It is stated that the question of a curative agent has for a considerable time engaged the attention of the members of the expedition, and that experiments are now in progress to find a remedial agent which would have the same effect in trypanosomiasis that quinine has in malaria.

Speaking as a layman, the phrase seems to hit the nail on the head, and to be applicable to other groups of diseases besides trypanosomiasis. Research into no form of tropical disease would appear to be complete short of the discovery of such a remedial agent, or of a prophylactic serum not less efficacious than vaccine lymph against small-pox.

The recently-discovered Leishman-Donovan parasite has already been met with not only in India and Assam but in Tunis and the Soudan, and it will probably be found to have a much wider distribution, and to be of greater pathological importance than was at first suspected. If it should be proved to be the cause of the deadly kala-azar of Assam and Upper Bengal, long confounded with malaria, and no less fatal than plague, the discovery will be of great importance, and may be the first step towards the prevention and cure of a disease which has hitherto baffled medical skill. Whatever may be the ultimate results, the investigation of this parasite, which will engage your inquiry, cannot fail to throw light on some obscure points of tropical pathology.

Much, therefore, remains to be done in the way of research and experiment, and I venture to express a hope that the coming session of the London School of Tropical Medicine may be not less fruitful of good work than the sessions that have preceded it. It must be gratifying to all who have laboured for the school to find that the number of students entered for the forthcoming course is the largest ever entered on the opening day.

Before bringing to a close these desultory notes, which are all I have to offer you as an inaugural address, I cannot refrain, as one who held high Colonial office during the whole period of Mr. Chamberlain's administration, from expressing my sense of the service he has rendered to the health of the empire, and certainly not the least of his services has been the establishment of this school.

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THE CLAIMS OF THE CLASSICS.

[ABSTRACT.]

AFTER pointing out that the supremacy which the classics enjoyed in education during the 400 years which followed the first revival of learning had within the last generation been seriously and successfully assailed, Professor Brooks said that in some quarters they were explicitly assailed as unscientific and what was called unpractical. In others they were not so much assailed as ignored, an attitude even more fatal to their interests than one of overt hostility. As a case which was not from time to time restated was apt to be considered to go by default, it might not, he thought, be inappropriate to examine briefly the current objections brought against the classics, and to set forth also their positive claims to consideration.

THE ALLEGED OPPOSITION BETWEEN CLASSICS AND SCIENCE.

In regard to the asserted opposition between classics and science, he hoped to show that this was a false antithesis due to the prevalent ignorance of what was really involved in classical study, and that, while it might be true that the classics were not present in science, the methods of science were, on the other hand, exemplified in the study of the classics. When it was said that classics did not enter into science there was one important exception to be made. It had been his privilege ever since it was first started to take in the *Stethoscope*, the organ of the Bristol Medical School. Nothing was more encouraging to a student of the classics than to observe how, in the technical articles of that journal, the vocabulary was almost wholly taken from the Greek; the small amount that was not Greek was Latin, and sometimes the two languages were combined with lawless dexterity in one and the same word. The dependence upon them was so absolute that one was driven irresistibly to the conclusion that if the Greek and Latin languages did not fortunately already exist it would have been necessary for the purpose of medical science to invent them. The same practice was followed in the other sciences. Sir William Ramsay, for instance, as he welcomed

each newborn element into the world duly endowed it with its Greek surname. Either it is "crypton," the hidden; "xenor," the stranger; or "neon," the new. All countries agreed in this tendency. Germany alone, in an excess of patriotic fervour, tried for a time the experiment of placing Teutonic roots side by side. The result was not philologically pleasing, and the attempt had been in great measure abandoned. It was surely a curious and somewhat pathetic tribute to the richness and flexibility of the ancient tongues that their modern rivals should have been thus compelled to resort to them for their phraseology.

CLASSICAL STUDY A BRANCH OF SCIENCE.

