graph as a measure of police in more than one remarkable case: as a measure of government it is not less important;—from the illustration which I have drawn from America, it is equally useful in commerce; but as a measure almost of social intercourse in the discharge of public business it is not without its uses also. The day before yesterday I had an opportunity of examining the telegraph in the lobby of the House of Commons, by which communications are made to and from some distant committee room. As a specimen of the information conveyed from the House, is the following:—"Committee has permission to sit until five o'clock;" and among the questions sent down from the Committee are the following:—"What is before the House?" "Who is speaking?" "How long before the House divides?"

Even if I possessed in myself, or had collected from others, the materials for the most rapid sketch of the progress of other sciences, the time would fail me in the attempt to convey it to you. I abstain from any reference to Geology, principally from my own ignorance of its later progress. I can as little endeavour to bring before the Association the discoveries during the past year by which Science has ministered to the arts or to commerce; yet I cannot leave altogether unnamed—though I can hardly do more than name—the discovery of the Gun Cotton; and the application of electricity to the smelting of copper.

For that process, I believe, a patent has been recently taken out. As yet, perhaps, sufficient time has not elapsed to test its full value. We all know that an experiment succeeds perfectly in the case of a model, or in a laboratory, which may not succeed so perfectly when the miniature steam engine, for example, is extended to its ordinary size in a manufactory, or when the operation is transferred from ounces to tons. But if the hopes, expectations and confidence of the discoverers be realized, their plan will be of the greatest value to this country, and of even greater proportionate value to some of the Queen's most important colonies. It has been said that 10,000 tons of copper ore were sent last year from Australia to be smelted in England; and that they produced no more than 1,600 tons of copper. It is evident, therefore, that, if by this process of smelting by electricity, the refuse, namely, 8,400 tons, can be left on the spot, 8,400 tons of shipping are liberated for other purposes of commerce between the colony and the mother country; and the saving of coal in England, an object not wholly devoid of interest, is immense.

From the sciences cultivated, extended, or encouraged, I advert to a consideration of the Association itself. The importance of these meetings is national. Their direct results have been eminently beneficial to Science: their indirect effects in uniting men of the same pursuit from different parts of our common country, and not less in bringing together those whom seas and empires divide, but whom the same zeal for knowledge happily associates as in this place, are equally remarkable. Those antipathies (I hardly use too strong a word) which once separated us from our brethren in other realms—and from which even men of science were not always exempt—are, year by year, vanishing; and we have met cordially on common ground to assist and encourage one another in the pursuit of objects honourable and serviceable to the whole family of man.

While, however, this effect is produced, whether our meetings be in Oxford or in Cambridge, in Edinburgh or in Dublin, in Liverpool or in Cork—or again whether they be in England or in Genoa, in Milan or in Naples—let us not forget, that, if we raise the standard of Science in our own country, we raise the national character, also, and its just influence in other countries; and that while individual benevolence is promoted by personal intercourse in these re-unions, the benefit of the labours of every such association is national also. None can doubt that the reputation of our country depends far more on its intellectual strength than on its military glory. Without for a moment undervaluing those to whom in past ages as in the present, England is—humanly—indebted not merely for her empire, but for preservation also, I cannot doubt that the European reputation of England is owing far more to Newton than to Marlborough. I believe that every new discovery of science which England is permitted to make, while it adds perhaps directly to her wealth or indirectly to the developement of her resources, adds also to her influence in the scale of nations. Our Government has exercised a prudent and sagacious liberality in adopting thus far the suggestions of this Association, for the advancement of Science; and it may be well assured, that such suggestions, made cautiously and disinterestedly by this Association, will continue to advance the public interests as well as the mere incidental honour of the body from which they proceed—and which, from past experience, may justly claim the confidence of the State.

The interest of our nation in Science has kept pace with the encouragement given by public authority to the cultivation of Science.

Our National Collection may now be compared, not ostentatiously, but thankfully, with those of other countries; remembering, also, that our collections are little more than half a century old.

