

## UNIT 6

# LOCKE'S EMPIRICISM

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1. Introduction.....	2
2. Locke's Refutation of the Theory of Innate Ideas.....	2
3. Locke's Representative Realism.....	3
3.1. Ideas and Their Two Sources .....	3
3.2. Distinction between Ideas and Qualities.....	4
3.3. Primary and Secondary Qualities.....	4
3.4. Naïve Realism vs. Representative Realism.....	6
4. Locke's Account of Knowledge .....	7
5. Locke's Response to Skepticism.....	8
5.1. Argument I: The causes of some ideas are external .....	8
5.2. Argument II: Ideas caused by external objects differ from those not so caused.....	9
5.3. Summary .....	10

## 1. Introduction

We have now looked at a rationalist theory of knowledge. Rationalists believe that the source of knowledge is reason. We will now look at an empiricist account of knowledge. Empiricists believe that knowledge originates in experience. Empiricism was already advanced by Aristotle in Ancient Greece and was held by Roger Bacon (1214-1294) and Francis Bacon (1561-1626). Francis Bacon is in fact very famous for developing the first methodology of science. It is generally agreed that modern empiricism as an epistemological position was fully developed by the three British empiricists: the Englishman John Locke (1632-1704), the Irish bishop George Berkeley (1685-1753) and the Scotsman David Hume (1711-1776).

I should note at the outset that all three empiricists rely on a subjective concept of experience, which they (together with many other philosophers) have inherited from Descartes.

## 2. Locke's Refutation of the Theory of Innate Ideas

Rationalists believe that the source of knowledge is reason. Accordingly, many rationalists believe that we are already born with some ideas, or in other words, that some ideas are intrinsic to reason itself – these ideas have been called “innate.” Traditional candidates for innate ideas are mathematical ( $2+2=4$ ) and logical truths ( $p$  or  $\text{not-}p$ ), as well as other self-evident propositions (“Bachelors are unmarried”, “Whatever is is”).

Locke disagrees with the theory of innate ideas. He argues that even if it were true that there are some universally agreed on truths, this would not yet prove (beyond any doubt) that those truths are innate. He claims that there could be other explanations why people accept some mathematical or logical truths. And as long as those explanations are not ruled out, the mere fact that everybody accepts certain truths does not show that they were born with those truths. Consider an analogy to make this point clearer. It may very well be that all members of a certain isolated society believe in the existence of the powerful evil spirit Zwoh. But it would be absurd to conclude that those people are born with the belief in Zwoh until we have properly investigated the matter and excluded other possibilities like the fact that they were taught about Zwoh from a very young age. Locke's point is that nothing about innateness of ideas follows from universal agreement about ideas.

Moreover, Locke observes that the theory of innate ideas is inherently implausible for some ideas. Think about color, for example.<sup>1</sup> We do not usually think that the idea of redness, say, is innate – if it were blind people could see color, but they do not (or at least we do not think that they do). The same argument can be made for the ideas of sound. We do not think that sounds are innate – if they were deaf people could hear inner sounds but they do not (or at least we do not think that they do).

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<sup>1</sup> You will see in a moment that Locke thinks of ideas as the basic elements of human consciousness. So all perceptual impressions like whiteness, sourness, roughness, foul odor, etc. are ideas in Locke's technical sense. When we perceive an object like a dog's bone, for example, we experience in our minds the complex idea of a dog's bone, which is composed of the simple ideas of foul odor, rough texture, brownish color etc.

Locke further challenges the theory of innate ideas by arguing that in fact there are no truths that are universally agreed on. While indeed the traditional candidates for innate ideas, i.e. certain “obvious” mathematical and logical truths, are held by many, they are not held universally by everybody. Very young children, who have not acquired language, for example, do not know that  $2+2=4$  or that everything is identical to itself. The same goes for some heavily mentally handicapped people. While Locke did not know this, contemporary anthropologists have discovered a tribe (Pirahã) that has a very rudimentary grasp of mathematics – they do not count like we do from 1 to ... (pick the highest to which you can count 😊), but they count thus: “1, 2, many”. This new evidence shows that  $2+2=4$  cannot be an innate idea. If it were, the members of the Pirahã tribe would have it, but they do not.