It was undoubtedly true that there was opposition between classics and science, more in detail so far as their subject-matter was concerned; for the one dealt with words and thoughts, and the other with substances and forces and the theories connected with them. But the test of experience showed that it ceased to be true with regard to the mental processes involved in each. The principles which underlay the pursuit of all science underlay also the study of the classics. In fact, from this point of view, they were a branch of science. The chief reason why they were so was that, owing to their remoteness in time, the language in which they were cast had been reduced to a system of exact and ordered law. It was exempt from the laxity and innovations and varying standard of usage which inevitably attended a spoken language. Again, it was highly inflectional. The change of meaning which was expressed in English by means of prepositions and auxiliaries was expressed in Greek and Latin by a change in the form of the word itself, so that one Greek or Latin word was often equivalent to three or four or even five English ones. Then, too, the order of the words in the ancient languages did not follow what we should regard as the natural order of the thought. The subject did not necessarily begin the sentence, the object constantly preceded its verb, and there was a tendency, especially strong in Latin, to reserve the verb for the last place in the sentence.

THE FACULTIES EXERCISED IN CLASSICAL STUDY.

In the study of the classics the faculties called into play were precisely those which were called into exercise in all science—memory, observation, accuracy, and, above all, the power of reasoning by analogy, of bearing in mind the main types of word-formation with which it was the student's first business to become acquainted, and then of recognizing in individual forms the signs which enabled him to refer them back each to its proper type. And not only had he to observe accurately, but the practice of composition in Greek and Latin forced him to reproduce accurately what he had observed. In all this there was mental discipline of a kind similar and equal to that bestowed by science, and exercised upon a sufficiently exacting subject-matter. Any one who had been able to master Latin grammar had a vice-like grip of the principles of all other grammar, our own included, and any one who had studied Latin syntax had had the benefit unwittingly of a course of systematized logic. Furthermore, the ancient languages were scientific not only in their formation but also in their interpretation, which consisted in the application of fixed laws to particular conditions. The general laws of the language must not be violated. On the other hand, the claims of the particular context must be considered, and the nice adjustment between the two in which right rendering lay could often be attained only by a long reasoning process. The classical student could not, if he would, escape the salutary fatigue of thought. He was necessarily and constantly engaged with the consideration of evidence, the drawing of inferences, and the passing of judgement. Primarily, and in not the least important of their aspects from an educational point of view, the classics were a branch of science, and must in the first instance be both studied and taught as such. Science, in fact, denoted a certain method of investigation rather than the particular objects of investigation with which it was connected in the popular mind, and a good deal of heated and mistaken controversy might have been avoided if this had been more generally recognized.

It was a curious but undoubted fact that the scientific spirit in which the classics had to be approached was often most conspicuously lacking in those students of them who were drawn from science. In saying this he was thinking of the matriculation forms in public schools in which were gathered the boys of the Science 6th, many of them holders of open scholarships who required to keep up a certain

amount of Greek and Latin in order to enter at Oxford or Cambridge or to pass the London Matriculation. Those who had had charge of such forms were well aware that the last thing as a rule which their pupils exhibited when confronted with the phenomena of language was any trace of scientific method. Whether any significance was to be attached to this fact they might inquire later. For the present they had to consider the converse question which would naturally be asked, What appearance does the classical student present when engaged upon science? Upon that point, so far as the ancient universities were concerned, no evidence was forthcoming, for the simple reason that he was not called upon to subject himself to the test at all. Far too many classical scholars, it was to be feared, were in the same position as a well-known Oxford don who once said of himself in print: "Of science I know nothing; I have not even examined in it." The case was far different when they came to such a product of modern ideas as the London University. That University from the first made Greek only an optional subject in its matriculation. For a long time it made Latin and the sciences equally compulsory, but within the last two or three years, at the time of its transformation into a teaching university, while retaining science as compulsory it made Latin optional, so that the preponderance had for the first time swung round the other way. The change was significant and affected a vast number of candidates of all ages and conditions; for there was no examination which appealed more strongly to youthful and even to middle-aged ambition. For a generation and more it had been in education very much what a clearing-house was in banking—gathering to itself for a time the most diverse types and then dismissing them each on its appointed way. No doubt it would be possible within the limits of that examination to obtain statistics for comparison, and to find candidates good on the literary side who were correspondingly bad at science.

MODERN LANGUAGES INADEQUATE SUBSTITUTES.

