

DESCARTES ON
RATIONALISM, DUALISM,
SUBJECTIVISM, AND MECHANISM

RENÉ DESCARTES (1596–1650), French philosopher, was born shortly after the dawn of modern science and was conversant with the work that had gone before. Although Descartes gave some grudging weight to the influence of experience on our ideas, he was convinced that it was reasoning which gives us ideas that are universally certain, true, and innate.

I have also observed certain laws which God has so established in Nature, and of which He has imprinted such ideas on our minds, that, after having reflected sufficiently upon the matter, we cannot doubt their being accurately observed in all that exists or is done in the world. Further, in considering the sequence of these laws, it seems to me that I have discovered many truths more useful and more important than all that I had formerly learned or even hoped to learn.¹

Fallability, due to experience, he added, may be corrected by reasoning.

Matter of experience consists of what we perceive by sense, what we hear from the lips of others, and generally whatever reaches our understanding either from external sources or from that contemplation which our mind directs backwards on itself. Here it must be noted that no direct experience can ever deceive the understanding if it restrict its attention accurately to the object presented to it, just as it is given to it either at firsthand or by means of an image; and if it moreover refrain from judging that the imagination faithfully reports the objects of the senses, or

that the senses take on the true forms of things, or in fine that external things always are as they appear to be; for in all these judgments we are exposed to error.²

Moreover, we are deceived by experience, but this is due to fallability of will, not of reason.

... God has given me for understanding, there is no doubt that all that I understand, I understand as I ought, and it is not possible that I err in this. Whence then come my errors? They come from the sole fact that since the will is much wider in its range and compass than the understanding, I do not restrain it within the same bounds, but extend it also to things which I do not understand: and as the will is of itself indifferent to these, it easily falls into error and sin, and chooses the evil for the good, or the false for the true.³

Understanding and reason had characteristically been referred to by Descartes' predecessors as due to the soul.

Thus because probably men in the earliest times did not distinguish in us that principle in virtue of which we are nourished, grow, and perform all those operations which are common to us with the brutes apart from any thought, from that by which we think they called both by the single name *soul*; then, perceiving the distinction between nutrition and thinking, they called that which thinks *mind*, believing also that this was the chief part of the soul. But I, perceiving that the principle by which we are nourished is wholly distinct from that by means of which we think, have declared that the name *soul* when used for both is equivocal; and I say that, when soul is taken to mean *the primary actuality or chief essence of man*, it must be understood to apply only to the principle by which we think, and I have called it by the name *mind* as often as possible in order to avoid ambiguity; for I consider the mind not as part of the soul but as the whole of that soul which thinks.⁴

In answering the charge that the word, soul, is ambiguous, the major point he is trying to convey, he seems to acknowledge the correctness of this charge by pointing out that mind is the preferred term. The distinction he was making between soul and mind was accepted by later generations and, hereafter, mind shall be considered the more appropriate term for matters of psychological concern. It is also clear from all of the excerpts that have gone before that Descartes was a rationalist, that

is, he believed that reason (understanding) is the major source of knowledge. Thus, he stands in contrast to Galileo, Bacon, and Harvey who were primarily empiricists, in that they looked to information gained from experiment, to inductive collection of facts, and to observation.

Early in life, Descartes had become enamored with the rationalistic beauty of mathematics and tried to find its likeness in other fields for the certainty that he craved. Above all, he wanted to look within himself for those concepts about nature which he could not doubt.

For a long time I had remarked that it is sometimes requisite in common life to follow opinions which one knows to be most uncertain, exactly as though they were indisputable, as has been said above. But because in this case I wished to give myself entirely to the search after Truth, I thought that it was necessary for me to take an apparently opposite course, and to reject as absolutely false everything as to which I could imagine the least ground of doubt, in order to see if afterwards there remained anything in my belief that was entirely certain. Thus, because our senses sometimes deceive us, I wished to suppose that nothing is just as they cause us to imagine it to be; and because there are men who deceive themselves in their reasoning and fall into paralogisms, even concerning the simplest matters of geometry, and judging that I was as subject of error as was any other, I rejected as false all the reasons formerly accepted by me as demonstrations. And since all the same thoughts and conceptions which we have while awake may also come to us in sleep, without any of them being at that time true, I resolved to assume that everything that ever entered into my mind was no more true than the illusions of my dreams. But immediately afterwards I noticed that whilst I thus wished to think all things false, it was absolutely essential that the "I" who thought this should be somewhat, and remarking that this truth "*I think, therefore I am*" was so certain and so assured that all the most extravagant suppositions brought forward by the skeptics were incapable of shaking it, I came to the conclusion that I could receive it without scruple as the first principle of the Philosophy for which I was seeking.

