paratory school. It contained the germ of modern-side education. Arnold did not know that he was passing from Melanchthon to Comenius, and that the study of things once set rolling would soon displace the study of words. It contained the germs of a new confidence and friendship between boy and master quite as different from the sly sentimentality of the Jesuits as it was from the pompous neglect of the old-fashioned courtly don. It contained, alas! in germ the subjection of the master to the boy in standard, tastes, and habits, which threatens to be the ruin of our public schools. It crystallized also the idea, which otherwise might have disappeared, that a head master must be of necessity a clergyman, and that no school could be properly conducted unless its chief sums up in the pulpit every Sunday afternoon what are supposed to be the spiritual results of the week's emotions. It stamped also with permanence, by a natural misunderstanding, that conviction of a head master's autocracy which prevents the formation in England of a profession of education. The history of English public schools since Arnold is merely the carrying-out under varying circumstances of the teaching of his example, and the development, sometimes to disastrous ends, of abuses to which that example may seem to lend currency.

A few words only are needed in conclusion as to the present and future of our public boarding-schools. Nothing has altered their character more than their growth in numbers, which has been the result of popularity. In Arnold's time no public school except Eton exceeded three hundred boys. Arnold and his contemporary head masters might boast with truth that they knew every boy in their school by sight, his habits, his capacity, his friends. A school thus governed by one man, and penetrated by his influence, differed not only in degree, but in kind, from a school which has of necessity become a confederation. In a public school of Arnold's date games were still amusements. Formerly neglected and ignored by pedagogues, they became the nurse of every manly virtue when a more sympathetic eye was turned upon them. Tom Brown's school-days represents the heroism of the forties, — the high-water mark where boyish enterprise and independence reached their height under the influence of manly recognition. During the last quarter of a century, games have become a serious business, instead of the wholesome distraction of public-school life. They are organized as elaborately as the work. Masters are appointed to teach them like any other branch of study: they form the basis of admiration and imitation between boy and boy, and the foundation of respect and obedience between boy and master. It is difficult to keep large numbers of boys, with only five years difference in their ages, quiet and wholesome without a large development of games. They have been admitted to their full share in the school curriculum. A public boarding-school is no longer a place where, amidst much liberty and idleness, there reigns a high respect for character and intellect, and where the ablest boys are left ample room to fashion each other and themselves. It is a place where the whole life is tabulated and arranged, where leisure, meditation, and individual study are discouraged, and where boys are driven in a ceaseless round from school to play-room, from play-room to school, regarding each as of equal importance, and bringing into the most delicate operations of intellectual growth the spirit of coarse competition which dominates in athletics.

It is difficult to say what changes public boarding-schools are destined to undergo, or whether in an age in which education is so much extended a system so expensive and so exclusive can continue to flourish. The last few years have witnessed the growth of large public day-schools, and any development of national education would be certain to increase their number. Although the Arnoldian system is little applicable to them on its best side, yet they are of necessity free from most of the abuses to which that system has given rise. An idea may grow up that the home is, after all, the best place for children, and that children are the best safeguard of a pure and happy home. Should English society in its new development prefer a kind of education which is the normal type of all countries but our own, which improved communication makes it easier to adopt, we shall still have public schools of which we should be proud: they will continue to represent our best national qualities, but they will be very different from the public boarding-schools of the past.

OSCAR BROWNING.

THE NÄÄS SEMINARY FOR TEACHERS OF MANUAL TRAINING.[1]

IF any inquiring friend of manual training endeavors to find Nääs on any ordinary map of Sweden, he will be disappointed. It is an old Swedish country-seat, beautifully situated on the pretty lake Sävelängen, about ten hours' journey from Gothenburg. The railway from Gothenburg to Stockholm passes in the vicinity, and the intending visitor to Nääs leaves the train at Floda station. From Floda to Nääs is a short journey by boat or on foot. The two settlements are not more than an hour's walk apart.

Nääs itself is situated on the highest point of a narrow strip of land. The lake here is about thirty metres broad, and is spanned by a substantial stone bridge. The castle is attractive, but represents no particular style of architecture. On both sides of the lake are beautiful woods in which the birch and the alder predominate. The situation is as lovely as nature and art can make it.

Herr August Abrahamson bought this place about fifteen years ago. He began at once to set aside a certain portion of his great wealth, acquired as a merchant in Gothenburg, to aid the population of his own neighborhood, and to improve their condition. He began by rebuilding many of the peasants' poor houses, and by teaching them something of systematic agriculture. Afterwards he built three schools in which instruction is given free, and for their support he donated the handsome sum of 225,000 crowns, or over $50,000.

In the year 1872, Herr Abrahamson opened a school for boys from ten to fourteen years of age.[2] The curriculum of this school contains twenty-two hours weekly of instruction in religion, language, history, geography, natural science, writing, arithmetic, singing, and gymnastic and military exercises,[3] and twelve hours weekly of instruction in manual training. The manual training has in this, as in almost all the other schools of Sweden (those of Gothenburg alone are an exception), no other aim than to prepare the boys for any trade whatsoever. The aim is thus a purely pedagogic one. Manual training is treated as a means of education, and is placed side by side with the other school-studies. By means of the methodical instruction in the use of tools and in the construction of one hundred objects, carefully arranged and graded, the pupil acquires a general manual ability which is of great advantage to him, no matter what calling he afterwards follows. Besides this, the manual training furnishes a healthy physical exercise, and, with the gymnastic instruction, affords an excellent means of escape from over-brainwork. It is also found that manual training gives the pupils a love for work and an enjoyment in it, and develops in a thorough manner their independence, attention, industry, and perseverance.

In the year 1874, Herr Abrahamson established a similar school for girls between ten and fourteen years of age; and the aim of this school was not only to instruct the girls in the usual subjects of a school course, but to make them adepts in the domestic arts. In the plan of studies, twenty-one hours a week are devoted to the usual studies, and fifteen hours a week to manual instruction.

Herr Abrahamson was, however, determined to extend his philanthropy as widely as possible, and to work for the cause of education, not in his neighborhood alone, nor in Sweden only, but in general. Thoroughly imbued with the idea of working out an harmonious scheme of instruction for children, to the completion of which the greatest educators have urged as necessary a graded course of instruction in manual work, Herr Abrahamson founded in June, 1875, the Seminary for the Instruction of Teachers in Slöjd (manual training); and this institution has since acquired a wide and well-deserved reputation.

During the first five years of its existence, the seminary course had in view the preparation of special teachers for the courses in manual training. The course lasted one year. To enter the seminary, a candidate must be at least eighteen years of age, in good health, and with such preparation in school-subjects and physical

[1] From S. Rudin's Bericht über eine Studienreise.

[2] The Swedish public schools are of two distinct grades, — the elementary school, for children of from six to ten years of age; and the common school proper, for children of from ten to fourteen years.

[3] The Swedish boys receive in the public school their military instruction, and are exercised in the handling of weapons, as are cadets in other countries.

exercises as was necessary to pass the examination for graduation from the Swedish common school. The instruction given in the seminary was partly theoretical, and partly practical. The theoretical instruction occupied eighteen hours weekly, and included arithmetic, geometry, physics, mechanics, mechanical drawing, and pedagogics. The practical instruction occupied eighteen hours a week, and was intended to teach the use of the various implements of the joiner, the turner, the modeller, and the smith, to impart familiarity in the use of these tools, and to enable the pupils to make the furniture and implements that are found in every household. For practice, the students gave instruction, under the supervision of a trained teacher, in the schools for boys and girls above mentioned. On graduating, the student had to pass an examination in the theoretical subjects, and demonstrate his practical ability and his fitness to teach. On meeting these requirements satisfactorily, a diploma was awarded.

In 1880 this plan of instruction was essentially altered. The scientific subjects were dropped, and the entire time devoted to instruction in manual training. The length of the course was reduced to six weeks, and the training was arranged to meet the needs of certificated teachers who wished to fit themselves in these other subjects. Several, usually four or six, of these six-weeks' courses are given each year, and so popular have they become that many applicants have to be turned away. An account of one of these courses is interesting. That given in 1885 from July 8 to Aug. 18 was attended by 42 students, of whom 28 were Swedes, 3 Norwegians, 1 a Dane, 1 a German, 1 a Swiss, and 8 were female teachers from Sweden, Norway, and Finland. Six hours daily were spent in the workshop, under the supervision of Herr Salomon. The same gentleman, who is the director of the seminary, lectured seven hours each week on the historical development and the methods of manual training, and also presided twice weekly at assemblies of the students, held for the purpose of discussing the Nääs system in general and in its details. The results of these discussions were registered in a book kept for the purpose, and they accomplished diverse improvements in the details of the course.

Throughout the course a religious service was held daily, which was opened and closed with prayer and sacred song. No one was compelled, however, to attend this service.

The programme of instruction included a daily lecture from seven to eight o'clock in the morning, slöjd exercise from 9.30 to 1.30 and from 2 to 6 P.M., excepting Saturdays, when the slöjd ended at noon, and the remainder of the day was devoted to school-work and trial lessons. Two evenings weekly were given over to the discussions, and two more to lectures by Director Salomon. Herr Abrahamson was often seen in the work-rooms, and for every student he had a cheering word or a suggestion, and his personal influence was strongly felt among them.

