WOMAN'S WORK IN INDIA.

At the last annual meeting of the N.I.A., Sir Steuart Bayley suggested that, as one of the main objects of the Association is to promote friendly intercourse between the English and Indian educated classes, the subject was a suitable one for somewhat more frequent notice in this Magazine, and he expressed a hope that if the methods by which some measure of success had been already attained were pointed out (more especially with regard to what English ladies have it in their power to do) others might be stimulated to further efforts. Advice from such an authority must command respect, and I venture to accept his invitation only because others, better qualified than I am, have not as yet done so.

I shall make no attempt to moralise, or to propose any general rules as to the best way of attaining the desired object. My intention is to offer a few practical hints, founded upon an experience of twenty-eight years in India, which may be of use to my European sisters. And I must beg it may be understood that I do not claim to have been successful beyond or above my fellow labourers, and that I have no wish to parade the little we were able to do. (I use the plural pronoun because my husband and I have always worked together, and I have never attempted anything without his advice and co-operation.) So far from congratulating ourselves on what we were able to do in this direction, we feel humiliated at the thought of having done so little.

Before writing more, I must beg the kind indulgence of my Indian friends if I should happen inadvertently to make any remark distasteful to them. If any good came
of my husband's and my own endeavours to improve the social relations between the two classes, it was because our friends met us half way; and the kindness I have always received from them makes me feel sure that they will acquit me of any intention of causing them pain or annoyance by what I write.

The qualities most necessary to our intercourse with Indian families, either high or low, are tact, sympathy, and patience; with these, added to a courteous considerate manner, an Englishwoman will speedily become popular, and acquaintanceships formed with our Indian sisters will soon deepen into mutual appreciation and regard. It is always well to remember that we have much to learn from them. Their warm natures, ready intelligence, and charity are qualities to be admired, and no one can observe their strong religious feeling (mixed up though it is with a good deal of superstition) without respecting this.

The vast majority of those in a good social position have shaken off the grosser forms of idolatry, and believe, as we do, in the Great Creator; their code of morality also resembling our own. We must remember that those who are not against us are for us, and take care that we ourselves act up to the religion we profess. I fear that some of us are enigmas to them in this respect.

I never attempted to lead conversation with my visitors to the subject of religion. Their fathers and husbands are very jealous of any attempt to proselytise, and the least suspicion of anything of this nature would at once close the doors between us. I think, moreover, that argument on religious subjects should be left to those qualified by special education to carry on the same without fear of failure. Example is better than any amount of talking, and a consistent life will, in my belief, command more respect, and do more for Christianity than anything else in our power to do.

The first great requirement is, of course, a knowledge of the language. Only a very few English ladies speak this with any pretence at accuracy. But the ordinary colloquial Hindustani is very easily acquired, and one of the best ways of picking it up, supposing you have no time or taste for study, is to engage an ayah who is unable to speak English. It is best not to be shy about talking. Your listener will be as polite and considerate as a French lady under similar circumstances, and will not even smile at your blunders, but will help you whenever you break down. You will soon acquire some fluency, but try to aim
at something more than the wretched patois of "pigeon language," which ladies too often talk. You were not satisfied with such a standard of modern languages when in your schoolroom. Why be so with the colloquial of a country in which you may pass many years of your life?

When calling on an Indian lady, or on the occasion of such a visit to yourself, try and put her at ease by interesting yourself in her children, house, dress, or ornaments. On such subjects she will soon talk unreservedly. Then you will almost always find that she has some little accomplishment (be it only that of stringing coloured beads on a scent bottle) deserving of your admiration, and she will be gratified by your appreciation of it. I always made a point of returning every visit. (As a rule it is kind to give notice of your intended call, but this is not necessary.) It would be rude to omit such civility here, and such omission in India would be evidence of the very exclusiveness it is your desire to break down. Do not be ready to take offence, or to regard what may appear to you a conventional mistake as an intentional liberty, or as indicative of want of respect. In nine cases out of ten an Englishwoman's acquaintance with native customs and habits of thought is very imperfect, and in this as in many other things, a little knowledge is apt to be dangerous. Politeness is natural to Eastern nations, and intentional breaches of this are so rare that it is not worth while to be always on the watch to discover méprises of this sort, which, when noticed, will very probably be found to have been purely innocent. It is a good plan to set apart a day for receiving your Indian friends, and I would advise you not to allow any other engagement to interfere with this. Indian ladies dislike the publicity of a large mixed establishment, and some attempts have been made to meet this objection by arranging meetings at a schoolroom or other building where they would be free from interruption, or in one of their own houses. But such gatherings are generally too formal for anything like real social intercourse, while the true compliment to your friends is in asking them to your own drawing-room. It is easy to prevent any chance of unpleasantness. Our Indian sisters are gradually getting less shy, but when I first began to ask them I used to let my ayah take the Chuprassie's place, as hall porter, and conduct my guests to my room or tent. At mixed parties, I used to have a separate room (or part of my drawing-room screened off by a curtain) where "purda" ladies, or shy ones, might sit and listen to the music, and see without
being seen. If at first starting you will show a little consideration, such as the above, for the convenience of your guests, their confidence will be easily won, and their husbands will make no objection to their visiting you.

I never pressed refreshments on my visitors, and I am sure that it is best not to do so. Instead of this, we used to present each guest at leaving with a small bouquet of flowers—a little attention which they appreciate much more. We always had tea, coffee, and fruit, and those who liked such things helped themselves.

I think that if one's husband happens to be in any post of power, it is wisest not to allow one's-self to become the medium of any communication to him. I used to avoid all official subjects in conversation, and discourage allusion to grievances, public or private. It is also safest to decline presents of all kinds. Those offered may be of no intrinsic value, and may be offered (and accepted) with the very purest motives; but the accepting of them may be misinterpreted by others, perhaps by your own servants. There is such a thing as straining this principle, and thereby causing needless offence. The offer of fruit and flowers is the custom of the country, and acceptance of such small favours is not likely to be open to misunderstanding, whereas refusal would be considered rude and ungracious. Accept all civilities as kindly and courteously intended, even though the beautiful garland of sweet-scented flowers which may be fastened round your neck by your hostess has just been taken from a bowl of cold water. The native feeling of hospitality is so delicate, that a shiver on your part would cause great distress!

By degrees you will be able to induce your new friends to visit girls' schools with you, and to take part in the prize givings at such institutions. Bye and bye, perhaps, you will be able to form a needle-work guild, to get them to take interest in the hospital, and to join music and drawing classes. There is much of such work to be done, and with kindly interest in the subject something may be done by each, and you will not lose by the effort. Speaking for myself, I am sure that I not only derived pleasure from these friendships thus made in India, but profit as well. There is always a satisfaction in exerting one's-self for others, and this is specially the case in India, where many of the little openings for benevolence, which are always at hand in England, are wanting. Many a lady sadly misses them. However well educated she may be, and however
many resources she may have in herself, she will almost always have a superabundance of leisure; and during the long days, when her husband is in office, or absent on duty, time will often hang heavy on her hands if she has not some way of employing it in objects of usefulness and philanthropy. In my own case I can truly say that the little I was able to do brightened my life in India, and was at least as beneficial to me as to those I tried to help. And now I must end.

There is nothing new in what I have written, nothing particularly deserving of a place in this Magazine; but I have endeavoured to act on the advice of one well qualified to offer it, and the task has been a pleasant one, as it has recalled much kindness and consideration received from my friends in Guzerat and Poona, to whom these few lines will carry an assurance of my goodwill and affection.

Adeline B. Sheppard.
THE INDIAN CENSUS.

The results of the Census in India, taken last February, have now been published—except in regard to castes and occupations—and the Times of July 11th gave a valuable summary of its chief points. The population of all India, as individually counted, is stated to have been, on the Census night, 287,223,421. Taking off about 5,250,000 belonging to such new British possessions as Upper Burma, Quetta, &c., and to the native state of Kashmir (now included), the population appears to have increased since the Census of 1881 by nearly 28,000,000. It must, however, be taken into consideration that ten years ago the people in many parts, through ignorance and superstitious fears, co-operated less willingly than on this occasion with the Census authorities. There was formerly a greater tendency, through suspicion of the objects of the Government, to withhold the real number of members of a family, especially as to the women. No doubt the same was often done even this year, but there is every reason to believe that the present Census was made more accurate than the last. In comparing, therefore, the results of the two, allowance must be made for a larger degree of under-computation in 1881, and thus the actual increase of population may probably not amount to fully 28,000,000. The advance, however, is very great. Population has increased most in the backward Native States of the Central Provinces—viz., 25 per cent.; in Lower Burma, over 23 per cent.; in Mysore and in Sind, 19; Bengal Native States, 17½; Rajputana and Hyderabad, over 17; Madras, 15½; Bombay, just under 17; the Punjab, 10.3; Bengal, 7.10 per cent. The North-West Provinces seem to be lowest as to increase, having only added 4½ per cent. to the number in 1881. The following is the total division between the population of British India and the Native States. In British territory, 221,173,000; in the Native States, 66,050,000.

It is well known that the people of India are mostly agricultural, but one is surprised to find that not more than 9 per cent. of the whole population inhabit towns.
Innumerable villages, as in ancient times, form the chief centres of social life. In Assam, and in the small Native States of the Central Provinces, and of Bengal, there can hardly be said to be any towns at all; the places called towns being scarcely more than local markets. And "in the great Lieutenant-Governorship of Bengal, notwithstanding Calcutta and other populous towns, the urban population is swamped by that of the immense rural tracts; and its percentage is only 4.8." But, whether for good or evil, and, indeed, in some respects for both, the large cities are becoming larger. Bombay and Calcutta are advancing towards a million of inhabitants; the former counts 821,760, the latter 741,140, or with its large suburbs 978,370. Madras has nearly half a million, Hyderabad, 415,000; Lucknow, 273,030; Benares, 219,470; Karachi is an instance of very rapid increase during the last ten years, for it has added 43 per cent. to its inhabitants; Rangoon and Cawnpore have also greatly grown. Four of the large towns, Patna, Amritsur, Surat, and Mirzapore, have not increased since the last census. A speedy influx into cities and towns would create much difficulty as to dwellings and sanitation, but such influx will be, owing to many causes, the inevitable tendency of the introduction into India of Western influences. Yet for a long time, the people must continue mainly agricultural.

