A series of experiments upon aesthetic appreciation in children / by Henry J. Watt.

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A SERIES OF EXPERIMENTS UPON ÆSTHETIC APPRECIATION IN CHILDREN.*

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1. One of the great leaders of modern experimental psychology was also the founder of the science of experimental æsthetics. The science that Fechner created attempts to analyse the processes that are present when any object is liked for its own sake, apart from any utilitarian, educational, or other extraneous motive. It has to determine what kinds of objects give this direct enjoyment, and to trace the relation between the latter and each element of the former which can be experimentally distinguished. Some part of the total pleasure may be produced by the sensory impressions given by the artistic object, and some part may be given by the arrangement of its elements, or by the series of mental processes which are evoked by these. If we remember the variety of mental states which may be excited by a complex sensory impression, we see at once that there is no mental state which may not at some time enter into and contribute to the total æsthetic enjoyment attaching to a work of art. It is, of course, problematic how far any given mental state can enter into æsthetic enjoyment without being changed in character, and what it is that then converts it into a state capable for the time of adding to or hindering æsthetic pleasure. There is certainly an æsthetic attitude which makes such differences; it is probably responsible for the clear line of demarcation between æsthetic

* An account of these experiments was given in 1907 to the Child-Study Society of Liverpool, and in 1909 to the Child-Study Society of Dundee and Edinburgh. The paper, now published at the request of the editor, follows closely the lines of the lectures.

value and extraneous value already suggested. The study of it is one of the main concerns of our science.

It will be readily understood how wide a field is allotted to such a science, and how varied is the work of exploration in view. The settlement was made only quite recently, and the promise of the land is largely in the future. Before the year 1900 only a few investigations had been made, but now there are many workers of many nationalities.

As a principle of work, it has been maintained that experimental investigation with the simplest conceivable objects must fix the lines upon which an explanation must be sought for even the most complex æsthetic enjoyment. From this starting-point, however remote it may seem, it is not so hard to come into close contact with the fullest and most unaffected æsthetic attitude of actual life.* A contribution to this principle will, it is hoped, be found in the present paper. To make its origin and position clear, accordingly, the main methods of simple experimental investigation must be named and explained.

2. The experimental methods of æsthetics fall into two main groups, those of impression and those of expression (Wundt). In the former, careful note is made introspectively of the feelings which are evoked by and in reference to certain precise objects or precisely varied series of objects. If doubt is attached to the classification of feelings as such, the record may limit itself to the judgments of approval or preference, which, in most cases, are readily obtained. The simplest of these is (1) the method of choice, simple or varied, in which, of a number or definite series of objects, that one is indicated which is liked best. More variety is obtained if judgments of greatest dislike or of indifference are also collected. The method is most fruitful if a large number of observers are available, for the results may then, in virtue of the variation of psychological equipment, predisposition, attention, and chance variation, approximate to those obtained by very much more detailed examination of a few observers. There is a close relation between popularity and excellence of art, in their widest sense, or highest preference. The method, taken simply, is, of course, the equivalent of the broad, unreflective choice of everyday life.

It is worth while to distinguish (2) the serial method, in which a series of objects, varied continuously on some objective basis, is converted by selective preferences into a series of decreasing æsthetic values. Such a series can be formed by placing the horizontal of a cross on a series of equal uprights, so that one is always one millimetre

* Cp. Külpe's report on the present position of experimental æsthetics, "Bericht über d. II. Kongress f. Exp. Psych., 1907," p. 1 ff., and "Segal, Archiv für die Ges. Psych.," vii. s. 86.

lower than the preceding. This form of investigation it is which, in its results, most closely resembles the analytical procedure presupposed by a fully developed standard of art. A relation to popularity can be obtained by finding into how many groups series of values produced by many observers can be divided, so that each group in order shall always contain the same objects in any arrangement.

The method of (3) paired comparison is more exhaustive than the preceding, demanding the comparison of every object of a group with every other. At its best, the method is incognitive, concealing the progress and accuracy of his judgments from the observer. Each object must, of course, be placed alternately on the left or right side for comparison as it occurs, so as to prevent any error due to disadvantageous position. Thoroughgoing attention to all the objects placed for preference is secured by this method, although it has the drawbacks of wearisome length and frequent recurrence of the same object.

