is an interrelationship between sensible and non-sensible aspect of reality. Africans do not believe in the world as strict compartmentalization of the world but both African and the world are interlocked and reciprocate influence on each other.

Looking at this fundamental assumption about reality by Africans, one will entertain little or no doubt that: if reality comprises the physical (perceptible) aspect which can be known or comprehensible through empirical and rational deliberation, it would then be equally important to say that there must be another way by which non-perceptible (spiritual) aspect of reality could be comprehended. It is in this regard that an analysis of other epistemologically related features of African ontological framework becomes imperative.

### ***Nature of God and spirits***

It is a fact that the history of Western philosophy shows good evidence of the futility of all attempts to prove or disprove the existence of God and spirits because, in Western philosophy, the analysis of ontological status of the supernatural beings such as God and spirits involves the problem of providing an acceptable account of the nature of the spiritual aspect of reality and its relationship with the physical aspect. This perennial problem, however, is non-existent in African metaphysics or ontology as God is believed to exist as a Supreme Being. Unlike what obtains in the Western metaphysical

tradition, the traditional Africans believed in the Supreme Being, *Olodumare* in Yoruba, and other beings that serve the will of *Olodumare* in the creation and theocratic government of creation.<sup>31</sup>

Also, central to traditional African thought is the existence or reality of spirits. African ontology accommodates the existence of a Supreme Being, God; together with, spirits and other beings. Traditional African man would not deny the existence of a Supreme Being and the reality of the spirits. The belief in the existence of a Supreme Being and reality of spirits are socially given and they permeate the entire African continent. In addition, Africans believe that there is a close relationship between spirits and other beings to the extent that it is a common belief that spirits reside in objects, plants, animals, and people. Also, their existence could be perceived like tangible objects such as tables and chairs by those who have powers to do so. Therefore, the belief that spirit is an un-embodied element that can inhabit and depart from any physical body it chooses is fundamental to the understanding that spiritual components of nature influence human experience and perception.

In view of the above submission, one can argue that African ontology subscribes to metaphysical holism in the sense that African ontology or conception of reality constitutes a holistic perspective of reality. In the view of Molefi Asante, the elements that govern how humans behave with regard to reality in the mind of Africans include the following: the practicality of wholism, the prevalence of poly-consciousness, the idea of inclusiveness, the unity of worlds, and the value of personal relationships. All these constitute the African conception of reality. In other words, these elements consist the conception of reality upon which cognitive claims are made.<sup>32</sup>

From the analysis of the traditional African ontology highlighted above, it can be argued that an epistemic justification of knowledge or reality is premised on the understanding of the ontological structure of beings and their relationships in traditional society. In this regard, the ontological structure of being in traditional

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<sup>31</sup> Idowu B. 1962. *Olodumare: God in Yoruba Belief*. London: Longman Group Limited. P. 57.

<sup>32</sup> Jimoh, A. K. 2017. "An African Theory of Knowledge." Ukpokolo, I.E. (ed.) *Themes, Issues and Problems in African Philosophy*. Switzerland: Palgrave Macmillan. pp



African thought emphasises that man and nature cannot be separated because man and nature are not two separate independent and opposing realities but one inseparable continuum of a hierarchical order.<sup>33</sup> Thus, African ontology and epistemology are intertwined and capable of providing justification for explaining non physical or theoretical elements of culture.

Therefore, in view of the prevalent dichotomies and demarcations in Western philosophy on the object of knowledge and the knower, physical and spiritual world, one can argue that the ontological foundation of African thought reveals that such distinctions do not constitute a problem in the traditional African thought. Perhaps, one of the reasons the relationship between the physical and the spiritual realm or what can be known and how it can be known, is not so problematic for the traditional Africans is that they do not make any effort, unlike Western counterparts, to reduce what can be known and how they can be known to purely empirical terms.<sup>34</sup>

Having identified the features of the ontological foundation of traditional African conception of reality, it can therefore be argued that the nature of beliefs associated with divination, paranormal cognition, magic or witchcraft are essentially metaphysical and cannot be discussed or analysed in isolation. The inference to be drawn from this is that all claims regarding supernatural or spiritual beliefs have their own language of discourse and they can only be said to be intelligible or unintelligible when analysed in the context in which they are held.<sup>35</sup> Therefore, certain beliefs, practices as well as knowledge claims that are associated with divination, paranormal cognition, and magic constitute a whole form of life that cannot be disputed in isolation of the totality of the form of which they are an integral part.<sup>36</sup> In this regard, Godwin Sogolo states that:

Science, a form of life, operates with a different conception of reality and traditional African ontology explains another conception of reality. Both African ontology and science are different forms of life

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<sup>33</sup> Ruch, E.A and Anyanwu K.C. (eds). 1981. *African Philosophy: An Introduction to the Main Philosophical Trends in Contemporary Africa*, Rome: Catholic Book Agency. P. 124

<sup>34</sup> Sogolo, G. 1993. *Foundation of African Philosophy: Definitive Analysis of Conceptual Issues in African Thought*. Ibadan: Ibadan University Press, pp. 68-76

<sup>35</sup> Sogolo, G. 1993. *Foundation of African Philosophy: Definitive Analysis of Conceptual Issues in African Thought*. p. 72

<sup>36</sup> Sogolo, G. 1993. pp 68-76

and each has different criteria of assessing its claim to knowledge and conception of reality<sup>37</sup>

Some scholars have argued that there should be independent or universal standard of reasoning which can be used to adjudge a culture to be logical and illogical/irrational. The position of Sogolo and some context dependent advocates of rationality is that peculiar form of life can determine context rationality and any attempt to assess the theoretical elements of the African indigenous knowledge system with scientific modes of thought or scientific principles would be out of place or misguided. Regardless of the several attempts to explain the nature of reality and knowledge of it, one thing that can hardly be refuted is that reality is one. J.A.I. Bewaji, while explicating the nature of knowledge and reality, submits that:

Humans know all kinds of things and with varying degrees of assurance or certainty, that some of these items are accessible to other people while some others are not. This is a fact which does not make claims to know any less real to the subjects of such knowledge. One fact of human existence and experience is that reality, though technically one, has various facets, dimensions and ramifications. Reality, regardless of what science may say about many universe, solar systems, planets, planes of existence,... Also, the multidimensionality of the ways of comprehending reality and its progressive extension by science and technology remain part and parcel of the same reality.<sup>38</sup>

It is now pertinent to examine the issue of rationality of belief and its correlation with the non-practical aspect of the indigenous knowledge system. It is important to note that issues with the practical aspect of indigenous knowledge have little or no challenge or problem about rationality other than the need to reconcile or synthesis practical elements of indigenous knowledge with the scientific methods or principles in order to achieve the benefits of the quest for alternative knowledge system. A major reason for the rationality issue in the aspect of the theoretical or non-practical aspect of indigenous knowledge system is that it is considered as a viable route through which the realisation of a holistic and adequate account of human knowledge can be achieved.

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<sup>37</sup> Sogolo, G. 1993. p. 72

<sup>38</sup> Bewaji, J.A.I., 2007. *An Introduction to the Theory of Knowledge: A Pluricultural Approach*. Ibadan: Hope Publications. pp31-32.

The analysis of the ontological foundations of the theoretical aspects of indigenous knowledge is a way of establishing the metaphysical justification of knowledge claims or rationality of beliefs. Without any iota of doubt, the concept of ‘justification’ is fundamental to epistemology and it is an important concept in recent epistemological discourse. This is because questions about the possibility of knowledge hinge on justification<sup>39</sup> Since the notion of justification is principally directed at beliefs, it is possible to restrict the use of the word ‘justified’ to express a purely epistemic evaluation, which is most paradigmatically concerned with the inferential aspect of belief-evaluation. This is premised on the fact that epistemic justification involves evaluations of beliefs and a belief’s rationality depends on the reasons for holding it. Thus, the words ‘rational’ and ‘justified’ are used interchangeably and narrowly in this study.

Rationality is, indeed, one of the essentially contested concepts that have been defined severally by scholars and other authorised bodies. The Concise English Dictionary defines rationality as “the quality or state of being rational. This means that it is related to reason. Simply put, it is the power of reasoning or to reason. Rationality is the capacity to use reason intelligibly. It is equated at times with logic, consistency, coherence, and systematic ways in thinking out a problem, when a statement or belief is justified. This is when rationality has both explanatory and predictive power. Rationality is known for its simplicity and pragmatic values. It can be said therefore that something is said to be rational if it is reasonable, plausible, acceptable, good and has an intrinsic or extrinsic worth.

Although rationality of beliefs, ideas, or statements is often restricted to its practical or instrumental tendency, this thesis adopts context-dependent canon of rationality that states that what determines the rationality of a belief is the norms of rationality of the relevant culture and not an unchanging canons or principles of scientific rationality, which is proposed to be an ideal theory of rationality which adjudicates on matters on rationality of culture.

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<sup>39</sup> Goldman, A. 1986. *Epistemology and Cognition*. Cambridge Mass: Harvard University Press. p 4

In view of this, we argue that it would be difficult to understand the epistemological and metaphysical foundations of the theoretical elements of African indigenous knowledge system if what can be known and how they can be known have been reduced greatly to scientific canons of rationality. The fact is that the analysis of the ontological status of indigenous knowledge system shows that different forms of life do exist and these forms of life have their own criteria of truth and intelligibility, which cannot be validated by appealing exclusively to scientific methods or logical principles. It is in this regard that it is argued that knowledge claims involving divination, paranormal cognition, and magic constitute a different form of life that cannot necessarily be assessed in terms of scientific standards or logical principles rather they should be analysed within the language of their metaphysical or ontological discourse.

In Western epistemology, four basic sources of knowledge have been identified: memory, perception, self-consciousness, and testimony. According to Sogolo, the first three are regarded as first-hand sources while the last is second-hand. Sogolo further argues that most of the beliefs that attract the greatest doubts are based on testimony. Either by sheer coincidence or by design, it is the case that several traditional African beliefs are derived from ontologically-based testimony. This means that most of the beliefs or practices associated with indigenous knowledge claims are shared through testimony; thus, grounded in African ontology.

Based on the fact that the scientific or empirical method is considered as the paradigmatic method of validating all knowledge claims and our position that the kind of justification or evidence that is required to support metaphysical beliefs ought not to be outside of metaphysical or spiritual contexts, one might be tempted to ask the questions that: what has to be true of a belief for it to be epistemologically justified or rational? What characteristics should be possessed by a belief for it to be rationally or epistemologically justified?

In view of the above question, a number of attempts have been made to free indigenous knowledge system from this conundrum. According to Goldman, the kind of answers to the questions posed above can be sought from the following substantive justification

conditions, these include: (a) logical conditions, (b) probabilistic conditions, (c) psychological conditions, (d) social conditions, and (e) metaphysical conditions.<sup>40</sup> By logical condition, it is assumed that logic deals with the principles of good reasoning and therefore justification of beliefs should proceed in terms of logical reasons. Therefore, a person's belief in proposition p is justified if p is logically implied by other propositions the person believes.

For probability conditions, Goldman argues that the term 'probability' is notoriously ambiguous. He, however, states that a theory of justification would appeal to probability condition if justification arises from the corpus of cognizer's beliefs plus probabilistic relationships between the target belief and the beliefs in this corpus (or rather, the propositional contents of these beliefs).<sup>41</sup> Also, a theory of justification would fall into the category of social conditions if justification of belief were based on socially accepted practices, form of life or language game. In this regard, indigenous knowledge system is socio-culturally justified. On the metaphysical condition, there is no doubt that the theory of justification of belief that appeals to ontological foundations of theoretical aspect of indigenous knowledge invokes metaphysical conditions of justification.

Goldman argues further that most theories of justification appeal heavily to psychological conditions, especially the antecedent beliefs of the cognizer. For instance, a theory that invokes psychological conditions is the one that justifies non-practical aspects of indigenous knowledge system by appealing to volitional and emotional thesis. According to Sogolo, knowledge claims based on beliefs in traditional cultures are very prominent and predominantly of the kind of belief Price calls "acceptance." Their main sources are custom and tradition which the believers assimilate and adopt unquestionably and some of which his personal experience may have to reinforce. If the traditional man is pressed for evidence or justification, he may conjecture some possible reasons why his society has held to these beliefs but which,

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<sup>40</sup> Goldman, A. 1986. *Epistemology and Cognition*. pp. 23 – 24.

<sup>41</sup> Goldman, A. 1986. Pp. 23-24

normally, are not regarded as a satisfactory explanation. Or, he may simply point to the fact that they are part of his culture over which he has no choice but to adopt. He may uphold the belief that his immediate culture is pertinent to his living in the society. In Sogolo's view, human beings are bound to accept that connections because that is the way our mind works. The major reason for this is that we, most times, do not question certain kinds of beliefs, which are assimilated from our cultures and associated with certain ideas. Individuals react to the belief based on his personal experiences.

Closely related to the views of Price and Sogolo is the idea of solidarity. Solidarity, a concept within the parlance of socio-political thought, suggests the way of organising beliefs or interests toward the course of producing concerted actions. Though 'epistemic solidarity', according to Goodin, facilitates the collective action of masses over those of the elites with a prior motive for pooling together correct beliefs to overcome false consciousness.<sup>42</sup> This sense of epistemic solidarity is expressed in a different way by Rorty when he noted that; "insofar a person is seeking solidarity, he or she does not ask about the relation between the practices of the chosen community and something outside that community."<sup>43</sup> The argument here is that there are procedures of justification of beliefs, which are not merely local, or social but also naturally confined within the horizons of the group.<sup>44</sup> This understanding does not merely reflect other aspects of socio-cultural dimensions of knowledge claims missing in many epistemological orientations but also represents the veritable socio-cultural means of knowing which underpin and validate others.

What can be inferred from the above is that we should break away from the obsession with the justification of beliefs through the quest for universal methods or scientific principles in all areas of knowledge. Rather, we should focus on the functions of institutions, traditions, conventions and rules of the game in the justification of certain

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<sup>42</sup>Goodin, R.E. & Speikermann, K. 2014. "Epistemic Solidarity as a Political Strategy." Being a Paper Presented at a Workshop at the Public Choice Research Centre, University of Turku and at a Workshop on Legitimacy and Factual Disagreement at the University of Copenhagen.

<sup>43</sup>Rorty, R. 1989. "Solidarity or Objectivity?". In Michael Krausz Ed. *Relativism: Interpretation and Confrontation*. Notre Dame: University of Notre Dame Press. P. 167.

<sup>44</sup>Rorty, R. 1989. pp. 168 – 169.

beliefs or knowledge claims. The nature of belief we hold is mainly determined by its source and the kind of evidence or justification that sustains it is a function of the context in which the belief is generated. Therefore, an adequate account of knowledge can be realised if conscious effort or attention is paid to the multidimensionality of socio-cultural factors, which are involved in the acquisition and justification of human knowledge.

### **0.5 Aim and objectives of the study**

This study aims to explicate the possibility of indigenous knowledge as an epistemological platform for the realisation of an adequate account of knowledge. As a variant of social epistemology, indigenous knowledge system emphasises that knowledge can be acquired and justified by the socio-cultural factors or conventions of a particular culture or society. This suggests that the idea of indigenous knowledge endorses the role(s) played by culture and society in knowledge acquisition. The study is, therefore, intended to project and “protect indigenous knowledge in the face of myriad pressures that are undermining the conditions under which indigenous people and knowledge thrive.”<sup>45</sup> The quest for indigenous knowledge will ensure a new thrust to a larger share of power and control over people’s social and political environment and provide access to knowledge about their history, culture and social life.

It is important to state that the idea of indigenous knowledge as a variant of social epistemology is set to provide a remedy for social epistemology where justification of certain beliefs transcends modern scientific methodology or rationality. Indigenous knowledge systems can be used to justify some forms of human knowledge particularly in those areas where modern science and its canons of rationality failed in providing explanations or had regarded as irrational.

It is also important to state that the real challenge, which this study seeks to undertake, is not to romanticise indigenous knowledge or undermine the importance of modern science; rather, the study seeks to establish that both categories have their strengths and

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<sup>45</sup> Masolo, D. A. 2003. *Philosophy and Indigenous Knowledge: An African Perspective*. p32.

limitations. Indeed, the two forms of knowledge employ different methods to investigate reality. They should, therefore, complement and not confront or undermine each other as far as holistic view of rationality or justification of beliefs, or of human knowledge is concerned. It is believed that when such a holistic view is undertaken, the search for absolute or universal accounts of knowledge, which are necessary and sufficient conditions of knowledge, objective account of truth, and scientific rationality of all beliefs would be jettisoned. Rather, the analysis of human knowledge would accommodate other important knowledge systems that have been either undermined or neglected as irrelevant and irrational. The specific objectives of this study include the following:

- To explore and demystify the rigid canons of analysis and justification of knowledge.
- To explicate how all knowledge is human-centred or driven by human interest.
- To highlight the emancipating capabilities of social epistemology and indigenous knowledge.
- To justify how and why the rationality of a belief ought not to be limited to scientific canons or principles of rationality. Rather, rationality of beliefs should be established within the context in which they are generated.

## **0.6 Methodology**

The methodology this study employed is philosophical argumentation involving conceptual clarification and critical analysis of concepts such as knowledge, justification, rationality, science, and indigenous knowledge. The study engages the task of conceptual analysis of the idea of indigenous knowledge by examining various definitions of indigenous knowledge. In this regard, we examine the definitions that place premium on the origin or source of indigenous knowledge in terms of the geographical location of the people's knowledge claims, the conceptions that emphasised indigenous knowledge system as well as its cultural elements.

Additionally, the work is both expository and evaluative by adopting a discursive method of analysis. The works of Thomas Kuhn, W.V.O Quine, Karl Popper, Richard



Rorty, Steve Fuller, Alvin Goldman, Helen Longino, Jurgen Habermas, Kwasi Wiredu, D. A. Masolo, Paulin Hountondji, Godwin Sogolo, M. B. Ramose and other relevant books and journals are consulted.

### **0.7 Justification for the study**

The idea of social epistemology is self-critique in Western epistemological discourse. It has lent a “strong supportive voice to the emergence of postcolonial text in asserting that most aspects of knowledge are significantly local and are partly reflected in the communal and practical (socio-historical) contexts of their production.”<sup>46</sup> In addition, indigenous knowledge emerges as a priority concern in the global knowledge industry and development agenda. Consequently, UNESCO has recently focused attention on two core concerns: the eradication of poverty and the development of a knowledge-based society. Activities are targeted to addressing the importance of local and indigenous knowledge as a resource for combating marginalisation and impoverishment.

Effort made in this work is epistemologically defined in the sense that it seeks to emphasise the importance of indigenous knowledge system as a viable means to understanding the socio-cultural dimension of human knowledge. More specifically, we argued that an understanding of indigenous knowledge as a variant of social epistemology would serve as an epistemological platform for the realisation of an adequate or holistic account of human knowledge and this represents a shift in hegemonic orthodoxy in the analysis of human knowledge.

This study is justified because of the long decades of neglect and dismissals of indigenous knowledge as well as what it signifies. Unlike before, “rationality, based on and defined by Western epistemological code... was the yardstick of judgment against others.”<sup>47</sup> Certain Western models or canon of rationality have been accorded undue privilege over other models as the essence of rationality, truth, knowledge and so on, even when these might yield just as good results as Western model.

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<sup>46</sup> Masolo, D. A. 2003. p32

<sup>47</sup> Masolo, D. A. 1994. *African Philosophy in Search of Identity*. pp124-127.

From the foregoing, the idea of indigenous knowledge that is being projected in this study does not merely attempt to free traditional epistemology and especially social theorists from the shackles of hegemonic scientific paradigmatic models of knowledge production or rationality for all beliefs but also places emphasis on role(s) to be played by socio-cultural factors, which are involved in realising an adequate account of human knowledge. Hence, indigenous knowledge system goes beyond the abstract epistemic discourses that have pervaded classical philosophy to embrace human interests and other socio-cultural dynamics.

## **0.8 Chapter outline**

**CHAPTER ONE: TRADITIONAL ACCOUNT OF KNOWLEDGE** In this chapter, we attempted a critical analysis of some issues, problems, and challenges in traditional epistemology. The traditional epistemology is concerned with the following problems; what kinds of knowledge are there? What are the sources, structure, mechanisms, and the limits of what can be known? How is knowledge related to belief and justification? How ought we to proceed in order to acquire knowledge? Since one of the major problems of the traditional epistemology is to provide a definition of the word ‘know’ and the task has typically taken the form of the search for definitions or analyses of the concept in terms of its logically, necessary and sufficient conditions of knowledge, the chapter, therefore, examined what has come to be known as the traditional or justified true belief (henceforth, JTB) account of knowledge and some assumptions.

## **CHAPTER TWO: RESPONSES TO TRADITIONAL ACCOUNT OF KNOWLEDGE.**

From our analysis of the tripartite definition, there are obvious attractions in the JTB. One of them is that JTB sought to prevent lucky guess from counting as knowledge even if the guesser is sufficiently confident to believe his own guess. However, knowledge goes beyond the three conditions. Edmund L Gettier, in a very short but influential paper, attempts to establish some problems with the traditional account of knowledge. What Gettier did was to provide examples of beliefs which are both true

and apparently justified, but which did not amount to knowledge. Therefore, this chapter critically examined Gettier's problem and some responses to Gettier's objections with other attempts at providing the fourth condition of knowledge.

### **CHAPTER THREE: THE IDEA OF SOCIAL EPISTEMOLOGY**

In view of the intractable nature of traditional epistemological problem in terms of the quest for logically necessary and sufficient conditions of knowledge and current interests and developments in the study of knowledge systems generally, epistemological orientations such as Naturalized Epistemology, Evolutionary Epistemology, Feminist Epistemology emerged with different positions and contributions to epistemological debates. For the sake of grounding indigenous knowledge within an epistemological discourse, the idea of Social Epistemology is explained in this chapter. Among the tasks undertaken in the chapter include: the analysis of the distinction between sociology of knowledge or sociology of scientific knowledge and social epistemology. Issues and questions with the social conception of knowledge include the following: what does it mean for epistemology to be social? What are the various approaches to social epistemology? Is social epistemology different from other series of attempts to define and justify human knowledge?

### **CHAPTER FOUR: THE NATURE OF INDIGENOUS KNOWLEDGE**

This chapter analyses the forms of knowledge that exist. It is concerned with the need to rehabilitate some indigenous materials conducive to proper understanding of knowledge in some areas. Apart from engaging a historical and conceptual map of indigenous knowledge, we also categorised indigenous knowledge into two namely: practical and theoretical. This chapter identified and discussed some practical or technical aspects of indigenous knowledge. The chapter also focuses on the epistemic foundation of indigenous knowledge as well scientific knowledge in order to show that, in spite of their different methodologies, they (indigenous and scientific knowledge) operate on the same epistemological foundation of induction. Therefore, we argue that advocating a superfluous division between practical elements of the indigenous

knowledge system and scientific knowledge by establishing the synergy between practical aspect of indigenous knowledge and scientific knowledge, it is expedient for scientists to further consider indigenous knowledge as resource for further scientific exploits and discovery.

## **CHAPTER FIVE: TOWARDS AN ADEQUATE CONCEPTION OF KNOWLEDGE**

While we divided indigenous knowledge into: practical and theoretical categories, the theoretical aspect is regarded as non-empirical and non-practical consisting the oral culture, values, beliefs and practices which are epistemologically justifiable as well as providing an intelligible explanation or justification for an unexplained phenomenon or reality. This chapter examines the ontological foundation of the theoretical elements of indigenous knowledge in order to provide a template for an adequate account of knowledge. Also, efforts are made to justify the rationality of beliefs and indigenous practices in order to debunk misguided assumptions about the rationality or otherwise of indigenous beliefs and practices. The chapter equally examines some of the possible criticisms against epistemic justification for theoretical aspect of indigenous knowledge that will provide a template for an adequate account of knowledge.

## **CONCLUSION**

The project of developing and justifying an alternative knowledge raises several philosophical and political issues. Attempts have been made in this work to restrict some of the issues to philosophical and especially epistemological questions. The core epistemological issues that the work dealt with include issues bordering on nature and conditions of epistemic justification, question of rationality and the challenge of epistemic relativism. For instance, arguments for socio-cultural and ontological justification of human knowledge claims assume the possibility of epistemic pluralism. This issue raises the problems of commensurability of the different knowledge systems and question of whether or not there can be common criteria of validity, which could be applied to all forms of knowledge.

Knowledge is a universal and natural phenomenon that human beings desire for their existential contingencies. However, ‘by virtue of our common humanity which makes certain problems or issues applicable to all humans across the world,’<sup>48</sup> many of the western epistemological orientations and scholars have construed knowledge as a universal phenomenon that requires universal or objective standards of validation while paying little or no attention to socio-cultural forces and human interest. The fact that knowledge is a universal phenomenon does not necessarily mean accepting the claim of universalism that calls for neutrality or detachment from socio-cultural settings.

Consequent upon this, a conscious engagement with epistemological pluralism as implied in ontological justification of indigenous knowledge system or what Toyin Falola calls ‘Pluriversalism’ would enhance the revival of the often marginalised or neglected indigenous knowledge system. To Falola, for instance, accepting the Universalist’s claim to Neutrality is to fall victim to the dominance of the so-called universal epistemology which posits that only one truth exists which has equally been translated to ‘European particularism.’<sup>49</sup> Embracing the thesis of epistemological pluralism or pluriversalism, Falola corroborates the ideas of Janet Conway and Jakeet Singh that pluriverse suggests multiple ontologies and worlds. These are known in diverse ways. Both universalist and globalist projects are explicated in a unitary ontology. Against the background of imperialist epistemologies which believes that the world is one, pluriverse is multidimensional.

While we maintain that reality is one but ‘its manifestation varies within several societies based on their location within the cosmos and experiences over the years and owing to the fact that sources of knowledge are not limited by space and boundaries, this work places its emphasis on epistemological pluralism against the hegemonic epistemological universalism and its operating systems<sup>50</sup> to establish the epistemic justification of indigenous knowledge system. Consequently, the rationality question is

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<sup>48</sup> Falaiye, M. 2017. “Is African Studies Afraid of African Philosophy?.” Afolayan, A. and Falola, T. (eds.) *The Palgrave Handbook of African Philosophy*. U. S. A: Palgrave Macmillan. pp4141-152.

<sup>49</sup> Falola, T. 2018. *The Toyin Falola Reader on African Culture, Nationalism, Development and Epistemologies*. Austin Texas: Pan African University Press. pp.889-911.

<sup>50</sup> Falola, T. 2017 p151

addressed by stating that different knowledge systems are specific to different cultural forms of life or human experience with each form of life embodies its own criteria of intelligibility that are grounded in the relationship with not only the culture's conception of reality but also in the human experience and history.

We also argued that since epistemological pluralism promotes multiples ontologies, it goes without much ado to state that the realisation of an adequate or holistic account of knowledge is imminent. It is important to state that the fact that epistemological pluralism encourages multiple ontologies does not necessarily yield or translate, in every respect, to 'relativistic' pluralism. The brand of epistemological pluralism that the study promotes merely rejects universalism as a dominant paradigm by maintaining that two or more justification rules or conditions might be required for every person and culture when it comes to acquisition and justification of human knowledge claims. By extension, in promoting the idea of multiple ontologies, it will not see itself as the 'other' as in the otherness created by the so-called universalism.<sup>51</sup>

### **0.9 Contribution to knowledge**

The importance of knowledge itself cannot be overemphasised. It is so fundamental and general that it includes itself in its scope.<sup>52</sup> Perhaps there can be no knowledge without knowledge of what knowledge is. This study contributes to the frontiers of the debate in social epistemology beyond the narrow issues raised in traditional epistemology, with particular reference to the roles of reason and experience in epistemic justification and the old-fashioned analysis of the possibility of the quest for immutable, absolute, general or universal accounts of the nature and limits of human knowledge. In this regard, the essence of indigenous knowledge system in this study is the fact that it places emphasis on the socio-cultural dimensions of human knowledge of which traditional epistemology and other modern epistemological orientations have neglected. This contributes to a better understanding of the nature of knowledge with how it actually evolves within given social contexts and the manner of its validation. It enriches the fields of knowledge in ways not appreciated some decades ago.

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<sup>51</sup> Falola, T. 2017 p151

<sup>52</sup> David, P. cited in Owolabi K. Ed. *Issues and Problems in Philosophy*. p69.

It can be said that the quest for the inclusion of indigenous knowledge system in the discourse of epistemology cannot be over-emphasised. For instance, Chinese acupuncture according to Feyerabend lacked any Western scientific underpinning and yet it was far ahead of contemporary Western medicine and technology. He goes on to state that western science reigns over the world not because of insight or inherent rationality alone but power play also. One of the major reasons for this is that western science has created weapons of death. Another reason is that western science provides food for the world and that is the reason its medicine has helped to eradicate parasites and other dangerous diseases. In view of Feyerabend's submission, it is presumptuous to suggest that because certain beliefs cannot be justified or proved scientifically that they should be rejected and taken to be irrational. Therefore, the recognition and inclusion of indigenous knowledge system, like any other forms of knowledge, in global knowledge schemes cannot be over-emphasised.

## CHAPTER ONE

### 1.0 TRADITIONAL ANALYSIS OF KNOWLEDGE

#### 1.1 Introduction

The quest for knowledge is a constant and universal feature of human existence. It is desired either as a means to other ends or ends in itself. This suggests that there is a natural tendency of the human mind to wonder about, to inquire into, and to reflect upon many issues and problems including knowledge itself. Beyond the desire to achieve knowledge, there has also been an age-long concern to understand the nature of knowledge itself. Knowledge is a subject area in which the problems are especially difficult, pervasive, and troubling in their implications.<sup>53</sup> Theoretically, this subject area is referred to as epistemology, otherwise defined as the philosophical study of knowledge or theory of knowledge. According to D. W. Hamlyn, epistemology studies “the nature and scope of knowledge. It is concerned with the general reliability and preoccupation of knowledge.”

While epistemology or theory of knowledge was coined in the Renaissance period, it has always been regarded as the most central area of philosophy. One can argue that the importance of epistemology to philosophy lies primarily in the fact that it involves in the activity of producing knowledge through investigating the process of human cognition and all problems associated with its acquisition and justification.<sup>54</sup> Also, epistemological concerns provide platform for philosophy, as an enterprise that adjudicates knowledge claims in other disciplines. Thus, it is an important concern for an epistemologist to identify and provide an intellectually valuable explanation for the characteristics or properties in virtue of which a person can be said to know or have a justified belief<sup>55</sup> in a manner that such explanation enhances an understanding of the nature of human knowledge.

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<sup>53</sup> Bonjour, L. 2010, *Epistemology: Classical Problems and Contemporary Response*. UK: Rowman & Littlefield Publishers, Inc. p. 2

<sup>54</sup> Owolabi, K.A. 2000. “The Nature and Problems of Epistemology.” Owolabi K.A. (ed.), *Issues and Problems in Philosophy*. Ibadan: GROVACS Network. p. 50

<sup>55</sup> Crumley, J. S. 1999. *An Introduction to Epistemology*. London: Mayfield Publishing Company. p. XIII.



Therefore, there is no doubt that epistemologists have special interest in the concept 'knowledge.' The concern of this chapter, however, is to navigate around the question: What is knowledge? Or, what does it *mean* to say that I know? In a way, this might typically imply a quest for the definition of the word "know." Indeed, the issue of the meaning of knowledge is one of the core epistemological problems. While some modern epistemologists have come to feel that the question "what is knowledge?," can be reduced greatly to a linguistic question<sup>56</sup>, others considered the question of the meaning of knowledge or to know as the quest for conditions or standards or criteria that must be satisfied in order to know or claim knowledge. In this regard, historically, there are several accounts of the nature of knowledge. These include Plato's account of knowledge, the Principles of Cartesian Epistemology,<sup>57</sup> A.J. Ayer's thesis, and Roderick Chisholm's, among others. Hence, the starting point on the analysis of knowledge in this chapter is the formulation of Justified True Belief otherwise known as JTB as postulated by Plato.

We shall attempt to expose the notion of knowledge as JTB, taking care to explain the components of JTB in knowledge. The chapter would also examine the plausibility of the traditional account of knowledge as JTB. It is in this regard that the chapter would discuss what appears to be the most prominent attack on the conception of knowledge as JTB.