An attempt was made to classify the people of India with regard to religious castes. The latter statistics have not yet been completed, and it was extremely difficult in some respects to indicate the differences of religion. It appears, broadly, that Hindus—among whom, however, are included the 3,050 Brahmos, and 39,950 Arya-Somajists—make up about three-quarters of the population—75 per cent.; the Mussulmans a fifth—19.96 per cent.; Buddhists (in Burma chiefly) 2.48 per cent.; Christians, 0.80 per cent.; Sikhs, 0.60 per cent.; and Jains, 0.49 per cent. The Parsis number about 90,000, and have gained 5½ per cent. The small number of Jews has also increased. The hill tribes of the country have been reckoned among the Hindus, on the ground that they are gradually becoming incorporated with Hinduism. Taken alone, they constitute 3.23 per cent. of the whole population.

In regard to education, there was a division in the schedules under these heads.
1. Those who were under instruction.
2. Those who were not, but could read and write.
3. Those who could not read and write.
The result was that 89.1 per cent. of the men and boys, and 99.4 per cent. of the women and girls were entered as unable to read and write. The proportion of those who could read and write was 1 in 9 for men, and 1 in 173 for women. Such statistics are, however, necessarily inaccurate, and perhaps the most reliable fact is that since 1881 there is a definite educational advance. The calculations as to those under 15 who were married, unmarried, widows, and widowers are said to be very elaborate, and the cursory results given in the abstract seem rather perplexing. Happily the number of widows under 15 appears to be less than in 1881, but 33 per cent. of this class of "widowed" girls were under 5 years of age. Still it must not be supposed that all these children are condemned to the severities of the Hindu widow's existence. In the lower classes widow-marriage is practised, and, of course, Mussulman widows can re-marry. It is only among the Brahmans, and in the castes that imitate their social customs, that the prohibition exists. These form a considerable class, but it will be seen, when the caste statistics are ready, what large numbers they do not include.

The chief Census Commissioner, Mr. J. A. Baines, F.C.S., explained in a paper which he sent to the Society of Arts, and which was read on May 19th, the machinery for taking the Census, in some respects necessarily different from the arrangements in Europe. In every country the difficulty of organisation on these occasions is enormous, but in India, owing to the enormous area, and the very great variety among the inhabitants, it is overpoweringly great. First, the date had to be fixed with reference to the agricultural convenience and the habits of the villagers, and the latter end of February was chosen as the time when most would be in their homes. Then the preparations were started ten months before the Census had to be taken. A conference was held, and a Superintendent of the operations was appointed for each province, for which post many qualifications are needed, as tact, experience, and sound health. He had to see that all the villages were grouped in circles, and then divided, for purposes of enumeration, into areas, called "blocks," in which each house was to be numbered and registered. The same system, with variations, was adopted for towns. Travellers needed to be considered, and for this sometimes trains had to be stopped for a while, which proceeding did not cause the complaints that would have arisen in busy England.
The Superintendent had also to look after the preparation of schedules, which had in India to be translated into at least seventeen languages, and sometimes, besides, with more than one character of writing. It was roughly calculated that the forms required were numerous enough, if put end to end, to cover more than the distances from India to England and back. When the date arrived, the schedules were not, as in England, left with each household to be filled up. This was done at Bombay, where education is pretty general, but it would not do in the village districts. "A schedule," wrote Mr. Barnes, "left for three days in the house of nine out of ten of the population would be mislaid in a hole in the tile or thatching, or strangely plaited and tied up like a court summons in a corner of the householder's waist-cloth; or, again, stuck, like a turnpike ticket, into the folds of his turban, and forgotten. The tenth man would probably spend more happy minutes, not inaudibly, in discussing its legality with the enumerator, or return it endowed casually with the primitive addition sums necessary for the balancing of his day-book." The plan adopted, therefore, was for the enumerator to call beforehand, at each house, and to fill up approximately the number of residents and of probable sojourners on the Census night. This having been done, he returned with his filled-up schedules on the actual evening and brought the returns up to date. The arrangement seems to have answered, and Mr. Baines mentions the great assistance received by the enumerator from the village officers, such as the village constable, the schoolmaster, the local grocer, &c., and in towns, from the municipal commissioners, and all the non-official classes. The drilling of the army of enumerators was no small matter. Everyone who was willing was pressed into the service, and received regular instructions by illustrative processes from the superintendents. Then, after the Census, each enumerator's book of schedules had to be examined in his presence, and he still had to make up the totals, his results being tested by their agreement with those of a second enumerator.

The *Times* article bears witness to the admirable manner in which the work of the Indian Census of 1891 has been performed by all concerned, and to the thoroughness with which the final revision has been concluded: "The credit is due alike to the provincial superintendents and their numerous staff, and to Mr. Baines, the Census Commissioner for all India. Mr. Baines obtained a
thorough grasp of the local circumstances and variations by travelling from province to province, and drew up carefully-adjusted rules for the grouping of the castes and occupations of the people, and for innumerable statistical administrative details. He has succeeded, to a remarkable degree, in getting his vast army of subordinates to work heartily with him—in the single Lieutenant-Governorship of Bengal they exceeded 309,000 persons for the enumeration of a population of 74.5 millions. His general report will form one of the most important contributions of the closing decade of this century to statistical science."
SOCIETY FOR THE ENCOURAGEMENT AND
PRESERVATION OF INDIAN ART.

This Society wishes every success to the Industrial Quarterly Review, edited by Mr. Mahadev Ballal Namjoshi, and trusts that the infant association which has been started "in a corner of Deccan," may gradually spread its light over all the vast Empire of India.

Next month, the Society hopes to allude more fully to the immense good that such an Association can do, if it will not push western mechanical improvements in manufacturing processes too far, but allow the artisans to follow their own traditional methods of producing their handicraft wares.

Extracts from the valuable and interesting papers in this review by Mr. Havell, in answer to Mr. John Adam's criticism of the Madras School of Art, will be well worth copying, in this connexion, for the benefit of our readers:—

INDUSTRIAL ART EDUCATION IN INDIA.

Some three or four years ago, a movement was started in Madras to found a Technical Institute in commemoration of the Jubilee of her Majesty the Queen Empress. Mr. John Adam, Principal of Pachaiyappah's College, who took an energetic part in the movement and is now the Secretary of the Victoria Technical Institute, wrote a memorandum in which he, besides freely criticising existing technical institutions in Madras, laid down the lines on which he considered the Institute should proceed with regard to Industrial Art Education. I notice that in the report of the first Industrial Conference held at Poona last year, several of the speakers promulgated views similar to those which Mr. Adam then expressed, and as I have been asked to contribute to this review an article suggesting how Indian Schools of Art ought to be developed and how Indian Art can be preserved and encouraged, I think I cannot do better than reiterate my views on the subject in answer to Mr. Adam's criticism of the Madras School of Arts. Mr. Adam wrote as follows: "They" (the native artisans) "are wholly illiterate. Their technical skill, great as it
often is, is the result of an hereditary instinct combined with long rule of thumb practice, and it would be Utopian to expect them to adopt the more scientific, time and labour saving and therefore more remunerative, processes of modern days." In another place he says: "The aim should be not to produce a renaissance or a revolution in Indian art, but to discover whether by improved methods of working and increased technical skill competition is possible between native manufactures and foreign imports;" again: "in view of the further object of the Institute—namely, the application of Art to Industries, it would be a serious waste to allow the valuable appliances, staff and experience of the School of Arts to be devoted to the subsidiary purpose of training teachers of elementary drawing."

**Scientific, Labour-saving Processes and Industrial Art.**

I. I gather from Mr. Adam's remarks, first, that Industrial Art in this country would be most benefited by the introduction of more scientific time and labour-saving processes; secondly, that the School of Arts in its application of Art to industries does not adopt these processes, and therefore needs to be taken in hand by the Technical Institute. With regard to the first point, I would observe that the question of the general application of time and labour-saving processes for the benefit of Indian Industrial Art is a more difficult one than Mr. Adam appears to think, and I do not believe that the Council of the Institute, constituted as it is and with such limited resources, will be in a position to deal with it. I will assume that Mr. Adam's propositions are feasible, and that qualified experts are sent to examine and report upon the technique of (e.g.) the wood carvers in different parts of India, from the "practical and economic point of view." It would be found that the Punjab carver is much quicker in his work (i.e., that he covers more ground in the same time) than the Madrassee. Mr. Adam, of course, would import a few men to teach the Punjab time and labour-saving processes. He would then find that the Punjabees would probably take longer than our local carvers to execute a bit of work in the South Indian style,* for this

* It will be interesting to note here that sometime after this was written, having engaged a very skilful Punjab carver to work in the school, I showed him a fine panel of Madras work, and asked him how long he would take to do similar work. He told me he could easily finish it in ten days, and smiled when he learnt
reason: the Punjab style of ornament is mostly flat, mere surface work, whereas the South Indian style involves more modelling and variety in relief. Are we then to suppress the peculiarities in Dravidian and other styles of art and adopt only one style, the cheapest and quickest? I admit that this is quite possible; that the two men working side by side might learn something from each other and be mutually benefited; but it is most likely that the Madras carver would only fall into a slovenly style which had neither the best characteristics of his own work nor the grace and freedom of design which are the chief merits of northern Art; for labour saving devices are quickly acquired, "Art is long," and its practice is not learnt except by hard study and patient work. In decorative art, style and technique grow together. Labour-saving processes applied to the industrial arts are not scientific when they destroy artistic expression.

Then, again, a process applied to one class of work may be eminently scientific, but clumsy and ineffective when applied to another and *vice versa*. Take, for instance, the process of casting by *cire perdue*, universally followed in India by brass-smiths and others. For the reproduction of delicate modelling or for single works of art, the process is a most perfect one, but for making vessels of common shape in large numbers it is tedious and ineffective compared with the European process of casting in moulding boxes. In the course of one of my tours I came across a native workman who had learnt the European process, I think in the Dowlaishveram workshops, and was using it with great effect in turning out the simple vessels required in his village. On the other hand, I noticed some time ago that an eminent London firm had adopted the *cire perdue* process for ornamental bronze castings, and took credit to themselves for the superiority of the work they were able to turn out. Here we have two exceedingly instructive incidents: the native workman giving up his hereditary prejudice against a European process when it is really more practical for his purpose, and the English art manufacturer of the nineteenth century turning back to the antiquated and so-called unscientific method used in the arts for many thousands of years.

that a Madras man had taken three weeks to do it. I then set him to work a similar panel, and, exactly as I anticipated, after working about a fortnight he had not finished more than half. The apparent slowness of the Madras carver was due to the style of design, not to deficiency in his technique.
Rule of Thumb.

II. Mr. Adam refers rather slightingly to "rule of thumb" practice. Now I am not ashamed to confess a great respect for "rule of thumb." The study of old artist-lore is as interesting to the art designer as "folk-lore" is to the antiquarian and literary student of it; it has besides great practical benefit. The great works of ancient and medieval industrial art, with which for the edification of modern artizans and designers our art museums in Europe are filled, are all worked by "rule of thumb." The most artistic nation of the present day, the Japanese, produce their magnificent bronzes, pottery, and other works by "rule of thumb." Castellani, in his endeavours to revive the perfections of classic jewellery, spent years in trying to discover the old Etruscan process of soldering minute grains of gold on to a gold surface, and at last found the secret preserved by "rule of thumb" in a family of goldsmiths living in the recesses of the Appennines.