So, Locke offers three arguments against the theory that there are innate ideas. Two of those arguments support the thesis that there are no innate ideas. One of the arguments amounts to a refutation of an argument given in favor of the theory of innate ideas.

☯ Has Locke proven (beyond any doubt) that there are no innate ideas? If so, explain exactly how? If not, what has Locke shown?

### 3. Locke’s Representative Realism

Locke believes that there is no innate knowledge. All our knowledge comes from experience. If all our knowledge comes from experience then it must be the case that at the outset our mind is like a blank slate (*tabula rasa*) or a white paper. If you think about it, this must be the empiricist account though it is only Locke who formulates it in this fashion.

#### 3.1. Ideas and Their Two Sources

Locke believes that the basic elements of our experience are *ideas*. Locke introduces the term ‘idea’ as a technical term. Ideas can be simple and complex. When we perceive a dog’s bone, say, the idea of a dog’s bone enters our mind (is written on the white paper, to use Locke’s analogy). The idea of a dog’s bone is a complex idea. It is composed of simple ideas such as the idea of brownness, of roughness, of cylindrical shape, of foul odor, etc. The idea of a red apple is again a complex idea, composed of simple ideas such as the idea of redness, of sweetness, of roundness, of fresh apple smell etc.

Locke believes that ideas come from two sources: senses and internal sense. The process of receiving ideas from these sources could be called the external experience (sensation) and the internal experience (reflection), respectively. In sensation, the mind receives ideas from the senses – the ideas of white, of heat, of softness, of bitterness, of nice smell, etc. all come to us through the senses. In reflection (which has later been called “introspection”), the mind directs itself on its own operations and in perceiving those operations acquires ideas of perceiving, of associating, of thinking, of doubting, of believing, of enjoying etc. Note that those ideas will usually be second-level ideas because will be ideas of operations performed on first-level ideas. So the mind might reflect that it has just performed the operation of associating the idea of Chinese food and the idea of sesame oil smell. In so reflecting, the mind has acquired the idea of associating the just mentioned ideas.

### 3.2. Distinction between Ideas and Qualities

Locke makes a distinction between ideas and qualities. Ideas, as we said, are in the mind, qualities are in the objects. Qualities are the powers that occur in physical objects that are responsible for producing ideas in us. (We would say that Lockean qualities are certain properties of objects, viz. those can be perceived by us.)

Locke gives the example of a snowball, which produces in us the ideas of round, of white and of cold. The qualities are the powers in the snowball itself that are responsible for our acquiring the ideas of round, of white, and of cold. The quality of roundness has to do with the way in which the water molecules in the snowball are structured together. The quality of whiteness has to do with the way in which the snowball reflects light. The quality of cold has to do with the magnitude of the kinetic energy of the molecules of water.

Consider another example of the smelly bone. When we perceive a smelly bone, we acquire the idea of cylindrical shape, of brownish color and of foul smell. In other words, we acquire certain simple ideas that are part of our complex idea of a smelly bone. Locke believes (and will later argue for that belief) that what is responsible for our acquiring ideas are certain properties in the object. It's the quality of the cylindrical shape of a bone (which has to do with complex internal organization of the bone) that is responsible for our acquiring the idea of cylindrical shape. And it is further complex properties of the bone, viz. certain properties of its structure responsible for deflecting light in a certain fashion, that are responsible for our acquiring the idea of color. And there is a certain quality of the bone, viz. its power to give off tiny "smelly" molecules that is responsible for our acquiring the idea of foul smell.

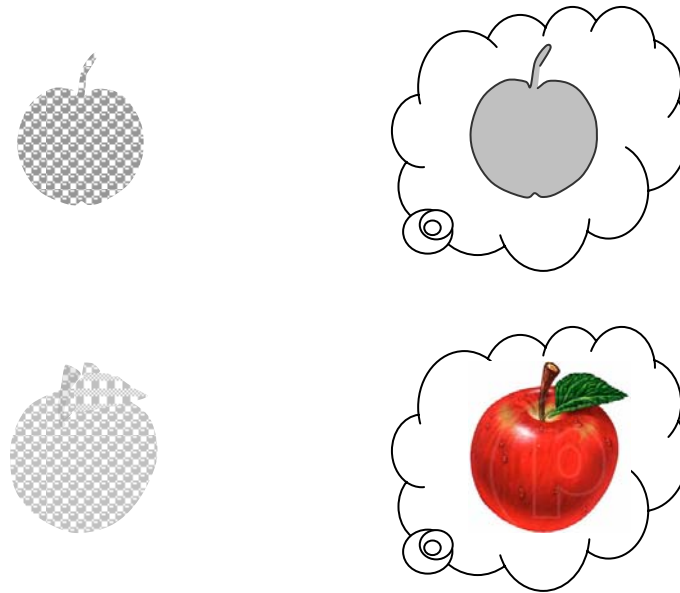
### 3.3. Primary and Secondary Qualities