## **1.2 The nature of knowledge**

It is important to start this discourse on the nature of knowledge by stating that from the beginning of the ancient Greek philosophy up till the period of Descartes that there are no accounts on the nature of knowledge and belief. Ancient epistemology deals with cognition; that helps in the understanding of the natural world. It should be emphasized that one cannot consider ancient epistemology as if it upheld a unanimous and not a plethora of theories about what constitutes knowledge, yet their common

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<sup>56</sup> Everitt, N. and Fisher, A. 1995. *Modern Epistemology: A New Introduction*, London: McGraw-Hill, Inc. p. 2

<sup>57</sup> Bonjour, L. 2010. *Epistemology: Classical Problems and Contemporary Response*. p. 9

position is that knowledge is a natural phenomenon and that it is possible to have incorrect or correct accounts of what knowledge is.

Indeed, their shared naturalism is also characterized by the way knowledge is viewed. In other words, knowledge, in this era, is real and something with its own natural features and the possibility of being able to communicate it or even being able to justify it is secondary to the question of whether one actually possesses it or not. Thus, the ancient epistemology was not characterized or viewed as a stipulated or semantically determined type of belief. Rather, its attainment was identical with the highest possible cognitive achievement, namely wisdom.

As a consequence, the naturalistic conception of knowledge that pervaded classical epistemology is such that the examination of issues relating to knowledge is treated in a generalized and univocal manner and also independent of human experience, socio-cultural factors and interests. However, it is important to state that contrary to ancient epistemological presupposition/conception, knowledge is a social phenomenon by virtue of its relationship to human intentional states and experience. This position suggests that knowledge claims are open to the possibility of human interests, social factors, and indeed, what legitimises knowledge often vary with context. Therefore, the social nature of knowledge shows that human knowledge and thought are conditioned by non-cognitive, socio-cultural factors.

Another important noticeable feature of ancient conceptions of knowledge is their preoccupation with what Keith Lehrer called ‘metaphysical epistemology.’ According to Lehrer, the focus of epistemology and metaphysics in philosophical inquiry shows that they are of separate concerns: while epistemologists ask questions about what we know and how knowledge is or ought to be obtained or sought, metaphysicians make inquiries into what is real. Lehrer queries the assumption of the ancient philosophers on why they placed emphasis on an account of the nature of reality and then appended a theory of knowledge to account for how we know reality.<sup>58</sup> For him, ancient epistemologists including Descartes assume that knowledge is assumable and

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<sup>58</sup> Lehrer, K. 1995. *Theory of Knowledge*. London: Routledge, p. 1

achievable. They took it for granted that we can have knowledge and be primarily interested in the question of what the true object of knowledge is. Therefore, to have knowledge of a thing is to know its essence, i.e., to know why it is and such is metaphysically laden. This is what the true object of knowledge is all about.

To illustrate this point, Plato metaphysically concludes that abstract entities such as triangularity, justice, and knowledge are mere appearances. For instance, in an attempt to contrast knowledge with opinion (*episteme* and *doxa*), he states that the objects of genuine knowledge are forms-which are immaterial, immutable, and unchanging realities. The justification for this is that, forms occupy a realm independent of sensory objects since there cannot be truth about changeable sensory objects. Thus, knowledge as form is 'real' and grasped by the mind. But mere opinion or appearances are grasped by the senses. They are ruled out in the scheme of knowledge of reality because sensory objects are partly unreal and subject to change.

For Aristotle, however, knowledge is only of forms that are immutable but not in the sense of Plato's forms. According to Aristotle, forms necessarily exist in physical objects or instantiated in sensory objects: they do not occupy a realm independent of the sensory world. Hence, he held that individual substances, such as individual statues or animals, are real.<sup>59</sup> His major concern is to inquire into how we might have knowledge, especially general knowledge, concerning these substances. Given the above examples, it is hardly surprising, according to Lehrer, that Plato and Aristotle produced vastly different theories of knowledge. That is, they clearly conceived of the nature of objects of knowledge in such different ways. Yet, their common approach is devoted to metaphysical epistemology.<sup>60</sup>

However, in Lehrer's view, metaphysical epistemology seems to be an approach that conflates two different objects of concern. It examines what knowledge is like. Metaphysical epistemology focuses on reality. To this end, he believes that the problem of the concept of knowledge should be a form of philosophical inquiry into the possibility of validly inferring statements about the world from given data and not

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<sup>59</sup> Lehrer, K. 1995.p.1

<sup>60</sup> Lehrer, K. 1995. p.1

uncritically assuming knowledge while assigning priority to metaphysics. That is, knowledge, if it is knowledge at all, must necessarily be that something is the case or knowledge that something is not. And, since knowledge concerns facts, an investigation into what facts are could be helpful than examining the essence of knowledge which is the concern of metaphysical epistemology. In this regard, Lehrer argues for a *critical epistemology* that begins with common sense and scientific assumptions about what is known. This is unlike classical epistemological analyses that were concerned with essence of knowledge through uncritical assumption of our knowledge of reality while assigning priority to metaphysics. In the view of Lehrer, philosophical inquiry accounts for data through critical approach that can either be explained or discarded. What should be noted is that an epistemological exploration is needed to explain how we know things that we think we know and why we do not know. In providing answers to all these, there is a need to ask first what knowledge is.

From Lehrer's submission, one might be tempted to disregard or jettison the idea of what he calls metaphysical epistemology. In spite of the concerted efforts put up by Lehrer to discredit traditional metaphysical epistemology, it is important to state that it is hard to see how in any case metaphysical questions can be avoided in an epistemological discussion. The point here is that while metaphysics not only underlies all the other sub-divisions of philosophy, it also lies at the very foundation of all human discourses and endeavours. According to Richard Kirkham's, it is absolutely essential to any complete epistemology that it has answers to the metaphysical issues.<sup>61</sup> Thus, metaphysical outlook in the analysis of human knowledge can hardly be undermined if genuine and holistic account of human knowledge is to be realized. This position shall be elaborated in Chapter Five of this work.

Notwithstanding the above, one can start the analysis of the concept of knowledge by distinguishing several ways we use the word 'know' or 'knowledge' for this purpose. The word 'knowledge' as a generic term has different senses. In one sense, 'to know' is an expression of a psychological conviction or cognitive aspect of consciousness in

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<sup>61</sup> Kirkham, R. 1995. *Theories of Truth: A Critical Introduction*. London: MIT Bradford Press. p. 43

general.<sup>62</sup> It can also be used to describe a fact to be established. A fact, for example, is the actual state of affair of an event or a conceptual projection, whose truth can be proved. In this sense, knowledge is used to contrast mere opinion or belief. Knowledge is also spoken of as conveying information or to recognize something as information.<sup>63</sup> In this conception, knowledge is seen as a statement or assertion of verified information about something that is the case or a fact. The information sense of ‘know’ is also generally concerned with either someone’s belief or its content. For instance, if we are aware of a fact, we might wish to know whether our subject believes that fact or not.

In view of such tremendous variety of meanings of knowledge, philosophers have tried to impose some order by distinguishing three different kinds of knowledge. One, there is capacity knowledge or a special form of competence knowledge sometimes called “know-how.” This kind of knowledge covers all those cases in which a person or a group of people know how to do something. Put succinctly, knowledge-how is ability, a not-necessarily- cognitive capacity to do or act.”<sup>64</sup> Examples of know-how include: to know how to drive from Abuja to Lagos; how to swim, how to repair a car. In some respect, if a person does something which he knows, it is this competence sense of ‘know’ that is usually involved. However, this sense of ‘know’ however is not restricted to human beings. Animals too know how to do all kinds of things; sometimes they ‘know-how’ without ever having to learn. Many animals ‘know how’ by instinct or that their behaviour is genetically programmed and most of these non- human animals have far more natural know-how than we humans do,”<sup>65</sup> that is, they do things without having learned them. It is also important to state that this ‘know-how’ varies from individual to individual across cultures or even culture to culture.

Another sense of ‘know’ is knowledge by acquaintance. The notion of knowledge by acquaintance is, consciously or unconsciously general but it was primarily associated with Bertrand Russell. In his views, knowledge by acquaintance is an aspect of

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<sup>62</sup> Hetherington, S. 2006. *Epistemology Futures*. Oxford: Clarendon Press. p. 71

<sup>63</sup> Hospers, J. 1996. *An Introduction to Philosophical Analysis*. London: Rutledge & Kegan Paul. pp.19-20

<sup>64</sup> Hospers, J. 1996. pp.12-20

<sup>65</sup> Hospers, J. 1996. p.19

knowledge that has no inference. To 'know' in this sense is to be acquainted with someone or something. This type of knowledge covers all those cases in which we are said to know some particular things; things which exist in space and time, and to know it by personal acquaintance. For instance, I know George, I know Lagos, and I know Trenchard Hall. One of the characteristics of this type of knowledge is that it is explicated in the verb "know." What it means by "I know George is that I am acquainted with George.

In fact, one can argue that this kind of knowledge is invaluable to understanding the nature of human knowledge because "all our knowledge rests upon acquaintance as its foundation."<sup>66</sup> One cannot have knowledge of the world without first having this sense of 'know,' that is, knowledge by acquaintance. In another light, the acquaintance sense of 'know' might also mean that I have the special form of competence. For example, in claiming to know Lagos I might mean how to get to Lagos or special form of competence to find my way around the city, geographically or socially. Hence, the term 'know' may be used in more than one of these senses even in a single utterance.

The third category of knowledge is propositional knowledge. Although, epistemologists are interested in the other types of knowledge mentioned above but are mainly concerned with propositional knowledge. While propositional knowledge takes the form '*S knows that p*' where S stands for a subject and p stands for a declarative sentence expressing some proposition. In other words, a proposition is something which can be expressed by a declarative sentence, and which purports to describe a fact or a state of affairs, such as "Dogs are mammals," "Abuja is the capital of Nigeria," "two plus two equals four," and so on.

Even though propositional knowledge is not the only kind of knowledge but making propositional knowledge the primary object of attention is purely an academic exercise to the epistemologists. In other words, the primacy accorded the propositional knowledge in the analytic tradition is probably connected with the fact that neither acquaintance nor capacity knowledge is wholly independent of propositional

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<sup>66</sup>Hospers, J. 1996. p.19

knowledge in the sense that knowledge by acquaintance or by capacity does not define knowledge unless these can be shown to reduce to propositional knowledge.”<sup>67</sup> This emphasises that there is a connection between practical or know-how and propositional or factual knowledge.

While there are close connections among these three kinds of knowledge, the propositional knowledge historically attracted most attention from philosophers and it is therefore tempting to think of propositional knowledge as theoretically fundamental in the conceptual analysis of knowledge. Following Russell, Everitt and Fisher argue that propositional knowledge is greatly important to epistemologists probably because it connects with such philosophically interesting concepts as rationality and truth. This can be understood from the distinction between propositional knowledge by description and non-propositional knowledge by acquaintance as advanced by Russell. He states thus, “Knowledge of things can be either by acquaintance or by description. Propositional knowledge is knowledge by description and it always involves knowledge of truths.”<sup>68</sup> This distinction, as advanced by Russell emphasizes the importance of propositional knowledge in conceptual analysis of knowledge and it also reflects the generally accepted idea that the truth of a proposition does not vary over time. Or, that propositional knowledge is a form of knowledge of truths that are either true or false once and for all, and that it does not depend solely on experience. The most important aspect propositional knowledge is that it enables people to go beyond the limits of our experience. It should be noted that truths are composed in terms of experience which we have experienced in acquaintance.

Another significance of propositional knowledge in epistemological inquiry lies in the understanding of statements or sentences that are declarative rather than commands or questions, and other things expressed in the sentences/statements that human beings utter. For instance, dogs hear commands; can identify their owners, places, respond to

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<sup>67</sup> Hetherington, S. 2006. *Epistemology Futures*. pp.71-73. He argues that knowledge-that and knowledge-how are not distinct because a reduction of the one to the other is possible, a view that attempts to establish the failure Gilbert Ryle conceptual centrality of knowledge-that.

<sup>68</sup> Russell, B. 1912. *The Problem of Philosophy*. Oxford: Oxford University Press. pp22-28. Also, Everitt, N. and Fisher, A. 1995. *Modern Epistemology: A New Introduction*. London: McGraw-Hill, Inc. p. 2

certain cues and other things. Yet, the propositional sense of “knowing is pretty much limited to human beings because other creatures cannot know that some statements are true or false.”<sup>69</sup> Put succinctly, propositional knowledge is a cognitive affair, that is, *knowledge-that* is a cognitive state in which one accurately represents, reflects, or reports some aspects of reality.

Although propositional knowledge seems endlessly varied yet epistemologists are somewhat agreed as regards the common features of propositional knowledge. There are different types of knowledge. One of them is non-empirical knowledge or knowledge based on pure reason or a prior knowledge. It is predominantly independent and derivable from reasons. Kant called this pure knowledge understanding. Examples include the following: I know that two plus two equals four; that triangles have three sides; that anyone who is a bachelor must be unmarried. Also, empirical or a posteriori knowledge proposition is based on some specific sensory experience. In other words, empirical knowledge is possible only subsequent, or posterior, to certain sense experiences. Knowledge of physical objects is typically cited as a paradigm instance of empirical knowledge. Some epistemologists, called rationalists, believe that all knowledge is ultimately grounded upon reason; others, called empiricists, believe that all knowledge is ultimately grounded upon experience.

Further on knowledge. There are two parts of knowledge: the objective and the subjective. According to J.A.I. Bewaji, the objective part has to do with the things we are conscious of as knowing beings. The subjective part, on the other hand, has to do with human agent as a knower, who is subject of knowledge. This classification is important because it will help in the effort to determine the justification of knowledge claims. According to Bewaji, when an analysis of knowledge is being undertaking, attention must be paid to the presence or absence of these two parts of knowledge. Thus, the implication for recognizing these constituent parts of knowledge is that it

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<sup>69</sup> Hospers, *an Introduction to Philosophical Analysis*. p. 20



would help to realize a good understanding that human knowledge as well as its justification is diverse and multi-dimensional.<sup>70</sup>

### **1.3 The Traditional conception of knowledge**

Having narrowed our focus to propositional knowledge, and restricting ourselves to speculations about ‘beings that have a language’, we must ask ourselves what the requirements for knowing something as opposed to just believing it are. What is the difference between someone who knows something and someone else who does not know it, or between something one knows and something one does not know? In short, what are the criteria, standards or conditions of knowledge? Epistemologists focus on the concept of knowledge, that is, identifying a set of individually necessary and jointly sufficient conditions which would determine whether someone knows something or not. To say that some conditions are necessary for knowledge is to say that, in order to claim knowledge, a person must meet them all: if a person fails to meet any one of them, he will not count as knowing. And, to say that they are jointly sufficient is to say that, if he does meet them all he will count as having knowledge. To this end, philosophers have examined a set of three standard or classical requirements which we refer to as the classical account of knowledge or Traditional Account of Knowledge (TAK).

While the starting point of most attempts at the traditional analysis of knowledge is Plato’s account of knowledge, his theory of knowledge is not systematic and cannot be elaborated in any conversation. As earlier stated, from the ancient times, Plato developed an analysis of knowledge in the larger context of his metaphysical concerns in a number of his dialogues specifically, the *Meno*, *Phaedo*, *Republic*, and *Theaetetus*. In these dialogues, Plato described how the human mind achieves knowledge and how to achieve a deeper understanding of the concept of knowledge itself. In the *Republic*, for example, he endorsed the view that knowledge is only of what is unchangeable. Perhaps he assumed that this was required by the justification condition for knowledge

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<sup>70</sup> For further discussion on objective and subjective components of knowledge, see Bewaji, J.A.I. 2007. *An Introduction to the Theory of Knowledge: A Pluricultural Approach*. Ibadan: Hope Publications. p.31

because what is known is not subject to change. In fact, Plato's *Theaetetus* is entirely taken up with the question of what knowledge is and substantial part of the dialogue was devoted to setting up and refuting different definitions and characterization of knowledge.<sup>71</sup> Proceeding from the different conceptions of knowledge, he examined three conceptions of knowledge as knowledge as sense-perception; (2) true belief; (3) true belief plus account (*logos*).

The first definition which *Theaetetus* proposes is 'knowledge as sense-perception.' In the dialogue, Socrates rejects this definition and argues that knowledge as sense - perception was identified with the Protagoras position that 'man is the measure of all things' which was said to have its foundation in the perpetual flux of Heraclitus. The actual rejection of the definition of knowledge as sense perception emphasises the assumption that the reality criterion is not met in sense perception. As stated in the dialogue, one cannot maintain that his sense-perceptions are true for him in all cases and if this is the case one does not therefore attain truth. This is based on the facts that not every appearance is true and knowledge is only of the immutable reality.<sup>72</sup> Clearly, if what is known is not subject to change, then knowledge of sensory objects whose appearance is part of, is ruled out. The conclusion to be drawn from this is that we can no longer seek for knowledge in perception at all.

Another definition of knowledge considered in the *Theaetetus* is that 'knowledge is true opinion.' But how is false opinion possible? How can a man be ignorant of that which he claims to know? If I claim that I do have the opinion that Ibadan is the home to University of Ibadan, my opinion might not be from the fact that I have been to the University of Ibadan before but from simple use of common sense that a University of Ibadan must be in Ibadan. In other words, my opinion might have been as a result of coming in contact with the name 'University of Ibadan' somewhere and understanding every word therein. There seems to be a share coincidence that my opinion is in fact

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<sup>71</sup> Coplestone, F. 1962. *A history of philosophy: In Greece and Rome*. (vol. I) London: Image Books. P143

<sup>72</sup> Moser P. K. Vander Nat, A. 1987. *Human Knowledge: Classical and Contemporary Approaches*, Oxford: Oxford University Press. pp. 39-40

true but it cannot be called knowledge in the true sense of the word. The requirement for knowledge goes beyond any lucky guess, accidentally true opinion. To this end, the definition of knowledge as true opinion was seen as inappropriate for the concept of knowledge. For it is not enough that my opinion turns out true, rather I must be able to give account or prove how this is so.

The third definition considered in Plato's dialogue was refined from the former definition and it is that knowledge is 'true opinion with explanation or ground' for holding such a belief. In *Theaetetus*, the position states knowledge is the addition of reason with opinion and that any opinion without reason is not knowledge. It can be surmised that when anybody gives true opinion about a thing without reason, such person has exercised his mind. However, the person has no knowledge. Opinion with reasons shows that the person is perfected in knowledge.

Hence, this latter conception of knowledge became the famous definition of knowledge down the history of epistemology and has been differently translated and conveniently codified 'justified true belief' (JTB). This definition became the epistemological minefield for generations of epistemologists and the centre foil around which almost all epistemological inquiry and debates revolve, thus justifying the observation of Alfred North Whitehead that all what we do in philosophy nowadays is just a series of footnotes to Plato.<sup>73</sup> Thus, the traditional formulation of propositional knowledge (in Western philosophy), being a legacy from the efforts of Socrates in Plato's *Theaetetus* to define what knowledge is, involves three key components: justification, truth, and belief (JTB). This form of knowledge is also characteristically called Propositional knowledge.

There are three conditions which can be used to elaborate the formulation namely: First step in knowing involves having a belief: we do not know something unless we believe that which we claim to know. The second is the truth condition. This implies that there can be no knowledge of false propositions; belief in a falsehood is evident in delusion

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<sup>73</sup> Whitehead, A.N. 1957. *Process and Reality*. New York: Harper Torchbooks. p. 63. Lawhead, W.F. 2002. *The Voyage of Discovery: A Historical Introduction to Philosophy*. Belmont, CA: Wadsworth Publishing. p. 65

or false impression, not knowledge. Third, the idea of justification demands that the true belief must be appropriately supported; there must be sufficient evidence, conclusive reason or justification for the true belief to become knowledge. Examinations of some of the assumptions about these components of knowledge are stated as next.

## **1.4 Analysing the traditional components of knowledge: belief, truth and justification**

### **1.4.1 Belief as a necessary condition for knowledge**

The belief condition is significant to knowledge but ‘believing that P’ is characteristically weaker epistemologically than ‘knowing that P.’ That is, ‘knowledge that P’ does entail and is higher than ‘believing that P’ in any case. While the analysis of knowledge shows that knowledge and belief are related to one another in a certain way, that is, knowledge requires belief, the analysis of the nature of belief itself is a rather complicated affair. In the *Republic*, for instance, Plato argues that knowledge and belief are wholly different, indeed incompatible, states of mind. For Plato, Knowledge, being infallible is a kind of belief which satisfies certain other conditions. Therefore, the immediate concern is to know what belief is and what aim or purpose the belief condition serves in the quest to know? Perhaps the most effective way of handling this point is to distinguish two different kinds of belief and then state certain epistemic characteristics or features of belief as a component of knowledge.

Belief is the primary cognitive state which helps in the representation of the world around in a certain way. Belief regulates our behaviour and guides us around the world. It is a concept that has been viewed from different perspectives. Belief has a dual picture which has become the standard picture. For instance, David Hume posits that ‘ideas’ supplemented by a particular ‘sentiment or feeling’ in virtue of which those ideas come to serve as guides to behaviour. It is a mental attitude in which the believer is “related in some way to an object of belief and whose one of the salient features is

the way it makes rational sense of its doings.”<sup>74</sup> In sum, belief is a state of the mind or a cognitive judgement or feeling one holds as true. Belief functions, in F.P Ramsey’s phrase, like “a map of neighbouring space by which we steer.”<sup>75</sup>

However, just as epistemologists distinguish between propositional knowledge and non-propositional knowledge, there are non-propositional and propositional senses of belief. By non-propositional sense of belief, we mean those forms of belief, which are expressed by sentences of the form ‘S believes in x,’ where ‘x’ stands for a person or an institution, or a set of ideas. It is often called ‘belief-in’ and examples include: to believe in God or ghost; to believe in a free- market economy and so on. But epistemologists are concerned with propositional belief in virtue of the belief condition of knowledge. That is, traditionally, belief has been of epistemological interest in its propositional guise. Propositional belief is expressed by sentences of the form S believes that p, where p is a proposition towards which an agent, S, exhibits an attitude of acceptance. Propositional belief is parallel to propositional knowledge because it is a sort of *believing that* some propositions are true or false. Though, a belief can be true or false, but necessarily anything that we know is true. It is also sometimes supposed that all belief is ‘reducible’ to propositional belief- *belief that*, because your belief in free-markets or in God, for example, is a matter of your believing that free-market economies are desirable or that God exists.”<sup>76</sup>

Other relevant distinction in our analysis of belief involves *occurrent* belief and *dispositional* belief.<sup>77</sup> The occurrent belief requires one’s current assent to the proposition believed. In other words, it is what happens when the person has the proposition explicitly in mind and accepts or assents to it. Beliefs in this sense are states “that occur in people’s minds; they occur in particular times; they can enter into causal relations with other things in the world such as the environment, the believer’s

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<sup>74</sup> Neil, J. 2003. “Belief in and belief that.” *A Companion to Epistemology*. Dancy, J. & Sosa, E. (eds.). USA: Blackwell Publishing Ltd., pp48-49

<sup>75</sup> Neil, J. 2003, pp48-49

<sup>76</sup> Rescher, N., 2003, *Epistemology: An Introduction to the Theory of Knowledge*, USA: University Press. pxvi

<sup>77</sup> Bonjour, L. 2010. *Epistemology: Classical Problems and Contemporary Response*, UK: Rowman & Littlefield Publishers, Inc. p.45

behaviour, her mental states, and so on.”<sup>78</sup> But the dispositional belief is a state where the person does not have the propositions explicitly in mind, but is disposed to accept or assent to it, that is, would accept or assent to it if the issue were raised. It is such that at any given time, we are not conscious of most of our beliefs. We may not doubt the belief that Abuja is the capital of Nigeria but we are not constantly rehearsing this thought in our consciousness. It is a sort of belief which we know that we have, which we can bring to consciousness when it is needed. But most of the time, it is not needed, and we are not conscious of it.

There are certain salient epistemic features of belief that render it a cognitive state and an important epistemic requirement. In other words, the necessity of belief condition for knowledge has been justified on many different grounds. Perhaps one who has never considered or entertained or even believed the proposition in question can surely not be correctly said to have knowledge. Equally, it is possible to think that you believe that p when in reality you do not. Therefore, one of the most obvious ways to satisfy a belief condition would be for “the person in question to be in the conscious state of explicitly considering and assenting to the proposition in question.”<sup>79</sup>

Another basic rationale for the belief condition is “its commitment to the truth of the proposition that constitutes its content.”<sup>80</sup> To claim to know something is to represent it as true and adopting an attitude of believing toward a proposition seems to carry with it some sort of commitment to the truth of that proposition. In this sense, it is accepting something for the purpose of attaining truth and avoiding error with respect to the very thing one believes that is required for knowledge. Hence, it is this distinctive feature of belief condition of knowledge that makes belief a fundamental component of knowledge. Thus, it is a special kind of commitment aimed at truth, that is, to believe things that we accept for epistemic purposes. Also, another epistemic feature of belief that has a constitutive link with knowledge is the view that has been standardly ascribed to Descartes. To him, only beliefs that are infallible and are guaranteed to be true can really count as an instance of knowledge.

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<sup>78</sup> Chisholm, R.M. 1989. *Theory of Knowledge*. Englewood Cliffs, N.J.: Prentice Hall. p. 45

<sup>79</sup> Chisholm, R.M.1989. p. 45

<sup>80</sup> Bonjour, L. 2010. *Epistemology: Classic Problems and Contemporary Responses*. p.45

### 1.4.2 Truth as a necessary condition for knowledge

The rationale for the truth condition, according to traditional conception of knowledge, is simply that one cannot know what is not true. Knowledge without truth is impossible. In general, it seems intuitively wrong to ascribe knowledge where the claim in question is not in fact true. Thus, knowledge has a truth requirement such that truth is basic to knowledge acquisition. But what does truth amount to? What does it mean to say that something or a particular proposition is true? To ask this is not the same as asking what the criteria or standards of truth are. In fact, a related problem that one might have with the truth problem in philosophical inquiry “arises from worrying about how one could tell when truth condition is satisfied.”<sup>81</sup>

In the same vein, the search for truth can be said to be the junction box that connect all areas of philosophy together, be it metaphysics, epistemology, philosophy of language, ethics or any other areas of philosophy in the contemporary period. In philosophy of language for instance, discourse on the notion of truth has remarkable relation with our reflections on language, thought and action. Thus, the concept of truth seems to be one of the most enigmatic of notions and as noted by Kirkham Richard, “a failure to grasp the big picture about truth is the root cause of many philosophical mistakes.”<sup>82</sup>

It must be noted that truth can be looked at from different ways. For example, there is a general but ancient belief that truth is “correspondence with reality.” From this conception, Tarski’s views truth as a fact that has been verified.”<sup>83</sup> However, what constitutes alleged reality and correspondence have remained relatively obscured. Also, It is generally suggested that true beliefs are pragmatically inclined such that they are useful, verifiable, persuasive, and context-dependent. We are compelled to believe that truth must be conformed to reality. The proper aim of scientific inquiry is targeted on truths. Truths help to do the following: achieve our goals; and understand a sentence. They also help to know which circumstances would make something works.

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<sup>81</sup> Bonjour, L. 2010. p.45

<sup>82</sup> Kirkham, R.L. 1995. *Theories of Truth: A Critical Introduction*. London: MIT Bradford Press. p. ix

<sup>83</sup> Cited in Kirkham, R.L., *Op Cit.*, p. ix

Whichever way it is conceived; the concept of truth constitutes one cardinal component of the notion of knowledge.

Truth has been examined from different perspectives. For instance, Leibniz distinguishes between the truths of reason and of fact.<sup>84</sup> The former are all explicit identities, that is, of the form “A is A”, “B is B”, and so on. They are reducible and substitutive successfully by using equivalent terms. For example, “All equilateral rectangles are rectangles” and “All bachelors are unmarried” are examples of truths by reason. The first is already of the form “B is B” and the latter can be reduced to this form by substituting “unmarried man” for “bachelor”. Other examples, according to Leibniz are “God exists” and the truths of logic, arithmetic and geometry. They were dubbed “truths of reason” because the explicit identities are self-evident a priori truths, whereas the rest can be converted to such by purely rational operations. Given that their denial involves a demonstrable contradiction, Leibniz also says that truths of reason “rest on the principle of contradiction, or identity” and that they are necessary propositions, which are true of all possible worlds.<sup>85</sup>

Truths of fact, on the other hand, are otherwise called *a posteriori*. This refers to the facts that exist in the external world. It must be noted that denial is a contradiction and truth is contingent. Each of these could be vice versa. Such truths hold of the actual world, but not of every possible one. For instance, “Caesar crossed the Rubicon” and “Leibniz was born in Leipzig” are propositions that express correct scientific generalisations. In Leibniz’s view, truths of fact are based on the principle of sufficient reason. This states that nothing is, unless there is a rationale behind it. However, it is pertinent to state that the choice of discussion of Leibniz’s distinction on truth of fact and truth of reason is borne out of the deeper interest that many philosophers have in it and the distinction is still generally recognized as fundamentally significant.

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<sup>84</sup> Dancy, J. Sosa, E. and Steup, M. 2010. *A Companion to Epistemology*. Wiley Blackwell Publishing Ltd. p.772

<sup>85</sup> Dancy, J. Sosa, E. and Steup, M. 2010. P772



### 1.4.3 Justification as a necessary condition for knowledge

Even though the traditional components of knowledge have their separate problems, there is some level of agreement among epistemologists on two basic conditions, with disagreement on what further conditions are required. For instance, epistemologists seem to agree that knowledge always involves belief. That is, knowledge and belief are related to one another in such a way that for a person to claim any knowledge, such knowledge must surely require a belief. Also, it appears generally acceptable that what one claims to know must be true as one cannot claim to know if what one is claiming is obviously not true. The moral to be drawn from this is that belief and truth conditions of knowledge are relatively straightforward in the sense that philosophers generally agree in imposing them, regardless of whatever their differences might be, on how to actually interpret them. However, the justification condition appears to be different and much more controversial, and this makes some epistemologists argue that the idea of justified belief is of more importance and interest than the idea of knowledge itself. And in view of this, philosophers have spent a lot of time trying to analyse what it is for a belief to be justified.

Looking back at Plato's account of the notion of knowledge, for example, one further ingredient that is needed to turn true belief into knowledge is reason or *logos*. This, for Plato is a sufficiently strong reason or justification for thinking that the claim in question is true thus, a possible candidate for knowledge. Although, the reason or justification should not just be any, rather, the sort of reason or justification needed for knowledge ought to be truth-conducive: "one that increases or enhances (to the appropriate degree) the likelihood that the belief is true"<sup>86</sup> and such a reason or justification is standardly referred to as an epistemic reason or epistemic justification.

However, the great divide on the justification condition of knowledge, in the history of philosophy is between the advocates of the internalist and externalist justification theses. Advocates of the internalist account tend to consider justification an internal matter, that is, a matter of the subject's having adequate evidence in "terms of factors accessible by introspection to that person. For example, it being supported by that

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<sup>86</sup> Bonjour, L.2010. *Epistemology: Classic Problems and Contemporary Responses*. pp. 34-39

person's other beliefs.”<sup>87</sup> However, advocates of externalism argue that internal justification is not a necessary condition of knowledge. Rather, justification should be construed as an external matter, namely as a belief's property of being the outcome of a reliable cognitive process.<sup>88</sup>

In short, an externalist theory of justification is one “that analyses a person's being ‘justified’ in terms of factors of which the subject may be unavoidably ignorant. For example, in terms of whether the belief is produced by a reliable process, that is, one that usually produces true belief.”<sup>89</sup> The implication of the controversial nature of epistemic justification condition has made many philosophers see epistemology not as the theory of knowledge *per se* but as the theory of justification of knowledge. The problem with the justification condition notwithstanding, many epistemologists still accept it as an important component of knowledge. They see the justification condition as central to any epistemological analysis of human knowledge. Thus, in line with objectives of this thesis, some justification conditions shall be examined in Chapter Five.

However, looking at these traditional components, one would accept them as necessary and sufficient enough to serve as the requirements for defining and achieving knowledge that appeal to common sense and capable demonstration in some areas of knowledge. Unfortunately, Edmund Gettier seems to radically deny the sufficiency status historically accorded to the traditional account of knowledge. The next section examines Gettier's position on the traditional account of knowledge.

