

help of induction of Bacon, for reasons mentioned before. Lastly, the scientific advance really would have been stifled if the scientists had put their eyes on the practical fruit of knowledge.

Then the historians wrongly read a great many anticipations in the writings of Bacon. It is said that the doctrine of the Idolas is an anticipation of Kant, for like Kant it implies that the nature of the mind determines the nature of knowledge. However, we must not forget that mind for Bacon is a passive thing, for he points out that our mind should be as receptive as that of a child. Besides, the doctrine of the idolas is only a subjective condition for knowledge and unlike the view of Kant, mind is not regarded as constitutive and regulative of knowledge.

Some, again, look upon Bacon as the father of Pragmatism for he emphasizes the usefulness of knowledge. However, it is one thing to say that knowledge should be used for achieving practical ends and quite another thing to hold that knowledge is precisely what it does.

Therefore, we must not exaggerate the services of Bacon to mankind. He called himself the trumpeter of his times and that he was. He gathered the major thoughts and tendencies of his age and has given a systematic expression to them in masterly English. He is the aura of the dawn of Modern Philosophy and like a harbinger gave forth the signs of its greatness. In him we do not see the father or initiator of modern philosophy but rather the close of the middle ages. Measured by the standard of the mediaeval he sounds modern, but judged by the standard of the modern he is just mediaeval. No doubt Bacon tries to emerge from the mediaeval doctrines amongst which he feels insecure but he relapses into them. The more he struggles to be free, the more entangled he becomes in the shackles of the past. "No man can leap beyond his own shadow, hardly one beyond the shadow of his age" (Eradmann, *History of Philosophy* pp. 682-83). His philosophy, therefore, is just marginal.

Bacon's philosophy is full of vaguely unrealised promises. It is simply sound and fury signifying nothing. He made a propaganda to conquer the kingdom of Alexander but battered none of its defences. His philosophy can hardly be called a system for he has nothing to say about God, the world or the soul. As such he left no followers. But then it will be told that his emphasis on experience, in acquiring knowledge should entitled him to be the father of British Empiricism. To some extent this may be allowed. However, we must not forget that Locke hardly makes reference to Bacon. Lockean empiricism really derived a greater impetus from Descartes and the Cartesians than from Bacon.

## 2

**Rene Descartes (1596-1650)**

Descartes, a Frenchman, was born in Touraine in 1596. He came of a wealthy family. Throughout his life he remained a bachelor and his inheritance enabled him to dedicate himself to philosophical meditation. Apart from being an epoch-making philosopher, Descartes was a creative mathematician. His great fame induced Queen Christiana of Sweden. At her invitation he went to Stockholm in October, 1649 but the following year in February, 1650 he died of pneumonia.

**2.01. The Method of Descartes**

Descartes was very much worried by the uncertain state of philosophy in his times. He saw that philosophy was cultivated for many centuries by the best minds that had ever lived and there was yet not a single proposition in it which was not under dispute.<sup>1</sup> However, Descartes did not despair of knowledge, and knowledge for him, must attain a certitude equal to that of the demonstrations of Arithmetic and Geometry.<sup>2</sup> This knowledge, he thought, could be attained if we use an appropriate method of enquiry. Seeing that knowledge proper has already been attained in Arithmetic and Geometry, he was surprised to find that philosophers had not reared a lofty edifice on such a firm and solid foundation. However, it was the method and not the subject-matter so much which had enabled mathematics to attain certitude. So Descartes attempted to understand the method of mathematics which could be utilised for advancing knowledge in any subject. He called his own enquiry as 'Universal Mathematics' in Rule IV of his *Regulae*. This will be called 'metamathematics' today. "Such a science", according to Descartes, "should contain the primary rudiments of human reason, and its province ought to extend to the eliciting of true results in every subject".<sup>3</sup>

[Descartes has noted that deduction alone could yield *certain results* and experiential inference could not yield errorless results.<sup>4</sup> But he did not see that these methods dealt with two different kinds of propositions. Further, only now we are beginning to realise that philosophy does not deal with cognitive but with non-cognitive propositions concerning self-realisation. Such distinctions would show

1. "Discourse on the method" in *Philosophical Works of Descartes*, Translated by E.S. Haldane & G.R.T. Ross (Dover Edition 1931) pp. 85-86.
2. Rules for Directions, *Ibid.*, p. 5.
3. *Ibid.*, p. 11.
4. *Ibid.*, p. 4.

that the criterion of mathematics cannot be applied to the understanding of philosophical problems.]

Descartes therefore was very much concerned with the enquiry into the method of philosophising. He had proposed to lay down thirtysix rules of which he mentioned thirtyone in the *Regulae*. The object of Cartesian methodology was to apply mathematical method of philosophy with a view to obtaining certitude in knowledge. As a result of his enquiry, he laid down four broad rules for his self-guidance.<sup>1</sup>

1. Never to accept anything as true unless I clearly know it as such.<sup>2</sup>

Descartes believes that errors arise from poorly comprehended experiences or from hasty, groundless and preconceived notions. The only remedy, therefore, he thinks, lies in resolute refusal to believe in what is not clearly and distinctly perceived.

2. Divide up each of the difficulties, under examination into as many parts as possible.

We begin with something vague and indefinite and later on, step by step, attain clearness and distinctness.

3. Commence with the simplest objects and ascend, step by step to the more complex.

The explanation must be ordered and systematic. Here Descartes is in favour of deductive use in philosophical thinking, for he implies that later steps, should be clearly deducible from earlier ones.

4. In every case make the enumeration so complete that I might be assured that nothing was omitted.

The complex thing can be understood when we know its (*i*) several constituent factors separately, clearly and distinctly, and when we (*ii*) know the order or system in which they are found.