And then, examining attentively that which I was, I saw that 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. On the contrary, I saw from the very fact that I thought of doubting the truth of other things, it very evidently and certainly followed that I was; on the other hand if I had only ceased from thinking, even if all the rest of what I had ever imagined had really existed, I should have no

reason for thinking that I had existed. From that 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.

After this I considered generally what in a proposition is requisite in order to be true and certain; for since I had just discovered one which I knew to be such, I thought that I ought also to know in what this certainty consisted. And having remarked that there was nothing at all in the statement "*I think, therefore I am*" which assures me of having thereby made a true assertion, excepting that I see very clearly that to think it is necessary to be, I came to the conclusion that I might assume, as a general rule, that the things which we conceive very clearly and distinctly are all true—remembering, however, that there is some difficulty in ascertaining which are those that we distinctly conceive.⁵

In the same discourse in which he established the certainty of his thinking (the mind) and therefore of his existence, he proceeded in successive steps to restore the certainty of the existence of God, and, as a separate step from the restoration of the reality of the existence of the mind, the reality of the existence of body, and then to the restoration of the reality of the rest of the natural world.

Armed with confidence in his ability to use unaided reason to know truth, he established four rules of procedure for himself and others to follow in order to achieve knowledge about which one could be certain.

The first of these was to accept nothing as true which I did not clearly recognise to be so: that is to say, carefully to avoid precipitation and prejudice in judgments, and to accept in them nothing more than what was presented to my mind so clearly and distinctly that I could have no occasion to doubt it.

The second was to divide up each of the difficulties which I examined into as many parts as possible, and as seemed requisite in order that it might be resolved in the best manner possible.

The third was to carry on my reflections in due order, commencing with objects that were the most simple and easy to understand, in order to rise little by little, or by degrees, to knowledge of the most complex, assuming an order, even if a fictitious one, among those which do not follow a natural sequence relatively to one another.

The last was in all cases to make enumerations so complete and reviews so general that I should be certain of having omitted nothing.⁸

Mind and body, although both certain of existence, are separate. His major argument for the separation of mind from body is that he is one that thinks. It will also be remembered that the certainty of body was arrived at as a separate step from the certainty of mind and thus serves as an additional argument for their separation. In still further support of this distinction between mind and body, Descartes happily enlisted the methodological distinction made previously by Galileo.

I observed that nothing at all belonged to the nature or essence of body, except that it was a thing with length, breadth, and depth, admitting of various shapes and various motions. I found also that its shapes and motions were only modes, which no power could make to exist apart from it; and on the other hand that colours, odours, savours, and the rest of such things, were merely sensations existing in my thought, and differing no less from bodies than pain differs from the shape and motion of the instrument which inflicts it. Finally, I saw that gravity, hardness, the power of heating, of attracting, and of purging, and all other qualities which we experience in bodies, consisted solely in motion or its absence, and in the configuration and situation of their parts.⁷

The word "merely" in the quotation carries a wealth of meaning; sensing is relegated to the world of experience, existing only in that experience.

The body is separate and distinct from the mind. It is a form of matter and is to be treated mechanically. Although, he does not mention Galileo by name, Descartes knew his work, and his exposition of the matter is quite in keeping with Galileo's treatment of inanimate matter. In the second paragraph of his treatise, *On Man*, he says that man's body is but a statue, or an earthen machine. This analogy arose from his familiarity with the moving figures in clock towers and statues in the garden estates of the nobility.

In the excerpt that follows in a general setting of the body as a machine, he is concerned with the body's capacity to respond appropriately to external stimulation without conscious direction.