### **1.5 Gettier's Critique of the Traditional Account of Knowledge**

It cannot be denied that the traditional account of knowledge is commonsensical. First, it is counterintuitive to talk about knowing *that p* if *p* is false. Second, one cannot know *that p* if *p* is not among one's beliefs. Third, knowing *that p* requires more than simply believing *that p* or *that p* is true. It also requires one to have some reasons for, evidence in favour of, or justification for believing *that p*. In other words, if a true proposition is

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<sup>87</sup> Swinburne, R. 2001. *Epistemic Justification*. New York: Oxford University Press Inc.

<sup>88</sup> Swinburne, R. 2001.

<sup>89</sup> Swinburne, R. 2001.

believed by some person, and the belief is justified, then that person is said to know the proposition in question. In modern and more recent times, it has been endorsed and expressed differently by a number of influential philosophers including Rene Descartes, A. J. Ayer, C.I Lewis, and Roderick Chisholm.

By way of illustration, Laurence Bonjour identifies the principles of Cartesian epistemology to include the definition of the concept of knowledge. He argues that the Cartesian account of knowledge is in fact one specific version of a more general account of knowledge that has come generally to be referred to as the traditional conception of knowledge. The three-part Cartesian account of knowledge could be stated thus: “knowledge is belief held with no doubt for which the person has a reason that guarantees its truth.”<sup>90</sup> According to this account, for a person S to know some proposition P at some time, the following three conditions must be satisfied:

1. S must believe or accept P without any doubt.
2. P must be true
3. S must have a reason or justification that guarantees that P is true<sup>91</sup>

Also, A. J. Ayer argues that the conditions to know that something is the case is that what one knows must be true; and secondly, that one be sure of it; thirdly, that one should have the right to be sure. Ayer’s position is summarised as thus:

S knows *that p* if and only if

- i. P is true,
- ii. S is sure that P is true, and
- iii. S has the right to be sure that P is true.<sup>92</sup>

Chisholm equally holds that the following gives the necessary and sufficient conditions of knowledge:

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<sup>90</sup> Bonjour, L. 2010. *Epistemology: Classic Problems and Contemporary Responses*. pp. 9-22

<sup>91</sup> <sup>91</sup> Bonjour, L. 2010. pp.9-22

<sup>92</sup> Huemer, M. 2005. (ed). *Epistemology: Contemporary Readings*. New York: Routledge Publishers. p.442.

S knows *that p* if and only if

- i. S accepts P,
- ii. S has adequate evidence for P, and
- iii. P is true.<sup>93</sup>

Thus, knowledge is like a tripod stand which cannot stand when any one of the three legs is removed. However, the major and intensive scrutiny of the tripartite analysis of knowledge can be dated at the publication, in 1963, of a brief paper by Edmund Gettier, titled “Is Justified True Belief Knowledge?”<sup>94</sup> In this paper, Gettier proposed two counter examples to the sufficiency of the conditions in the traditional analysis of knowledge. He produced two counter-examples which satisfied these criteria but evidently could not be ascribed as being instances of knowledge.

## CASE I

In the first counter example given by Gettier, he imagines Smith and Jones as candidates for a job, and Smith believes that:

- (a) Jones will get the job
- (b) Jones has ten coins in his pocket.

Smith believes that both propositions are justified: a company executive has informed him that Jones will be hired, and he had seen the coins in question with Jones. Based on these justified beliefs, Smith also believes (quite justifiably) their logical implication that:

- (c) The person who will get the job has ten coins in his pocket.

As event would later turn out, Jones did not get the job. Instead, Smith got the job. However, as it also happened, Smith (unknowingly and by sheer chance) also had 10 coins in his pocket. So his belief that “the man who will get the job has 10 coins in his pocket” is the truth and justifiable. But this does not appear to be knowledge despite having satisfied the three conditions of knowledge.

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<sup>93</sup> Huemer, M. 2005. p.444.

<sup>94</sup> Gettier, E., 1963 “Is Justified True Belief Knowledge?” *Analysis*, vol. 23, No. 6, pp. 123-126

The crux of Gettier first counter example is formulated as thus:

1. X believes p
2. p is true
3. X has justification for believing p, for example, because it follows logically from something, say q, that he also believes, although in fact
4. q is false

The inference is that knowledge is a more than a true belief. It must be justified by appropriate reasons. The counterexample claims that the ground which individual adopts could lead to false or true beliefs. Also, in the second counter example, Gettier advises us to stretch our imagination to capture the possibility of a scenario in which Smith holds a belief that “Jones owns a Ford automobile” after seeing Jones with a Ford car on several occasions.

## **CASE II**

Let us suppose that Smith has strong evidence for the following proposition:

1. Jones owns a Ford.

Smith’s evidence for this belief might be that Jones has, at all times in the past within Smith’s memory, always seen Jones in a Ford, and has offered Smith free rides many times while driving a Ford. Let us imagine, now, that Smith has another friend, Brown, of whose whereabouts Jones is totally ignorant. By the rule of disjunction, Smith added some disjuncts of the whereabouts of Brown even though Smith has no knowledge whatsoever about the location of Brown. Smith selects three place names quite at random and constructs the following three propositions:

2. Either Jones owns a Ford, or Brown is in Boston.
3. Either Jones owns a Ford, or Brown is in Barcelona.
4. Either Jones owns a Ford, or Brown is in Brest-Litovsk

This suggests that these propositions are a product of the first proposition. For instance, Smith discovers that the entailments in the first propositions make him to proceed to (2), (3), and (4) respectively. Smith draws inferences of (2), (3), and (4) from the first proposition for which he has strong evidence. Smith is justified his belief on each of these three propositions. Smith does not have idea of where Brown is. He

thereafter logically concludes that “Jones owns a Ford, or Brown is in Barcelona.” However, as event will turn out again, Jones does not own a Ford, but by sheer coincidence, Brown really is in Barcelona. Again, Smith had a belief that was true and justified, but not knowledge.<sup>95</sup>

To formalize the second counter example is to say:

1. X believes p-or-q.
2. q is true (and consequently p-or-q is also true).
3. X disbelieves q.
4. X believes p-or-q, but does so (only) because he believes p.
5. p is false.

These examples were designed to illustrate the difficulty within the realm of belief, truth and justification all in relation to the concept of knowledge. As Gettier avers in the paper, justification, truth and belief are necessary conditions but not sufficient condition for knowledge. And no sooner than the devastating counter-examples given by Gettier surfaced that other similar examples in refutation of the traditional account of knowledge began to appear.

For example, a Gettier-like case where justified true belief (JTB) does not seem to count as knowledge afterward was introduced by Gilbert Harman. In Harman’s case, Jill in a newspaper read that her country president has been assassinated. This story was confirmed from impeccable source. But the associates of the president pressurised the media to suppress the story and have broadcasted that the president is fine in all the television stations. It was broadcasted that the president bodyguard was killed by the assassin. The newspaper she read reports that the event is true. Jill’s peers, on the other hand, have heard the misleading TV reports and were sure that the president was not killed. Harman claims that this is another Gettier case: he says that Jill has a justified true belief that the president was assassinated, but she does not have knowledge, because there are a lot of misleading evidence abounds in her community, which she has only managed to avoid by sheer luck.

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<sup>95</sup> Gettier, E., 1963. pp. 123-126

In another light, a student of philosophy has developed a habit of using the Tower clock at Trenchard Hall, University of Ibadan, to know what time it is. She also usually has a 12 o'clock lecture every Wednesday and as a result of this leaves her Hall (Queen Elizabeth II hall) and passes by the Tower clock at fifteen minutes to twelve on Wednesdays to attend the class. On this particular Wednesday, she leaves her hall to attend her lecture and in the front of Trenchard Hall checks the clock again which reads 11:45. At this point her friend meets her and tries to inquire what time of the day it is, which she confidently replies 11:45. Indeed the time was fifteen minutes to twelve, as the friend also confirms from passers-by who check the time from their wrist-watches. However unknown to her, the clock in question had stopped working the previous night at exactly 11:45pm. Though she gets the time correctly (with a stroke of luck), her knowledge of the time is coming from a false belief that the clock is giving the accurate time.

However, since the major contention of Gettier is that for a JTB account of knowledge to be successful, it would have to be amended with a fourth condition such that cases of accidental justified true belief's claims to knowledge would be ruled out. To this end, there are countless examples that show the inadequacy of knowledge as justified true belief in contemporary epistemology and greatest efforts have gone into the attempt to revise the traditional analysis in ways that would render it immune to the problems raised by Gettier and other Gettier-like cases.

## **1.6 Conclusion**

So far, this chapter attempted a conceptual analysis of the notion of knowledge. Since the desire 'to know' is a natural phenomenon and in spite of varieties of meaning and application of the word 'know' or even knowledge, there is no universally accepted definition of knowledge. Our analysis then employed operational means in terms of focusing, among other things, on explaining the epistemic conditions that must be satisfied in order to achieve knowledge. Thus, belief, truth and justification (also known as JTB) are considered to be classic conditions for knowledge claim. These conditions are primarily considered necessary to be an effort that would facilitate the job of separating mere belief and conjecture from knowledge in the strict sense.

The importance of this discussion lies in the fact that since there is no universally accepted definition of knowledge and the need to examine those common but essential features that can be accommodated in the attempt at defining knowledge, the question of whether the traditional account of knowledge as JTB is an adequate definition of knowledge or not is another issue. Also, the controversies on the nature of what makes a proposition to be true, when a subject believes it, and when a subject is justified in doing so further emphasize the importance of the conceptual clarification or analysis of such concept like knowledge. Be that as it may, Chapter two of this work shall attempt a further examination of the conceptual analysis of knowledge particularly from Gettier's attack on JTB in order to examine some of the plausible attempts at providing the fourth condition of knowledge and other issues from the suggestions.



## CHAPTER TWO

### 2.0 RESPONSES TO GETTIER'S CRITIQUE OF THE TRADITIONAL ACCOUNT OF KNOWLEDGE

#### 2.1 Introduction

The traditional account of knowledge as Justified True Belief (JTB) is originally considered to be helpful in providing a set of conditions that must be satisfied for a person to know and be able to distinguish mere true belief or guesswork from knowledge. Since Gettier and other Gettier-like theories have shown the inadequacy of the conception of knowledge as JTB, many attempts have been made to correct the JTB to forestall the misunderstanding involved in undertaking the conceptual analysis of knowledge and that of investigating justified belief. To this end, the focus of this chapter is to investigate those responses to Gettier problem which are aimed at correcting the JTB and the plausibility of achieving the required fourth condition of knowledge that would enhance the realization of the necessary and sufficient conditions of knowledge.

Since the 1963 publication of the Gettier Problem, many attempts at resolving the problem which Gettier raised have dominated epistemological discourse and a number of responses to the problem can be grouped into two categories. The first category of responses recognises the Gettier problem as a typical philosophical or an original epistemological issue; and attempt to resolve it by looking for a fourth condition that would render JTB immune to the problem raised by Gettier and other Gettier-like cases.

The second category includes those responses that do not recognise the Gettier counter problems or cases as posing a significant epistemological threat to the traditional account of knowledge. The scholars on this side of the epistemological debate reject the counter examples of Gettier and contend that in none of the Gettier cases was the belief sufficiently justified. From this stance, it is impossible to justify any belief which is not true as far as epistemic justification is concerned. To this end, the JTB definition

of knowledge survives but the Gettier and other Gettier-like examples constitute a pseudo-epistemological problem that only needs dissolving and not resolving.

Therefore, this chapter focuses on addressing fundamental issues emanating from responses aimed at plausible fourth condition that would accommodate the shortcoming of the JTB. While there are very innumerable plausible ‘fourth condition’ responses, the chapter endeavours to discuss some of the major ones. These responses include the infallibility and relevant falsehood approach, indefeasibility approach, reliabilist approach, conclusive approach, and the causal theory of knowledge.

## **2.2 POST GETTIER RESOLUTION/APPROACHES**

### **2.2.1 Infallibility and relevant falsehood approach**

Infallibilism believes that satisfaction of the infallibility condition must be met in the requisition of knowledge. The condition requires that the attainment of an infallible belief is all that is required to convert a true knowledge. The proponents of the infallibility condition maintain that the Gettier cases standing as challenges to the traditional account of knowledge can be done away with by simply ensuring that a subject believing *that p* must not have a fallible or defective justification for his or her belief. A fallible justification in this regard fails to adequately satisfy the requirements of Justified True Belief (JTB). In response to Gettier, Richard Kirkham opined that infallibility thesis is the definition of knowledge that is immune to counterexamples. He further argued that not only should every belief be true and justified, its justification must necessitate its truth and such justification for the belief must be infallible. One can however state that the implication of Kirkham’s argument is that there would always be counter-examples to knowledge claims in cases where a presuming knower’s evidence does not logically necessitate the belief-claim to knowledge.

Similarly, the condition of relevant falsehood is based on the fact that false belief should not be inferred from the constituent of belief. Put succinctly, “no proposition is justified for a person if he has reasoned to that proposition through some false step.”<sup>96</sup>

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<sup>96</sup> Pappas, G.S. and Swain, M. (eds.) *Essays on Knowledge and Justification*, London: Cornell University Press.

To this end, in addressing Gettier challenge, the relevant falsehood approach as advanced by Jonathan Dancy argues that since the initial belief *that p*, from which the true justified belief *that q* is inferred, is false, no inference can be drawn from a false belief, or from a group of beliefs of which one is false. Therefore, the demand of the elimination of relevant falsehood (especially inferential ones) is needed as the fourth condition.<sup>97</sup>

In addition, Lehrer and Paxson argue that the condition of no relevant falsehood would render our analysis impervious to Gettier-like cases.<sup>98</sup> This observation is aptly reasonable because holding on to false beliefs hinders acquisition of JTB (knowledge as the traditional accounts claim). Also, making use of Roderick Chisolm's instance of sighting a dog instead of a (fictional) sheep on the field, Dancy accounts how Gettier's analogy that one may have a justified true belief but not knowledge is not mistaken. This implies that there is need to take cognisance of the gratuitous beliefs that accompany belief forming knowledge.

However, one can argue that the infallibility approach presupposes an absolutist account of knowledge as if to reify the possibility of drawing inferences (which may be false), elevating propositions to the eidetic stage of apriori propositions, independent of fallibility. It is equally important to know the extent in which such propositions of knowing *that p* be severed from the influx of (human) intellect/intuition that confers truth values on these propositions. Where this remain impossible, the infallible approach also remains implausible, though significant for implying the awareness of being prone to scepticism in the course of knowledge justification.

The relevant falsehood condition is also difficult to satisfy as the suggestion is not only too strong but also likely to make it impossible for us to know anything. Further elaboration would show that the relevant falsehood condition attempts to place much emphasis on truth value, whereas there are cases of justified false beliefs in which a subject believes *that p*, has reasons or justifications (based on evidence immediately

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<sup>97</sup> Dancy J. Sosa, E. and Steup, M. (eds.). (2010). *A Companion to Epistemology*. 2<sup>nd</sup> ed. Wiley Blackwell Publishing Ltd. p. 772.

<sup>98</sup> Lehrer, K. and Paxson, T.D. (1978). "Knowledge: Undefeated Justified True Belief" in Pappas, G.S. and Swain, M. (eds.) *Essays on Knowledge and Justification*, London: Cornell University Press.

before the subject) for believing *that p* but unbeknownst to the subject, the state of affairs *p* constituting the subject's belief is untrue. Whether set of propositions exemplify logical plausibility for justifying knowledge claims is what should become a matter of concern here (not necessarily one forecasted by mere false beliefs, derived by mediate perceptions/experience).

### **2.2.2 Infeasibility approach**

Another possible candidate and widely favoured response for the fourth condition of knowledge is the idea of infeasibility introduced by Keith Lehrer and Thomas Paxson. Infeasibility theory as a new response added a defeasibility condition to the analysis of JTB. The theory argues that there should be no overriding or defeating truths for the reasons that justify one's belief. What motivated this view was that the weakness of Gettier cases is the agent of the justification, which is somehow defective. It is true that the agent's belief is justified, that the agent does have some evidence. But there is other evidence that the agent does not possess which the agent does not believe or recognize to be true and which is relevant to the truth of target belief.

For instance, a justification for belief in *p* is defeasible if, when further evidence is known; therefore, the original justification is defeasible. For example, if I believe that Manchester FC or Chelsea will win the league this year by my current information about the state of Manchester/Chelsea players that are on top form and their respective positions on the league table. However, this justification is defeasible because new information could come to light which would have the effect of making me less confident that one of them will win. I might find out that in relation to one or both teams: the coach is leaving, key players are really hiding or sustaining serious injuries, there is no money for new players, and some of the other teams are playing much better than anyone had anticipated.

Contrariwise, infeasibility holds that a justification for belief in *p* is infeasible if it is intact though there might be new discovery. The application of the above to the Gettier's problem shows the following new conditions:

A knows that p if

- 1) p is true
- 2) A believes that p
- 3) A can justify that p, and
- 4) A's justification of p is indefeasible.

The argument is that the justification of p converts belief in p into knowledge if, and only if, such justification is strong despite new information that is revealed. Another way of formulating the indefeasibility condition is that justification that is rooted in falsehood is indefeasible. Thus, such beliefs are not justifiable. This is because the justification is indefeasible. This is closely related to the first formulation. This is because the discovery of false beliefs weakens the original justification.

On this account, knowledge is justified as a true belief. This is because a justified true belief is regarded as knowledge if and only if it is also the case that there is no further truth. For example, assuming that Sumbo believes he saw Tobi steal a book from the University library and justifies the claim that Tobi stole a book from the library. Such a proposition is overridden for such a claim could be a true proposition like, 'Tobi's identical twin Samuel is in the same town as Tobi. So long as no defeaters of one's justification like this exist, the belief of a subject would be epistemologically justified. However, it could still be argued that the notion of a defeater fact cannot be made precise enough to rule out the Gettier cases without also ruling out a priori cases of knowledge.

While one could appreciate the broad range of this theory, it seems ambitious and renders itself ubiquitous as if it could shield itself from defeasible justifiers (defeating justification through further evidence, facts or truths). This approach is a charge to the epistemological process that all plausible channels of defeated and undefeated claim to knowledge can be known. However, this is an ambiguous stance, as regards the terrain of application of this possible defeating 'further truths, facts, evidence or statement'; whether it is a priori or a posteriori variation, associated with the account of knowledge. More so, this approach of further truth presupposes an ad infinitum regress

of indefeasible conditions. On the point of ad infinitum regress, Nicholas Everitt and Alec Fisher stated that “undefeated justification can be reinstated; re-defeated, reinstated...ad infinitum... once we start thinking about the concept of indefeasible justification, we can see that the account needs to be made a little more complicated. The complication that we now have to take account of is that I may adequately be justified in holding on to a belief, even though there are total counters to my belief.”<sup>99</sup>

It is generally said that a number of problems is associated with the tripartite definition of knowledge. The tripartite can be amended with the inclusion of indefeasibility condition. The first identified problem is that if the indefeasibility condition is adopted, it seems the first criterion of truth will be made redundant. That is, indefeasibility makes redundant the first criterion, “p must be true” in the tripartite traditional account of knowledge. While a false belief is justified, it is impossible such belief to be false. If so, why retain the first criterion? Jonathan Dancy has pointed out that this is not really a problem. Perhaps it now made clear why truth is an important component of knowledge, whereas it had been only intuitively valued before the Gettier problem arose.<sup>100</sup>

A real problem surfaces when a new truth is added to one’s evidence. For instance, a question such as “Are truths added one at a time, or are they added all together?” is relevant. The difficulty is that no matter how one answers this questions, further problems surface. How someone justifies whether there are no other truths is either justified or defeated. This suggests that all truth must be deemed justified indefeasible. It is doubtful, for such a project will consume longer time before a person claims that he knows. Beyond extending the duration of determining what counts for knowledge and what does not, a continuous search for indefeasibility is an exercise in establishing scepticism. Therefore, the crux of the argument here is that one may need a fifth condition of knowledge before indefeasibility can stand or the requirement of indefeasibility pushes knowledge further towards scepticism rather than what it is intended to defend.

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<sup>99</sup> Everitt, N. and Fisher, A. (1995)., *Modern Epistemology A New Introduction*. USA: McGraw Hill, p.26.

<sup>100</sup> Dancy, Jonathan.(1985). *Introduction to Contemporary Epistemology*. Oxford: Blackwell. p.29.

### 2.2.3 Reliabilist Approach

Reliabilism is propounded by Alvin Goldman. The theory is concerned with belief, which is justified only if it is “produced by processes that typically yield a sufficiently high ratio of true to false beliefs.”<sup>101</sup> In other words, by its name, this theory holds that a true belief counts as knowledge only if a reliable belief-forming process produces it. Epistemological reliabilism intends to solve Gettier’s problem. It replaces the justification condition in the traditional analysis of knowledge as a true belief. The problem aims to conceptualise the reliability approach since, for instance, Armstrong’s conception of reliability, which requires that a reliably formed belief must as a matter of necessity be true, was considered to be too strong. At any rate, reliabilism is a theory that concerned with justified beliefs. Thus the idea, roughly, is that for a belief to be justified it must be formed as the result of reliable processes, where reliability does not entail truth.

However, reliabilism has not been able to effectively address the challenge posed by Gettier cases. Intuitively, reliabilism believes that the epistemic merit of a belief is dependent on the performance of the person. This is because a belief is compared to action. As action is not downgraded and so also is believed. His responsibility in forming the belief is always rationalised. This is explicated by comparing two identical situations which are subjective. For instance, if person forms the same belief on the basis of the same supposition, it may be true in one and false in another.

On one hand, the reliabilism approach seems to cover a wide horizon of conditions for knowledge, especially via its ambivalent implications of what constitute/amount to a reliable source or process. These necessitate the following knotty questions: does reliabilism imply an appropriate connection of beliefs, truth and justification, elimination of falsehoods, indefeasible propositions/evidence, conclusive reasons, or just reliance on processes (processes based on what?). Where reliabilism seems encompassing of these other approaches, it equally shares in the problems of each of the approaches. More so, the fundamental question of whether reliabilism as an

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<sup>101</sup> Goldman, A. 1978. “A Causal Theory of Knowing” in Pappas, G.S and Swain, M. (eds.) *Essays on Knowledge and Justification*, Ithaca and London: Cornell University Press.

approach, is established by reliance on further truths, facts or belief of the process or source still hangs. This simply suggests that within epistemological discourses, the question of knowing that P becomes a standard question that would continually surface so long philosophising suffices.

#### **2.2.4 Conclusive reason approach**

Another attempt made to save the traditional account of knowledge was for justification that it is not only necessary but conclusive in holding a particular belief. This is the line of thought that informed Fred Dretske approach to correct the three-way definition and description of knowledge. He developed an account of knowledge called 'conclusive reasons'. The theory of conclusive reason relies heavily on the counterfactual condition that posits that a subject S has conclusive reason R for P just in case:

- (a) R would not be the case unless P was the case.
- (b) S believes, without any reservation, or question, that P is the case the belief is on the basis of R.
- (c) S knows that R is the case or R is some experimental states of S (about which it may not make sense to suppose that S knows that R is the case; at least it no longer makes much sense to ask how he knows).

The conclusive reasons for believing P is that one believes P based on the basis of reasons. The reasons are unobtainable if and only if the propositions were true. However, Pappas and Swain have argued against Dretske's characterisation of the conclusive reasons claim that: S knows P entails "S has conclusive reasons for believing that P" on the ground that it is mistaken. The duo categorize Dretske's attempt as an effort to create immunity to the Gettier problems. Pappas and Swain state that "in Gettier's examples, the subject S, has knowledge that E, and E provides excellent reasons for believing that Q, which in turn entails P. S believes that P on the basis of his knowledge of these facts.

Following this, the duo contend that Dretske's analysis grant a restricted way of justifying knowledge simply because his approach does not guarantee the plausibility



of subjective conditions of knowledge This hints that knowing that P is only claimed if all circumstances that have evidence (E) as excellent reasons for believing P (which entails Q) is fixed; the truth value (falsehood or truth) of Q never matters; in the absence of this, knowledge of P is not possible as circumstances may be the same, yet radically different from the basis of such conclusiveness. Thus, this condition is considered too strong for the justification of Gettier analysis.

The duo's criticisms seem logical and stand a chance of overcoming Dretske's epistemic condition since it would be difficult to deny or ignore that Dretske's condition presupposes an encompassing/extremely inclusive account of conditions for knowing that P; a condition which is yet to be proved exhaustive of all bases for knowing that P, hence it is coherent to logically share Pappas and Swain's argument.

### **2.2.5 Causal theory of knowledge**

The difficulties in getting a plausible fourth condition to the original tripartite definition of knowledge have attracted some level of radical rethink on the definition of knowledge and this brought the Causal Theory of Knowledge into focus. Causal Theory proposes to define knowledge without reference to justification at all rather it suggests the addition of a causal condition to a subject's justified belief to count as knowledge. This approach is radical. This is because it is necessary to have a right justification, which is infallible, indefeasible or reliable so as to convert a true belief into knowledge.

Causal theorists approach the issue the search for a fourth condition from another angle and according to this theory:

A knows that p if:

- 1) p is true
- 2) A believes *that p*
- 3) The belief *that p* has the right sort of causal connection to the fact *that p*.

In other words, it is generally acceptable that a true belief that has the right sort of causal connection the truth of p is knowledge. The belief that p is caused by the fact

that p is not believed if p is not the case. In another words, the belief that p and the fact that p have a common cause suggests that there is an emergence of a new picture of human knowledge. For Goldman, the point is that the truth of a belief in itself is instrumental to the subject believing that p. A justified true belief therefore counts as knowledge when the knowing subject is able to “correctly reconstruct” (mentally) the causal chain the subject’s belief and the truth of a given state of affairs or proposition p. With reference to the Gettier’s cases, albeit Smith’s prediction that the candidate who has ten coins in his pocket would get the job coming to pass. Goldman’s analysis still nullifies the Gettier case since Smith’s belief about the one who would get the job is not predicated on the truth of his belief. What seemed like Smith’s knowledge of the outcome was merely an instance of coincidence.<sup>102</sup>

Goldman’s ‘causal theory’ of S knowing *that p* could be put simply thus: it is a theory that extended the traditional account of knowledge to satisfy the justificatory role of empirical proposition/argument through the causal connection of the fact that P (the reality that P is concrete and true) and the belief that P, the former is always prior to the latter. In illustrative terms, Goldman presents it in this way that when “S” sees a vase in his form suggests that a causal connection between the speaker and vase exists and presents.

Thus, in Goldman’s view, a causal process has standardly taken place when we say somebody sees something, this suggests such actually exists by the sense of sight. Thus, a causal requirement actually exists by relevant causal process. Following this, Goldman proposes the array of variety of causal connection processes that justifies the claim that P via perception (non-inferential), memory (case of remembering), perception and memory, inference (based on explicit reasoning that is causal chain) and testimony.<sup>103</sup>

One can argue that Goldman’s analysis is laudable to the extent that he tries to rehabilitate the JTB or the traditional account of knowledge without necessarily having

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<sup>102</sup> Cf. Wikipedian, (eds). *Epistemology*. Mainz: PediaPress, p.70. Retrieved June 29, 2017 from <http://pediapress.com/books/show/epistemology-an-overview-by-wikipedians/>

<sup>103</sup> Cf. Wikipedian, (eds). pp.69-75.

recourse to a fourth condition as most scholars tried to do. For instance, Marshall Swain finds Goldman's theory to be more plausible than the defeasibility alternative (that de-emphasizes any counter evidence that stands as the criterion for possibility of claim to knowledge) noting that "the defeasibility condition can be replaced by conditions that refer to facts about the *causal connections* that obtain between a man's evidential beliefs and the events or states of affairs about which he has knowledge."<sup>104</sup> On this basis, whether a man's justification is defeated or undefeated is in general a function of the characteristics of such causal chains with respect to knowledge of specific events or state of affairs.

More importantly, Goldman's position takes as granted the JTB analysis as adequate for non-empirical truths or that the traditional account of knowledge is adequate for non-empirical truths or propositions in general. The import of this is that JTB is capable of accommodating certain mystical or metaphysical assertions. More so, Goldman's attempt did not take into cognisance the possibility of logical tension between the apriori platform of JTB and non-empirical propositions justified by this theory in his rehabilitation motive.

There are arguments against Causal Theory of Knowledge. One of the difficulties with the causal theory as proposed by Goldman has to do with the theory tending towards incorporating reliabilism for it to be relevant in the quest for the justification of belief as knowledge. The problem is highlighted in the fact that there is an apparent difficulty in giving the explanation that accounts for how appropriate causal relationship is different from the inappropriate one. The appropriate causal relationship produces knowledge. Goldman opines that "the latter would be useful, but not as useful or desirable as the unchanging definitions of scientific concepts such as momentum". I can be surmised that Gettier's causal response must adopt reliabilism about justification.

Some have equally posited that, through causal connection, the knowledge of the future cannot be explained by Causal Theory. This theory inherits one of the problems of

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<sup>104</sup> Cf. Wikipedian, (eds). pp.69-75

cause and effect which is contentious. Some think it is impossible to have knowledge of the future through Causal Theory of Knowledge, particularly, if one's own intentions play a part in determining some aspects of the future. Another important issue against the Causal Theory of Knowledge is that it cannot account for a priori knowledge, moral, religious, or knowledge of universal generalisations. What facts, for example, cause our beliefs concerning logical relations? What fact causes our belief that all men and women are mortal? The deaths of particular human beings can cause our belief in human mortality, but these deaths are not the deaths of everyone. The usual response to this line of criticism is to concede that the Causal Theory of Knowledge, if workable at all, is applicable only to empirical knowledge concerning matters of particular contingent facts. (Consequently, this theory of knowledge will have to be supplemented by another account of knowledge for a priori knowledge and knowledge involving universal generalisations).

Another problem concerns the reliability of causal relations/links itself. Not all causal processes that generate beliefs necessarily produce true beliefs. One can think of the testimony of people who may or may not be entirely aware of all the facts about which they are reporting. What about beliefs produced in even less worthy ways via crystal balls and horoscopes? Some stories need to be told about how we come to identify a particular causal process as reliable in the first place. If this point is taken, supporters of causal theory of knowledge will still press its merits with respect to empirical knowledge but some philosophical account of perception is required to complete the Causal Theory of Knowledge.

However, it is important to note that Gilbert Harman's solution to the Gettier's problem involves the argument that since reasoning from a false belief precludes knowledge, and Gettier's subjects do reason from false beliefs, they cannot be said to know.<sup>105</sup> If we distinguish implicit assumptions from beliefs, then we might extend Harman's proposal to cover false implicit assumptions too. Harman's proposal handles both Gettier's cases described above. Each subject reasons from a false belief: Smith from

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<sup>105</sup> Harman, G. 1973. *Thought*. Princeton: Princeton University Press. p. 195

Jones owns a Ford and Smith again from ‘the man who will get the job has ten coins in his pocket.’

As earlier pointed out, some have objected that ‘the man’ as used by Gettier corresponds to an individual existence which Smith had in mind at that very time he is making that proposition and not the universal man the phrase represents after the proposition was confirmed true. Also, that the proposal does not account for proposition. This is because Gettier did not account for reasoning from false belief. This objection is totally truthful because Gettier focuses on belief, which is derivable from a false implicit assumption.

Harman’s view is concerned with a more pressing problem because it excludes many arguments. You can gain knowledge by reasoning from false beliefs. For example, Mr Ola brings 100 copies of his handouts to a public lecture. He is unsure if he brought enough copies for every attendee. He does a head-count, concludes that there are 53 attendees, and infers that his 100 copies are enough. But Mr Ola’s head-count was actually wrong. This is because Chinedu switched seats and was counted twice. There are only 52 attendees. Mr Ola knows that his handouts are enough even though he infers this from a false belief. Harman’s view states a wrong result in such cases.

Another solution comes from John Greco who is of the opinion that knowledge is intellectually creditable true belief and if we look at Gettier subjects, they are not creditable for believing in truth. This is because they are unaware of the truth. Belief in the truth is the intellectual credit. This is “because” of your reliable cognitive abilities (“abilities” for short). Greco provides a detailed and principled account of the relevant because relation derived from a general theory of the pragmatics of causal discourse. You believe the truth because of your abilities just in case (i) those abilities form “an important and necessary part of the total set of causal factors that give rise” to your true belief, and (ii) no other factor “trumps” your abilities’ explanatory salience.<sup>106</sup>

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<sup>106</sup> Greco, John. 2003. “Knowledge as Credit for True Belief”. In DePaul and Zagzebski (eds.). *Intellectual Virtue: Perspectives from Ethics and Epistemology*. Oxford: Oxford University Press. pp. 123, 127–132.

