

"hypothesis that animals are automata," he advanced to the declaration that he sees no reason for thinking that any state of consciousness in general is only a collateral product of the nervous mechanism and stands outside of the dynamic circuit, dependent and powerless. There is no need to quote other authorities.

Here, if anywhere, in the presence of this grand conception, would be a fit place for the cosmic emotion of Prof. Clifford, or for the cosmic worship of Strauss. The most stolid mind can hardly avoid a feeling of awe and wonder; while the sensitive neophytes of the new religion must surely prostrate themselves in rapturous adoration. But we postpone our worship to a more convenient season in order to return to our main thought of the nerves as scientists. A mathematician, say Newton or LaPlace, sits down to mathematical study of the solar system. For his crude thought, his volition seems to have something to do with it, and his thoughts seem to flow one from another, but nothing of the kind is the case. The thoughts come and go according to the principles of nerve-mechanics, and determine nothing in any case. The nerves, too, are not conscious of the problems, and of course get neither light nor guidance from the thoughts they produce. They have a double task to perform. First, they must produce the illusion of a conscious thinker who fancies that he is proposing and studying problems and that his thoughts flow along in logical connection. Second, they must carry on the physical processes of preparing diagrams, writing equations, explanations, demonstrations, corollaries, scholia, etc., by a blind, pushing and pulling of the molecules concerned, and this they must do in such a way as to produce logical harmony and connection. Otherwise demonstrations and diagrams might get very much mixed. If we ask how this is possible, either we are referred to the "nature of things," or we are told that nervous systems have been evolved. Either suggestion is adequate and both together make the facts transparently luminous. The illusion referred to in no way aids the process, being in fact but so much extra work.