

of these to be a fluid which repelled its own parts and attracted those of the other: this is, in fact, the outline of the theory which recently has been considered as the best established; but from various causes it was not at once, or at least not generally adopted. The hypothesis of the excess and defect of a single fluid is capable of being so treated as to give the same results with the hypothesis of two opposite fluids, and happened to obtain the preference for some time. We have already seen that this hypothesis, according to which electric phenomena arose from the excess and defect of a generally diffused fluid, suggested itself to Watson and Franklin about 1747. Watson found that when an electric body was excited, the electricity was not created, but collected; and Franklin held, that when the Leyden jar was charged, the quantity of electricity was unaltered, though its distribution was changed. Symmer² maintained the existence of two fluids; and Cigna supplied the main defect which belonged to this tenet in the way in which Dufay held it, by showing that the two opposite electricities were usually produced at the same time. Still the apparent simplicity of the hypothesis of one fluid procured it many supporters. It was that which Franklin adopted, in his explanation of the Leyden experiment; and though after the first conception of an electrical charge as a disturbance of equilibrium, there was nothing in the development or details of Franklin's views which deserved to win for them any peculiar authority, his reputation, and his skill as a writer, gave a considerable influence to his opinions. Indeed, for a time he was considered, over a large part of Europe, as the creator of the science, and the terms³ *Franklinism*, *Franklinist*, *Franklinian system*, occur in almost every page of continental publications on the subject. Yet the electrical phenomena to the knowledge of which Franklin added least, those of induction, were those by which the progress of the theory was most promoted. These, as we have already said, were at first explained by the hypothesis of electrical atmospheres. Lord Mahon wrote a treatise, in which this hypothesis was mathematically treated; yet the hypothesis was very untenable, for it would not account for the most obvious cases of induction, such as the Leyden jar, except the atmosphere was supposed to penetrate glass.

The phenomena of electricity by induction, when fairly considered by a person of clear notions of the relations of space and force, were seen to accommodate themselves very generally to the conception

² *Phil. Trans.* 1759.

³ Priestley, p. 160.