CHAPTER II

POSSIBILITY OF KNOWLEDGE:
THE RATIONALIST AND THE
EMPIRICIST MODELS
The sceptics from the Greek to the present times have denied the possibility of knowledge. The question of knowledge has therefore been the main problem for those who have opposed scepticism through all ages. Especially the philosophers of sixteenth and seventeenth centuries have taken the challenge of sceptics regarding the possibility of knowledge more seriously. This is the age when the foundations of human knowledge have been firmly laid down by philosophers like Descartes, Spinoza and Leibniz in the rationalist tradition and Locke, Berkeley, Hume in the empiricist tradition.

In this chapter my aim is to present the foundations of human knowledge as laid down by the rationalists and empiricists. I have in a historical perspective shown how the dominant models of knowledge, namely rationalism and empiricism, have tackled the sceptics’ problem. My aim is to show that human knowledge is possible and that the sceptics’ denial of knowledge can be questioned.

1. DESCARTES’ DEDUCTIVE MODEL OF KNOWLEDGE:

We have already discussed in the first chapter the Cartesian method of doubt. It was for the sake of certainty that Descartes was led to doubt each and every item that come to his mind. Descartes’ ideal was certainty, not probability. In order to achieve this ideal he converted all sorts of sciences to only one sort. He expected that all of them behave like mathematics. If all of them behave like mathematics then mathematical method would work, not only on mathematics but also on those sciences. Descartes ruled out the possibility of plurality of methods. If sciences are diverse in nature, then they could have diverse methods. But Descartes did not accept their diversity. For him empirical sciences were also expected to behave like mathematics, otherwise mathematical method would not apply to them. True knowledge, which can be achieved through the mathematical method, consists in the use of intuition and
deduction. He writes, “the method... contains everything that gives certainty to the rules of arithmetical.” Descartes wants to make all knowledge a ‘universal mathematics’. He is convinced that mathematical certainty is the result of a special way of thinking. Mathematical reasoning showed him that we are able to discover what we do not know by progressing in an orderly way from what we do know.

Descartes finds the whole edifice of knowledge upon the foundations of intuition and deduction. For him “These two methods are the most certain routes to knowledge, and the mind should admit no others. All the rest should be rejected as suspect of error and dangerous.” According to Descartes, intuition is an intellectual activity or vision of clarity that leaves no doubt in the mind. The testimony of our senses and the imperfect creations of imagination lead us to confusion. By ‘intuition’ he means our understanding of the self-evident principles such as the axioms of geometry and non-geometrical truths such as ‘I think therefore I exist’. No rational mind can doubt the self-evident principles. By ‘deduction’ he means orderly, logical reasoning or inference from self-evident propositions. Descartes describes deduction as the necessary inference from the propositions that are known by intuition. By intuition we grasp a simple truth completely and immediately, whereas by deduction we arrive at a truth by a process. It is a continuous and uninterrupted action of the mind. As he says, “we distinguish this mental intuition from deduction by the fact that into the conception of the latter there enters a certain movement or succession, into that of the former there does not.” So the first principles themselves are given by intuition alone, while, on the contrary, the remote conclusions are furnished only by deduction. For Descartes deduction indicates the relation of truths to each other. Descartes wanted to rest knowledge upon a starting point that had absolute certainty in the individual’s own mind. But this leads to a difficulty. Certainty in one’s own mind implies psychologism. Universal mathematics should not suffer much from psychologism or subjectivity. How can the objective character of science be retained if all importance is given to a person’s psychology?
How can I arrive at objective scientific truths by looking into my mind? Descartes solves this difficulty by maintaining the view "that the Power of forming a good judgement and of distinguishing the true from the false, which is properly speaking what is called good sense or Reason, is by nature equal in all men." So if I arrive at some truth intuitively, others would not fail in arriving at the same truth by looking into their mind. Because reason present in their mind is the same as that which is present in my mind. Though numerically different, our minds are qualitatively identical.

Some truths by their very nature cannot be known except through induction. But induction involves probability, not certainty. The sciences, which are wholly dependent on induction, cannot be converted into parts of universal mathematics. Induction cannot be converted into deduction, so also empirical sciences cannot become a part of universal mathematics. However, the Cartesian method has very limited scope of operation. It is not the kind of method which can be applied in all fields of knowledge. The fact that it functions well in geometry does not mean it would also work well in chemistry or geography. Descartes' search for method thus suffers from the malady of reductionism. Diversity of human knowledge is overlooked. So also the diversity of methods is overlooked. Descartes goes wrong in advocating methodological monism. But it cannot be denied that this deductive method has been successful in securing foundations for human knowledge.

In the first chapter we have already discussed Descartes' 'Cogito' argument. Descartes tried to derive one's existence from one's thinking. The next important step for Descartes was to show the epistemological priority of mind over matter, even if both of them are placed on the same ontological level. In his Principles he remarked, "the knowledge, which we possess of our mind not only precedes that which we have of our body, but is also more evident." The epistemological priority of mind over body becomes evident from the fact that it is the mind that searches for the body and not vice
versa. In his *Discourse on Method* he remarked, "I could conceive that I had no body, and that there was no world nor place where I might be; but yet that I could not for all that conceive that I was not." Descartes succeeds in conceiving the non-existence of the world, including his own body, but fails to conceive his own non-existence. My existence is assured even in my attempt to doubt it. Descartes' further step on this issue is quite interesting. He says, "I knew that I was a substance the whole essence or nature of which is to think, and that for its existence there is no need of any place, nor does it depend on any material thing; so that this "me" that is to say, the soul by which I am what I am, is entirely distinct from body, and is even more easy to know than is the latter; and even if body were not, the soul would not cease to be what it is." Descartes is talking, not only about substances, but also about their essences. My essence consists in thinking. I am a substance that thinks. Since thoughts do not occupy any space therefore 'I' in its capacity as a thinker has not to occupy any place in space. So also I do not depend on any material thing, because such dependence would deprive me of my status as a substance. Descartes makes the distinction between the soul and the body. He even hints at the disembodied existence of the soul.

In the last remark, quoted in the above paragraph, Descartes distinguishes the soul from the body. I am necessarily a soul and contingently a body. My having of the body is the contingent truth because I would not cease to be when my body ceases to be. Descartes clearly means that 'I' is ambiguous. When I say 'I am six feet tall', 'I' has one meaning which is very different from the meaning when I say 'I am suffering from pain'. In the former case 'I' means the body. In the later case 'I' mean the mind. Since my relationship with my body is contingent the two substances, mind and body, are not necessarily connected. Just as essence of mind is thinking, the essence of body is extension. Shape, size, figure etc. are different modifications of extension. For the soul or mind in this context Descartes does not find a place in space. So also it is independent of the body, having no place in the body.
According to Descartes, the human mind is capable of having true knowledge by virtue of having clear and distinct ideas. These ideas constitute the bedrock of human knowledge in the sense that these ideas alone give us self-evident truths in mathematics, and other sciences based on mathematics. The ideas such as \( 2 + 2 = 4 \) are clear and distinct and so are self-evidently true. So also are the ideas of self, God, etc., which are given to our mind clearly and distinctively. ‘Cogito ergo sum’ is the paradigmatic truth having absolute clarity and distinctness.

The concepts of clarity and distinctness of ideas have their own difficulties. The difficulty is not that these concepts have been given a psychological dimension, as a matter of fact they have been given a theological dimension. Because of the theological dimension the Cartesian argument has become circular. Consider his remark: “all the things that we very clearly and very distinctly conceive of are true, is certain only because God is or exists, and that He is a perfect being, and that all that is in us issues from Him.” To express briefly the circle, clear and distinct perception depends on the existence of God. But the existence of God itself depends on the clear and distinct perception. Descartes has clear and distinct perception not only of his own existence but also of the existence of God. So God is required for clear and distinct perception, and the clear and distinct perception is required for the existence of God. This issue was raised by several critics in the Fourth Set of Objections to the Meditations. This ‘circle’ is also described as Arnauld’s circle, because Arnauld was the most vocal critic of Descartes on this issue. If the theological dimension is dropped even then the Cartesian argument is not free from difficulties. The criterion of clear and distinct perception is not logical, it is certainty psychological. But Descartes’ universal mathematics should not involve any judgements that are psychologically certain. They should be logically certain. However, it can be argued that Descartes intends to have a logical criterion of clarity and distinctness. His method of analysis demands the logical concept of clear
and distinct ideas. Otherwise, Descartes would be guilty of psychologism in his theory of knowledge.

We have already seen how Descartes doubted all kinds of beliefs, and how later he attempted to get rid of all doubts. By the time he reaches the Fifth Meditation he starts feeling the necessity of bringing the physical world back to its original place. He succeeds in bringing the physical world back to its original place only in the Sixth Meditation. At the end of the Fifth Meditation he claims that he has succeeded in knowing God and therefore he has acquired the ability to know the corporeal nature. Earlier he identified himself only with his mind, now in the Sixth Meditation he has directed his attention to the body. Now he maintains, “that I have a body which is adversely affected when I feel pain, which has need of food or drink when I experience the feelings of hunger and thirst, and so on; nor can I doubt there being some truth in all this.” Descartes does not dissolve the distinction between mind and body. The relationship between mind and body has been explained by him in terms of “as a pilot in a vessel.” He continues to think that his association with the body is temporary, as he is permanently associated only with his mind. As he says, “it is certain that this I (that is to say, my soul by which I am what I am), is entirely and absolutely distinct from my body and can exist without it.”

There are places when Descartes is unable to retain the rigid distinction between the thinking and unthinking substances. Bodily sensations of pain, hunger, thirst etc. have led Descartes to remark, “I am very closely united to it (body), and so to speak so intermingled with it that I seem to compose with it one whole... all these sensations of hunger, thirst, pain etc. are in truth none other than certain confused modes of thought which are produced by the union and apparent intermingling of mind and body.” So Descartes accepts the intermingling of body and mind, which is the intermingling of thought with extension. How is intermingling possible? Unless there is something
common to the two substances, mind and body, no intermingling is possible. But if there is something common between the two, then they are not genuine substances. They may simply be the modes of a higher substance. So Descartes has paved a way for Spinoza.

Descartes’ rationalist epistemology lays down the foundations of human knowledge firmly in the self-evident and a priori principles. He shows that we can arrive at absolute certainty in knowledge, not only in mathematics but also in empirical sciences such as physics. Mathematics shows the way. Metaphysics follows mathematics in laying down absolute principles such as ‘Cogito ergo sum’, etc.