A plentiful source for that kind of information about the artistic mind that is obtained from volumes of studies and appreciations is found in the so-called (4) method of simple description. The process of æsthetic interpretation may reach its climax or end only after an hour or more, and nothing but a careful record of a running commentary on the whole process can be expected to clear up the broader questions concerning the start, course, nature, hindrances, and supports of the process of æsthetic appreciation.

A passage towards the pure methods of expression is found in the method (5) of production, which follows the lines of artistic creation, in so far as these can be reduced to a simple form amenable to experimental investigation. In so far as a certain amount of ability to give expression to artistic conception is presupposed, the method is, of course, one which shows clearly the nature and degree of artistic appreciation, at least whenever the æsthetic attitude may be presumed to be present. That is the basis of our appraisal of the artist by his works or of the pupils by the excellence of his attempts. But however much we may feel tempted to extend this method in our desire to follow the presence and growth of appreciation, we cannot expect to be able to apply it to all the arts whose appreciation has to be cultivated. The teacher must therefore turn the pure methods of impression into tests for appreciation if he is sincere in his desire to abandon the irrelevant tests of philological, biographical, analytical, grammatical or other heterogeneous information. The actual work of creation is, of course, a wonderful incentive to effort and to keen æsthetic pleasure, but only in rare cases would it outweigh the loss of time and effort involved. The vast majority of learners, on the

other hand, should find the methods of impression profitable and economical, if they are skilfully manipulated.

Pure methods (6) of expression determine the effect of the pleasure of various impressions upon the breathing, the pulse, the variations in blood pressure indicated by the fluctuating volume of a limb, and the like. The results of such investigations are very doubtful and of questionable value, in any case. More is obtained by the examination of the relation between æsthetic appreciation and facial expression. A close relationship of this kind is, of course, part of the ground on which the arts of figure painting and sculpture build.

3. The aim of the experiments to be described was to find some objective indication of the kind of degree of appreciation of certain visual objects in children, and of its progress, without the assumption of any standard of taste, and without any prompting or *ad hoc* instruction. It seemed at the time that the method of paired comparison was most likely to lead children into fuller æsthetic appreciation than might be mechanically suggested by the preliminary circumstances of the experiments and the simple instruction given to them at the start.* The ten children, five boys and five girls, with whom the observations were made were at the time (last quarter of 1907) attending the Holt Road Secondary School, Liverpool, to the head master of which, Mr. C. W. Bailey, I am much indebted for his kindness in selecting the children for me, and in allowing me to carry out the work in the school. Various grades of intelligence were selected to represent types of predisposition for æsthetic appreciation. Just before the experiments started the children had been taken to see an exhibition of the pictures of Holman Hunt in the Walker Art Gallery in Liverpool. Some of them were able to describe a few of these pictures, while others did not know of the Liverpool Gallery, or were unable to give its name, or could not remember any definite pictorial objects.

As objects for comparison in the first stage, coloured picture post-cards, representing the arms and flags of the nations of the world, were chosen. These seemed the most appropriate, in view of Calkin's† determination that 88 per cent. of children showed a preference for a pleasantly coloured object, as against excellence of form or contour. These cards were placed before the child pair by pair in the order, *ab, ca, bc, db, cd, ec, de, fd, ef, ge, fg, hf, gh, ad, ea, be, fb, cf, gc, dg, hd, eh, af, ga, bg, hb, ch, ha.* A small screen hid the writer's hands, note-books, cards, and the table from the children's gaze, who, of course, though ignorant of the purpose of their work, were still able to observe

* For further details of these methods, v. Külpe, *ibid.* p. 9 ff.

