

## THE RATIONALIST AND EMPIRICIST EPISTEMOLOGICAL STRATEGIES AND THEIR IMPLICATIONS IN ETHICS

**Hyginus Chibuike Ezebuilo, PhD**

Department of Philosophy  
Nnamdi Azikiwe University, Awka  
hc.ezebuilo@unizik.edu.ng; 08035448298  
DOI: [10.13140/RG.2.2.36109.97768](https://doi.org/10.13140/RG.2.2.36109.97768)

### **Abstract**

*While the main focus in an ethics course is on right and wrong and the problems and issues that ethics raises, it is impossible to investigate these problems in isolation, without at least some excursions into the other philosophical sub-disciplines. While all the branches of philosophy consider separate questions and issues, there are considerable interconnections, as assumptions in one area will have repercussions in other areas. One question that all ethical theories must address is where ethical knowledge arises, that is, where does the knowledge about general ethical principles (or the knowledge that certain actions are moral or immoral) originate? These and other similar questions raise issues that are no longer unique to ethics, but ones that touch upon more general epistemological questions: about knowledge, its sources, nature and justification. There is little doubt that there are at least superficial similarities between ethics and epistemology: one might say that ethics is about the appraisal of social behavior and agents, while epistemology is about the appraisal of cognitive acts and agents. This paper studies the basic tenets of empiricism and rationalism, their various epistemic justificatory mechanisms and how they relate ethics.*

Key words: Empiricism, Rationalism, Ethics, Knowledge, a priori, a posteriori.

### **Introduction**

The question, where does knowledge originate, might seem rather strange to some. While knowledge acquisitions are essential to human beings, the more usual epistemological questions concern the source of some particular ideas or the truth condition of some statements. So, while it is common to inquire into the source of a statement or an idea, to inquire into the source of all knowledge seems strange. One might question whether an answer is even possible. Nevertheless, it is a legitimate (indeed an essential) philosophical question, and though there are real difficulties, answers are possible. Rationalism and empiricism represent the traditional philosophical responses to these epistemological questions. As epistemological theories, these philosophical

traditions each bring unique insights and assumptions to questions about human knowledge, its nature and origins as well as the question of our belief about moral conduct.

Usually, actions are taken and policies adopted to realize envisaged goals, and they are undertaken because of belief that they will probably realize the goals. Actions and policies may be criticized, then, on one of two grounds: that the goals are ill-chosen or that the belief that the actions or policies will probably achieve the goals is ill-founded.<sup>1</sup> It is interesting, and perhaps indicative of the facts to be examined below, that many words of appraisal – such as justification, warranted, reasonable, right – are used (although possibly in slight different senses) to indicate the acceptability of both goals and beliefs.

Moreover, such appraisals obviously have two features in common. First, the appraisal of a particular goal or belief can be made only in view of some general principles; second, the principles in question are not self-certifying, and their rational justification must be a serious question for a thoughtful person. The appraisal of actions and policies thus raises two questions about both goals and beliefs: what are the proper principles or standards to be used in appraisals, and what is the rational basis for regarding any principle or standard proper?

Historically, ethics has been the philosophical discipline concerned with these two questions about goals,<sup>2</sup> although historically, epistemology has been the discipline concerned with the same questions about beliefs.<sup>3</sup> In order to develop the parallel between ethics and epistemology, it is convenient to identify ethical and epistemological statements. Ethical statements are those that imply a statement that could be expressed by some sentences containing essentially “is a good thing that,” “is a better thing,” or “is morally obligatory that” – for instance “it is morally wrong not to.” Similarly, epistemological statements are those that imply a statement which could be expressed by some sentence containing essentially “it is reasonable for a person to place more confidence in x than in y.”<sup>4</sup> One’s epistemic convictions will have impact in one’s moral beliefs. In order to through light to this assumption, let us first have a clear understanding of

---

<sup>1</sup> Jonathan E. Adler, *Belief's Own Ethics* (Cambridge: Bradford Book MIT Press, 2002), p. 49.

<sup>2</sup> However, “goals” must be taken broadly to include not only the question of ultimate values but also the question of moral obligations and moral rights.

<sup>3</sup> Again, “beliefs” must be taken broadly to go beyond mere predictions of consequences of the use of certain means to include theories, explanations, and systematical thought.

<sup>4</sup> Jonathan E. Adler, *op.cit.* p.51.

empiricism and rationalism and the nature of the debate between these two schools of thought.

### **Empiricism**

Empiricism is the view that all knowledge originates in experience, that all knowledge are about or applicable to things that can be experienced, or the belief that all rationally acceptable beliefs or propositions are justifiable or knowable only through experience. This definition accords with the derivation of the term 'empiricism' from the ancient Greek word *empeiria*, meaning experience. Empiricism is the knowledge acquired through sense perception, that is, through any of the five senses. Empirical knowledge is always knowledge of an individual object rather than knowledge of a class of objects. For example an empirical knowledge of a chair is of a particular chair – this particular chair that I am seeing or touching, etc, or these particular chairs, but not chairs in general. This is because the sense organs can only present us with particular concrete objects.<sup>5</sup> The senses bring us into contact with the empirical world through the act of sense perception.

But are the things we perceive exactly the way we perceive them; that is, do the qualities we perceive in things exactly exist in these things or are they products of our own minds. For instance, when I perceive a blue object, is the blueness really inherent in that object or in my sense of sight? According to Democritus and Berkeley,<sup>6</sup> the qualities we perceive in things are not really inherent in them; they only appear to have them but in reality these qualities come from our senses. Some philosophers (neo-realists) on the other hand have concluded that things are exactly the way they appear to us. They believe that there is contradiction in nature and therefore things have contradictory aspects in them – for instance, something can be both hot and cold at the same time.