The distinction between the idea and the quality might have appeared insignificant at first. One might have thought that the only reason to make the distinction has to do with the fact that ideas are in the mind while qualities are in the object. But Locke noted something important and surprising at the same time.

Locke compared our ideas and the qualities that produce the ideas in us and found that our ideas resemble some qualities relatively accurately but do not resemble other qualities at all. Consider for example the idea of a round shape of an apple. The quality of the apple that is responsible for producing the idea of roundness is the spatial structure of the molecules that make the apple. And while of course the molecular structure is not exactly the way we perceive the apple (we do not see the rough edges – the empty spaces between the molecules, etc.), the quality of the apple shape approximates our idea of the apple shape. We might schematically represent the situation as in Figure 1. Locke calls such qualities **primary qualities**. Primary qualities are closely resembled by the ideas that such qualities produce. Our idea of the shape of the apple closely resembles the actual shape of the apple. Among the primary qualities, Locke includes solidity, extension, figure (shape), mobility and number.

But there are other qualities, called **secondary qualities**, which as a rule are very unlike the ideas that they produce. One of the paradigmatic examples of a secondary quality is color. We are all familiar with the idea of redness that a red apple produces. But we are surprised when we learn in school physics that the color red is not in the object itself. Rather, the apple has certain structural properties that reflect the light in such a way that we perceive the apple to be red. The

secondary quality of redness arises only when the right sorts of properties interact with the perceptual apparatus.



**Figure 1.** Primary qualities (e.g. shape) resemble the ideas produced by those qualities. Secondary qualities (e.g. the powers that are responsible for our perceiving color) do not resemble the ideas produced by those qualities.

In sum, primary qualities are qualities the object has that are quite independent of us. The secondary qualities are certain powers in objects to produce in us ideas like color, taste, smell and so on. Secondary qualities of objects do depend on our having the right sort of perceptual apparatus. The secondary qualities are in reality wholly unlike the ideas they produce. Primary qualities are like the ideas they produce.

The distinction between primary and secondary qualities explains the following puzzle raised by the Ancient Greeks. How can the same water at the same time produce the idea of cold (when one hand is immersed) and the idea of heat (when the other hand is immersed)? If there were only primary qualities, this would mean that the same water can be cold and warm at the same time (since our ideas of primary qualities are like reality). The recognition that coldness and warmth are secondary qualities explains why the same object can produce two different ideas at the same time – it is because the ideas that secondary qualities produce arise from the interaction of the powers in the object with the perceptual apparatus.

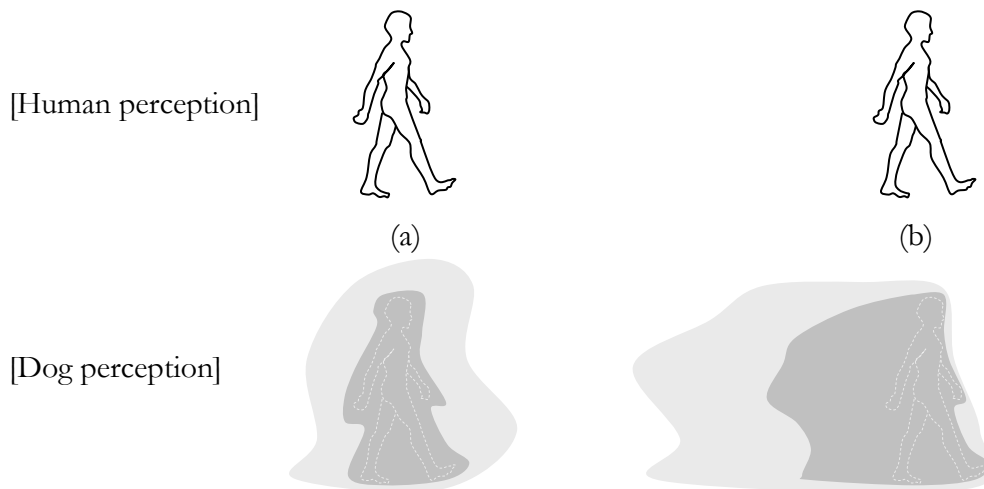
- ☯ Here is an old philosophical conundrum: Does the tree that falls down in a forest, when there is nobody around, make a sound? How can Locke's distinction between primary and secondary qualities help to answer the question?