Descartes, being himself a great mathematician, was struck by the excellence of mathematics. Therefore, in order to make philosophy truly scientific he hoped to make its method patterned on mathematics. Now in Geometry we first of all start with a few self-evident axioms and then reach the whole body of its conclusions by means of simple elaborative deduction. Now in the same way in philosophy too, he tells us, to find out "by an inductive enumeration and a critical sifting of all ideas. . . a single certain point to deduce all further truths. The first task of philosophy is *analytic*, the second *synthetic*." (Windelband, *Ibid.*, p. 390)

Now how can we find something which is sure and certain? Descartes believes that the single, certain truth can be systematically sought by deliberate doubt. When doubt is pushed to its farthest limit then it will reveal something which is indubitable, which is clearly perceived. Now in order to discover the indubitable

1. "Discourse on method", *Philosophical Works of Descartes*, Vol. I, p. 92.

2. This he also states in rule IX of the *Regulae*.

intuition, let us doubt all that can be doubted.

(i) *Sense-testimony can be doubted*. Things of our daily life like tables, chairs, etc., we know through the senses. But the senses deceive us as is clear from illusions, hallucinations etc. Now prudence demands that we should not rely on things which deceive us even once.

We are deceived not only by distant and minute objects but also by other things. However, some may think that it is impossible to doubt that we are seated here, in a certain place at a certain time. but similar certainty is also found in our dreams, who knows that we may be dreaming and the things of the present sense-experience may be deceiving us?

Thus some sense-beliefs are more probable than others. All of them, again appear convincing, as long as they last. But, then, whether even one of them is certain, past doubt we have no grounds of believing; on the contrary have ample grounds for doubting.

(ii) *Even the truths of science can be doubted*. At this stage, it might be objects that the truths of sciences like  $2+2=4$  cannot be doubted, even in dreams. However, the case does not seem to be quite clear. We cannot know whether any truth of knowledge is at all intended for us finite beings; whether God has not created us rather for mere opinion and error. Besides, who knows there might be no God at all. There might be a demon at once potent and malignant who tricks us to believe in falsehood.

*That I doubt cannot be doubted*. When the doubt has done its worst it finds a fact of completely unassailable certainty. I may doubt anything but I cannot doubt that I am doubting. Whether it be a dream or a real consciousness, I must exist as a doubting or thinking being. Let there be a demon to deceive me, but then I must exist as a thinking being to be deceived. Hence, I doubt or think, therefore, I exist, i.e., *cogito ergo sum* is the one certain truth which may be taken as the foundation of philosophy.

The doubt of Descartes should not be confused with psychological doubt. For example, in darkness, when a small creature crosses our path, we may doubt whether it was a mouse or a mole. The two may be thus contrasted:

#### *Descartes' Doubt*

1. It is not a thing of direct feeling and experience but is a deliberate and dispassionate attitude towards human experience in general.
2. It is not directly determined by the nature of objects.
3. The logical doubt of Descartes is deliberate, depending on the will.

#### *Psychological Doubt*

1. This is directly felt and experienced by us as such, as in the previous example.
2. It is caused by the nature of object about which we want to know.
3. It is independent of our will. However, hard we may will, the doubt continues.

4. This is concerned with attitude towards total things or ultimate things.
4. It is concerned with particular things of daily life.

Again, the doubt of Descartes should not be confused with Scepticism. Descartes is not asserting that whatever can be doubted is false, but he is only supposing it to be false. Again, the scepticism is the finished conclusion about knowledge which professes the denial of any certain knowledge whatsoever. However, the Cartesian doubt is only a starting point to find out that which cannot be further doubted.<sup>1</sup>

## 2.02. Cogito Ergo Sum

This *cogito ergo sum* is the first final certainty and as such we have to be careful in its interpretation as well as in deciding its position in the Cartesian philosophy.

First, what Descartes tried to establish is not an inference but a simple fact of primitive knowledge or a self-evident axiom. Had it been an inference, then it would be merely dependent on premises for its certainty and then again these premises on other premises for their certainty. This would lead to infinite regress without reaching the indubitable truth. However, the certainty of the *cogito* is clear and distinct, and, that nothing else could be perceived or intuited with the same certainty. *Cogito ergo sum* means that my consciousness is the means of revealing myself as something existing. Here is the indubitable truth of the inseparability of thought and thing. My being implied in my being conscious is the first principle both logically and psychologically. Of course the use of the term ‘therefore’ was unfortunate for it led to the interpretation of the *cogito* as an inference. However, ‘therefore’ primarily means a step in inference but secondarily it means a relation of necessary connection. Descartes uses the term ‘therefore’ in the secondary sense.

Again, ‘I think therefore I am’ should not be emphasized to hold that thinking alone guarantees self-existence. The important thing is to show that it is my consciousness which carries with it the existence of myself. No other function apart from conscious function can guarantee the existence of the self. Therefore it would be wrong to say because ‘I walk therefore I am’, for walking without being conscious cannot imply self-existence.

Further, in *Cogito* I know that I am, but I don’t know that I am, i.e., the content or that which constitutes the self is not known. All that we can say that the thinking this is that which doubts, imagines, senses etc. But beyond these, we cannot say that my body is myself or not.

Lastly, we can say that which thinks is a *substance*. “It is certain that thinking cannot exist without a thing which thinks or generally that any accident or activity cannot be without a substance of which it is the activity.”

1. Discourse on the method, *Ibid.*, p. 99.

### 2.02A. Critical Comment on Cogito Ergo Sum

Descartes was of the opinion that the permanent self or Ego can be *known* with certainty. Even Locke believed that one’s self can be known by intuition. However, Hume and Kant reject the contention of Descartes. They hold that the permanent self can never be known empirically. We shall find this in relation to Hume’s refutation of spiritual substance and in relation to Kant’s *paralogism of reason*. The contention of Kant that the transcendental subject can never be an object of knowledge is also maintained with a great deal of logical rigour by the Vedantins.