Ernest Sosa provides a solution that knowledge is an apt belief though this opinion is not generally accepted by his subjects. This is because they do not know. It is pertinent to examine the notion of apt belief. According to him, apt belief has “AAA structure”. The structure is evident in all evaluable performances. This means that the performance of AAA structure can be evaluated via accuracy, adroitness, and aptness. While accurate performances are the aim, adroit performances that manifest competence. Accuracy is the common feature of apt performances. For beliefs, Sosa associates accuracy with truth, adroitness with intellectual competence, and aptness with truth also. Apt belief is a belief that is truthful because of competency.

Sosa’s claim is right about the lack of entailment. For instance, *A* might explain the existence of *B* despite the fact that *B* is irrelevant and does not have property of *A*. Also, a carpenter’s skill might explain why an existed house is abandoned, despite the fact of its abandonment to him. The efficiency of printing press might explain why a stolen book exists and irrelevant. The main argument against Sosa’s position is how to make “aptness” as he is using it veridical.

### **2.3 Dissolving Gettier’s problem**

It can be observed that Gettier problem can be avoided in a number of ways. For example, Linda Zagzebski opines that there is no amount of knowledge as true belief that can withstand Gettier’s objections. This is because there is a small degree of independence between truth and the other conditions of knowledge. However, it can be argued that knowledge as justified true belief can be justified true belief without knowledge. What can be inferred from this is that anybody that wants to objects Gettier’s conclusions must defuse the counterexamples made by Gettier. It can be said that, using the parameters of counterexamples, the following must be either accepted or not:

1. Gettier’s cases are not really cases of justified true belief, or
2. Gettier’s cases really are cases of knowledge after all.

The other option is to show that exemplar can be circumvented through the elimination of any necessity. The application carried out by JTB was meant to provide answer to obscurity noticeable in Gettier's work. This suggests that there are difficulties in the fourth condition. The condition helps to repair deficiency noticeable in JTB account. He concludes that Gettier's examples are inappropriate. This is because the false principle relies on false propositions for one to justify other propositions. Also, Richard Kirkham opines that a good definition of knowledge is needed such that counterexample of definition will be impossible. It can be surmised that a counterexample to the definition of knowledge is not possible because of the evidence of believers. This is because the believer's evidence is not in concomitant with his her beliefs. Because of the non-conformity of believer evidence with beliefs, Kirkham propounds scepticism about knowledge. He further says that a belief may be rational if such belief is not related to knowledge.

Timothy Williamson examines knowledge from a new dimension. To him, knowledge is not a justified true belief. He posits that the concept of knowledge cannot be analysed into a set of other concepts; instead, it is *sui generis*.<sup>107</sup> This implies that it constitutes a class of its own or unique in its own way. Thus, though knowledge requires justification, truth, and belief, the word "knowledge" cannot be accurately regarded as simply shorthand for "justified true belief"<sup>107</sup>

## 2.4 Conclusion

As initially proposed, some of the responses made to the Gettier's counter-examples are exposed in this chapter. The responses to which we refer can be placed within two categories:

- Those who do not recognise Gettier cases as posing significant epistemological threat, and thus do not see their approaches as seeking for a fourth condition or a condition of knowledge. These schools of thought rather propose approaches that seek to fill up the gaps present in the traditional account of knowledge (TAK) either by modifying TAK analysis

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<sup>107</sup> Williamson, Timothy. 2000. *Knowledge and Its Limits*. Oxford: Oxford University Press.

or corroborating its 'legitimate' analysis as far-reaching. Examples of such approaches in strengthening TAK analysis are the causal theory of knowledge which posits that a belief is properly reckoned as knowledge if it possesses relevant connection with fact p existing as a state of affairs or proposition and the reliabilist theory which holds that a belief is knowledge if it is generated from knowledge-forming processes capable of manifesting high probability of true beliefs. The focus in the latter approach is on the reliability of the knowledge accumulation process.

- On the other side of the response-divide are those who call for an examination of the JTB as the traditional account of knowledge (TAK) and argue that the TAK analysis is unviable on account of the lack of a fourth condition that should ensure justification in knowledge claims. The quest for the 'unjustified;' that is, the search for an additional condition or inevitable conditions of knowledge; has led to the generation of the alternative views such as the Conclusive Reason Approach proffered by Fred Dretske that knowledge is ascertained when the knowing subject has conclusive reason(s) to believe proposition P.

However, it is instructive to note here against the backdrop of the two categories of responses to Gettier, that Gettier's analysis of the traditional account of knowledge did not intend (at least in philosophical term) to seek the corroboration of other theories. Neither was it an exercise in search for a fourth or fifth condition of knowledge. Gettier's analysis of TAK was rather a constructive criticism which stated that the TAK's attempt to forestall the progress of scepticism itself culminates in further extending the roots of scepticism in the human epistemological process. Gettier's paper while not pretending to propose a new epistemological protocol is both a pointer to the scepticism inherent in TAK and an open albeit tacit invitation to future scholars to re-examine the JTB account of knowledge. There is no doubt that post-Gettier's responses seem to have affirmed Gettier's intention, as his argument has spurred several arguments on the debate on knowledge; raising alternative approaches which interrogate the foundations of previous positions.



This research work interrogates the traditional account of knowledge by advancing alternative approaches/account of knowledge; bearing in mind that examining every plausible accounts of knowledge is tantamount to examining also the sceptical considerations of knowledge as Gettier and Post-Gettier scholars have explicated. This would be in keeping to the views of Michael Williams, who holds that our attempt to understand the conditions of knowledge is believed to be that we are making an effort to conceive knowledge in harmony with our sense of what our best examples are.

## CHAPTER THREE

### 3.0 THE IDEA OF SOCIAL EPISTEMOLOGY

#### 3.1 Introduction

With some of the intractable problems identified with the traditional account of knowledge and current interests and developments in the study of knowledge generally, it is evident that the field of epistemology has evolved different notions of the term “knowledge.” In this regard, various epistemological orientations such as Naturalized Epistemology (NE), Evolutionary Epistemology (EE), Genetic Epistemology (GE), Virtue Epistemology (VE), Feminist Epistemology (FE), Sociology of Knowledge (SoK), and Social Epistemology (SE) have emerged to present different notions of knowledge. While the traditional account discusses the concept of knowledge in terms of JTB and emphasises the distinction between belief and knowledge based on features such as certainty, truth, and justification of knowledge; the contemporary epistemological approaches attempt to liberate the discourse on knowledge from such a narrow conception of knowledge by traditional epistemology as JTB. By contemporary epistemology, we refer to post-traditional accounts of knowledge, especially the post-Gettier’s critiques, which, in an attempt to settle the Gettier objection, fragmented the discourse on knowledge into diverse perspectives and orientations.

This chapter elaborates the frameworks of contemporary epistemological approaches concerning what it means to know, what could be known and how epistemic subjects can explain what is known. In order to elaborate the contemporary epistemological approaches to the study of knowledge, we would examine basically three trends namely:

- (i.) Naturalized Epistemology
- (ii.) Pro-Naturalized Epistemologies (constituted by evolutionary, genetic, feminist and virtue epistemologies)
- (iii) Sociology of knowledge and Social Epistemology

The central arguments that have been advanced in each approach would be critically examined with attention paid to scholars whose ideas are relevant to each

epistemological outlook. The chapter examines the methodological and conceptual adequacies in realising the goals that they set to achieve. Expectedly, some objections to these epistemological orientations would also be examined. Attempts are made to anchor our discussion on social epistemology with emphasis on what makes it stand out from the other epistemological orientations. It is believed that identifying the central concern of social epistemology would enhance the realisation of what epistemic justification really is. To achieve this, it is important, therefore, to examine other epistemological orientations and their claims to what knowledge is and how to acquire or justify it.

### **3.2 Naturalized epistemology**

Given Edmund Gettier's critique of traditional account of knowledge and responses from post-Gettier scholars, one could express, like Ernest Sosa, that the attempts of traditional and naturalised epistemologies focus on the dual project of understanding and validating knowledge. This is the epistemic validation within a perspectival coherence of cognition that provides a reliable account for the theory of knowledge. To some extent, this explains the motive of the shift of ideological reflections as regards the account of knowledge. For instance, the problem with traditional epistemology, as identified by some advocates of the naturalised epistemology, includes how beliefs arise and what kind of causal connections are there between beliefs and knowledge. Similarly, the idea of a priori justification of scientific knowledge permeating the traditional epistemological programme is a central problem to naturalised epistemologists while its rejection is vital in the quest that epistemology should be naturalised. In other words, naturalised epistemologists emphasise the view that "nothing could be known as a priori; hence, no epistemological principle is known as a priori."<sup>108</sup>

The call for naturalising epistemology intends that epistemology be replaced by a sub-discipline of the natural science of psychology. Thus, its task must not be a justification

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<sup>108</sup> Kertesz, A. 2002. "On the De-Naturalization of Epistemology," *Journal of General Philosophy of Science*. 273-274.

but rather, an explanation of the origin of beliefs by using scientific methods. Naturalised epistemology is concerned with the fact that the normative or evaluative issue of either good reasons or justification is replaceable by issues on how beliefs are casually generated. It is in the light of this position that the American logician and epistemologist, Willard van Orman Quine, opines that epistemology studies both natural phenomenon and physical subject. The discipline is accorded a certain experimentally controlled input on certain patterns of irradiation in assorted frequencies.

The aim of Quine's styled naturalism is not difficult to outline. Quine's naturalism argues that substantive questions of knowledge and meaning must be addressed by making use of the methods and tools of natural sciences. The rationale offered by Quine for transforming epistemology in this way is basically that the traditional approach to epistemology is ineffective and needs to be replaced with a possible alternative. Thus, Quine objects that the first philosophy is a theoretical/conceptual paradigm before natural sciences. For Quine, since the concern of epistemology is the foundation of science and the traditional approach to knowledge hardly appeals to natural science, empirical psychology in particular, to achieve this end, inquiry about knowledge would always lead to begging-the-question exercise. This is on the basis that scientific claims about the physical world are among those whose justification is in question. Hence, the issue becomes less problematic once the goal of justification of beliefs is abandoned in favour of a view to explaining how beliefs are causally generated or explained through scientific methods.

A discerning mind would be curious about the suggestion of Quine's naturalism. This is because an immediate point to note from this brief insight into Quine's naturalism is that there are noteworthy distinctions within the terrain of naturalised epistemology as there are different analyses of naturalised epistemology. It must be noted that within the philosophical enterprise, the Replacement strand of naturalised epistemology (Quine's naturalism) seems to be prominent. However, to limit the discussion by Quine's operational notion of naturalised epistemology would amount to narrowing the

scope of naturalised epistemology and this is not the purpose of this chapter. As such, it would be critical and objective to open up common themes in the naturalised epistemological outlook. This would further aid in unravelling the features or thematic concerns of naturalised epistemology as a whole. As such, it is needful to make the following brief remarks about naturalised epistemology:

- Naturalised epistemology aims at providing an explanation or exposition to knowledge-claims and beliefs rather than providing justification for them.
- It intends to give the account of the world rather than a solipsistic or realist account of the knowledge of the world as demonstrated by traditional epistemology. It attempts to concretise the forms of know-how not merely at stopping at the inquisition of universals but also searching the conditions for knowledge.
- Naturalised epistemology presupposes that philosophy is a continuum with natural science. In this regard, Robert Sinclair notes that naturalism is concerned with the understanding of the relationship between philosophy and science. This relationship helps in the scientific inquiry. It must be noted that engaging in philosophical exploration is to understand the world provided by science.
- Naturalised epistemology also posits that traditional epistemological method or approach is questionable for the formation of philosophical claims to knowledge unless it is corroborated by scientific methodological approach.

In the course of defending traditional epistemology from the critiques of naturalised epistemology, Almeder contends that Quine's attempt of "naturalistic defence" of the paradigm of scientism in replacing the epistemic viability of concepts like certainty, belief, justification, and truth that is implicit in all forms of know-how is counter-productive. He argues that Quine's thesis is woven around the point that scientific questions cannot be raised or resolved within the context of traditional epistemology. In this direction, Almeder impresses that Quine's naturalism which is rooted in science, forecloses the possibility of access to the criteria of knowledge such as truth and belief,

which are different from the opinion emphasised in traditional account of knowledge. One could be sceptical about the naturalised epistemological approach to knowledge claim on the basis of explanation rather than justification of the knowledge claim. In Almeder's view, this leads to the gap of philosophical and scientific scepticism of knowledge claim. Almeder posits that unless Quine's version of naturalised epistemology bridges the gap between philosophical and scientific scepticism to a logical end, this approach would be inconsistent and incoherent.

Almeder asserts that the exposure of traditional philosophical questions is illegal and it appears that the intelligible question about human knowledge in the form of a naturalised epistemology remains unanswerable. Almeder's conception portrays that traditional epistemology is broader than the naturalist approach that seems to expound the idea that the notion of knowledge is not about justification but explanation. In other words, traditional epistemology deals with knowledge in general. Almeder states that:

A close look at traditional epistemology, however suggests that the primary concern is much a matter of getting clear on...or understanding just what it means to know, and just what the concept of certainty relative to different senses of 'know' consists in, as it is a matter of validating knowledge claims or seeking the foundation of certainty.

In the light of the above assertion, the implication is that Quine's thesis did not achieve much result. From a different perspective, Ernest Sosa observed that he is not too clear on how to correlate the scientific study of the causal conditions of knowledge with the philosophical study of the nature of knowledge, unless one subjects epistemology to science alone by returning it to nature.<sup>109</sup> This sort of predisposition (as pointed by Sosa) that comes along with replacement naturalism demands to be philosophically engaged beyond the focus of this chapter.

Based on Hans Reichenbach's distinction between the 'context of discovery and context of justification,'<sup>110</sup> Harvey Siegel contends that while Quine is not mistaken that

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<sup>109</sup> Sosa, E. 1983 "Nature Unmirrored Epistemology Naturalized", *Synthese Vol. 55: 1. Justification and Empirical Knowledge, Parts I and II*, p.70.

<sup>110</sup> These two contexts are the parallels by which some epistemologists had attempted the distinction between psychology and epistemology.

there is the need to understand the link between observation and science, that is, “endowing truths of nature with full authority of immediate experience,”<sup>111</sup> his appeal to psychology can only help in accounting for the psychological mechanisms and process of theory development and not in the rational evaluation of theory. Consequently, Quine’s appeal to psychology is yet to be successful as the basis for epistemological inquiry. Simply put, Siegel’s claim implies that the role of epistemology is broader than the value of scientific features of psychology which need to be addressed against the backdrop of epistemological justification. This questions the essence of naturalised epistemology. It portrays, as Siegel puts it, that the province of epistemology seeks to reveal the general features of the sciences with the justificatory force.<sup>112</sup>

### **3.3 Pro-naturalised epistemologies**

Due to the fundamental observation hinted above that Quine’s naturalism in its attempt to seek for a causal explanation of knowledge rooted in natural sciences misses the broad aim of traditional epistemology in terms of the conceptual features and justification of knowledge, other theoretical orientations of knowledge such as ecological epistemology, evolutionary epistemology, virtue epistemology and genetic epistemology emerged. Also, the claims of environmental effect, intellectual virtue, social and gender contexts and so on as factors requisite for knowledge claim respectively by these epistemological outlooks suggest in like terms the replacement strategy deployed by Quine’s call for a return to nature; hence, this is the broad classification of these theories as pro-naturalised epistemologies. How? The consideration of the dynamics of these outlooks is examined below:

#### **3.3.1 Ecological epistemology**

Quine’s naturalism remains influential for the evolution of other forms of epistemological outlook. Lorraine Code acknowledges the influence of Quine’s naturalism in this direction. Although Code is of the view that Quine’s naturalism

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<sup>111</sup> Siegel, H. 1980. “Justification, Discovery and the Naturalizing of Epistemology.” *Philosophy of Science Vol.47: 2*, p.348.

<sup>112</sup> Siegel, H. 1980. p.320.

impresses incompleteness in the formulation of knowledge about reality as a whole, she argues that it could be repaired and that an ecological modelled naturalism would address the problems of naturalism.<sup>113</sup> Reflecting further on naturalised epistemology, Code calls for an ecological naturalism on the ground that it would get rid of Quine's naturalistic account of incompleteness. Ecological naturalism is centred on the conception of the natural knowledge-making process derived from the science of ecology. Ecological naturalism opines that inter-relations and interactions between individuals and their environment formulate knowledge. This is the factor of social-ability, as emphasized by Code. This approach, in her view, is not anti-scientific but both scientific and social-scientific. She argues further that:

Part of the answer to my question "what is natural about epistemology naturalized?," can be found then in ecological thinking. Naturalistic project can contribute to emancipatory epistemological agendas to the extent that they are prepared to examine the constructed dimensions both of nature and scientific knowledge and to assess the ecological effects of these constructs. Hence they need to assess the ecological effects of these constructs. Hence they need to engage questions of historical, cultural gendered epistemic specificity as constitutive features of science as an institution or process in the world.<sup>114</sup>

Code's insight appears extensive but there is the suspicion that such an attempt elevates the project of epistemology out of the sites of epistemology (as pursued by traditionalists and naturalists of Quinean version), thereby subjecting epistemic analyses to the current of ecological realities. Though this approach is laudable due to its recognition of the environmental nuances of epistemic generations in man and society, it is in a philosophical sense over-rated due to the unresolved questions about the possibility of the fusion of scientific, non-scientific and social scientific methodologies, which to a large extent, is still debatable. It is a futuristic epistemological appeal that is in the making.<sup>115</sup>

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<sup>113</sup> Code, L. 1966. "What is Natural about Epistemology Naturalized? *American Philosophical Quarterly* Vol.33: 1.

<sup>114</sup> Code, L. 1966. p.16.

<sup>115</sup> Code, L. 2003 "Feminist Epistemology." in Dancy, J. Sosa, E. & Matthias Stepup (ed.) *A Companion to Epistemology*. UK: Blackwell Publishing.



### 3.3.2 Evolutionary epistemology

Evolutionary epistemology is based on the thesis that cognition is a function of the brain; thus, it is also a result of biological evolution. This approach focuses on the connection between the growth of knowledge and biological evolution. Therefore, true knowledge is to be explained in terms of evolutionary biological adaptation. Evolutionary epistemology attempts, through the theory of evolution, to study our cognitive faculties. It emphasises that cognition is biologically conditioned in perception and experience. An evolutionary epistemologist is concerned with the development of human knowledge, which proceeds from some natural selection process. The process is what Darwin's Theory has called biological natural selection. A formidable protagonist of evolutionary epistemology is Hilary Kornblith.

Kornblith explores the Darwinian argument to defend the legitimacy of a naturalistic bent of knowledge claim. Kornblith agrees that Quine's argument remains one of the most persuasive naturalist accounts, though it must be foregrounded by some connection with the cognitive faculties. For Kornblith, this would enhance a fruitful engagement of three core questions posed by naturalised epistemology about knowledge claims:

Question 1: How ought we to arrive at our beliefs?

Question 2: How do we arrive at our beliefs?

Question 3: Are the processes by which we do arrive at our beliefs the one by which we ought to arrive at our beliefs?<sup>116</sup>

The first is the concern of epistemology. This is "how ought we to arrive at our belief if knowledge is justified true belief?" The second question is the concern of psychology whose interest in belief is how human beings come about beliefs, whether they are true or false. The third question, which is an interface between the two, is the concern of naturalised epistemology. Kornblith, like other pro-naturalised epistemologists, claim that the answer to question three should be affirmative. According to Kornblith, this is because nature has endowed our cognitive processes with a bias towards true belief. Why is this so? Kornblith's answer is that naturally, true belief has a survival value:

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<sup>116</sup>Kornblith, H. 1987. *Naturalising Epistemology*. Cambridge, MA: The MIT Press. p.5

without it, human beings would not have survived this long in the evolutionary timeline. To be concise, “we know this is because we survive.” But since this argument as it features in Kornblith’s view is presented as an enthymeme, let us attempt a better and explicit formulation of the argument here.

We know because:

1. We form beliefs in our mind about the external world.
2. Some of these beliefs reflect the facts external of our mind (irrespective of the physicalist doctrine that Kornblith subscribes to, direct or indirect realism, or any other).
3. Our survival as a species is based on these “facts giving beliefs” of ours.
4. Since we survive, we cannot but conclude that these beliefs are true: where to be true could be taken in its pragmatic sense.
5. Any adaptive behaviour that helps a specie to survive will be maintained over time and encoded in its genetic make-up, and our belief forming processes have such endorsement of nature. (Darwinian Theory)
6. Our beliefs, being 1 to 4 have achieved 5, giving rise to belief forming processes with a bias towards the truth.

As we can see, this line of thought is heavily resting on the evolution theory. It serves as the theoretical framework for Kornblith’s argument. In fact, we can waver between the two words “evolutionary” and “Darwinian” without any problem. But what is this Darwinian argument and how is it related to the issue of knowledge? The cognitive processes of human beings help people in the survival and reproduction of knowledge over ten thousands of years. If our cognitive faculty did not have a bias in favour of true beliefs, then we would not have been able to survive and reproduce. Having true belief has a survival value. What can be said is that natural selection is a predisposition to form a true belief. As Kornblith opines, that nature helps in the construction, generation and process of beliefs, the beliefs about nature can either be true or false. Thus, the process of arriving at a belief process is by the way we ought to arrive at them. This is what is referred to as Kornblith’s Darwinian Argument. Let us attempt further explication of the argument for clarity.

(a) True belief has survival value

This means that a true belief could help a specie of animal to prosper in the evolutionary timeline. You know that your perceptual apparatus (sense) tells you the truth about a predator coming which gives you enough time to hide or run from the impending danger that could terminate your life. If the apparatus had deceived you in believing that it is not a predator that is approaching but a lamb, then it would have been deceiving your progenitors the same way and your species would have become extinct as a result of poor or untrue judgment of the external world.

(b) Human perceptual apparatus produces a true belief that has survival value

The fact that human beings have survived in the state of nature points to the conclusion that our perceptual apparatus somehow gives us the true state of affairs of the external world. We can derive an all-important conclusion from this.

(4) Nature conditions our cognitive processes about true beliefs.

(5) If nature conditions our cognitive processes, the processes by which we arrive at our beliefs are the same through which we arrive at our beliefs.

This, therefore, answers the third question above:

(1) The processes by which we arrive at our beliefs are the same through which we arrive at our beliefs.

The logical pull of the Darwinian or evolutionary-biology argument bears the process of beliefs. This argument is valid; however, there is a need to entertain some speculations as regards the unknown forecast ('what could be' the future) of the surviving principles when some species go into extinction as in the case of some extinct animal species. Conceived from this perspective, reliance on evolutionary survival as the cognitive justification of knowledge may not be adequate as there is still a need to bridge the gap between 'what is' (temporal survival) and the possibility of what could be (future).

Despite this observation, evolutionary epistemology, to an extent, believes that we do have knowledge or that we can know by testing our beliefs on how well they help us to survive. However, I shall argue that the evolutionary survival justification provided by Kornblith presupposes that knowledge is social in both production and application. We

might want to inquire. First, the claim that the evolutionary usefulness of our belief justifies them as true and that it justifies the perceptual apparatus from which are made reliable true belief producing apparatus, implies that knowledge is social. This is because evolutionary theory is concerned with the apparatus for producing the belief, which could be genetically transferred from one generation to another, through heredity. Since almost everyone on the planet earth presently shares close to 99% of each other's' genetic make-up, we cannot but accept that the cognitive processes and perceptual apparatus of others work. This could dispel solipsism about knowledge; that is, I alone know that I exist.

On a second note, the evolutionary biology argument explains why we accept or reject the view of others that we consider as true or false, either as testimony or as peer disagreement by using it to cross-check our own position. This is because the Darwinian argument justifies the historical reliabilism of the epistemic status of the knower. As we have shown above, the virtue must necessarily be shared by others within the context of evolutionary theory, which serves as its theoretical legitimacy.

The implication of Kornblith's version of epistemology is far reaching for the whole enterprise of epistemology. It derives justification for the possibility of human knowledge as a product of evolution; epistemology thus becomes a pure and descriptive account as humans are a product of evolutionary development. Therefore, knowledge claims could be understood by appeal to basic laws of biology under the evolutionary theory. This suits Popper's opinion that knowledge claim consists of the biological quest of how human knowledge originates and grows.<sup>117</sup> As we have shown above, this epistemic outlook linked directly to Darwinism presupposes that knowledge is closely connected with beliefs and 'truth' about the survival value of species' natural selection.

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<sup>117</sup> Almeder, R. 1990. "On Naturalizing Epistemology." *American Philosophical Quarterly* Vol. 27: 4, 274.

### 3.3.3 Genetic epistemology

Closely related to evolutionary epistemology is genetic epistemology, which examines the progressive evolutions between continual states of knowledge in a person. It involves the study of historical developments of beliefs, cognitive stages, categories, and epistemic states. Genetic epistemology studies the mechanisms that increase knowledge and their passage from states of lesser knowledge to another state of higher knowledge which is adjudged superior. Although there are various versions of this epistemology dimension, central to genetic epistemology is the acquisition and justification of the epistemic transition from one state of knowledge to another in an individual.

Given the above insight, there is a narrow line of distinction between genetic and evolutionary epistemology as they have a common subject matter; the functional claims to knowledge (cognitive and biological make-up of humans) though they diverge in their perspectives. The basis for the position is that evolutionary epistemology emerges out of the Darwinian projection of the unity of nature. It covers a broad sense of substance and focuses on the essence of organisms (epistemic subjects) with its interactive environment (objects) while genetic epistemology derives its footing from the cognitive function of these organisms (epistemic subjects).

While Jean Piaget is popularly celebrated as an ardent protagonist of genetic epistemology, it is appropriate to focus on some scholars whose analysis of Piaget's epistemological approach seems re-sounding for explicating this epistemic outlook. For example, Kitchener opines that Piaget construed genetic epistemology by expounding on the psychological construction of knowledge derived from a comparative mental anatomy expressed by similarities in biological and psycho-physical structures (of adults and embryo's mental structures and functions).<sup>118</sup> Kitchener elaborated other commentaries on Piaget's genetic epistemology and opined that Piaget's genetic

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<sup>118</sup> Kitchener's insight is informed by the definition of Piaget that genetic epistemology is the study of the passage from states of lesser knowledge to states of knowledge (that are judged to be) more advanced or superior. See Kitchener, R.F. 1981. "The Nature and Scope of Genetic Epistemology." *Philosophy of Science*. Vol. 48: 3, 402. This informs Kitchener's assertion that genetic epistemology borders on "genesis (increase) of knowledge from lower to higher level.

epistemology does not suggest a reductionist and subjective scientism about knowledge. Rather, his view is that Piaget's attempt is a historico-critical method cum psycho-genesis that has a general scope as a universal epistemic framework, if subjected to a liberal interpretation.

It is in this sense that Kitchener observes that Piaget's attempt is not towards an internal or external history of science but a conceptual history of science which he says is similar to Kantian transcendental psychology. This psychology is concerned with the development of necessary conditions of thought that focus on the form or the structure of knowledge which is universal rather than the history of a single concept and conceptual relationship. Piaget makes a clear-cut distinction between epistemic subject and genetic epistemic. Epistemic subject is common to all subjects. This is manifested at the level of individual developments. Presumably, genetic epistemology is about the epistemic subject, an idealised individual who is the real subject or epistemological history. Also, genetic epistemology is concerned with psychogenesis, which is the fundamental category of thought in the epistemic subject from infancy to adulthood.

Kitchener's attempt is laudable but its extent to rid genetic epistemology of excessive psychologism is not glaring. This is simply because, when attempt is made to place Piaget's approach on an eidetic plane with the nature and scope of epistemology, its entanglement with the tenets of psychologism and the linguistic turn (of psychological framework) could hardly be avoided. If this is not avoidable, how can we be convinced that epistemology via the Piagetian route is not psycho-scientifically configured for explanations and knowledge claims? Six years after his work, "the nature and scope of genetic epistemology", according to Kitchener, contemplates the possibility of genetic epistemology through the 'genesis-justification' distinction; a misunderstanding, which generates the genetic fallacy.<sup>119</sup>

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<sup>119</sup> Kitchener, R.F. 1987. "Is Genetic Epistemology Possible." *British Journal for the Philosophy of Science* Vol. 38: 3, 283-299.

By genetic fallacy, Kitchener confuses the mere temporal order with logical order. Given this, he re-addressed the state of genetic epistemology side by side with epistemology. He realised that genetic epistemology, when conceived in the sense of fact-norm distinction in most epistemological project of the psycho-geneticist, becomes irrelevant to ‘real’<sup>120</sup> epistemology. Nonetheless, Kitchener argues that when the nature of psychology is misinterpreted, the thought that genetic psychology is irrelevant for genetic epistemology may abound; a thought not justified, yet may (not) be totally misconstrued.

Churchland, in similar vein, accentuates that psychologism which is an equivalent of the sort of Piaget’s naturalised genetics would demonstrate that epistemology is basically concerned with knowledge development.<sup>121</sup> This is not to say that the viability of psychology or biology strips epistemology of its normativity; rather, the point is that knowledge claims on logical-conceptual analysis alone restricts the quest of knowledge within linguistic parlance, while knowledge might be developed beyond linguistic confines.<sup>122</sup> The implication is that, for genetic epistemologists, epistemology is majorly an organism-embodying knowledge reflected by neural, nervous and sensory operations within humans rather than reliance on a venture of justification via a realist/a priori inquiry of notions like beliefs, truth and so on.

### **3.3.4 Feminist epistemology**

The problems of what constitutes knowledge are also the focus of feminists. Feminist epistemological projections “are at once political and revisionists.”<sup>123</sup> They destabilise androcentrism which is prevalent in the humanities, social, and natural sciences. Feminist epistemologists argue that contrary to notions of universality or objectivity and abstract conception of knowledge that permeates Western epistemological thoughts, all perspectives reflect the interests of those who hold them. Because they

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<sup>120</sup> The usage is adopted by Kitchener though it seems ambiguous.

<sup>121</sup> Churchland, P.C. 1979. *Scientific Realism and the Plasticity of Mind*. Cambridge: Cambridge University Press.

<sup>122</sup> Boden, M.A. p.193.

<sup>123</sup> Code, L. (2003) “Feminist Epistemology”, in Dancy J. Sosa, E. and Stepup, M. (ed.) *A Companion to Epistemology*. UK: Blackwell Publishing.

focus upon practices of knowledge construction, one of their principal effects is to the question ‘Whose knowledge are we talking about?’ to a central analytic position. In other words, feminist’s epistemologists are sceptical of the possibility of a general account of human knowledge that ignores the social context and gender of knowers. It examines how the norms and conceptions of gender and gendered interests and experiences influence knowledge. For feminist epistemologists, a leading question has been whether women acquire knowledge in ways that differ from methods of knowledge acquisition open to men. This line of thought is made manifest in Longino’s submission that there have been questions on the relation of feminist theorizing to knowledge construction. What must be said is that knowers of a common framework belief assume that knowledge must be distinguished from a mere opinion.

Also, from Carol Gilligan, Smith Dorothy, Liz Stanley, Susan Heckman, Sandra Harding among others, the sketch of feminist epistemological outlook could be succinctly summarised. It is a reactionary epistemology that contends that the ‘male’ domineering orthodox episteme categories is elevated at the exclusion of women’s experiences and location within the social context of all sciences; hence, it reinforces gender dualism and false universalism. It imposes objectified knowledge. Feminist epistemology has been expounded as a new theory of knowledge that accommodates the complexities in orthodox (traditional) epistemology. As such, it creates room for plural conceptions of epistemology. The whole quest of knowledge is a venture in doubt or a mere impression of what constitutes the truth or genuine acquisition of knowledge claim. Despite this general outlook of feminist epistemology, a scholar like Jennifer Ring attempted a re-interpretation of the feminist standpoint theory via Marx’s dialectics. Ring engages some pro-feminist scholars’ argument that Marx’s dialectics fostered a distinct male point of epistemology at the expense of women subordination.<sup>124</sup>

Ring argues that such feminist view is also guilty of the same pitfall that classifies conceptions of universality and the objectivity-subjectivity dichotomy as a distinct

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<sup>124</sup> Scholars like Catherine Mackinnon, Mary O’Brien, and Nancy Harstock are of this view.



male point of view. She proffered that any account that suggests epistemology framed by this motivation has not addressed the content of feminist epistemology sufficiently.<sup>125</sup> Through Marxist dialectics, she posits that there is no justification provided by feminists for the male construed view about universality and object-subject distinction. Presenting the metaphysical complexity in the nature of passivity and activeness of subject-object, she argues that such situation makes it difficult to envisage how anything, truth inclusive is received and transmitted.<sup>126</sup> Moreover, the view that Marxist dialectics have potential relevance for feminist epistemology through the interpenetration of subjectivity and objectivity, that objectifies “women” with nature leading to dialectic truth and a possible ‘universality’ warranted by feminist liberal objectivism, is sustained. The basis for this is Marxist’s political and metaphysical assumption about the struggle to become/live (that is labour/“producing life” which involves living, eating, drinking, housing and so on that are women or men driven/determined) in the course of making history.