The Origin of the demand for Technical Education.

III. It will be interesting in this connexion to trace the origin of the present demand in Europe for technical education in industrial art, which has now been exported to India. It really was the final outcome of the introduction into art manufacture of those mechanical and scientific labour-saving appliances which Mr. Adam believes are essential to the future welfare of industrial art in India. In the middle of the last century mechanical invention first began to oust the master workman and his apprentices and to turn the art workshop into a factory. A century later the English art manufacturer found that he was being left behind in the race with foreign countries, because his labour-saving appliances had extinguished the manual skill of the artizan and obliterated the "rule of thumb," or tradition of the workshop. Then there came the cry for schools of design and for technical education! Up to the middle of the last century, industrial art was a living and spontaneous growth in England as it now is in India; but at the present time English art applied to manufactures is purely eclectic and exotic.

Technical Education in England is (in relation to art industries) the remedy for the evils resulting from the unwise and indiscriminate application of "time and labour-saving processes." Mr. Adam proposes to adopt the same processes as the basis of education in industrial art, a
curious transmutation of purpose! He apparently wishes to bring manufacture, pure and simple, and industrial art to the same level, and to apply to the latter principles which have no part or parcel in genuine art. A great many people who join in the cry for technical education, without knowing much about it, think that by starting industrial schools all over the country they will in time establish new industries and provide the masses of the people with bread-earning education. The only sound basis for schemes of technical education is the basis of all such schemes in Europe—viz., to take the industries which exist, and endeavour to improve them or lead them into new developments. This is exactly what the School of Arts is trying to do.

The Legitimate Use of Mechanical Process in Art.

IV. Now I am quite prepared to admit that this question of labour saving processes is very important. Burges, one of the greatest of English art designers in this century, says in the introduction to his series of Cantor lectures on “Art applied to Industry”: “Decidedly the best application of art to industry is when a great many copies are made from an exceedingly good pattern.” He refers to a case in which a large firm turned out very pretty tinned iron door rings, but, instead of having them stamped in a die, by which means they could have been sold at 3d. a piece, they were made entirely by hand at a cost of from 3s. 6d. to 4s. 6d. Burges, however, would have been the last man to advocate an indiscriminate application of mechanical reproduction to industrial art, as any one who has read his lectures will know. Mr. E. J. Poynter, R.A., late Director for Art at South Kensington, another great authority, speaking of a mechanical process by which glass manufacturers imitated the old Venetian diamond mouldings at a considerable saving of labour, says: “To an uncultivated eye the effect may be equally good, but in the process the original charm has disappeared, and the delicate fabric has become a mechanical production without life, made probably at a tenth of the cost, and with a tenth of the labour, but one which, so far as the artistic value of its ‘diamond moulding’ goes, it was superfluous to make at all.” He adds: “It would be foolish to suppose that mechanical reproduction can be done away with. It is part of the necessities of the times. But we must not delude ourselves into the belief that we can produce works of art by the substitution of machinery for hand labour,
or that the decoration of objects of common utility by a mechanical process can even have artistic value. We should indeed have made an immense step in advance if the public could be persuaded that it is better to have no decoration at all than such as is purely mechanical.” He goes on to explain that he did not mean that mechanical processes should in no case be made use of in art, and sums up as follows: “Although an exact definition is not easy, it may be broadly affirmed that mechanical reproduction in art begins to be objectionable at the point where, precise and multiplied repetition not being one of the conditions, the charm of free and skilful treatment outweighs the imperfections and more lengthened process of hand work, and conversely it ceases to be offensive to taste where the labour of hand work not only becomes oppressive to the imagination, but ceases to fulfil the requisite conditions.”

The Real Points of the Question.

V. The real points of the question for the School of Arts and the Technical Institute to consider are these:—

1st. Is there in this country, as there is in Europe, a large and increasing field for the employment of the artizan in the decoration of objects of common utility, and in the class of art work to which mechanical reproduction may be legitimately applied?

2nd. In any case are there many mechanical processes unknown to native artisans which may be usefully introduced in the art industries which exist?

Is There a Demand?

VI. In answer to the first I would say that there is not in this country a general demand for the multitude of things of common utility to which decorative art is applied in Europe. In the Madras Presidency, and among the wealthy and educated class of natives, the application of art, at least of indigenous art, to ordinary surroundings and common objects of utility is generally considered old-fashioned and out of date. Native ideas of art are, as a rule, limited to pictures and English furniture. It is, of course, a consummation devoutly to be wished that among all classes of natives the knowledge of art, which leads to an appreciation of beauty in common things, should grow up together with the advance in general education. When this consummation is reached, half the difficulties in in-
dustrial art education in India will have vanished. As it is, the whole tendency of modern Indian industrial art is towards the production of bric-á-brac and "curiosities" for export which are neither artistic nor Indian.

If real Indian art is to be preserved it must be through a re-awakening of an artistic sense in the everyday life of the people of the country, not through the patronage of globe-trotters and curiosity-mongers. No art ever flourished which was not rooted in the national life of a people.

Associations and Societies for the encouragement and preservation of Indian art will never do much good unless they work chiefly in India, for India, and among the Indians. European aid and encouragement can do comparatively little for Indian art. When the Romans conquered Greece they appropriated Greek art, and employed Greek artists to decorate their houses, palaces, and temples. But the British domination in India does not afford a historical parallel to the conquest of Greece by Rome. The Greeks and Romans were peoples with common ties as regards race, religion, and domestic life. It is not surprising that Englishmen, however much they may admire Indian art, should feel a repugnance to allowing Mohammedan art to appear in their churches, and to decorating the walls of their houses with Hindu emblems and effigies.

Do Native Artisans fail to appreciate practical improvements?

VII. Now with regard to the second question,—that of processes. Of course, it is necessary to set aside the machinery and steam power which may, even in art, be employed as adjuncts to skilled labour, though not as substitutes for it. Nothing will be gained by teaching in Technical Institutes the use of machinery which the artisans outside cannot or will not use. As far as my experience goes, the native workman is not so slow as is generally supposed in adopting superior tools or simple and effective mechanical contrivances when they are placed before him. In large towns, carpenters and brass-smiths will be found using English or American lathes worked by a treadle; imported tools for turning the thread of screws, drawing wire, &c., are commonly used by the goldsmiths and brass-smiths. Even in the remotest villages carpenters use English saws, planes, chisels, &c. A few commercial travellers demonstrating the advantages of such tools and appliances would do more in six months towards intro-
ducing them than the Institute with its limited resources will be able to accomplish in ten years. Of course the common village carpenter will not use an American lathe or buy superior tools, for even if he could afford them, what does a man want with such things whose chief work consists in repairing country carts, or nailing together a few rough planks to serve for the door of a mud hut?

**Technique in Ornamental Art.**

VIII. As to the technical processes, the ornamental metal worker's methods are essentially the same all the world over. There is no essential difference in the technique of the wood carver in different countries, *it is only modified by style.* Hand-made carpets are made in practically the same way in Europe as in India. Besides, there is a vast difference between teaching an unskilled English artisan to adopt a new system of technique, and introducing innovations into a system which, having been practised for hundreds of generations in one caste or family, has gradually developed into what we call a rule of thumb. The English workman would not find more difficulty in working in one way than in another; but, putting aside the question of artistic style with which technique is so closely connected, the native would be conscious of the effect of the law of heredity, and feel that the very muscles of his fingers and toes were predisposed to work in the old way.

The common appliances used in the industrial arts for mechanical reproduction, the metal worker's dies, the leather worker's stamps, the cotton printer's blocks, were in use in India when industrial art was in its infancy in Europe. I do not say that nothing can be done to improve Indian art in the direction suggested by Mr. Adam, but his ideas on this subject seem to me far beyond the scope of an Institute organised as he proposes, and, indeed, far away from the root of the difficulties (in the main economic rather than technical) which surround the problem to be solved.

**The European System of Art Manufacture.**

IX. It is of the greatest importance, when considering schemes of technical education suitable for this country to look at the essential difference between the condition of industrial art in India and in the great manufacturing countries of Europe. Every large firm of art manufacturers in Europe employ one or more designers, who prepare the designs for all the work turned out by the establishment. As I have said before, English decorative art of the
present day is entirely eclectic; there is no distinctive English style of design. Designers are taught either by being attached to the draughtsmen's office of some manufacturing establishment where they draw out the sketches of the chief designer and gradually learn to design in the style most in vogue in that particular firm, or they study the historical styles and the principles of design in Schools of Art or kindred institutions. In working out designs the principle of division of labour is strictly adhered to. The chief designer will sketch a design and hand it over to draughtsmen to prepare drawings; these will be passed on to the workmen. In some kinds of work the design will be reproduced entirely by mechanical means, but if hand labour is employed, the workmen, who are each specially skilled in some one process and generally absolutely ignorant of any other, will divide the work between them, and by this co-operative system the original design will be carried out. Now, from the "practical and economic point of view," of course this system is an admirable one and great mechanical perfection is no doubt obtained by it, but when one considers that the end in view is to produce a work of art, it becomes evident how defective in one respect the system really is. The chief designer may be and often is an admirable artist, and of course he is sufficiently acquainted with technical processes to be able to adapt his ideas to the exigencies of material and processes of manufacture, and if the workmen knew as much about art, or even knew enough to be able to understand and appreciate the ideas of the designer, the system would not be so bad. As it is, the workmen are often simply skilled mechanics who work from a pattern and have no more real artistic knowledge than a gunsmith or sword maker. Art manufacturers in Europe, at least those who have sufficient respect for art to wish to advance its interests equally with their own, have become fully alive to these defects and through recognition of them, as I have tried to point out before, the demand for the education of the art workmen has arisen. They have begun to discover, rather late in the day, that scientific labour saving processes when applied to industrial art should always be subsidiary to artistic knowledge.

The Technical Question a many-sided one.

X. I am fully aware that this view of the question does not by any means meet the whole case, for the technical question is a many-sided one. It does not touch the
improvement in materials used in the arts, or the reduction in the cost of manufacturing materials, though it would not be difficult to show that even in these matters artistic considerations must be taken into account and that Science cannot have all her own way. Still it can hardly be maintained that the marked advance which England has made in all branches of decorative art during the last 20 or 30 years has been chiefly due to improved mechanical processes or what I would call pseudo-scientific methods. It would be more correct to say that it has been due in a great measure to a return to the principles which guided the old industrial artists all over the world, principles which no discoveries in Science can ever change.

