INTRODUCTION

Epistemology is a field of philosophy that concerns itself with the nature and process of how knowledge is acquired. Ever since philosophy was practiced by the pre-Socratics in ancient Greece, there has been an intellectual enterprise to discover how human beings come to know certain things whether they be material objects (such as the world), abstract objects (such as universals), or interactions (such as causal relationships). In this essay I shall begin by surveying the epistemological practice of empiricism and prominent representatives who have helped shape it. Because empiricism has been widely acknowledged in various disciplines (e.g. science), I shall explain how empiricism has been superficially and haphazardly characterized by metaphysical naturalism. In this essay we will also look at how belief in theism has been retained in empiricism thereby decrying the uncritically accepted metaphysical naturalism in contemporary empirical epistemology.

CLASSIC AND MODERN EMPIRICISM

All investigations of empiricism must begin with a differentiation between classic empiricism and modern empiricism. Classic empiricism generally refers to the epistemological works of Aristotle and St. Thomas Aquinas. Aristotle suggested that "the universal and necessary elements of knowledge - the foundations of all subsequent reasoning - are built up in the mind through induction." This means that knowledge of universal or general concepts are derived by repeated experiences of individual or particular things. Aquinas echoes this sentiment when he suggests that essential or universal elements are derived by abstracting a common essence. He writes:

Our intellect cannot know the singular in material things directly and primarily.

The reason for this is that the principle of singularity in material things is individual matter; whereas our intellect understands by abstracting the intelligible species from such matter. Now what is abstracted from individual matter is universal.
Aquinas also wrote the famous phrase, "Nihil in intellectu quod prius non fuerit in sensu" or "Nothing is in the intellect which was not first in the senses." Thus classical empiricism is characterized by comprehending universal concepts from repeated exposure to various particular things in the sensible world. When our understanding of universals becomes apparent then we can utilize universal concepts for future propositions about items within that universal's category. Further, Aquinas and Aristotle were also theists in that they believed in natural theology. That is, the existence and nature of God could be ascertained from empirical observations about the world. For Aristotle, the concentric spheres of the universe required a Prime Mover. In Aquinas' Christian theism, one could see the universe in need of a sufficient cause. This cause was required because the universe cannot be explained in terms of an infinite regression of contingent causes. As a general world view, the classic empiricists retained some sort of belief in a divine cause for the universe without making any metaphysical speculation leading to non-theistic alternatives.

Modern empiricism was erected generally by British philosophers who opposed the sentiments of the philosophers who accepted either rationalism or some notion of innate ideas. Innate ideas, as posited by philosophers such as Immanuel Kant, suggest that the human intellect begins with ideas already in place in the intellect prior to any sensible experience. Modern empiricists, such as John Locke and George Berkeley, reject this notion. For the modern empiricist, the only way knowledge becomes "stamped" onto the human conscience is through internal and external sensations. Contrary to modern empiricism, rationalism had always accepted the idea that the human intellect could transcend experience and grasp concepts that would otherwise be undergirded by experience. But modern empiricism is no friend to rationalism with its acceptance of a priori knowledge and seeks to employ empiricism as the sole means of acquiring all knowledge.

Professor of Philosophy at the University of York, R. S. Woolhouse, writes that an empiricist "will hold that experience is the touchstone of truth and meaning, and that we cannot know, or even sensibly speak of, things which go beyond our experience." More than this, Woolhouse is careful to made the distinction between empiricism as a theory and as a methodology. In a rough sense, a modern empiricist would be comfortable merely with the former while a classic empiricist would be comfortable merely with the latter. Regarding this distinction, Woohouse comments:

Someone could follow, or even explicitly favour, observational and experimental procedures in the search for knowledge, yet hold no theory about how exactly knowledge, and the ideas in terms of which we express it, are related to our sensory input.

While it is true that someone could reject empiricism as a theory (that only knowledge is acquired via sensory input), she could methodologically practice pursuing knowledge via sensory input.

