

only vague similarities in the phenomena of attraction and repulsion aroused attention. But directly electricity was set in motion, constituting what is called an electric current, magnetic lines of force instantly sprang into being, without the presence of any steel or iron; and in twenty years they were recognised. These electrically generated lines of force are similar to those previously known, but they need no matter to sustain them. They need matter to display them, but they themselves exist equally well in perfect vacuum.

How did they manage to spring into being? Can it be said that they too had existed previously in some dormant condition in the ether of space? That they too were closed loops opened out, and their existence thus displayed, by the electric current?

That is an assertion which might reasonably be made: it is not the only way of regarding the matter, however, and the mode in which a magnetic field originates round the path of a moving charge—being