### 3.4. Naïve Realism vs. Representative Realism

The recognition of primary and secondary qualities gives rise to a more sophisticated form of realism than the position, which we adopt pre-reflectively. At the outset, we are **naïve realists**. We think that the world is like we see it. There are objects in it and they have the properties that we recognize. Apples are red, bones are smelly, etc.

The more sophisticated position that Locke adopts is **representative realism**. According to representative realism, the objects indeed resemble some of our ideas of them (viz. those that were produced by primary qualities), but they do not resemble other of our ideas of them (viz. those that were produced by secondary qualities). It is a realist position because Locke believes that there are actual real objects out there. (There are other philosophers, e.g. the second of the British empiricists, Bishop Berkeley, who held idealist positions. Berkeley thought that the external world does not exist physically at all – it exists only in our minds.) The adjective ‘representative’ indicates that our minds represent the world in certain ways and also distort the picture of the world, so that we cannot naively think that the world is like we see it.

Locke’s point here can be made more vivid if you try to think about the way that another creature represents the world. Bats echolocate – they send out little shrieks, which, if there are objects in the bat’s way, return to the bat thus informing the creature that there is something in its way and it better not fly there. This perceptual modality lets the bat “see/hear” in the dark. It is really hard to imagine for us what the world is like for the bat. We can make certain conjectures about it. For example, while there is dark in our perceived world, there isn’t dark in the bat’s world.



**Figure 2.** The contrast between human perception (with sight as the primary sense) and the supposed dog perception (with smell as the primary sense). In case (a), the perceived person is walking in a closed building with stationary air. In case (b), the person is walking against the wind. See text for details.

Take another example. Dogs’ primary sense is the sense of smell (in humans it is the sense of sight). If this also means that smell is used to identify the nature of objects then the way that dogs think about objects would have to be very different from our way of thinking about them. For example, it would have to be one of the first principles of “dog-physics” that objects “resonate” smells. Where we think of objects as having defined spatial boundaries, objects in dogs’ world have fluid boundaries (they “look” like fire in our world). Moreover, the objects can get extended in space when the wind starts blowing. In fact, this can happen pretty fast – the

wind can just extend one for one hundred yards! Moreover, since winds have been known to change direction this can mean that those extended objects can change their position incredibly fast. You were extended one hundred yards to the north, now you are extended one hundred yards to the south. (Have you ever seen a surprised dog's look "You were here just a second ago!?" Now you know why.)

This dog's world story is completely imagined, of course. Its point was only to make vivid the distinction between two questions: "What is the world really like?" and "What does the world look like to us?"

☯ If you think about it a little, the very position of representative realism is an invitation for the skeptic. Can you formulate the invitation?

#### 4. Locke's Account of Knowledge

Locke distinguishes three types of knowledge: intuitive, demonstrative and sensitive. All three types of knowledge consist in the fact that the mind perceives certain relationships between ideas. (In contemporary terms, we would say that knowledge always involves some belief. When John knows that  $2+2=4$ , he believes that  $2+2=4$ , or in Locke's terms perceives a certain relationship between the idea of adding 2 to 2 and the idea of 4.) Intuitive and demonstrative knowledge are certain. Sensitive knowledge is not certain but it still deserves to be called knowledge.

Sometimes, Locke thinks, our mind perceives a certain relationship between ideas immediately. In such cases, the mind has **intuitive knowledge**. For example, when we are confronted with such claims as "White is white" or "White is not black" or "Circle is not a triangle" or " $1+2=3$ ", we know *immediately*, without thinking, whether those claims are true or false. Locke speaks of agreement and disagreement between the ideas rather than of truth and falsehood, but the same point is made. (We would say that we know immediately, without thinking, that the claim "White is not black" is true. Locke would say that we immediately perceive disagreement between the idea of white and the idea of black.)