**PRIMARY REPRESENTATIVES OF MODERN EMPIRICISM**

In this section we shall explore a modest selection of representatives of modern empiricism and see to what extent these thinkers perceived the senses as a source of knowledge. In order to see the alteration of
contemporary epistemology with respect to the role of empirical knowledge in the natural sciences it will be fruitful to see how the shift from classic empiricism (a mere methodological epistemology) culminates into modern empiricism (occasionally a naturalistic metaphysic).

Francis Bacon (1561 - 1626)

Francis Bacon was an English philosopher and an essayist who inaugurated contemporary attitudes on science. Woolhouse adds that he "was essentially a propagandist for science and knowledge" eventually leading to "the advancement of colleges, libraries, and laboratories." Bacon was a prominent politician who was eventually elevated to the role of lord chancellor. The fascinating feature about Bacon's active political life is his time spent in scholarly work. Bacon is known for his method of induction that was introduced as an alternative approach to the deductive syllogism employed by Aristotle. His inductive principles such as enumeration and establishing causal relations became influential methodologies that would eventually influence John Stuart Mill and Sir John Herschel. In expressing the basic difference between Aristotle and Bacon, Woolhouse writes:

Bacon rejects the idea of producing syllogistic arguments from first principles or axioms, but retains, along with some Aristotelian terminology, its aim of achieving knowledge of causes.

Woolhouse continues Bacon's assessment by explaining that his system retains the four categories of causality but notes that Bacon "is somewhat sceptical of the search for final causes."

Bacon's attitude on science helped shape contemporary scientific methodology. After having established how causal relations can be inferred, Bacon is concerned with the elimination of false opinions and prejudices that plague such investigation. He refers to such mental influences as "idols." When someone achieves the status of someone who disavows their prejudices in scientific investigation then she can begin to generally explore proper explanations for nature. Canadian philosopher Robert E. Butts comments on Bacon's general system for acquiring scientific knowledge:

Once the idols are eliminated, the mind is free to seek knowledge of natural laws based on experimentation.

Thus the progress in epistemology that Bacon seems to contribute to is the methodology of induction and scientific investigation with respect to causal interrelations.

Thomas Hobbes (1588 - 1679)

Thomas Hobbes is widely recognized as the political philosopher who espoused the nature of the human race prior to the establishment of a civil society. His empiricism patterns that of Francis Bacon but seems to be treated more as a theory rather than a methodology. When empiricism is seen as a theory it generally
corresponds to materialism (or naturalism). As a fellow critic of Aristotle, Hobbes' philosophical empiricism leads him to adopt a metaphysical naturalism which denies any hylomorphism that Aristotle fought so hard to maintain. In discussing Hobbes' understanding of the role of sense perception, Woolhouse writes:

In thinking about [sense perception] he 'luckily' (as he says it) hit upon the idea that matter in motion is the key. . . . His idea was that . . . our sensory ideas just are motions in matter. This led him to think that everything, in one way or another, could be matter in motion.

Further indication of Hobbes' materialism is seen in his interpretation of Christianity and its sacred Bible. For Hobbes, the supernatural elements of Christianity are metaphors and unknowns and even God himself is ontologically inexplicable.

Hobbes is also well-known for establishing an ethic consistent with his materialism. In his profound work, *Leviathan*, originally written in London, Hobbes writes:

But whatsoever is the object of any mans Appetite or Desire; that is it, which he for his part calleth Good: And the object of his Hate, and Aversion, Evill; And of his Contempt, Vile, and Inconsiderable. For these words of Good, Evill, and Contemptible, are ever used with relation to the person that useth them.

In the ethical system employed by Hobbes, ethical decision-making is to be seen in the context of morality as sense-perception. This ethical system is the representation of morality as a system of "appetites" and "aversions." What we like becomes moral and what we detest becomes immoral.

