

evolving the knowledge by which alone these wonders can be accomplished.

In regarding such gatherings as the above, we find our respect for the scholar deepening, and our faith in the power of mind increasing. However the subject may effect us, we can readily see that to the speaker it is of absorbing interest, and that even in the dry-as-dust pursuits he is urged on by the most powerful enthusiasm. The President, Professor Cayley, opens with an abstruse lecture on Mathematics, which was largely an elaboration of the following proposition:—

“Mathematics connect themselves on the one side with common life and the physical sciences; on the other side, with philosophy, in regard to our notions of space and time, and in the questions which have arisen as to the universality and necessity of the truths of mathematics and the foundation of our knowledge of them.”

He closed with the following words:—

“In conclusion, I would say that mathematics have steadily advanced from the time of the Greek geometers. Nothing is lost or wasted; the achievements of Euclid, Archimedes, and Apollonius are as admirable now as they were in their own days. Descartes' method of co-ordinates is a possession forever. But mathematics have never been cultivated more zealously and diligently, or with greater success, than in this century—in the last half of it, or at the present time. The advances made have been enormous, and the actual field is boundless, the future full of hope. In regard to pure mathematics we may most confidently say,—

“Yet I doubt not through the ages one increasing purpose runs,
And the thoughts of men are widened with the process of the suns.”

Following this address came papers upon Biology, Anthropology, Geology, Geography and Mechanical Science, by specialists. In each case we are told the rooms were filled with interested auditors, a fact which is certainly significant. In presenting the claims of biology upon the scholarship and purses of the British people Prof. Lankester thus disposes of objectors to Science:—

“To opponents of the advancement of science, it is of little use to offer explanation and arguments. They mock at the botanist as a pedant, and the zoologist as a monomaniac; they execrate the physiologist as a monster of cruelty, and brand the geologist as a blasphemer; chemistry is held re-

sponsible for the abomination of aniline dyes and the pollution of rivers, and physics for the dirt and misery of great factory towns. By these unbelievers science is declared responsible for individual eccentricities of character, as well as for the sins of the commercial utilizers of new knowledge. The pursuit of science is said to produce a dearth of imagination, incapability of enjoying the beauty either of nature or of art, scorn of literary culture, arrogance, irreverence, vanity, and the ambition of personal glorification. Such are the charges from time to time made by those who dislike science, and for such reasons they would withhold, and persuade others to withhold, the fair measure of support for scientific research which this country owes to the community of civilized States. Science is not a name applicable to any one branch of knowledge, but includes all knowledge which is of a certain order of scale of completeness. All knowledge which is deep enough to touch the causes of things in science; all inquiry into the causes of things is scientific inquiry. To aid in the production of new knowledge is the keenest and the purest pleasure of which man is capable. The progress and diffusion of scientific research, its encouragement and reverential nurture, should be a chief business of the community, whether collectively or individually, at the present day.”

Mr. Saunders discusses the proposed Jordan Canal. Prof. Ball lectures on “Recent researches on the sun's distance,” affirming with apparent exultation that,

“Reviewing all the different methods, the most probable value seems to be 92,700,000 miles. It does not seem likely that this can be erroneous to the extent of 300,000 miles. The distance of the sun is one of the most important constants in the universe. It is indeed a constant in a very emphatic sense. The planetary perturbations which affect so many other elements of the solar system are powerless to touch this constant. Once the distance of the sun has been measured, the telescope with which the observations were made may moulder, and the astronomer who used it may survive only in name, but the work he has accomplished will remain true for countless ages of the future.”

Mr. Harrison gives some results in Anthropological Science. Mr. Brunlees describes dock and railway machinery. Mr. Bramvell talks to the common people about the telephone, stating that it has been used over a distance of 1000 miles, and reflecting upon this progress in the following terms:—

“Common as the telephone now is, let me remind you that if but six short years ago it had been suggested to you that we should within two years