Locke thinks that intuitive knowledge is absolutely certain. Intuitive knowledge is immediate and irresistible and as such it cannot be doubted. (Think here of the Cartesian discovery that we can know the contents of our minds with certainty. On this point, Locke agrees with Descartes.)

Moreover, Locke thinks that intuitive knowledge is fundamental in that all other kinds of knowledge depend on intuitive knowledge. This last point can be clearly seen with respect to demonstrative knowledge.

**Demonstrative knowledge** is also certain but it is not immediate. Consider the claim  $1134:6=189$ . Is it true? It is *certainly* true but its truth is not immediately visible. We need to reason or to demonstrate that this is so. And we can do this using the long division algorithm.

$$\begin{array}{r} \underline{189} \\ 1134:6 \\ \underline{6} \\ 53 \\ \underline{48} \\ 54 \\ \underline{54} \\ 0 \end{array}$$

What happens in a good demonstration, according to Locke, is that the reasoning is broken down into steps and at each step we can have intuitive knowledge of that step in reasoning. In this way, demonstrative knowledge depends on intuitive knowledge.

Note that while Locke counts simple mathematical operations as examples of intuitive knowledge, more complex mathematical operations are examples of demonstrative knowledge.

One final kind of knowledge that Locke distinguishes is **sensitive knowledge**. This is the knowledge we have of the external objects. Locke thinks that sensitive knowledge is not certain (because of the skeptical doubts) and it is not immediate either. He nonetheless thinks that sensitive knowledge is a kind of knowledge and his arguments against the skeptic are to support that belief. Moreover, one gains the impression that Locke is somewhat impatient with the skeptics. He says, for example, “nobody can, in earnest, be so sceptical as to be uncertain of the existence of those things which he sees and feels” (Book IV, Ch. XI). This is why he does want to consider sensitive knowledge a kind of *knowledge* not just opinion or faith. He does admit that one can enter a frame of mind where one can doubt the existence of external objects and perhaps the external world. But he also thinks that he can challenge such a skeptical frame of mind from within his empiricist position.

## 5. Locke’s Response to Skepticism

Locke believes that we know that the external objects exist because they are the causal sources of our ideas of them. He says, for example, that “it is . . . the actual receiving of ideas from without that gives us notice of the existence of other things” (Book IV, Ch. XI.2). In view of skeptical challenges, however, this sounds like mere wishful thinking. Of course, this is what we all believe, but the skeptic challenges us here. What about the dreams? When I am dreaming of a there being a computer in front of me, my mind perceives the idea of a computer, but the idea of a computer is not received from the external object (here: my computer), it is simply created by my mind. Moreover, the skeptics claimed that there is nothing in the idea of a computer (when it is dreamt) that distinguishes it from the idea of a computer (when it is really perceived). If we cannot distinguish the ideas that are veridical (that are of what is really there) from those that are not (that are of what is not there), we cannot know of any of our ideas whether they are veridical or not and so we cannot know that there is any external world at all.

Locke offers two arguments against the skeptic. The first of those arguments aims to establish the conclusion that at least some causes of ideas are external. The second of those arguments challenges the skeptic’s crucial premise that veridical ideas (actually caused by external objects) cannot be distinguished from non-veridical ideas (not so caused). Let’s consider those arguments in turn.

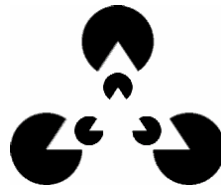
### 5.1. Argument I: The causes of some ideas are external

Locke observes that blind people do not see colors: they do not have ideas of color in their minds. Somebody without a well-functioning sense organ (e.g. sight) never produces respective ideas (visual ideas: colors). So, why can non-blind people perceive colors? Locke envisages two possible explanations: either the non-blind people’s eyes produce respective ideas (say, of color) by themselves or the non-blind people’s eyes produce those ideas because they are affected by appropriate causes. Locke eliminates the first possibility – he does not think that the organs

themselves produce ideas for eyes never see colors in the dark, for example. The nose does not smell roses in winter. Nobody experienced the taste of pineapple until they ate the fruit. He is thus left with the second possibility: non-blind people's eyes produce ideas of color when they are affected by appropriate external causes.