**John Locke (1632 - 1704)**

Having been preceded by the two other empiricist philosophers, Bacon and Hobbes, Locke is significant in his own right for ushering in a more moderate version (indeed, one that includes metaphysical speculation). Locke was a medical doctor by profession but a learned philosopher of political thought. He begins to express his epistemology by denying the notion of *innate ideas*. Innate ideas were regarded by the Rationalists and Idealists as principles and ideas that existed prior to, and independent of, our sense experience. Instead of joining the Rationalists and Idealists by ignoring a *tabula rasa* (or "blank tablet") of the mind, Locke believed that all human knowledge began with a "white paper" simply accepting the impressions of sensory input throughout life. Those simple parts that compose our experiential knowledge are called *simple ideas* by Locke.
Locke ultimately divided empirical knowledge into two categories: (i) Knowledge by sensation, and (ii) knowledge by "true ratiocination" or reflection. This is to say that knowledge is either acquired directly by sensing the objects of that knowledge or that knowledge is recalled by reflecting on what occurs in our minds. Having said this, the knowledge by sensation in subsection (i) can be subdivided into two categories as well: (a) Primary qualities, and (b) secondary qualities. A primary quality is a quality found in the object of experience itself including size and shape. A secondary quality is a quality that acts on the mind to produce its effect (Locke calls this "power") such as colors. Because primary and secondary qualities are generally associated together, many make the error, says Locke, to conjoin the two as essential elements of the same object (contra Aristotle and Aquinas), even though they come from the same substratum.

Locke draws closer to metaphysical speculation when he suggests that sensitive knowledge brings us to a belief in an external reality even though empirical and reflective knowledge only tell us that we have experiences and not that such experiences necessarily derive from any external reality of objects outside of our minds. Instead, our experiences work in concert to demonstrate how truths are indirectly discovered, not whether an external world really exists. However, even though this precludes one from ascertaining an external world with certainty, the sensitive knowledge can assure us of the external world.

George Berkeley (1685 - 1753)

George Berkeley was born and educated in Ireland where he eventually wrote two of his most important works concerning his empirical epistemology. Berkeley's philosophy seems to be aimed at critics of theism since previous philosophers seem to have incited doubt concerning the external world. In Berkeley's *Three Dialogues* he imagines a conversation between an empiricist and a rationalist. The lesson we are to learn in this dialogue is that skepticism is inappropriate.

Berkeley taught through the *Three Dialogues* that sensations are experiences that exist in our minds and that we only have direct awareness of those sensations. Contrary to Locke, the notion of a substratum (an underlying reality for experienced objects) cannot even be conceived of because we cannot access anything beyond our sensations. Furthermore, our ideas about experiencing external objects are "fleeting, changing, and ephemeral" while the substratum is said to have a "fixed and real nature." As if in anticipation of the modern-day Copenhagen school of quantum theory, Berkeley suggests that the external world exists in the perception of it. The "immaterialism" of Berkeley is descriptive of the epistemological process of perception of objects which are mere apprehensions of ideas in the mind. Therein lies their reality. However, Berkeley wanted to avoid the mistake of the Solipsists who believed that objects outside of sensory experience actually cease to exist. Thus he suggested that there must be a divine mind that constantly senses the external world so that it never ceases to exist.

David Hume (1711 - 1776)

The Ninewells-born Scottish skeptic, David Hume, was a young student at the University of Edinburgh where he ended up leaving at the age of fifteen. After failing to produce any popular writings, he eventually made it big with his *History of England*. Hume ended up serving as the secretary to the British Embassy in Paris in the 1760's and, shortly after, served as secretary of state for England.

Hume's reputation precedes him because he is one of the most influential empiricists to stir the waters of conventional wisdom. For centuries, philosophers had pursued truth while Hume thought that no one really could discover the truth on any matter. So Hume suggested that the only thing we are capable of doing is the "science of man" which is to ask how people come to believe what they do. Hume's epistemology can be separated into two categories: impressions and ideas. Impressions can be simple or complex but are "more forceful and lively." They can be perceptions of color or entire pictures wrought with various color schemes. Ideas regard memory and imagination. Our memories are a fixed order or sequence of ideas that we accumulate. Our imagination is the creative arrangement and association of ideas with other ideas as if contiguous in time and space.
One of Hume's controversial contributions to philosophy is his assessment of the notion of causation. A cause, as understood classically by Aristotle and his followers, can be material, formal, efficient, and/or final. These signify the "how," the "what," and the "why" of causation that is evident in our perceptions. Contrary to Aristotle, David Hume suggested that we do not really perceive causation. Rather, what we perceive is the relationship between two entities that we interpret (e.g. via imagination) to be a causal relation, thus it can be rationally believed; However, causation cannot be rationally known. All we can do is perceive temporal and spatial proximity and make personal judgments about them.