After this, in order to understand how it [the machine] can be incited by external objects which strike the sense organs, so as to move all its members in a thousand other ways, remember that the little threads which I have so often told you come from the inmost part of the brain, and which compose the marrow of the nerves, are so distributed to all the

parts which serve as organs that they can very easily be moved by objects of the senses; and when they are moved ever so slightly, they pull at the same instant at the parts of the brain from which they come, and by this means they open the entries of certain pores which are on the internal surface of the brain. Through these the animal spirits which are in the cavities immediately begin to take their course, passing through them into the nerves, and into the muscles, which serve in this machine to perform movements entirely similar to those to which we are naturally incited when our senses are touched in the same manner.

For example, if the fire A is close to the foot B, the small particles of fire, which as you know move very swiftly, are able to move as well the part of the skin which they touch on the foot. In this way, by pulling at the little thread cc, which you see attached there, they at the same instant open e, which is the entry for the pore d, which is where this small thread terminates; just as, by pulling one end of a cord, you ring a bell which hangs at the other end.

Now when the entry of the pore, or the little tube, de, has thus been opened, the animal spirits flow into it from the cavity F, and through it they are carried partly into the muscles which serve to pull the foot back from the fire, partly into those which serve to turn the eyes and the head to look at it, and partly into those which serve to move the hands forward and to turn the whole body for its defense.⁸

This point of view approaches that which we call reflex behavior. Motion follows predictably from stimulation; mind is not involved. While he did refer to "reflex," what he meant by that term was essentially an analogy with the reflux of water involving a rebound. Moreover, coordinated activities such as walking or carrying a tune were used as illustrations of that to which he referred. On both counts, the modern concept of reflex disagrees. Be that as it may, he was advancing something akin to the reflex as a model of much of the body's behavior.

Animals are similar to machines in the same way as are the bodies of human beings. Humans can nevertheless be distinguished from animals. Commenting on animals, Descartes said:

... we should always have two very certain tests by which to recognise that, for all that, they were not real men. The first is, that they could never use speech or other signs as we do when placing our thoughts on record for the benefit of others. For we can easily understand a machine's being constituted so that it can utter words, and even emit some responses to action on it of a corporeal kind, which brings about a

may ask what we wish to say to it; if in another part it may exclaim that it is being hurt, and so on. But it never happens that it arranges its speech in various ways, in order to reply appropriately to everything that may be said in its presence, as even the lowest type of man can do. And the second difference is, that although machines can perform certain things as well as or perhaps better than any of us can do, they infallibly fall short in others, by the which means we may discover that they did not act from knowledge, but only from the disposition of their organs. For while reason is a universal instrument which can serve for all contingencies, these organs have need of some special adaptation for every particular action. From this it follows that it is morally impossible that there should be sufficient diversity in any machine to allow it to act in all the events of life in the same way as our reason causes us to act.

By these two methods we may also recognise the difference that exists between men and brutes. For it is a very remarkable fact that there are none so depraved and stupid, without even excepting idiots, that they cannot arrange different words together, forming of them a statement by which they make known their thoughts; while, on the other hand, there is no other animal, however perfect and fortunately circumstanced it may be, which can do the same. It is not the want of organs that brings this to pass, for it is evident that magpies and parrots are able to utter words just like ourselves, and yet they cannot speak as we do, that is, so as to give evidence that they think of what they say. On the other hand, men who, being born deaf and dumb, are in the same degree, or even more than the brutes, destitute of the organs which serve the others for talking, are in the habit of themselves inventing certain signs by which they make themselves understood by those who, being usually in their company, have leisure to learn their language. And this does not merely show that the brutes have less reason than men, but that they have none at all, since it is clear that very little is required in order to be able to talk.⁹

The body of a human is essentially similar to that of animals, but humans have a reasoning mind which animals lack.

That the mind did interact with the body, despite their separation, constrained him to find a point of interaction and a theory of how this interaction took place.

ARTICLE XXXI.

That there is a small gland in the brain in which the soul exercises its functions more particularly than in the other parts.

whole body, there is yet in that a certain part in which it exercises its functions more particularly than in all the others; and it is usually believed that this part is the brain, or possibly the heart: the brain, because it is with it that the organs of sense are connected, and the heart because it is apparently in it that we experience the passions. But, in examining the matter with care, it seems as though I had clearly ascertained that the part of the body in which the soul exercises its functions immediately is in nowise the heart, nor the whole of the brain, but merely the most inward of all its parts, to wit, a certain very small gland which is situated in the middle of its substance and so suspended above the duct whereby the animal spirits in its anterior cavities have communication with those in the posterior, that the slightest movements which take place in it may alter very greatly the course of these spirits; and reciprocally that the smallest changes which occur in the course of the spirits may do much to change the movements of this gland.

