term which I employ is his, though the fact was not known to him.

I have published an article describing these experiments, which may be known to you, but I have since found some new facts. At Berlin I tested some metals which I had not tried before. I cannot vouch for the quantities within 50 per cent., but I think I can vouch for the direction of the effect. It is not the same for different metals under the same conditions of current and magnetic force. It might have been expected that the effect would be in the same direction in nickel as in iron; but it is not, it is in the opposite direction; nickel acts like gold, cobalt acts like iron. Nickel, silver, gold, platinum, and tin gave an effect opposite to iron.

The most important fact that I have to bring before you is that in zinc the effect is in the same direction as in iron and cobalt.

Table of effects on an arbitrary scale.

Iron	+ 78	Brass	− 1·3
Cobalt	+ 25	Platinum	− 2·4
Zinc	+ 15	Gold	− 6·8
Lead	—	Silver	− 8·6
Tin	+ 0·2	Copper	− 10
		Aluminium	− 50
		Magnesium	− 50
		Nickel	−120

The deflection of the current in those marked + is in the same direction in which the conductor itself tends to move in the magnetic field. I cannot vouch for the order of the metals. I have tried three specimens of nickel, and the direction was the same in them all. One of them was pure nickel, furnished me by Prof. Chandler Roberts.

The following remarks were made by the chairman, Sir William Thomson:—

The subject of this communication is by far the greatest discovery that has been made in respect to the electric properties of metals since the times of Faraday—a discovery comparable with the greatest made by Faraday. I look upon it with special interest myself as so closely connected with electrodynamic properties of metals, which formed the subject of my Bakerian Lecture in 1856. I pointed out in that paper, in about § 104, that it was to be expected that magnetic induction would produce change of thermal conductivity and of electric conductivity in different directions in substances perfectly isotropic. I found by mathematical investigation rotational terms, and pointed out that we might expect in bodies which have rotational quality to find the effect of such terms exhibited. But the only influence having that relation to rotation which was necessary for producing the terms in question I pointed out to be the influence of a magnet, and that we might expect that the effect of a magnet upon an isotropic body would be to induce difference of quality in different directions in accordance with the rotatory term, and I said I thought it improbable that the rotatory terms would be found to be null in a body subjected to the influence of a magnet. I look with great delight on Prof. Hall's discovery, as having verified that which I predicted as probable. I did not myself make any serious attempt to discover it. It is the first illustration ever brought out by experiment of one of the most curious and interesting things in the mathematics of æolotropy. The previous mathematical writers dismissed these terms altogether, although they found them in the formula;—dismissed them as something which we could not imagine to exist. I refused to dismiss them, and said there was decided reason that they could exist under the rotational influence which we know to belong to a magnet.

Prof. Rowland said: Mr. Hall had tried the direction of rotation of the plane of polarisation when light is reflected from nickel and iron on Dr. Kerr's plan. The direction was found, if he remembered aright, to be in opposite directions for these two metals. We did not yet know enough to say whether this investigation explains the rotation of the plane of polarisation of light.

Prof. Sylvanus Thompson said he had verified Prof. Hall's result by using a telephone instead of a galvanometer.

Mr. Glazebrook said he had published a paper on the same subject in connection with the rotation of the plane of polarisation of light. Maxwell said this effect (rotation of the plane of polarisation by reflection from a magnet) could be explained by molecular rotation of the particles in the field.

Prof. Fitzgerald asked Sir William Thomson to express an opinion as to how it happens that different substances differ in the direction of this effect. He also remarked that the terms expressing the magnetic force on the matter were the same as those which would express Prof. Hall's observed effect on the current. Was the action to be regarded as an action on the matter or on the current?

Prof. Everett asked whether the current in its deflected condition was oblique (instead of, as usual, normal) to the equipotential surfaces?

Sir William Thomson, in reply, said that effect on matter and effect on the current through it went together, and could not be distinguished. He could not say why the effect in any particular metal was in one direction rather than the other. There was nothing in the mathematical theory to show in which metals it should be in the same direction. Prof. Everett's question might be answered by referring to several corresponding cases. If heat was flowing from end to end of a bar cut obliquely from a crystal, the points of equal temperature in two opposite sides would not in general be exactly opposite to each other. The foundation of the general theory of which this was an illustration had been laid by Prof. Stokes.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE

OXFORD.—On November 3 Sir William Anson, Bart., D.C.L., Fellow and Sub-Warden, was elected Warden of All Souls' College in succession to Dr. Leighton, deceased. Sir William Anson was Vinerian Reader in English Law.

A Fellowship at University College will be offered for competition about the end of next February. The examination will be in biology and kindred subjects. At the last examination for a Biological Fellowship none of the candidates were judged of sufficient merit, and the election was accordingly deferred.

Candidates for the Brackenbury Natural Science Scholarship at Balliol College must communicate with the Master by letter on or before Friday, November 11. Papers will be set in Chemistry, Mechanics and Physics, and in Biology. There will also be an optional paper in Mathematics, and an essay.

At Christ Church there will be one or more Natural Science Junior Studentships elected next March. Candidates must not have exceeded the age of twenty on January 1, 1882. Papers will be set in Chemistry, Biology, and Physics, but no candidate will be allowed to offer himself in more than two of these subjects.

CAMBRIDGE.—On Monday, November 7, Mr. J. E. Marr, F.G.S., was elected to a Fellowship at St. John's College. In 1878 Mr. Marr obtained a First Class in the Natural Sciences Tripos; in 1879 he received a grant from the University to enable him to travel in Bohemia and study the Cambrian and Silurian rocks there; also in 1880 he went in a similar manner to Norway and Sweden. His paper on the Rocks of Bohemia was published in the *Quarterly Journal* of the Geological Society for November 1880. He is at present lecturing for the University at Barrow Kendal, and Lancaster.

GLASGOW.—Mr. John Macalister Dodds, B.A., Fellow of St. Peter's College, Cambridge, 4th Wrangler, 1880, has been appointed one of the assistants to Dr. Jack, Professor of Mathematics in the University of Glasgow. Mr. Dodds was a distinguished Glasgow student before proceeding to Cambridge. All the four Professors of Mathematics and Natural Philosophy in the Universities of Edinburgh and Glasgow—Prof. Tait, Prof. Chrystal, Prof. Sir William Thomson, and Prof. Jack—are Peterhouse men.

SCIENTIFIC SERIALS

The American Naturalist for September and October, 1881, contains (No. 9, vol. xv.): Carl F. Gessler, variations in a copepod crustacean (woodcuts).—A. S. Packard, jun., Scolopendrella and its position in nature (places Symphyla as a sub-order of Thysanura).—W. H. Dall, American work in the department of recent mollusca in 1880.—D. G. Brinton, notes on the Codex Troano and Maya chronology.

No. 10, vol. xv.: D. H. Campbell, on the development of the stomata of Tradescantia and Indian corn (woodcuts).—Cyrus Thomas, the age of the manuscript Troano.—J. Walter Fewkes, the Physophoridæ (iii.).—R. E. Cull, the Loess in Central Iowa.—A. S. Packard, jun., on the early stages of the