The ornithological, the conchological, the mammalian departments in the British Museum are equal, I believe, to those of any other capital: greatly owing to the talents and labour of the eminent head of that department, Mr. Gray,—whom I see here. The fossil divisions, under the care of my zealous, laborious and able friend, Mr. Konig, are perhaps superior—in some classes, beyond comparison. Last year, there was added to the palæontology of the Museum the unique specimens of the Holitherium of Kaup, the Cephalaspis of Lyell, the Lepidote of Fitton; and the collection of osteology is, as it ought to be, the first in England. The number of visitors, which six years ago was 319,000, was last year above 700,000—and the collections of comparative anatomy in the Hunterian Museum are, as they ought to be, the first in the world.

With these indications of the state of Science, and of the taste for science diffused in our own country—sometimes as the fruit of the labours of this Association, sometimes as collateral and incidental, and even distinct, results, but all shewing the progress of physical knowledge or the means of extending and familiarizing it amongst us—I might finish my Address.

But I cannot conclude without congratulating the University and the Association alike on this assemblage.

We can never forget that the earliest, and in every sense the first, of the scientific bodies of England, the Royal Society, derived, as we learn from Bishop Sprat its original and contemporary historian, its foundation in this place. We can never forget that Bishop Wilkins, the predecessor of my honored friend the Vice-Chancellor of Oxford in the government of Wadham College, was the chief promoter of its designs; that Sir W. Petty, the Wrens, Seth Ward, and Wallis, were his associates; and that here, for fourteen years, our own great and good Robert Boyle, pre-eminent amongst early observers, and ever eminent for Christian principle and devotion, cultivated natural science: and, without for a moment undervaluing the mighty names which do honor to Cambridge—which do more, which do honor to England and our common nature—we may claim in Oxford the distinction of having nourished and sent forth the men who first laid the basis of the greatest of the scientific Associations of the world.

Here, then, the British Association gladly accepts the welcome now tendered to it within this venerable University. It was cordially received fifteen years ago, when this Chair was worthily occupied,—and far more appropriately than by me—by my very reverend friend, Dr. Buckland. I hope and believe that the feeling of good-will and respect will be mutual, enduring, and cordial;—that the University will see with pleasure the progress of the Natural Sciences, and of the observations which the British Association has eminently encouraged;—and that the members of our Association will look with kindness and respect at the venerable seats of ancient learning, whence have been diffused through the land for many centuries the benefits of a large and liberal education, and the blessings of Christian instruction; where it is the earnest and habitual endeavour of those who teach—may it be alike the desire of those who learn—to sanctify the acquirements of the mind by the graces of the Spirit.

I feel that I have very inadequately discharged the duties of the station in which I have been placed. Wherever the failure is less apparent, I unfeignedly desire you to attribute such partial success to the aid which I have received from Dr. Robinson, Professor Owen, Mr. Robert Brown, and Colonel Sabine; since nothing which is derived from them can be unworthy of your notice. Lest you should have forgotten my earlier mention of them, I repeat this statement; and add again, that it is enough for me to be allowed to call such men my friends. My own avocations in later years have withdrawn me, as I have said, from the active pursuits of science; yet it was necessary for me to attempt some review of its later progress. I will only add my firm belief, that every advance in our knowledge of the natural world will, if rightly directed by the spirit of true humility and with a prayer for God's blessing, advance us in our knowledge of Himself, and will prepare us to receive His revelation of His will with profounder reference.

The improvements of modern Art, have greatly facilitated the progress of Science. Here, how have they brought together from distant regions men of other tongues and other families, but not of other minds!—men whom I name to honor them; the Prince of Canino, Van der Hoeven, Langberg, Ehrenberg, Leverrier, Struvé, and Gautier, united here in one common object. In the words of the Prophet Daniel, if they may be applied without irreverence, "men travel to and fro, and knowledge is increased."

May that knowledge be guided aright—may every acquisition of it be sanctified—as the circle widens, may every eye be still directed to the Centre of all Truth—and may every science, whether cultivated in connection with this great Association or in the elder establishments of this great University, willingly, gladly, and cheerfully lay its tribute on the altar of God.

The Marquis of Northampton moved, and the Chevalier Bunsen seconded, a vote of thanks to Sir R. H. Inglis for his address. The motion was carried by acclamation.

All Letters must be Post-paid.

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