Descartes however was greatly influenced by his assumption with regard to the doctrine of ‘substance’ and its unchangeable attribute.<sup>1</sup> For this reason he concluded that there is a permanent self, since there is its unchangeable attribute of ‘thinking’. Now-a-days this kind of reasoning will be called *a priorism*. Once we grant that there is a permanent substance which must have its unchanging attribute, we have to conclude that the self is a permanent substance, since we have found out its essence called ‘thinking’ which even the worst of doubt cannot demolish. But this is bad metaphysics. We cannot bring anything into existence by defining it. All that we are permitted to conclude is that from a given idea taken on our assumption, we can deduce another from it. This would mean that *not* that a permanent self is a *fact*, but simply from that from a certain *idea* we can deductively infer another *idea* of a permanent self. We shall find this point again with regard to the ontological proof for the existence of God. From an *a priori* idea, we can never pass to an actual fact.

The root of the trouble lies in the faulty use of the verb ‘to be’. ‘To be’, properly speaking can be used only in conjunction with a predicate. For example, a proper proposition is, ‘I am a poet’, and not simply ‘I am’, — certainly not in conjunction with a proper name.<sup>2</sup> The verb ‘to be’ by itself cannot be a predicate.

Secondly, there can be no logical transition from ‘I think’ to ‘I exist’. ‘Existence’ can be maintained not with regard to the subject, but regard to the predicate. When we say: ‘I am a poet’, it does not say with anything about my existence. It, however, points out that poets exist. Similarly, from ‘I think’ all that can be established is that there is thinking or that there is a state of thinking consciousness.

### 2.02B. Importance of the Cogito

*Cogito* occupies a strategic position in the philosophy of Descartes for the following reasons:

1. N.K. Smith, *New Studies in the Philosophy of Descartes*, pp. 328-29.

2. R. Carnap, ‘The elimination of metaphysics’, and M. Schilck, ‘Positivism and Realism’ in *Logical Positivism*, edited by A.J. Ayer, pp. 73f, 96, 98f.

(i) *Cogito* supplies its own evidence of clearness and distinctness which none of the things doubted had. This characteristics of clearness and distinctness which serves as the criterion of all other truths not deduced, but is *intuitively induced* from a single instance.<sup>1</sup>

(ii) *Cogito*, strictly speaking, is neither a first principle nor a premise. It is simply a sufficient answer to any future agnosticism which may hinder us from attaining certain knowledge.

(iii) Again, *cogito* is the first existential proposition which points out something actual existing, namely myself as the doubter or the thinking being.

(iv) Here we come in contact with a very important quality of consciousness which will serve as the distinguishing mark of mind in relation to material bodies.

The method of Descartes is deductive-inductive analytic-synthetic. It is inductive for it is based on the discovery of a certain truth. Again, it establishes a first clear and distinct perception or intuition. It is deductive for Descartes, as all other elements of his philosophy gradually follow from this one single certain truth, i.e., *cogito*. Of course, the deduction of Descartes is not syllogistic. In Descartes' words his deduction is unilateral, proceeding from one previously established point to the next and from this to others till we reach some hitherto unknown result. "Passing little by little from one to the other, we may acquire in time a perfect knowledge of the whole of philosophy."

Descartes seems to make three assumptions in his method carried on through doubting.

(a) That there is some certain knowledge about the actual world.

This seems to be the most important assumption. It is difficult to believe the possibility of any philosophy without this assumption. Any way the certain knowledge must be such as can be believed by all and such as can never be doubted by anybody. Its 'necessity' must be self-evident.

(b) Again, 'what is clear and distinct is true' can be proved to be true.

(c) The deductive knowledge involving memory can have the same certainty as intuitive knowledge.

### 2.03. Criterion of Truth

Now let us try to determine that in *cogito* (*Philosophy*, Vol. XVII, No. 69, April 43, Gewirth 'Clearness and Distinctness in Descartes') which makes it true. This something by virtue of which *cogito* becomes indubitable will serve as the criterion or touchstone of all further knowledge. Now *cogito* is true because it is clear and distinct. Hence, clearness and distinctness may be regarded as the criterion of any true knowledge.

Anything which is as clear and distinct as is *cogito* must be regarded as true.

This criterion of clearness and distinctness has been regarded by Leibnitz,

1. *Philosophical Works*, vol. I, pp. 7, 33 for intuition.

Gassendi and Hoffding as purely subjective, for psychologically what is clear and distinct to me may not be so to others. Hence, Leibnitz demanded a proof of clearness and distinctness which should be palpable, mechanical and lacking the least difficulty in its understanding. No doubt Descartes required a certain psychological discipline to perceive something clearly and distinctly but he also supplied a certain logical standard about his criterion.

Idea has usually three elements, namely (a) Perceptive act, (b) a modification of the mind, a mental content and (c) a representative of something external to the mind. Now Descartes uses clearness and distinctness primarily for the first two functions of the mind and also determines later how it is to be attained in the third case. Now he defines his criterion of clearness and distinctness thus.

"A clear perception I call that which is present and open to the attending mind, just as we say that those things are clearly seen by us which, being present to the regarding eye, move it sufficiently strongly and openly. But that perception is distinct which is not only clear but is so precise and so separated from all others that it plainly contains in itself nothing other than which is clear."

Hence to be clear an idea must be *present* to the mind, *open* to the mind and the mind also must *attend* to it. Similarly, distinct is that which is precisely determined so that it may not be confused with anything else.

Again, Descartes uses clearness and distinctness in relation to the representative functions of ideas also. Now an idea is clear when the mind includes in it that content, which is 'integral and complete' in relation to the mind's interpretation of it, and it is distinct when the content of the idea includes nothing other than this. For example, the idea of God is clear when it includes all that which goes to constitute the idea of God, and distinct when it includes nothing else.