† *Psychol. Rev.* vii. 380.

that what they did and said was recorded and used in some way. The children were made to feel quite at ease, and were so, for the most part, giving their answers willingly and readily. They did not seem to be affected by any attitude suggested by guesses as to the possible effect of their doings on their credit for intelligence. At first each child was asked simply to indicate which of each two cards shown it preferred, and nothing further. After the series of comparisons had been made, they were asked to choose from the whole series laid before them the card they liked best, and, having done so, were asked why they preferred it. Each child was dealt with separately throughout. Five sets of eight cards were used, each boy and each girl beginning with a different set. Only foreign coats-of-arms were admitted to these sets, and the names of the countries were covered by the frame used to place the cards in for comparison, so that the stamp-collector's interest should not intrude upon any æsthetic appreciation. The choice of coloured coats-of-arms was made by the writer on seeing a small nephew amuse himself spontaneously by arranging in order of preference the small cards showing arms and other figures given with small packets of cigarettes and collected assiduously by all the youngsters of Britain.

4. The results of a series of such comparisons take the form of votes in favour of each card. If we obtain these figures, Card A 7 votes, B 6, C 5, D 4, E 3, F 2, G 1, and H none, it is clear that here we have a graded series of preferences, of which each one is relatively greater than the other. This may be called an ideal system of preferences. Other forms of ideal systems are possible, for example, when two or more cards are liked equally well, and half a vote is given, consequently, to each. Then we should obtain a gradation of, say, 7, 6, $4\frac{1}{2}$, $4\frac{1}{2}$, 3, 2, 1, 0 votes. An inconsistent series, on the other hand, may be said to be present when one card A is preferred to B, B is preferred to C, but C to A. That case would be represented by the figures A 7, B 6, C 4, D 4, E 3, F 2, G 2, H 0, where an examination of individual preferences shows that G is inconsistently preferred to C. Subtract one vote from G and add one to C and the series of votes then happens ideally graded. Thus, two "faults" are present in the figures A 7, B 5, C 4, D 4, E 4, F 2, G 1, H 1, for inspection again shows that H, that has otherwise no vote, is preferred to C, that has otherwise four votes, and E(3) to B(5). So far, this procedure is relatively safe, but when we find a series A 5, B, C, and D 4, E, F, and G 3, C 2, which can be reduced to an ideal form only on the assumption of seven faults, we have lost touch with the probable psychical events, for these may have actually been very

different from those assumed by the smallest possible number of faults. It is allowable to assume that where one or two faults are found, we have clear evidence that the reference of preference has changed at or before these points. This would suggest that previously no æsthetic attitude was present at all, or that, if present, it had been changed by some form of limitation. The magnitude of a fault may be seen in the number of votes that the card inconsistently preferred has otherwise in excess of the number that the card inconsistently rejected has otherwise (*i.e.* from other comparisons).

In the second stage of the experiments, which began about a week later, the reason for the preference was asked for gently after each comparison made and the answer noted without further inquiry. At the end of each series of comparisons, the card preferred to all was selected from the whole series. In the third stage, after over a month's interval, a number of questions were added in pursuance of each answer given to the first reason for preference, and the whole was followed by the serial method (No. 2, above) instead of that of choice. Finally, in a fourth stage, some two to four weeks later, all questions were omitted, in the hope that in the objective data of preferences, some influence of the intervening stages might be traced. The evidence of these that I have been able to extract from the facts is not very strong. The cards I used were rather complex objects, so that it is rather a questionable proceeding to refer from faults and their magnitude to definite underlying processes, especially in these cases, where the results of the serial method and the method of comparison do not agree. If the "faults" shown in the latter method are eliminated, one obtains what may be considered to be that arrangement of preferences which actually ruled the child's mind during its comparisons. This assumption may, however, only be made if there is a strong probability that the system of preferences is brought to its true form by the elimination of the smallest number of "faults." The probability of this, though great, is not always strong enough to convince, especially when a serial arrangement, made just after the series of comparisons, is found to agree neither with these as given, nor as reconstructed by elimination of faults. The procedure of elimination of faults may be a valid one, but its examination must be made a matter of special investigation. The results regarding faults are summarised in Table I.

TABLE I.

THE NUMBER OF FAULTS IN SUCCESSIVE SERIES.

