

unimportant, that the partitions usually employed are not impermeable to sound, as opaque bodies are to light. He observes that the sound does not all come through the aperture; for we hear, though the aperture be stopped. These were the main original points of attack and defence, and they continued nearly the same for the whole of the last century; the same difficulties were over and over again proposed, and the same solutions given, much in the manner of the disputations of the schoolmen of the middle ages.

The struggle being thus apparently balanced, the scale was naturally turned by the general ascendancy of the Newtonian doctrines; and the emission theory was the one most generally adopted. It was still more firmly established, in consequence of the turn generally taken by the scientific activity of the latter half of the eighteenth century; for while nothing was added to our knowledge of optical laws, the chemical effects of light were studied to a considerable extent by various inquirers;<sup>13</sup> and the opinions at which these persons arrived, they found that they could express most readily, in consistency with the reigning chemical views, by assuming the materiality of light. It is, however, clear, that no reasonings of the inevitably vague and doubtful character which belong to these portions of chemistry, ought to be allowed to interfere with the steady and regular progress of induction and generalization, founded on relations of space and number, by which procedure the mechanical sciences are formed. We reject, therefore, all these chemical speculations, as belonging to other subjects; and consider the history of optical theory as a blank, till we arrive at some very different events, of which we have now to speak.

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<sup>13</sup> As Scheele, Selle, Lavoisier, De Luc, Richter, Leonhardi, Gren, Girtanner, Link, Hagen, Voigt, De la Metherie, Scherer, Dizé, Brugnatelli. See Fischer, vii. p. 20.