Hence, Omoregbe noted that while, for example,<sup>7</sup> Democritus and Berkeley would say, "The wine tastes sweet to me tastes sour to you; therefore, I do not perceive that it is sweet and you do not perceive that it is sour, and the wine is neither sweet nor sour;" Protagoras would say, "The wine that tastes sweet to me tastes sour to you, hence, I perceive that it is sweet and you perceive that it is

---

<sup>5</sup> J. Omoregbe, *Epistemology: A Systematic and Historical Study* (Ikeja: Joja Educational Research and Publishers, 1998), p.24.

<sup>6</sup> Ibid. p.25.

<sup>7</sup> Ibid. p.26.

sour, and therefore, no boy can say absolutely either that the wine is sweet or that the wine is sour, and one can say relatively that whereas it is true for me that the wine is sweet, it is true for you that that the wine is sour." Some neo-realists would say, "The wine that tastes sweet to me tastes sour to you, therefore, one must say that there are contradictions in nature; one must say of the wine not only that it is both sweet and not sweet, but also that it is both sour and not sour."

These are extreme positions. It is however a fact, and here we agree with Chisholm that the way we perceive things depends to a certain extent on our own psychological and physiological conditions.<sup>8</sup> We know for example that if someone is suffering from acute malaria even sweet things taste bitter to such a one, while everything appears yellow to someone suffering from yellow fever. Aristotle, however, criticized the extremists' positions when he says:

The earlier students of nature were mistaken in their view that without sight there was no white or black, without taste no sour. This statement of theirs is partly true partly false. Sense and sensible objects are analogous terms, i.e. they may denote either potentialities or actualities. The statement is true of the later, false of the former. This ambiguity they wholly failed to notice.<sup>9</sup>

Aristotle maintains that the qualities we perceive in things are properties actually inherent in them. It is because they have these properties that they appear to us the way they do. Hence a number of people viewing a tree under normal conditions, for example, would see it as green because greenness is one of the properties of a tree. It is in virtue of this that it appears to us as green. On the other hand, such terms as white, black, sweet, sour refer to the way in which things are perceived rather than the properties they have.<sup>10</sup> Thus, although things do really have these dispositions (or qualities) inherent in them, their appearing to us the way they do also depends on our psychological and physiological conditions.

Concepts are said to be "a posteriori" if they can be applied only on the basis of experience, and they are called "a priori" if they can be applied independently of

---

<sup>8</sup> Roderick H. Chisholm, "Theory of Knowledge" *Foundations of Philosophy Series* (Englewood, Cliffs: Prentice Hall, 1966), p.72.

<sup>9</sup> Cited by Omoregbe in op.cit. From Aristotle's *De Anima*, book3, p.426.

<sup>10</sup> Ibid.

experience. Beliefs or propositions are said to be *a posteriori* if they are knowable only on the basis of experience and *a priori* if they are knowable independently of experience. Thus, empiricism is the view that all concepts, or all rationally acceptable beliefs or propositions, are *a posteriori* rather than *a priori*. As a theory of justification, therefore, it views belief as depending ultimately and necessarily on experience for their justification. Simply put, empiricism is the view that all human knowledge is derived from (empirical) experience. In both everyday attitudes and philosophical theories, the experiences referred to by empiricists are, however, principally those arising from the activities of the sense organs.<sup>11</sup>

A posteriori knowledge is the knowledge that is gained through empirical experience. Knowledge acquired by means of any of the senses is a posteriori. This includes knowledge acquired through seeing objects, hearing sounds, tasting things, feeling something or smelling something. Most of our knowledge is of course a posteriori. However, the senses alone cannot furnish us with knowledge. It is reason that interprets our sense experiences and gives them meaning before they can become knowledge. Until reason performs this role, they are simply raw data without meaning.<sup>12</sup>

This was well brought out by Omorogbe in line with Immanuel Kant.<sup>13</sup> For example, the direct object of the sense of sight is simply color. When we look we can only see color. That is all that the sense of sight can furnish us with. It is reason which tells us that what we are seeing is a tree, a table, a blackboard, an animal, etc. again, the direct object of the sense of hearing is sound. The ears do not tell us the sound of what it is or where the sound comes from. For example, we hear the sound of an aeroplane, the sound of a gunshot or that of thunder. It is our reason that tells us, for example, that the sound we are hearing is that of thunder and not that of aeroplane or gunshot. Our ears only register the sound without telling us the meaning of the sound. The same applies to all the other senses. When a blind man touches something the sense of touch does not tell him what he is touching. It is his reason that interprets and tells him what he is touching. Sense perception requires the cooperation of reason in order to produce knowledge.

---

<sup>11</sup> C. Umezina (ed.), *Essays in Philosophy* (Enugu: Afro-Obis Publications, 2005), p.117.

<sup>12</sup> J. Omorogbe, op.cit. p.31.

<sup>13</sup> Ibid.

## **Rationalism**

Rationalism is the view that regards reason as the principal source and test of knowledge. Holding that reality itself has an inherently logical structure, the rationalist asserts that a class of truth/knowledge exists that the intellect can grasp directly. According to the rationalists, there are certain rational principles – especially in logic and mathematics and even in ethics and metaphysics – that are so fundamental that to deny them is to fall into contradiction.

Rationalism has long been the rival of empiricism, the doctrine that all knowledge comes from, and must be tested by, sense experience. As against this doctrine, rationalism holds reason to be a faculty that can lay hold of knowledge beyond the reach of sense perception, both in certainty and generality.<sup>14</sup> In stressing the existence of “natural light,” rationalism has also been the rival of systems claiming esoteric knowledge, whether from mystical experience, revelation, or intuition, and has been opposed to various irrationalisms that tend to stress the biological, the emotional or volitional, the unconscious, or the existential at the expense of the rational.<sup>15</sup>

Rationalism has somewhat different meanings in different fields, depending upon the kind of theory to which it is opposed. In the psychology of perception, rationalism is opposed to transactionalism, a point of view in psychology according to which human perceptual skills are achievements, accomplished through actions performed in response to an active environment.<sup>16</sup> On this view, the experimental claim is made that perception is conditioned by probability of judgments formed on the basis of earlier situations. As a correlative to these sweeping claims, the rationalist defends a nativism, which holds that certain perceptual and conceptual capacities are innate – though these native capacities may at times lie dormant until the appropriate conditions for their emergence arise.<sup>17</sup>

In the comparative study of languages, a similar nativism was developed by the syntactician Noam Chomsky, who, acknowledging a debt to Rene Descartes, explicitly accepted the rationalistic doctrine of innate ideas. Though the thousands of languages spoken in the world differ greatly in sounds and

---

<sup>14</sup> Chris Macann, *Empiricism vs Rationalism* (Boston: Martinus Nijhoff Publications, 1981), pp.23-24.