ARTICLE XXXII.

How we know that this gland is the main seat of the soul.

The reason which persuades me that the soul cannot have any other seat in all the body than this gland wherein to exercise its functions immediately, is that I reflect that the other parts of our brain are all of them double, just as we have two eyes, two hands, two ears, and finally all the organs of our outside sense are double; and inasmuch as we have but one solitary and simple thought of one particular thing at one and the same moment, it must necessarily be the case that there must somewhere be a place where the two images which come to us by the two eyes, where the two other impressions which proceed from a single object by means of the double organs of the other senses, can unite before arriving at the soul, in order that they may not represent to it two objects instead of one. And it is easy to apprehend how these images or other impressions might unite in this gland by the intermission of the spirits which fill the cavities of the brain; but there is no other place in the body where they can be thus united unless they are so in this gland.¹⁰

This "very small gland" is the pineal gland, now described as a small, reddish vascular body in the posterior portion of the third ventricle and of no particular physiological importance.

The dualism that Descartes made crystal clear was a matter that numerous predecessors had fully addressed themselves to, so, in itself,

dualism was not a novel concept. What was novel about Descartes' dualism was making central that mind, not soul, would heretofore stand in contrast to body for psychological matters. Equally as novel and even more important in the future was his demonstration that accepting or not accepting interactionism could not be ignored in any serious discussion of dualism.

To Descartes, his means of dealing with interaction was not entirely satisfactory, and those who came after him found it to be a fertile source for alternative solutions. Even in his own time, critics pointed out that one all-too-easy solution was to disregard the separation and say that man was *only* a machine and therefore mechanical.

The mind understands through meditation, and possessing freedom of will, stands in sharp contrast to the body studied mechanically and subject to what was later to be referred to as natural law. Subsequently, two very important streams of thought flowed from the work of Descartes—the phenomenological and the mechanical. The former arose primarily from his insistence on the centrality of meditation as a method and from his certainty of being a "thinking thing"; the latter from his insistence on the separation of mind and body which had mechanical action.

In connection with the phenomenological strain, it is important to clear up an apparent contradiction. With Descartes' emphasis on immediate experience, one might question his being designated a rationalist and not an empiricist, since it is the latter who insists knowledge comes from experience. The discrepancy is resolved when it is indicated that, unlike German, we do not have words to distinguish between awareness in consciousness, that is, immediate experience, from the effect of cumulative experience. Rationalism and phenomenology are dependent on reflection about immediate experience, empiricism on cumulative experiences.

HOBBS ON PSYCHOLOGY AND THE STATE, THE IMPORTANCE OF MOTIVATION, THE SUBJECTIVITY OF PERCEPTION, AND THE NATURE OF ASSOCIATION

THOMAS HOBBS (1588-1679), English philosopher and minor diplomat, was primarily interested in the advancement of a strong monarchy in support of which he appealed to psychological concepts.

Although older than Descartes by nearly a decade, his contributions relevant to this volume, *Human Nature* and *The Leviathan*, were published in 1650 and 1651 by which time Descartes had published most of his major works. He was influenced by Galileo's conception of motion, not that of Newton, who was less than 10 years of age at the time of his major writings. He is also considered at this point, because he was a direct forebearer of British empiricism and associationism epitomized by Locke, considered shortly. Hobbes is best known as a social philosopher and thus as a precursor of social psychology. His *Leviathan* was so named because he saw the microcosm of man written large in the macrocosm of the state. He stressed studying the behavior of individuals within society as a means of understanding and strengthening the state.

Thus have we considered the nature of man so far as was requisite for the finding out the first and most simple elements wherein the compositions of politic rules and laws are lastly resolved; which was my present purpose.¹

The dominant, all-pervasive goal of his thinking was a plea that there must be a strong monarchy with a powerful leader. Without this person the natural condition of man prevails—a state of warfare expressed most vividly in the famous line which ends the paragraph about the "life of man" under these conditions: