SCIENCE.—SUPPLEMENT.

FRIDAY, MARCH 18, 1887.

SLÖJD [1]

I HAVE been asked to give some account of the slöjd system, as practised in Sweden, having lately visited that country in order to study the system both practically and theoretically. This visit convinced me of its excellence, of its claim to be regarded as an important factor in education, and the need there is for something of the kind in our own schools.

The word 'slöjd' is essentially Scandinavian, and an equivalent for it is not to be found in any other European language. Its original meaning is 'cunning,' 'clever,' 'handy' (compare '*sleight* of hand'), but, as at present used, it means rather the different kinds of hand-work used in schools for educational purposes. 'Slöjd' is such a convenient word, and embraces so much, that I think we shall have to naturalize it in England, and call it 'sloyd.' It has already been adopted in France and Germany, and I believe in Belgium, Austria, and Russia.

There are many kinds of slöjd, or hand-work, practised in the schools in Sweden, Norway, Denmark, Finland, Germany, and other countries, — simple metal-work, smith-work, basket-making, painting (trade), fret-work, book-binding, *papier-maché*, needle-work, and finally wood-slöjd, which consists mainly of carpentry, but in which carving and turning may play a subordinate part.

Herr Otto Salomon, the director of the seminary at Nääs, has drawn up a table in which the above occupations are compared, under the following heads:—

1°. The children's interest gained; 2°. Work which can be used; 3°. Order and precision; 4°. Cleanliness and neatness; 5°. Development of sense of form; 6°. Accordance with children's capacity; 7°. Strengthening and developing of the physical powers; 8°. Counterpoise to sitting; 9°. Capability of methodical exposition; 10°. General dexterity.

It appears, from a careful comparison of the results obtained by means of these various occupations, that while several of them answer to the above tests in certain particulars, yet only the *wood-slöjd* can answer all.

I will endeavor to give a brief outline of the chief principles of the method for the teaching of manual work which is followed at Nääs, and which has thence been largely disseminated all over Scandinavia and Finland, and is taught even within the arctic circle. In Sweden alone, wood-slöjd is practised in eight hundred national schools, has been introduced into the secondary schools for boys, and is now being adapted even in the upper schools for girls.

It has also been introduced into France, Belgium, Germany, Austria, Russia, and the United States. It will probably be taken up in Abyssinia, through the instrumentality of the Swedish missionaries; and even far-distant Japan is showing an interest in the subject. Are we English to be left hopelessly behind in the adoption of hand-work as an important factor in education? We have already accepted it — in a very limited way, it is true — in the adoption of the kindergarten system, the very soul of which is its response to the child's need of activity and production; and slöjd is the same principle at work, only in a form suited to the growing powers of our boys and girls.

Herr Salomon himself has treated of the results aimed at by slöjd, the choice and classification of models, and the question who is to be the slöjd teacher, in a work which has already been translated into French and German, and will soon, I hope, appear in English.

Slöjd aims at the following results:—

1°. To implant respect and love for work in general; 2°. To implant respect and love even for the coarser forms of honest manual work; 3°. To develop activity; 4°. To foster order, accuracy, cleanliness, and neatness; 5°. To encourage attention, industry, and perseverance; 6°. To develop the physical powers; 7°. To train the eye and the sense of form.

The joining of the slöjd course should be voluntary on the part of the pupil: consequently the work should fulfil the following conditions:—

1°. It should be useful; 2°. The preparatory exercises should not be too fatiguing; 3°. They should offer variety; 4°. They should be executed without help; 5°. They should be real work, not play; 6°. They should not be knick-knacks, or so-called fancy-work; 7°. They should belong to the worker; 8°. They should be in harmony with his power and physical strength; 9°. They should be of such a nature that they can be finished with exactness; 10°. They should allow of cleanliness and neatness; 11°. They should demand thought-

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fulness, and thus be more than a purely mechanical work; 12°. They should strengthen and develop the physique; 13°. They should help to exercise the sense of form; 14°. Lastly, as many tools and manipulations as possible should be employed.