<sup>15</sup> Ibid.

<sup>16</sup> Ibid.

<sup>17</sup> Ibid.

symbols, they sufficiently resemble each other in syntax to suggest that there is a “schema of universal grammar” determined by innate presettings in the mind itself. These presettings, which have their basis in the brain, set the pattern for all experience, fix the rules for the formation of meaningful sentences, and explain why languages are readily translatable into another.<sup>18</sup> It should be added that what rationalists have held about innate ideas is not that some ideas are full-fledge at birth but only that the grasp of certain connections and self-evident principles, when it comes, is due to inborn powers of insight rather than to learning by experience.

Common to all forms of speculative rationalism is the belief that the world is a rationally ordered whole, the parts of which are linked by logical necessity and the structure of which is therefore intelligible. Thus, in metaphysics it is opposed to the view that reality is a disjointed aggregate of incoherent bits and is thus opaque to reason. In particular, it is opposed to the logical atomism of such thinkers as David Hume and the early Ludwig Wittgenstein, who held that facts are so disconnected that any fact might well have been different from what it is without entailing a change in any other fact.<sup>19</sup> Rationalists are basically of the view that the law of contradiction “A and not-A cannot coexist” holds for the real world, which means that every truth is consistent with every other; they believe that all facts are so bound up with each other that none could be different without all being different.<sup>20</sup>

In the field of epistemology where its claims are clearest, rationalism holds that at least some human knowledge is gained through *a priori* (prior to experience), or rational, insight as distinct from sense experience, which too often provides a confused and merely tentative approach. In the debate between empiricism and rationalism, empiricists hold the simpler and more sweeping position, the Humean claim that all knowledge of fact stems from perception.<sup>21</sup> Rationalists, on the other hand, urge that some (though not all), knowledge arise through direct apprehension by the intellect. What the intellectual faculty apprehends is objects that transcend sense experience, namely universals and their relations. A universal is an abstraction, a characteristic that may reappear in various

---

<sup>18</sup> Ibid. p.55.

<sup>19</sup> Ibid.

<sup>20</sup> Ibid.

<sup>21</sup> Ibid. p.58.

instances:<sup>22</sup> the number three, for example, or the triangularity or humanity that all triangles or all human beings have in common respectively. Though these cannot be seen, heard, or felt, rationalists point out that humans can plainly think about them and about their relations. This kind of knowledge, the rationalists argue, is the most important and certain knowledge that the mind can achieve. Such *a priori* knowledge is both necessary (i.e., it cannot be conceived otherwise) and universal (in the sense that it admits of no exceptions).

### **Basic Cognitive Mechanism of Empiricism**

Empiricism denies the rationalist distinction between empirical and *a priori* knowledge. All knowledge, the empiricist argues, arises through, and is reducible to, sense perception. Thus, there is no knowledge that arises through reason alone. It is essential to be clear here: it is not the existence of reason that empiricism denies, or that reason has a role in knowledge acquisition, rather it is that reason has some special access to knowledge over and above the knowledge that experience provides. All empiricists acknowledge that human beings possess reason; reason is the instrument that allows us to manipulate and augment the knowledge that experience provides. Knowledge, however, has its origins in experience rather than in reason.

As Macann rightly noted, empiricism begins with the distinction between sense data and ideas.<sup>23</sup> Sense data represent the basic information that the senses present to the mind through our perceptual experiences, that is, sights, tastes, textures, sounds, and odors. To illustrate, suppose that one sees a blue glass. This sense experience is reducible to the visual act and the sense data (i.e., the information that the visual act contains). In this case the sense data/the information that the visual act contains are that there is a 'blueness' and a 'glassness'. At this stage there is no conscious recognition that one sees a blue glass, all there is, is the pure sense data that the senses present to the mind through the sense experiences. The mind processes and represents each individual sense datum as an idea, in this case the ideas are: blue and glass. The mind then associates and combines the ideas it creates through sense experience to create the conscious idea: blue glass.

---

<sup>22</sup> Ibid.

<sup>23</sup> Ibid. p.13.



To the empiricist, sense data represent the basic material that the mind uses to construct the ideas that comprise all our knowledge.<sup>24</sup> Thus, no matter what the idea is, it is possible to trace that idea to some sense experience(s). While the precise details differ, these are the basic cognitive mechanisms that the principal empiricist philosophers (John Locke, George Berkeley and David Hume) all appeal to in order to explain the process through which sense data becomes knowledge. In this way they deny the existence of *a priori* knowledge.

Although empiricism denies the existence of *a priori* knowledge, as knowledge that depends upon no experience, there is still the recognition that some knowledge goes further than experience in the sense that it is not about experience. Nevertheless, empiricism argues that such knowledge is still reducible to experience.<sup>25</sup> Again, this is the crucial notion that it is possible to trace all knowledge, whether or not it is about experience, to some particular experience or experiences. Indeed, some of the empiricists argue that whatever knowledge that cannot be so *reduced* is nothing but nonsense.<sup>26</sup>

### Analytic-Synthetic Distinction

Rather than preserve what is thought to be an inaccurate distinction, empiricism recasts the distinction between *a priori* knowledge and *a posteriori* knowledge into the distinction between analytic knowledge and synthetic knowledge. Through this distinction empiricism denies the rationalist claim that *a priori* knowledge is superior to *a posteriori* knowledge. Indeed, the distinction provides the basis to argue the precise opposite. The statements that the rationalists cite as paradigmatic *a priori* knowledge include: A triangle has three sides,  $3 + 3 = 6$ , and so on.<sup>27</sup> These, empiricists see as analytic statements.