It is true, as Prof. N.K. Smith has pointed out<sup>1</sup> that Descartes has not been able to lay down any logical criterion of clearness and distinctness. But it is worthy of note that Descartes illustrates his meaning with regard to mathematical propositions and points out that they follow from the 'light of reason alone'. Whereas with regard to propositions of matters of facts, he points out, that they are obtained not by natural light, but by 'a certain spontaneous inclination'.<sup>2</sup> He also notes that intuition and deduction are the only certain routes to knowledge and no other routes should be admitted.<sup>3</sup> And inference based on experience can never be certain,<sup>4</sup> according to him. Hence, Descartes was classifying propositions into two kinds, namely, propositions of mathematics which are true by definition only and factual propositions which can be proved indirectly only, through the veracity of God. If he had thought sufficiently enough on the distinction between his knowledge of self or Geometrical axiom given by *intuition* and his knowledge of matters of fact based

1. *Ibid.*, p. 319f.

2. Meditation III.

3. Rules for direction III, *Philosophical Works*, p. 8.

4. Rules for direction, *Ibid.*, p. 4.

on 'confused ideas' given by 'spontaneous inclination', then he would have defined the criterion of truth more precisely.

However, Descartes, does not use the term clearness and distinctness for truth. Truth or falsity is found in judgments which are the product of intellect as well as will. This topic we shall take up later.

#### 2.04. The existence of God

Let us try to rehabilitate the world which the doubt had destroyed. Now with the criterion of clearness and distinctness let us see which ideas are true or false. Now ideas are either innate or those derived from outside or are pure inventions. But of all the ideas there is one innate idea of Being who is 'eternal, omniscient, omnipotent, source of all goodness and truth, creator of all things and in sum having in himself all those things in which we can clearly note some perfection which is infinite, or tainted by no imperfection.' Now what can be the cause of this idea? At least the cause must be equal to the effect. I cannot be the cause for I know myself to be finite being. Hence this idea must have been caused by an equally perfect cause, namely, the infinitely perfect being called God.

The causal proof of the existence of God is based on two assumptions, namely (i) Individual consciousness knows itself to be finite, and, (ii) This consciousness of 'God' is derived only from the conception of an absolutely perfect being. Of course, some may object that the infinite being may be a negative idea, i.e., that which is not finite. Now Descartes points out that the idea of the infinite being is the most positive idea for in comparison with the fullness of the Perfect Being we realise our finitude.

**Ontological Proof:** No doubt Descartes also adds to this causal proof, the cosmological proof for the existence of God. He asks, what can be the cause of myself, my parents and all other finite beings? This he concludes, can be proved only with the help of the idea of a Perfect Being who has created everything else in the world. But the most important proof of the existence of God is *Ontological*. According to this, the existence of God follows from the very idea of the perfect being just as the equality of 3 angles of a triangle = 2 right angles follows from the very idea of a triangle. The most perfect being cannot be thought without at the same time thinking of Him as actually existing. Of course, the idea and the actual finite thing are not inseparable. One can think of a winged horse though there may be none in reality. But this idea of a perfect being, according to Descartes, cannot be thought apart from His existence.

Descartes has been accused of copying Anselm's proof for the existence of God which runs thus : 'Consideration demonstrates the word God to mean that which must be thought as what is greatest; but to be in actuality as well as in thought, is greater than to be in thought alone; therefore, God exists not only in thought, but in fact.' This proof makes God's existence dependent on the thought of it. God

exists, because we think of a perfect idea, namely, God. Descartes points out that his proof is different from that of Anselm for Descartes makes the thought of God dependent on His Being. 'Whatever we clearly and distinctly perceive to belong to the true and unalterable nature of any thing, to its essence, its form, that may be predicated of it. Now we find, on investigating God, that existence belongs to his true and unalterable nature, and therefore, we may legitimately predicate existence of God.'

#### 2.05. Critical Comments

Ontological proof is based on the assumption that 'existence' is a predicate or a quality like colour, taste, weight etc. Unfortunately, fictional entities do not form a class distinguishable from other objects by virtue of their having 'non-existence'. For instance, chimeras and gold mountains do not form a class of non-existence. A non-existent mango has all those qualities which an existent mango has. A non-existent God no wise differs from an existent God. "A hundred real thalers do not contain the least coin more than a hundred possible thalers."

The content of both must be one and the same, otherwise the concept would not truly represent the actual coin. Hence, the question is not whether God exists or not. The real problem would be, 'Is God love or personal or responsive to human prayers?' If God could be shown to be 'love' or 'personal', then his actuality follows from this. If I could show that there is yellow, fragrant mango on the table, then its existence automatically follows from this.

One thing is certain that concepts are not things. 'If wishes were things, beggar would ride cars', and, certainly nobody would suffer from any want. Unfortunately, from no amount of thinking intensely we can produce an actual thing. At most from a concept we can deduce another concept as a result of entailment. Descartes himself points out that properties of a triangle follow from its definition. But we know that a proposition of mathematics is independent of any actual state of affairs. Here, as a result of deduction we can proceed from one proposition to another. But these propositions do not become *empirical* propositions as a result of deduction. Similarly, we can proceed from a perfect idea to another idea of 'an existent perfect Being'. But the idea of an existent Being is an idea and not an actuality.

The ontological proof is based on self-contradictory terms, viz., 'necessary Being'. If God is 'necessary', then it can be expressed in analytic propositions only, as in Logic and Mathematics. But as noted earlier, such propositions do not deal with actual state of affairs. Again, if God is an existing Being, then He can be given by experience only, as Kant had pointed out long ago. But we know that an empirical proposition, no matter how many times verified, can be *probably* only. The predicate of any synthetic proposition can be denied without involving us in self-contradiction. So if there is loving God, then His existence can always be

questioned. So He cannot be conceived to be necessary. Thus, any, 'Being' is probable. So the concept of a 'necessary Being' is self-contradictory.

Kant's criticism of the ontological argument is unanswerable and at the present time its validity is accepted by a majority of philosophers. But the idealists had tried to rehabilitate this argument on the basis of their doctrine of inseparability of 'knowing and being'. However, in the present context, the identity of the idea of a perfect Being and the existence of such a Being can no longer be maintained.

