DESCARTES' VERSION OF DUALISM: FOCUS ON THE BODY

Seeds for the conception of physical causation of behaviour can be found in the writings of some of the ancient Greeks, who speculated about the senses, the human intellect, and the physical basis of the mind in ways that seem remarkably modern. But such ideas became dormant in the middle ages and did not begin to sprout again until the fifteenth century (the Renaissance) or take firm hold until the eighteenth century (the Enlightenment).

Philosophy tightly bound to religion through the seventeenth century. The church maintained that each human being consists of two distinct but intimately conjoined entities, material body and an immaterial soul – a view referred today as *dualism*. The body is part of the natural world and can be studied scientifically, just as inanimate matter. The soul, in contrast, is a supernatural entity that operates according to its free will, not natural law, and therefore cannot be studied scientifically. This was the accepted religious doctrine which – at least in most of Europe – could not be challenged publicly without risk of a charge of heresy and consequent execution. Yet the doctrine left some room for play, and one who played dangerously near the limits was the great French

mathematician, physiologist and philosopher, René Descartes (1596- 1650).

Prior to Descartes, most dualist assigned all the interesting qualities of the human being to the soul. The soul was deemed responsible for the body's heat, for its ability to move, for life itself. In 'Treatise of Man' (1637/1972), and even more explicitly in 'The Passions of the Soul' (1649/1985), Descartes challenged this view. He had performed dissections of animals and of human cadavers. He was familiar with research on the flow of blood and he began to regard the body as an intricate complex machine that generates its own heat and is capable of moving even without the influence of the soul. Although little was known about nervous system in his time, Descartes' conception of the mechanical control of movement resembles our modern understanding of reflexes, which are involuntary responses to stimuli.

Descartes believed that even quite complex behaviours can occur through pure mechanical means, without involvement of the soul. Consistent with church doctrine, he contended that non-human animals do not have souls, and he pointed out a logical implication of this belief: Any activity performed by humans that is qualitatively no different from the behaviour of a non-human animal can, in theory, occur without the soul. That is, if a dog (who can do some wondrous

things) is just a machine, then a good deal of what I do might occur purely mechanically as well.

In Descartes' view, the one essential ability that a person has that a dog does not have is *thought*, which Descartes defined as conscious deliberation and judgement. Whereas previous philosophers ascribed many functions to the soul, Descartes ascribed just one—thought. But even in his discussion of thought, Descartes tended to focus on the body's machinery. To be useful, thought must be responsive to the sensory input channelled into the body through the eyes, ears, and other sense organs, it must be capable of directing the body's movements by acting on the muscles.

How can the thinking soul interact with the physical machine – the sense organs, muscles, and other parts of the body? Descartes suggested that the soul, though not physical, acts on the body at a particular physical location. Its place of action is a small organ (now known as pineal body) buried between the two hemispheres (halves) of the brain. Thread-like structures, which we now call nerves, bring sensory information by physical means into the brain, where the soul receives the information and by non-physical thinks about it. On the basis of those thoughts, the soul then wills movements to occur and executes its will by triggering physical actions in nerves that, in turn, act on muscles.

Descartes' dualism, with its heavy emphasis on the body, certainly helped open the door for a science of psychology. It is a popular theory among non-scientists even today, because it acknowledges the roles of sense organs, nerves, and muscles in behaviour without violating people's religious beliefs or intuitive feelings that conscious thought occurs on a non-physical plane. But the theory has serious limitations, both as a philosophy and as a foundation for the science of psychology. As a philosophy, it stumbles on the question of how a non-material entity (the soul) can have a material effect (movement of the body), or how the body can follow natural law and yet be moved by a soul that does not. As a foundation for psychology, the theory sets strict limits, which few psychologists would accept today, on what can and cannot be understood scientifically. The whole realm of though and all behaviours that are guided by thought are out of bounds for scientific analysis, if they are the products of a wilful soul.