

superior race of marionettes, which eat without pleasure, cry without pain, desire nothing, know nothing, and only simulate intelligence as a bee simulates a mathematician?"

"I desire", Descartes said, "that you should consider that these functions (including mental processes) in the machine naturally proceed from the mere arrangements of its organs, neither more nor less than do the movements of a clock or other automaton, from that of its weights and its wheels; so that, so far as these are concerned, it is not necessary to conceive any other vegetative or sensitive soul, nor any other principle of motion or of life, than the blood and the spirits agitated by the fire which burns continually in the heart, and which is in no wise essentially different from all the fires which exist in inanimate bodies."

Could Descartes have known, as we do, the results of experiments on the brain and nervous system, the observations on the life of those who have suffered serious nervous injury through wounds or disease, the researches on the hypnotic and related states, or even the phenomena of chloroforming, he would doubtless have been even more convinced than he was as to the truth of his theory of animal automatism. And yet there are few who would now accept it!

The strongest argument against Descartes' position is an indirect one, which we owe to the evolution-idea—the conviction of unity and continuity in nature. We cannot for a moment believe that conscious experience began in man. "We know", Huxley says, "that, in the individual man, consciousness grows from a dim glimmer to its full light, whether we consider the infant advancing in years, or the adult emerging from slumber and swoon. We know, further, that the lower animals possess, though less developed, that part of the brain which we have every reason to believe to be the organ of consciousness in man; and as, in other cases, function and organ are proportional, so we have a right to conclude it is with the brain; and that the brutes, though they may not possess our intensity of consciousness, and though, from the absence of language, they