Such are the results aimed at; but here a very important question arises, Who is to be the slöjd teacher? Teachers are already so overburdened with work, that it seems too much to expect them to undertake another subject. But for them, too, a subject so novel, and necessarily so differently taught from the ordinary school-subjects, would doubtless have its attractions, and would illustrate the saying, 'Change of work's as good as play.'

Whether this be so or not, the slöjd instruction must be undertaken, not by an artisan, who would naturally regard it merely from its mechanical side, whereas the main object of slöjd is not the teaching of any trade, but the development of the faculties, and the acquiring of general dexterity. It must therefore be given by a trained teacher, who understands the nature of the material on which he has to work, viz., child-nature, and, if possible, by the same teacher who takes the other school-subjects.

I may mention that by means of slöjd, which necessitates individual supervision and instruction, the teacher has an opportunity of obtaining an insight into the character, and of establishing a personal relation between himself and his pupils, which it is almost impossible to obtain by means of class-instruction. Numbers of teachers can bear witness to the truth of this statement. The teacher should lead, direct, and control the work, but should be careful not to put his hand directly to it. In order to be able to follow with advantage the course of instruction, the pupil ought to have reached a point of development usually attained about the age of eleven.

One word as to the main differences between wood-slöjd and ordinary carpentering, with which it is very apt to be confused. These lie, 1°, in the character of the objects made, which are usually smaller than those made in the trade; 2°, in the tools used (the knife, for instance, the most important of all in slöjd, is little used in ordinary carpentry); 3°, in the manner of working (the division of labor employed in the trade is not allowed in slöjd, where each article is begun, carried on, and finished by the same pupil); 4°, but the fundamental difference is in the object of slöjd, which is, not to turn out full-blown, or half-blown, or even quarter-blown young carpenters, but to develop the faculties, and specially to give general dexterity, which will be useful, whatever line of life the pupil may afterwards follow.

As individual instruction is generally required, and as this manual work cannot be taught in class, the same teacher can only superintend a limited number of pupils at the same time. Generally speaking, there should not be more than twelve.

As to the choice of models: 1°. All articles of luxury are to be excluded; 2°. The objects made are to be of use at home; 3°. The children should be able to finish them entirely without help; 4°. The articles should be made of wood only; 5°. No polish should be used; 6°. As little material as possible should be employed; 7°. The children should learn to work both in the harder and softer woods; 8°. Turning and carving should only be sparingly employed; 9°. The models should develop the children's sense of form and beauty, and for these ends the series should include a certain number of modelled objects (for instance, spoons, ladles, and other curved articles), which are to be executed with a free hand, and chiefly by eye; 10°. By means of going through the whole series, the pupils should learn the use of all the more important tools. In the choice of models, care should be taken that each one prepare for the next.

As to classification of models: 1°. The series ought to progress without a break from the easy to the difficult, from the simple to the complex; 2°. There must be a sufficient variety; 3°. Each model must be so placed in the series that the pupil shall be able to carry it out entirely without the direct help of the teacher, by means of what he has already made; 4°. The models should constitute such a series that at each step the pupil may be able to make, not a passable, but a correct work; 5°. In making the first models, only a few tools are to be employed, but as the series is carried out new tools and new manipulations are to be employed; 6°. The knife, as the fundamental tool, is to be the most used in the beginning of the course; 7°. For the first models, rather hard wood should be employed.

At the beginning of the series the models should be capable of speedy execution, and objects which require a considerable time should be gradually reached.

Let us now see whether slöjd, if the foregoing conditions be carried out, may be regarded as a factor in education, whether considered physically, mentally, or morally.

It is essentially a form of work which calls forth every variety of movement, which brings all the muscles into play, and which exercises both sides of the body. It is so arranged that the children can work with the left hand as well as with the right, in sawing, planing, etc. Thus all the

muscles are strengthened, a more harmonious development attained, and there is less fear of their growing crooked There is no reason to dread their becoming left-handed: in more delicate manipulations, the right hand will always remain the better man of the two.