So far as knowledge is concerned Descartes affirms that doubt has no place in it. Sceptical doubts are to be ultimately eliminated. His Sixth Meditation decisively argues that the initial doubt of the philosopher is only methodical doubt and so there cannot be a genuine sceptical doubt regarding our knowledge derived from sense-experience as well as from reason. Knowledge is fully secure against any possible design of an Evil Genius.

2. SPINOZA’S CONTINUATION OF THE DEDUCTIVE MODEL:

Like Descartes, Spinoza too is inspired by the ideal of universal mathematics, converting human knowledge into knowledge of mathematics. As a matter of fact what was only an ideal for Descartes was actualized by Spinoza. His Ethics, the major philosophical work, has been demonstrated in a geometrical order. Spinoza demonstrated his order, modeled on Euclid’s Elements. He was following Descartes, but with reservations. In his Spinoza, Stuart Hampshire writes about the seventeenth century rationalists that their programme was “to generalise the mathematical method of reasoning, and to apply it without restriction to all the problems of philosophy and
The major difference between Descartes and Spinoza is that Descartes follows the 'method of analysis' whereas Spinoza follows the 'method of synthesis'. The latter method follows the demonstrations from axioms. Geometry makes a start from definitions, postulates and axioms. Descartes did not start his demonstration in this fashion, because he thought that the axioms that occur in geometry are accepted by everyone, but the same does not happen in Metaphysics. Therefore, Descartes preferred the 'method of analysis' and was not bold enough to apply the 'geometrical method' which was the 'method of synthesis'. As against Descartes, Spinoza has exhibited that metaphysics can be given the garb of geometry. His *Ethics* has been written in the Euclidean fashion.

The most important concept in his *Ethics* is the concept of substance. He rejects the plurality of substances. Such a plurality involves a contradiction. Descartes considered mind and matter as two different substances depending for their existence on the third substance, the God. Spinoza rejects this picture. In his proposition VI he maintains "one substance cannot be produced by another." Therefore mind and body cannot be substances, because they have been produced by the third substance, God. Only God is the substance, not the mind and the body. Spinoza identifies God with Nature and this Nature or God is self caused. In his proof of the proposition VII he says, "A substance cannot be produced from anything else (prev. prop. Coroll.): it will therefore be its own cause that is (Def. I) its essence necessarily involves existence or existence appertains to the nature of it." Propositions XIV and XV are quite important. According to proposition XIV, "Except God no substance can be granted or conceived." This means everything is in God, nothing is excluded from the God. This becomes clear in proposition XV, "Whatever is, is in God and nothing can exist or be conceived without God." And this God is the substance consisting of infinite attributes. This is what he stated in Definition VI, "God (Deus) I understand to be a being absolutely infinite, that is, a substance consisting of infinite attributes, each of
which expresses eternal and infinite essence. 19

The identification of God with Nature has led Spinoza to be described as a pantheist. He rejected the concept of God that had its origin in human form. Theistic concept of God implies that God is numerically different from man, so also different from the Nature. This notion of God allows human feelings to God. This concept of God has been created in the image of man. Man's own image and his own psyche have been transferred to the God that is created. Spinoza clearly rejects such a concept of God. The fact that Spinoza denies the ascription of human form and human feelings to God does not mean that he denies the ascription of extension and thought to the God. Thought and extension are the attributes of substance i.e. God. God has infinite attributes; thought and extension are two of them. "God is a thinking thing." 20 So also "God is an extended thing." 21 Descartes considered thought and extension as two different substances. Spinoza converted them into two different attributes of the same substance, the God.

The third important concept in Spinoza is the concept of a mode. By mode he means "the modification affection of a substance." 22 So a man is a mode of God's attributes of thought and extension. He is not a combination of two substances as Descartes thought. He is the modification of only one substance. A man thinks, so also a man walks. If Descartes is right then the man who thinks is different from the man who walks. Thinking is done by one substance and walking is done by another substance. This is Descartes' view. But, according to Spinoza, the man who thinks is the same as the man who walks. There is no place for mind body-dualism is Spinoza.

The objections that Strawson has raised against Descartes in Individuals are not applicable to Spinoza. Strawson argued against Descartes that Descartes has converted the subject expression 'I' into an ambiguous symbol. While discussing Descartes earlier
it was pointed out that ‘I’ refers to mental substance when it is said ‘I am in pain’. But it refers to a material substance when it is said; ‘I am walking’. According to Strawson, when we speak of a person in the Cartesian sense, we are really referring to “two substances of different types, each of which has its own appropriate types of states and properties; and none of the properties or states of either can be a property or state of the other.”\(^{23}\) The two substances in question are mind and matter, which have their own properties. Spinoza gives no scope for considering that ‘I’ is ambiguous. Since the substance that thinks is the same as that which is extended, there is no question of having two substances. The unity of man is not broken, by ascribing thinking and extension to him. Rather Strawson’s own view concerning the identity of a person can easily be drawn from Spinoza’s concept of the substance. In his *Individuals* Strawson maintains that the concept of a person is prior to the concept of his ego or his body. This clearly sounds like Spinoza, for whom the concept of substance is prior to the concept of its attributes. A substance is that “which is in itself and is conceived through itself: I mean that, the conception of which does not depend on the conception of another thing from which it must be formed.”\(^{24}\) So understanding of substance does not depend on the understanding of anything else. This means our knowledge of substance does not depend on our knowledge of other things. Strawson’s concept of a person is also logically prior to mental and physical characteristics that we ascribe to him. Strawson’s concept of a person is not very unlike Spinoza’s concept of substance. According to Strawson, we ascribe states of consciousness to the very same entity to which we ascribe physical states. The subject of mental states is not different from the subject of physical states. He calls the subject a person. A person for Spinoza would be a mode of the substance, God. In ordinary language this mode is designated as ‘man’. Under the attribute of thought we say that the ‘man thinks’. Similarly under the attribute of extension we say about the same man ‘He is six feet tall’. Spinoza, like Strawson, refuses to break the unity of man. We ascribe thought to the same entity to which we apply extension. To say that thought and extension are essences of a substance in our
context would mean the entity in question is of different kind altogether from a material body. Material bodies are incapable of thinking, but a man has the ability to think.

So far as Spinoza’s rationalist theory of knowledge is concerned; he follows Plato rather than Descartes. In Plato there is triple division of reality. Corresponding to this, there is triple division of mind. Images and shadows are at the lowest stage of reality. An image appearing in mirror or water has no reality at all, except that which it has obtained from the physical objects of which it is an image. If there had been no physical object, there would have been no images and shadows. So physical objects exist at a higher stage of reality. But physical objects on their own part are nothing but images of concepts or essences. Physical objects depend for their existence on essences. Mental state of imagination or fantasy corresponds to having of images. The second higher mental stage is the stage of belief or opinion. It is directed towards the physical objects. It is only the third and final stage, the stage of reason, which has essences or ideas or concepts as its objects. The progress of thought in Spinoza is in terms of progress from inadequate ideas to the adequate ideas. Corresponding to adequate ideas Spinoza refers to intuition which is the highest knowledge. Below intuition is reason, which is concerned with scientific knowledge. At this stage the ideas are adequate but not so adequate as at the stage of intuition. The lowest stage of the mind is the stage of imagination. Imagination has only inadequate ideas as its objects. Spinoza’s rejection of sense perception according to Stuart Hampshire exhibits his Platonism. As Stuart Hampshire says, ‘This is Spinoza’s peculiar version of the ancient doctrine of rationalist philosophers that knowledge wholly derived from sense perception is not genuine knowledge, but is in some sense subjective and uncertain.’

Spinoza’s example of the Sun seen with naked eye gives us only confused inadequate idea of the Sun. But when the Sun is studied in Astronomy our idea of the Sun has acquired some adequacy. At the highest level of knowledge, higher than the level of Astronomy, we would have wholly adequate idea of the Sun. So the object remains the same, but the mental state to which
it is revealed passes through three stages: the stages of perception, reason and intuition.

Since Spinoza identifies Nature with God, its attribute of thought should not come in conflict with its attribute of extension. Therefore, it would be a conflict if physical world is determined and the mental world is free. If the physical world is determined by causes and effects, then the mental world should also be determined by causes and effects. Therefore, Spinoza was led to accept determinism and did not allow freedom either for human thinking or for human action. Human thinking and human action are as much part of the Nature as are rivers, plants and clouds etc. Causal determination of events is as rigid as that which occurs between the terms of logical relations. Spinoza does not allow chance and probability.

If human actions are determined then there is no scope of ethics. Ethics presupposes freedom of will and freedom of action. Unless I am free to do what I ought to do I will not succeed in performing moral action. Ethics appears to be impossible in a world, which is deterministic. Spinoza prescribes a kind of detachment. Events of world cannot be changed by, us but we can develop the attitude of a detached observer. If we move from the mental state of having inadequate ideas to the state of having adequate ideas or having intuitive knowledge, we will be liberated from desires and passions. Freedom from desires and passions is possible only when we move towards God. We should have intellectual love of God: This kind of love is different from the love which arises from desires and passions etc. And this love is eternal. According to Spinoza, “no love save intellectual love is eternal.” According Stuart Hampshire, “Spinoza is often represented as a mystical pantheist because of his description of the good life as “The intellectual love of God”.” Again, eternity for Spinoza does not mean ever lasting; it means something like timelessness.

Lastly, though Spinoza gives the same importance to human mind that he gives
to human body, in the end the human mind obtains superiority over the human body. According to Spinoza, "The human mind cannot be absolutely destroyed with the human body, but something of it remains, which is eternal." This means nothing in the human body remains after death, which is eternal. Has not the attribute of thought gained superiority over the attribute of extension? Spinoza too like Descartes exhibits a drift towards mentalism, toward the superiority of mind over body.

Spinoza's metaphysics of the substance is based on his rationalist theory of knowledge, which refuses to accept subjective doubts and sceptical attitude. For Spinoza scepticism, even methodical scepticism like Descartes', is impossible. We cannot doubt our knowledge of reality because the reality is there and our thinking is itself a part of reality. Thought and the external world are both real and are attributes of the same substance. In this sense we cannot doubt whether there is a world corresponding to our ideas.

Spinoza considers the sceptic as one who has no clear and adequate idea of reality. Had he got adequate ideas he would have seen that it is absurd to pretend that we do not know reality because we ourselves are a mode of reality. Reality needs no vouchsafe from our thinking because the latter is an aspect of the world.