The suggestion here is that Marxist dialectics proceed historically from the central concern of women on the unity of nature. This informs that any epistemological framework that relinquishes human history because it is recognised only as ‘male’ history<sup>127</sup> would not suit the interest of feminist theory. This sort of approach is suspiciously a centric; it diverts the position of mainstream feminist standpoint from its connection with the subordination of women as knowers. However, for other epistemologists, the character trait of the epistemic subject/knower is the certifying basis for knowledge acquisition or claim. How is this approach projected? This is the central concern of another epistemological orientation called, the virtue epistemologists.

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<sup>125</sup> Ring, J. 1987. “Towards a Feminist Epistemology”, *American Journal of Political Science* 31: 4, pp.753-772.

<sup>126</sup> Ring, J. 1987. p.758.

<sup>127</sup> Ring, J. 1987. “Towards a Feminist Epistemology.” *American Journal of Political Science*.p.766.

### 3.3.5 Virtue epistemology

Virtue epistemology defines knowledge in terms of the intellectual character and emphasises that the intellectual virtue be the cogent requirement for knowledge.<sup>128</sup> Douglas Walton and Alan Briton proposed that the claims of a speaker who has ‘bad’ character should be perceived less plausible,<sup>129</sup> while Lawrence Hinman and Stephen de Widjze agree that where the truth value of a speaker’s claim is inaccessible, hearers (of the speakers) should consider the speaker’s (character) reliability as relevant in justifying the truth-value of the claim.<sup>130</sup> Virtue epistemologists eschew the plausibility of knowledge claims that are derived from intellectual vices (that is because of ‘bad’ character, limitations of accessibility to claims, lack of truth values in propositions and arguments). As an ardent proponent of virtue epistemology, Battaly emphasised that intellectual virtues are concomitant conditions for knowledge production; thus, some “ad hominem arguments” afterwards are legitimate.<sup>131</sup> By stating that some ad hominem arguments are legitimate, Battaly suggests that ad hominem propositions would be rid of its fallacious tendencies by logically interrogating a person’s claim independent of the personality.

This argument is premised on the thought that even a ‘bad’ intellectual character may often produce sound, strong, and valid claims (knowledge). Through this standpoint, virtue epistemologists emphasise that knowledge is not exclusively tied to belief-evaluation as traditional epistemologists have portrayed; it is also tied to agent evaluation. The understanding here is that epistemology cannot be based on the Gettier/Chisolm styled epistemic guesses/luck (as presented in the counter examples and the case of the sheep respectively) rather assertion of claims or beliefs as knowledge should appeal to the intellectual virtue of knowers. Indeed, this view is the

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<sup>128</sup> Battaly, H. 2010. “Attacking Character: Ad hominem Argument and Virtue Epistemology”. *Informal Logic*, Vol. 30: 4, pp.361-390.

<sup>129</sup> Alan, B. 1985. “A Rhetorical View of Ad hominem.” *Australasian Journal of Philosophy* 63: 1, 50-63; Alan, B. 1986. “Ethotic Argument.” *History of Philosophy Quarterly* 3: 3, pp.245-258; Alan, B. 1995. “The Ad hominem.” Hans, V.H and Robert, C. (eds.) *Fallacies: Classical and Contemporary Readings*. University Park, PA: The Pennsylvania State University Press, pp.213-222.

<sup>130</sup> De Wijze, S. 2003. “Complexity, Reliance and Character: Problems With Teaching The ad hominem Fallacy.” *Educational Philosophy and Theory* 35: 1, pp.31-56. See also Hinman, L.M. 1982. “The Case For ad hominem Arguments.” *Australasian Journal of Philosophy* 60: 4, pp.338-345.

<sup>131</sup> Battaly, H. 2010. p.3.

central point of the whole gamut of virtue epistemology: virtue reliabilism, virtue responsibilism and virtue sensibillism<sup>132</sup>(which holds that intellectual virtue is central to knowledge claim but vary in terms of degree or explanations about intellectual virtue). Given this virtue approach of knowledge, there are lots of objections to contend with. One objection is the obvious moral colouration overhauling the account of knowledge as if epistemic know-how is a mere abstraction from the categories of characters, vices or virtues and virtuous knowers (speakers and hearers). Accounting for knowledge in this way may lead to further philosophical problems, since morality is often times a normative enterprise; how does it account for scientific, religious, cross-cultural variables of knowledge and perception? Even though there is an ethical dimension into the issue of knowledge, it is clear that ethical concerns cannot be appropriated always as moral concerns even in the domain of philosophy. Jason Baehr partially shares this view “that virtue epistemology is ... the epistemological analogue of virtue ethics”. Though the dissimilarity between the two, according to Baehr, is that there is a formidable agreement about moral virtue in Virtue Ethics while intellectual virtue (which is the core of virtue epistemology) is divided alongside the explanatory model of virtue: reliabilism, responsibilism (and sensibillism) in virtue epistemology.<sup>133</sup>

In the same vein, Jonathan Kvanving argued that virtue epistemology does not provide an adequate or complete account of knowledge. He states that for any value on knowledge to be acceptable, the nature of knowledge in terms of the virtues must be explained and how true virtue is more valuable than true belief itself. Be that as it may, the evaluation of this approach to knowledge like the other forms of pro-naturalised epistemologies remains insufficient for clarifying the matter of knowledge acquisition despite the several attempts to go beyond justification to explanation of the nature of knowledge.

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<sup>132</sup> Sosa, E. 1980 *The Raft and the Pyramid.*; Sosa, E. 1991, *Knowledge in Perspective*, Collected Essays in Epistemology. New York: Cambridge University Press; Sosa, E. (2007), *A Virtue Epistemology*, Oxford: Clarendon Press. p. 262

<sup>133</sup> See Baehr, J. 2006 “Character, Reliability and Virtue Epistemology”, *Philosophical Quarterly* Vol.56: 233, 193.

At this juncture, it is important to state that the epistemological orientations outlined above are vigorously pursued and explored in modern epistemology. They have all served to enrich and expand the field of epistemology in ways not appreciated a few decades ago. One can also appreciate the important contributions these positions have made at repairing the inadequacies of traditional epistemology. However, these epistemological positions differ on a number of grounds particularly in terms of their characterization of epistemology and the disciplines they study. Naturalised epistemology, for instance, examines the cognitive methods and the substantive claims by using the posteriori evidential status of science. Genetic epistemology also settles for psychology while evolutionary epistemology studies biology. It is equally important to state that all these epistemological positions (except feminist epistemology), in one way or the other, focus entirely on psychological and cognitive processes involved in beliefs and knowledge justification. Yet, the point that these alternative epistemological outlooks follow the path of Quine's replacement strategy of the search for the fundamental factor, that varies from one outlook to the other as emphasised, that explains the acquisition or process of knowledge claim rather than justification (of traditional epistemology), is sustainable for their inclusion in the broad classification of pro-naturalised epistemology.

However, looking at the traditional epistemology and other epistemological orientations, the relevance of people's social-cultural epistemological practices and other concrete human situations in the production, dissemination, and justification of human knowledge is undermined. The fact that knowledge is a human affair that is socially-created seems to suggest that when there is need for an analysis of human knowledge, it should be done without "being overly rigid and without cutting the knower off from the real world he seeks to know."<sup>134</sup> Thus, the knowing subject in both the traditional and some modern epistemological accounts of human knowledge is socially and historically detached from the object of knowledge.

Therefore, the study of social epistemology becomes an inevitable route to the analysis and understanding of human knowledge. In addition, it is further assumed that social

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<sup>134</sup> Goldman, A. H. 1988. *Empirical Knowledge*. USA: University of California, Berkeley. p 22.

considerations can further illuminate the general conditions by encouraging or discouraging the acquisition, dissemination, and development of human knowledge.

### **3.4 Sociology of knowledge and social epistemology**

Highlighting the distinctions between sociology of knowledge and social epistemology is an essential point of entry into this section. According to social epistemology, knowledge is whatever is taken to be knowledge. Knowledge consists of beliefs which people confidently hold in high esteem and live by it. Sociologists are concerned with beliefs, which are taken for granted or institutionalised, or invested with by groups of people in authority. Sociology of knowledge examines the distribution of beliefs and its different factors. Sociology of knowledge determines human participation in social life. It studies the relationship between human thought and the social context within which it arises and focuses on the effects of prevailing ideas on societies. Knowledge is conjectural and theoretical. This is because nothing is absolutely final. Knowledge is therefore relative to the text producers. Criticism and evaluations are based on the social milieu of the producers.

It can be deduced that sociology of knowledge assumes that knowledge can be treated as empirical investigation of causes, conventions, and interests that social institutions have in the acquisition, distribution, and development of human knowledge. Social epistemology, on the other hand, is the normative study of the relevance of social relations, interests and institutions to knowledge. Hence, it is meant to be distinguished from the sociology of knowledge, which is an empirical study of the contingent social conditions or causes of what is commonly taken to be knowledge. It studies the normative relevance of social relations interest and institutions. Social epistemology is an attempt at explaining how the products of our cognitive pursuits are constituted by an understanding and justification of knowledge within the social-cultural framework.

From the foregoing, it is important to ask what is ‘social’ in social epistemology. Different epistemologists have conceived the term “social” in different ways. Social epistemology encompasses a wide variety of approaches, all of which regard the investigation of social aspects of inquiry to be relevant to the discussions of the

justification of human knowledge. Social epistemologists like Richard Rorty, Alvin Goldman, Helen Longino, Lorraine Code, and Steve Fuller among others have adopted different approaches in their conceptions of social epistemology. It is pertinent to state briefly different dimensions or approaches the project of social epistemology has taken.

Thomas Kuhn gave a new claim that knowledge is human-centred. This means that it is a function of social forces in a multidirectional evolution and that knowledge performs social functions in every conversation. In view of the position maintained by Kuhn, Lorraine Code corroborated this by claiming that the Western epistemological-paradigmatic project for “all knowledge systems has not only been unsuccessful but also ill-conceived and has no right to the theoretical hegemony to which it lays claim.”<sup>135</sup> Code’s position is tenable because since knowledge is derived from specific human interests, it should be frankly viewed as socio-cultural projects.

As a corollary, individuals possess socially-situated knowledge because our social situation affects how we think, what we think about, our belief, as well as our knowledge claims. Indeed, components of knowledge or concepts such as truth, rationality or justification, and knowledge itself are socially and contextually determined. Hence, the whole projects of Western philosophy in seeking absolute epistemic foundations or the misleading image of the “autonomous epistemic agent” ought to be replaced with the social conception of knowledge that encourages a multi-dimensional analysis of human knowledge. To this end, the justification of knowledge should not depend solely on individual subject-object relations account rather, it must include the relationships of knowers and the circumstances of a people.

In Code’s view, knowledge requires communal standards. It affirms, corrects, and denies human standards. Epistemic community focuses on epistemological inquiry. It analyses the perception-and memory of knowledge based claims. In this regard, Rorty opines that instead of analysing truth, rationality, and knowledge, it is pertinent to examine social factors of knowledge by using context. For him, “reality is one, but

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<sup>135</sup> Code, L. “Taking Subjectivity into Account.” in Alcoff, L. (Ed.) 1998. *Epistemology: The Big Questions*, p.131.

descriptions of it are many. They ought to be many, for human beings have, and ought to have, many different purposes.”<sup>136</sup>

Alvin Goldman and Helen Longino opine that social epistemology is an extension of traditional epistemology. It aims to correct its extreme orientation of individuals. Their conceptions of social epistemology retain the thought that knowledge and justified belief have a linkage to truth as epistemic goals of inquiry. Goldman’s approach to social epistemology seeks to establish the social nature of truth with its regulatory role. According to him, there are two branches of epistemology namely: individual and social. Both branches identify and examine processes and practices of true belief. Individual epistemology needs help from cognitive sciences. That is, individual epistemology would identify and evaluate cognitive processes, structures and mechanisms<sup>137</sup> that occur within an epistemic subject.

On the other hand, social epistemology focuses on social processes. It interacts with other agents who exert causal influence on their beliefs. Goldman argues that, whether in everyday life or in specialised arenas, there is a certain value which is placed on true beliefs rather than false beliefs. This type of value is called veristic value. According to Goldman, the veristic approach to social epistemology is evaluative (normative) rather than purely descriptive (explanatory). It evaluates actual and prospective practices. What can be inferred from this is that truth plays a regulatory role in the study of knowledge.

According to Goldman, social epistemology evaluates social practices. Also, Helen Longino seeks to establish that understanding relationship among two or more individuals aimed at epistemic justification or rationality of beliefs is a crucial factor in knowledge claims. Longino’s conception of social epistemology involves the establishment of knowledge and objectivity in the activities of the community of scientists. In her view, a scientific belief is justified if its results are verifiable by using objective methods and also to say that a theory or hypothesis “was accepted on the

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<sup>136</sup>Rorty, R. Solidarity or Objectivity in Rajchman J. and West C. (Eds.) *Post Analytic Philosophy*, NY: Columbia University Press.p.7

<sup>137</sup>Goldman, A. 1986. *Epistemology and Cognition*. Cambridge Mass: Harvard University Press. p.4

basis of ‘objective methods’ does not guarantee that it is true rather justification is grounded in ‘objectivity’ in the community of scientists rather than individual scientist. This implies that a theory or hypothesis is only accepted if it must be justified by asserting that it is true and such justification is grounded in ‘objectivity’ in the community of scientists rather than individual scientists.”<sup>138</sup>

Therefore, the social dimension of scientific knowledge in Longino’s postulation is reflected in the point that objectivity is a feature of a community’s practice. In her view, it is another approach that construes the social epistemology as a radical departure from traditional epistemology. While some social epistemologists have articulated that there are objective norms of rationality that social epistemologists should aspire to articulate in epistemology, the radical approach focuses on the epistemic goal of justifying or rationalising beliefs in a rather different manner. This radical conception of social epistemology has no regard for universal or general account of concept like truth and there is no independent foothold for justification of knowledge. It also rejects the existence of objective norms of rationality. The social dimension of knowledge, according to this approach, involves what is believed, or what culture, society or community, or context says. This approach to social epistemology seeks to describe and understand a selected community’s norms of rationality but rejects the notion that there are any ‘universal’ or ‘objective’ norms of rationality, or criteria of truth.

This approach to social epistemology maintains that since there are no context-free or super cultural norms of rationality, it might be impossible to decree that certain practices are more rational or more truth-conducive than others. Put differently, rationality or justification of certain beliefs is context-dependent because there is “no ‘ultimate’ or ‘foundational’ criteria of rationality which could serve as the standard by which all forms of belief-system could be judged as rational or irrational.”<sup>139</sup> Therefore, concepts such as truth, rationality, justification, and knowledge are socially

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<sup>138</sup>Longino, H. 1990. *Science as Social knowledge*, Princeton: Princeton University Press. p.67.

<sup>139</sup> Irele, D. 1997. ‘Essentially Contested Concepts and the Question of Rationality in Traditional African Thought.’ *Ibadan Journal of Humanistic Studies*, 28.



determined. This perspective can be discerned from some of Richard Rorty's pronouncements on social epistemology. According to him, knowledge involves "the social justification of belief, and rationality and epistemic authority are supposed to be explained by reference to what society lets us say."<sup>140</sup> Contrary to some traditional and modern conceptions of knowledge, Rorty argues that "epistemic justification is not a matter of a special relation between ideas (or words) and objects, but of conversation, of social practice."<sup>141</sup>

The three derivatives from the above analysis about the nature of social epistemology are stated below:

- Social epistemology entails both cognitive and non-cognitive factors of knowledge production.
- Social epistemology differs from sociology of knowledge that presumes to purify errors and falsity social-scientific account of knowledge, emphasising that epistemology is logically basic to sociology of knowledge.
- In lieu of these two, social epistemology attempts a balance and inclusive account of knowledge, foreclosing an exclusive scientific or traditional (paradigmatic) account of knowledge. This is similar to Alvin Goldman's speculation of his core idea of 'epistemics', which he hinted, recognizes and stipulates the cognitive and social aspects of knowledge.<sup>142</sup>

The immediate suspicion about this point of view is its propagation of a relativistic gnosis since different cultures display different norms of rationality. However, this needs not to be the case, as there is the possibility that an 'extra discursive element of truth'<sup>143</sup> fused with a realistic outlook (on diverse cultural framework) can propel an objective 'we perspectives' (to use Hartmann and Lange's term) of knowledge rooted in every culture (without setting one against another).

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<sup>140</sup> Rorty, R. 1979. *Philosophy and the Mirror of Nature*. Princeton: Princeton University Press.p.174

<sup>141</sup> Rorty, R. 1979. p.170

<sup>142</sup> Goldman, A.I. 1986. "The Cognitive and Social Sides of Epistemology." *Proceedings of the Biennial Meeting of the Philosophy of Science Association*. Vol.2. pp.295-311.

<sup>143</sup> Hartmann, D. and Lange, R. 2000. "Epistemology Culturalized." *Journal for General Philosophy of Science/Zeitschrift für allgemeine Wissenschaftstheorie*. Vol.31:1, p.93.

It is noteworthy that these approaches to social epistemology contributed immensely to debates about the social dimensions of the traditional components of knowledge. It is equally necessary to state that most of these approaches to social epistemology focused heavily on the social factors in science, that is, the tremendous practical successes of science in the modern period, which have encouraged the claims of the objectivity and universality of science as a paradigm of knowledge. Simply put, the prominence accorded this conception of social epistemology is limited and has made social epistemology to fail in the attempt to resolve some of the problems that the traditional and modern epistemologies are confronted with.

Besides, the social factors canvassed by social epistemologies, especially in favour of science as the paradigmatic knowledge, are too narrow, and even dismissive of other non-scientific social routes to knowledge. One of such significant social routes is the indigenous knowledge system, which puts into question the views that only scientific knowledge reflects the structure of reality 'out there' and that it provides a mirror of the nature of social epistemology.

Social epistemology has not been followed to its logical conclusion. It has not sufficiently explored the possibility and the nature of indigenous knowledge. It has equally undermined various cultural epistemological practices, values and other forms of indigenous systems in the justification of beliefs and knowledge claims. Therefore, the inadequate attention to indigenous system of knowledge has the tendency to foreclose the possibility of moral, religious, and other forms of socio-cultural or indigenous knowledge systems. These areas of knowledge form parts of the areas which social epistemology should cater for because they are equally significant for the understanding and analysis of human knowledge.

### **3.5 Conclusion**

Our assessment of different strands of epistemology, both in individualistic and social contexts in this chapter, is an ambitious end. This is because there is the possibility of charting a conceptual link between social epistemology and indigenous knowledge. The precise effort made so far in this chapter has been to consider other responses to

traditional account of knowledge, or aptly put, alternative accounts or approaches of knowledge, which we perceive as thought provoking. The chapter has, to an extent, ‘edged out’ the point of emphasis of each approach’s strengths and weaknesses. In the latter section, the choice of social epistemology has been introduced as a pragmatic approach (suitable) to the complicated account of knowledge.

Having expatiated on the agenda of traditional epistemology, naturalised epistemology as well as pro-naturalised epistemologies, this chapter argues that, since the inception of western epistemology, the conceptual properties with which knowledge was characterised, that is, belief, truth and justification were approached majorly from the individual cognitive perspectives. Given this, the chapter made efforts to emphasise that social cognition of knowledge as prioritized by social epistemology is important to make a holistic sense of individual claim to true belief and knowledge. Basically, the chapter posits that social epistemology emphasises the “we” as an essential element that must be factored in in the proper conception, analysis, justification and acquisition of human knowledge.

It can be surmised that social epistemology via indigenous knowledge has a tendency of situating in appropriate terms the locales of knowledge production and it accounts for the norms of rationality, which bind epistemological speculations from Western philosophy to African philosophy. It is necessary that we examine the nature of indigenous knowledge to critically engage what it has to offer.

## CHAPTER FOUR

### 4.0 THE NATURE OF INDIGENOUS KNOWLEDGE

#### 4.1 Introduction

In chapter three, we examined some contemporary epistemological orientations and their attempts at providing an account of knowledge. In the course of examining these epistemological orientations, we identified social epistemology as an epistemological orientation that provides a viable platform through which an adequate account of knowledge can be realised. The central claim of social epistemology, as identified in the chapter, is that knowledge is a phenomenon that is socially-bound and its justification by necessity could be approached in multi-dimensional ways. This suggests that, since there is a desire to know, it follows that human knowledge must be justified by appealing to social factors and human interests. It can be said that social epistemology moves beyond the individualistic perspective of the traditional knowledge system and other epistemological orientations to emphasise the social dimension in the acquisition and justification of human knowledge.

However, social epistemology as highlighted and presented in the works of some scholars could not resolve some of the problems that the traditional and other contemporary epistemological orientations have grappled with. To state in clear terms, social epistemology has not sufficiently investigated the indigenous knowledge as a viable platform through which the project of social epistemology can be adequately realised. By extension, it has marginalised and undermined some socio-cultural knowledge practices, values, beliefs, and indigenous methods of justifying knowledge claims. Apart from the inadequate attention given to the indigenous knowledge system, there is also a tendency to foreclose the epistemic justification of moral, religious, and other forms of non-scientific and socio-cultural claims to knowledge. Indeed, these areas of knowledge constitute the bulk of what social epistemology should cater for because they are equally significant in understanding the dimension in which social factors in the acquisition and justification of human knowledge can take.

To address these problems and other inadequacies of social epistemology, this chapter projects the idea of indigenous knowledge as an important epistemic platform that attempts to provide the framework that is found to be inadequate in other strands of social epistemology as well as other epistemological orientations. This effort is predicated on the understanding that the idea of social epistemology itself is premised on the idea that knowledge is significantly local and partly shows the communal and practical (socio-historical) contexts of its production.

However, it is pertinent to note that the indigenous knowledge, as construed in this work, is a strand of social epistemology that emphasises a cultural platform for understanding knowledge acquisition and justification. It attempts to situate what is known, the way of knowing and the limits of human knowledge in specific social-cultural contexts. Therefore, our focus on indigenous knowledge system is premised not merely on the fact that it has not been granted adequate attention in social epistemological discourse but also on the fact that it explains the multidimensionality of human knowledge than other strands of social epistemology.

It is imperative to start with problems of knowledge. According to Popper, the problems with knowledge generally, and scientific knowledge in particular, involves practical as well as theoretical dimensions.<sup>144</sup> Following this assumption and to achieve the specific objectives of this work, the chapter begins with the task of conceptual analysis of indigenous knowledge by categorising indigenous knowledge system into two: practical and theoretical. This means that indigenous knowledge system involves practical (techniques) and theoretical (non-practical) elements. The practical or technical element of indigenous knowledge is closely connected with craft traditions, artisans, technology, and other practices involved in finding a genuinely satisfactory solution to some problems by the indigenous people. Also, the theoretical aspect of indigenous knowledge involves those elements that constitute a form of life of a people in which an intelligible explanation or justification for oral culture, values, beliefs and practices is sought.

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<sup>144</sup>Popper, K. 2000. *In Search of a Better World*. London: Rutledge. p. 3.

This chapter focuses on practical or technical aspect of indigenous knowledge. The other aspect shall be examined in the next chapter. Also, with respect to the practical aspect of indigenous knowledge, the trial and error method is identified as the principal methodology of arriving at knowledge claims and this methodology is based on the principle of induction. This same principle underpins scientific knowledge. Thus, what we attempt to achieve is to provide epistemic foundation for indigenous knowledge system. Also, as we proceed, it will be argued that since both practical indigenous knowledge and scientific knowledge rely on the principle of induction, that is, both operate on the same epistemological platform, it is a misconception to claim that indigenous knowledge is anti-science or a form of knowledge that is opposed to scientific knowledge. The chapter rather submits that in view of the similarities between scientific knowledge and the practical aspect of indigenous knowledge system, establishing the synergy between indigenous knowledge and scientific knowledge will make scientists to further consider indigenous knowledge as a resource for further exploits and discovery. It is therefore important that we proceed to a clarification of the idea of indigenous knowledge.

## **4.2 Conceptions of indigenous knowledge**

While the idea of indigenous knowledge system is as old as humankind itself, the academic discourse on indigenous knowledge is relatively a recent phenomenon.<sup>145</sup> It is only in the last four decades that the academic interest has been directed to the idea of indigenous knowledge. Historically, the first phase of the debate on indigenous knowledge system constitutes an interesting example of colonial discourse applied to issues of culture, power and knowledge. This means that the idea of indigenous knowledge originally emerged in the context of national liberation struggles. Critiques of colonial discourse generate debate about the need to revive and develop indigenous and alternative forms of knowledge which had been submerged by the dominance of modern science transmitted through colonialism and other Eurocentric ideologies. This heightens the interest in traditional knowledge system in a number of post-colonial

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<sup>145</sup>Horsthemke, K., 2004. "Indigenous Knowledge'- Conceptions and Misconceptions." *Journal of Education*, No.32pp. 31-48.

states and generates the debate about their possible relevance for contemporary times.<sup>146</sup>

In its second phase, the focus is on the models of development and new technologies introduced especially with the emerging interest in international business environment and sustainable development agenda.<sup>147</sup> This is when multinational corporate interests began to explore business possibilities, which might be opened up by incorporating knowledge from other systems and cultures.<sup>148</sup> It is for this reason that the United Nations Educational Scientific and Cultural Organization (UNESCO), for instance, focused her attention on two core concerns: the eradication of poverty and the development of a knowledgeable society.<sup>149</sup> It is noteworthy that activities aimed at addressing these priorities recognise the importance of indigenous knowledge system as an integrated body of knowledge and a viable resource for combating marginalisation and impoverishment.

Given this background, it is important to hint that the discourse on indigenous knowledge involves complex socio-cultural, legal, and political issues relating to how the wisdom embodied in indigenous system should be preserved for the world and the benefits derivable for including indigenous knowledge in development strategies without compromising their culture and way of life are innumerable. Consequently, the definitions or conceptions of indigenous knowledge are as many as the 'Eurocentric' classifications of knowledge systems are concerned. It can be said that our attempt at a conceptual analysis of indigenous knowledge is aimed at identifying core features of knowledge within the indigenous knowledge system and to establish the epistemic significance of indigenous knowledge within the gamut of social epistemological discourse.

It is imperative to begin a conceptual analysis of indigenous knowledge with an examination of those definitions that place premium on the origin or source of

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<sup>146</sup> <sup>146</sup> Joseph, S.1998. *Interrogating Culture: Critical Perspectives on Contemporary Social Theory*. London: Sage Publications. P. 90

<sup>147</sup> Agrawal, A. 2002. 'Indigenous Knowledge' In *International Social Science Journal*. 173, p. 286.

<sup>148</sup> Agrawal, A. 2002.

<sup>149</sup> Agrawal, A. 2002.

indigenous knowledge in terms of their geographical location of the people claiming the knowledge. In this regard, Louise Grenier opines that indigenous knowledge is the unique, traditional, local knowledge existing within and developed around the specific conditions of women and men indigenous to a particular geographic area.<sup>150</sup>

Apart from indigenous knowledge being conceived to be unique to a geographical location, it can also be defined in terms of the transmission of its cultural elements. In this sense, Ocholla Dennis in support of Madhav Gadgil considered indigenous knowledge to be a “cumulative body of knowledge and beliefs handed down through generations by cultural transmission about the relationship of living beings,(including humans) with one another and with their environment.”<sup>151</sup> Also, indigenous knowledge is an archive of the local knowledge which belongs to a community and is explicated in actions, objects and sign language for sharing. Indeed, indigenous knowledge is an integral cultural heritage of a community.

Granted that the above definitions are useful in shaping our conceptual exploration of the idea of indigenous knowledge, another attempt to conceptualise indigenous knowledge by D. A. Masolo warrants our attention in the sense that it emphasises the actual epistemic content of indigenous knowledge that the social conception of knowledge advocates. He states thus:

The emphasis on the content and methodology in philosophical traditions can be traced to circumstances that identify how different peoples of the world have striven to manage their culture and their histories. In that sense, such emphasis bear the marks of indigeneity, meaning that they are indicators of the ways that people think differently about the world...the striving is no longer the search for the elusive universal but a

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<sup>150</sup>Grenier, L., 1998. Working with Indigenous People: A Guide for Researchers. Ottawa, ON: International Development Research Centre.

<sup>151</sup>Ocholla Dennis, 2001. ‘Marginalised Knowledge: An Agenda for Indigenous Knowledge Development and Integration with other Forms of Knowledge,’*South African Journal of Libraries and Information Science*, pp. 237-243.



search for the integration of diversity- including diversity in knowledge.<sup>152</sup>

What must be noted is that indigenous knowledge is an important factor to be understood in the social epistemological discourse as intended in this chapter. It seems to propel an interrogation of certain conceived universal (mainly Western) posers of the phenomenon of knowledge. That is, the essence of threading the path of Masolo is to interrogate and justify the epistemic ingredients and characteristics that define the diverse circle of intellectual know-how and which has established forms of knowledge as systematic, analytical, from a specific standpoint, all thriving for a universal plane for leveraging the account of acquisition and justification of knowledge.

Masolo's position further suggests that indigenous knowledge is crucial to the enterprise of epistemology in terms of exposing the multidimensional ways in which social factors can engender the acquisition and justification of knowledge. In other words, Masolo's position emphasises that, within the context of epistemological discourse, indigenous knowledge is a pointer to the fact that all knowledge schemes of belief-justification are routed via the context of its producers. For instance, a number of contemporary societies including African societies use telepathy and precognition to establish that knowledge, though universal to all humans, can be acquired and justified through different socio-cultural contexts or indigenous means.

At this juncture, it is important to ask: When is knowledge indigenous? As earlier stated, questions relating to local, traditional and indigenous status of knowledge are widely discussed and politically charged. In this chapter, we shall consider Paulin Hountondji's position. He subscribes to our earlier definitions of "indigenous" and argues that the forms of knowledge exist and could be regarded as indigenous by virtue of their being local, traditional, or interior to a particular culture.<sup>153</sup>

Indeed, while it is difficult to undermine the epistemological implication of the views of Masolo and Hountondji as well as other definitions of indigenous knowledge, it has

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<sup>152</sup>Masolo, D.A., 2003, 'Philosophy and Indigenous Knowledge: An African Perspective.' *Africa Today*, p. 22 Masolo, D.A., 2010, *Self and Community in a Changing World*, Blooming and Indianapolis: Indiana University Press, p.51

<sup>153</sup> Hountondji, P., 1997, *Endogenous Knowledge: Research Trails*, Wiltshire: Antony Rowe Ltd., p.13

been argued that categorising knowledge as ‘indigenous,’ ‘local’ or ‘traditional’ and their inclusion in knowledge scheme, is misguided. It is further stated that such categorisations give emphasis to political undertone.

The point here is that Hountondji’s speculation deepens the categorisation of traditional as against foreign, exogenous, modern, and scientific conceptions which emphasise the need to remove African philosophical know-how from an extreme insular, interiorised, indigenous stance, and places it within a wider web of world and global cultural mode or inquiry. Labelling practices, techniques or even knowledge as ‘indigenous,’ ‘traditional’ or ‘local’ seems counter-productive in the sense that its political undertones exhibited the preconceived consideration of some modes of knowing as sophisticated, contemporary, modern, cosmopolitan in contrast to others considered as inferior, local, docile, barbaric, superstitious or mystical. Consequently, this seems to explain the denial of epistemological status of indigenous knowledge because it has been categorised among the systems of knowledge that do not fit in the corpus of Western science and its epistemological paradigms.

