

dreds may be made, and the original magnet will be stronger after the process than before, a circumstance which cannot be reconciled with the theory of communication.

But there is another result peculiarly characteristic of magnets, or rather of the agent itself, and that is the attractive and repulsive power of magnetic poles between themselves. That end of a magnet which points to the northern hemisphere is called the north pole of the magnet, and that which is directed to the southern the south. But, if we take two magnets, and bring their north poles together, a strong repellant power is called into action, and they fly from each other, and the needles can never come to rest till the south pole of one is directed to the north pole of the other. This is not merely the result of a strong repulsion between poles of the same name, whether north or south, but is partly produced by an attraction between poles of different names, for the north and south poles evince an evident tendency to come as nearly as possible to each other. Acknowledging the force of this law of the magnetic agent upon itself, it will follow that we have misnamed the poles of the magnet. There can be no doubt that the force subsisting between a magnet and the earth resembles that which is exerted between two magnets. It would therefore be more proper to reverse the names of the poles; for as poles of opposite names attract each other, that which is directed to the north pole of the earth is the south pole of the magnet. For some reasons, the alteration of terms might even now be desirable; but so many inconveniences arise from a change of nomenclature, that it is generally better to keep an inaccurate term than to confuse facts by the adoption of a better, and especially when those terms are in common use among practical men.

These preliminary statements will enable us to explain the action which subsists between a magnet and the earth, and the variations to which the directive power is subject. The facts will perhaps be more intelligible if we imagine the earth to be a magnet, or rather to enclose a magnet extending from north to south, having a revolution round a small circle in both hemispheres. But, at the same time, the reader must bear in mind that the hypothesis is only employed for the sake of illustration.

The poles of a magnet freely suspended do not point to the poles of the earth's rotation, and hence we may deduce