Proceeding, Professor Brooks said: It is the absence in modern languages of those peculiar characteristics which give to the classics their scientific basis that makes it impossible for the former to take the place of the latter as an instrument of education, if, that is, as we are all agreed, the element of science must enter into all education. The modern languages, by the nature of their being, had attained to no fixed and final type; they were not inflectional, and the thought followed for the most part the order of the words. Their surpassing literary merits were beyond dispute, but no one had seriously contended that the external form in which they were cast made sufficient demands upon the scientific intelligence for them to be comparable in that respect with the ancient tongues. They do not present that combination of the difficult and the unfamiliar which is needful for the student to sharpen his mental teeth upon. If we feel inclined to congratulate ourselves upon the superior ease and convenience, as it seems to us, of the modern modes of expression, our self-complacency may be slightly tempered if we reflect upon the historical facts of their first origin.

Our habit of using a multiplicity of words for one, and of altering the form and natural order of words as little as possible, takes its rise ultimately from the inability of the barbarian subjects and the barbarian conquerors of Rome to master the structure of the Latin language with which they were brought into contact. Traces of this inability linger among our young barbarians of to-day, those, for instance, who, when they are asked to decline the Latin word "plus" in full, decline it with only too much fullness as "plus," "pla," "plum"; in their case the desire to become immaculate is likely to remain ungratified. The barbarian inheritors of the Empire of Rome broke up the mighty fabric of language which they were unable to assimilate, and reduced it, as it were, to a lower denomination, and the different modern languages which were the result still show in their formation nothing like the mental grip and concentration of the speech from which they were derived.

CLASSICAL TRAINING NOT UNPRACTICAL.

The second chief objection brought against the classics is that they are "unpractical." This is a loose term and loosely used, but in some one or other of its possible meanings it represents so prevalent an attitude of mind that it is necessary to take it into account. Many people when they use the word have in their minds the undoubted fact that the subject-matter and associations of the classics have no necessary

connexion with the ordinary occupations of the world around us. Success in those occupations is seen to be perfectly compatible with entire ignorance of the classics, and it is felt that from the standpoint of those occupations the classics have no market value. And it is often asked, Why spend time and energy on acquiring knowledge which brings in no material return instead of upon subjects which have an immediate bearing upon one's future life-work? The argument is specious, and might seem likely, if acted upon, to tend to the production of that efficiency of which we nowadays hear so much; but it is none the less mistaken. Its supporters would no doubt claim for it that it is in accordance with the dictates of common sense; but that is by no means an infallible guide. It is easy to see, to take an extreme case, that to discharge people upon the world equipped with a knowledge of shorthand and commercial French is in no sense to send them forth educated, even if 10 commercial French are added commercial German and Spanish. Though these acquisitions may have an immediate market value, success in commerce is, as a rule, reserved for those who come to it with a more widely developed intelligence. And the same principle holds even in the case of those avocations which make considerable intellectual demands in themselves. From one point of view, education consists in teaching how to learn, or as it was once excellently expressed at a conference in our own neighbourhood—"Its object is not to cram with facts but to equip with faculties." Judged from this standpoint, the classical training must be pronounced to have been a success in regard to at least two of the chief careers open to Englishmen. The profession of the Law in its highest branch is entered by men at the end of their university course, who, up to the age of 22 or 23 years, have for the most part never opened a law book, but whose previous training gives them an astonishingly rapid grasp of a new subject; and the same is the case with the administrative duties of the Home and Indian Civil Service.

Whether science will prove equally successful in producing general capacity remains to be seen; in that rôle it is still young and untried in the world, for it has hitherto existed only in reference to itself.

So far we have been endeavouring to meet the "practical man" upon his own ground, and to show that, even from his own not very exalted standpoint, the exclusion from education of what is not immediately and obviously marketable is a mistake. But it is possible to take other and higher ground. It is a real moral service for a young learner that the element of conscious self-seeking should be removed from his education; and that if he asks, as he is very likely to do, What is the good of this? he should be told, "This is good in itself, and therefore you are set to study it." He is thus brought to the conception of knowledge as a thing desirable for its own sake, and not solely as a means to an end; and the more remote the subject is from everyday needs, the more clearly that valuable lesson will be enforced upon him. It has been the experience of most of us with regard to mathematics, which is the readiest instance to take, since it is the one subject which forms a part of all education. Except for those who have since turned to scientific and technical pursuits, the rest of us make no use whatever in daily life of our mathematical training, the first four rules of arithmetic and some remembrance of the easier tables being our only and sufficient guide. But that does not in the least affect our debt of gratitude for the introduction which it gave us to severe and abstract reasoning. It was the mental experience which was all-important, and not the possibility of application in practice.