#### **2.06. God and the Criterion of Clearness and Distinctness**

If there is God, then He is a perfect and truthful God and therefore, the hypothesis of a deceiving demon must be given up. This veracity of God is the ultimate guarantee of all knowledge, for He cannot have created us to err. All that we clearly and distinctly perceive must be true, otherwise God will become a deceiver. Thus the existence of God is a sufficient guarantee against any doubt and agnosticism. Hence the modern rationalism is introduced by Descartes by the circuitous route of scholasticism. In modern language the veracity of God simply means that the universe is rational through and through and we can hope to make enquiries about it without the fear of being baffled in our search. In making God the ultimate ground of all knowledge Descartes has been accused of arguing in a circle. From the criterion of *clearness and distinctness* of ideas he proves the existence of the veracious God and; again, from the veracity of God he proves the ultimate truth of the criterion of clearness and distinctness. However, the charge of arguing in a circle is more apparent than real. In the order of *knowledge*, the criterion comes first, but in the order of *existence* God comes first. The criterion is suggested as soon as we begin to apply the method, but the method itself is based on some metaphysical assumption. The veracity of God is the ontological assumption of the methodological criterion.

Descartes seems to be vague and indefinite in his use of the term God. His God is partly the Absolute of metaphysics on which everything depends, but which depends on nothing else; partly he is the personal creative Being of Christian theology. The Christian concept of a creator God is not adequate to support a rationalistic system. Here Spinoza has tried to make Descartes consistent.

#### **2.07. The External World**

Besides the ideas of God and self we experience many ideas of colour, taste, smell, extension etc. We believe that they are caused by bodies external to us. But how can we prove their existence? We cannot rely on their existence through our senses for they deceive us. However, in general we know that our ideas about the external world are caused by bodies outside of us. At least in general it appears quite clear and distinct to us and we have a strong inclination to believe that really there is an external world of material bodies. If these ideas do not come from external bodies

then either they are caused by our own selves or by God. But if these ideas be caused by either of them then God would be deceiver, for we clearly and distinctly perceive them to originate from external bodies. Thus corresponding to this clear perception there must be an external world for the veracious God cannot allow us to have a strong inclination to believe in delusion.

The clear and distinct perception of the external world shows that it is extended. But extension is known only through our ideas of it. The perception of the external world may be thus described after Descartes. There are firstly, the impressions made on the organs which lead to the excitation of the animal spirits in the nerves. Then there is the termination of the animal spirits in the brain, usually in pineal gland which gives rise to the sensation. Now the processes leading to the sensation are all non-conscious or non-mental. But somehow the conscious perception or ideas represent the objective material bodies. This correspondence of the ideas to the external bodies is guaranteed by the veracity of God.

The whole proof of the existence of the external world appears highly artificial. The account of perception shows that the ideas are highly indirect and non-representative so far as the material bodies are concerned. It is too much to expect that the ideas be true copies of the material bodies. This logical absurdity must not be laid in relation to the idea of God at least. Besides, how can we know that our ideas are the copies of their original, the external bodies which *ex hypothesis* are shut out from our verification? The representative function of ideas is unfortunate in explaining knowledge and this was clearly criticised by Berkeley.

Descartes was a naive realist in practice for he believed that there are bodies existing in their own rights like tables or chairs. They will continue to exist even if there be no human mind to perceive them. But what do we mean by bodies? Well, we understand by bodies to be independent *substances*. By a substance we understand that which so exists that it needs no other thing in order to exist. Strictly speaking then there is only one substance namely God for He alone exists in Himself and through Himself and does not involve the existence of anything else. However, besides God there are two relative substances, namely, mind and body. Each can exist without the other, though both of them depend on God for their existence. This essential property or characteristic of the substance is known as *attribute*. Now the attribute of mind is consciousness and that of the body is extension. The attribute manifests itself in many ways. This modification of the attribute is known as the mode. Figure or motion is the mode of extension, as sensation or imagination is the mode of thought. The mode cannot exist without the substance and its attribute, but substance and attribute can exist without the modes.

Material bodies then are substances with their attributes of extension. However, the things are perceived to have the other qualities also of colour, taste, smell etc. Do they also belong to the things? Here Descartes points out that there are two kinds of qualities, namely, *Primary and Secondary*. Primary qualities are those which are clearly perceived by us. This simply meant those qualities which can be put into

mathematical form. As such they are extension, figure, motion, rest, duration and number. The primary qualities do belong to the material bodies. The secondary qualities are the confused ideas. They are heat, cold, colour, sound, taste etc. We cannot clearly and distinctly perceive them. They are in the mind of the perceiver.

The conception of matter as consisting of extension alone has had far reaching influence on the philosophy of nature. Where there is space, there must be extension. As such there is no such thing as Vacuum. As, again, matter being extension is infinitely divisible, so there can be no atom. Besides, matter being purely extension is entirely passive. The activity or motion in material things is due to their mechanical impact, God imparted the first motion and thence it is being continued.

Much of Descartes' physics is obsolete but in certain observation he is delightfully modern. Specially his observation of motion as purely relative reminds us of the theory of relativity of Einstein. The same steamer is static in relation to the man on the board, but, says Descartes, it is moving in relation to the man on the shore.

Descartes reduces the whole world to mechanism. The so-called living organisms, are really machines, only they are more complex and refined. This doctrine led to the dissection of the animals and to the discovery of the reflexes. The automation theory, however, was mixed blessing for it led to cruelty to the animals as well as powerful tendency towards materialism. In his doctrine of the universe as a vast machine he anticipates the 19th century materialism and his insistence on reflexes is an anticipation of Behaviourism.