	Stage I.			Stage II.			Stage III.			Stage IV.	
	No.	Size.	x	No.	Size.	x	No.	Size.	x	No.	Size.
Boys.											
O_1	0	0	2	0	0	0	2	1·7	0	0	0
O_2	1	2	2	1	6	0	0	0	0	0	0
O_3	1	2	0	1	2	0	2	1·5	0	3	2·3
O_4	0	0	1	2	2	0	3	2·3	0	2	1·5
O_5	2	3	0	4	2	0	1	4	0	0	0
Girls.											
O_6	1	1	0	2	2·5	0	1	1	0	?	?
O_7	4	2·5	0	1	1	0	1	2	0	1	1
(O_8)	7	2	2	2	2·2	1½	—	—	—	—	—
O_9	2	2·2	0	2	3·5	½	3	2·5	0	2	1·7
O_{10}	4	1·7	1	0	0	0	1	2	0	2	1
Average of 9 ...	1·6	1·6	0·6	1·4	2·1	0·05	1·5	1·9	0	1·2	1

x is the magnitude of the fault as between the best by comparison and the best by simple or serial choice.

Observer No. 8 is not included in the averages, because her judgments were hopelessly erratic and she obviously did not give the slightest attention to the work. For this reason she was dropped from the experiments when the questions were made more frequent. She practically refused to answer them, not because they were hard or unpleasant, but out of pettish obstinacy. O_6 gave curious results in the last stage. It seemed impossible to correct her faults of preferences, except by the assumption that a certain card, between which and five others she was unable to decide, was the card she liked best of all!

I examined the faults of the fourth stage immediately after the series of comparisons was finished by presenting the faulty pairs to the children again without comment as a continuation of the series. O_7, O_9, and O_{10} reversed their faults spontaneously. O_7 said she had not noticed all the parts of one of the cards the first time the comparison was made, but was quite sure of her preference the second time. O_9 did not remember one of her faults. Of O_3's three faults one was reversed at the second presentation, one was confirmed, and the third I omitted to test. O_4 held to both his faults. O_6 was not tested. The method of counting faults is thus shown in the majority of cases to have an objective psychological basis, which would doubtless have held for the cases I overlooked and did not test immediately at the end of the series of comparisons.

The table shows in particular cases and on the average that the preferences of the last stage were more consistent than those of the preceding. O_1 seems to come with a taste for æsthetic comparisons, while O_2 was an intelligent boy, who took to the work after a time. O_3 and O_4 were less intelligent, while O_5 I learned to think of as "the erudite youth," who did not reach the æsthetic attitude at all till the third stage. O_6 and O_7 are the two more intelligent girls, and are followed by O_{10}, while O_9 also seemed to be rather devoid of the æsthetic attitude most of the time. These remarks are borne out by the record of the reasons for preference given by the children.

TABLE II.

THE REASONS GIVEN FOR PREFERENCE IN STAGE II.

The Observer.	1	2	3	4	5	6	7	8	9	10
The colours (and their) ...	rare	—	—	—	once	1	1	—	—	—
Brightness	—	—	1	1	—	—	—	1	2	—
Variety	—	—	—	—	—	—	—	rare	2	1
Combination	rare	1	—	—	—	1	1	1	1	2
Simplicity	—	1	—	—	—	—	3	—	—	quiet 3
The objects (and their) ...	—	—	—	2	1	—	—	—	—	—
Associations	—	—	—	—	1	—	—	—	—	—
Variety	—	—	—	2	—	—	—	—	—	—
Arrangement	—	—	—	—	—	—	2	—	—	—
Design or pattern ...	1	—	weak	—	—	—	2	1	—	—

The numbers in the table indicate the priority of the reasons given. 1, *i.e.* means "given oftenest as reason," etc.