The Indian System.

XI. Industrial art in India is carried on in exactly the same lines as it was in all European countries up to the middle of the last century. Division of labour is recognised to a certain extent, but the principle is never carried so far as to convert the art workman into a mechanic. In ornamental designs the workmen have their traditional styles to follow; they are not, like the art student in Europe, bewildered by a congeries of fifty dissimilar styles from which a system must be formulated of laws and principles common to all. The Indian workman is happy in the possession of a rule of thumb.

I may say that I am not conscious of any prejudice either for or against Indian art. I believe I am capable of discriminating between good and bad in any style, and I can never be led to believe that an artistic atrocity is in any sense less objectionable because it is Indian. On the other hand I do not see why the Indian workman should not borrow from foreign styles of art, provided that he has an inclination to do so and his art is improved or does not suffer by so doing. Of course, such a suggestion would evoke from some art critics a storm of righteous indignation at the flagrant violation of historical consistency. However as the best art workmen in every age and in all countries, and India is no exception, have violated historical consistency in the most outrageous manner, I do not see why those of the present day should trouble themselves about it. Indeed it is evident that, if they had always regarded only historical consistency, art would never have advanced far beyond the barbaric notches on the cannibal's war club. It is folly to suppose that art workmen, like mummies in a museum, can remain un-
influenced by a vast social revolution going on around them; but it is for Schools of Art and such institutions to guide the workmen, so that they may see how far and in what direction they may learn from the art, the technique, and the scientific discoveries of other countries. Indian art has doubtless often suffered greatly from foreign influence, but the mischief has nearly always been when the workmen, not being allowed spontaneous expression of their own ideas, were compelled to follow those of their misguided patrons. Certainly questions of this kind are beyond the proper scope of Jubilee Technical Institutes.

In another issue of this Review I will endeavour to show the practical work the Madras School of Arts is doing to encourage and develope Madras Art.

E. B. Havell.

Schools of Arts, Madras, March 1892.

Copy of letter from the Executive Committee of S.E.P.I.A. to Surgeon-Lieut.-Colonel T. Holbein Hendley, C.I.E.:

Dear Sir,—We cannot allow you to leave England on your return to India without conveying to you the expression of the deep sense and obligation we feel we are under to you for your services, in collaboration with his Highness the Maharajah Sawai Madhu Singh, G.C.S.I., of Jeypore, and his late Highness the Maharao Raja Mangal Singh of Ulwar, in reviving the handicraft Art Industries of the Rajputana States. We desire at the same time to place on record our special acknowledgment of the enlightened and munificent patronage extended by his Highness the Maharaja Sawai of Jeypore to the Industrial Arts of his own states; and if the same stimulus were given by the rulers of Cashmere, Baroda, Hyderabad in the Deccan, and the ancient Hindu kingdom of Mysore, to the indigenous arts of their respective states, we feel that the future of the traditionary arts of India in all their leading local lights would be made secure for at least another generation. We further feel under the deepest obligations to you for your disinterested labours in organizing the splendid exhibition of Indian metal work now open at the Imperial Institute; and as a souvenir of our gratitude we forward for your acceptance, and we trust it will be gratifying to you the certificate of merit, printed in gold
of the Society for the Encouragement and Preservation of Indian Art, and we beg you to be the bearer of another copy of our certificate, also printed in gold, for his Highness the Maharaja of Jeypore, as also of the copies printed in sepia, adjudicated by the Society to the various workmen who have contributed to the collection of metal work shown in the Jeypore Room at the Imperial Institute. Wishing you God-speed, we have the honour to be, dear Sir, yours most truly,

SARA M. CARMICHAEL
C. PURDON CLARKE
W. MARTIN WOOD

By direction of the Executive Council of the Society for the Encouragement and Preservation of Indian Art.
July 2nd, 1892.

An additional certificate has been awarded to Mr. E. B. Havell, of the Government School of Art at Madras, for his advocacy of the Traditional Arts of India with special reference to his recent Article in The Industrial Quarterly Review of Western India, published at Poona.

The Committee of S.E.P.I.A. much regret the resignation, by General Pollard, of the Treasurership of the Society, but they have been fortunate in securing the services of Mr. A. Brandreth, late of the Indian Civil Service, and well known for his interest in Indian art. H.H. Maharaja Sayaji Rao Gaekwar, of Baroda, G.C.S.I., and H.H. Maharani Jumna Bai Sahib Gaekwar, of Baroda, C.I., have become Vice-Presidents and Life Members of the Society. The Hon. Mrs. Fellowes has made a donation of 10s. to the Society.
THE MUTUAL INFLUENCE OF MAHOMMEDANS AND HINDUS IN LAW, MORALS, AND RELIGION.

Le Bas Prize Essay, 1891. By F. W. Thomas.

This is in many respects an interesting essay, for the writer has not only read up very carefully the literature of his subject, but he also shows skill in the arrangement and connexion of his materials, and he writes in an easy fluent style. He has considerable command of large philosophic terms; and he speaks to us in the tone of one surveying a vast field of human thought and action from the lofty heights of wide-ranging observation. His tendency, as is natural in these altitudes, is towards broad generalisations; so that the first sentence strikes the note of the whole work. "Society in India, replete as it is with strange contrasts, is distinguished in the main by the one great contrast between its theories and its actualities." We are tempted to apply this remark to the essay now before us, and to suggest that Mr. Thomas has been prevented by the magnitude of his subject and the paucity of space allowed for an essay, from giving his whole attention to the necessity of bringing his theories into close uniformity with the actual facts of the religious condition of India.

His sketches of the main features and historical outline of Hinduism and Mahommedanism are drawn with a free hand; they are in a large and general sense correct; and they exhibit here and there very creditable power of condensing the expression of a leading characteristic into one appropriate phrase. Of Hinduism he says, rightly—"The system, while culminating in a mystic philosophy, has its roots in the every day life and thought of the people." The early Mahommedans he describes—"a race of enthusiasts, he (Mahomed) inspired the Arabs with the idea of purifying the beliefs of mankind; a nation of robbers, he opened to them the prospect of plundering the world. The double aspect of this vast conception characterises the whole history of Islam." This may not be new, it may not be absolutely and critically true, but it is sufficiently exact, and at any rate very well said.
An essayist who is dealing with ancient and mighty religions that have profoundly modified the beliefs of the world, and that are still in full activity, may be expected to indulge not only in bold retrospects of their past history, but also in prophecies as to their destiny in the ages to come. Where questions of fact are incapable of verification, criticism is disarmed. We may therefore dispense with close scrutiny of Mr. Thomas's account of "what Brahminism did for the Dekhan and parts of Hindustan in the first few centuries before and after Christ;" because there is such a notable lack of positive information on the question, that he need not be blamed for discoursing upon it at his ease. For a similar reason we shall not dispute the dictum that "Hinduism has signed its own death warrant in the culminating fiction" that the Mlecha, or foreigner, is forever outside the pale of Brahminism; and that "in another hundred years the system will probably live only in the dreams of a few isolated Brahmins." No one can possibly tell whether this sweeping sentence upon the religion of 250,000,000 be right or wrong; one can only observe that threatened faiths, like threatened men, are apt to be long lived. When, however, our author remarks on the "strange chance that the first foreign power with which the natives of India were brought into permanent contact was Mahomedanism," it may be suggested that long before the era of Islam, North India had felt the influence of the Greeks.

Mahomedanism is, as Mr. Thomas truly declares, in most respects the very antithesis of Hinduism. "Hinduism is melancholy, sentimental, and philosophical: Mahomedanism is ardent, austere, and practical." It may be added that Islam takes short views of future life; you are relegated once for all after death to Hell or Paradise; while the Hindu soul wanders through interminable labyrinths. Between two such opposite systems there could be little fusion; the result of contact has been rather, as is noticed in the essay, to accentuate antagonism. "In what manner then," asks our author, "could the two systems exercise any wide-reaching influence?" The answer given is—"Only indirectly—the sharp contrasts of theory could be toned down, if at all, only in consequence of the interaction of facts": by which is meant that the Hindus and Mahommedans could only affect each other by rubbing together constantly in the same country. This is tolerably true; although it might have been added that the Mahommedan conquerors did not trust only to the
slow filtration of ideas by inter-communion for the spread of their faith; they violently converted hundreds and thousands of Hindus, and they encouraged active proselytism with all the strength and resources of a powerful State religion. On the Hindu side, of course, there was no similar missionary enterprise against Islam; and the non-Hindu aboriginal tribes were fair game for both of the rival systems in the competition for proselytes. Brahminism had here a distinct superiority, and has absorbed the greater number; but the contest was occasionally so close that in some parts of India the hill tribes are still partly Hindu and partly Mahommedan. The difference in organisation between the two religions is not overlooked by Mr. Thomas. Islam is governed, more or less, by written law, and by scriptures expounded theologically in regular schools; whereas Hinduism has no formal creed, and very little systematic administration. It is clear that two such separate methods must have had very little mutual influence. But the bottom of the matter is that the speculative, refining, and sceptical Hindu mind has always felt a certain contempt for the rough, confident, unquestioning enthusiasm of Islam.

Mr. Thomas begins his chapter on Morality with the statement that the effect of the Mahommedan conquest on the morals of Hinduism is at once more easy and more difficult to trace than its effect on law and religion. The morals of an immense mixed population being much less easily definable or ascertainable than its law or its creed, we should have supposed this to have been far the most difficult part of the author's arduous undertaking; yet he finds no trouble in concluding that, under Islamistic influences, Hindu morality has deteriorated. The point is determined in the essay by quoting the testimony of early travellers, who record that the Hindus were truthful and honest; and the very recent evidence of Colonel Sleeman, who merely says generally that the people of India tell as few lies as other folk—wherein he is not very far wrong. But, "according to our reporters, truthfulness and honesty are just those virtues which are chiefly lacking in modern Hindus"; ergo [as we understand the argument], their morals must have become worse during the Mahommedan period. This seems a very fallacious mode of proof; the truth being that we know next to nothing about the morals of the ancient Hindu, and a good deal about the defects of contemporary Hindu society; so that we credit the earlier ages by benevolent conjecture with virtue, and debit the
later generations with the vices that are too certainly perceptible. That a rapid rise of morality has been taking place in this century is, nevertheless, quite beyond reasonable doubt.

On the whole the book is as well done as could be expected, and is a work of promise; for the author has handled a most complicated theme, very difficult to bring within manageable limits, with much intelligence and industry, and in a philosophical temper. Whenever he is free to choose his own subjects, he will no doubt take narrower ground, will clip the wings of his theorizing spirit, and will give himself over to enjoyment of the luxury of accurate investigation.