An analytic statement is one where the statement analyzes the concept in question. Thus, the statement, "A triangle has three sides" does no more than analyze the concept, triangle; and the statement  $3 + 3 = 6$  does no more than analyze the concept, six. Moreover, the empiricist argues, these statements never do more than analyze the concepts in question. In a real sense then these

---

<sup>24</sup> Ibid.

<sup>25</sup> Ibid. p.14.

<sup>26</sup> Ibid.

<sup>27</sup> Thomas I. White, *Discovering Philosophy* (Upper Saddle River: Prentice-Hall, 1996), p.199.

statements provide no additional knowledge, all the knowledge that analytic statements contain is given within the original concept the statement analyzes.<sup>28</sup>

Synthetic statements, in contrast, do provide additional knowledge – knowledge that goes further than the original concept. Consider the statement: the temperature outside is 75°. This is a synthetic statement since, while there has to be some temperature outside, there is no reason that it has to be 75° rather than some other temperature. The concepts ‘temperature’ and ‘outside’ then have no intrinsic connection to 75° (or some specific outside temperature), rather what the temperature depends upon are various other environmental conditions. So the statement such as “The temperature outside is 75°,” provides us with additional (and sometimes valuable) information. All synthetic statements then share the characteristics that, because there is no intrinsic or logical connection between the elements of the statements, these statements provide information about a connection or relation that is unavailable in the original concepts themselves.

Given that analytic statements reveal no additional insights, while synthetic statements do provide novel ideas and associations,<sup>29</sup> it should come as no surprise that empiricism argues that empirical knowledge is superior to *a priori* knowledge rather than the reverse (or to be more precise, that synthetic knowledge is superior to analytic knowledge). With the focus on analytic truth, rationalism never quite reaches the real universe in the manner that synthetic statements are able to do, according to this analysis.

### **Problems with Empiricism**

There is, however, a philosophical price to be paid. While the empiricist gains additional insights and knowledge, there is a loss in certitude, since the empiricist still must deal with senses that (the rationalist is correct to maintain) are unreliable. The rationalist can be certain that  $2 + 2 = 4$ , the empiricist, however, must accept that empirical knowledge is at best probable, never certain. The problem is that the empiricist has no real response to the claim that it is possible to doubt even the most persuasive sense impressions, since it is possible to doubt them without logical contradiction.

---

<sup>28</sup> Ibid. p.208.

<sup>29</sup> Ibid.

In philosophical terms, the problem is that our sense perceptions undermine their causes.<sup>30</sup> In other words, a given sense perception has more than one explanation. Consider, for example, that one sees a white rabbit. What might explain this perception? The obvious answer is that one sees a white rabbit because there is a white rabbit there. It is also possible, however, that one has a rare optical disease and the rabbit is some other color, rather than white. It is also possible that one hallucinates or dreams the rabbit. As White will attest, these are all logical possibilities and the sense experiences in themselves provide no certain means to decide which explanation is correct.<sup>31</sup>

This suggests another potential problem that empiricism must address, namely how to explain mathematics and logic? Remember that empiricism maintains that *all knowledge is reducible to experience*. Thus, the empiricist must explain how it is possible to reduce sometimes arcane mathematical knowledge to common sense experience. This means that, since mathematical knowledge is thought to be certain knowledge, the empiricist must explain how it is possible to derive certain knowledge through a process of sense experience that provides knowledge that is, at best probable. Moreover, the empiricist must also explain how it is possible to prove mathematical statements through experience.

There have been numerous attempts to demonstrate how it is possible to derive mathematics and logic through experience.<sup>32</sup> Though commendable these attempts, all have had serious difficulties and so have met with little or no general acceptance. Even if it were possible to reduce mathematics to experience, the questions: whether experiences whose truth is probable can produce certain mathematical knowledge and, how it is possible to prove mathematical statements through experience, pose rather more serious difficulties.

Perhaps the easiest, though least intuitive, solution is to argue that there is no certitude in mathematics. This is John Stuart Mill's tactics. Mill, a radical empiricist, argues that, as with all other empirical statements, mathematical statements express mere possibilities. All that distinguishes them is that mathematical statements have undergone more extensive confirmation than other statements.<sup>33</sup> The disadvantage to this tactics is obvious: one must give up

---

<sup>30</sup> Ibid.

<sup>31</sup> Ibid. p.209.

<sup>32</sup> See Ibid. pp.209-300.

<sup>33</sup> J.B. Schneewind, "John Stuart Mill," *Encyclopedia of Philosophy*, 1967, p.503. <https://www.2.onu.edu./-m-dixon/handouts/rationalism%20and20empiricism.html>.

all claims to absolute truth in mathematics. Most philosophers (as well as mathematicians) consider this concession to be as difficult as it is undesirable and counterintuitive.

In contrast to Mill, less radical empiricists (like David Hume and John Locke) still want to maintain mathematical certitude.<sup>34</sup> This too, however, comes at a price. To preserve mathematical truths as absolute truths Locke argues that some perceptions, and the ideas that represent these perceptions, can be more certain than others. To be precise, he argues that, when reason operates on experience, the ideas, and the associations between ideas that it produces, result in knowledge that is either intuitive, demonstrative or sensitive. Locke maintains that intuitive knowledge and demonstrative knowledge are certain knowledge.<sup>35</sup> His arguments here are technical and less than a complete success. To all intents and purposes, however, what Locke does in order to guarantee certain knowledge is rather too similar to the rationalist's *a priori* knowledge to please most empiricists.

