defined through the labours of Galileo and Newton did the mechanical sciences start upon that assured way of progress which they are now following. The very fact that, in spite of much mathematical and mechanical knowledge in former ages, it took such a long time before the now current definitions were reached, is an indication how little the popular notions connected with the word force are immediately applicable and useful in scientific inquiry. The sensations which have led to the popular definition of the word force are connected with subjective experiences, such as effort, pressure, resistance, and many others which are not externally visible, which every person, in fact, only experiences for himself. This subjective origin and signification of the term force has led to two difficulties. First, in order to make the term useful for describing external phenomena, the conception must be cleared of those purely psychical or subjective attributes, and only such data must be retained as can be shown to exist for the external senses—that is to say, the conception must be defined by the measurable quantities of time, space, and mass. This was accomplished by measuring a force by the velocity which it imparts to a definite quantity of matter. In this way no knowledge of force as the cause of motion was required; it was simply measured and defined by its effect; in mathematical language it was equated, or made proportional, to its effect. In the second place, however, the word force, in spite of the clearance through mathematical definition, retained in the popular understanding, as well as in the purely descriptive natural sciences, that subjective meaning