### **2.08. Truth and Error**

The criterion of knowledge is that all that is clear and distinct must be true. If one asks, why should the clear and distinct be regarded as true? The answer is that it follows from the divine veracity. But, then, it is also a fact that we are deceived and commit mistakes and then we have to answer the question: "How could a veracious God give us faculties that so easily lead us astray?"

Now truth or falsity lies in judgements and not in ideas or perceptions. A judgement is a joint product of intellect and will. We perceive something and then we give assent to it either by affirmation or denial, leading to a judgement. If the ideas be clear and distinct, then their affirmation or denial leads to truth. The human intellect is finite inasmuch as it cannot hope to receive clear and distinct ideas of all things. But the will of its very nature is infinite for it has unlimited choice to make before it. If we could give our assent or dissent only to clear ideas, then there could be no room for error, but we give our will to confused and indistinct ideas also. And this gives rise to error.

Thus error is due to the joint product of intellect and will together. By itself intellect does not lead to error for every idea in itself is a psychical existence. Besides every "idea must have a really existing cause of its objective reality." By

itself there is nothing wrong in the will to be infinite.

Though in general, Descartes holds that the part of intellect in producing error is very small, yet it cannot be totally absolved. The intellect supplies confused and indistinct ideas and to which the assent or dissent constitutes error. Specially this is true in relation to the secondary qualities of colour, heat, smell etc. These ideas do not represent anything objective in things but have their sole function in directing us to that which is beneficial or harmful for us. Thus errors arise due to its being finite and limited in giving us clear and distinct ideas and for making the intellect finite God is responsible. As such, to some extent at least, God is responsible for our errors.

Descartes answers by way of reply to the above observation firstly, by saying that we have no right to enquire into the how and why of what God does. Besides, God is the creator of the whole universe; and for the perfection and harmony of the universe it is better to have fallible rather than infallible intellect. Again, the created intellect of its very nature must be limited and the existence of even the finite intellect is undoubtedly good. Lastly, the will could not have been created in such a manner as to be limited to clear and distinct ideas. This would have made man a machine rather than a free spirit. Thus the gift of infinitely free will is necessary for spiritual growth and as such for its misuse we are to be blamed rather than the creator God. The positive causes of our errors are—

- (a) Haste, without waiting for the adequate evidence.
- (b) Prejudice and the early preconceived opinions that have never been tested.
- (c) Too much reliance on memory which should be checked and refreshed by continual perceptions.

### **2.09. Mind and Body**

The method of Descartes in reaching *Cogito ergo sum* is one of abstraction. One by one he takes all that is not essential in thinking and discards them till he comes to consciousness. Now in order to know consciousness one need not refer to extension. Similarly, in knowing extension one need not refer to consciousness. Consciousness and extension, mind and body, then are independent of one another and do not involve each other's existence. As such there are two independent substances called mind and body.

This dualism of mind and body is important, for human beings have both body and soul. The human body like all other organic bodies is a mere machine. The moving principle of this machine is the heat in the heart. The death is due to the destruction of some important parts of the body machine. In human beings alone God by a special creation adds soul. There can be no real relation between body and soul for they are diametrically opposed. The relation of the soul to the body is of the nature of the pilot to his machine.

However, this vague formulation of the mind and body relationship is very inadequate. We intuitively know that there is *some* relation between *M* and *B*, but

we must decide the precise nature of it. Descartes wavers between interactionism which he seems to suggest and parallelism which follows logically from his absolute dualism. A great many bodily activities can be explained in terms of reflexes and his acute observation in this connection makes him the precursor of modern behaviourism. But bodily activities are to some extent influenced by the mind, and the mind is also influenced by the body. He regards sensing, imagining, remembering as mental acts but the objects referred to are not mental. But can the mental ideas tell us anything of the material bodies? No, for the sole function of the ideas is to guide us to what is harmful or beneficial to us and not to represent things external to us. However, Descartes believes that there are real material bodies. This general belief in material bodies is based on divine veracity. If we want to know definitely about the particular material bodies, then we can know only their primary qualities but the so-called secondary non-quantitative qualities are nothing but confused ideas. The confused ideas, however, are caused by external objects as is clear from his explanation of perception. In perception the material bodies effect the mental states through the human body.

- (i) Firstly, the exciting body affects the sense-organs of the percipient's own body.
- (ii) This bodily affection moves the subtle animal spirits in the nerves. The movement of the animal spirits terminates in the pineal gland which he considers to be the seat of the soul. The soul is indivisible substance and therefore occupies the pineal gland which is the only undivided portion of the brain.
- (iii) Lastly, a physical impress or seal is left on the pineal gland which serves as the occasion of the origin of consciousness.

Descartes seems to have explained away the mechanical pressure of the body on the mind by the mediating services of the animal spirits terminating in the pineal gland. Similarly, the mind acts on the body by moving the animal spirits in the pineal gland which coursing through the muscles leads to bodily movement. This direct interactionism he tries to conceal with the help of the analogy of the rider and the horse. Just as the rider spurs on the horse to run fast with his own energy, so the mind only excites the bodily movement without imparting its own energy into the material series. However, the artificial nature of the relation between *M* and *B* is open to various criticisms.

1. Even the above analogy of the rider and the horse does not totally exclude the possibility of interactionism. The analogy is false for both the rider and the horse are essentially of the same nature but *M* and *B* are quite opposed having nothing in common. Besides, even if the direct contact between *M* and *B* be excluded, still it remains true that they influence each other through the animal spirits. Again, grudgingly the interaction is admitted as soon as we grant that the soul is excited to activity by the animal spirits or that the soul moves the animal spirits. The animal spirits is material though it is subtle; and if it can move the soul, then there is no

bar in believing that the body can act on the mind and also *vice-versa*.

2. Descartes tried to soften the rigour of the absolute dualism of *M* and *B* by pointing out at least one place of pineal gland as their meeting ground. Not only the choice is purely arbitrary but also at the same time metaphorical. The soul being a spirit does not need a seat like any material body. And if the soul can occupy space in the pineal gland, there seems to be no reason why it should not occupy the whole body. Although Descartes limits the direct inter-action of soul and body to the pineal gland, he makes a departure in the case of memory. The memory appears to him more physical than mental and he conjectures it to be diffuse through the whole brain.