Since empiricism argues that there is no knowledge that arises through reason alone, it should be obvious that empiricism also denies that there are innate ideas, that is, ideas that are in the mind prior to experience or that are built into the mind in some manner. A usual argument against innate ideas is that were there such ideas then all rational beings should possess and acknowledge them. Since it is obvious that there are neither universal ideas (i.e., ideas that all human beings possess), nor ideas upon which there is universal agreement, then, there are no innate ideas.<sup>36</sup> The empiricist considers the pre-experience mind to be a *tabular rasa* – a clean state, and it is true experience that knowledge comes to be written on this slate. Thus, the basic credo of empiricism is that where there is (or can be) no experience there is (and can be) no knowledge.

### **Rationalist Distinction between Empirical and *a priori* Knowledge**

Rationalism distinguishes between empirical knowledge, that is, knowledge that arises through experience, and *a priori* knowledge, that is, knowledge that is prior to experience and that arises through reason. As knowledge that arises through our experiences, empirical knowledge is about the material universe

---

<sup>34</sup> Ibid.

<sup>35</sup> Ibid. p.501.

<sup>36</sup> See John Locke's *Essays Concerning Human Understanding*, and David Hume's *A Treatise on Human Nature*.

(and the various phenomena in that universe). Sentences such as Enugu is in Nigeria; Good Luck Jonathan was Nigeria's president; John Locke was a philosopher; a full bag of black beans weighs 750kg, each expresses statements about certain phenomena in the universe and so represents empirical knowledge.

In contrast, *a priori* knowledge is not about phenomena in the empirical universe or our experiences, though some *a priori* knowledge is applicable to that universe. The sense in which *a priori* knowledge is prior to experience is logical rather than temporal.<sup>37</sup> In other words, it is possible that one learns some *a priori* knowledge through experience. Nevertheless that knowledge neither requires experience in order to be known, nor is it about experience. Perhaps it is easier, then, to consider *a priori* knowledge as knowledge that arises through reason alone, that is, it depends upon no experience.

Consider, for instance, logical or mathematical knowledge. The statement, "All triangles have three sides" makes no claim about experience or the empirical universe since there are no triangles in the universe. There are, to be sure, triangular entities, that is, physical entities that have triangular shape, but no triangles themselves.<sup>38</sup> Similarly, the statement  $3 + 3 = 6$  makes no claims about the universe as there are no 3 or 6 that one can experience and so possess empirical knowledge about. Again, while it is obvious that some mathematical knowledge is applicable to experience,<sup>39</sup> this fails to demonstrate that the mathematical statement  $3 + 3 = 6$  is an empirical statement. The logical statements  $x = x$ , All the entities in the universe are either  $x$  or not- $x$ , and No entities in the universe are both  $x$  and not- $x$ , are also statements that while applicable to experience are not about experience.

There is another difference between empirical and *a priori* knowledge in addition to their respective sources and content. This difference has to do with their truth conditions. A truth condition specifies under what conditions a given statement can be said to be true or false, that is, it indicates what one needs to do to prove a statement true or false.<sup>40</sup> Consider the statement: it is 75° outside. Under what conditions is this statement true? It should be obvious that the statement is true

---

<sup>37</sup> Roderick H. Chisholm, "Theory of Knowledge," op.cit.

<sup>38</sup> Ibid.

<sup>39</sup> Example,  $3 + 3 = 6$  is applicable when one has 3 apples and someone gives one 3 more apples

<sup>40</sup> B. Williams, *Ethics and the Limits of Philosophy* (Cambridge: Harvard University Press, 1985), p.19.

so long as the outside temperature is 75°. To prove this statement true or false, therefore, one appeals to experience and the empirical data is provided.

In contrast to this empirical statement, consider again the statement  $3 + 3 = 6$ . Under what conditions is this statement true and how is it possible to prove it? Here is the principal difference between empirical and *a priori* knowledge. How does one prove the statement to be true? Perhaps the most obvious response is: take three apples and add them to three more apples and then there are six apples. While this demonstration is to the point, does it suffice to prove that  $3 + 3 = 6$ ? No, at best this little exercise confirms the statement, but it fails to prove it.<sup>41</sup> To prove that  $3 + 3 = 6$  is true then requires that one appeals to more than experience. To be precise, one must appeal to other mathematical knowledge.

At this point someone will perhaps take exception with this analysis and point out that since one learns mathematics through experience, it follows that mathematics must also be empirical knowledge. The point is well taken. However, the real issue here is what the knowledge is about and its truth conditions. Even though some *a priori* knowledge may arise through experience, it should be obvious that most does not. The rationalists' point here is that there is more to *a priori* knowledge than experience can account and as such it provides knowledge that experience is unable to provide.<sup>42</sup> For instance, while one might argue that one learns basic mathematical truths (e.g.,  $1 + 1 = 2$ ,  $2 + 2 = 4$ , etc), through experience, it seems clear that there are other mathematical truths beyond the purview of experience (eg.,  $a^2 + b^2 = c^2$ ).

A similar analysis will demonstrate that logical statements such as "All the entities in the universe are either  $x$  or not- $x$ " also depend upon no experience to determine their truth. Indeed, since the statement is about all the entities in the universe, the experience one needs to prove it as an empirical claim is impossible. It should be obvious, however, that one needs no experience or

---

<sup>41</sup>To understand the difference between 'prove' and 'confirm,' consider another illustration. It is a quiet hot afternoon and Jude decides to rest under the tree besides a river. Some moments later a white swan swims down the stream. As Jude continues to rest, seven more swans that are also white swim down the stream. Jude considers this experience and realizes that all the swans he has ever seen have been white. So, he formulates the statement: All swans are white; and sure enough the next swan he passes is white. Did this last experience prove that the statement "All swans are white" is true? No, since Jude has not seen all swans, it is possible that there is at least one that is non-white color. Jude's experience does, however, provide additional confirmation that the statement is true (at least until he discovers there are non-white swans).

<sup>42</sup> B. Williams, op.cit. p.24.

empirical data to prove the statement, that is, whatever characteristics one chooses as *x*, it is apparent that all the entities in the universe either have *x* or do not have *x*. All the entities in the universe are either purple or not purple, bigger than a pencil or not bigger than a pencil, spherical or not spherical, and so on. As Williams observes, one can know that this statement is true even when one has no idea what the characteristics in question are. Thus, one knows that all the entities in the universe are either *nonsonel* or *not-nonsonel*, even though no one else in the universe knows what *nonsonel* is (since I made it up!).