5. In Table II. the reasons for preference are tabulated, and they show well-marked differences between the single children and between the boys as a group and the girls. The latter give a greater variety of reasons altogether, and are stronger in their appreciation of colour, but are less interested in the things depicted than the boys are. These differences become more striking in the third stage. To obtain statements of their reasons at this time, the children were told before starting the comparisons that they would be asked the reason for their preferences. After they had compared the cards, I put the question, "Why (do you prefer it)?" and allowed them to talk freely. If a vague answer was given, *e.g.* "I like the colours," I pushed the question further by asking, "What do you like about the colours?" If they were unable to express themselves, they were asked to point out what they meant. The questioning process was never pushed far, but was broken off whenever the child failed to give an answer after a question

had been put more than once, or when it showed any sign of perplexity or confusion. The child was never allowed to become shy of speaking. By careful consideration of the statements made, some idea of the spontaneity and prominence in their judgment of the various motives can be got. The following summary contains the result :—

O_1: (1) Pretty colours (which match); (2) distinctness (not simplicity); (3) accurate and symmetrical design; (4) appearance of reality (*e.g.* in the folds of a cloak). Black is abhorred; it looks sorrowful.—This boy shows ease and spontaneity in the use of these standards, and can distinguish the merit of each separately.

O_2: (1) Pleasing combination of colours; (2) shape; (3) distinctness; (4) not too many colours; (5) natural or real look; the absence of this upsets any other merit, even that of (1).—This boy shows decided preferences, but his ideas are not easily stimulated by repeated comparison.

O_3: (1) Brighter colours; (2) nice decoration, especially an interesting view or object; (3) not too much in the picture. "A plain picture is nicer to the eye." A ragged line is disliked.—This boy yields to suggestion easily, but seems not to realise the idea suggested. His answers are stereotyped. Yet the process of comparison is carried out attentively, until the cards are taken from before his eyes.

O_4: (1) Bright colours and interesting, especially scenic, pictures; (2) greater variety of colours; (3) distinctness; (4) prettiness of the colours; (5) "more in it" (more objects depicted). The plain and smudgy are much disliked.—This boy can distinguish between these preferences. Though by no means unintelligent, he is not quick or keen. Still he can reach an idea by himself if sufficient opportunity is given.

O_5: (1) Greater variety of colours; (2) colours which are pretty and go well together; (3) distinctness: the central objects show up well against the background.—This boy shows great ease in using his æsthetic ideas, once he has found them. They are not numerous, but he uses them well, and discriminates sharply between different cards. He is very much occupied by his associations "by what the picture makes you think of." These, indeed, filled his whole mind during the first two stages, and were poured forth at an astonishing rate. This won him the title of "the erudite youth."

Girls.—O_6: (1) Pleasant arrangement of colours. This motive is constantly uppermost, and is based on great wealth of detail. Blue is the favourite colour. Other reasons are hardly evident; perhaps (2) shape; (3) in one case, a pleasing view in the middle of the picture. The following reasons were accepted when suggested: (*a*) brighter colours; (*b*) larger number of colours, but not too many.

O_7: (1) The shape is usually mentioned; (2) the combination of colours; (3) their brightness—black is dreary, and is disliked; (4) pleasant arrangement of objects depicted, as also a view in the centre; (5) more colours in the same space; (6) plainness, as against showiness: this is often overruled by other motives; (7) uncommon features.—This girl gives the greatest number of reasons, which are all spontaneous. Questions put to her only serve to fix her meaning. She makes her judgments with ease and interest.

O_8 was omitted at this stage.

O_9: (1) Shape; (2) colours, especially the bright ones—plainness and black are disliked.—It was hard to get any reasons from this girl at all, though she was reported to be an excellent scholar. Her typical answer was, "I don't know why." She is of Jewish extraction.

O_{10}: (1) Variety — of colours, shapes, positions, and objects: there can be no doubt but this is the primary motive; (2) shape; (3) combination of colours; (4) arrangement of the objects and balance between their proportions; (5) distinctness; (6) brightness. White is the favourite colour. Plainness is obviously excluded as a motive.