3. LEIBNIZ'S METHOD OF LOGICAL ANALYSIS:

Leibniz was no less known to the mathematicians than to the philosophers. He made original contribution to mathematics, not very unlike his original contribution to philosophy. The concept of substance has played a major role in the rationalistic thought. Following Descartes and Spinoza, Leibniz too took the notion of substance quite seriously. Though Leibniz retained substances, he rejected the views of Descartes
and Spinoza. Their views fail to do justice to the concepts of God, man, and nature, and the distinctions that go with them. The picture of the world that Leibniz painted with the help of substances was an attempt to meet the sceptic.

One of the occupations of the 17th century philosophers was the sceptical challenge to knowledge. We have already seen sceptical background of Descartes' Meditations. According to Stuart Brown, "Leibniz was sympathetic to Academic scepticism though not to the Pyrrhonists, whose goal a of suspense of judgement seemed to him neither desirable not attainable."²⁹ It seems Leibniz was introduced to a version of Academic scepticism, which rejected the suspension of judgement. Pyrrhonist accepted the suspension of judgement. Leibniz according, Stuart Brown, "had an amicable correspondence with Pierre Bayle (1647-1706), whose Historical and Critical Dictionary contained some forceful statements of Pyrrhonistic scepticism that were to influence later figures such as Berkeley, and Hume."³⁰ Brown means to say that Berkeley and Hume were influenced by Pyrrhonism but not Leibniz. And this was only for the reason that Leibniz was not in favour of the suspension of judgement. The answer of Leibniz to scepticism was the construction of fascinating world picture, which was extremely original. No philosopher of the past succeeded in drawing such a picture.

Monads are the ultimate substance of the world according to Leibniz. A monad is a simple substance without parts. It has neither extension nor shape. Therefore it was not divisible. According to Leibniz, these are true atoms of Nature. The fact that they have no extension or shape implies that they are not material atoms. The ultimate picture of the reality that Greek atomists drew was in terms of physical atoms in motion. Motion was external to an atom. According to Descartes, Motion had "to be added to extension by God."³¹ Though atoms have extension they do not have motion as their property. They are inert and inactive. So Leibniz was in need of those kinds of atoms which made activity possible. Monads were such atoms: they were centers of force and

66
exhibit that they are not purely material atoms. Leibniz described them as souls. A soul is supposed to be active and it is distinguished from the matter, which is dead and inert. The concept of a Monad is the concept of a spiritual atom. The dimension of spirituality has been added to introduce motion as the property of an atom, this is, in order to save God from taking the trouble of introducing motion to the physical world. According to Leibniz, “Monads have no windows, by which anything could come in or go out.”

This is treating the monads not unlike the material objects. Two material objects may lie side by side without having any communication between them. By converting monads into windowless substances Leibniz has attempted to show that though monads are spiritual there is no communication between them.

Leibniz believed in the principle of the identity of indiscernibles. This principle presupposes that numerical diversity involves qualitative diversity. The objects that are numerically diverse must also be qualitatively diverse. Leibniz says, “every monad must be different from every other. For there are never in nature two beings which are precisely alike, and in which it is not possible to find some difference which is internal, or based on some intrinsic denomination.” Since monads do not have such things as shape, size or figure, which may be regarded as its external property, they can be distinguished only in terms of internal property. What Leibniz means to say is that the monads are substances, and no two substances differ only in number. To think of two indiscernible things is to think of only one thing having two names. This problem becomes more difficult to handle when we consider the view of Leibniz concerning the possible worlds.

Leibniz believed that the world that we inhabit is the best of all possible worlds. How does one reach the concept of a possible world? Consider the situation of myself involved in discourse on Leibniz at this time, but it is possible that I could have been doing something else at this time. Some other situation was possible to have occurred
rather than the present situation. According to Leibniz, before the world came into existence God contemplated different alternatives, different possible worlds. This world is one of the possible worlds and God has actualized this world because he found it the best one. According Nicholas Rescher, “Each possible world consists of a family of possible substances, every one of which is composible with all the rest.” Rescher means to say that there is perfect harmony between different monads that exist in the world. The concept of a monad is the concept of a substance that has been actualized. The possible substances of the other possible worlds are not monads, because they have not been actualized. Of course the possible substances of the possible worlds which have not been actualized are also in harmony with each other. As Rescher points out, “Every possible world has its own population of possible substances. And not just possible one, but substances that are also composible, i.e. capable of being realised together and conjointly.”

Consider now the connection between possible worlds and the identity of indiscernibles. It is impossible for one and the same substance to occur in two possible worlds. Each substance is restricted to one possible world only. The principle of identity of indiscernibles penetrates into possible worlds. Not only that a given substance of a given world is qualitatively different from all the other substances of that world, but it is also qualitatively different from all the other substances of all the other possible worlds. Suppose there are three possible worlds having possible substances.

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\begin{array}{cccc}
P_1 & S_a & S_b & S_c & S_d \\
P_2 & S_o & S_p & S_q & S_r \\
P_3 & S_e & S_f & S_g & S_h \\
\end{array}
\]
What Leibniz means to say is not only that Sa, which is occurring in P1 is qualitatively different from Sb, Sc, Sd, but it is also qualitatively different from the substances occurring in other possible worlds. That is Sa is qualitatively different from So, Sp, Sq, Sr, Sc, Sf, Sg, Sh. Not only the substances of these possible worlds are numerically different from each other, but they are also qualitatively different from each other.

Closely connected with the concept of the possible worlds is the concept of truth. Leibniz distinguished the 'truth of reasoning' from the 'truth of fact'. As he says, "Truths of reasoning are necessary and their opposite is impossible; those of fact are contingent and their opposite is possible." Necessary truths being analytic in character are true in all possible worlds. A contingent truth is restricted to a given possible world. The distinction between necessary and contingent is only because of the limitation of human understanding. For a higher understanding, or the understanding of God, there is no such distinction as the distinction between necessary and contingent. As Leibniz points out, "all things are understood by God a priori, as eternal truths; for he does not need experience, and yet all things are known by him adequately. We, on the other hand, know scarcely anything adequately, and only a few things a priori; most things we know by experience, in the case of which other principles and other criteria must be applied." What other principles and other criteria are had to be elucidated. In order to understand the position of Leibniz one has to understand the notion of analysis. Applying the subject - predicate distinction to substances and their attributes, one can say that subject includes its predicate. If we analyse the subject we will find all the predicates contained in it.

In the case of a priori proposition the law of contradiction helps the analysis. In the case of contingent propositions which are true, Leibniz uses the principle of sufficient reason. Nothing occurs without reasons. According to Leibniz, every true proposition is analytic, be it contingent or necessary. In the case of contingent truths we
have to take infinite steps in order to analyse the predicate from the subject. God alone can carry this analysis. But the fact that we fail in performing infinite tasks does not mean that the true propositions are not analytic. There arises the distinction between finitely analytic propositions and infinitely analytic propositions. Finitely analytic propositions are those which are necessarily true, on which we can apply the principle of contradiction. As distinguished from them are the infinitely analytic propositions, which are true contently. In their case we are required to take infinite steps, which is impossible in our case.³⁸ Only God can do it.

Leibniz also mentions the principles of perfection. This is the principle, which God uses in creating the universe. The possible world, which has the greatest amount of perfection, is actualised by God. The substances of the actualised world also exhibit the maximum perfection. According to Leibniz, “God has chosen (to create) that world which is the most perfect, that is to say, which is at the same time the simplest in its hypothesis [i.e. its laws] and the richest in Phenomena.”³⁹ Simplicity of hypothesis or law does not mean that they are numerically diverse. Numerical diversity some times leads to chaotic condition. Richness means variety. The principle of perfection is Leibniz’s God’s goodness. The principle is not logical but ethical. So also the necessity of contingent truths is distinguished from the necessity of a priori truths. The former is described as moral necessity whereas the latter is the logical or metaphysical necessity. The position of Leibniz is certainly different from the position of Descartes and Spinoza, who took a position that implied that God’s will in creation was arbitrary.

The next important principle or law is that of continuity. The universe of monads has no gaps and holes. It is a universe in which continuity pervades. At any instance every monad represents the entire universe. Of course this representation differs from one monad to the other. There are as many representations as there are monads. Because each monad represents the universe from its own point of view. As
has already been pointed out, the monads are windowless. But then how is the harmony between them possible? Leibniz introduces the notion of pre-established harmony. It is a harmony that obtains among the monads. This is a kind of reciprocal accord. According to Rescher, "This accord is pre-established in a dual sense: first, because it is determined upon anterior to the creation of the world, second because the accord at any instance of time is but the consequence of the accord at any previous instant." It implies that a substance has its own place in the possible world. It is so situated in that world that it is harmonised with other possible substances. It's earlier and later states harmonize with earlier and later states of other possible substances. As Leibniz writes, God has "so formed each of these substances from the beginning, that in merely following its own laws, which it received with its being, it is yet in accord with the other, just as if they mutually influenced one another, or as if over and above his general concourse, God were for even putting in his hand to set them right."

Now consider the nature of perception, which these monads have of one another. Leibniz in his monodology distinguishes perception from apperception. Apperception is a kind of consciousness of one's perception, i.e. it is a higher order perception. Leibniz introduces a hierarchy of monads. Bare monads are at the lowest level; above them are monads that are living creatures. Man is at the top among the living creatures. Of course man too is not wholly perfect. Only God is the perfect monad. Perception characterizes all monads. Apperception is like self-consciousness. This is restricted to men. In a superficial way one can think of Leibniz as dissolving all kinds of distinctions, reducing everything to soul-substances. However, Leibniz has done no such thing. He gives high importance to men. As he writes, "it is the knowledge of necessary and eternal truths which distinguishes us from mere animals, and gives us reason and the sciences, raising us to knowledge of ourselves and God. It is this in us whom we call the rational soul or mind."
The views of Leibniz on space and time are quite different from the views of Newton. According to Leibniz, space and time are relative concepts. They depend on the existence of things. Things are ontologically prior to space and time. Space and time arise as soon as things come into existence. These are relations between things. As against this relativist view was the view of Newton. Newton considered space and time existing prior to the things, as if they are containers. Containers can be empty whether things exist or do not exist in them. No harm is done to space and time in the obscene of things. They would continue to exist even when the things discontinue to exist. Space and time are primary; things existing in them are secondary.

If the Newtonian views of space and time were accepted then one and the same space and one and the same time would penetrate into all possible worlds. This would lead to a complete breakdown of several principles of Leibniz. In order to save his position Leibniz was free to accept the plurality of space-time systems. Each possible world would have its own spatio temporal framework. Space, according to Leibniz, arises out of co-existence of substances. The possible substances of a given possible world co-exist with each other. None of these substances co-exist with the substances of any other possible world. Therefore the space of one possible world cannot be the same as the space of another possible world. Every possible world has its own spatial frame. So is true about time. Each substance has its own future history. No substance is common to two different possible worlds. No two substances would have a common future history. Therefore time in one possible world cannot be same as time in another possible world. One possible world is not at any distance from the other possible worlds. So also is true about time. There is no such thing as taking any time for reaching from one possible world to another possible world. So Leibniz treats space and time as particulars, and as particulars they are restricted to their own worlds.