A. C. Lyall.
REVIEWS.


It is fitting that Sir A. Cunningham, after so long and so earnestly labouring in the elucidation of Indian archaeological problems, should crown his useful career by an exposition of the most important and most antique of all the Buddhist monuments of India. Nothing that has been, or ever can be, discovered in the field of Buddhist art can vie in interest with the venerable ruin which he has now described and illustrated. The Buddhist temple, subjected to examination in the handsome volume just published, was raised over the spot where the living Buddha sat, and thought out the great secrets of life and death, which made his name famous through, probably, endless ages, and which gave to mankind a religion sufficiently attractive to seduce the major part of them from former systems of belief, and to still hold in, apparently, indissoluble bonds from a-half to three-quarters of the human race. The spot where so far-reaching a conception had its birth may well claim the undying interest of the world's inhabitants; for all other thinkers and reformers sink into insignificance when compared with the extraordinary man who could evolve so seductive a philosophy from his brain, and win the adhesion of so many millions of his fellow men. All ages of Buddhists have ever regarded the spot where Buddha sat under the Pipal Tree, and thought out his great secret, as the sacred centre of their religion, and the centre of enlightenment to the entire universe. Every inch of the ground was esteemed sacred, as the scene of some incident in the grand drama; for all the little details leading up to, and succeeding the great central fact were carefully recorded, and commemorated by buildings of much architectural and archaeological interest.

There are four places held peculiarly sacred by Buddhists; the first is where Buddha was born; the second, where he obtained enlightenment under the Pipal
Tree; the third, where he began to preach; and the fourth, where he died. At all these places stūpas or temples of special magnificence were raised; but the spot where the great Teacher conceived the fundamental principles of his creed was justly considered the most important and sacred of all. This spot is in Bihār, near the town of Gayā, close to a village now called Urel, which, as Sir A. Cunningham points out, is beyond doubt the modern form of the ancient name Uruvilva, where all ancient authorities place the Temple. The building was so famous that there is no lack of evidence as to its position, age, general character, and repairs. What invests Sir A. Cunningham’s researches with peculiar interest is the fact that they tally with all written records, and enable no small part of the alterations and additions to be distinctly shown. More than this; Sir A. Cunningham has unearthed several inscriptions placed by those who effected the repairs, and thereby has corroborated the historical notices of the spot, besides identifying the structures themselves. One of these inscriptions is that of the Burmese Mission, of the eleventh century A.D., which gives the whole history of the structure from its foundation by the great King Asoka, B.C. 250.

A temple on which the devotion of a thousand and more years, and the wealth of many nations, had been continuously lavished, could not be expected to preserve intact much of the original structure of the founder. The thoughtfulness of Sir A. Cunningham has, however, enabled him to discover some undoubted portions of Asoka’s building, and these relics are therefore the oldest monuments of Indian architecture and sculpture which exist anywhere. The identification was due to the fact that the structure known as Buddha’s Walk (and which was seen and described by Chinese pilgrims in the fifth and sixth centuries of our era, and thus known to be Asoka’s work) is not parallel with the existing great temple. The bases of the pillars which flanked this Walk pass, on one side, in a slanting direction under the walls of the present structure. When Sir A. Cunningham was examining the sacred seat in the centre of the Temple, he carefully removed the outer basalt facing preparatory to re-levelling the floor, which had been forced up. He then found an older plaster Seat hidden behind this outer one; and, as the plaster was much broken, it revealed a third sandstone Seat, which was, of course, still older. On removing the whole of the plaster the startling fact was revealed, that
this most ancient seat was smaller than the outer two, and that it was not in the centre of the present building. This prompted further research, and to the east, west, and south, portions of an original basement of an outer Railing were laid bare for distances of 9 or 10 feet each. In addition to this, the entrance step to the Temple was discovered about 20 feet in front of the seat. By drawing lines parallel to these portions of old walling, the exact dimensions of the original temple were ascertained, and the correctness of this discovery was proved by the fact that the walls of the old Temple were exactly parallel to the old Buddha's Walk, still existing; and the ancient Seat now discovered was found to be exactly in the centre of this former building, just as the ancient Chinese pilgrims had stated it to be. Still more remarkable confirmation of this discovery is found in a bas-relief at Bharahut giving a representation of the Temple of the Holy Tree, and this bas-relief agrees in a remarkable manner with the old remains which Sir A. Cunningham has now unearthed. This bas-relief has the name of the Temple engraved upon it, and, therefore, no guessing is required. It represents four flat pilasters in front of the seat, just like those of the most ancient Seat recently uncovered, and as the bas-relief was executed about 100 years before Christ, or only about 150 years after Asoka had built this structure, there is the most convincing evidence that Sir A. Cunningham's researches have revealed this portion of the work of Asoka's period. If additional corroboration were needed it is found in the fact, that the bases of the pillars along Buddha's Walk are marked with letters of the alphabet of the time of Asoka; the eleven on one side being marked with the vowels, and the eleven on the other side with the first eleven consonants of the alphabet. This of itself is a discovery of no small interest, for it tells us that the order of the letters was the same then as now, a point of much palaeographic importance. The very order of the letters of the Nagari alphabet is now incontestably carried back to B.C. 250.

There is a long series of alterations, which can be clearly traced, in these buildings, and these repairs took place in A.D. 140, 450, 600, 620, 1035, and 1079,—actual dates being given in some cases,—which makes the Temple almost an encyclopædia of Indian art. There are female figures and medallions on parts of the undoubted work of Asoka's time, and these give us the earliest specimens of Indian sculpture; and the stone railing, Buddha's Walk,
and other fragments and foundations present the oldest relics of Indian architecture. It is also to be remarked that the well-known Buddhist emblems were in established use in Asoka's time. I am of opinion that probably the whole of Asoka's temple survives, scattered about, were it possible to identify the fragments. The Bharahut bas-relief represents the Temple as an open space, surrounded by a three-bar stone railing, having the sacred seat in the middle, behind which the holy tree stands. In addition to this, there are two or three detached columns and open-work gateways, through which the tree, &c., is seen. Now it is not improbable that all that Asoka did was to mark the spot on which Buddha sat, by placing there the ornamental seat which Sir A. Cunningham has discovered; then surrounding this with an open pavilion, through and above which the tree towered. Outside this was the low rectangular railing, about 250 feet in circumference; and on the north side of that, Buddha's Walk was marked by a brick terrace and pillared cloister. The Walk remains in great part; the seat has happily been found, the base of it inside, and the top of it outside, the present Temple; and the old railing we know was used in the construction of the present ruin, as far as the rails would go round the extended area. Beyond this, there seems little else to discover, except the interior pavilion, which seems to have been a light, open structure. The outer railing was 10 feet high, and the inner open-work pavilion was about 20 feet high, so that there could not have been much material to dispose of; and the care which was taken to preserve the Walk, to use up the old rails in the new enclosure, and to cover up the ancient seat, leads to the supposition that the old material remains on the spot, so far as time and the Mahommedan invaders have allowed.

The volume which Sir A. Cunningham has now published describes this antique Temple, and gives translations of the various inscriptions. He has enriched the work with a set of plates, chiefly reproduced from photographs, which will be of great value to archaeologists and the student of Indian history. Most interesting among these is the photograph of the seat marking the spot where Buddha found enlightenment. All the sacredness of the spot is due to the incident commemorated by this stone, and, therefore, everything connected with it is of the deepest interest. Sir A. Cunningham has discovered beyond cavil the original base of this old stone in the centre of the now buried Temple. This stone, as photographed,
is against the outer wall of the present structure, where it must have been placed during the Gupta period, about A.D. 200; but as it is carved all round it is evident that it was intended to stand where all sides could be seen. This stone ought to be carefully removed, and photographed from every point of view, as there can be no doubt that the curious markings on that slab, when minutely studied, would tell an unexpected tale. This can be safely asserted from the known predilection for symbolism displayed by early Buddhists.

Sir A. Cunningham considers that the octagonal columns resting in a kind of vase, and crowned by a reversed capital, "show unmistakably their Persepolitan origin;" but he does not seem to have reflected on the favour shown to the figure eight by the early Buddhists, as is seen in the eight-leaved lotus, &c. There is a peculiarity connected with these columns which deserves notice, and that is, that an octagonal column always presents three faces to the eye from every point of view. The Tri-ratna, the famous triad of Buddhism—Buddha, Dharma, and Sangha—will suggest why a figure presenting three facets on all sides should find favour. The vase at the bottom is a globular mass, which, of course, presents a rounded figure from every point of view. Now the famous "Wheel of the Law" was depicted by a circular body; and the globular vase might have been intended to present a circular appearance from every side. The "Wheel of the Law" generally rests on four steps, similar to those at the bottom of the pillars. Thus, when looked at from every side, these pillars present the appearance of four steps, surmounted by a circular object, above which rises the three faces of the shaft of the column, just as an ingenious Buddhist might design the thing for esoteric reasons, without any reference to Persepolis. The reversed bowl at the top of these columns would represent the top of a Stupa, above which come three or four projecting plates, intended for umbrellas of honour; on the top of all coming the lion, the emblem of Sakya-Sinha, or the elephant emblematic of the wisdom he attained. This suggestion is made in order to show that the peculiar shape of these pillars may be quite original; for, indeed, no shape could more fitly portray the ideas most constantly in the mind of a Buddhist.

Sir A. Cunningham's work is one of great value, and abounds with matter of a highly suggestive character. He has done wisely to give the building its old name, which is...
really the name by which the surrounding inhabitants still know the place. It has been customary to speak of the place as the remains at Buddha-Gayâ; but, as Sir A. Cunningham points out, it has no connexion with Gayâ, and has always been called Bodhi or Mahâbodhi, and that is the name still in use among the villagers around. There can be no doubt that this handsome volume will add to the fame which Sir A. Cunningham has already gained. It is a book of great interest and value, and seems to carry Indian architecture back to its earliest existing representative. The conclusions which the author has based upon his discoveries are moderate, and certainly appear to be unassailable. It is to be hoped that yet further researches may be made in this interesting spot, until it has been made to yield up all the facts which its abundant remains can be made to tell.

Frederic Pincott.


The writer of this useful pamphlet, who belongs to Ceylon but is a graduate of Aberdeen, has been much impressed by the ignorance prevalent among teachers with regard to the defects of eye-sight in school children, and their consequent carelessness as to preventing the increase of the evil. He begins his remarks by a short explanation, illustrated by diagrams, of the nature of the eye. He shows how it is that, by the refraction of the rays of light, a visual image is formed upon the retina. Then he proceeds to indicate what is meant by short-sight. A blurred confused image is produced, because the rays come to a focus in front of the retina, instead of accurately upon it. In the case of long-sight, the eye is too small, and so the light is focussed behind the retina, which causes much straining. The long-sighted eye results, the writer says, from an arrest in the development of the eye in early years.