There is another point of view from which the classics are often described as unpractical, and that is in reference to their own subject-matter. It is vaguely assumed that they are concerned chiefly with the creations of poetry and the imagination. While it is true that their excellence in that sphere is one of their greatest glories, the impression that they have no other side is one which may be dispelled by the simple process of reading them. One finds then that they contain not only the literary presentment of the legends of mythology, but an accurate reflection of the different forms of ancient life—agricultural, social, military, and political—and that various highly concrete and technical matters engage the reader's attention. Either he is keeping bees with Virgil, or hunting the hare over the snow with Xenophon, or bridging the Rhine with Caesar, or drawing lines of blockade round Syracuse or Plataea with Thucydides, or meeting charges of bribery or extortion with Cicero, or investigating maritime law and disputed will cases with Demosthenes and the Attic orators. On all these subjects he has to become for the time being an

expert, and receives, it may be sometimes even against his will, a miniature training in many different arts.

WHAT THE CLASSICS OFFER IN THEMSELVES.

Proceeding to consider what the classics have to offer in themselves, Professor Brooks said: We find in them a vast storehouse of the best that has been thought and felt in the world expressed in the best way. Nowhere else have the great human emotions and experiences been more deeply realized, more clearly and firmly depicted, and more profoundly commented upon. The great irregular art of Shakespeare alone places him apart—"Others abide our question, thou art free"—but with that exception the supreme excellence of the ancient writers, both in the knowledge and delineation of human nature and the criticism of life, is universally conceded. They have given us, too, the highest expression of the different types of literature. Lastly, their writings contain the embalmed record of the past history of mankind. May it not, then, be reasonably urged that these studies, which touch humanity at every point—in its thought and passion, in political and social life, in statecraft and citizenship, afford the best foundation for the building up of human character? This is the great function they have fulfilled in the past; they have not merely developed the intelligence but they have been trainers of men.

"The present age is predominantly scientific." So we are assured on all hands, and so our own senses seem to assure us, for we are surrounded on all sides by the visible and audible results of science. Have these advances, however, improved the quality of life, or is it possible that the American Thoreau was right when he said of the mechanical triumphs of the age: "These things are improved means to an unimproved end"? Whatever the moral effect and value of these improved external conditions, and however impressive we may find them, they are not more than conditions; what remains of supreme importance to us is the human drama, the fate of individuals and nations which is played out within those conditions. Instead of saying that the present age is predominantly scientific, it would be more correct to say that the present age, like its predecessors, is predominantly human, with a scientific setting.

Another misconception into which we are insensibly led is to suppose that because our age makes familiar use of the discoveries of science, it therefore has also an adequate intellectual grasp of them. Are we not most of us really in the same position with regard to them as the lady who, when some one in her presence thoughtfully exclaimed: "I wonder what causes electricity?" replied, with an air of bright surprise, "Oh, don't you know? One turns a sort of revolving thing downwards, and the light comes." Upon these easy terms we can all of us enter upon the heritage of science, and it is precisely upon these terms that the vast majority of us do enter upon it. The intellectual merit involved in this attitude is of the slightest; in fact, it is almost non-existent.

Passing to the examination of some of the special attributes of the classics, Professor Brooks said they might be considered as supplying a kind of historical background to modern life. No doubt the world would still be a supremely interesting place, even if one had only been born into it at some time during the Eighties of the last century and knew nothing of its previous history, but its interest and significance were immeasurably enhanced if one was able to look upon its present in the light of its past. Eliminate Greek and Latin from the world, and it was as though the history of the human race did not extend further back than the year 1500 of our own era. The modern world owed to Rome the basis of its code of law. Besides law, they owed to Rome the general framework of government and administration, the forces of order and method which made society an organized structure. On the other hand, the greater part of the intellectual basis of the modern world came from Greece, which inaugurated the free and right use of reason and scientific method, and laid the foundations of the sciences themselves.

