

## Memoranda for Materialists 63

the falling of a stone to the ground. There is a passage in the preface to the first edition of the *Principia*, which shows that Newton was penetrated, as completely as Descartes, with the belief that all the phenomena of nature are expressible in terms of matter and motion:—

“ ‘ WOULD THAT THE REST OF THE PHENOMENA OF NATURE COULD BE DEDUCED BY A LIKE KIND OF REASONING FROM MECHANICAL PRINCIPLES. FOR MANY CIRCUMSTANCES LEAD ME TO SUSPECT THAT ALL THESE PHENOMENA MAY DEPEND UPON CERTAIN FORCES, IN VIRTUE OF WHICH THE PARTICLES OF BODIES, BY CAUSES NOT YET KNOWN, ARE EITHER MUTUALLY IMPELLED AGAINST ONE ANOTHER, AND COHERE INTO REGULAR FIGURES, OR REPEL AND RECEDE FROM ONE ANOTHER ; WHICH FORCES BEING UNKNOWN, PHILOSOPHERS HAVE AS YET EXPLORED NATURE IN VAIN. BUT I HOPE THAT, EITHER BY THIS METHOD OF PHILOSOPHISING, OR BY SOME OTHER AND BETTER, THE PRINCIPLES HERE LAID DOWN MAY THROW SOME LIGHT UPON THE MATTER.’ ”

Here is a full-blown anticipation of an intelligible exposition of the Universe in terms of matter and force: the substantial basis of what smaller men call materialism and develop into what they consider to be a materialistic philosophy. But there is no necessity for anything of the kind; a