Practical advice follows this introduction. The teacher ought to test the sight of school children by means of various types, such as are printed on a paper appended to the pamphlet. The observations should be recorded in a formal schedule, and the teacher should mark whether the sight of a child becomes worse. If so, the parents should be communicated with. Short sight is more easy
to detect than long sight; but by experience the latter, which is often accompanied with a slight squint, will not escape notice.

Dr. Ferdinands then comes to the preventive methods which should be attended to by all connected with education.

In building schools, care should be taken that the light does not fall on the faces of the scholars, but from above, or from the sides—preferably the left. The flickering of gas-lights is objectionable, and it can be lessened by the use of glass globes. School-rooms should be lofty and well ventilated. The scholars should have separate desks of an adjustable kind, so as to hinder their falling into cramped attitudes, which can hardly be prevented if those of different sizes have to sit at the same long desk. Books should be printed in a clear, bold type; a blackboard ought not to have a glossy surface. Again, the teacher should take pains and discourage stooping, and should require a round upright kind of handwriting. But young children ought in no case read and write much. They should have plenty of games and other healthy exercises, for thus their bodily organs will be rightly developed.

It is a well-known fact that short sight has latterly become more general, owing, it is supposed, in great measure to the non-hygienic conditions under which education is carried on. Now that oculists have called attention to the matter, such suggestions as are given by Dr. Ferdinands ought to be taken into serious consideration. His pamphlet may prove of great value if circulated among teachers here, and also in India, where affections of the eye are not infrequent. Everyone should be instructed in the ordinary rules by which sight may be preserved and prolonged. We are ignorant on these matters, and we are careless. Students often use their eyes for a long time, without any intervals for rest; and some persons encounter the risk attending reading by fire-light, or when darkness is coming on. Eyesight is one of our most precious possessions. We should try to understand its requirements, and its limits of activity, both in regard to our own sight and that of children under our care and management.

We acknowledge with pleasure receipt of No. 1 of the *Industrial Quarterly Review of Western India* from Poona, edited by Mr. Mahadev Ballal Namjoshi, who is the Honorary Secretary of the Industrial Association which
was definitively organised at the Conference held during four days in August last. The Review fitly starts with record of correspondence with the Bombay Government, opened by Captain Beauclerk, who was President of that Conference. This letter states, in concise form, the objects of the Association, and is directed towards urging the authorities in institute an Industrial Survey of material resources and special needs of Western India: but we miss any reply from the Government, which, no doubt, would refer to the difficulties to be overcome, and to the limitations that inexorable circumstances prescribe to the objects of the Association. On the other hand, the Review contains communications from persons well adapted to advise the members, amongst these are Colonel H. L. Nutt, of Kattiawar, Mr. R. B. Havell, of the Madras School of Art, and other well informed writers. But all this, while showing what a wide field there is for operations, also indicates the obstacles in the way of increasing the industrial efficiency of India—the most serious being the lack of capital, which checks effort on every side. Nevertheless, this publication affords evidence of the courage and energy with which the Association is approaching its great task, and ought to elicit counsel and support from those on this side, whose Indian experience enables them to give practical advice. One item in this would be, we presume, to warn the Association not to attempt too much at once, and to make the most of any sound self-supporting enterprises, however small. In the next Quarterly we hope to see some definite record of these modest practical efforts. Certainly we must welcome the hopefulness of this attempt to render fruitful "the future of the whole industrial movement commenced in 1888 under the fostering support of the Governments of Lords Dufferin and Reay, and since carried on with the help of the public and the sympathy of the provincial Government." The Review is embellished with a good portrait of H. E. Lord Reay.
NEW BOOKS RELATING TO INDIA.

THE ADMINISTRATION OF WARREN HASTINGS, 1772—1785. From Original Documents. By G. W. Forrest, B.A. 7s. (Calcutta.)

SOME RECORDS OF CRIME. Being the Diary of a Year of an Officer of the Thuggee and Dacoite Police. By General Charles Hervey, C.B. 2 vols. 30s. (S. Low & Co.)

ARAKAN—PAST, PRESENT, AND FUTURE: A Resumé of Two Campaigns for its Development. By John Ogilvy Hay. 4s. 6d. (W. Blackwood & Son.)

SERAMPORE LETTERS: Being the Unpublished Correspondence of William Carey, and others, with John Williams, 1800—1816. Edited by L. and M. Williams. 7s. 6d. (New York.)

THE NAULAHKA: A Story of West and East. By Rudyard Kipling and Wolcott Balestier. 6s. (W. Heinemann.)


LETTERS FROM MANDALAY. By the late J. A. Colbeck. Edited by G. H. Colbeck. 2s. 9d. (W. Lowe, Knaresborough.)

A short notice of the Hon. Mrs. Lyttelton’s “English­women in India” (the New Review, June 1892) appeared in last month’s issue of this Magazine, but a paper so altogether exceptional deserves fuller recognition.

Mrs. Lyttelton is happily not the only student of life in India who takes a kindly view of Anglo-Indian women. It may be said that all the more thoughtful writers do so. Women have no cause to blush for themselves as they appear in the all too few works of high class fiction which have been given to us. The readers of these works, which bear on their face the stamp of truth, will, as they recall the women that figure on the fictitious but life-like stage, heartily endorse Mrs. Lyttelton’s dictum that “An Anglo-Indian woman is only a temporarily transplanted English­woman; and only in so far as she is subject to special conditions does she differ from the women of her own race and class anywhere else.”

But the influence of fiction, though only second in power to that of fact, is, at best, ephemeral. These are not the days of home libraries, in which the novels, few in number, are read and re-read. One work succeeds another so rapidly that it is only in the event of the same tale being told by all that the due impression is made on the public mind. In this case the evidence is cumulative. The English­women in “A Noble Queen,” in “Seeta,” in “The Dilemma,” in “The Touch-stone of Peril,” in “The Ceruleans,” in “More than he bargained for,” in “The Dead Man’s Gift,” are as worthy members of their race as though they had never quitted English soil; while, in some of his sketches, Mr. Rudyard Kipling shows an insight and appreciation which partially redeems the tendency of his writing to make disproportionately prominent the flirting element. Still, thanks to sketchy literature, which necessarily deals with the surface of things, and aims chiefly at sensation, and to the fact that Anglo-India is one widely extended, but thinly-populated parish, in which every incident becomes common property, a very unfavourable impression is abroad as to the solidity of Anglo-
feminine character; and it is the truthfulness of this impression that Mrs. Lyttelton has set herself to estimate.

"The special conditions (she proceeds to state) are exile, enervating and often deadly climate; a society which is in most places very small, never very large, and which is three-fourths military and one-fourth official; which contains a large preponderance of men over women, no old people, and no young ones between the ages of six and sixteen; which is recruited from the upper of our upper middle classes at home, in which almost all enjoy a competence sufficient to meet the expenses of their position, but affording no margin for freedom of action or the pursuit of a wide choice of interests; a life of interruptions and publicity, of few domestic responsibilities, much solitude for the women, and peculiarly heavy responsibilities for the men. . . . .

It is my object to show that some of the less attractive peculiarities of the Englishwoman in India have nothing peculiarly Indian about them. And whilst I must own that in India a woman is more tempted to drift into idleness, inertia, local-mindedness, uncultured, gossipy lines of thought and speech, into pleasure-seeking and flirtation (I use the word advisedly as distinct from serious love-making), than she ever need be at home, yet the life has produced, and is producing, women of whom we have every reason to be proud, and whose qualities many women in England may do well to imitate."

For the bright and sympathetic sketches by which Mrs. Lyttelton effects her object we must refer the reader to the original article; they make very clear the trials of Indian life, and the brave spirit in which these trials are for the most part met.

Mrs. Lyttelton apologises for dwelling at greater length upon the flirt than upon other types; but as the tendency to flirtation constitutes the chief accusation against Anglo-Indian women, we are glad to have the truth told us by so kindly an observer. The question is not shirked:

"Flirts exist in India in a larger proportion than in England. . . . In India women are in a minority, and therefore at a premium socially. It is a law of nature that whichever sex is in a minority in any society obtains an amount of attention, flattery and homage from the other sex, which results, among the lighter-headed, in a condition of things commonly known as being 'spoilt.' As an exemplification of this we have only to look at London society, where the men are in a minority. Who that has travelled about the world and seen men under the opposite condition, but will agree with me that the average English gentleman of no special moral or intellectual power to lift him above the crowd is a more chivalrous-minded man after ten years of India than if he had remained in London at a false social premium. As London
society is an abnormal test of a man's vanity, so is Anglo-Indian society of a woman's. At least, in India things are balanced, so that it is rare to see women 'running after' men; the race is all the other way."

Having thus gone to the root of the matter, Mrs. Lyttelton further accounts for the flirt by the want of adequate interests in ordinary station life. For the detail of this sketch, as well as of the others, we refer the reader to Mrs. Lyttelton's own pages.

We would dwell a little upon the causes which make Indian life one long trial to Anglo-Indian women, resulting in the pursuit of excitement by the lighter-headed, and in the majority "an array of white faces on which endurance is plainly written."

Giving full force to the conditions enumerated by Mrs. Lyttelton, we must add to these, as a very powerful agent in the same direction, the fact that, with few exceptions, Anglo-Indians of both sexes regard their life in India as transitory,—a temporary condition, more or less unpleasant, to be borne with what philosophy can be mustered. It occurs to hardly any to regard the country as a home. They know, indeed, that the best part of their lives will be spent in it;—that ere they can leave it to settle in the land towards which their thoughts so fondly turn, the spring of youth, the strength of their prime will be gone; the time will have come when half the remaining pleasures of life are those of memory. They know, but they do not realise it,—do not perceive how completely they are spoiling their lives in the present, and in the retrospect, by the constant fret against existing conditions, and perpetual glance towards "home" as the only spot where life is tolerable. In this respect the Anglo-Indian was happier in an older time, when difficult and infrequent travel and correspondence made him accept his life as he found it.