To sum up the position of rationalists, all of them attempted to meet the sceptic.
All of them thought that absolutely certain knowledge is possible in mathematics. So all of them used mathematical method even in the non-mathematical disciplines. Greek sceptics were dependent on experience because they did not reject appearances. Therefore in attacking scepticism these rationalists also attacked knowledge derived from experience. They however recognised the role of experience. As Leibniz remarks, “we are merely empiricists as regards three-fourths of our actions. For examples, when we expect it to be day tomorrow, we are behaving as empiricists, because until now it has always happened thus.” So according to Leibniz we are most of the times empiricists, only occasionally, rationalists. Even the academic empiricists would not deny the occasional use of reason to run their lives.

Leibniz meets the sceptics’ challenge by providing that we know the world and other monads by our innate capacity of apperception. We apperceive the world in our inner consciousness. There is no gap between what we know (apperceive) and what is real. Reality consists of monads, which are represented in my consciousness. So there is necessity in our knowledge of the world. Even the so-called empirical propositions are morally necessary.

Leibniz takes human knowledge, both mathematical and empirical, as founded on necessary truths, which have origin in us. There is no possibility of doubt that threatens the fabric of our knowledge.

4. LOCKE AND THE PROJECT OF EMPIRICISM:

Locke is the founder of British empiricism, which led to the evolution of Berkeley and Hume. He reacted against rationalism, especially that of Descartes. Since the British rejected rationalism they had favorable attitude towards a milder form of scepticism. As we have already pointed out, the Greek scepticism was revived on the Continent during 16th century. But the revised scepticism lost its original extremism.
Though dogmatism was rejected, the extreme form of scepticism was also rejected. The middle course was accepted which was described as constructive scepticism. For constructive scepticism the names of Montaigne, Gassendi and Mersenne are well known. It was this constructive scepticism that came over to the British Isles. As Woolhouse points out, a tradition of constructive scepticism "has been traced in Seventeenth-Century England, both in religious and non-religious areas... Locke belongs to this tradition of constructive scepticism." Woolhouse further points out about the nature of Locke's scepticism that it is "both limited and constructive. These two features explain how, beginning from a basically sceptical position, he can still hope to avoid the worrying, doubting outlook which often characterises such a position." Locke's scepticism is limited in the sense that he rejected that kind of scepticism, which is general. We have already seen how Pyrrhonists rejected the knowledge-claims made in all the areas of knowledge. But Locke believes that there are areas where our knowledge claims are free from doubts and uncertainty. However, Locke recognises that there are some areas where our understanding cannot reach. About these areas, according to Locke, we should not accept anything to know. We should be content to remain ignorant of these areas. According to Locke, an attempt to go beyond one's mental capacities only leads to frustration and despair. As he remarks, "...men, extending their inquiries beyond their capacities, and letting their thoughts wander into those depths where they can find no sure footing, it is no wonder that they raise questions and multiply disputes, which, never coming to any clear resolution, are proper only to continue and increase their doubts and to confirm them at last in perfect scepticism." This is Locke's constructive scepticism. This suggests a way to avoid scepticism. The way is not to indulge in asking questions and making inquiries about the area where human understanding cannot reach.

Book I of the Essay is devoted to an attack on innate ideas and principles. It seems that Locke's analysis of human understanding presupposes the driving away of all those things, which were put by earlier philosophers in human mind. The rationalist
philosophers from Plato to Descartes and Leibniz have been putting into the human mind all kinds of ideas. Of course they did not take any credit for doing this. Sometimes God has been made responsible for putting ideas into human mind, at other times nature itself had been made responsible, and yet on some other occasions it was said that the human soul has got certain ideas from its very birth. Locke had no wish to increase the stock of things that already existed in the human mind. He wished to start with a clean human mind. Plato was certainly not starting with a clean human mind when he thought that all knowledge was recollection. Ideas were already existing in the mind, a man had only to recollect them. Descartes improved the situation by rejecting the mythology connected with recollection and rebirth. Finally, Leibniz considered human mind having innate abilities to know certain things. From the time of Plato to the time of Leibniz several versions of innateness hypothesis were presented by philosophers. Whose version was attacked by Locke? Locke seems to have attacked only a crude version of the innateness hypothesis. Referring to the innateness doctrine Yolton points out, "The doctrine underwent, in general, a transformation from its naive form to a modified version. The naive form claimed that God wrote into or impressed upon the soul or mind at birth certain ideas and precepts (or a developed conscience capable of deciding what is right and wrong, independent of custom or learning) for the guidance of life and the foundation of morality, even though we do not become aware of these innate principles (or of the conscience) until maturity." 47 The naive form of innatism was introduced to sustain morality and religion. This sort of innatism is easy to be criticized. But it is doubtful, whether Locke has rejected this kind of innatism. He was certainly not against morality and religion. But the improved version of the doctrine of innate knowledge was difficult to criticize. During the days of Locke himself innate knowledge was given a dispositional analysis. It was "claimed not that men are born with completed ideas and principles of morality, but only that such knowledge was implicit in the soul and merely required experience to elicit awareness of it." 48 This means there is no contradiction between having innate knowledge and using
experience to make it explicit. To call some piece of knowledge innate simple means to have potentiality to have such knowledge. Potentialities are not occurrences, but can lead to occurrences.

Lee, Sergeant and Leibniz attacked Locke's empiricism in order to defend innate ideas. According to Lee, "If all knowledge comes by our senses or Reflexion, which is his Maxim, then there can be no certain knowledge of the truth of any general proposition whatever; because our senses can reach but to particulars and Reflexion no farther." This would mean the success of scepticism. Scepticism denies the possibility of knowledge i.e. certainty. Without general propositions we cannot make any progress in any science. According to Lee, the man would lose all privileges over brutes. According to Lee, man is better than brute because he has ability to use general principles and to arrive at general truths. Sergeant's Solid Philosophy Asserted contains criticism of Locke, which is not very unlike the criticism of Lee. According to Yolton, Leibniz's "criticism of Locke's empiricism echo's that of Lee." According to Leibniz, not only mathematics and geometry contain truths that are independent of experience, even theology and juris prudence contains truths that are necessary. According to all the three, Lee, Sergeant and Leibniz, no knowledge is possible without the help of general principles and general principles cannot come from experience. As Yolton refers to them, "Lee, Leibniz and Sergeant were concerned with laying bare what they took to be the necessary rational presuppositions of any theory of knowledge. All three were committed to a theory of knowledge which in effect removed analysis and investigation from experience and gave it an a priori foundation in general principles." If general principles have to function as the foundations of knowledge then there is no question of obtaining them as the end product of the process of knowledge. For they themselves make knowledge possible. The present discussion of course does not mean that Lock made no contribution to philosophy through his attack on innate ideas. He certainly made a significant contribution by attacking the innateness hypothesis. It is his attack
on the doctrine of innate ideas that led philosophers to give more attention to mind and its capacities to operate.

Locke has rejected innate ideas simply for showing that the child takes birth without having any ideas in his mind. It is his birth in the world that is responsible for ideas arising in his mind. It is not reason but sense which is causally responsible for the birth of ideas. Sense is again divided into two kinds, outer and internal sense i.e. sensation and reflexion. It is the contact of mind with the external world that leads to the generation of ideas. What is the epistemological status of an idea once it has been generated? The epistemological status of an idea is that it is an object of thought when a man is involved in the process of thinking. As Locke points out referring to the term ‘Idea’, “It being that term which, I think, serves best to stand for whatsoever is the object of the understanding when a man thinks, I have used it to express whatever is meant by Phantasm, notion, Species, or whatever it is which the mind can be employed about in thinking.”52 In order to explain the meaning of an unfamiliar term we take the help of familiar terms. But the terms phantasm, notion and species are as much familiar or unfamiliar as is the term idea. No progress is made in clarity except that the ideas occur in thinking. As Bishop says, “As to the term of ideus, I have no objection to the use of the word itself; provided it be used in a common sense, and no weight be laid upon it more than it can bear; for I am for no new affected terms which are apt to carry men’s Minds out of the way; they are like Ignis fatui which seem to give light, but lead to those that follow them into bogs.”53 Bishop means to say the term idea has been given a new technical meaning, which is different from its ordinary meaning. Locke has hardly succeeded in explaining the new meaning of the term idea.

Several of Locke’s contemporaries including Lee and Sergeant were quite dissatisfied with Locke’s use of the word ‘idea’. However, Locke is not muddled as his critics have made him. The term ‘idea’ was already in use. When the rationalist
philosophers from the days of Plato to the days of Leibniz have used the term idea they gave it some meaning. Locke too is giving the same meaning to this term idea except that it should not be considered as innate to the mind. Mind has not taken birth with any kind of ideas, they have come to one's mind through the senses. The matter is quite simple but Locke's critics have unnecessarily made it complicated. The only difference between Lock and the rationalists is that some rationalists like Plato considered ideas as objective and real, having existence outside the mind of a man, they were not restricted to mind. But for Locke ideas exist nowhere except in mind. Thinking depends on ideas and ideas depend on thinking, there is a reciprocal type of dependence. Not only that ideas do not exist outside the mind; they do not exist even in the mind without the acts of thinking. This point is important because Locke's concept of mind is little different from the Cartesian concept of mind. Locke does not accept that mind is occupied in thinking all the time. There are occasions when mind does not have thoughts at all. On those occasions mind would also fail to have ideas. So ideas are in the real sense thought dependent objects. This would make ideas into some kinds of objects existing in between the thoughts of a man and the external reality. Man is not directly in contact with the external reality. He is in contact only with his ideas. As Chappell points out, "The epistemological objection is that the presence of such objects in perception creates an impenetrable "veil" between perceivers and the external world, making it impossible for them to know that any thing exists outside their minds;" Our knowledge of the external world would be completely inferential. There is no chance for removing the veil of ideas and looking into the external world. There is no possibility of being acquainted directly with the objects of the external world. The external would is represented through the ideas. So if we have any knowledge of the external world, it is only through the mediation of ideas.