Does slöjd help forward the mental development? Surely work which draws out and exercises energy, perseverance, order, accuracy, and the habit of attention, cannot be said to fail in influencing the mental faculties; and that it should do so by cultivating the practical side of the intelligence, leading the pupils to rely on themselves, to exercise foresight, to be constantly putting two and two together, is specially needed in these days of excessive examinations, when so many of us are suffering from the adoption of ready-made opinions, and the swallowing whole, in greater or smaller boluses, the results of other men's labors.

We want whole men and women, the sum total of whose faculties is developed, who have learned to apply their knowledge, not only in the emergencies, but in the daily occurrences of life; and this readiness — this steadiness of nerve, the ordered control of that wonderful machine the body, the cultivation of the practical side of us — can only come by exercise, and this is given by means of slöjd. Let us also remember that all skilled work, however humble it may appear, is brain-work too: the hand is the servant of the brain. If any one doubt this, let him try to make, from first to last, some complete object, however insignificant, — be it the modelling of a leaf, cube, or even a ball, or the making of a wooden spoon, — and, I answer for it, he will gain a new respect for hand-work, not only from its usefulness, but the skill it requires.

What does slöjd do for the moral training of the child? It implants respect and love for work in general, including the coarser kinds of bodily work. In the fierce competition which exists in all civilized countries (and nowhere fiercer than in our own), which springs in so many cases from the desire to push on to some fancied higher level of life, what a clearing of the moral atmosphere would be effected if the rising generation could be imbued with the feeling, deepening as they grow up into conviction, that it is the *man* who dignifies or degrades the work, — that all labor which proceeds from a worthy motive is of equal worth, and that the right work for each one of us, and consequently the noblest, is the work we can do best!

But this is not all which slöjd effects in the way of moral influence. It tightens and strengthens the bond between school and home. Every thing which the child makes is for home use, is prized there as his own honest work, and as the product of the skill which he is gaining at school. Among the working-classes, the actual use of the things made by the children (besides the wholesome pleasure and pride they call forth) is found to do much, in the countries where slöjd is practised, to reconcile the parents to their children remaining at school even when they are beginning to be of use at home and to be able to earn something. They have tangible proof, in the objects brought home, that their children are learning something which makes them useful and handy, and which will make them readier in future in learning a trade.

I will only mention one other point in which slöjd bears good moral fruit. I mean, it implants in the child a sense of satisfaction in honest work, begun, carried on, and completed by fair means and by his own exertions. In these days of scamped work, of dishonest tricks to be found in all trades and manufactures, what can we say too much in praise of a system which will give our boys and girls a sense of the dignity of work, a scorn and contempt for what is slovenly or tricky? The slöjd system is completely opposed to the modern principle of division of labor, which is no doubt a necessity in the present conditions of life, but which would be disastrous in education, where the aim must be the development of each individual, not the getting through a given quantity of work in the shortest and cheapest way. I feel sure that a boy or girl who, at a period when impressions are most lasting, has had the solid satisfaction of carrying out a piece of work from beginning to end, will not be satisfied, in adult life, with becoming a mere machine for drilling holes, putting on pins' heads, or turning out chair-legs by the hundred, but will, in his leisure hours, vindicate his dignity and skill by doing some work, whether practical or intellectual, worthy of a human being. We must remember, too, that a large part of the distress in bad times is due to the fact, that, if the particular fragment of work which a person is capable of is taken from him, he can do nothing else whereby to earn his bread.

