

so the rays of electric and magnetic force seen by Faraday in the abstraction of his intuitive mind became a reality for every experimentalist when Hertz in 1888 actually showed the wonderful action of electric waves at a distance. Atoms and lines of force have become a practical—shall I say a popular?—reality, whereas they were once only the convenient method of a single original mind for gathering together and unifying in thought a bewildering mass of observed phenomena, or at most capable of being utilised for a mathematical description and calculation of actual effects.

For a quarter of a century after Faraday had conceived the notion of looking upon electric and magnetic phenomena as depending on a property belonging to all matter, and pervading all space, like radiation and gravity, the only natural philosopher who to any extent entered into his ideas was Thomson. Even Tyndall, who came more than any other prominent physicist under Faraday's immediate and personal influence, and contributed largely to our knowledge of the new phenomena discovered by his great master, does not seem to have assimilated his scientific language and reasoning. It required a mathematical mind really to grasp and put into form Faraday's notions. Encouraged by Thomson, and soon after the publication of Thomson's mathematical theory of magnetism, Clerk Maxwell devoted himself to a theoretical study of electricity and allied subjects, a field which Thomson had then almost monopolised in this country.<sup>1</sup> The first of Maxwell's revolu-

<sup>1</sup> See Professor Glazebrook's little book on 'James Clerk Maxwell and Modern Physics,' published in the

"Century Science Series," 1901. On page 42 a letter of Maxwell is quoted, in which he speaks of