To rationalists this power to discern and generate universal truths is quite impressive. Indeed, the differences between rationalism and empiricism as to (a) what constitutes genuine knowledge, (b) what knowledge is about, and (c) its truth conditions, suggest to the rationalists that there is a real qualitative difference between *a priori* and *a posteriori* knowledge. To be precise, most rationalists argue that *a priori* knowledge is superior to *a posteriori* knowledge. The one consideration that is seen as the most decisive in this argument is the difference in truth conditions between *a priori* and *a posteriori* knowledge.

According to most rationalists, there is a fundamental problem with empirical or *a posteriori* knowledge. Empirical knowledge depends upon our senses, senses that, the rationalists wastes no time to demonstrate, are unreliable. To demonstrate this, the rationalists appeals to common sense deceptions and perceptual illusions.<sup>43</sup> When one places a straight rod into water the rod appears to bend, at a distance a square tower appears to be round, parallel lines appear to converge in the distance, and so on. Thus, it is difficult, perhaps even impossible, to ever know that an empirical statement is true. It seems that it is possible to doubt even the most certain sense perceptions.

In contrast, *a priori* knowledge is certain knowledge. While it might be possible to doubt that the entity in my distant front is a human being (I might have a bizarre optical disease or it may be that a hallucination), it seems impossible to doubt that  $2 + 2 = 4$ . Moreover, while *a posteriori* knowledge represents conditional knowledge (that is, knowledge that might have been otherwise), *a priori* knowledge is universal and eternal. Again, while it is possible to imagine a universe in which politicians are honest or a universe in which an association of Christian Mothers defeats the Supper Eagles in a football tournament, it seems

---

<sup>43</sup> Ibid.

impossible to imagine a universe in which  $2 + 2 = 6$  or where triangles have more (or less) than three sides.

### **Rationalists Disagree on the Origin of *a priori* Knowledge**

As with most philosophical theories there is some disagreement between rationalists on certain issues. One issue that separates rationalists is the answer to the question where *a priori* knowledge originates. The more radical rationalists (such as Plato and Rene Descartes) argue that *a priori* knowledge is innate, that is, the knowledge is in some manner latent within the mind or even built into the mind. At best then experience acts to elicit the knowledge, but the knowledge was there prior to the experience. Plato argues that all genuine knowledge is innate and education is mere recollection or remembrance,<sup>44</sup> while Descartes claims that certain critical concepts such as God, material substance, and mental substance are innate. Given these three innate ideas and reason, Descartes argues that other *a priori* knowledge is derivable.<sup>45</sup>

The obvious problem that these radical rationalist strategies face is the need to explain where the mind acquires these ideas from. In Plato's case, the solution is an immortal soul-mind that lives through countless lives (i.e., reincarnations), whereas Descartes argues that God places these ideas in human minds. It is also possible to argue that the mind's biological structure contains the ideas. While this sounds rather strange, the linguist Noam Chomsky argues this precise thesis: "Unless one assumes that certain linguistic structures, e.g., deep grammar, are innate, it is impossible to explain the apparent ease with which human beings learn natural languages."<sup>46</sup>

Immanuel Kant argues a less radical rationalist line. Kant accepts the rationalist claim that reason alone can provide certain knowledge. Nevertheless, he also accepts the empiricist claim that all knowledge begins in experience, that is, without sense experience as the initial data upon which reason can operate, the knowledge acquisition process can never start. Knowledge, as Kant conceives it then is what the mind produces as it orders and structure otherwise chaotic sense data.<sup>47</sup> The rather radical idea here is that it is the mind that imposes the order and structure on the sense data, the implication being that the sense data have no

---

<sup>44</sup> Plato, *Five Dialogues*, J.L. Blau (ed.). Indianapolis: Hackett, 1981.

<sup>45</sup> Rene Descartes, *Meditations of First Philosophy* (Indianapolis: Hackett, 1993), p.84.

<sup>46</sup> Chris Macann, *Empiricism vs Rationalism*, op.cit. p.56.

<sup>47</sup> Thomas I. White, op.cit. p.296.



intrinsic order or structure. The main organizational principles that the mind imposes on sense data are its spatial and temporal structure. These considerations led Kant to a metaphysical distinction; the distinction between noumenal universe and the phenomenal universe. The noumenal universe comprises entities-in-themselves, while the phenomenal universe comprises entities-through-their-appearances.<sup>48</sup> This is rather technical, so it is fine to go through it piecemeal.

Suppose someone presents us with a blue glass sphere. It is through our senses that we perceive this sphere. In this case the principal senses are visual and tactile; indicates that it is blue and spherical and our tactile sense that it is glass and also that it is spherical. Philosophers call these qualities: being blue, being glass and being spherical *properties* or *characteristics*. All entities have properties: size, shape, color, taste, texture, odor, sound and so on. Kant's point is that it is through these properties and through them alone, that all the knowledge we have about the entities in the universe arises. All knowledge about things comes through their properties (which Kant calls appearances).

Our common sense intuitions suggest, however, that there must be some substance or matter that has the properties that our senses perceive. In other words, it is obvious that the properties cannot exist without some substance that underlies them and possesses them as properties. While the substance that underlies the properties is unseen, nevertheless reason and commonsense insist that it must exist. Descartes suggests that such inferences are rather common occurrences, for example:

When one peers out of a window on a cold winter afternoon, one might see a person move across the lawn. But does one see a person? No; all that one sees is a cap, a coat and perhaps trousers and shoes. Nevertheless, no one doubts that there is someone under all the apparel. Even though one is unable to see the person one still reasons that there must be one there, since clothes seldom stroll across lawns on their own.<sup>49</sup>

Kant agrees that there must be entities that possess the properties our senses perceive, but argues that while logic necessitates their existence, these entities-in-themselves (which comprise the noumenal universe) are unperceivable and so

---

<sup>48</sup> Ibid.

