why the sulphuret of copper commonly occurs in metallic veins nearer the surface than the yellow bi-sulphuret, where it is exposed to the action of water and of ferruginous matter, as indicated by the "*gossan*," or oxide of Iron, which occurs in the upper regions of Copper mines in Cornwall. Mr. R. W. Fox referred also to his experiments on the electro-magnetic condition of metallic veins, and adduced proofs of the electricity which he had detected in them, being independent of accidental influence; indeed, he obtained very decided voltaic action when a piece of sulphuret, and another of yellow bi-sulphuret of copper were dipped in water, taken from a mine, the former being electro-positive with respect to the latter. This experiment shows that the voltaic action between different metallic lodes, and different parts of the same lode, must be very great. He was induced to commence his electro-magnetic experiments in mines in consequence of the analogy which he thought he perceived in mineral veins to voltaic combinations.

In another experiment Mr. R. W. Fox has substituted the sulphuret or vitreous copper ore for the piece of Zinc in one of the cells, all other circumstances being the same as before described, and in a few weeks the yellow bi-sulphuret of copper in the other cell was covered with a thin coating of the sulphuret of that metal. He has also found that sulphuretted hydrogen is copiously evolved when yellow copper ore is placed in a solution of sulphate of Zinc or of Iron in one of the cells, and connected, by means of a wire, with a piece of Zinc in the water of the other cell. As sulphuretted hydrogen has the property of precipitating most of the metals from their solutions, in the form of sulphurets, this experiment seems to point at an agent which may have produced many of the metallic sulphurets. See vol. ii. P. 108. Note.

In a subsequent communication to the Geol. Soc. of London, January, 1837, Mr. Fox observes, "I imagine that I see more and more reason to believe, that the Eastward and Westward tendency of metallic veins, must be ascribed to the electro-magnetic influence of the earth. In some parts of the world there may be considerable deviations from this bearing, which may be owing to local circumstances; but the coincidence in their direction, generally speaking, is so great and decided as clearly to indicate