It will be evident from these summaries how many of the motives for preference based upon the sensuous effects of an impression have been used by the children spontaneously, and how detailed and repeated their application is. The predominance of one or other motive in each child is one of the most interesting results. These motives, as the children bring them to school, or as they develop in them, are the basis upon which any education in æsthetic appreciation must build. It seems clear that one of the best ways to develop them is to provide opportunity for their practice. The use of the methods described provides a very natural opportunity of this kind, and the teacher could do much by variation of objects compared or arranged according to preference to cultivate a motive seldom used, or to provide an occasion for the appearance of a new motive, if not to suggest one. Spontaneous appearance is, of course, likely to lead to greater interest on the part of the child. It is hardly yet sufficiently realised how much appreciation can be cultivated by practice, and especially by practice in the conscious adoption of the æsthetic attitude. We are too much accustomed to take taste and artistic judgment for innate faculties. Apart from the psychological outfit necessary for the pursuit of some arts, it is more likely that artistic appreciation is a power as much capable of educative practice as is that of any skilled activity or profession, or even the general desire to face facts or the love of truth.

6. In a fifth stage I endeavoured to find the children's capacity for

entering into the æsthetic enjoyment of states of mind lying beyond the sensuous elements—those of characteristic perceptions, emotions, and sentiments, as well as thoughts. It is impossible to give many examples of the accounts I obtained from the children. I used a number of reproductions of pictures and views published in a good pictorial calendar. The prints were some 4 inches by 6 inches, and were cut out and mounted upon dark-green cardboard mounts, 6 inches by $8\frac{1}{2}$ inches. They made quite a pleasing impression. An example will show what the children were capable of, and how the questions were used to stimulate them.

The following records refer to a picture by J. Israels, "The Fisher of Landboort (Amsterdam)."

O_1 prefers it to another because the shading is nicer, and it looks more real. "*Q.* What is the picture meant to be? *A.* A poor fisherman going home with his boy and his baby, his net over his arm. What mood is he in? He looks as if he were thinking. And the boy? Looks as if he had no mother to look after it. The baby looks only very young, and as if it had no mother to look after it, because the fisherman wouldn't carry it along with his net if he had a wife. He looks as if he had come home from his work and had taken his children there with him. Do you think it knows the old fisherman is thinking? No, sir. It looks quite happy, doesn't it? Yes, sir. Why do you prefer the one picture to the other? The singer picture looks jolly, and the fisher sad. Do you prefer the sad? Yes, because the story is more interesting. Which picture tells its story more vividly? The fisherman. It looks as if he had lost his wife, and had left home where she was, after burying her. What do you mean by more vividly? You can tell by the faces in the fisher picture that he is thinking about his wife, but in the other picture you can't tell exactly whether it is her son the old woman is thinking about."

O_2 also prefers this picture, and likes the colouring. "What is the story? A fisherman is coming home from the sea. He seems glad to get home and to see the children. Does he look glad? I think the expression of his face shows he is glad. What else is there in the picture? There is a sea behind him. And the children? Is he thinking of them? No. What about them, then? They looked pleased to see him."

O_3 does not like the picture. "The man is taking two children away. He looks a fierce man, and the children are frightened. What makes you think that? They are looking at him."—This boy's descriptions of the pictures were very often quite beside the mark.

O_4 prefers the picture. "The fisherman is going home after

fishing, taking the children with him. What is his expression? He looks vexed. What about? Perhaps he hasn't caught any fish. What about the boy? He is looking at him. What does his look mean? He is looking at the fisherman because he's cross and that" (sort of thing). Sadness of the picture and the cross expression are disliked.

O_5 (the erudite youth) likes the picture. "You can tell he is poor. He hasn't even got boots to his feet, and the children are not well dressed. He looks tired. What about the boy? He seems as if he had had to work for his father. He is looking at the poor baby, which has hardly got any clothes. Why do you prefer this picture? Well, because I don't like to see men quarrelling (as the other picture seems to show), and because you should have pity for the poor people and be thankful that God has blessed you. Reason for preference in another comparison—because, though poor, the fisher has some one to comfort him, and I'd sooner be comforted than not, or have to sit alone and idle my time away reading books."