With women, one principal cause of inadaptability to the life of the country in which they are called upon to dwell is to be found in the extreme youthfulness of Anglo-Indian brides. In England, few girls marry under eighteen, and more often four-and-twenty finds the young woman still single. In those years she has come to a knowledge of herself, has found the insufficiency of mere amusement to occupy her life, and has taken up one of the more earnest pursuits, with which—should she remain single—she will more and more fill her hours. But with the Anglo-Indian girl it is otherwise. She goes out at sixteen, and after a season or two of the "petted courted
life” Mrs. Lyttelton so graphically describes, she marries, and at once loses all her youth, and falls into a groove of routine. While still in her early teens, she has taken upon her shoulders the cares and responsibilities of life, and can never again know the careless heart of girlhood. Mrs. Lyttelton was struck by an “impression of faded, old-fashioned refinement about” Anglo-Indian women. They have left England too early to have assimilated the modern tone. We were always painfully impressed by the look of precocious maturity the young faces so rapidly assume. In the space of a few short months the girl-matron takes on a look her English sister’s face does not assume for another ten years. If she has contemporaries, they are married like herself. She has no outlook; her career is settled for good and ill before it should even have occurred to her to speculate on the future. It is that rather than the climate that gives the look of “endurance” Mrs. Lyttelton speaks of as characteristic of Anglo-Indian women; they are tired by the long strain of cares too early assumed.

It were greatly to be wished that a longer period of untrammelled girlhood could be secured to those destined to an Indian career; but those added years should be spent in quiet country life in England, not in the excitements and contentions of society. This is hardly to be hoped for while Anglo-Indian gentlemen continue their strange preference—especially in second marriage—for girl wives, but the “fresh look” they so much desire would last longer were it less early tried.

We shall be asked what resources lie open to women in India if they had the mental vigour to cultivate them. One resource is open to all, and all would find profit in it—the acquisition of the local vernacular. All are not fitted by taste or ability for the perfect acquirement of language other than that unconsciously imbibed in infancy, but most do attain to sufficient colloquial knowledge for domestic use, and some arrive at great ease in expressing themselves on subjects outside the domestic sphere. To many it is particularly distasteful to learn from books, and yet more so from a Pundit or a Munshi. These might seek the aid of Eurasian ladies. Every mother is sensible how desirable it is for her to understand the tongue spoken by Ayahs, and Bearers to her children. How many parents have been shamed by the utterances of their little ones explained to them by the better-informed visitor!

A lady, speaking recently in India, said: “It is almost impossible and useless for us English ladies to learn any
vernacular language, for we are such birds of passage."
This may apply in parts of India where there is no lingua franca, and where English is therefore the speech used by servants to their employers; but over a large extent of India, Hindustani is the common medium of communication; and it is certain that if the young children have time to learn it so efficiently as they do, so also have their mothers. Surely it is of paramount interest to the mother to do more than guess at what the nurses are saying to her children. She would be rewarded for her labour by an intimate knowledge of the ideas instilled into her children's minds, and by a clearer insight into the customs, creeds, and modes of thought of the races of which her domestics form a part. Contrast life in the household of the parents of "Puck and Pearl"* with that of those ignorant of the furniture of their children's minds, and uninterested in the Hindu and Mahommedan life amid which they dwell. It may be said that the life of Puck and Pearl and of their parents is fictitious, but it is a fiction that it rests with Indian mothers to realise.

Knowledge of the vernacular opens the door to intercourse between Englishwomen and those of Hindustan. This in the past has not been easy, scarcely possible, but now, to a limited extent it is possible. There are many Hindu houses where an Englishwoman would be welcomed as a friend. The elder generation might not do more than tolerate her presence, but the younger ladies would hail her visits when once assured that they were paid in a purely friendly spirit. And what a world of new interests would thus be opened! We do not speak of the formal visit of the English lady to the Hindu ladies, got up for the occasion in all their jewellery, when little but stiff formalities are exchanged, and no friendship results; but of the informal visit in the company of the lady doctor or of a member of one of the committees of ladies formed in different parts of India to promote social intercourse between the races. In these visits knowledge of the language would steadily progress, intercourse becomes easy, friendships would be formed, and in a quiet private way the visits would be returned.

One of the most painful conditions of Indian life is its constant change of personnel, the sweetest ties are broken up by dispersion, but in friendliness with the ladies of the

---

* Puck and Pearl: The Wanderings and Wonderings of Two English Children in India. By Frederika Macdonald.
soil there is an element of duration which adds to its charm. Much tact is needed in forming and maintaining these friendships. Ignorance of customs and of etiquette has hitherto proved a formidable barrier, but this barrier need no longer exist. Under the guidance of the lady doctor or of the member of the Friendly Intercourse Association, initial mistakes are avoided, and every day’s intercourse renders the relation more easy. A genuine interest and affection would grow up, and when at length the hour for parting came, many an Englishwoman would find herself bidding farewell with keen regret to the home and the friends of thirty years.

M. S. Knight.
SOCIAL LIFE AT CAMBRIDGE.

It has often been asked, but very seldom explained, why Cambridge enjoys so great a reputation before the eyes of the civilised world. To me the question asked seems easy enough for solution. Cambridge no doubt enjoys a high reputation owing to its learning. But its reputation would never have been so great were it not for its society. Of over three thousand undergraduates who usually reside in the University not less than ninety-nine per cent, are extracted from the higher middle-class families of the country. Those that travel over from America or Australia, Africa, or any of the other numerous colonies of England, or those who come here on a pilgrimage from India, are mostly men who have received already a liberal education at home, which they desire only to "finish up" by travel and residence at an old English University. Of the English students themselves, many have already taken their degrees at some University or other.

Their visit to Cambridge is chiefly then with a view to obtain either a fellowship at some college—which brings money—or to derive benefit from a higher social environment, which gives them higher, richer, and nobler ideas, and brings in suit self-reliance and self-confidence, two things as essential to a politician as to a schoolmaster or a country curate.

Within the limits of a readably short article it is impossible for me to give in detail the various means by which Cambridge society edifies its members; but were an enumeration attempted, perhaps the first place would certainly be given to the annual festivities which take place at Cambridge under the name of "May week." This May-week is usually celebrated in about the second week of June. By this time all the Tripos or Honours degree examinations have taken place; the "Little-go," or the Previous Examination, has also finished tormenting its victims by its petty paltry pranks. In many cases the Honours result—which, by the way, takes only about a week or ten days to come out—has also finished its ingenious lottery. The Cambridge undergraduate, in short, need not visit his lodgings or his college except for sleep—
a feat not easily accomplished, as every undergraduate who has slept in residence will readily admit. He therefore sends for his "people" to come over and see him in his academic glory. By "people" at Cambridge is invariably meant a young sister or two, and sometimes also the mother. Of course often the undergraduate's people also include his lady friends, who come over to enjoy the week with him, and partake of his hospitalities.

Thus, annually, about two to three thousand people come to Cambridge to pass a week there, and make a personal acquaintance with the old Institution. The amusements provided for these visitors are highly varied, and many of them only characteristic of an University town. Boat-races between several colleges, however, draw most visitors to the riverside. These races always take place late in the afternoons, and continue for four days in succession. If the day be fine, there is nowhere so fine a gathering of ladies exquisitely dressed, and young men robed in their several College costumes, shouting, rushing, running, and tripping over in a frantic frenzy after their college boat, as on the Ditton corner of the Cam. Through the young water-willows planted on each flank of the river, or the fierce light of the summer sun mellowed by the shade of the lofty lime-grove which studs the Ditton meadow, one watches the tiny Canadian canoes gliding on the smooth un-rippling surface of the water, and long-beaked boats, holding the promising members of many a family, small steam-barges quietly lording it over the whole landscape, pedestrians flitting past in their fairy-like costumes—the sight, if not vividly recalled, looks like the dream of imagination—

A sight that never is on sea or land,
The consecration and the poet's dream.

These boat-races establish a friendly relation between the undergraduates of different colleges. To prepare for this annual contest, all undergraduates taking pleasure in aquatic sports have daily to be on the river, practising rowing, sculling, or tubbing, as it is called. Those who do not actually row often take their daily constitutional on the river bank, when the adjacent gas works are not too active, and thus pick up acquaintances with men of several colleges. Athletes, cricketers, lawn-tennis men, all have their common meeting ground, and thus chances of making congenial acquaintances.

Moreover those who are not of a sporting turn, will in-
variably join the Union Society. This is a large club, liberally fitted with reading, writing, and drawing-rooms, and a large debating hall, where the young undergraduates settle their controversies and differences of opinion by peaceful means every Tuesday during the term time.

In this and many other ways all undergraduates of the University have a chance of meeting each other. During the May week these acquaintances ripen into family friendships. Then every large college gives a ball and a concert, to which members of the University and their friends alone are invited. Open-air plays, flower shows, and a gala further distinguish the May week from the prosaic routine of an academic life. Thus the young undergraduate comes in contact with other young men of his age, and thus in this social school he learns that reliance and dependence upon self, which no examination, however cunningly devised, can teach him. He discovers, too, the latent aptitudes which mark out his future career.

But while in these moulds a Cambridge undergraduate is cast, his life is not inconsiderably shaped by moulds of a lesser sort. In the University there exists several clubs, chiefly consecrated to different muses. Men of a literary turn have hired a room in the Trinity Street; Australians have their own club, where the colonists come and are welcome; Liberals have the "Pitt" club; Conservatives the "Carlton;" while the Indians have an itinerary society called the "Majlis," which holds its session every Sunday in the rooms of one of its members. The Majlis is a social non-political body, and by bringing together Indians from different colleges, it fairly subserves the purpose of a club.

This slight sketch may give some idea of the social life led at Cambridge, which is almost the only form of useful instruction that the older Universities impart to their students. If the student expects to get anything more solid and sterling he can get it from books, and he had better have gone for it elsewhere than to Oxford and Cambridge.

A CAMBRIDGE GRADUATE.
Josiah Marshall Heath, whose researches and discoveries mark an epoch in the history of steel, and whose introduction of manganese in improving the quality of iron and steel resulted in an aggregate saving, up to 1855, of not less than £2,000,000 sterling, while it also rendered England comparatively independent of the Swedish and Russian iron ore, was a civilian on the Madras Establishment, and he joined the Service as a writer in 1806. In 1808 he became Assistant-Secretary to the Board of Revenue; in 1809, Examiner under the Secretary to the Board of Trade; in 1812, Deputy Commercial President at Salem. In 1820, he is marked as out of employ, having engaged himself in the development of the trade in Iron and Steel at Porto Novo in the South Arcot district. In 1825 he returned to England, and was retired as an Annuitant on the Civil Service Fund from 1st January 1829. After this, he went back to India, which he appears finally to have left in 1837. He died circa 1854. The works were then transferred from Porto Novo to Beypore near Calicut, but want of success in the management and difficulties about a supply of fuel led, before long, to their being closed.

The immediate causes which led to Heath's discoveries were his endeavours to use in the manufacture of steel the low grade Wootz iron ore of Madras. He not only succeeded in this, but, as mentioned above, he completely revolutionised the steel industry of England. He improved malleable iron by mixing with the cast or plate iron, while fusing in the puddling furnace, from 1 to 5 per cent. of pure oxide of manganese, the sesquioxide being preferred. He improved cast steel. He mixed in the crucible with the materials to be converted into steel from 1 to 3 per cent. of what he called carburet of manganese. He took out patents for the above processes, which involved himself and his widow in protracted and ruinous litigation.