<sup>49</sup> Rene Descartes, op.cit.

incomprehensible to the human mind. All that is knowable are the properties (i.e., appearances) that our senses perceive and our mind structures. These appearances are the entities that comprise the phenomenal universe. There are no means then to, as it were, move outside our senses to see things in themselves, to see the real universe rather than the universe that our senses communicate to us through perception. Since all our knowledge comes through the senses and reason, these act as filters which order and structure all perceptions and thoughts. Things-in-themselves that underlie the perceptions remain forever elusive.

While perhaps more plausible, Kant's rationalism imposes limitations on knowledge that more radical rationalists would refuse to accept. Nevertheless, Kant's approach is rationalist since it is the mind (to be precise, reason), that gives our sense perceptions the structure that changes them into knowledge.<sup>50</sup> The main point to keep in mind, however, is that rationalists believe that, even though it might require experience to initiate the knowledge process, there is some knowledge that is irreducible to experience, that is, the knowledge is neither about experience nor is it possible to use experience to demonstrate its truth conditions.

### **Implications in Ethics**

Our main purpose here is to illustrate that one's general philosophical assumptions about the nature and origins of knowledge will have consequences in other philosophical investigations, particularly in ethics; and to illustrate that all theories involve compromises, that is, no matter the initial assumptions, there will be advantages and disadvantages. It is to a philosopher's credit then to be able to detect and acknowledge the disadvantages as well as the advantages that his/her positions entails. To make this more explicit let us begin by briefly ex-ray the implications of John Locke's, Kant's and John Stuart Mill's epistemologies to their respective ethics.

Locke's natural law ethics reveals the same tensions that run through his approach to knowledge. The claim that some knowledge are certain knowledge, even though all knowledge arises through experience, forces Locke to argue that reason is able to combine some ideas in a manner that produces certain knowledge. Such knowledge is irresistible; it leaves no room to hesitate or

---

<sup>50</sup> Thomas I. White, op.cit. p.279.

doubt.<sup>51</sup> Thus, Locke argues that certain knowledge is possible. Perhaps most important to Locke's ethics is the conviction that it is possible to be certain that God exists. Indeed he bases what is moral on what God wills,<sup>52</sup> hence, it is also possible to know what it is that God desires human beings to do, that is, the divine law. The divine law as discoverable through reason becomes for Locke, the natural law, the command to preserve human being. The natural law, Locke argues, underlies and governs all human interaction. Thus, through the natural law reason is able to derive all the particular natural rights and moral duties that human beings possess. These are rights and duties that all human beings possess as human beings and which they must use as a guide in their behavior. Since all experience is particular, the universal and absolute character is what reason supplies to experience to produce certain knowledge. Therefore, it is evident then that Locke's theory is not without some compromise, for were he to stick to the principle "no experience no knowledge" he would have by no means arrive at his moral convictions.

Similarly, Mill's utilitarian ethics incorporates the radical interpretation that Mill gives the empiricist principle that all knowledge arises in experience. Mill interprets the *all* to mean all knowledge. Thus, he assumes that even mathematical and logical knowledge are empirical knowledge with all the limitations that such knowledge possesses.<sup>53</sup> The greatest happiness principle that underlies utilitarian ethics states that those actions are moral which provide the greatest happiness to the greatest number. In this respect, what determines happiness is without a doubt an empirical matter, that is, it is through our experience that we realize what actions cause the pleasures that increase happiness and what actions cause the pain that decreases happiness. The role of reason in this process is to learn through these experiences and to formulate the general moral rules that will, over time, lead to the greatest happiness. It is essential to realize, however, that while these general moral rules are meant to guide behavior, because our experiences change, these rules can and do change over time.<sup>54</sup>

This theory suggests that moral norms lack both universality and permanence. It could be recalled that there was a time in history when abortion, gay marriage

---

<sup>51</sup> Locke, John, *Essay on the Law of Nature* (Oxford: Oxford University Press, 1950).

<sup>52</sup> *Ibid.*

<sup>53</sup> J.B. Schneewind, *op.cit.*

<sup>54</sup> *Ibid.*

and similar moral issues are unheard of and are regarded as taboo. Today they have been incorporated and legalized in the civil laws in many countries of the world. The idea is that *ab initio* experience provided data which enabled reason to formulate the general moral rules forbidding such acts in the society. But as experience changes, today, it presents reason with different data which then enabled it to formulate new general moral norms permitting the actions. By implication reason serves experience and nothing can be intrinsically evil. Common sense teaches us that this line of reasoning is simply absurd.

The case of Immanuel Kant is not quite different. Though he accepts the empiricist principle that all knowledge arises in experience, Kant is without doubt a rationalist. This rationalism is quite apparent in Kant's philosophical investigations into ethics. Kant believes that the supreme principle that underlies all morals – the categorical imperative – must be absolute and universal. Such a principle can never arise in experience, Kant argues, since all experience is particular (that is, about particular entities in particular situations at particular times). Neither can experience prove this principle. Kant insists that experience can at best confirm the categorical imperative. In contrast to the knowledge that arises through experience, the knowledge that arises through is abstract and universal.<sup>55</sup> It is reason alone then that is able to determine and prove the categorical imperative as the supreme moral principle. Kant distinguishes here between theoretical reason and practical reason. It is theoretical reason that investigates the empirical universe. The concern of practical reason is the will, that motive force in human beings that underlies all moral behavior. To be precise, it is the role of practical reason to create a good will. To do this, practical reason determines the moral principle that the will must follow, that is, the categorical imperative.