Girls.—O_6 prefers the picture, "because the man in it has a kinder-looking face than the man in Picture 1. They are poor people, and I think are going about the streets trying to make a living. The man seems to like the children. And what about the children? What are they doing or thinking? The boy seems to be telling the man something."

O_7 also prefers this picture. "What is the subject? The man is going from home, and is taking his children away to a place of safety, as if there were going to be a war, or else perhaps he is taking them out for a day. What is his state of mind? Is he happy or sad? I should think they are poor by their appearance; perhaps the man has lost his wife, to judge by the look on his face. And the boy? What is he doing, thinking, or feeling? He is thinking about his father, I should think. I think he's sympathising with him. And the baby? I don't think it looks very sad. It seems as if it were wondering what was the matter. It looks quite content. Which of the two pictures expresses the feeling of its subject best? I think you can tell by looking at both of them what the picture really means. Why do you prefer this one? I think it's a sad one. Is that why you prefer it? Yes."

From O_9, as already remarked, practically nothing could be elicited by question. Preferences were hardly even indicated, if present at all.

O_{10} also prefers this picture "because it is prettier. What is prettier about it? The little baby and the boy. What is the picture

about? The old man is taking care of the children. He is a fisherman. What are his thoughts or feelings? The boy is going to help the old man to fish."—This girl is shy and sensitive, and was not able to formulate any further ideas, if she had them.

The inclination and ability of the children, indicated in regard to their preferences with coloured picture postcards of arms, is well borne out in the examples of their answers just given. There are marked differences between them, but it seems quite clear that there is plenty of material upon which any teacher, who considers the training of appreciation a necessary part of education, might build. I shall, indeed, be glad if these notes on experiments, which from a special point of view were rather a failure than a success, should encourage those entrusted with the education of young persons to cultivate the æsthetic activities in them more than is usual by the comparison and preference of numbers of lovely things of any kind or by encouraging children to express themselves freely upon all aspects of beautiful objects. To love beauty and to rejoice in it is, apart from mere happiness, the main way in which we may love life and delight in unhindered activity of mind. Education must teach skilled action, knowledge of truth and goodness, but it must not omit to create the habit of delight in all that varied mental activity which art invokes. By art the mind is not only enriched but enjoyed. Neither life nor education would be complete unless conscious activity in itself were happiness.

TYPES OF CHILDREN: THEIR OBSERVATION AND NURTURE.*

By J. LIONEL TAYLER, M.R.C.S., L.R.C.P.

Lecture delivered before the London Society, February 17, 1910.

The question I would wish to raise in this lecture is this: Have we reached a point in the study of healthy child-life when, for the guidance of the school teacher, the parent and the medical practitioner alike, and perhaps also for the employer of labour and the public-health student, we must begin to seriously consider whether many normal types of health do not exist; whether many normal but different kinds of bodies and minds are not observable, and to frankly accept that these *inborn* differences demand, for their highest fulfilment, type-educational, type-home, and type-hygienic standards, and to recognise that even for the employer of labour it pays to have men and women in his employment *naturally* fitted for his class of work? Whether, in fact, mental and bodily individuality must not be from the present time onward increasingly felt in the social organisation of life?

In saying this, I do not wish to be misunderstood, and thought to be assuming that humanity can be classified in an exact and accurate manner, for such a conception would, of course, imply gross scientific ignorance; I only mean that as there are all grades of womanliness and manliness, and yet sex characteristics† are clearly definable, so there are other type characteristics besides these sexual ones, and it should, I think, be our business to discover and interpret them for the benefit of the individual, society, and the race.

When one considers that hereditarily defective individuals in most modern states do not comprise more than, at the most, a one-hundredth part of the whole, possibly even less,‡ it seems at first sight extraordinary, in view of the amount of information that exists about mongoloid, microcephalic, feeble-minded, and other defective types, that so little is known about the numerically ninety-nine times as important

* The lecture was illustrated by a considerable number of photographs.

† See list of differences in chap. x. of A. F. Chamberlain's Work on "The Child: a Study in the Evolution of Man."

‡ In England and Wales the percentage appears to be 0·4 to 0·6; in Canada, about 0·3 to 0·5.