One might find Locke's argument problematic. One question one might raise is this: How do we know that blind people do not have ideas of color in their minds? Perhaps they do have color images: the only thing that they cannot do is to correlate the color images in their minds with reality.

Locke would probably think that this possibility is excluded by his observation that sense organs do not produce ideas on their own (otherwise, eyes in the dark would produce ideas of color, nose would smell roses in winter, taste-buds would produce the taste of pineapple prior to actually tasting it). One might wonder how successful this response is. For one thing, could sense organs really not produce ideas on their own? Think about afterimages, for example. Or perhaps other examples of illusions like the invisible triangle illusion, where we have the idea of a triangle (in fact two triangles) where there is none.



Moreover, if successful the argument would allow Locke to quash the threat of global skepticism (the belief that it is possible that there is no external world). But it would not help in our deciding in each particular case of an idea appearing in front of our mind that it corresponds to something in reality (as opposed to being a dream or hallucination). The second argument can help in the latter task.

## 5.2. Argument II: Ideas caused by external objects differ from those not so caused

We have seen that the skeptic's argument crucially relies on the premise that there is no way to tell the difference between an idea produced by the mind and an idea produced by the world. Locke argues that such ideas differ – they differ in at least two ways.

First, Locke claims that ideas caused by external objects differ in vivacity from the ideas not caused by external objects. The former force themselves on the senses with an unmistakable power. Compare the idea of heat (when one actually is in fire) and the idea of heat (when one imagines that one is in fire), or the idea of light (when one looks at the sun) and the idea of light (when one imagines it).

Second, Locke observes that ideas caused by external objects differ from those not so caused in that while we have control over the latter, we have no control over the former. In situations where (we think that) external objects cause our ideas, we cannot remove those ideas from our minds at will. However, in situations where (we think that) our mind is the cause of our ideas (as is the case in imagination, for example), we can at will remove those ideas from our minds. Consider Locke's example. He imagines himself shutting his eyes, and so removing (what we think to be) the external source of ideas. As long as his eyes are shut he can imagine sunlight (produce in himself the idea of sunlight) or he can imagine dark (produce in himself the idea of

dark) and he can do so at will – if he wants to, he will be imagining sunlight and if he wants to stop imagining sunlight and start imagining the dark, he will do so. But he observes an incredible fact. When he opens his eyes at noon and turns toward the (English) sun, the idea of sunlight that appears in his mind is *no longer* responsive to his will. He can want as much as he likes to not see the sun (to remove the idea of sunlight from his mind) but he cannot do that. He could do it when his eyes were shut but when his eyes are open his mind is captive, it is no longer free.

Locke asks: how can we explain this difference in the way in which our ideas sometimes are and other times are not responsive to our will? He thinks that the only answer is that when our eyes are open (and in general, when our sense organs are receptive) our ideas become captive to experience – we no longer have any control over them.

If there are differences between ideas caused by external objects and those not so caused then the skeptic's argument will be undercut. But there are problems here. The fundamental problem is that Locke does not explicitly say which of the following claims he holds:

- (U) Every idea of *X* caused by external object *X* differs from an idea of *X* not caused by *X*.
- (E) Some ideas of *X* caused by external object *X* differ from ideas of *X* not caused by *X*.

Does he mean to be making the universal claim (U) and so to be claiming that we can *always* distinguish between ideas that have external causes from those that do not? Or does he merely point out that we can make such a distinction sometimes?

More importantly, some ideas not caused by an external object can force themselves on us with a greater force than ideas caused by an external object. This happens to people who have experienced an array of traumas. The traumatic experience keeps haunting them. A literary example here is that of Raskolnikov's (the main hero in Dostoyevski's *Crime and Punishment*) recurring (guilt-induced) images of his crime, which appear to have greater vivacity than the image that has been produced by his perceiving himself committing an act of murder. Moreover, Raskolnikov cannot get rid of the recurring images of the murder. By Locke's criterion, we would have reason to believe that Raskolnikov was actually committing the murder again and again.

### 5.3. Summary

While one may have some doubts concerning the effectiveness of Locke's arguments against the skeptic, it is clear that (1) they do provide some reasons to reject skepticism and (2) they do so from within the empiricist standpoint.