In his lectures, Director Salomon developed the ends which manual training is to subserve, with great ability and perspicuity. He distinguished these ends as formal and material. The formal ends, he showed, were, (1) to arouse a desire for work and a pleasure in it; (2) to accustom pupils to independence, and to fit them for it; (3) to instil the virtues of exactness, order, and accuracy; (4) to train the attention; and (5) to train pupils in habits of industry and perseverance.

The material ends of manual training, Herr Salomon explained to be as follows: (1) to win the interest of the children, and therefore (2) to give them something useful to work at; (3) to require and promote orderliness and exactness; (4) to develop cleanliness and neatness; (5) to provide an opportunity to exercise and develop the sense of form; (6) to appeal to both the mental and physical powers of the child; (7) to strengthen the muscles; (8) to afford a relief from long-continued sitting at school; (9) to train the pupil to methodical and accurate expression; and (10) to promote a general ability to do hand-work. NICHOLAS MURRAY BUTLER.

A PLEA FOR THE STUDY OF LOGIC.

MOST intelligent persons are very lavish in their expressions of admiration for the many important aids to the science of education, and consequently to the armamentarium of the teacher, which have been developed during the last fifty years. And yet, notwithstanding our progress in the methods and appliances which aid the teacher so much, many of our best educators are not satisfied with much of the work at present accomplished, and remedies are suggested from various quarters. It seems to me that most persons fail to appreciate the direct cause of the trouble, and in consequence their proposals are not such as will cure the ills of our great school system.

The object of an education should be to so train the faculties which nature has given the student, and to impart to him such knowledge, that he will be the better prepared to fill that particular station in life for which he seems destined, and which will enable him to grow in knowledge with his years, if he will continue the same methods of study after his graduation.

The school and college course should be regarded only as a beginning; and by reason of this education, if it has been as successful as we have a right to expect, the further acquisition of knowledge will be much easier. It is a source of great satisfaction to perceive that the old idea of a higher education, which consisted in turning out a polished man or woman upon society, who was almost wholly ignorant of the laws of nature, and especially so in all that pertained to their own organization, is no longer defended in the institutions of learning in this country. It is so at least in those worthy of any consideration as educational centres, and yet much remains to be accomplished under the new *régime*.

One of the desirable objects at present is to educate a man so that he may be able to overlook intelligently the whole field of knowledge, and to know how and where to obtain what he needs. The departments of human learning are already so numerous, that a general education can give but an insight and acquaintance with the many; while, if excellence in any one is desired, one must become a specialist.

Up to the present time, our greatest achievements in knowledge have been effected by our adherence to a certain form of reasoning known as the 'scientific method,' which combines the inductive and deductive processes. Until the full recognition and definition of this combination, progress was painfully slow, and was often retarded by the timely discovery that what had previously been regarded as truth, was, by reason of the imperfect methods made use of, only partly true, or altogether false. Certainly we had a right to expect that when the new method had been worked out, and had achieved grand results, every educator would be enthusiastic in its praise, and never cease to urge its study upon those who are seeking the knowledge in possession of the race at the present time, and especially upon those who hope that they themselves may be able to make some additions to the common fund of knowledge. But instead of this, it seems to have been forgotten, at least as anything of importance with which young students should become acquainted; and when it is taught, it is reserved until they have nearly completed their school-education.

The very principles that would be of incalculable advantage to the student, if inculcated early, are reserved until he has, perhaps, formed vicious habits of statement and reasoning, and which are not then so easily described. Perhaps the greatest defect of our educational system at present is the almost universal manner in which logic as a study has been ignored by our educators.

It may be urged that the logical principles are contained in some of the other branches taught; and as, in this way, knowledge is gradually increased, the pupil naturally appreciates the laws of reasoning involved in these studies, and therefore does not need the separate study of logic. But I do not believe this ground is well taken; for, although it is true that we are all to some extent logicians, too many are very imperfect ones, and they are unfortunately in the majority.

When a boy is placed at a trade involving the use of tools, the first step usually taken is to acquaint him with their construction, use, and care. But such delicate and intricate instruments as those which make up the human mind, seem to call for no special knowledge or training as to their use or care. Would it not be fully as wise to teach the younger scholars in the beginning of their education, soon after learning to read cleverly, — say, between the age of ten and twelve, — the fundamental principles of correct reasoning? The study of logic would be likely to cultivate the faculty of observation, which is so necessary in a true education.