Locke considers 'red', 'blue', 'hard', 'soft', 'sweet', 'cold' etc. as examples of simple ideas which come through sensation. Mind acts on its own operations and
produces the simple ideas of reflection such as perception, thinking, doubting, reasoning etc. Any simple idea, which is in the mind of a man, has come through either by sensation or by reflection. Mind has no ability to generate any simple idea by itself. However, it can produce compound ideas by joining simple ideas. So in a way complex ideas also are not generated by the mind except the compounding of the simple ideas. The examples of compound ideas are the ideas of substances, modes and relations.

Mind, not only compares ideas and compounds them, but it also involves in the acts of abstraction. For the human mind is not only having the simple and the complex ideas, it also has abstract ideas, which involve generality. The abstract general ideas are possible through the mental activity of abstraction. Consider how the abstract general idea of man is formed? Those who are involved in abstraction “make nothing new, but only leave out of the complex idea they had of Peter and James, Mary and Jane, that which is peculiar to each, and retain only what is common to them all.” The general idea of man is formed by abstracting what is common to Mary, Jane and Peter, leaving out what is peculiar to each one of them. Certain remarks of Locke on the nature of abstract general ideas have exposed his view to bitter criticism by Berkeley and Hume. As Locke says concerning general idea of a triangle that it “must be neither oblique, nor rectangle, neither equilateral, equiangular, nor scalene, but all and none of these at once. In effect, it is something imperfect that cannot exist, an idea wherein some parts of several different and inconsistent Ideas are put together.” So the general ideas for Locke are self-inconsistent because they are constituted out of inconsistent parts. Both Berkeley and Hume, as we will see, refused to accept that mind has any such ideas. These ideas are pure fictions of Locke’s mind.

Mind is equipped not only with simple, compound and abstract general ideas, but according to Locke, there are also ideas of two other kinds, the ideas of primary qualities and the ideas of secondary qualities. The distinction between perception and secondary
qualities was popularised by the scientists of Locke's time. Primary qualities are such as shape, size number, motion or rest and solidity. The secondary qualities are such as sweet, cold, heat, color, soft etc. Primary qualities are held as intrinsic properties of material objects. But the secondary qualities are only powers of material objects to produce their ideas in human mind. Concerning the ideas of these qualities in our mind Locke maintains that the ideas of primary quality is resemble the qualities existing in physical objects. But the ideas of secondary qualities do not have their counterparts in the physical world. This implies that size and shape are really part of the physical world. But the colour that we see in an object does not belong to it. So also sweetness, softness, etc. do not belong to the world.

Apart from the primary and secondary qualities, there is also a material substance. Qualities are always qualities of something or the other. Qualities cannot float in the void; they require a substratum to stick on. Material substance is that base. In postulating material substance and its primary and secondary qualities Locke has broken his ties with rigid empiricism. He has accepted the existence of unobservable entities, for neither primary qualities nor the substance in which they exist, can ever be observed. These entities are unobservable in principle.

Though Locke considered the reality of mind independent of the reality of body, he was not a Cartesian. He refused to reduce mind to thinking and body to extension. There is no doubt that mind thinks, but not continuously. It has ability to think, and ability is not an occurrence. So also is not extension but solidity, which is the real character of matter. Locke’s views on mind-body dualism have led him to extremely novel views about personal identity. The specialists on personal identity generally begin their work by quoting Locke. According to Locke, a person stands for “a thinking intelligent being that has reason and reflection and can consider itself as itself, the same thinking thing in different times and places.” There are two important implications of
Locke's view. First is the distinction between a person and a man. A man is a biological entity. Locke is concerned with the identity of a person. The second important implication is that a person is not restricted to one and only one body. A person may occupy more than one body. What is required for an identity of a person is not the identity of the body; it is the identity of consciousness. It is quite imaginable that two persons exist in the same body. So also it is imaginable that one person is occupying more than one body. Locke gives the example of a prince, leaving his own body and then occupying the body of a cobbler who recently died. As Locke remarks, “should the soul of a prince, carrying with the consciousness of the prince's past life, enter and inform the body of a cobbler as soon as deserted by his own soul, every one sees he would be the same person with the prince, accountable only for the prince's action.”

It appears that Locke refuses to define personal identity in terms of bodily identity. He considers continuity of consciousness as the criterion of personal identity. But continuity of consciousness presupposes memory, so memory becomes the criterion of personnel identity. There are so many implications of Locke's views, which are not relevant in the present context.

Let us finally consider Locke's view of knowledge. Most of Locke's contemporary critics considered him as a committed sceptic. How far is the characterization of Locke as a sceptic correct? If he was a sceptic then he was a constructive sceptic, as we have already pointed out. Locke considered, like Descartes and Leibniz, mathematics as the paradigm of knowledge. He refused to consider empirical sciences as giving us true knowledge. Natural philosophy would cover empirical sciences in our sense of the term. Everything other than the demonstrative and intuitive knowledge was only opinion or belief. His idiom was quite unlike the idiom of our age. We make distinction between a priori knowledge and a posteriori knowledge. Locke did not consider a posteriori knowledge as a case of knowledge, because it was not having any certainty in its truth. Therefore Locke considered a posterior knowledge
as a kind of belief or opinion. For Locke only that was knowledge which is a case of a priori knowledge. Therefore it would not be wrong to think that Locke was influenced by scepticism so far as our knowledge of empirical truths is concerned. What may be shocking to the philosophers of our age would be placing morality among the science capable of demonstration. Locke has put ethics on the same level as geometry. Maybe Spinoza was responsible for Locke’s giving as much importance to ethics and morality as to geometry. So having ideas in one’s mind does not mean that one would also have knowledge. Ideas are necessary but not a sufficient condition of knowledge. Sometimes they succeed in giving only opinion.

Locke is the founder of British empiricism, which has placed empirical knowledge in its proper context vis-a-vis mathematical knowledge. Locke did not put empirical knowledge above mathematical knowledge, yet he considered it as a case of knowledge though with less certainty. Certainty in its true sense is fond in the domain of mathematics and logic.

However, it cannot be held that Locke left human knowledge vulnerable to sceptical attack. In so far as empirical knowledge is based on our sense-contact with the world, we cannot doubt its validity. All that we must concede to empirical knowledge is probability, which is as much reliable as certainty in mathematics. Empirical knowledge is surely based on firm foundation in our experience of the world.

5. BERKELEY’S CONTINUATION OF THE EMPIRICIST MODEL:

According to Woolhouse, “Berkeley, the first great British philosopher after Locke, reacted against what he saw as the sceptical and atheistical consequences of Locke’s philosophy.” Berkeley seems to be free from the influence of scepticism. As Grayling, an interpreter of Berkeley, writes “Berkeley had two related aims, which were
to defend ‘common sense’ by refuting scepticism and to defend religion by refuting atheism.” The defense of common sense does not mean that one must refute scepticism. There is no inconsistency involved in being both a sceptic and a holder of the common sense view. Ryle once suggested to Bertrand Russell that Locke invented common sense. Russell’s immediate reaction was “By God, Ryle, I believe you are right. No one ever had common sense before John Locke and no one but Englishmen have even had it since.” Berkeley was simply working on Locke’s invention of common sense and in spite of this invention Locke retained scepticism. Though Berkeley professes that he is anti-sceptic, he uses scepticism to develop his own philosophy. Berkeley was certainly influenced by the “revival of interest in epistemological scepticism generated by the Meditations and reported, with some relish, in Bayle’s Dictionary.” Bayle’s Dictionary depicts the arguments of the Pyrrhonians. According to Grayling, “Bayle sets out arguments for scepticism which are echoed, even in phraseology, by Berkeley.” Bayle has argued against the distinction between secondary and primary qualities. If secondary qualities were mind-dependent, so would be the primary qualities.

Some details of Bayle’s arguments have been brought out by Popkin in his article on “Berkeley and Pyrrhonism.” In the remark B in the article on Pyrrho Bayle writes “if the objects of our senses appear to us coloured, hot, cold, smelling, tho’ they are not so, why should they not appear extended and figured, at rest, and in motion, though they had no such thing.” Bayle is trying to show that all qualities of physical objects, whether primary or secondary, are mere appearances.

In his remark G on Zeno, Bayle argued against the non-mental existence of extension. Extension for Descartes was essence of a material body. Once it is shown that extension is not unlike other secondary qualities it would be shown that there are no real material bodies having extension. According to Bayle, modern philosophers have
recommended the suspension of judgement "with relation to sounds, odours, heat, and cold, hardness, and softness, ponderosity, and lightness, savours and colors, etc., that they teach that all these qualities are perceptions of our mind, and do not exist in the objects of our senses. Why should we not say the same thing of extension?" Bayle cited passages from Malebranche and Fardella in support of this thesis. Bayle even discusses Arnauld's charge against Malebranche for holding "some extravagant propositions, which strictly taken, tend to the establishment of a very dangerous Pyrrhonism." These three sets of arguments were meant for showing that Bayle succeeded in making a rigid distinction between the world of appearances that is known to us and the world of real objects which is not known to us. Bayle's attempt was similar to the attempt made by Sextus Empiricus in his Outlines of Pyrrhonism. Sextus attempted to show that we are acquainted only with appearances. We are completely ignorant of the nature of reality.

Berkeley, not only understood scepticism, but also tried to solve the sceptical difficulties. Whatever aspect of scepticism was desirable, Berkeley assimilated it into his philosophical thought. The remaining part of it he rejected. Abolition of the distinction between primary and secondary qualities by sceptics was accepted by Berkeley. But he rejected the view that the ideas of these qualities have no reality. Berkeley discovered the source of scepticism in the rigid distinction between appearances and the real objects, between what is perceived and what exists beyond perception. Popkin quotes the crucial remark of Berkeley concerning the source of scepticism. Berkeley remarks, "All this scepticism follows, from our supposing a difference between things and ideas, and that the former have a subsistence without the mind, or unperceived. It were easy to dilate on the subject; and show how the arguments urged by sceptics in all ages, depend on the supposition of external objects." The distinction between things and ideas has been crucial to the sceptics. From the time of Pyrrho to the time of Sextus, and again from the time of Montaigne to the time of Bayle,
the sceptics were fond of talking about the distinction between things as they appear to us and the things as they really are. We are restricted to the realm of appearances, and this realm too is full of inconsistency and contradictions, for the reason that the realm of appearances is a mind-dependent realm.