It is therefore necessary to state unequivocally that we do not find it expedient to focus our attention on the conception of indigenous knowledge based on turgid political or geographical issues; rather, our interest is to undertake the evaluation of the conception of indigenous knowledge system in epistemological terms. That is, with our conception of indigenous knowledge as a form of knowledge embodying certain beliefs that required socio-cultural condition of justification and this indeed makes it theoretically similar to the issue of the epistemic justification condition to complement the traditional conception of knowledge. Thus, we intend to focus on the conception of indigenous knowledge system that underscores the constitution of knowledge as a socio-cultural process.

#### **4.3 Dimensions of indigenous knowledge systems**

It is an undeniable fact that different individuals in different cultures or societies possess skills or know-how that enable them understand themselves in relationship to their natural environment. That is, different people from diverse social backgrounds

approach the world in diverse ways and different things are learnt about the world. Also, a few scholars would deny the fact that people survived the millennia before Western science and technology arose because people in different societies often develop an indigenous knowledge of their natural environment outside mainstream scientific enterprise. Therefore, there are many ways of acquiring knowledge and gaining control of our environment. While science is one of these ways, indigenous knowledge system is another way.

Indigenous knowledge system is explained by using its practical and theoretical elements. The practical (technical) element of the indigenous knowledge is closely connected with craft traditions, artisans and technology of the indigenous people. For instance, there are indigenous knowledge systems of nature, environmental protection and sanitation, agriculture, health and illness as well as conflict management techniques. This class of indigenous knowledge systems or practices grow out of the ordinary ways by which coping with the environment or world at large helped in engaging successful agriculture such as to work hides and metals. In fact, Thomas Kuhn points out the ways by which craft traditions and technology developments were historically vital to the emergence of new sciences in the sixteenth to the nineteenth centuries.<sup>154</sup>

On agriculture, for instance, indigenous knowledge of agricultural practice and techniques has been existing in diverse cultures from time immemorial. The knowledge spans from clearing the land, tilling, and selecting seed varieties for planting, harvesting, and storage. Similarly, the Central Africa, for instance, has a broad knowledge of plants that have a multi-purpose use at different levels. These plants are used as food and medicine for many diseases. In some African countries, the indigenous knowledge system of use *eru* and *okok* cannot be over-emphasized both in terms of their medicinal and economic values.<sup>155</sup>

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<sup>154</sup> Bishop R. 2007. *The Philosophy of the Social Sciences*. London Continuum International Publishing Group. p. 9

<sup>155</sup> Eyong, T. "Indigenous Knowledge and Sustainable Development in Africa: Case Study on Central African."

It must be noted that the value of indigenous knowledge of healthcare system cannot be ignored. Thus, the World Health Organization (WHO) recognises the enormous contribution of indigenous healthcare system towards a healthy population. With more than half of the world's population using indigenous healthcare based on the medicinal plants, it is believed that indigenous knowledge of medicine and healthcare is holistic in terms of addressing the questions of 'why' and 'how.' This forms the basis of explanation for health-seeking behaviour. We shall discuss some issues and concerns about the holistic conception of reality and knowledge of it in our attempt to justify the quest for a holistic account of knowledge in the next chapter.

Another important aspect of the indigenous knowledge system is the approach to conflict resolution and crisis management. Traditional African societies, for instance, had an established mechanism for conflict management, conflict prevention, peace-making and peace building that varied from culture to culture. The traditional method of conflict resolution is restorative across African countries. It is also informal, cost-effective, expeditious, corrective, and preventive. One of the most distinguishing features of the indigenous mechanism for conflict resolution is that it aims at a win-win situation whereby the warring parties reconcile and become friends again.

Following the brief analysis of the practical dimension of the indigenous knowledge system highlighted above, one can argue from an epistemological standpoint that the practical dimension of the indigenous knowledge system is fundamentally similar to features of knowledge know-how or capacity knowledge. As explained in Chapter One, the analysis of knowledge includes capacity or a special form of competence called know-how. In this regard, most of the examples of indigenous knowledge identified above would be in accord with the capacity, practical, or 'know-how' conception of knowledge. Granted that know-how or capacity type of knowledge is taken as given by many epistemologists in their analysis of knowledge generally, we can still argue that 'know-how' or capacity knowledge is important and is closely connected to our understanding of certain epistemic features of indigenous knowledge. This is because of the fact that it constitutes a crucial factor in the socio-cultural justification of indigenous knowledge system.

To illustrate the point in Chapter One of this work, it is essential to distinguish practical and knowledge know-how from factual or propositional knowledge. It can be affirmed that traditional epistemologists are deeply concerned with propositional or factual knowledge. Yet, a careful analysis of the practical elements of indigenous knowledge claims would reveal that there are close connections between knowledge by acquaintance, capacity or know-how, and factual or propositional knowledge. For example, a traditional healer who claims that s/he knows that the extract from *dongoyaro* plant (*Azadirachta indica* or *Neem*) cures malaria would be claiming to know how to cure malaria fever. It is also the case she/he is acquainted or familiar with *dogonyaro* leaves or roots and this implies that s/he presumably knows that the roots, herbs, berries or barks of *dongoyaro* have the requisite disease-curing properties.<sup>156</sup>

Given the different conceptions and classifications of indigenous knowledge, the essential features common to the practical or know-how aspects of the indigenous knowledge include the following: that many of them are hard earned in the sense that they are generated through years of trial and error experience and practical demonstration. Also, in terms of value of such knowledge through the method of trial and error, the efficacy of a particular knowledge is established. The efficacy of plant, for example, is established in treating a disease.

It must be noted that the relationship between social epistemology and indigenous knowledge can be established by considering one of the most important tasks of the practical aspect of indigenous knowledge system. The task involves the fact that the core activities of indigenous knowledge acquisition are socio-culturally defined. It can be argued that, in many ways, certain practical elements of indigenous people, through collective effort, offer a genuine and satisfactory solution to human and other existential problems. Also, while there are different forms of indigenous techniques or skills that are unique to a particular culture, it is often the case that some indigenous knowledge systems are not distributed evenly across a given society or culture. Certain indigenous knowledge practices indeed vary with social groups, status, ethnicity, and

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<sup>156</sup>Horsthemke, K. 2007. "Indigenous Knowledge: Conceptions and Misconceptions." *Journal of Education*. No 32. pp. 31-48

gender. The fact that these activities and knowledge processes involve socio-cultural process and validation is enough to engage social epistemologists' attention.

Despite the fact that social epistemology discourse marginalised indigenous knowledge, many other academic interests in indigenous knowledge focus largely on know-how, techniques or practical aspects of the indigenous knowledge system. Indeed, a lot of efforts are being made to revive some areas of indigenous knowledge, especially in agriculture, environmental health protection, and conflict management. It is also good to note that attempts to critically interrogate and establish the relevance of many of these indigenous knowledge systems or practices have yielded positive results in sustainable development strategies. In the next section, an attempt is made to justify trial and error method that underpins both scientific method of gaining knowledge and indigenous knowledge system. We would also examine the intricate relationship between the use of trial and error method in generating indigenous knowledge and scientific knowledge.

#### **4.4 Science, induction and the trial and error method of inquiry**

According to Semali and Kincheloe, indigenous knowledge system is a consistent and coherent set of cognitions and technologies that have slowly evolved through the trials and errors of generations people.<sup>157</sup> One of the major justifications for the trial and error methodology is that holders of indigenous knowledge rely on the history of its application in resolving human problems. Therefore, it is important to examine the epistemic foundation of trial and error method as the natural or basic method of indigenous knowledge.

The term “trial and error” was coined by C. Lloyd Morgan. He coined this phrase from his practices called “trial and failure” and “trial and practice.”<sup>158</sup> In computer science, for instance, it is regarded as “generate and test”. In elementary algebra, it is called “guess and check.” “Trial and error” is the process of solving a problem by trying

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<sup>157</sup>Ladislaus M.S. and Joe L. K. (Ed.) “What Is Indigenous Knowledge?” *Voices from the Academy. Indigenous Knowledge and Schooling*. Volume 2 New York: Falmer Press of Taylor & Francis Group. 1999. p.3. italics mine.

<sup>158</sup> Thorpe W.H. *The Origins and Rise of Ethology*. Hutchinson, London & Praeger, New York. p26. Wikipedia online. [https://en.wikipedia.org/wiki/Trial\\_and\\_error](https://en.wikipedia.org/wiki/Trial_and_error)

various methods until one finds a method that is successful. Another definition is that trial and error aims to provide solution to a problem by using different methods. Another definition is that it is a method of finding a solution to a problem by trying out various means until error is minimised.

Trial and error is also a heuristic method. It aims to solve problems and obtain knowledge. To be more precise, trial and error is a method of providing solutions to problems. It helps to work with a large number of experimental solutions. It is also a method relating to the use of a general formulation or simply put, 'generalisation' that serves to guide investigation. Since generalisation is an epistemic superstructure of inductive reasoning and it follows that in talking about generalisation, we are relying on the principles of induction which is equally the foundation of the trial and error method. What then is the principle of induction that constitutes the basic epistemic foundation of the trial and error method? The philosophy of science examines the method of induction as the foundation of science. It can be argued that generalisation which is the basis of induction is a fundamental assumption in science. For instance, the claim that fire can be produced by rubbing wood in a certain way is a knowledge derived by generalising from individual experiences. The point therefore is that knowledge inquiry presupposes the belief that certain events occur, or that certain properties co-exist.<sup>159</sup> That is, all generalisations imply or say that a certain implication holds for all things of a specified kind. Thus, the essence of knowledge is generalisation.<sup>160</sup>

Inductive reasoning is otherwise called an inductive inference. It is a form of reasoning derivable from an inductive premise. Inductive premise presupposes standard inductive conclusion. Its conclusion may be likely truths. In other words, inductive reasoning takes place when reasons are probably justified. John Losee further discussed two types of induction: simple enumeration and inductive induction.<sup>161</sup>

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<sup>159</sup> Thorpe W.H.

<sup>160</sup> Reichenbach H. *The Rise of Scientific Philosophy*. California: Los Angeles University. P. 17.

<sup>161</sup> Losee, op. J. 1980. *A historical introduction to the philosophy of social sciences*. pp.7- 8

Simple enumerative induction can be regarded as generalisations about people which are statements about individuals. Statements about individuals are taken as a genus' generalization. This means that the truth about diverse individuals is generalised as the species to which such individuals belong to. Thus, in an inductive argument by simple enumeration, the following premises and conclusions contain the same descriptive terms.<sup>162</sup>For examples,

Hitler was a dictator and was ruthless.

Stalin was a dictator and was ruthless.

Castro is a dictator.

Therefore, Castro is probably ruthless.<sup>163</sup>

The second type of induction is a direct intuition. These are general principles. Intuitive induction uses insight. It is the ability to recognise essential things in data of sense experience. Thus, when a scientist notices that the bright side of the moon is turned towards the sun, it concludes that the moon shines by reflected sunlight.'<sup>164</sup> Therefore, the problem of the attempt to justify knowledge claims or inferences on the basis of enumerative induction or intuitive inferences is now commonly referred to as the 'problem of induction'. This is how past experiences or what has been observed to what has not yet been observed warrants or provides a foundation for beliefs about similar future events.

Also, in David Hume's work, the problem of induction is philosophically elaborated. It is about inquiries on the foundational premise or 'medium' that supports inductive inferences.<sup>165</sup> Hume argues that inductive reasoning (that is, causal or factual inference) is not a product of reason and therefore cannot be logically justified.<sup>166</sup> Although the problem of induction raises complex issues, which shall be

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<sup>162</sup> Ibid.

<sup>163</sup> Copi, I.M and Cohen C. (2000). *Introduction to Logic*. New Delhi: Prentice Hall of India Private Ltd. p. 8

<sup>164</sup> Losee, J. 1980. p. 8

<sup>165</sup> Beauchamp T.L. 1999. *David Hume: An Enquiry Concerning Human Understanding*. New York: Oxford University Press. Pp 26-29.

<sup>166</sup> Beauchamp T.L. 1999. Pp26-29



avoided, it must be noted that there could be powerful arguments that what we know about the past can never provide certainty for the knowledge of future. However, Laurence Bonjour provides some explanations to justify inductive inference through what he calls ‘the pragmatic vindication of induction’ and ‘ordinary language justification of induction’.<sup>167</sup>

According to Bonjour, the pragmatic approach is inductive. It helps to arrive at statements as well as accepts the tentative claim that if general statements are true or correct then revise the generalisations. The pragmatic approach to inductive inference and method of gaining knowledge is what Bonjour calls ‘posit.’ Posit means a statement that is believed to be true but rather treated as if it were true. Therefore, pragmatic approach vindicates the inductive method, which shows the rationality to follow.

An ordinary language philosophy is another attempt to defend the rationality of induction. According to Bonjour, the basic claim of the ordinary language justification of induction is premised on the tradition of ordinary language philosophy. According to this school, the traditional problems of philosophy and the problems of induction and epistemology are ‘pseudo-problems’. This is because they are the result of misuse of language. Such supposed problems, as it is claimed, need to be ‘dissolved’ rather than solved: they evaporate under a careful scrutiny.’<sup>168</sup> Bonjour argues further that ordinary language describes the common-sense justification of induction. According to him, the main claim is that inductive reasoning is reasonable or justified simply because reasoning in this way is what we commonsensical call ‘reasonable.’<sup>169</sup>

It can be said that the ordinary language philosopher claims that there is no meaningful issue to be raised about the reasonableness or justification of reasoning inductively. For Bonjour, the very idea that there exists a significant ‘problem of induction’ is therefore

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<sup>167</sup> Bonjour L. 2010. *Epistemology: Classic Problems and Contemporary Responses*. p 57.

<sup>168</sup> Bonjour L. 2010. p.57

<sup>169</sup> Bonjour L. 2010. p.57

a mistake, a kind of intellectual illusion.’<sup>170</sup> One of the reasons for the illusion, he argues, arises from the mistake of demanding that inductive reasoning meets the standards of deductive reasoning if it is to be reasonable or justified. Therefore, the basic problem is that Hume and many other philosophers are so fascinated with the total or conclusive epistemic justification, which deductive inference provides for knowledge and wondered why the same status of reasonableness ought to be accorded inductive reasoning that provides just probable support.

In other words, the problem about why induction is reasonable can be understood from the position that, since it would involve self-contradiction to accept the premises of a valid deductive argument and deny the conclusion, one can accept the premises of an inductive argument and deny its conclusion. In this regard, the problem of induction might be solved by adding something or justify it deductively. From ordinary language thesis, the whole attempt or approach to justifying induction deductively is just about confusion. He argues that though deduction is a distinct form of reasoning, yet both inductive and deductive reasoning have their standards. One should not expect one to meet up with the standards of others. One major fact is that induction is reasonable and justified by inductive standards. The standards are explicated in everyday discourse.

From another perspective, one can argue that inductive reasoning or inference is fundamental to human beings in the sense that it is employed in almost every branch of human enquiry. It is considered as a significant way of gathering knowledge about nature or environment, and it is the ability to retain or recover from such knowledge later. Human nature is such that we acquire a habit of expectation after observing a sufficient regularity in nature. Hence, the method of trial and error, for example, though premised on the practice of inductive inference, enables the ability to construct new knowledge on the basis of the old.

It is in line with this perspective that Jonathan Dancy argues that inductive method could be justified ‘by seeing that things we already believe or experience provide

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<sup>170</sup> Bonjour L. 2010. p. 63

reasons in favour of other beliefs. Where those reasons are strong enough, we can hope that in believing as they suggest, we have acquired new knowledge. A true belief, based on previous experience which provides sufficient inferential justification for that belief, will be knowledge.<sup>171</sup> Therefore, inductive reasoning which provides foundation for trial and error method of acquiring knowledge helps to extend our frontier of knowledge.

It is important at this point to attempt a definition of science. According to David Lindberg, science, as a body of knowledge whether conceptual or theoretical, is concerned with facts. It is a body of knowledge that is useful in understanding why things happen. Indeed, science has a great value both as a practical resource, and as an intellectual satisfaction, especially in the satisfaction of curiosity and the desire to know.<sup>172</sup> Also, science studies phenomena in the world. It is based on reproducibly testable and verifiable evidence which have different forms.

What then gave rise to the scientific method? Opinions may differ as to the period of time during which scientific method was discovered. For instance, a claim can only be considered scientific, if it has an appropriate relationship to a recognised methodology or if the methodology can be empirically demonstrated to be reliable. Although, science does not have a rigid method what should be noted is that each method must be testable and verifiable. If certain conditions of those recognised methods in science are not met, whatever comes out it in terms of knowledge will not be regarded as scientific knowledge. Also, the laws and principles discovered in scientific investigation provide a reason for saying that science is a special way of knowing and justifying knowledge claims.<sup>173</sup> Although science is one of the human activities, it is systematically criticised for its errors. This is however achieved by sticking to certain accepted “procedural rules.”<sup>174</sup> In this regard, science is methodological. This is because it has a set of procedures, which are experimental for exploring and confirming hypothesis and

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<sup>171</sup>Dancy J. 2000. *An Introduction to Contemporary Epistemology*. USA: Blackwell. p. 197.

<sup>172</sup>Copi, I.M and Cohen C. 2000. *Introduction to Logic*. New Delhi: Prentice Hall of India Private Ltd. Pp.526-527

<sup>173</sup>Reichenbach H. *The Rise of Scientific Philosophy*. p. 18.

<sup>174</sup>Popper, K. 2001. *All Life is Problem Solving*. London: Routledge, p. 3.

theories about nature. Consequently, it is assumed that the scientific method minimises the influence on results from personal, social, political, and economic factors.

Given that trial and error as a natural method helps in the acquisition of knowledge, it also the case that the method results in inconsistent conclusions, wastages in effort and resources, yet, it can be noted that the acquisition of knowledge is done minimally. It can argued that Rene Descartes who established the framework for the scientific method in the field of science today was actually in search of what to add to refine natural trial and error method of human mind when he posits that he would never accept anything for true unless he has indubitable foundation to support it. This means that he avoids sentiments and does not compromise true judgments which were presented to his mind that is devoid of doubts.

Having argued that trial and error is premised on the epistemic edifice of induction and generalisation, one can also argue that trial and error is the base of scientific method of enquiry. What reason do we have to justify the claim that scientific method operates on the basis of trial and error method? This claim can be justified in many ways especially if we consider the position of Carveth Read in *Logic: Deductive and Inductive*. According to Read, science is progressive and systematic. This is because of its rules of natural selections which emphasise abundant hypothetical procedures. This helps in the results to discard those not verifiable and accept those verifiable. According to Popper, the natural and the social sciences use the same method that common sense employs in providing solution to a problem.

To elaborate the point, enumerative induction is considered a better way to justify scientific method. This is because; from scientific inquiry is a progression from observation to principles and to initial observations. In every scientific method, the first step is the observation of a phenomenon. According to Christine V. McLelland, the discovery of such a phenomenon is as a result of the interest of the observer. This may come into place by assignment, wish, or even annoyance. For such observation to be made, the observer must be in the right frame of mind. The observation is followed by

questions, which must meet the observer's curiosity on how a phenomenon takes place. Most times, scientific questions are answerable and this could lead to the formulation of research hypothesis on a phenomenon.<sup>175</sup>

To explain a phenomenon, a hypothesis is formed. The process called hypothesis formulation can be regarded as an *educated* guess or answer(s) proffered in explaining the phenomena observed. The term 'educated' becomes necessary because no good hypothesis can be formed without a problem. This suggests that hypothesis is important to scientific investigation. This suggests that hypothesis is the first step in scientific research. Hypothesis depends on the careful identification of the subject of the investigation. This means that one hypothesis can be used for different cases. After establishing the hypothesis, what follows is the testing. This stage distinguishes science from other fields of study. This stage leads to discoveries. Hypothesis helps in the prediction of other phenomena. However, an experiment might be carried out to discountenance the test already established.

After the explanation of the observation, a problem might resurface. This might call for a further investigation. This might take an integrated and comprehensive approach. The established facts might be tested in order to make prediction about natural phenomenon. The implication of this is that scientific discoveries can be modified by new discoveries, which have been tested and re-evaluated. Now, the new discoveries are supported by the new evidence.

From the foregoing, one can argue that the processes or procedures in scientific methodology are meant to refine the trial and error method. That is, scientific methodology is trial and error writ large. This claim is strengthened by Karl Popper's analysis of scientific method, namely Popper's Evolutionary Theory of Knowledge. Evolutionary epistemology uses Darwin's principle in selecting scientific theories. This

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<sup>175</sup> McLelland, Christine V. 2012. *Nature of Science and the Scientific Method*. The Geological Society of America. p.13

focuses on problem solving and error elimination in its application to the study of knowledge.

Popper illustrated his theory that old knowledge emanated by trial and error. In a more technical term, this is called the law of conjecture and refutation. His theory encompassed all forms of knowledge about man and animal. To human beings, it is the discovery of new ideas. To animals, it leads to the production of new reactions, organs, and life.

Also, in *The Logic of Scientific Discovery*, Popper argues that theories are always tentative. The most decisive aspect of a theory is to test the theory. Popper's submission is that the best theories may be problematic by new evidence, criticisms and theories because there is no theory-independent observation.<sup>176</sup>

Similarly, this particular method resonates the emergence of Critical Rationalism of Hans Mouritzen. Critical rationalism, a newly established school of thought is centred on the work of Karl R. Popper. To Popper, science is characterised by the method of 'trial and error', and this view is applicable in all politics according to its adherents. The school claims that science believes that the best method is to devise a situation to solve a tentative problem. This suggests that discoveries are tested to know their falsity and when this is justified, knowledge is increased. This optimistic belief in the justification and the growth of knowledge is called rationalism.

#### **4.4.1 Scientific method and indigenous knowledge system**

A careful observation of the steps and procedures in scientific method reveals that the invention of scientific methodology is an attempt to elaborate trial and error. Therefore, this section attempts to explain the intricate relationship between the methodology of science and that of indigenous knowledge. What we intend to do is to establish that the method of scientific enquiry bears semblance with the trial and error method of indigenous knowledge. It is said that the distinction between western and indigenous

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<sup>176</sup> Popper K., 1959, *The Logic of Scientific Discovery*, Oxford: Routledge. pp67-80

knowledge is confusing. The confusion lies in the term “scientific”. The western knowledge is termed “scientific”, while indigenous knowledge is called “unscientific”.

However, many researchers have confirmed the significance of indigenous knowledge. For instance, in the Philippines, although indigenous knowledge may not be considered as formal science, it is not considered unscientific. This is because trial and error is a scientific method used by western and non-western scholars. As such, trial and error is in tune with science or the scientific methods of enquiry and the method of indigenous knowledge. In this respect, Ladislaus Semali and Joe Kincheloe opine that indigenous knowledge is a reward for individuals that live in a locality. Furthermore, they contend that “indigenous knowledge is a reflection of socio-cultural and political lives of the people in a particular locality.”<sup>177</sup> This is because it depicts their historical developments, worldviews, and ideologies. It shows how they relate to their natural environment and organise their flora, fauna, and cultural beliefs.

Therefore, from an epistemological perspective, we get the idea that indigenous people, from the West to East, and especially, Africans, consider an epistemic state of mind as knowledge purely from its trial and error as well as pragmatic perspective. It might appear too broad but the epistemic import of indigenous knowledge no doubt confirms the submission. It must be noted that the practical aspect of indigenous knowledge system is derived from the same epistemic platform as modern science. In addition, there is no doubt that the traditional or indigenous method of knowledge generation also starts with keen observation. Indeed, holders of indigenous knowledge are also good at observation, hypothesisation. Sometimes, such hypothesisation might be loaded with supernatural presuppositions. The fact is that they also seek to establish a causal link between certain events, which might go beyond scientific principles. For example, Dah-Lokonon in his seminal work on Rain-making technique in Benin, relates the story of how a hunter came to know how red monkeys cause rain to drive off farmers from their farm because the red monkeys used to eat to their fill from the field.

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<sup>177</sup> <sup>177</sup> Ladislaus M. Semali and Joe L. Kincheloe. (Ed.) *What Is Indigenous Knowledge? Voices from the Academy* Indigenous Knowledge and Schooling Volume 2. New York: Falmer Press of Taylor & Francis Group. 1999. p.3.

According to Dah-Lokonon,<sup>178</sup> the farmer observes that not only would the red monkeys in order to cause rain vomit a stone called *kpen* which has blue and white sides, the intensity of rainfall depends on which side of the stone hits the ground first; if it is the white then there will be heavy rain and if it is the blue side there will be light rain with heavy cloud. The only difference in this regard between scientific and indigenous observation is that the scientist is committed to proffering only natural explanation or hypothesis while the traditional man may go beyond the natural to the supernatural. Both realities are considered by the traditional man as resourceful in explaining the observed phenomenon and he sees the reference to the supernatural not as epistemologically scandalous. Both the rational or logical terrain and ontological foundation of the assumption of the traditional man shall be examined in the next chapter.

The indigenous knowledge system allows holders of indigenous knowledge to classify and experiment with plants, new ideas or information to produce remedies and cures, technologies, policies and ideologies that pragmatically speaking, produce the best result. A traditional epistemic agent considers every piece of information as carrying the same epistemological weight. He begins to test each piece of wisdom like the three laws of thought which had been claimed, are ubiquitous to all human beings. These are the simplest laws operating in the thinking process of any rational being which make language use possible.

On whether indigenous knowledge system is consistent with the so-called laws of thought or not, A.G.A. Bello states that we should expect indigenous beliefs to respect the three laws of thought. He therefore states that:

For one thing, all languages involve classification... The consistent confusion of foods and poisons or of feline and their leonine cousins can only have fatal results for the language or culture group. But classification is broadly based on the principles of identity.<sup>179</sup>

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<sup>178</sup>GbnoukpoBodhou Dah-Lokonon." 'Rain-makers': Myth and Knowledge in Traditional Atmospheric Management Techniques" in PaulinHountounji (ed.) Endogenous Knowledge: Research Trails. AyiKwesiArmah Trans. Senegal: CODESRIA book series. p. 90

<sup>179</sup> Bello A.G.A., 2016, *Ethics, Governance and Social Order in Africa*. Essays in honour of Godwin S. Sogolo. Olatunji Oyeshile and Francis Offor (Eds.) Ibadan: Zenith BookHouse Ltd.



What is the rationale behind the sceptic's assertion that indigenous knowledge is not scientific? A critical perusal of major works on the subject matter shows that indigenous knowledge is different from Western or scientific knowledge on three grounds namely: substantive, methodological and epistemological and contextual grounds. Substantive is concerned with the subject matter, methodological on the forms of knowledge and ways of investigation, while contextual is that indigenous knowledge is rooted in its environment.

Attempt shall be made in the next chapter to discuss these issues and other related ones. It is important to state that rather than focussing on the differences between scientific knowledge and practical aspect of indigenous knowledge, we should emphasise the similarities to strengthen the relationship between the two forms of knowledge. Agrawal strengthens the impetus for this juxtaposition when he posits that there are diversities on the notion of western and indigenous knowledge across cultures, in examining knowledge. Despite the diversities, there is a common link among scientists on the notion of knowledge. People are categorised as western or non-western. It is necessary to accept difference and categorisation. However, the classification of western as scientific and non-westerner as indigenous is uncalled for. Scientists should know that differences occur across cultures.

There are remarkable similarities between trial and error of the indigenous knowledge system and the scientific mode of inquiry. For instance, practically both are meant to address human needs or problems. Also, the identified method of indigenous knowledge production takes every step that scientific method takes notwithstanding its crude processes.

#### **4.5 Conclusion**

Following our conceptual analysis of the idea of indigenous knowledge, we tried to establish that some aspects of indigenous knowledge system are practical, know-how, and empirical form of knowledge. This chapter attempted an analysis of the idea of indigenous knowledge. It brought indigenous knowledge into the mainstream of

epistemological discourse, as a strand of social epistemology. From the analysis of various definitions of indigenous knowledge, we concluded that a working definition could be sketched out for indigenous knowledge, that is, a culture's unique genius and distinctive creativity which put a most characteristic stamp on what its members in their singular context and history meaningfully develop as knowledge, metaphysics, and worldview.

The chapter also discussed the components and features of indigenous knowledge as well as the methodology of indigenous knowledge system. Consequently, as stated above, the epistemic foundation of the practical aspects of the indigenous knowledge system is trial and error. It is claimed that indigenous knowledge practices or techniques are derived through the method of trial and error which is premised on the principle of induction. Induction as the epistemic foundation of trial and error was equally examined. Also, through comparative analysis, the trial and error was juxtaposed against the methodology of science and it is argued that the methodology of science is also the trial and error method writ large. The import of this is that the traditional man in his environment, at least, also goes through some crude or elementary form of scientific methodology. Rather than advocating a superfluous division between practical elements of the indigenous knowledge system and scientific knowledge, establishing the synergy between practical aspect of indigenous knowledge and scientific knowledge will make scientists to further consider indigenous knowledge as resource for further scientific exploits and discovery.

As earlier stated, there is a theoretical aspect of indigenous knowledge where some elements are non-empirical and non-practical. They are theoretical and can be epistemologically justified. In other words, theoretical components of indigenous knowledge system constitute a form of life that can be employed to explain reality and justify knowledge claims within the context in which they are held. It is erroneously believed, by many, that the non-practical or theoretical forms of indigenous knowledge are irrational beliefs. More specifically, it is assumed that, since scientific explanations or principles cannot be used to assess these elements of indigenous system, the epistemic justification of those areas of knowledge would be impossible. This is largely

due to an insufficient understanding or lack of substantial theoretical information on these elements of indigenous knowledge system. Thus, lack of theoretical understanding of form of life that this aspect of indigenous knowledge contains could impose constraints on the realisation of its epistemic justification.

In view of this challenge and other issues, attempt shall be made in the next chapter to establish that there are a lot of theoretical elements of indigenous knowledge system and efforts to justify them along with their contexts of rationality that do not necessarily afford for an application of the scientific methodology or western canon of rationality. We shall argue that the attempt to classify some beliefs and practices as irrational and non-scientific is uncalled for. This is because they lack empirical justification. The fact that science dominates certain areas of knowledge does not by itself eliminate alternative domains of knowledge. Therefore, science is not the only enterprise of knowledge acquisition and dissemination. It is scholarly to state that every form of human knowledge must be justified within the culture or context in which it is generated.

## CHAPTER FIVE

### 5.0 TOWARDS AN HOLISTIC ACCOUNT OF KNOWLEDGE

#### 5.1 Introduction

Following a critical analysis of the conceptual and methodological issues involved in the idea of indigenous knowledge in Chapter Four, we identified an aspect of indigenous knowledge system that involves the practical, know-how, or empirical form of knowledge. We argued that a lot of discourses on indigenous knowledge system focused largely on the epistemic and methodological justification of the practical aspects of indigenous knowledge system. However, there is an aspect of the indigenous knowledge system that is non-empirical, non-practical and theoretical. This theoretical aspect of the indigenous knowledge system contains much of the oral culture, values, beliefs which are epistemologically justifiable as well as providing an intelligible explanation or justification for an unexplained phenomenon or reality.

There is the assumption that the epistemic justification of the theoretical or non-practical content of indigenous knowledge systems is difficult if not impossible. That is, it is erroneously believed that where there is an insufficient understanding or lack of substantial background in some elements of indigenous knowledge system, it could impose some constraints on the epistemic justification of such indigenous knowledge system. For example, it is assumed that where scientific explanations seem inadequate or unavailable, the epistemic justification of these areas of knowledge becomes impossible. Given this background, the focus of this chapter is to examine the possibility of achieving epistemic justification of the theoretical aspect of indigenous knowledge.

Following the trajectory of our analysis of knowledge in the Western epistemological enterprise, it was difficult realize an adequate account of knowledge because efforts were restricted to a single method of explaining reality and knowledge. Rather, we should recognise diverse approaches to understanding knowledge and reality. This submission is premised on social epistemology which states that knowledge is a social phenomenon and efforts to justify knowledge should not neglect or undermine socio-

cultural factors. Also, knowledge is concerned with the affirmation of communal standards. It corrects and denies its very existence. Therefore, it means that the workings of epistemic community are concerned with epistemological inquiry, which helps in the analysis of perception-and memory based knowledge claims.

The overall objective of this chapter is to argue that indigenous knowledge system provides a template for a comprehensive account or a holistic conception of knowledge and reality. Thus, the task in this chapter involves an examination of the ontological foundation of the theoretical aspect of the indigenous knowledge system, which would not only provide a platform to defend the socio-cultural dimension and justification of human knowledge but also facilitate the realisation of a holistic and adequate account of human knowledge.