I can only speak in the briefest way of the crying need there is for some such practical training as is given by slöjd. I am not an enthusiast for the particular form of it which I have studied myself at Nääs, and which I have seen at work in the Swedish schools, where I wish I could transport you, so that you might see for yourselves the earnestness and energy of the young workers, the dexterity with which they handle their tools, their extreme carefulness (for no damaged or careless work is passed), and the independent manner in

which they work. But I do say, that we want something of the kind, suited to our national needs and character, and bearing the same fruit of trained intelligence and skill which it is producing in the countries where it is practised. A great deal is being done in England for technical education, and a great deal is said as to its need, for there is a very real danger of English workmen being driven out of the field on account of the superior skill of foreigners and the great advantages they enjoy in the way of technical education. We can but rejoice that we are beginning to recognize this danger, and that so much attention is being directed to the need of technical education; but even supposing the country were covered with technical schools, if our young people come to them with eyes and hands untrained, with little or no sense of form and beauty, with lack of perception and habits of observation, with untrained and undeveloped muscles, how can they possibly hold their own against the youth of other countries, coming fresh from schools where eye and hand have been trained to general dexterity, which will stand them in good stead whatever special branch of technical work they may take up, with trained observation and perception, and with a love for work and an interest in it which has been quickened and stimulated by many a victory gained by perseverance, attention, and energy?

Should this slöjd instruction be given to girls as well as boys? This question has already been answered practically in the affirmative in Sweden, and with excellent results. It is just as important for a woman to have the complete use of her hands as for a man. It may be said that girls have needlework, which is more suited to their sex, and more useful to them in after-life. It would be a very sorry thing for our future wives and mothers not to learn the use of their needle, but why should they not learn needlework and slöjd too? The use of the tools would develop their muscles, and they would gain an added dexterity which needlework alone cannot give. And besides this general development, which is of paramount importance, the positive knowledge gained, and the power of doing little jobs about the house, would be of great service to them when they grow up.

But, it will be objected, even granted that a universal hand-education should be given, including both sexes, and granted that teachers are forthcoming who are capable of giving it, how is it possible to spare time for another subject? I will only reply, that the schools in Sweden are among the best in Europe, and yet they find time for it. The slöjd classes — which are entirely voluntary — are held in the evenings, so as not to interfere with the ordinary school-work.

For the girls of our higher schools it seems to me even more important than for their sisters of the working-classes. The latter have to help their mothers at home in many active ways, and get, at all events, plenty of movement and variety of occupation; but the former, who have not so many active games as their brothers, and who are often unable to be much out of doors in bad or severe weather, are lamentably in want of some interesting active work as a counterpoise to the continual sitting and poring over books and exercises. Slöjd of some sort is the very thing they need. I am persuaded, that, if only we set our shoulder to the wheel in this matter, we shall find in this hand-education the true remedy for over-pressure of brain, which is not an invention of the doctors.

You will perhaps wonder where all the teachers of slöjd, so universally taught in the Scandinavian schools, are trained. A slöjd seminary has been founded by Herr Abrahamson, a wealthy Gothenburg merchant, on his beautiful estate of Nääs, within easy reach of Floda station, on the main line between Stockholm and Gothenburg, and about an hour by rail from the latter.

This seminary was founded in memory of Herr Abrahamson's wife, in 1872, and he has spared neither time, money, nor effort in making it a worthy memorial. There is also a model school for boys and girls in connection with it, so that those who are in training may see the system actually at work among the children. I may mention, in passing, that this school has a great reputation, and that children are sent from considerable distances to attend it. The seminary is directed by Herr Otto Salomon (Herr Abrahamson's nephew), who is quite an enthusiast in the cause of slöjd, and devotes his life to the spread of the system in other countries as well as his own, and to the improvement of it in practical details. The seminary, which is built very picturesquely of timber, in the old Norwegian style, is situated in Herr Abrahamson's park, close to the lovely lake of Sävelängen. It consists of large work-rooms fitted with double rows of carpenters' benches and racks all round for the different tools, a large lecture-room, a sitting-room for the gentlemen, a small one for the ladies, and a room where the models and finished works are kept. Upstairs is sleeping accommodation for thirty men. In addition to the seminary, there is a pretty little house close by, called 'Vänhem' (friends' home), where the lady students live, who form a very small minority of those who attend the course. There are also other cottages in the neighborhood, where

the overflowing numbers attending the course are accommodated.