Berkeley thought that once the things are reduced to ideas, the unknown and unknowable reality is reduced to known and knowable reality, that is, reality is reduced to appearances, there will be no scope for scepticism to intervene. Therefore in his writings Berkeley started reducing the existence of things to the existence of ideas. He came to accept the view that objects do not exist independently of, or apart from, the ideas. The reason is very simple that they are numerically identical with ideas. As Grayling points out referring to Berkeley's reductionism, "In essentials Berkeley's maneuver is to deny the appearance - reality gap by saying that appearance is reality; there is no divide between ideas and things because things are ideas, not independently existing items in some way lying inaccessibly behind or beyond experience." This is an interesting maneuver by Berkeley; he is not reducing things to ideas but converting ideas into things. As Philonous says to Hylas "I am not for changing things into ideas, but rather ideas into things; since those immediate objects of perception, which according to you, are only the appearances of things, I take to be real things themselves." The real things are given more serious thought because they are supposed to be permanent and enduring whereas things that appear are only transitory and non-enduring. This image has to be wiped out; appearances have to be converted into real things. There should be no reality over and above appearances. This is Berkeley's move, and not the opposite one.

In order to convert things into ideas two steps have to be taken. In the first step things are reduced to their sensible properties; at the second step sensible properties are reduced to ideas in the mind of a person. A thing is characterized by something that is
red, hot, and round, but these sensible properties are nothing but ideas in the mind of a person. But no such steps are taken if ideas are considered as things. Ideas are supposed to be subjective and things objective and public. One and the same thing can be perceived by different people but one and the same idea cannot occur in the minds of different people. So Berkeley’s problem is how to convert an idea, which is subjective and restricted to a given mind, into something that is public and shared by different minds. Berkeley converts ideas into things by making God to play a role. The ideas in the mind of men have not been generated by those men, they have been generated by God. God has put the same idea into the minds of different people. Berkeley has succeeded in removing subjective element from human ideas and converting them into some kind of common ideas, shared and sharable by different people. One may not be very happy with the introduction of God for the conversion of ideas into things. Besides, no type of conversion or reduction or translation is free from difficulties and objections. Consider the reduction of physical objects to sense-data by the modern phenomenalists like Russell and Ayer. They are supposed to be the academic descendants of Berkeley. The phenomenalism of Russell and Ayer is considered as phenomenalism of Berkeley without the involvement of God. Sense-datum by definition is something which is private and subjective. No numerically the same sense-datum can occur in the minds of two different people. Even the same sense-datum cannot occur in the mind of the same person at two different times. A sense-datum is a highly subjective and private entity. In contrast, an object is a public entity shared and sharable by different people. When Russell and Ayer reduce objects to sense data they are reducing a public object to a set of private objects. There is no objection if the same set of private objects occur in the sense-field of different people. In such a situation perception of numerically the same object is possible. But this is self contradictory and nonsense to say that the same set of the same bundle of sense-data occurs in the sense fields of different people. A sense datum is as a convenient entity for explanation as is Berkeley’s God. They have been introduced for the convenience of explanation, and
both of them become inconvenient on some occasions of explanation. A sense-datum explanation involves its own difficulties, in the same way in which explanation in terms of God involves its own difficulties. Berkeley is convinced of the fact that without God the ideas are likely to be subjective and private. Hence subjective idealism can't be presented if God's presence is not allowed.

The major difficulty with Berkeley's reduction of things to ideas is that there is no guarantee that it would stop scepticism. He proposes this reduction for condemning and rejecting scepticism. He had historical glance over scepticism and discovered that its being consists in the distinction between things and ideas. So he thought that the removal of this distinction would take away the base of scepticism. However, Hume more than Berkeley is known for the reduction proposed by the later. But Hume was a well known sceptic. In spite of successfully demolishing of the distinction between things and ideas Hume was a Pyrrhonist. As Popkin points out, "Hume maintained in far clearer and more significant fashion than Pyrrhonists or quasi-Pyrrhonists like Montaine, LeVayer, Glanvill, Huett or Bayle, that we can never have grounds for beliefs, whether factual, moral, or demonstrable." There are hundreds of ways in which a sceptic would knock out a system of philosophy. If you stop one way he will find the other way. The issue of justifying a belief is no less important than the reduction of one belief to another belief. In spite of his opposition to Pyrrhonian thinking, Berkeley has been charged with Pyrrhonian prejudices. As Popkin writes, "Berkeley refused to give up the Pyrrhonian thesis that all we can ever know is appearance, and in offering a foundation for appearance, offers one that makes appearance real, not unreal.... The uniqueness of Berkeley's immaterialism is that it provides a basis for the Pyrrhonian world of appearances in the mind." In his attempt to meet sceptics Berkeley has inebibed in him the spirit of a sceptic. Referring to three major influences on Berkeley's thought, Luce comments, "Locke taught him, but Malebranche inspired him,... Bayle alarmed and altered him." So Berkeley owed to
the sceptic Bayle as much as he owed to Locke and Malebranche. He rejected the views of Bayle on several issues, so also he rejected the views of Locke and Malebranche. Berkeley totally rejected Locke’s material substances. This rejection followed the rejection of primary qualities. Once the primary qualities were abolished, there was no need of a place to house them. A material substance was nothing but a house to accommodate them. Berkeley wished to prove the non-existence of matter in order to prove that he was an immaterialist. Locke’s material substance was nothing but a piece of matter. By abolishing the matter and the modifications of matter, Berkeley has reduced the whole reality to the reality of mental substances (spirits) and their ideas. Some ideas of a finite spirit depend on him but other ideas are provided to him by God. So there is a direct transaction of ideas, not only between two finite spirits but also between finite spirits and God. Luce gives a pictorial account of Berkeley’s ideas and the spirits which hold them. As he remarks, “There is something entirely distinct from ideas. There is what perceives ideas, wills, imagines, and remembers them. There is what I call mind, spirit, soul, or myself. This rather ego-centric account passes soon into the account of spirit as “one simple undivided active being’ whose two main operations are understanding and willing. Spirit, by denotation, divides into the infinite spirit and finite spirits, and in the later sections, more precisely, into God, myself, and other spirits.”74 So Berkeley’s spiritual realm is complete. Commenting on this realm Russell writes, that Berkeley “undertook to prove that there is no such thing as matter at all, and that the world consists of nothing but minds and their ideas.”75 Is this the common sense view of the world? Does the sense of the common man accept a world in which only the spirits and their ideas exist? Not only is Berkeley’s view theologically oriented, it is also highly sophisticated, and a common man would hardly make any sense out of it. But then according to Pitcher, Berkeley perhaps had “a low opinion of the general spiritual condition of most people: he saw them as the victims of error and selfishness. And so he naturally had no great respect for the deliverances of ordinary common sense, although he paid lip service to it.”76 It is better to pay lip-service than paying no service
to common sense. The Lockean tradition of common sense had to be retained.

Consider now Berkeley’s treatment of ‘existence’. *Existence* is no less important than *idea* in Berkeley’s philosophy. Berkeley converted *Idea* into a *thing*. Similarly he converted existence into ‘to be perceived or to perceive’. Berkeley’s dictum ‘esse est percipi’ means that existence lies in perception, that is, in being perceived by spirits. Existence, according to him, is mind-dependent. This is Berkeley’s idealism about the external world.

One gets some new information about a billiard ball when it is said that it is red, round and hard, but there is no new information obtained when it is added that the billiard, ball exists. Berkeley is quite aware of the situation. He knows very well that existence is not an extra property of objects. Berkeley comes to conclude that saying that a billiard ball exists simply means to say that it has been perceived. And this is true about the existence of all kinds of objects except the human souls or spirits. In the case of spirits, to say that they exist means to say that they perceive. The conclusion is obvious: ‘Existence’ means ‘to be perceived or to perceive’. So the analysis of existence justifies Berkeley’s ontology of spirits and their ideas.

Berkeley’s epistemology, as already discussed, follows his ontology of spirits. His empiricistic model of knowledge considers naturally as an extension of his theory of perception by spirits. The spirits, including the infinite spirit, that is, God, are capable of seeing and having ideas. Thus knowledge is based on the ideas or perceptions.

So far as his meeting the sceptic’s challenge is concerned, it is evident that he rejects scepticism and atheism of the philosophically unenlightened. Knowledge, according to him, is fully secured in the human capacity to perceive. The real world is commensurate with our perceptions. So there is no possibility of our being misled in our
beliefs and perceptions. Our perceptions are true more often than not.

6. HUME’S SENSATIONALISM:

We have already discussed Hume’s scepticism in the first chapter. His scepticism was the outcome of his empiricism. Once empiricism was taken to its logical conclusion the result was scepticism. So we must discuss in depth the nature of Hume’s empiricism. This discussion is complementary to the discussion of Hume, which we have already done in the first chapter. Perceptions are the foundational entities of Hume’s empiricism. Whatever sort of knowledge we have, or fail to have, is on account of perceptions. However, these perceptions Hume divides into impressions and ideas. Impressions are those perceptions, which knock at the door of mind for the first time. It is through impressions that mind becomes acquainted with perceptions. Every perception by definition is short-lived. So impressions too are short-lived. As soon as they enter into the mind and get their presence registered, there they come to an end. However, though the impressions die out, they leave behind them their shadows. Hume calls these shadows ideas or thoughts. So what continues to exist in the mind is only an idea or thought. Hume defines an ‘idea’ as a faint copy of an impression. Hume says that, “Those perceptions, which enter with most force and violence, we may name impressions;.... By ideas I mean the faint images of these in thinking and reasoning.”

It is obvious that the force and vivacity cannot be the character of ideas, because they are only copies or images and not the original objects. Only impressions can have force and vivacity. Only in abnormal circumstances like sleep, fever and madness ideas acquire force and vivacity. They cannot be distinguished from impressions. Similarly on some occasions impressions are very faint.

Mind cannot manufacture on its own simple ideas. All simple ideas are copies of simple impressions. The exception is given by Hume of a simple idea of a shade of a
colour of which one had no impression. If one has seen many shades of a given colour his mind can invent the simple idea of a shade of that colour of which he did not have any impression. The mind can manufacture complex ideas which may not directly resemble the compound impressions. But a complex idea is analysable in terms of those ideas which represent the impressions. Though we may not have the impression of golden mountain we certainly have the impression of gold and the impression of mountain, and the mind has manufactured the idea of golden mountain by adding the idea of gold to the idea of mountain. So there can be nothing in the mind of which the source is not in the impressions. The invention of the term impression has helped Hume in eliminating all those thoughts and ideas of which the source is not in the impression. When we entertain, according to Hume, "any suspicion that a philosophical term is employed without any meaning or idea (as is but too frequent), we need but enquire, from what impression is that supposed idea derived? And if it be impossible to assign any, this will serve to confirm our suspicion."

8 So the technical term impression has been used by Hume as scissors to eliminate philosophical views which cannot be ultimately reduced to perception. 'Impression' is only a technical name for perception. Hume simply means that nothing can be in the mind in the form of an idea or a thought of which the source is not in perception.

