

After the sustenance has been secured the chief objects which are in any way worthy of his attention are those which pertain to the cultivation of the mind in its largest sense, and the mere money-spinner who is constantly forgetting this or acting as if he knew it not reminds one of nothing else so much as the dog that dropped the substantial meat in order to plunge in quest of its mere unsubstantial reflection in the water. The man of science or of art ought not to find it necessary to be for ever making apologies for his work. When the cash-worshipper asks with Hudibras—

For what is worth in anything

But so much money as 'will bring?'

he can answer in the words of Ben Jonson, "Money never made any man rich, but his mind."

No true student will allow himself to be turned aside from any field of enquiry merely because he does not immediately see the prospect of a so-called practical—that is a money-making—issue to his investigations. Yet in the four different aspects under which Dr. Rennie discussed his favourite science he was able to show how at every turn the student finds himself rewarded with the discovery of some utilitarian fact which should supply at all events a sufficient reason, even to the most materialistic mind, in favour of public support being accorded to the original research of the scientist. In the purely physical aspect of chemistry the most interesting work touched upon, such as that of Professor Crookes and Lord Kelvin, had reference to the efforts now being made to account for the action of the all-pervading ether of the universe in giving rise to the phenomena of matter. On the chemical side it has been shown that one metal may be made to manifest itself in at least five different aspects, thus suggesting that this apparently elementary body is really a compound derived from some simpler substance or substances. Nothing was said about the indirect evidence which is now accumulating to show that hydrogen is the basis of some materials which at one time were thought to be chemically indivisible elements. But the bold generalizations of Lord Kelvin in looking to the ether as the prototype of all so-called elementary substances have presented an even more interesting field for thought. Here again, however, the practical side of the scientist's work was not left unnoticed, and it was shown that the metal nickel is now being rendered available for purposes to which it would never have been applied but for the partly accidental discoveries of the chemist. It may be mentioned, in addition to what Dr. Rennie says in his paper, that the process of nickel-plating is likely to be revolutionized very soon by the discovery of certain solutions of the same metal, and possibly by this means the practical man may be enabled to obviate the losses occasioned by metallic rust. If an equally simple remedy for vegetable "rust" were found out there would be much cause for rejoicing.

Modern researches are opening up fields of usefulness for chemistry, both from an agricultural and from a manufacturing point of view. The proof that such plants as peas and beans actually have the effect of transferring nitrogen from the atmosphere into the soil is giving a new and highly scientific bearing to the theory of the rotation of crops; while, on the other hand, the synthetical instead of the analytical part of the chemist's functions has been called into exercise in the artificial production of sugar. In all quarters the horizon of knowledge is widening out and disclosing new directions in which patient and conscientious efforts may be productive of immense results in improving the happiness of mankind. Toxicology, or the medical and chemical study of poisons, must at once assume a most vitally important meaning for all the world when it is clearly understood that in many of the most deadly diseases it is a certain specific poison, probably the product of some species of microbe, which kills or weakens the patient. In this, indeed, we have a sphere of chemical research regarding which it must truly be said that the harvest is plentiful but the labourers are few. How to neutralize these poisons may be termed the grandest and most momentous problem which the science of this generation is called upon to solve. There is for many reasons much cogency in Professor Rennie's appeal to students to apply themselves to original researches. It is not really necessary for the student to take up his permanent abode in the crowded centres of the old world in order to effect valuable and lasting work in the cause of humanity. The scientific publications of London, Paris, Vienna, and Berlin are ever open for the recognition of any communications of real value. The true brotherhood of science is in fact independent of local habitation. It is at present nothing less than a reproach to Australians that they leave the investigations even of their flora and fauna to a large extent in the hands of English, European, and American enquirers. Much valuable work has indeed been done in Australia, but the workers are so few, and the amount of work to be accomplished is so great, that the principal cause for reproach applies to those who might make some effort at original research, but who completely neglect their opportunities. The University is the crown of our educational system, and its annual commemoration is a fitting inauguration for the series of school speech-days and reunions which signalize the close of the year. The love of knowledge for its own sake must ever be strangely blended with that of the distinction which it brings. But in congratulating those who have won the laurels of the year we also remind them that the most precious possession which they have acquired is not the prize or the degree, but the mental training and the knowledge which it typifies.