3. Descartes himself seems to be aware of the many difficulties raised and waves in his conviction of dualism when he comes to explain 'passions' like love, hatred, anger, fear etc. He is obliged to treat them as modes of thinking and yet believes them to be caused by the action of the body. They are treated to be complex and confused states. The so-called passions are perceptions, feelings and emotions of the soul. . . . which are caused, maintained and strengthened by some movement of the animal spirits. However, apart from the special difficulty of *M* and *B* in relation to passions, this observation of Descartes reminds one of the famous James-Lange theory of emotion, according to which an emotion is a sensation-mass caused by the stirred-up states of the body.

4. The difficulty of *M* and *B* dualism arises from an artificial division of a concrete reality. We never experience ourselves as mind *and* body but always as embodied mind or spiritualised body. The whole method of vicious abstraction led to the existence of consciousness apart from any relation to the body. This led Descartes to define mind as that which is not extended, and extension as that which is not conscious. But if we define *M* and *B* in such a way that they cannot be bridged then there can be no real relation between them. There can be no real remedy of a fancied malady. Here we can say that we ourselves have raised the dust and complain that we cannot see.

## 2.10. The Estimate of Descartes

Bacon and Descartes are rivals in being called the father of Modern Philosophy. However, we have seen that Bacon cannot be called the father of modern philosophy. It was really Descartes who not only establishes a new critical method but also propounds an original system of philosophy with far reaching development. He is justly called the prophet of the new era of his revolution proved most radical and influential in the history of thought between Aristotle and Kant. For this reason of creating an epoch in man's thinking he has been called the legislator of modern thought. We may now briefly summaries the important tendencies of his philosophy.

### 2.10A. Method

Descartes postulated the free enquiry into the philosophical domain. Instead of submitting to the authorities, he tells us, to bring everything to the bar of reason. Reason, after years of bondage, comes to her own. Faith in religion and moral goodness, he does not discard but he supplies them the better and more stable ground of reason. In this acceptance of the true of Magna Charta of thought he was followed by all the moderners. Later on the same necessity of free thought was clearly laid down by Kant.

In this method Descartes laid down that knowledge to be obtained must be certain, necessary and universal. This model of knowledge is clearly found in mathematics. Thus the real philosophical method should be cast in the form of mathematics, especially Geometry. This emphasis on mathematics led to Geometrical method of Spinoza and influenced the methodology of Leibnitz and Kant. Even the empiricists Locke, Berkeley and Hume could not ignore the claim of mathematics to be the model of knowledge. However, the method of Descartes was carried on through abstraction. It established the cogito by rejecting what cannot be sure and certain. This successive negation of the inessential factors was considered to be most important by Spinoza who laid down that every determination is negation with frightful result. Besides, the deductive aspect of mathematical reasoning was emphasized by Spinoza and Leibnitz and even Locke could not reject this part of reasoning.

### 2.10B. Rationalism

Descartes has been a real initiator of modern rationalism. First, as mentioned before he laid down that reason is the sole arbiter of philosophical dispute. In this he was followed not only by Spinoza, Leibnitz and Kant but also by the empiricists Locke, Berkeley and Hume.

However, Descartes is the founder of rationalism in its distinguishing feature by pointing out that real, universal and necessary knowledge is found in innate ideas alone. This doctrine of innate ideas was greatly opposed by Locke and then it was modified by Leibnitz, and, Kant finally shaped the whole controversy into sharper lines. Hence a brief reference to the Descartes' view will not be out of place.

**Innate ideas:** No amount of sense-experience can give us universal knowledge for necessity the former is particular. As such the universal principle is supplied by the mind to the sense data. Now divested of the inadequate and mediaeval expression, the doctrine of innate ideas really means that mind is not totally receptive but is also active. It supplies the active formative principles of knowledge. In this broad and sympathetic interpretation of innate ideas, Descartes seems to be essentially correct. At least Kant in the most characteristic ways points that general principles and concepts are inherent contribution of the mind to the sense-data. However, even the most sympathetic interpretation would point out that Descartes

was rather vague in his doctrine of innate ideas. Descartes at least recognised the dual role of innate ideas.

(i) Since the essence of the mind is consciousness or thought so there are certain ideas which belong to the mind alone. Specially the innate ideas are characterised by clearness and distinctness. In this sense innate ideas meant pure and abstract thoughts. The best example of this is the innate idea of God defining His characters as infinite, perfect etc.

(ii) However, Descartes was also obliged to extend the innateness to sense ideas as well. First, he could not find their place in the mental series as they seemed to be caused by something external to the mind. But afterwards, he had to yield. The sense experience of colour, taste, etc. are not in objects and therefore, they belong to the psychical existence. The external stimulus at most serves the function of release mechanism, exciting the sense-organs and consequently through the pineal gland the soul to form sense-experience. Accordingly, Descartes had to concede even though reluctantly that the ideas of sense must be natural to the mind, i.e. innate. Upon the second view, then instead of the innate ideas forming a special class, innateness becomes characteristic of every idea. At least this was developed in the philosophy of Leibnitz, as the former interpretation of innate ideas as the formative principle of knowledge was developed by Kant.