Ideas do not occur in a jumbled fashion. They occur in a connected fashion. Ideas do not occur in the fashion of a jungle of ideas. They occur in the fashion of a garden of ideas, where there is regularity. As Hume remarks, "even in our wildest and most wandering reveries, nay in our very dreams, we shall find, if we reflect, that the imagination ran not altogether at adventures, but that there was still a connexion upheld among the different ideas, which succeeded each other."

9 Imagine that a gardener arranges flower plants in three different ways. In one part of the garden the flower and plants form a circular figure, in another part they had been arranged in a triangular fashion, and in the third part they give an impression of two straight lines. Ideas too
occur in a similar fashion. Ideas follow three principles of association namely, "Resemblance, contiguity, in time or place, and cause or effect." It is on the ground of resemblance that sometimes one idea leads to me to other idea.

The discussion above refers to the objects of sense. The next important issue is the issue of objects of human reason. He divides these objects into two kinds to which references have already been made in the first chapter of this thesis. The two kinds are ‘relations of ideas’ and ‘matters of fact’. The former do not depend for their truth on anything existing anywhere in the universe. In short their truth is independent of reality. ‘Matters of fact’ are wholly unlike the relations of ideas. For their truth the ‘matters of fact’ are dependent on reality, because their whole purpose is to describe the reality. The negation of every matter of fact implies a possible situation. As Hume remarks, “That the sun will not rise to-morrow is no less intelligible a proposition, and implies no more contradiction, than the affirmation, that it will rise.” Hume reduces all empirical knowledge to probability. If Sun will not rise tomorrow is intelligible then there is no absolute guarantee for the truth of the affirmation that it will rise. In his Treatise, Hume maintained that “all knowledge resolves itself into probability.” In that work Hume also maintained that there is possibility of error not only in connection with the matters of fact but also in connection with demonstrative sciences. As he remarks, “In all demonstrative sciences the rules are certain and infallible; but when we apply them, our fallible and uncertain faculties are very apt to depart from them, and fall into error.” This is sufficient for a Pyrrhonian to reduce even demonstrative sciences to probabilities. All that goes in the name of knowledge is nothing but probability. What is the fun in calling the rules of demonstrative sciences certain and infallible when the manipulations of demonstrative sciences, the algebraist or mathematicians are themselves fallible beings. Though Hume had made a very rigid distinction between relation of ideas and matters of fact, this rigidity seems to be quite elastic. The two scales, which Hume evolved for judging the truths, has recently been questioned by
Quine. According him all truths belong to one and the same scale. Though Hume gave birth to the two scales, he has also taken a step for the dissolution of these two scales. The Pyrrhonian influence on his thought is responsible for this destructive step.

Empiricism means that philosophy which makes a start from experience and also ends with experience. An empiricist cannot therefore avoid the claims of memory. The experience that is momentary is not of much use. Only the experience that has duration can lead to the construction of the universe. But duration presupposes memory; therefore, Hume was led to discuss the nature of memory. Hume distinguishes it from imagination, though contents of both are ideas. Ideas of memory, according to Hume, retain some vivacity of impressions. Ideas that occur in imagination loose their vivacity completely. The second important distinction is "that the memory preserves the original form in which objects were presented." But in the case of imagination it can "transpose and change its ideas." Memory is said to recollect what was perceived earlier. There is no such restriction on imagination. There is no doubt that Hume takes the help of memory at every step. Memory is required for explaining the relation of cause and effect, for personal identity, for future prediction etc. However the concept of memory is riddled with difficulties. For example, Hume is saying that memory that reproduces the order of past events involves him in an impossible position. How does one know that a given piece of memory has reproduced the order of the past events? Is it possible for my mind to be directly acquainted with the past events without the involvement of memories? It is only in such a condition that I can compare the two, the memory and the past events. If not, then how can we say that memory has reproduced the order of the events correctly? And if it is possible to be acquainted with past events without memory, then why to introduce memories? It is because mind cannot be directly acquainted with the past that the medium of memory was introduced. Comparing memory with memories solves no problem.
In Hume's philosophy both memory and imagination play crucial role. For example, though Hume maintains that there is no external world, he also maintains that the human beings do have a belief in the external world. How does this belief take place? How do we come to believe in an external world? Memory helps us in remembering the perceptions that I had in the past. Imagination later introduces identity in the resembling perceptions. So it is with the help of both memory and imagination that belief in the external reality that exists independently of human mind, arises. Both memory and imagination are structural items of Hume's empiricism.

Abstract or general ideas in the form in which they were accepted by Plato and Locke were not acceptable to Hume. Plato invented an independent world of general ideas, over and above the world of particular ideas. Acceptance of such a world cannot be approved by a consistent empiricist. So Locke was wrong about the general ideas though he was an empiricist. He attempted to obtain general ideas through the process of abstraction. What is common to different particulars is abstracted. After abstraction a general idea is formed. Take for example the objects that we call horses, general idea of horse is formed by what is common to different horses. One horse may be white and the other gray, so what is common to two horses is not white or gray. What is common to them is only colour. Similarly about size and figure etc., different horses have different sizes but all of them have size. So size is common to all of them. So abstraction of what is common to different objects means not abstracting any precise quality or quantity. It is only the general character that in abstracted. Hume would say that he tried his best to form the general idea of the horse but failed. In his mind only those ideas exist that have precise colour, shape and figure. As he says, "that the mind cannot form any notion of quantity or quality without forming a precise notion of the degrees of each." This means that Hume can find the notion of white horse or gray horse but not just of a coloured horse. Our mind does not entertain any such thing as general idea. All ideas that exist in one's mind are particular ideas. Abstract general
ideas are fictions introduced by such great philosophers as Plato and Locke.

The function of an abstract or general idea is to bring different particulars together. But this can also be done by a particular itself. Suppose I take up a particular object and call it 'leaf'. All objects, which resemble this object, may be called leaves. So particular leaf has been put to perform the same function, which is being performed by a leaf in general. Hume succeeds in placing particular ideas in place of general ideas.

Just as Plato gave more importance to universals over particulars, there were philosophers who preferred particulars to universals. The latter tendency has origin in Aristotle. Protagoras was wholly devoted to particulars. Hume maintained, not only the superiority of particular over universals, he was interested in totally demolishing the universals. However, he failed to do so. He has taken the help of at least one universal. The universal in question is 'resemblance'. This universal can have its own instances.

Hume has made very penetrating remarks about academic disciplines. Consider his remarks, "T is not solely in poetry and music, we must follow our taste and sentiment, but likewise in philosophy.... When I give the preference to one set of arguments above another, I do nothing but decide from my feeling concerning the superiority of their influence." It is not only in philosophy, even in science, taste and sentiments are given importance.

Hume became a controversial figure simply because it is quite difficult on our part to decide Hume's preferences. He maintains that "there is a direct and total opposition betwixt our reason and our sense." This opposition led him to scepticism. One would feel that he rejects both reason as well as senses. However, he is on the side of senses. It is the senses, which lead us to form certain habit or custom. Custom, according to Hume, "is the great guide of human life. It is that principle, alone which
renders our experience useful to us, and makes us expect, for the future, a similar train of events with those which have appeared in the past. Without the influence of custom, we should be entirely ignorant of every matter of fact beyond what is immediately present to the memory and senses. It is such remarks as these, which would lead one to think that Hume, was no kind of a sceptic or that he was not serious about scepticism. If he was a sceptic then perhaps he was sceptic about philosophy and theology rather than about sciences. As his famous remark goes, "If we take in our hand any volume; of divinity or school metaphysics, for instance; let us ask, Does it contain any abstract reasoning concerning quantity or number? No. Does it contain any experimental reasoning concerning matter of fact and existence? No. Commit it then to the flames: for it can contain nothing but sophistry and confusion."

Thus Hume has shown that nothing less than the relations of ideas in mathematics and matters of fact in science is acceptable to philosophy. Empiricistic philosophy cannot accept the so-called metaphysical truths, because they are not certain like mathematical truths, nor are they probable like the truths in sciences. Hence metaphysics as a non-empirical and non-mathematical discipline is impossible.

Hume has thus prepared the ground for a critical examination of the grounds of our knowledge later by Kant. Hume awakened Kant from his dogmatic slumber. He made possible the emergence of transcendental or critical philosophy in the Continent.

7. KANT’S CRITICAL MODEL OF KNOWLEDGE:

The rationalist and empiricist model of epistemology differed in their account of the possibility of human knowledge. The conflict was very simple. Empiricists gave over-importance to experience. Similarly the rationalist gave over-importance to reason. One gave no importance to reason, other gave no importance to experience. Both were
wrong. Knowledge is possible neither without experience nor without reason. Kant tried to resolve the conflict between rationalists and empiricists. He was a historical necessity, if philosophy had to make any progress. Progress means not the repetition of what has already been done, but the production of something new. It was no surprise that Kant was influenced by the rationalist tradition. Perhaps he would have remained a rationalist philosopher if he had not come in contact with Hume’s sceptical thought. It is Hume’s scepticism that awakened Kant from his dogmatic slumber. If he had not read Hume he would have remained a dogmatist. If one studies the fundamental structure of Hume’s thought one would find a way to Kantian thinking. All those entities, which Hume failed to find in experience, such entities as ‘self’, ‘cause’, etc., were converted by Kant into a priori presuppositions of experience. According Korner, Kant never “ceased to admire Hume’s philosophical acumen. For his anti-metaphysical argument he remained avowedly grateful. It had taught him that whoever wishes to engage in a metaphysical inquiry must first be clear about the nature of the undertaking.” Kant was convinced by Hume’s attack that not all metaphysics is genuine. Therefore the question arises, put crudely, how is genuine metaphysics possible?

There was another conflict that also required resolution. The conflict was between the idealists who thought that the reality is created by human mind and the realists who thought that the human mind only records what is there outside the mind. According to the realists, mind only records what is given to us. But the idealists reject any objective reality. This conflict was no less important than the conflict between the rationalists and the empiricists.

To Kant the human mind appeared quite complicated. It is through the study of human mind that Kant could think in terms of creating a Copernican revolution in philosophy. The kind of revolution that Copernicus made in astronomy, Kant claimed to have made in philosophy. In the pre-Copernicus days it was thought that the earth is the
centre and all the other planets move around the earth. Copernicus converted earth into one of the planets moving like other planets around the Sun. Kant created a similar revolution in philosophy by giving higher importance to mind over objects. Though mind does not create objects, it constructs them, so in a way recreates them. The pre-Kantian position was that our knowledge had to conform to objects. The Kantian position is that the objects have to conform to our knowledge. Human knowledge is produced by mind, but mind is not a simple receptor of any kind. Knowledge is the end product of the processing done by sensibility and understanding.

