

its equivalents by the commercial world. It will not only be a great discouragement to American science, but, if persisted in, would enormously diminish the practical usefulness of the Survey. It is impossible to neglect pure science, and yet hope to reach those results which are but its latest fruitage. Palæontology, with all its marvellous disclosures relative to ancient life; chemistry, with its determination of the origin of crystalline rocks, or its wondrous spectrum analysis, revealing to us the physical structure of the heavens; or physics, with its more comprehensive discoveries of the correlation of forces—all alike present themselves to the "practical" mind as mere sports of scientific speculation, with no possible bearing on the economic needs, or the industrial interests of the community. What can it benefit the miner to learn of Tertiary vertebrates; or the farmer to be assured of the verification of the *Hesperornis*, the *Ichthyornis*, or other toothed birds of the Cretaceous strata of our North American continent? It is not indeed a matter of wonder that, to the man of "advanced views" in political and social science, who claims above all things to be "practical," it should seem a matter of equal indifference whether the dawn of life has been discovered in the *Eosoon Canadense* of our Laurentian rocks; or the existence of palæolithic man in America has been demonstrated by the recovery of the turtle-back celts in the drift of New Jersey. Nevertheless, to note only one familiar instance, the determination of the relative age of the strata of the Earth's crust has been of scarcely less economic value in the Provinces of Quebec and Ontario, in saving the useless expenditure of many thousands of dollars in a vain search for coal, than in guiding the geologists of Nova Scotia in the development of

their rich coal fields. It is the same in every department of science. Amber (*ἤλεκτρον*) furnished the first hint of latent Electricity, which perpetuates in its name the seemingly insignificant beginnings of that branch of science to which we now owe the telegraph, the telephone, electric light, the ocean cable; which have annihilated space, and outstripped time in their winged messages over land and sea. Yet such is the world's inheritance, won for her in the ardent search for abstract truth, in the unselfish devotion to pure science. We can no more look for the practical fruits of science without such preliminary labour, than for the reaping of the harvest where there has been no seed-time.

The institution of this Royal Society by the Canadian Legislature is in itself a recognition of the value thus assigned to pure science. By our constitution it is provided "that the advice and assistance of the Society shall at all times be at the disposal of the Government;" and in no way can this be more legitimately rendered than by interposing to prevent a premature demand for economic results arresting the researches of science. We are not likely to forget that Canada is still a young country—favoured in many ways on that very account, by reason of the unimpeded course that thus lies before us; but also with some of the difficulties incident to national youth. The learned societies of Europe have, in many cases, endowments at their disposal, which enable them to render efficient aid to science, and to issue costly works dealing with subjects such as no publisher would view with favour. No such endowments as yet exist in Canada; and occasions will occur when it may be our duty—looking to the true interests of the Dominion—to recommend to the Legislature a liberal encouragement