To achieve the stated objective, the chapter examines the metaphysical foundation of the theoretical aspect of indigenous knowledge with a view to establishing that metaphysics underlies not only all the other sub-divisions of philosophy, but that it also lies at the very foundation of practically all human discourses and endeavours. Also, going by the understanding of ontology as an aspect of metaphysics which studies the nature of existence or what applies to everything that is real, the chapter argues that an understanding of a people' conception of reality would provide a more genuine and accurate knowledge of what is the case and what is not the case.

The point to be emphasised here is that the culture of a people plays a viable role in the conception of reality. Except one is conversant with the people's ontological commitments to culture, it will be difficult to understand their commitments. From another perspective, since every culture operates its own perception of objects and its own conception of reality, one can reasonably argue that an analysis of the ontological status of the traditional African thought, for example, would enhance the intelligibility of what appears bizarre, non-scientific, and irrational about the theoretical elements of the indigenous knowledge system.

It must be said that one of the reasons why it is difficult to understand or realise the epistemic justification of the theoretical elements of the indigenous knowledge system

is that many epistemologists and other scholars have presuppositions that what can be known and how they can be known can be reduced greatly to scientific analysis and verification. It is, therefore, important to state that there are different forms of life and each has its own criteria of establishing their rationality, truth and logic that is not necessarily based on scientific logic. Thus, knowledge claims involving divination, paranormal cognition as well as magic constitutes a different form of life and that using scientific standards to interrogate these non scientific areas of knowledge is a misguided effort. These areas of knowledge are inaccessible or open to any strict scientific principles. Rather, they should be analysed within the language of their discourse.

In this regard, this chapter maintains that certain ideas, beliefs, practices, and supernatural claims to knowledge, even though they are neither empirical nor physically accessible, yet they constitute a viable resource for the social justification of knowledge claims. To justify this assertion, the chapter examines ontological and epistemic foundations of elements of knowledge in oral culture such as proverbs, divination and claims to knowledge through paranormal means of gaining knowledge such as telepathy, clairvoyance, psychokinesis, and precognition. The chapter attempts to provide ontological foundation of theoretical elements of indigenous knowledge in order to provide a template for an adequate account of knowledge. Also, efforts shall be made to justify the rationality of paranormal cognition and other indigenous knowledge system in order to debunk misguided assumptions about the rationality or otherwise of indigenous beliefs and practices. The chapter also examines some of the possible criticism against the establishing epistemic justification for theoretical aspect of indigenous knowledge that will provide a template for an adequate account of knowledge. However, it is important to examine what theoretical elements of indigenous knowledge system contain.

## **5.2 Non-practical/theoretical dimension of indigenous knowledge system**

The intellectual circle is suffused with the impression that discourse on indigenous knowledge is applicable essentially to know-how or practical knowledge. Hountondji states that theoretical elements of knowledge exist side by side with modern

classification of know-how or practical knowledge in indigenous knowledge systems. For example, he asserts that corpuses of knowledge do exist mostly in African oral traditions/cultures. These corpuses are transmitted from one generation to another.<sup>180</sup>

Following Hountondji, one can argue that many of the theoretical elements of the African indigenous knowledge involve oral culture. Oral culture is extensive and it comprises proverbs, parables, idioms, folktales, songs, tales, allegories, and dilemma stories. According to Liz Gunner, oral culture of a people serves as foundation for certain beliefs and practices that constitute the bulk of indigenous concepts or ideas in terms of generating meanings, which have guided and sustained people over generations.<sup>181</sup> Also, oral culture is a means of transmitting historical facts and a modest approach to historical knowledge. Undoubtedly, it is a tradition that is widely practised in many societies especially in Africa. Indeed, for Gunner, African continent, for example, can be regarded as ‘the oral continent per excellence.’ The justification for this assertion is that orality must be contextualised within the African purview. This helps society to regulate themselves as well as organise their past, present and solidify their philosophical perspective. He further opines that orality had existed before colonial presence in Africa. This means that orality precedes west and imperial forms of literature.

This suggests that every society unites its members by varying degrees of relations. Oral culture is the communicative action, which showcases varying degrees of social, ideological, aesthetic beliefs of a society. While a society is constituted by the relations that unite its members, oral culture constitutes a mode of communicative action that has in ‘the past been finely honed to fit into a myriad of different social, ideological, and aesthetic needs in many different societies on the continent. Even in the era of globalisation, orality has taken a new form. It is now a medium for the expressions of the historical underpinnings, cultural beliefs, and ideological underpinnings. Oral culture has adapted itself into many different forms to become a vehicle for the

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<sup>180</sup> Hountondji, P., 1997, *Endogenous Knowledge: Research Trails*, Wiltshire: Antony Rowe Ltd., p.13

<sup>181</sup> Gunner, L. 2004. “Africa and Orality.” in Abiola Irele and Simon Gikandi (eds). *The Cambridge History of African and Caribbean Literature*. Cambridge. Cambridge University Press. Pg. 1

expression of the fears and hopes of new generations of Africans.’<sup>182</sup> From the foregoing, attempt shall be made to explain proverb, which is an integral aspect of indigenous knowledge system.

### 5.2.1 Proverbs

Proverbs help in the transmission of socio-cultural and philosophical thoughts underlying social values, issues, and religious beliefs from one generation to another. Proverbs give the gist of what one wants to say in a brief and unmistakable form. That is, proverbs are used to express a basic truth which may be applied to common situations or drive home a point in a few striking words.<sup>183</sup> In this sense, Claude Sumner opines that, when a situation calls for a commentary, the commentary is only possible through proverbs. This is because some situations might not be clear without proverbs. To use a proverb effectively, one must understand its importance to discover its originality and pertinence and finally, its relevance to situation. Proverbs enlighten situations for those who do not.<sup>184</sup>

Proverbs from the African context are the wisdom and the experience of the African people. For example, it is in proverbs that we find the vestiges of the oldest forms of the traditional African philosophical heritage. This is because proverbs help in the transmission and communication of socio-cultural knowledge, ideas, emotions and belong to African verbal discourse. They are a means of reflecting the socio-cultural orientations, philosophical worldviews, as well as psychological and literary make-ups of African people. They help in the depiction of the African experience. They are figurative, pithy, intuitive and insightful. They express the wisdom of experience.

One vital point about proverbs, according to Biobaku, is that they are used to bring out, more sharply and clearly, the point one intends to make rather than using ordinary speech or plain language. Proverbs are a horse through which ideas can be sought. Also, proverbs are a transporter of societal values. They are a means of preserving

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<sup>182</sup> Gunner, L. 2004, p. 3

<sup>183</sup> Biobaku, S.O. 1973. *Sources of Yoruba History*. Ibadan: University Press. P. 77

<sup>184</sup> Sumner C. 2001. The Proverb and Oral Society in Kiros T. (ed) *Explorations in African Political Thought: Identity, Community, Ethics*. London: Routledge, p. 126.



people's knowledge. Proverbs are used to resolve social and political conflicts in Africa. It is generally believed that "*iwa rere lesu eniyan*" which literally means "a good character is the beauty of man". The philosophical meaning of the proverb is that one should be virtuous or modest. In socio-political case, the proverb is used to call somebody to order.

Another important function about proverb is its cognitive role. Proverbs help in the expression of socio-cultural realities. This is because proverbs present or describe a situation in a more striking way. According to Kazeem Fayemi, proverbs are essential to Africans and are used to store and retrieve Africa's cultural and philosophical worldviews. This means that the traditional African experience, culture and philosophy, for instance, could be easily found or retrieved through proverbs.<sup>185</sup>

Also, a viable feature of proverb gives intelligibility to the dialectic between an experienced situation and human spirit. Proverbs are used to express reality. According to Fayemi, what is not expressive or intelligible in proverbs is not real. This is because proverbs express reality. Linguistically and logically, proverbs are a test of knowing cognitive ability of a person in relating to the content of a proverb. Thus, proverbs cannot be studied as mere linguistic facts; however, they show realities. This is because the latter is always present in proverbs.

In another dimension, Sumner opines that there is a close affinity between the world of phenomenon, space, time social environment, event, and physical world. All these are exemplified in the human spirit. Proverb mirrors the reality of the fact that spirit did not come from anywhere but it is modelled by tradition. The spirit helps in the perception of the intelligibility of new situation which relates to a past situation. It can be observed that human spirit helps to understand the real world which is a dialogue between the truth and tradition.

Summarily, proverbs are African evidence against western ethnocentric arguments, which professed that Africans are unlettered, pre-logical and irrational. The works of

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<sup>185</sup> Fayemi A.K. 2010. The Logic in Yoruba Proverbs. *Itupale Online Journal of African Studies*. 2 (2010). P. 1-14

Taylor, Durkheim and Levy-Bruhl manifest the ill-perceived assumptions. From the western arm-chaired scholars, rules of logic are the only intelligibility means of evaluating thought systems. However, Fayemi's work already cited attempts to examine the logical basis of some proverbs in Yoruba culture. He extracts some Yoruba proverbs to enunciate the acclaimed universal laws of thought.

In Aristotelian cannon of laws of thought, three laws of thought are identified. These include the Law of Identity, Law of Contradiction and Law of Excluded Middle.

- (1) The Law of Identity states that if a statement is true, then it is true. Simply put, a statement is true when it is identical with itself. Its logical form is  $P \supset P$ .<sup>186</sup> One of the proverbs that exemplify this law among the Yoruba is "*Eni to jale lekan, to da aran bori, aso ole loda bo ara*". This means that "somebody who steals once, and covers himself with a royal garment, is still covered by the stain of the theft"

The metaphoric implication of this is that pretence of class status does not detract one from a bad character. A thief is always a thief, irrespective of any pretence to the contrary.

- (2) The Law of Contradiction states that statement can never be true and false at the same time. This suggests that nothing can both be true and false at the same time. Fayemi cited Ajibola's work on the Yoruba proverb that captures the law:

*Bi o ba maa je Osaka ki o je Osaka,, bi o ba maa je osoko , ki o je osoko, o saka nsoko, ko ye omo eniyan.*

If you want to be Osaka, be osaka; if you want to be osoko, be osoko, Osaka soko is not good for a human being.

This proverb warns people against actions that are obviously contradictory to what they believe.

- (3) The Law of Excluded Middle states that any statement is either true or false. Such that there is no middle ground. Thus, we cannot say that a

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<sup>186</sup> Offor Francis, 2012. *Essentials of Logic*. Ibadan: Book Wright Publishers. P. 4

statement is neither true nor false. The emphasis on this law is that anything must be either P or not.

*Meji ni ilekun, bi ko si sinu, a si si ode, bi ko ti sinu, a ti sode.*

It is one of two ways with a door; it opens either inward or outward; it shuts either inward or outward.<sup>187</sup>

As earlier stated, it is important to note here that the attempt to establish the logical structure of the Yoruba proverbs is meant to debunk some misguided assumptions about logical foundation of the traditional African line of thought. Equally of note is the fact just as scholars of different ages and orientations have acted in obedience to these laws because these proverbs are readily fitted into the interrelationship of people in the universe, these logical rules do not govern most of our experimental world as they cannot have a compelling force on all men.<sup>188</sup> This assertion is premised on Winch's view that different forms of life have their own ways of evaluating what is logically intelligible and what is not contrary to the hegemonic and ubiquitous status accorded in Western logical rules.

### **5.2.2 Divination**

Divination is one of the ways in which the theoretical elements of African indigenous knowledge system are coded. According to Woodford, divination is an attempt to form and possess an understanding of reality in the present and additionally, to predict events and reality of a future time. Thus, divination system upholds the present reality in order to predict future events.<sup>189</sup> Also, divination system is a standardised process which is got from a learned discipline through an extensive body of knowledge. It is a means through which epistemological substance of the non-practical and theoretical elements of the indigenous knowledge system can be produced and better understood.<sup>190</sup>

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<sup>187</sup> Fayemi K., 2010 pp1-14

<sup>188</sup> Sogolo, G. 1993. *Foundation of African Philosophy: Definitive Analysis of Conceptual Issues in African Thought*. Ibadan: Ibadan University Press. P. 68-76

<sup>189</sup> Woodford, J.C. 2006. *Culture and Customs of the Central African Republic*. Greewood Publishing Group. P. 31

<sup>190</sup> Peek. P. "Divination: A Way of Knowing", in Eze (ed) *African Philosophy: An Anthology*. P. 172

While it is quite complex to categorise divination because of its practical and theoretical dimensions, it can be simply defined as the primary institutional means of articulating people's epistemology.<sup>191</sup> It is crucial in making decisions. It is a basic source of vital knowledge. Divination system helps in the provision of divine guidance such that people can predict events in the future and make good choice. Thus, divination system is an indigenous knowledge system that constitutes a special knowledge feature found in many traditional cultures known in history or ethnography.<sup>192</sup>

There exist different types of divination systems in Africa. In Yorubaland, *Ifa*, is a divination system. In other words, *Ifa*, one of the divination systems or ways of knowing is traceable to the Yoruba, an ethnic group of South-Western Nigeria. Scholars have argued that *Ifa* is a compendium body of epistemological, metaphysical and moral insights about nature, man and other phenomena.<sup>193</sup> From the epistemological viewpoint, there is abundant evidence that *Ifa* divination is identified with the knowledge of all things and answers to the various kinds of human problems. *Ifa* is described as “an inexhaustible repository of knowledge”<sup>194</sup> For Chukwudi Eze, *Ifa* divination system among the Yoruba is an epistemological process of explaining or understanding truth and reality. For Eze, *Ifa* divination helps to discover the meaning of life, the direction of events. It uses rationality, discernment and liberation. *Ifa* is truly a process of pursuing destiny. It reflects basic knowledge about human life and their actions through discernment and epistemology.

That *Ifa* is considered to be an accepted authority and arbiter of truth as well as knowledge, is rigidly entrenched in peoples' social fabric. Perhaps, this is the point Jimoh A. J. tries to make when he says that “the hard views are so deeply rooted in the culture that they are quite difficult to alter. The reason for their durability may be as a

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<sup>191</sup> Murdock, G.P cited in Peek, P. 1998, “Divination : A Way of Knowing”, Eze , E. C. Ed. *African Philosophy : An Anthology*, p171.

<sup>192</sup> Ibid

<sup>193</sup> Ibid

<sup>194</sup> Ibid

result of their practical usefulness in solving human problems or because they are in tandem with our common-sense understanding of the world around us.”<sup>195</sup>

However, it is noteworthy that understanding elements of knowledge in divination system is necessary. There are paraphernalia or items, objects, and symbols that help these modes of knowing or sources of knowledge in the acquisition and justification of knowledge. For example, in *Ifa* divination system, the paraphernalia like, *Opele*, *Ikin*, *Ibo*, *Iyereosun*, *Osun-awo*, *Iroke* among others serve basic divination purposes. For instance, *Ibo* consists of a pair of cowry shells closely knit together by a piece of bone. It represents an epistemic check to handle contingencies and preserves the integrity of *Ifa* as a cognitive process. According to Taiwo, the importance of *Ibo* as a divination tool of *Ifa* is meant to serve as epistemic check against the possibility of mischief, fraud, and other sheer incompetence in the divination processes.<sup>196</sup> This equally explains why *Ifa* is often preferred to other forms of divination by the people. One can argue therefore that an important point about indigenous knowledge as established in *Ifa* is its popular acceptance as a result of its pragmatic benefits to those who had followed the practice

### 5.2.3 Paranormal cognition

Another important source of indigenous knowledge system is what J. B. Rhine called Extra Sensory Perception (ESP)<sup>197</sup> or paranormal cognition. Indeed, if reality consists of the visible and the invisible, the visible is understandable by rational deliberation. It is pertinent to note that invisible reality could be comprehended through different means. Experience is the justification for the strong belief in retrieving knowledge beyond empirical deliberation.<sup>198</sup> Paranormal cognition is recognised as a medium of knowing. That is, most African societies, especially the Akan philosophers, affirm that

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<sup>195</sup> Jimoh, A.K., 2017. ‘An African Theory of Knowledge.’ in Ukpokolo, I.E. *Themes, Issues and Problems in African Philosophy*. Switzerland: Palgrave Macmillan.

<sup>196</sup> Taiwo, O. 2006. “An Account of a Divination and some Concluding Epistemological Questions” in Wiredu, K. (ed). *A Companion to African Philosophy*. UK: Blackwell Publishing Ltd. p. 304-313

<sup>197</sup> Mosley, A. 1978. “The Metaphysics of Magic: Practical and Philosophical Implication.” *Second Order: An African Journal of Philosophy*. p. 6.

<sup>198</sup> Mosley, A. 1978. p6.

‘paranormal’ cognition is a third mode of knowing in Africa, after reason and sense experience, it is extra-sensory.<sup>199</sup>

A general definition of a paranormal event is the one which is contradictory to the fundamental scientific principles. Thus, paranormal cognition has been considered as a source of knowledge that cannot be explained by scientific method or knowledge without the use of any sense organ. Rhime distinguished four categories of paranormal events or forms of ESP.<sup>200</sup> These include the following: telepathy, clairvoyance, precognition and psychokinesis.

Thus, the belief that these events can generate knowledge is common to many non-Western cultures. However, there are features common to some theoretical indigenous knowledge systems especially *Ifa* and paranormal means. One of the common features is that these knowledge systems involve rigorous and lengthy period of training as well as initiation. As it is required in the various divination systems, only the initiated ones or those that are in training know these knowledge systems. From the foregoing, theoretical aspect of indigenous knowledge could be defined as those elements that provide an intelligible explanation or justification for oral culture, values, beliefs, and practices and especially bulk of what appears to be a mysterious phenomenon or reality. In other words, this theoretical aspect of the indigenous knowledge system also involves the form of life of a people, which can only be epistemologically justified within the context of the ontological framework of culture, or people.

Unfortunately, social epistemologists have ignored these sources and forms of indigenous knowledge system because they did not conform to the patterns of the so-called scientific knowledge that are devoid of logic or rationality. Indeed, the belief in paranormal events has generated a serious academic debate. For instance, the belief in paranormal events contradicts the scientific fundamental principles. All subscribers to

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<sup>199</sup> Gykye K. 1997. *Tradition and Modernity* Oxford: Oxford University Press. P. 260 See also Ajei, M.O. 2007. *Africa's Development: The Imperatives of Indigenous Knowledge and Values*, a PhD Thesis submitted to the Department of philosophy, University of South Africa, pp. 1 – 243.

<sup>200</sup> Mosley A.G. 1987. “The Metaphysics of Magic.” *Second Order*. Vol. VII, p. 3-19

physicalism, which helps to sustain mainstream Western science, have persisted in their denial of the possibility of knowledge claims based on paranormal sources.

In other words, scholars are quick to dismiss paranormal phenomenon simply on the ground that Western science has not been able to verify them empirically. For example, Peter Bodunrin applying the yardstick of modern science denied the suggestion that paranormal cognition might serve as sources of knowledge and the claim that an individual might be said to gain knowledge by paranormal means.<sup>201</sup> Bodunrin's rejection of paranormal sources of knowledge is based on the assumption that the evidence for paranormal cognition cannot afford the essential features of scientific evidence or the kind of justification needed for such belief to become knowledge as traditional conception of knowledge as justified true belief. Bodunrin denied paranormal cognition because of its inability to be scientifically justified and the practitioner's inability to empirically justify the claim to know even if the claim is true.

In response to this standpoint, Sophie Oluwole observes that the assumption that human beings can transmit and receive information via recognized channels is amendable in the future. The assumption underlies and requires the current empirical verification. She posits that science denies the existence of paranormal and this denial is a mistake as regarding epistemological conclusions.<sup>202</sup> This means that scientific standard for assessing the reality of paranormal powers and abilities cannot be applied to the form of life or beliefs that operates in divinatory as well as paranormal events. The next section would address the epistemic foundation of the theoretical aspect of the indigenous knowledge system.

### **5.3 Examining the ontological foundation of the indigenous knowledge system**

It is an undeniable fact that the quest for knowledge is natural to all human beings irrespective of the different ways in which different cultures define cognition. Although, culture is very vital in the generation of human knowledge, such knowledge

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<sup>201</sup> Mosley, A. 2013. "Peter B: The Skeptical Inquirer." *African Philosophical Inquiry*. Vol 3, No 3. P. 57-65.

<sup>202</sup> Oluwole S. 1978. On the Existence of Witches, Second Order: *African Journal of Philosophy*, Vol. VII No 1 & 2 p. 20-35

is bounded by presuppositions, prejudgements and interest. In this regard, the epistemic justification of the theoretical elements of the indigenous knowledge system requires a critical examination of the ontological foundation of claims to knowledge in traditional African thought. This is to say that the analysis of the ontological status of indigenous knowledge system involves explicating how cultural conception of reality is fundamental to knowledge claims.

The basic position here is that the justification for theoretical elements of traditional African knowledge is rooted in African ontology. This submission is premised on the fact that metaphysics underlies not only all the other sub-divisions of philosophy but also at the very foundation of practically all human discourses and endeavours. Metaphysics as a branch of philosophy deals with reality from a holistic perspective. It deals with the whole of reality and not any fragment of it in isolation of the other fragments.<sup>203</sup> Also, ontology as an aspect of metaphysics which studies the nature of existence or the whole range of existent beings<sup>204</sup> and African ontology simply put, consists of how Africans see or talk about reality.

While there are several accounts of the ontological structure of the traditional African culture, the central question here is what are the features of African ontological framework that are fundamental to the epistemological discussion? Also, why is it that an understanding of a people's conception of reality would provide a more genuine and accurate justification of claims to knowledge claims?

There is no doubt that the controversy on the actual nature of reality in the Western philosophy has polarised the discourse of metaphysics and philosophers down the ages and it has been categorised as either monists or dualists. The monists are of the conviction that reality is one, while the dualists maintain that reality is plural. It comprises two basic elements: the material and the spiritual. One of the essential features of African ontology that are fundamental to our epistemological discussion is

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<sup>203</sup>Ekanola, A.B. 2006. *Metaphysical Issues in African Philosophy* in Oladipo O. (ed.) *Core issues in African Philosophy* Ibadan: Hope Publications.;p.79.

<sup>204</sup> Ozumba G.O. 2002. *Understanding the Philosophy of W.V.O. Quine*. Calabar: Samrol Publishers p. 5



that the traditional Africans uphold a dualistic conception of reality. Traditional African people conceived reality or existence as partly physical and partly spiritual. As Adebola Ekanola maintained, there exists an intrinsic relationship between sensible and non-sensible aspects of reality. The sensible involves perceptible and physical realities, while the non-sensible focuses on non-perceptible and spiritual realities. Africans do not separate perceptible (physical) from non-perceptible (spiritual) realities rather, they are intertwined and have “a continuous and reciprocal influence on each other.”<sup>205</sup>

Looking at this fundamental assumption about the conception of reality by Africans, one will entertain little or no doubt that if reality comprises the physical, perceptible, which can be known or comprehensible through empirical and rational deliberation, it is equally important to note that there is a way by which non-perceptible and spiritual aspect of reality could be comprehended. It is in this regard that an analysis of other epistemologically related features of African ontological framework becomes imperative.

It is noteworthy that the history of Western philosophy evinces the futility of all attempts to prove or disprove the existence of God and spirits because, in Western philosophy, the analysis of ontological status of the supernatural beings such as God and spirits involves the problem of providing an acceptable account of the nature of the spiritual aspect of reality and its relationship with the physical aspect. This perennial problem, however, is non-existent in African metaphysics as the spirit is regarded as an un-embodied element that can inhabit and depart from any physical body it chooses. Perhaps, one of the reasons the relationship between the physical and the spiritual realms of existence is not so problematic for the traditional Africans is that they do not make any effort, unlike Western counterparts, to reduce what can be known and how they can be known to purely empirical terms.

African ontology accommodates not only the existence of God, spirits and other beings but also emphasises relationships among them. Unlike what obtains in the Western metaphysical tradition, there is the indigenous belief in the Supreme being, *Olodumare*,

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<sup>205</sup> Ekanola A.B. 2006, p.75

and other beings that serve the will of *Olodumare* in the creation and theocratic government of the world.<sup>206</sup> This belief permeates the entire African continent and is taken as given and beyond doubt. The ontology of beings in the traditional African thought does not attempt to prove or disprove the existence of God and reality of spirits. Rather, Africans believe that there is a close relationship between spirits and other beings to the extent that it is believed that spirits reside in objects, plants, animals, and people.

In view of the above submission, one can argue that African ontology subscribes completely to Walsh's view about metaphysics in the sense that African ontology or conception of reality constitutes a holistic perspective. According to Asante Molefi, several elements in the mind of Africans constitute the conception of reality. The elements govern human behaviour in relation to reality. The elements further consist of the idea of wholism, the indispensability of poly consciousness, the idea of inclusion and universality of the world and the personal relationship values. In other words, these features help in the constitution of the elements of the mind of Africans and they conceive realities based on cognitive claims, which they made.<sup>207</sup>

From the foregoing, the analysis of the traditional African thought reveals that an epistemological account of reality is premised on the understanding of the ontological structure of being. On this view, Ramose states that epistemology is as much an ontological reflection as ontology is an epistemological concern. Accordingly, African ontology and epistemology are intertwined and understood as two indispensable aspects, which reflect realities.<sup>208</sup> In this regard, the ontological structure of being in traditional African thought emphasises the nature of man and nature itself. This is because man and nature are not two separate independent but opposing realities. They are inseparable continuum and have a hierarchical order.<sup>209</sup>

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<sup>206</sup> Idowu B., 1962. *Olodumare: God in Yoruba Belief*. London: Longman Group Limited. P. 57.

<sup>207</sup> Asante, M.K. 2000. *Epistemology: A Contemporary Introduction to the Theory of Knowledge*. New York: Routledge Publishers.

<sup>208</sup> Ramose, M.B. 2002. *African Philosophy Through Ubuntu*, Harare: Mond Books. P. 40

<sup>209</sup> Ruch, E.A and Anyanwu K.C. (eds). *African Philosophy: An Introduction to the Main Philosophical Trends in contemporary Africa*. Rome: Catholic Book Agency. p124

In view of the prevalent dichotomies and demarcations in the Western philosophy on the object of knowledge and the knower, physical and spiritual world, what can be known and how it can be known, the ontological foundation of African thought reveals that such distinctions do not constitute a problem in the traditional African thought. According to Anyanwu, the Africans maintain that there is knowledge of realities. Knowledge, therefore, is a reflection of all the cooperation of human faculties and experience.

Having identified that some common ontological features in traditional African conception of reality which also determines the foundation of their knowledge claims, it can therefore be argued that certain beliefs, practices as well as knowledge claims that are associated with divination, paranormal cognition, and magic constitute a whole form of life. This cannot be removed from the totality of the form by which they are an integral part. The point here is that the nature of beliefs associated with divination, paranormal cognition, magic, and even witchcrafts are essentially metaphysical ones and cannot be discussed or be analysed in isolation.<sup>210</sup> The impression to be drawn from this is that all claims regarding supernatural or spiritual beliefs are context dependent. They are intelligent or unintelligent when analysed in the context in which they are held.<sup>211</sup> In this regard, Sogolo, while emphasising Peter Winch, states that:

Science, a form of life, operates with a different conception of reality and traditional African ontology explains another conception of reality. Both African ontology and science are different forms and criteria of assessing its claim to knowledge and conception of reality.<sup>212</sup>

Winch rejects Pritchard's independency of standard of measures. Few universal principles of reasoning observed that anything could be judged either logically or illogically. Therefore, any attempt to assess the theoretical elements of the African indigenous knowledge system with scientific modes of thought or scientific principles

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<sup>210</sup> Sogolo, G. 1993. *Foundation of African Philosophy: Definitive Analysis of Conceptual Issues in African Thought*. Ibadan: Ibadan University Press. pp.68-76

<sup>211</sup> *Ibid.* p. 72

<sup>212</sup> Sogolo, G. 1993. *Foundation of African Philosophy: Definitive Analysis of Conceptual Issues in African Thought*. Ibadan: Ibadan University Press. pp.68-76

would be out of place. Regardless of the several attempts to explain the nature of reality and knowledge of it, one thing that can hardly be refuted is that reality is one. To sum up the stance, Bewaji explicates the nature of knowledge and reality that human beings have. To Bewaji, there are varying forms of assurance and certainty, which people in the world may know and may not know. Bewaji asserts that:

One fact of human existence and experience is that reality, though technically one, has various facets, dimensions and ramifications. Reality, regardless of what science may say about many universe, solar systems, planets, planes of existence, etc. remain one... Also, the multidimensionality of the ways of comprehending reality and its progressive extension by science and technology remain part and parcel of the same reality.<sup>213</sup>

It is important that we proceed to examine the issue of rationality and its relationship with the theoretical aspect of the indigenous knowledge system.

#### **5.4 Theoretical elements of the indigenous knowledge and the question of rationality**

While the analysis of the ontological status of claims in the traditional African indigenous knowledge involves explicating the rationality of the conception of reality and the form of life they subscribe to, this section shall be devoted to addressing some issues relating to the rationality of indigenous beliefs, practices and claims to knowledge. It argues against the view that the theoretical element of the indigenous knowledge system is an inferior form of knowledge because it is non-scientific and irrational. To do this, it is necessary that we bring to the fore the question of rationality and logic at the centre of indigenous knowledge's debate.

However, it should be noted that the word "justified" expresses a purely epistemic evaluation. It is used to infer from a belief-evaluation aspect. This is because a belief's rationality depends on the reasons for holding it. This also means that the reasons for

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<sup>213</sup>Bewaji, J.A.I., 2007., *An Introduction to the Theory of Knowledge: A Pluricultural Approach*. Pp31-32. Ibadan: Hope Publications. pp.31-32

thinking that the belief is true must be based on the belief's desirable cognitive virtues. Hence, the words 'rational' and 'justified' are interchangeably used in this study.

Rationality is indeed one of the essentially contested concepts. It has actually been defined in various ways. The Concise English Dictionary defines rationality as "the state of being rational". That is, it refers to reason or the power of reasoning."<sup>214</sup> Rationality, in this sense, is the capacity to use reason intelligibly. It is equated with logic, consistency, coherence, and systematic ways of thinking. For instance, something is said to be rational if it is reasonable, plausible, acceptable and good and has an intrinsic or extrinsic worth. Therefore, rationality of beliefs, ideas, or statements is not limited to its practical or instrumental tendency. What determines the rationality of a belief is the norms of rationality of the relevant culture and not unchanging canons or principles of scientific rationality, proposed to be an ideal theory of rationality. Rationality, through the provision of sufficient proofs, makes a belief to be justified in the world circumstances.

It is noteworthy to state that language and logic are fundamental features of human societies and constitute the important criteria of rationality. Language, as a fundamental human feature, expresses facts, ideas or events that are communicable because they refer to a stock of knowledge about the world that people share. There is little doubt that the human cultural experiences are explicated in a language and language is a system of communication, which relates the message with the channels. For example, a message can be communicated via a specific set of symbols that are understood by a social group.<sup>215</sup> In short, language expresses cultural reality. It is in this regard that the rationality of any human belief is expressed primarily in the use of language because language expresses the human fundamental mode of operation. This is because language expresses the worldviews of a particular speech community. Since most knowledge is a cultural product, channelled through language and social communication, there is a symbiotic relationship between context and language used.

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<sup>214</sup>Patterson R. F. (ed) 1990. *Concise English Dictionary*. p336

<sup>215</sup> Fayemi A.K. 2010. 'The Logic in Yoruba Proverbs.' p3

One can equally argue that since language is what gives us access to reality in the first place, there are as many ways of knowing as there are languages. Therefore, the role of language in the constitution of reality can never be overemphasised in the analysis of human knowledge. A deep consideration of the extract from John Hospers can be used to corroborate the importance of language and culture in the analysis of rationality of beliefs and indeed indigenous knowledge system. He states thus:

Words don't just "mean"; people mean by the words they use. And people don't always use the same word to mean the same thing. What one person might grant to be knowledge, another might not, because they don't attach quite the same meaning to the same word. There is no such entity as knowing "out there somewhere," waiting to be discovered, the way we discover the characteristics of a mineral-rich rock.<sup>216</sup>

Also, logic has been assumed to be a criterion of rationality. As a branch of philosophy, logic deals with rules and principles guiding human thought. The ability to think or reason logically is considered to be the mark of rationality. Those who deny African thought system of rationality have done so by denying that they lack element of logical reasoning, that is, the ability to think logically. Since logic lies at the centre of what we call rationality, then by denying Africans of the ability to think rationally, critics of the African psyche have argued that we are intellectually inferior to the West. To refute this claim, Africans and African scholars such as Sogolo and Uduma have argued for the ubiquity of logic given its relation to language, in order to undermine this criticism. They contend that every language expresses culture and every culture expresses the worldviews of a people. Language is the overt or covert expression of culture and since culture proceeds the existence of logic, there is no way the logic of language can be denied in any culture. One needs to know that logic is fundamental to the worldview of Africans. Uduma holds that the cultural experiences of a people are organised in the language of Africans. This is an activity which itself presupposes a logical thinking and tendency. Logic and language are central to people and they help to organise reality.