The reality that is given to our experience, i.e. the objects that we see, hear, touch, taste and smell etc. are not as they really are. Our seeing, touching, tasting, hearing etc. i.e. our perceptual activities, have introduced changes in them. Primary change that occurs to them is the placement in space and time. Each object occupies some part of space and occurs at a given time. According to Kant, we cannot conceive an object without space and time. But one can conceive space and time without objects. Kant considers space and time as a priori forms of sensibility. They cannot be abstractions from experience, because they make experience possible. After giving a spatio-temporal structure to the data given to sensibility, the data are forwarded to the understanding where they are brought under categories. The categories provide a logical structure to the sense-manifold.

The reality with which we are in contact all the time, which is spread out in space and time, is described by Kant as phenomenal reality. The phenomenality presupposes some reality, which is beyond the phenomenal reality, and which is in some sense the ground for the phenomenal reality. Kant calls it as noumenal reality i.e. reality as it is in itself. Man has not brought noumenon into existence, but in some sense he has brought phenomenon into existence. For phenomenon is the result of the contact of reality with human mind.
Kant's philosophy is called critical because it evaluates the extent of reason critically. Kant did not accept Hume in rejecting metaphysics. But he wished to construct metaphysics on a secure foundation. The critical method was designed to provide a secure foundation not only to metaphysics but also to epistemology.

Kant affirmed that we possess a faculty that is capable of giving us knowledge without an appeal to experience. He agreed with the empiricists that our knowledge begins with experience, but he added that "though all our knowledge begins with experience, it does not follow that it all arises out of experience." For Hume all our knowledge consists of a series of impressions, which we derive through our senses. We clearly possess a kind of knowledge that does not come out of experience even though it begins with experience. Hume was right that we do not experience causal necessity but Kant rejected his explanation that causality is simply a psychological habit of connecting two events that we call cause and effect. Kant believed that we have knowledge about causality, and we get this knowledge not from sense experience but directly from the faculty of rational judgement, and therefore is a priori. What is a priori knowledge? Kant replies that if one desires an example from science, one needs only to look at any proposition in mathematics. If one desires an example from the commonest operations of understanding, the proposition that every change must have a cause can serve one's purpose. Kant says that this kind of knowledge cannot be derived from experience. Experience cannot show us that every change must have a cause since we have not yet experienced every change. Nor can experience show us that connections between events are necessary. Experience cannot give knowledge about necessary connections. Hume's theory would work for the ideas of things we have actually experienced. If I ask, how do I know that the chair is brown? My answer is that I can see it and if my assertion is challenged, I refer to my experience which settles the question, because we all agree that experience gives us a kind of knowledge that conforms to the nature of
things. But we also have a kind of knowledge, which cannot be validated by experience. For example, every straight line is the shortest distance between two points. What makes it possible for me to make judgements about events before they even occur? What makes it possible to have judgements that are universally true? For Kant, mind makes judgements about all objects, even those that have not yet been experienced. It is the seat of the necessary and universal judgements. Kant was forced to try a new hypothesis regarding the relation between the mind and its objects. Kant’s hypothesis was that it is the objects that conform to the operations of the mind. He came to this hypothesis following Copernicus. Kant says “Hitherto it has been assumed that all our knowledge must conform to objects. But all attempts to extend our knowledge of objects by establishing something in regard to them a priori, by means of concepts, have, on this assumption, ended in failure. We must therefore; make trial whether we may not have more success in the task of metaphysics, if we suppose that objects must conform to our knowledge.”¹⁹³ He further says: “If intuition must conform to the constitution of the objects, I do not see how we could know anything of the latter a priori, but if the objects (as object of the senses) must conform to the constitution of our faculty of intuition, we have no difficulty in conceiving such a possibility.”¹⁹⁴

Kant did not mean to say that the mind, creates objects, nor did he mean that mind possesses innate ideas. He says that the mind brings something to the objects it experiences. That is, mind is structured in such away that it imposes its way of knowing upon its objects.

Kant says that there are two sources of human knowledge, which perhaps spring from a common but to us unknown root, namely sensibility and understanding. Knowledge is a cooperative affair between the knower and the thing known. Although I am able to distinguish between myself as a knower and the thing I know, I can never know that thing as it is in itself. I know it as my structured mind permits me to know it.
So Kant says, "Without sensibility no object would be given to us, without understanding no object would be thought. Thoughts without content are empty, intuitions without concepts are blind."\(^9\)

The distinct activity of the mind is to synthesis and to unify our experiences. It achieves this synthesis first by imposing on our various experiences in the sensible manifold two forms of intuition, namely space and time. But space and time are not ideas derived from the things that are experienced. The manifold of experience is judged by us through certain fixed forms or concepts such as quantity, quality, relation and modality. When we assert quantity, we have in mind one or many. When we make a judgement of quality we make either a positive or a negative statement. When we make judgement of relation, we think of cause and effect and subject and predicate. When we make judgement of modality we have in mind that something is either possible or impossible. All these ways of thinking are what constitute the act of synthesis through which the mind strives to make a consistent single world out of the manifold of sense impressions. Kant says, the mind transforms the raw data given to our sense into a coherent and related set of elements. This leads to the unity of our experience which must imply the unity of the self, for unless there be a unity between the several operations of the mind, there can be no knowledge or experience. To have such knowledge involves, in various sequences, sensation, imagination and memory, as well as the powers of intuitive synthesis. Thus, it must be the same self that at once senses an object, remembers its characteristics, imposes upon it the forms of space and time and the category of cause and effect. All these activities must occur in some single subject, otherwise there could be no knowledge, for if one subject had only sensations, another only memory, and soon, the sensible manifold could never be unified. Kant calls the single subject that accomplishes this unifying activity as ‘transcendental unity of apperception’. He uses the term “transcendental” to indicate that we do not experience the self directly even though such a unity or self, is implied by our actual experience.
Thus the idea of this self is a priori, as a necessary condition, for our experience of having knowledge of a unified world of nature. In the act of unifying all the elements of experience, we are conscious of our own unity, so that our consciousness of a unified world of experience and our own self-consciousness occur simultaneously. Our self-consciousness is affected by the same faculties that affect our perception of external objects.

The major impact of Kant’s critical philosophy is the insistence that human knowledge is forever limited in its scope. This limit takes two forms. In the first place, knowledge is limited to the world of experience. Secondly, our knowledge is limited by the manner in which our faculties of perception and thinking organize the raw data of experience. Kant distinguishes between the world as we experience it and the reality. There is the reality external to us that exists independently of us, but that we can know only as it appears to us and is organized by us. The concept of a thing in-itself does not increase knowledge but reminds us of the limits of our knowledge.

If the human knowledge were limited to the faculties of sensibility and understanding then the kind of metaphysics, which would arise, would also be limited. Strawson distinguishes metaphysics into two kinds, descriptive and revisionary. He places Kant and Aristotle in the class of descriptive metaphysicians. Philosophers like Plato and Hegel belong to the group of revisionary metaphysicians. Descriptive metaphysician does not use reason-crossing boundaries of understanding, he keeps the reason limited to the understanding. According to Strawson, metaphysicians like Kant are only making explicit transcendental presuppositions of thought. Transcendental presuppositions of thinking are those presuppositions, which make thinking possible. Therefore this is very different kind of metaphysics, than the kind of metaphysics that was done by Plato, Hegel etc.
Kant’s critical method thus brings out the transcendental presuppositions of our knowledge of the external world. The transcendental account of knowledge explains the a priori possibility of knowledge; that is, it brings out the a priori principles, which underlie knowledge. In this way the sceptic’s argument that knowledge is not possible is refuted by Kant.

Kant’s argument against scepticism is the strongest because he shows that knowledge is not only possible but is founded in our faculty of sensibility and understanding. Because of these a priori foundations our knowledge is certain and indefeasible. There is an element of necessity not only in our mathematical knowledge but also in our empirical knowledge of the world. The concept of necessity will be discussed in the following chapters.

NOTES AND REFERENCES

3 Ibid., p. 8
4 Ibid., p. 8
5 Ibid., p. 81
6 Ibid., p. 223
7 Ibid., p. 101
8 Ibid., p. 101
9 Ibid., p. 105
10 Ibid., p. 192
11 Ibid., p. 192
12 Ibid., p. 190
13 Ibid., p. 192
16 Ibid., Part I, Proposition. VII, p. 4.
17 Ibid., Part I, Proposition. XIV, p. 11.
18 Ibid., Part I, Proposition. XV, p. 11.
19 Ibid., Part I, Definition. VI. p. 1.
20 See Ethics, Part II, Proposition 1, p. 38.

103
21 Ibid., Part II, Proposition II, p. 39.
25 Stuart Hampshire, Spinoza, p. 85.
26 Spinoza, Ethics, Part V, Corollary of the Proposition XXXIV, p. 218.
28 Op Cit., Part V, Proposition XXIII, 213.
30 Ibid., p. 47.
33 Ibid., p. 180.
35 Ibid., p. 49.
36 Leibniz, Philosophical Writings, p. 184.
37 Ibid., p. 15.
38 See for detailed discussion Rescher, Leibniz An Introduction to His Philosophy, pp. 22-25.
39 Quoted by Rescher, Ibid., p. 29. From Discourse on Metaphysics, p. 5.
40 Ibid., p. 66.
41 Leibniz, Philosophical Writings, p. 131.
42 Ibid., p. 183.
43 Ibid., p. 183.
48 Ibid., pp. 39-40.
49 Quoted by Yolton, John Locke and Way of Ideas, p. 73. From Lee Henry, Anti-Scepticism, p. 67.
50 Ibid., p. 75.
51 Ibid., pp. 86-87.
53 Quoted by Yolton, John Locke and Way of Ideas, pp. 88-89. From The Bishop of Worcester’s Answer to Mr. Locke’s second Letter, 1698, p. 71.
61 Op Cit., p. 185.
62 Op Cit., p. 2.
63 Ibid., p. 6.

Ibid., p. 227.

Ibid., p. 228.

Ibid., p. 229.


Quoted by Grayling, Ibid., p. 17.


Ibid., p. 23.

Ibid., p. 24.

Ibid., pp. 25-6.

Op Cit., p. 181.

Ibid., p. 180.

Ibid., p. 9.

Ibid., p. 10.

Ibid., p. 18.

Ibid., p. 103.

Ibid., p. 231.

Op Cit., p. 44-45.

Ibid., p. 165.


Ibid., p. 22.

Ibid., p. 22.

Ibid., p. 93.