years, to the older and apparently abandoned views contained in the writings of Wilhelm Weber, who dealt with electric particles and their actions at a distance. The chasm has been bridged over by such theories as those of Lorentz and Larmor, and the missing link supplied which prevented Gauss[1] from accepting that theory when it was first communicated to him by its author.[2]

[1] See above, p. 67, note, where Gauss's letter is quoted; also Larmor, *loc. cit.*, and 'Æther and Matter,' pp. 22, 72; 'Philos. Transactions,' vol. clxxxvi. (1895), p. 726; H. A. Lorentz, 'La Théorie électromagnétique de Maxwell,' 1892, p. 71: "On voit donc que, dans la nouvelle forme, la théorie de Maxwell se rapproche des anciennes idées. On peut même, après avoir établi les formules assez simples . . . regarder ces formules comme exprimant une loi fondamentale comparable à celles de Weber et de Clausius. Cependant, ces équations conservent toujours l'empreinte des principes de Maxwell." Further: Lorentz, 'Versuch einer Theorie,' &c. (1895), p. 8: "In general there lies in the assumptions which I make in a certain sense a return to the older electric theory. The kernel of Maxwell's views is hereby not lost, but it cannot be denied that with the assumption of ions we are not very far removed from the electrical particles with which one operated formerly." Wiechert ('Grundlagen der Electrodynamik,' p. 108) expresses himself similarly. Lastly, I may refer to Prof. Kauffmann's very interesting Address delivered at Hamburg, September 1891, translated in the 'Electrician' (November 1901, p. 95 *sqq.*) So we may perhaps say that as Larmor attaches himself to the traditions of the Dublin school, Lorentz and other continental representatives of the atomic view attach themselves to the school of Gauss and Weber. In proof that Weber's ideas never died out in the Göttingen school, see Rieck's Eloge of Weber, Göttingen, 1897, p. 27, and a very significant remark in the verdict of the philosophical faculty on Planck's Prize Essay ('Die Erhaltung der Energie,' 1887, p. 10).

[2] It would be unjust to dismiss this subject, the overwhelming importance of which becomes evident if we glance at the many contributions which fill the third volume of the 'Rapports présentés au Congrès International de Physique' (Paris, 1900), without stating that the atomic theory of electricity not only furnishes the very keystone which Gauss was looking for seventy years ago, but that it has also stood the test of experimental verification in the observation by Zeemann of the effect of magnetism on the rays of light, an effect which Faraday sought for in vain about the time when Gauss was in search of the keystone of electrodynamics. A very concise and interesting account of Zeemann's phenomenon will be found in M. A. Cotton's monograph "Le Phénomène de Zeemann" ("Scientia," Phys. Mathem., Paris, 1899): "Comment M. Zeemann a-t-il eu l'idée d'étudier avec un appareil de polarisation la lumière émise