

graph is so thoroughly understood and appreciated, cannot fail to remember that this,—one of the most surprising, as well as the most useful boons, which the application of modern science has bestowed upon mankind,—was dependent on the discovery of those laws of electricity and magnetism which are being further evolved, by the means of such careful and unbroken notings of varying phenomena as have been for years recorded at our own Magnetic Observatory.

Such an establishment is worthy of the rising character of this fast-growing community, and affords to foreign countries one of the best proofs of our real advancement. Our progress and improvement have been wrung from a soil which, however fertile, was covered with a dense and pathless forest; and the toil necessary to reclaim it left to the laborer little force, and even less of time and opportunity, for mental cultivation. It cannot, therefore, be a matter of surprise that attempts at intellectual progress should have tarried for the material progress which has been so successfully achieved; that efforts to cultivate the sciences, the æsthetic arts, the abstract philosophy, in which consist the true elements of national greatness, should but recently commence, and by degrees occupy the thoughts and attention of the people; and it is in this view that the Toronto Magnetic Observatory becomes a subject of honest congratulation. It is a thing of a world-wide character, designed to co-operate with all other nations engaged in similar researches, and founded in the most generous spirit of philanthropy, which seeks to benefit as well future generations as our own: by the accumulation of truths, the full development and practical application whereof will only be known and made available to those who come after us, to fill our places in this busy world.

Nor can I refrain, in this place, from making an allusion to one especial advantage which a full mastery of the laws of magnetic science will confer upon commerce, in respect to the use of iron ships, which, from the material of which they are constructed, render the magnet useless, unless the influences of local attraction can be overcome. More than one disaster has arisen from this cause; and it is only to a perfection of the science that we can look with hopeful confidence for an effectual remedy; for it has been found that this local attraction itself is dependent, in iron vessels, on the exercise of an inducing effect by the earth's magnetism, and varies with it according to laws the course of which has yet to be traced. The importance of this consideration will be the better appreciated, by remembering that the *Leviathan*—that wonder of naval architecture,