In any case the doctrine of innate ideas was suggestive of future development in the modern stream of thought. There is yet another element in the Cartesian rationalism of modern development. This element consists in showing that certain knowledge is found in the analysis of self-consciousness. In simple language it amounts to this that the reality can be best interpreted on the analogy of the reality of self. The *Cogito ergo sum* of Descartes led Leibnitz to define the monads in terms of the self. This finally led in Kant and the subsequent idealists to the statement that the mind is the legislator to things. As a matter of fact in-spite of dualism Descartes really had an idealistic leaning inasmuch as he laid down that the mind alone can be known with certainty and the matter can be known only indirectly through the veracity of God. Concerning this point Russell in his *History of Philosophy* writes, "There is thus, in all philosophy derived from Descartes, a tendency to subjectivism, and to regarding matter as something only knowable, if at all, by inference from what is known of mind." (p. 586)

### 2.10C. Dualism

Descartes has been called a typical dualist and that he was as a metaphysician, psychologist and physicist. Descartes laid down that mind and body are two independent substances. This led to many subsequent theories concerning the relation between the two, like occasionalism, parallelism of Spinoza, Pre-established Harmony of Leibnitz and subjective idealism of Berkeley. Even in contemporary times the problem cannot be said to have been solved. Hence he supplied an important problem for the posterity to solve.

In other respect, the dualism of Descartes led to materialism. His insistence on human body as a complex automation led to the materialistic tendency towards explaining everything in terms of matter. The recent rise of behaviourism is simply hearkening back to the Cartesian tendency.

Even in the theory of knowledge Descartes was a dualist. He believes that we have the ideas through which we know the external world. Here also he divides knowledge into ideas and the things of which we have the ideas. This epistemological dualism was held by Locke and was severely criticised by Berkeley.

It seemed that the dualistic tendency was rather strong in Descartes for he also divides the qualities of the external world into primary and secondary ones. In this he was followed by Locke but was severely attacked by Berkeley.

Lastly, Descartes divides the mental qualities into the two attributes of thought and will. In this he was followed by all up to the time of Kant who introduced the tripartite division of the mind instead of the bipartite.

#### **2.10D. System Builder**

Descartes believed in the capacity of reason to know all things. From the *cogito* he gets the criterion and from the criterion he establishes the existence and veracity of God. From the veracity of God he establishes the reality of the external world, the permanent self and knowledge. Thus with the proof and the veracity of God he closes the circle of his thought. In this ambitious attempt to build a system of thought he was followed by Spinoza, Leibnitz, Berkeley and Kant. Not only he makes a system but he builds a God-centred system and here also he was followed by Leibnitz and Berkeley.

Thus, many streams of thought have followed from the writings of Descartes. However, he himself looked upon his principles as merely preparatory to his system. But the principles and not the content of his system have proved momentous in the history of philosophy. Thus, Falckenberg observes:

The vestible has brought the builder more fame, and has proved more enduring than the temple; of the latter only the ruins remain; the former has remained undestroyed through the centuries.

But, is the observation of Falckenberg sound? Well we have already noted in §0.02 that no key concepts can explain all the details of a world scheme of things. Similarly, the vision of mathematical philosophy could not be fully carried out in all the details. If Descartes and his successors could have seen the inherent weakness of such a vision, then they would have been helped into a deeper and more adequate vision. Unfortunately, the real weakness of mathematical key notions in philosophy could not be fully realised till very recently. Mathematics does yield necessary propositions. But the propositions of mathematics, as Hume noted, have nothing to do with actual state of affairs. but in philosophy we pick up a notion from a field

of factual enquiry and apply it to all other data of all other fields. The propositions of mathematics and logic are important in connecting and organising the *relation* between facts with a view to obtaining a synoptic worldview. As such in general mathematical notions are not always very suitable for working out a philosophical system.<sup>1</sup>

But the real difficulty lay in selecting the characteristic of *necessity* involved in mathematical propositions. This can be obtained only in *a priori* propositions. But philosophy has to take into account actual state of affairs. But no propositions of empirical import can be *necessary*. Hence, the introduction of the key-notion of mathematical *necessity* raised an absurd ideal of philosophical knowledge, and created a false impression concerning philosophical propositions. They wrongly came to be regarded as cognitive statements. From this unfortunate impression concerning philosophy thinkers have not been as yet fully weaned. Further, the introduction of mathematical ideal in philosophy tended to prove philosophy an *a priori* system, as in Spinoza and in other idealistic thoughts.

#### **2.10E. Concluding Remarks**

From the preceding discussion another observation follows. If we keep the tradition of perennial philosophy in our account, then we find that philosophy aims at not giving us *knowledge but wisdom*. Wisdom implies not only sufficient knowledge of actual states of affair but also a high state of development in the wise man himself. In other words, philosophy aims at self-realization through the help of knowledge in science or in other walks of everyday life. Scientific knowledge remains subordinate, even when some important key-notions have to be borrowed from it. Descartes that way has changed this Platonic view of philosophy. He has introduced a new tradition into philosophy. He wants to make philosophy wholly cognitive enterprise like mathematics. This is a misconception of the task of philosophy. Many philosophers in the present twentieth century have come to the conclusion that systematic philosophy called metaphysics cannot fulfil the demand of scientific knowledge. From this inability of philosophy, they conclude that philosophy is nonsense. Is it so?

The reality as a whole has been the traditional subject-matter of philosophy. Now science deals with the observable either directly or indirectly. But 'reality as a whole' cannot be the object of any one's observation. It remains super-sensible. Naturally God or the immortality of soul cannot be known in the scientific way. But the perennial philosophers have not claimed any scientific knowledge of their subject-matter. They all the while were dealing *not with facts* but with the realm of *values*. Their language has always been mostly symbolical, metaphorical and analogical. If we try to understand and faithfully keep this end of philosophy in view, then philosophy need not be science. Though science is the only way of

1. This guarded statement becomes necessary in view of the philosophical system of Whitehead.

attaining knowledge, but is not the only *rational* discipline of man. The attainment of values is as much the serious concern of man. The task of philosophy is the determination of values.

Now Descartes should be remembered for introducing this misconception into the nature of philosophy. Here he has been followed by a number of philosophers. The anti-metaphysicians of the present era in their misguided way are simply carrying out this Cartesian tradition of philosophy. Fortunately Descartes was followed by Spinoza and in him we find the vindication of metaphysics in its true sense.