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<sup>216</sup> Hospers, J. 1996. *An introduction to philosophical analysis*. London: Routledge & Kegan Paul. pp78-90

The truth is that the rational analysis of the traditional ontology or conception of life involves matters of logic and consistency in different forms of reasoning. It must be noted that there are set of rules that can be logical or otherwise. Therefore, to caution on the uncritical acceptance of the Western canon of logical rules as the standards of rationality, Peter Winch's position states that the criteria of logic are product of men's curiosity. They are a way of living.

Indeed, people of different ages and orientations have acted in obedience to these laws because they are considered to be readily fit into the perception of interrelationship of things in the universe. As Sogolo argues, these logical rules do not govern most of our experimental world as they cannot have a compelling force on all men.<sup>217</sup> This assertion is premised on Winch's view that there are different modes of living among people. Each one has ways of evaluating what is logically intelligible, which is contrary to the hegemonic and ubiquitous status accorded Western logical rules. It must be noted that concatenated efforts have been made to delineate African thought from irrationality. The import from this is that different forms of life call for different paradigms of discourse. As such, all magico-religious beliefs have their discourse, which are intelligible or unintelligible.

Habermas corroborates winch's view about how language constitutes an important component of reality and rationality of beliefs. Habermas identified two types of knowledge and rationality namely: technical control rationality and interpretative rationality.<sup>218</sup> Technical control is otherwise called empirical analytical science, while interpretative rationality is also called historical-hermeneutic science. He posits that historical-hermeneutic science use a diverse methodological approach. It is concerned with understanding of meaning not by observation.

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<sup>217</sup> Sogolo, G. 1993. *Foundation of African Philosophy: Definitive Analysis of Conceptual Issues in African Thought*. p72

<sup>218</sup> Habermas, J. 1972. *Knowledge and human interest*. Massachusetts: MIT Press.p309

It must be noted that Habermas examines the differences and similarities in the objectivist and the interpretive sciences. The idea of indigenous knowledge is the possibility of hermeneutic approach to the study of epistemology. This requires that the process of understanding would be important. This is because the hermeneutic perspective on indigenous knowledge explains the openness of the inquirer that is needed in the understanding of knowledge.

The theory of interpretation seeks to provide an alternative analysis to the empirical or positivist's epistemology that dominates the spheres of knowledge. That is, rationality of beliefs, the truth of ideas, and knowledge acquisition can be determined from the angle of the social or culturally accepted notions of truth, explanation of reality and knowledge. In view of this position, the interest in indigenous route to the analysis of human knowledge does not merely reflect the social dimension of knowledge; it is equally concerned with the prominence accorded culture and language in knowledge acquisition and justification.

The thrust of the argument is that those beliefs, ideas, and practices that are scientifically unexplainable or perceived to be irrational can be rationalised within the contexts that generate them, most especially within the contexts of culture, morality, and religions. The emphasis here is that there are some beliefs that can be rationally justified without recourse to the scientific logic or canons of inquiry. The debate on the rationality or otherwise of indigenous knowledge system constitutes an interesting example of an analysis of colonial discourse applied to issues of culture, power and knowledge. Historically, the debate reflects both the insights and the weaknesses of colonial discourse analysis as a mode of analysing culture, power and knowledge. It is important to highlight this debate as it pertains to the epistemic justification of theoretical aspect of indigenous knowledge system.

It can be argued that one of the reasons for the denial of the paranormal cognition and other theoretical elements of the indigenous knowledge system as constituting knowledge framework is because modern Western science has portrayed itself as the only universally valid source of empirical knowledge. Western science explains and



predicts natural and social phenomena. It retains and promotes the self-made image by proclaiming its knowledge.

A form of historical racism traceable to David Hume reinforces this viewpoint. It permeates Western thought and has a strong influence on Kant, Hegel and many others. An illustration from Hume is evident in the citation by Kant who supports the assertion that white man is superior to the Negro. According to Hume, there is no Negro that has shown special talents. Hume asserts that among thousands of blacks that have been set free, there was no one who has ever done anything great either in arts or science.<sup>219</sup> None of them has done anything praiseworthy, while among the whites, there are some that perform great wonders through great and superior gifts. This is the major difference between two races of man not only in terms of colour but mental abilities.

Kant situates Hume's racism in ontology. According to him, human beings gradually move from the state of barbarity into Enlightenment. However, non-Europeans use self-reflexive and self-reflective project in examining Enlightenment. To them, the non-Europeans did not have the ability to reason. 'Civilization' or 'Enlightenment' always comes from the outside world. The rationalisation of European ethnocentrism helps in the provision of philosophical reasons, which ridicule the non-whites. The European ethnocentrism buoyed up European colonial adventure from nineteen to twentieth centuries. This ethnocentrism constructs Africans as 'primitive' and 'pre-logical.' For instance, Western anthropologists viewed Africa indigenous knowledge traditions until the first half of the 21st century. It is on the basis of ethnocentrism that Lévi-Strauss supported 'primitive' cultures. This is because the culture is enmeshed with their immediate environment than modern science.

Levy-Bruhl surmised the positions of Kant and Hume that the two mentalities-African and European are both oxymoronic to each other. They are different from each other in terms of habit and mode of expression. One is foreign; the other is indigenous. The Europeans employ abstractions in that there is no thinking with simple logic and

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<sup>219</sup> Eze, E.C. 1997. *The Color of Reason: The Idea of 'Race' in Kant's Anthropology in Post-Colonial African Philosophy: A Critical Reader*. UK: Blackwell, p.122.

emphasis is not laid on language. However, the primitive emphasises language and thought. Language and thought are indispensable.

What should be emphasised here is that orthodox view of rationality is translatable into the Western paradigm particularly on what cognitive system is. What this suggests is that cognitive system helps in the justification of a true proposition. Such proposition is always the second-hand for individuals. According to western epistemological perspective, cognitive system is known for rationality and modernity. The basic features made western scholars to regard African mentalities as primitive and pre-logical.

From the foregoing, the salient argument against Eurocentric conception of knowledge and reality is that not all human knowledge claims could be subjected to paradigms of scientific rationality or justification. The impression to be drawn from this is that there are notions of rationality in indigenous knowledge system, which, largely, applies to the making of epistemological and other (ethical and religious) standpoints. In view of this, there are a lot of ideas, beliefs and knowledge claims along with the justification of the rationality that does not necessarily account for the application of the scientific methodology or Western canon of rationality. By the scientific methodology, we mean the methodology of the natural sciences such as observation, hypothesis formulation, testable models and theories, and formulation of laws. Therefore, to classify some beliefs, knowledge claims and practices as irrational because they seem to be non-scientific or lack empirical justification, is misguided. Science is not necessarily the only form of knowledge or platform for knowledge acquisition and dissemination. The fact that science dominates certain areas of knowledge does not eliminate alternative spheres of knowledge.

To illustrate this point, the kind of epistemic justification required for the knowledge claims of a faith healer who heals the diseases of people as well as the claims of clairvoyance, telepathy, and other cultural beliefs transcends the methodology of scientific inquiry. An example in the Chinese case is the knowledge of Acupuncture, an Oriental practical knowledge which until few years was not accepted in many Western

communities. This category of knowledge has always been rational in a sense of the term. For instance, Chinese technology, as argued by Feyerabend, for a long time lacked any Western –scientific underpinning and yet it was far ahead of contemporary Western technology.<sup>220</sup>

In view of Feyerabend’s submission, it is presumptuous to suggest that beliefs which cannot be justified or proved scientifically be rejected and taken to be irrational. This, according to Makinde, amounts to “a pure empiricist dogma.” The tradition that demands that we believe before knowing is based on a “deeper vision of the nature of knowledge than scientific rationalism, which allows us only to believe explicit declarations, based on tangible data derived from them by formal inference and open to verification.”<sup>221</sup> Hence, the traditional African holistic conception of reality as well as knowledge constitutes a form of life, and is intelligible in the context of ways of living or modes of social life of the people.

### **5.5 Removing the mythological and the diabolical veils from indigenous knowledge**

There is no doubt that one other principal challenge to indigenous knowledge is the task of removing mythology to allow for a more scientific discourse. Robin Horton had earlier dismissed traditional thought as lacking criticality because of its tendency to be justified by appeal to tradition. Barry Hallen, in this regard, explained that while, many of the indigenous thoughts or beliefs are perforated with the appeal to authority, Such appeal lies at the periphery of explanation for the Yoruba *Onisegun*. According to Hallen, if the traditional Yoruba attempts to justify a position or action by an appeal to tradition or authority, they are merely referring to the origin of the particular belief or thought. If one presses for further justification, more sophisticated responses are likely to be proffered.<sup>222</sup>

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<sup>220</sup> Feyerabend, P. K. 1993. *Against Method*, New York: Verso Publishers. p.xx1

<sup>221</sup> Makinde, 2007. p69-70

<sup>222</sup> Hallen, B. “Robin Horton on Critical Philosophy and Traditional Thought.” p. 82

In view of the response of Hallen, indigenous knowledge system has also often been criticised on epistemological ground that is derived or based on elements of divination and spiritism. African scholars have responded to this charge differently. For example, David Parkin has compared the epistemological stance of science to that of divination itself. He suggested that, to the degree that divination is an epistemologically specific means of gaining insight into a given question, science itself can be considered a form of divination that is framed from a Western view of the nature of knowledge.<sup>223</sup> In other words, science attempts to explain the past, the present and predicts the future by looking at the present scientific facts the same way divination system of the traditional people use the present “facts” to divine or predict the future or explain the past.

The difference is that the traditional man could claim that a god or gods revealed the knowledge of the future to him while science would rather claim that it strictly followed what the laws of nature allow to reach the conclusion about the future. Against this position, the question is to what extent is this spiritistic explanation and tendencies intellectually satisfying. However, if we consider the fact that medieval scholars, philosophers cum natural philosophers perceive intuition and revelation from the same focal point of supernaturally aided access to eternal truth or knowledge, the allusion to gods by the *onisegun* is not totally out of place. He is only implanting gods where his science stops. This is equally a trend common even among western scientists when they recourse to chance.

Similarly, Sogolo sees what is taken to be reality as culturally influenced if not defined. Sogolo posits that explanations of events across culture vary.<sup>224</sup> Though there may be danger in overstressing the contrasting features of explanations because, as he said, these diverse explanations overlap or shade into one another in certain respects. For example, when a Westerner and a traditional African are confronted with a normal event, they are likely to differ as to the type of explanation they will proffer. The Westerner may, due to his or historical orientation in science and scientific reasoning,

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<sup>223</sup>Parkin, 1991 "Simultaneity and Sequencing in the Oracular Speech of Kenyan Diviners", <http://www.jstor.org/stable/2253205>. Accessed: 09/04/2014 12:12. p.185. See also “Criticism of Science” in Wikipedia. <https://en.wikipedia.org/wiki/Criticism-of-Science>

<sup>224</sup>Sogolo, G.1993. “Explanatory Models: the Scientific and the Non-scientific.” in *Foundations of African Philosophy: A Definitive Analysis of Conceptual Issues in African Thought*. Ibadan: Ibadan University Press. p.91

offer a scientific explanation while the traditional African may proffer spiritual explanation due to his background.

When both are confronted with an extra-ordinary event, the Western mind may stubbornly cling to his scientific model of explanation and claim the event is as a result of chance or the principle is yet to be discovered. He may as well try to explain it using the known or available principles. The point is when confronted with extra-ordinary events the Westerner is likely to embrace different explanatory categories: chance or unknown principles. To an African mind, what appears to be an extra ordinary event is no problem because there are contiguous causal relations that can be established. Although physical laws explain relations between natural phenomena and indigenous African mind; however, physical laws have their limitations with different explanations.

The position Sogolo seeks to defend in his work is relevant here because of the conflict that is between primary and secondary causes; natural and supernatural. It can be said that no absurdity exists in an integrated diagnostic process. Diagnostic process is a combination of the natural and the supernatural processes. It involves the activities of the herbs from a pharmacological perspective and it appeases to supernatural entities. In seeking to justify or explain events, traditional Africans adopt more than one explanatory model, which may cut across both the natural and the supernatural causes, just as the Western man will also present different explanations to an extraordinary phenomenon.

In the same vein, Ayoade comments that, in *Inner Essence*, both non-supernatural and supernatural questions are not two irreconcilable categories in causal theory but as a different point in the same continuum.<sup>225</sup> What should be noted is that, in Yorubaland, a non-supernatural ailment is susceptible to an infliction of supernatural ailment. Ayoade's 'non-supernatural' and 'supernatural' coincides with Sogolo's primary and

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<sup>225</sup> Ayoade, J.A. 1979. "The Concept of Inner Essence in Yoruba Traditional Medicine," in Ademuwagun, Z.A. *et al. African Therapeutic Systems*. Watham Mass: Crossroads Press.

secondary levels of explanation respectively. The valuable point in Ayoade's view is that primary and secondary causes are complementary and not mutually inclusive.

Therefore, the inference from this is that there is an uncompromising scientific framework between the borderline of physical and the non-physical. There is no clear-cut borderline between physical and non-physical. Also, one can argue that the African ontology which constitutes a holistic explanation or justification of a phenomenon by traditional African satisfies emotional needs. The reason for the spiritistic or supernatural element in traditional African's explanation of phenomenon, according to Barry Hallen, is oftentimes given by some of these "*onisegun*" which he nicknamed Chief Z that it "helps to mitigate and deflect the jealousy and envy that would otherwise very definitely be the response of the rest of the community."<sup>226</sup> As he recounted, Chief Z was of the opinion that:

When you prepare your medicine and you say it is your *orisa* which told you to give it to people, if the medicine should cure the type of illness to which it is applied, they (people) will regard your *orisa* as powerful and will think that its (the *orisa*'s) power that you use to do whatever that you do, not knowing that it is your medicine.<sup>227</sup>

This clearly shows that the medicine man, as a typical African knowledge bearer, understands the concept of nature holistically and observes it in his explanation, but will use the idea of gods as smoke screen to deflect criticism and jealousy that his ability to apply his knowledge to cure ailments could attract. In other words, such explanation merely fulfils emotional needs that are pre-eminently intellectual.

However, the more troubling implication of this explanation or form of argument is how to relate or to reconcile it with the claim that knowledge is a universal phenomenon. That is, if knowledge is universally acquired in the same way across human beings irrespective of race and colour, the Western world could establish what bears a normative label of naturalism in every of its rationalistic steps. It may appear

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<sup>226</sup>Hallen, Barry. "Robin Horton On Critical Philosophy and Traditional Thought". Sodipo J.O. (ed). Second Order: African Journal of Philosophy. Ile-Ife: ObafemiAwolowo University Press. Vol.vi no.1.p.85

<sup>227</sup>Hallen, Barry. "Robin Horton On Critical Philosophy and Traditional Thought".p.84

that the traditional Africans hold two contradictory opinions about a single thing. That is to say, Sogolo's harmonizing and complementary explanatory model which can be considered as one of the variants of Senghor's Negritude epistemology proved to be, in the end, a less than successful attempt to give account of universal phenomenon called knowledge and how it is achieved. This is because there is a dichotomy between the west and Africa, which is confirmed by reason or emotion. The crux of the matter can be settled if it is taken that though the desire to know is a universal phenomenon but it should not to be taken to mean that there are universal criteria for knowledge assessment. What appears to be a universal criterion, according to critics of African conception of reality is the presupposed universality of logical rules or mode of reasoning. This requirement, though important, is not universally applied and indeed, non-existent. According to Sogolo, the insistence as a universal criterion is nothing but relics of the traditional efforts used by rationalists in the justification of their faith which to them is the supreme reason.<sup>228</sup>

### **5.6 On the charge of epistemic relativism**

The epistemic justification of indigenous knowledge is open to the charge of relativism. It can be stated that, in the epistemological context, there is a rejection of the claims of relativism. Since there are no universal standards for truth to be judged, epistemic relativism holds that truth is relative to culture, convention, and the truths of belief claims are context dependent. Truth as we have discussed in Chapter One is an essential component of the tripartite conception of knowledge from Plato. It seems less difficult to be considered as a criterion of knowledge but it is one of the essentially contested concepts in the history of philosophy because it is extremely difficult to pin the concept down to a particular standard.

To the charge of epistemic relativism therefore, there are two common responses from advocates of indigenous knowledge. Often, some accept this charge of relativism on the basis that truth does not necessarily constitute any problem as a criterion of knowledge in traditional African conception of knowledge. For example, Wiredu

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<sup>228</sup> Sogolo, J. 1993.

argues that knowledge to an indigenous man is opinion. He goes further to state that truth is examined from specific points of view. Hence, knowledge of truth is distinct from opinion and it is a self- contradictory notion. According to Wiredu, truth is necessarily joined to point of view, meaning that truth is viewed from some points of view and there are different points of view.<sup>229</sup>

If the above position of Wiredu is true, then opinion needs not to be true or bear epistemological certitude. As it is argued, this is not the case. The truth condition of knowledge is evident from all angles and it constitutes the line between doxa and gnosis. On the other hand, relativism delves into indigenous knowledge discourse through different opinions about the rationality of indigenous people – a debate that has been raging on for decades. This is seen in the works and claims of Malinowski, Boas, Lévi-Bruhl, Mauss, Evans-Pritchard, Robin Horton and Lévi- Strauss.

It must be noted that the nature of belief we hold should determine the criteria of truth to be used in assessing the truth of such belief. In relation to the truth of theoretical knowledge of indigenous system, most of the beliefs about divination, paranormal cognition and other practices are essentially metaphysical of which the predominant correspondence theory of truth cannot be applied. Rather, the consistency and coherence of these beliefs within the web of the discourse would enhance the understanding of truth or otherwise of those belief system.

### **5.7 On the charge of peculiar rationality**

Similar to the charge of relativism is a trend common to defenders of indigenous knowledge especially the advocates of negritude epistemology, that is, the claim of a peculiar rationality. The claim, in essence, is that for Africans, the rationality of certain beliefs though unique to Africans is more or less of equal status to the Western idea of rationality. Extended debates in this area were motivated by Peter Winch and Robin Horton who are cultural anthropologists. Winch posited that reason is inseparably linked to language and culture because both reality and rationality are intertwined.

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<sup>229</sup> Wiredu



However, following Horton's commitment to the universality of reason, Kwasi Wiredu argued that such universals must exist since cross-cultural communication exists, and he roots their existence on the biological similarities of all humans. While Wiredu strives to establish certain universal values to show similarity, he aimed at establishing that the notion of rationality is universally the same. What is however important to note at this juncture is that epistemic claims are, to a large extent, products of our social values, interests, and circumstances. In this regard, the validity of such social or cultural belief or values could be derived from the customs of the culture in context. This suggests that knowledge claims are not necessarily to be validated by the universal principle as the universalists contended.

Also, Sogolo argues that what appears to be peculiar rationality or form of life is not peculiar or limited to African indigenous thought system. To him, different cultures have their own share of forms of life that exist in traditional societies, that is, both elements of spiritual or non-scientific and scientific explanations of reality are common to many societies. According to Robin Horton, those critics of African form of life and especially the conception of reality are doing so because they have often failed to understand the theoretical thinking of their own culture and those that are familiar with the theoretical schemes of their own culture have failed to recognize their African equivalents because they have been confused by a variation of idiom.<sup>230</sup>

## **5.8 Conclusion**

Since the focus of this chapter is on theoretical aspect of indigenous knowledge and how it can be epistemologically justified and at the same time provide a platform for the realisation of an adequate account of human knowledge, we defined the theoretical aspect of indigenous knowledge system as those elements that provide an intelligible explanation or justification for oral culture, values, beliefs, and practices and especially bulk of what appears to be a mysterious phenomenon or reality. Attempt was made to focus specifically on the ontological foundation of the non-practical and theoretical aspect of indigenous knowledge. We argue further that this knowledge system also

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<sup>230</sup> Horton R. 1988. "African Traditional Thought and Western Science." Eze E.C. (ed) *African Philosophy: An Anthology*. Massachusetts: Blackwell Publishers. p181-192

involves part of life of a people that can only be epistemologically justifiable within the context of the ontological framework of culture or people.

It suggests the view that the acquisition and justification of knowledge as well as reality is derived from the process or properties contingent to the knower's environment, knowing process or form of life. It argues that an understanding of a people's conception of reality or form of life would provide a better and accurate conception of knowledge of what is the case and what is not the case. The point here is that since the culture of a people plays a role in their conception of reality and unless one is familiar with the people's ontological commitments to their culture, it will be difficult to appreciate or understand how their ontological commitments enhance their conception of reality and knowledge.

In addition, the chapter emphasises specifically that the theoretical indigenous knowledge system provides a deep insight into the justification of knowledge. That is, since all claims to knowledge are socially determined and some areas of knowledge specifically are indigenous in various respects; therefore, justification of knowledge claim ought not to be strictly confined to a single mode of knowing, especially to scientific methodologies. Since some beliefs, practices and knowledge claims are metaphysical and can only be justified within the context in which they are held or generated, it follows they are irrefutable by the canons of science. Consequently, we need not situate the understanding of the nature of reality or knowledge of it in a single method; rather, we should accept diverse approaches to it.

The chapter also examines the concept of rationality as well as the rationality of indigenous knowledge beliefs or epistemic claims and submits that there are different criteria of rationality that do not necessarily need justification from Western standards of rationality. Since there are no universal standards of judging a belief to be rational or irrational, the chapter maintains that rationality of beliefs, truth as well as justification ought to be determined within the context or form of life in which beliefs are held.

Following the attempts to establish the ontological framework of the epistemic foundation of indigenous knowledge system, it can be argued that an adequate or holistic account of knowledge is realisable. In other words, using theoretical aspect of indigenous knowledge, a strand of social epistemology and what it offers as a template, it is possible to establish the possibility of an adequate account of knowledge. Since the understanding of the multi-dimensional nature of reality enhances knowledge acquisition and justification, we therefore argued that the need for an adequate account of knowledge ought not to be situated or limited to a single method of explaining reality and knowledge rather; we should accept a diverse approach to understanding knowledge and reality.

Notwithstanding the neglect and denial of the theoretical elements of the indigenous knowledge system, we can still submit that the study of indigenous knowledge system is not only essential to understanding the discourse of socio-cultural dimension of knowledge claims but is also a platform for realising an adequate account of human knowledge. The oral traditions and practices like paranormal cognition provide a veritable means of understanding diverse nature of socio-cultural factors that are involved in the acquisition and justification of human knowledge. Therefore, cultural elements of knowledge in proverbs, apothegms and wise sayings, divination system, and paranormal claims to knowledge constitute key themes that provide the theoretical background for indigenous knowledge system that this work is premised on.

## GENERAL CONCLUSION

As already stated, the debate on indigenous knowledge system constitutes an interesting example of colonial discourse analysis applied to the issues of culture, power and knowledge. The debate reflected both the insights and the weaknesses of colonial discourse analysis as a mode of analysing culture, power and knowledge. That is to say, the idea of indigenous knowledge originally emerged in the context of national liberation struggles. The quest for the revival of indigenous knowledge system as a protest against colonial policies that allowed the penetration of modern science into the colonial states at the time is an attempt to counter colonial, political, and cultural domination. In other words, it sought to challenge the penetration of Western civilisation, language, science and value system and especially the claim that any particular group, society or civilisation represents the progressive force of living.<sup>231</sup> Therefore, the first phase of discourse on indigenous knowledge was a project of reviving indigenous knowledge system which represented a response to derogated Eurocentric remarks and attitude.

One of the major arguments is that the wisdom embodied in indigenous system should be preserved for the world, and that the independent identity of colonial societies could only be built around their culture and way of life.<sup>232</sup> Another central argument put forward by the supporters of indigenous knowledge is that all knowledge systems are a part of cultural traditions of a society located in the history, possibly supporting political interests.

In its second phase, the focus was on models of development and new technologies introduced to combat impoverishment of many colonial states, although some nationalist concerns also remained. It is the relative failure of development strategies of modern science and technology which has supported the call for indigenous knowledge system. In fact, Arun Aggrawal has pointed out that their motion of indigenous knowledge is perfectly compatible with familiar Western prejudices about traditional

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<sup>231</sup> Joseph, S. 1998. *Interrogating Culture: Critical Perspectives on Contemporary Social Theory*. London: Sage Publications. p. 90

<sup>232</sup> Joseph, S. 1998. p. 91

societies. That is, it merely makes a virtue out of what was criticised in the 1950s and 1960s by modernisation theorists as representing inferior knowledge and superstition.<sup>233</sup>

However, it is not difficult to submit that the project of developing alternative knowledge raises several philosophical and political issues. Attempts have been made in this work to restrict some of the issues discussed to philosophical and especially, epistemological questions. Among the issues that the work deals with include the problems of incommensurability and epistemic relativity. For instance, argument for socio-cultural ground or justification of human knowledge claims assumes the possibility of a plurality of knowledge system. This issue raises the problems of commensurability of the different knowledge system and questions whether or not there can there be common criteria of validity, which could be applied to all forms of knowledge. The work emphasises that each cultural form of life embodies its own criteria of intelligibility. That is, the criteria are specific to each knowledge system, grounded in its relationship with not only the culture's conception of reality but also in the natural environment and its history.

In addition, it can still be asked whether indigenous knowledge would still survive in a world which is being increasingly homogenised or not? Or would such knowledge be of practical value in today's world? In other words, if proverbs, wise sayings and aphorisms are accepted as part of an alternative knowledge system, can they offer practical wisdom to solve the problems of the modern world? Or should the demand or project of reviving the indigenous knowledge be merely for the inclusion of indigenous knowledge in a universal knowledge system?<sup>234</sup>

This work provides some responses and solutions to some of the issues raised above. The first response is that since the debate about indigenous knowledge and values system was temporarily shelved in many societies when they achieved political

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<sup>233</sup> For a discussion on this aspect, see Aggrawal, A. 1995. "Dismantling the Divided between Indigenous and Scientific Knowledge" In Aggrawal, A. *Development and Change*. Vol. 26 No 3, July pp. 413-37.

<sup>234</sup> Horsthemske, K., 2004. "Indigenous Knowledge': Conceptions and Misconceptions." *Journal of Education*, No.32 pp. 31-48.

independence and modernising goals were given prime importance instead. Consequently, many nationalist leaders, philosophers and development experts were hooked to Western science to transform the materials and economic aspects of their societies although they might have upheld the claims of indigenous knowledge as well. The failure and disappointment resulting from uncritical acceptance of foreign strategies at the expense of the indigenous ones had pushed for the need go back to their roots.

The obvious is that indigenous knowledge system is still being marginalised especially at the theoretical platform. Therefore, an important scholarly research is to integrate the ongoing research for the benefit of Africa. It has been argued that the absence of serious dialogue between modern science and indigenous knowledge system gives rise to a number of challenges and failures. Therefore, the project of reviving indigenous knowledge becomes imperative but goes beyond academic fancy. Hountondji posits that the essence of researching into the indigenous knowledge otherwise called local knowledge or folk science is aimed at incorporating indigenous knowledge into scientific and technological research. The aim of indigenous knowledge is concerned with the purpose of the application of “technical know-how” in the areas of agriculture and medicine and the likes. Thus, Africans should capitalise on existing indigenous knowledge to improve the quality of life.

From the epistemological perspective, the project of reviving indigenous knowledge as argued in this work makes a case for a more holistic approach to the issue of justification of human knowledge. Rather than restricting epistemic subjects to theorising about totalising and abstract individual cognitive requirements as prominent in the Western analysis of human knowledge, the work focuses on specific socio-cultural circumstances. It is in line with this socio-cultural view that Harding explains that one’s social standpoint organises and sets limits on how one understands the world. A deeper understanding of this position would enhance the idea that all beliefs are filtered through the social standpoint of the believer.<sup>235</sup> The point here is that social

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<sup>235</sup> Harding S. 1991. *Whose Science? Whose Knowledge? Thinking from Women’s Lives* NY: Cornell University Press.

factors are taken into considerations in talks about the acquisition and justification of human knowledge. Social factor in knowledge enables a multidimensional approach to the issue of justification of human knowledge.

Following the submission in Chapter Four of this work: that traditional and other epistemological orientations have taken for granted the importance of indigenous knowledge system in the acquisition and justification of human knowledge, that examining the core epistemic features of indigenous knowledge is yet to be granted a vantage of critical consideration as a variant in social epistemology, we argue therefore that indigenous knowledge, when formulated within social epistemological platform, would engender the realisation that knowledge justification can hardly be divested from the intricacies of indigenous elements. This sustained stance proffers advantageous positioning as regards the realisation of the inevitable place of indigenous route of knowledge acquisition and justification, which can hardly be underrated.

Chapter Five examined the question of rationality of the idea of indigenous knowledge as well as the conception of reality or ontological foundation of the traditional indigenous knowledge system. The conclusion that emerged from this is that there is no absolute standard of judging the rationality or otherwise of a culture or form of life other than the internal assessment or judging the truth of beliefs within the context in which they are generated. This conclusion follows from a number of findings: the first is that there are many forms of life that define the conception of reality in different contexts. Second, using a scientific paradigm in which knower is detached from the object of knowledge, Western epistemological tradition neglects the emotive and spiritual dimensions of human knowledge. Thus, this thesis found that since we are all individuals located within specific social environment, certain socio-cultural factors affect whatever we claim to know. And as members of a particular society, there are various activities that we engage in which in turn tend to structure our perception and ways of knowing.

Also, our findings reveal the importance and inextricable links between metaphysics and epistemology. Metaphysics is concerned, first and foremost, with the nature of reality, epistemology deals with the nature of knowledge. The nature of relationship between epistemology and metaphysics lies not only in the fact that they are branches of philosophy but also in the fact that they remain fundamental in the ultimate aim of human beings to understand and unravel the reality that surrounds their existence. So, it is based on this fact that any fundamental problem in one, if long pursued, tends to resolve itself into the other. That is to say, basic epistemological problems become metaphysical ones and vice versa.

The above submission appears to be a basic truth because the analysis of major theoretical problems of knowledge necessarily involves explicating on the metaphysical foundation of knowledge. As explained in chapter one, for example, ‘metaphysical epistemology’ featured prominently in the works of the Western philosophers such as Plato, Aristotle, Descartes, Hegel, among others, in their attempts to find the ‘essence of knowledge’ or ‘Form’ as in Plato. The search for ‘essence’ of knowledge in Western philosophy is an equivalent of metaphysical foundation of African knowledge system. This means that advocating the metaphysical foundation of knowledge claims is not peculiar to the idea of African epistemology. It is on this ground that we submit that what appears to be peculiar in terms of justification of theoretical African indigenous knowledge system is said to be common to many societies.<sup>236</sup>

What can be inferred from the above is that we should break away from the obsession with the justification of beliefs through the quest for universal methods or scientific principles in all areas of knowledge. Rather, we should focus on the functions of institutions, traditions, conventions and rules of the game in the justification of certain beliefs or knowledge claims. The nature of belief we hold is mainly determined by its source and the kind of evidence or justification that sustains it is a function of the

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<sup>236</sup> Sogolo, G. “Explanatory Models: the Scientific and the Non-scientific.” in *Foundations of African Philosophy: A Definitive Analysis of Conceptual Issues in African Thought*. (Ibadan: Ibadan University Press, 1993) pp72-73



context in which the belief is generated. Therefore, an adequate account of knowledge can be realised if conscious effort or attention is paid to the multidimensionality of socio-cultural factors, which are involved in the acquisition and justification of human knowledge. Indigenous knowledge, which admits of epistemological pluralism bridges the gap created by previous epistemological approaches to the acquisition and justification of human knowledge. Therefore, it provides a more comprehensive account of human knowledge than other theories of knowledge.

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