There are four slöjd courses given in the course of the year, — two summer and two winter courses. Each course lasts six weeks; and, as the time is so short, the hours are somewhat long, and the work rather hard, for those who are not accustomed to much bodily exercise. The plan of the day is as follows: prayer, 6.45 A.M.; lecture, 7 to 8; breakfast; slöjd from 8.30 to 1, with a break of a quarter of an hour; dinner and rest, 1 to 3; slöjd, 3 to 5; coffee, followed by discussions, either on the slöjd models — which are apt to be very lively — or on ordinary school-subjects, for Herr Salomon is anxious to take advantage of the presence of so many teachers by giving them frequent opportunities of hearing each other's views, and thus rubbing each other up by means of a little wholesome friction.

The whole number of models, consisting of a hundred articles, is divided into two series, — fifty in the first course, and fifty in the second. Many of the teachers return in order to go through the second course, and are sure of a hearty welcome. At the end of the course, each member receives a certificate, in the presence of the whole body, stating that he or she has attended the course, and has made so many models. No special number is required. Every one is anxious to get on; but strength and ability vary considerably, and those who come with a knowledge of carpentering soon leave those who have had no such previous practice hopelessly behind. But all gain much during the course, quite enough to begin a slöjd class on their return to their respective schools, in different parts of the world.

The difficulty of teaching together representatives of so many different nations is not so great as it seems. As far as the practical work is concerned, the chief thing is to be shown how to work, handle the tools, etc., and the primitive language of signs goes a long way. The lectures are more difficult to manage, and I can only say how they were given at the course I attended. A daily lecture was given in Swedish and in German. The former was attended, not only by the Swedes, but by the Danes, Norwegians, and Finlanders, who understand Swedish well. The latter was attended by the Austrians, Bohemians, and English. If we had known no German at all, I believe we should have received some private instruction.

A few words, in conclusion, as to the life at Nääs. I think the thing which, above all, struck us, was its complete novelty. We felt as if we had dropped into another planet. The mixture of nationalities and languages, the simplicity of the mode of life, the early hours, the general kindliness, the absence of all class-distinctions, the child-like enjoyment of little pleasures, the good-tempered rivalry in work, made up a sort of hyperborean Arcadia. On the other hand, it is only fair to say that the general arrangements are so primitive, that no one should go there who cannot put up with a certain amount of roughing it and very simple fare. I may mention here, in case any one should feel inclined to spend the summer holidays in going through a course of slöjd at Nääs, that ten pounds would well cover the whole cost of the undertaking. A first-class return ticket from London to Gothenburg is £5 5s. (this does not include food). The journey to and from Nääs is short and inexpensive, and a very small sum, about 1s. a day, is charged for food. Application should be made some months beforehand to Herr Otto Salomon, Nääs, Floda station, Sweden.

Another pleasure was the excellent singing, generally given in the open air, specially during the long solemn evenings of the north, when the air was alive with song. A choir was formed of the best male voices, under an excellent conductor, a member of the course, who took great pains with them. The quarter of an hour's rest in the morning was often turned to good account in the musical line. We used to sit about outside the seminary, while the choir would stand on a knoll and give us song after song till the bell rang, summoning us to return to our labors. Will you think it strange that this going to school again was also a pleasure? We quite enjoyed to be the pupil instead of the teacher, and were amused to find how much our point of view had changed since we were *in statu pupillari*. But, let me whisper, we should probably not have enjoyed it had it been for more than a very limited time.

We are proud, and justly proud, of our position as Englishmen; but I think we can well afford to recognize more heartily and generously the quota which each civilized nation brings to the intellectual wealth of all. Even those who are small in population, and not so well endowed as ourselves with natural advantages, do their part relatively perhaps better than we; and Swedish education, during this century, has advanced by leaps and bounds. I will only remind you of these three facts: it was a Swede, Captain Nordenskiöld, who, in the little Vega, first made the north-east passage; it was a Swede, Herr Henrik Ling, who has given to the world the most scientific and comprehensive system of gymnastics; and it is Sweden who again comes forward and offers us the hand-education, which, if rightly used, is to give our children a completeness in their training which is at present lacking.

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