In any judgments about knowledge, we cannot have any certainty because one could wake up tomorrow and the course of events could possibly and conceivably change. Because of this deficit, we simply believe certain ideas because they seem to have force or because there is a repetition of resembling events. In reading the skepticism of Hume, one could conclude that Hume's epistemology is a "pure" form of scientific investigation. That is, natural science is (should be?) such that all investigation is not evaluation but a pure accumulation of facts leading to a set of observations. It is easy to see why Hume is called a skeptic.

**NATURALISM AND THEISM**

It is presumptuous to suggest that the modern (or British) empiricists denied belief in the existence of a divine being, or God, simply because they were empiricists. Often, empiricists are classified monolithically as naturalists, which is to say that the only reality that exists is the perceivable physical world of time and space. The unfortunate conflation of empiricism has led many to surmise a disavowing of theistic belief subsequent to the Middle Ages simply because empiricism offered a physical evaluation of reality. In contemporary vernacular we now ponder what the relationship between religion and science is. But I am pleased to announce that modern empiricism did not a priori eliminate belief in God.

First, even if the various empiricists thought that a proper epistemological structure was only what can be perceived via the five senses, the fact remains that the most ardent critics, such as Hobbes and Hume, still gave tacit admission to the existence of God. However, any attempt at rationalizing God or any organized religion, says Hume, is surely a vacuous enterprise for religion is not in any sense a "relation of ideas." Thomas Hobbes vigorously derides the notion of an immaterial world of a deity or angelic beings in *Leviathan* yet accedes the notion of God all throughout his writings, perhaps thinking that belief in God was not a matter of reason but of revelation. Francis Bacon also perceived God as a matter of revelation and not reason.

Second, the field of epistemology concerns how one comes to know certain things. The mistake often committed by careless investigators is to conclude that because an empiricist's philosophy does not possess a rational or experiential means of acquiring knowledge of God then God must not exist. This would be to make a metaphysical conclusion from an epistemological standpoint, which is mistaken. Surely how one comes to know certain things has little (if any) bearing on the ontological status of those things. This is how the genetic fallacy is often committed.

Finally, the empiricists by and large give explicit affirmation of their belief in God. Bacon writes, "Men must soberly and modestly distinguish between things divine and human . . . the oracles of sense and of faith." John Locke writes, "The knowledge of the works of God proportions our admiration of them." And Locke even contends that the Gospels in the Bible are God's revelation. We also saw how George Berkeley's "immaterialism" was contingent upon the existence of a divine perceiver, God, in order to bring reality to unseen objects. Woolhouse writes, "In a sincere attempt to display the importance of God in the scheme of things, Berkeley sought to rebuild the 'new philosophy' on the more solidly religious foundations of a complete and thoroughgoing spiritual immaterialism." So theism is given explicit homage in the writings of these men.
CONCLUSION

The modern empiricists are contrasted to the classical empiricists in that they denied certain *a priori* ideas once held by Aristotle and Aquinas. In our survey of the British Empiricists we have seen how their epistemological systems permit belief in the existence of God despite naturalistic overtones. But to conclude that the empiricists were *all* naturalists is to make a presumptuous judgment not evident in their writings. The British Empiricists have shown how one can remain skeptical and empirical but still reserve a special place for belief in God. Whatever one's final analysis of the philosophy of religion, it must be acknowledge by the records surveyed in this essay that the existence of God was retained during a celebrated era of skepticism.

END NOTES


2. See Reginald E. Allen, ed., *Greek Philosophy: Thales to Aristotle*, 3rd Ed. (New York: The Free Press, 1991), pp. 1-54. The early philosophers, such as Thales and Anaximander, pursued questions concerning metaphysics and cosmology. Their endeavors show that knowledge of what the universe is and where it came from were indicative of the thirst of knowledge that all subsequent philosophers pursued.


7. Ibid.

8. Ibid., pp. 9-10.


11. Ibid.


14. The hylomorphic composition is Aristotle's metaphysical achievement which suggests that all objects are a combination of prime matter and substantial form.


17. *Ibid.*, p. 120.