The general epistemological intuitions that arise because of the fact that Kant accepts the empiricist's principle that all knowledge begins in experience are also apparent in Kant's ethics. Since it is impossible to know-things-in-themselves there are certain things and ideas, whose importance to ethics are immeasurable, about which human beings can have no knowledge whatsoever. In particular, it

---

<sup>55</sup> To illustrate the difference consider the statements "There are wombats in the Tasmania" and " $a^2 + b^2 = c^2$ ." It is clear that the empirical statement "There are wombats in the Tasmania" is about particular entities (wombats) and a particular situation (being in Tasmania). The mathematical statement has no such limitations. This statement is abstract in that it mentions no particular entities and universal in that it applies to all appropriate  $a, b, c$ .

is impossible to have knowledge as to whether (1) God exists, (2) the soul is immortal and (3) human possesses free will. Yet, even without certain knowledge, it is still essential to assume that all these are true, otherwise ethics is impossible.

Generally, there are three things involved in the act of sensation, namely the object perceived, the sense organ with which it is perceived, and the ego, that is, the subject that interprets what is perceived and gives it a meaning. The senses in themselves cannot give meaning to the objects of sense perception without the ego. Hence, Kant is right in saying that we need both sense perception as well as reason to produce knowledge. The product of the two faculties is knowledge. Sense perception alone without reason giving it a meaning is meaningless. Similarly, without the senses presenting our reason with some sense data, it sometimes becomes impossible for reason to do any work not to talk of producing knowledge.

In ethics, rationalism holds the position that reason, rather than feelings, customs, or authority, is the ultimate court of appeal in judging good and bad, right and wrong. Among major thinkers, of the most notable representative of rational ethics is Kant, who held that the way to judge an act is to check its self-consistency as apprehended by the intellect. Take, for instance, a theft. Ask if one can consistently will that the principle be made universal. The answer must be "no," because, if theft were generally approved, people's property would not be their own as opposed to anyone else's, and theft would then become meaningless; the notion, if universalized, would thus destroy itself, as reason by itself is sufficient to show.

Indeed, rationalists speak of so many things pertaining to metaphysics which are not objects of sense perception or empirical experience. The empiricists and the logical positivists simply dismiss all such things as mere illusion rather than knowledge, for the simple reason that they are not objects of empirical experience, nor are they empirically verifiable. But is it true that all knowledge derives from empirical experience? Is empirical experience the only kind of experience man has? By no means, for there are such things as intuitive experience, metaphysical experience, mystical experience, religious experience, and any of these could be the source of knowledge. There is more to reality than can be experienced empirically.

## Conclusion

The debate between rationalism and empiricism continues, and it is quite possible some issues will be impossible to resolve, at least given our finite human intellect. To the degree that it is possible to determine the correct solutions to these issues, the British philosopher Bertrand Russell concludes that the score is even. Russell argues that while it seems clear that the empiricists are correct that all knowledge must arise through experience, it also seems obvious that there is some knowledge that it is impossible to reduce to experience, that is, reason is able to use experience to produce knowledge that it is nevertheless impossible to prove through experience.<sup>56</sup>

Epistemology and ethics are both concerned with evaluations: ethics with evaluations of conduct, epistemology with evaluations of beliefs and other cognitive acts. Of considerable interest to philosophers are the ways in which the two kinds of evaluations relate to one another. *One question that all ethical theories must address is where ethical knowledge arises, that is, where does the knowledge about general ethical principles (or the knowledge that certain actions are moral or immoral) originate?* This is to say that ethics and epistemology are two inseparable disciplines. Our moral convictions are informed by our epistemological convictions.

Empiricism and rationalism are two main rivals with regards to origin or source and justification of knowledge. An empiricist theory of knowledge holds that all knowledge arises through and is reducible to experience, while a rationalist theory of knowledge holds that some rationally accepted knowledge must have a sufficient reason for its existence – the principle of sufficient reason being *a priori*. This study attempted to illustrate that one's general philosophical assumptions about the nature and origins of knowledge will have consequences in other philosophical investigations, particularly in ethics. It also tried to illustrate that all theories involve compromises, that is, no matter the initial assumptions there will be advantages and disadvantages. It is to a philosopher's credit then to be able to detect and acknowledge the disadvantages as well as the advantages that his/her positions entails. Any epistemic claim to the detriment of true ethical beliefs will be a disservice to civil society and to the individuals.

---

<sup>56</sup> Russell, Bertrand, *The Problems of Philosophy* (Indianapolis: Hackett, 1912).

## Bibliography

- Adler, Jonathan E. *Belief's Own Ethics*. Cambridge: Bradford Book MIT Press, 2002.
- Chisholm, Roderick H. "Theory of Knowledge" *Foundations of Philosophy Series*. Englewood, Cliffs: Prentice Hall, 1966.
- Descartes, Rene. 1993. *Meditations of First Philosophy*. Indianapolis: Hackett.
- Hume, David. *A Treatise of Human Nature*. London: Penguin, 1969.
- Kant, Immanuel. *Metaphysics of Morals*. Mary Gregor (trans.). Cambridge and New York: Cambridge University Press, 1991.
- Locke, John. *Essay on the Law of Nature*. Oxford: Oxford University Press, 1950.
- \_\_\_\_\_. *An Essay Concerning Human Understanding*. Oxford University Press, 1975.
- Macann, C. *Empiricism vs Rationalism*. Boston: Martinus Nijhoff Publications, 1981.
- Omeregbe, J. *Epistemology : A Systematic and Historical Study*. Ikeja: Joja Educational Research and Publishers, 1998.
- Plato. *Five Dialogues*. J.L. Blau (ed.). Indianapolis: Hackett, 1981.
- Russell, Bertrand. *The Problems of Philosophy*. Indianapolis: Hackett, 1912.
- Schneewind, J.B. "John Stuart Mill." *The Encyclopedia of Philosophy*, 1967.  
<https://www.2.onu.edu/-m-dixon/handouts/rationalism%20and%20empiricism.html>
- Umezina, C. (ed.), *Essays in Philosophy*. Enugu: Afro-Obis Publications, 2005.
- White, Thomas I. *Discovering Philosophy*. Upper Saddle River: Prentice-Hall, 1996.
- Williams, B. *Ethics and the Limits of Philosophy*. Cambridge: Harvard University Press, 1985.