THE CLASSICS AND THE FORMATION OF CHARACTER.

Continuing, Professor Brooks said:

Let us now examine the part which the study of the classics has played in the formation of English character. The great majority of the men who have influenced public affairs—our statesmen, soldiers, and administrators—have received it as the normal and traditional training of their country. Are we dissatisfied with the type it has produced? and does it appear from the past record of England to have failed beneath the test of experience? Can we feel confident that a

more circumscribed and a less human training will produce a better result, or even a result as good? Is it a light thing to break with what has been the tradition and inspiration of our fathers and fathers' fathers, and will the national life and intelligence become narrower and poorer in consequence? Not the least testimony to the value of the classical discipline has been the way in which leading Englishmen in the past have recurred in the hour of trial for comfort and encouragement to the great thoughts and images contained in its literature. And it is scarcely less noticeable how the classics have been the daily friends and companions of men of affairs.

It is sometimes urged that though the classical training may be well suited to members of the governing class who will be called to high positions in the world, it is not suited to the great majority who follow quite ordinary and comparatively humble occupations. A little consideration will show that precisely the opposite conclusion should be drawn. The less interesting and varied one's life-work may be, the more important it is that one should have resources outside it in oneself. If life is to be spent solely in providing the means of life, then, indeed, as Ruskin said, in a phrase of profound and mournful significance, "It passes as a tale which is not told." To guard against this danger is one of the functions of education which fits us primarily for work, but secondly for the rational enjoyment of life; it gives us an outlook wider than the sphere of our particular employment, the capacity for appreciating and following up with pleasure to ourselves this or that intellectual interest. There are happily many such, and amongst them the attractions of classical antiquity will hold certainly not the lowest place. A boy who may not have much chance of becoming an ambassador, a general, a judge, or the governor of a colony or dependency, will at least become a citizen. It is another less obvious, but no less real, function of education to prepare him for citizenship, and this will be best done by giving him the most widely-developed intelligence possible, with the power of taking comprehensive views of questions, and coming to right judgements upon them.

THE FUTURE OF THE CLASSICS.

After considering the relations of the classics to modern literature, Professor Brooks concluded:

There are other important aspects of the classics upon which I might dwell if there were time, but I have touched upon the chief. The omens with regard to their future are not altogether good. They have to contend with ignorance, and the indifference or sometimes hostility which springs from ignorance, with misconception, and with a hasty, unintelligent, and at present panic-stricken desire for material gain, which has not even the wit to see that in injuring education it is over-reaching itself. Imagine out of Dickens a combination of Gradgrind and Jonas Chuzzlewit, and we can estimate the effect of the intrusion of such a spirit into the delicate task of rearing human souls. Undoubtedly these are formidable antagonists, but the cause of the classics is, I think, destined to survive. If it is eclipsed for a time it will have a new renaissance, for its anchorage is in the general heart of mankind, it is interwoven with the stuff and fabric of human life, with the past history of man and his future destinies, his emotion and morality, his feeling for conduct, and his sense of beauty. So long as the human spirit seeks above all for human sustenance—in other words, so long as humanity remains in man—so long, I imagine, will these studies retain an eternal fascination and an eternal appeal.

MEDICAL STUDENTS AND GRADUATES IN THE UNITED STATES.

—According to the *Journal of the American Medical Association*, the number of medical students in the United States for the year ending June 30th, 1904, was 26,138, being 1,477 less than in the year 1903. Of this number, 23,622 were in attendance at the regular schools; 1,105 at the homoeopathic; 1,014 at the eclectic, and 357 at the physio-medical and non-descript schools. There was a decrease in the attendance of the regular schools of 1,266 as compared with the previous year, and a decrease of 1,216 as compared with 1902. In the homoeopathic schools there was a decrease of 393 as compared with 1903, and of 512 as compared with 1902. In 1904, 1,014 students attended the eclectic schools, an increase of 166 over the attendance in 1903. These schools have been increasing steadily since 1900. The total number of graduates for the year ending June 30th, 1904, was 5,747, an increase of 49 over the preceding year. The increase in 1903 over 1902 was 699, so that the increase in 1903-4 was much less than that of the year previous.