H. G. T.
A BRILLIANT entertainment was given on April 30th by the members of the Cosmopolitan Club, Madras, to their Secretary, Rai Bahadur P. Ranganada Mudeliar, M.A., in honour of his appointment as Sheriff. The Madras Mail says: “At both the entrances of the building triumphal arches were erected, with the inscription ‘Welcome’ in blue and red, and the ground and approaches were illuminated with hundreds of kerosine lamps. The frontage of the building was picked out with coloured lanterns. In the compound, the band of the Somersetshire Light Infantry was present, and played at intervals throughout the proceedings. The attendance was large, and testified to the esteem in which the guest of the evening is held in this city as an educationist, as a citizen, and as Secretary of the Cosmopolitan Club.”

On the arrival of Rai Bahadur Ranganada Mudeliar at 6.15 p.m., he was received by Raja Sir Savalay Ramasawmy Mudeliar, Chairman of the Entertainment Committee, and a deputation of members of the Club. Some musical performances were given by Mr. Devadu Aiyar and Mr. N. K. Sastry. Refreshments were served at separate tables, to Europeans, Hindus, and Mahommedans, after which the company assembled on the terrace. A handsome garland was then placed round the neck of the chief guest by Sir Savalay Ramasawmy, and the President of the Club, the Hon. Mir Humayun Jah Bahadur, expressed to him the congratulation of the members. The Hon. Mr. Justice Muthusawmy Iyer also spoke, stating that his acquaintance with Mr. Ranganada Mudeliar dated from nearly thirty years past. He had had many opportunities of forming an opinion regarding his aims as an educationist, his attainments as a graduate, and his many estimable qualities, which were admired not only in Madras, but also at Kumbakonum. His career as a student at Pachaiyappa’s High School and also at the Presidency College was remarkably brilliant, and after he left the Presidency College his merits as an educationist were conspicuous.
"He was regarded," continued the Judge, "by all of us as a brilliant mathematician, and we thought at one time that mathematics was his *forte*; but as our acquaintance with him improved, we found out that he was excellent in almost every subject taught in the Presidency College. Very early in his career he was Professor of Moral Philosophy and Logic; then he was a successful Professor of Mathematics and History, and he has also been a very successful teacher of English to the B.A. classes. His capacity to teach four of the many subjects that are taught in the Presidency College with such efficiency was recognised by all his colleagues and by the native public, with feelings of appreciation, and I may also add, by many parents with with gratitude. In conclusion, I may say that the mark of distinction recently conferred upon him by the Government was richly merited, and merited better by none of his predecessors in the Shrievalty, and I only echo the wish of all present here when I say that we should all give three hearty cheers as a token of our wish for his long life, for his continued prosperity, and for a career of progressive usefulness and distinction throughout his life."

Dr. Duncan (Principal of the Presidency College) followed with a short speech, which called forth loud applause. He said: Gentlemen,—I would ask your indulgence for a few minutes. I had no intention of speaking this evening, as I am not on the Committee of the Club or on the Committee which organised this excellent entertainment. You probably know that I have been more closely connected with Mr. Ranganada Mudeliar than any other European in Madras for the last twenty-two years, and I can only say that during the whole of that period, my relations with Mr. Ranganada Mudeliar have been of the most agreeable description. I remember very well twenty-two years ago, coming up in a P. & O. steamer from Galle, there was a military gentleman on board who said to me: "The best thing for you is to take the next P. & O. boat and go back to England, as you educational people are spoiling India." When I arrived here I went first to our revered friend Mr. Thompson, and he at once took me to Mr. Ranganada Mudeliar, who was acting in the Chair of Logic, to talk over matters with him. I did talk over matters with him, and began to think that my military friend was right after all in the advice, but wrong in the reason he assigned; for I then came to the conclusion that the best thing I could do was to go home in the next P. & O. boat,
because if India could produce gentlemen of the learning and ability of Mr. Ranganada Mudeliar I did not see why the Secretary of State should send gentlemen out here all the way from England. However, I stayed here, and the result has been that my high estimate of Mr. Ranganada Mudeliar has grown day by day, and I am sure none of his many European friends in Madras are more pleased than I am at the distinguished honour that has been bestowed upon him and at the high position he now occupies, not only amongst his own community, but amongst many Europeans in the Presidency. I am very glad to have this opportunity of meeting my old friend here, and of joining with you in your congratulations upon the great honour recently bestowed upon him,—an honour which is by no means too great for his distinguished ability and which the great good he has bestowed upon the community rightly entitles him to.

Rai Bahadur Ranganada Mudeliar, who was much moved by the kind reception accorded to him, briefly, and with feeling, acknowledged the friendly congratulations of those present, and the company dispersed after a very successful gathering.
ON a specially fine morning, a party of the National Indian Association was formed to make a visit to the Royal Mint. A journey of about a few minutes brought us to Aldgate Station, and on our way from the station to the Mint we tried to pick up as much information as we could concerning that famous part of London. The Tower, a place fraught with interesting traditions, formed the chief feature of our view during the rest of our walk.

As every one knows, the Mint is a place where the money of a country is coined and issued by the Government. There is very little difference between the gold and silver processes, except as to the mixing of copper, &c., so I shall confine myself to the coining of gold pieces. I may here state that the circulation of gold has been greatly increased during the last few years, and that about 10,000,000 gold coins were in circulation in the year 1883.

Having signed our names in a book kept for the purpose in the hall, and having formed ourselves into groups of six, we were led into the Mint by a guide. We first came to the melting room. Here the metal is placed in crucibles of plumbago and melted, the contents of each pot being constantly stirred to render the mass homogenous. When the pots have become red hot in the furnaces, copper is added to bring the metal up to the standard, which, in England, is eleven parts of pure gold to one of copper.

After the metal has been properly melted it is next cast in iron moulds, and thus formed into bars. A small piece is then cut from each bar for purposes of assay.

The second room into which the guide ushered us was the rolling room. Here the bars (gold or silver) are repeatedly passed between the hardened steel rollers, which are brought closer and closer as the thickness becomes reduced. In order to make the bars exactly of the necessary thickness for the coin intended they are placed between the finishing rollers, and are still further adjusted by another machine, in order to equalise the thickness.
Then trial pieces are cut from each strip, and their weight is tested.

Next we were conducted into a room for the third stage, cutting the metal plates into rounds, or to use the word of the Mint, into blanks. This is done by means of punching machines of simple construction. The blanks after being cut out are carried to another machine where they are thickened at the edges. Then follows the annealing, and next the drying and sifting process begins, which is rapidly and properly effected by a rolling machine.

We walked very cautiously in a single file headed by our friend, till he brought us to where the coins receive the impressions, into the press room. What an interesting sight it was! At a very early stage of civilization, when it was found necessary that a definite medium of exchange should be established to avoid inconvenience through payment of bad coins, hand machines were devised for giving the authorised impression; but the improved machinery that we saw dates only a few scores of years back.

The present gold coin receives on one side the likeness of H.M. the Queen of England and Empress of India, and on the other Britannia. There are about sixteen machines in the Mint at present for this operation. The blanks receive an impression here, on both sides, from engraved dies. They are automatically placed one after the other upon the lower die, and removed one by one, when they have received full impressions from that and the upper die. About 110 coins can be struck in one minute, but a good result is obtained by coining 90 per minute.

Now our destination was a hall, where about thirty automatic balances were at work. These small and exquisitely beautiful instruments are each capable of accurately weighing about 25 coins a minute and distributing them into three separate compartments (light, heavy and required weight).

The coining of money is not the only work done here, but medals for the Army and Navy, as well as those given by the Royal Society, the University of London, &c., are prepared.

Lastly, we saw the library, where ancient coins and stamps are preserved. Students of history amongst us were delighted to notice the coin of the time of the great philosopher, Newton.

I may add that the state of the coins in several of the Native States of India is regrettable. It is true that in
some of these a change for the better is rapidly taking
place, and I hear a proposal is under the consideration
of the Nizam's Government to import machinery from

There is much to be hoped for under the just and
enlightened rule of the present Nizam, who takes practical
interest in modern ideas and often adopts them.

M. Kabiruddin.

INDIAN INTELLIGENCE.

The new High Court at Madras was opened on July 15, with
great ceremony, by H.E. the Governor. The building is a
magnificent one, covering a large area, and with costly ornamen-
tation.

A Durbar was held on June 20 at Junagadh by Sir Charles
Ollivant, K.C.I.E., Political Agent, Kathiawar, to celebrate the
accession of H.H. Nawab Saheb Rassul-Kanji Bahadur to the
Gadi. Sir Charles Ollivant made a speech of congratulation to his
Highness, who, in return, said that he recognised the responsibilities
resting upon him, and that he should endeavour to maintain
justice in his State, and to promote progress in the various
branches of the Administration.

Satisfactory social reforms are being carried out (says the
Indian Daily News) by the Khatri of Rajputana. At an
anniversary of their Sabha, a Society for promoting reforms as to
marriages and other matters, it was agreed to receive back into
the community, without penance, those Khatri who have visited
England or other European countries. It was noteworthy that at
this gathering some purda nashin ladies were, for the first time,
present, although behind screens.

A poor sonar (goldsmith), named Prayag Ram, of Dumraon, in
Behar, has constructed a very remarkable mechanical group,
representing a large number of women engaged in household and
industrial occupations. Each figure is about two inches high,
beautifully modelled, and dressed according to the custom of the
district. Some are spinning cotton, others grinding corn, husking
rice, churning, &c. An elaborate clockwork arrangement sets the figures in motion, and the whole is enclosed in a glass case. Prayag Ram having expressed a desire to present his work to her Majesty the Queen, application was made by the Magistrate of Shahabad through the proper channels. The Queen has been graciously pleased to accept this ingenious production, and it is being forwarded to England.

The Indian Daily News has often called attention to the Widows' School and Home of Mr. and Mrs. Sasipada Banerjee, at Baranagar, near Calcutta, and lately it has again referred to the value of their scheme. There are now twenty-five inmates in the boarding department, and nearly 100 girls in the two girls' schools. Mrs. Colquhoun Grant continues to take a lively interest in the Institution. Babu Chandra Mohun Mozoomdar, Assistant Inspector of Schools, Presidency Division, visited the Institution on June 16th, with the Deputy-Inspector, and examined all the classes. The Inspector made the following remarks in the visitors' book: "There were thirteen widows residing in the Training School, most of whom come from Hindu families. I examined the girls in the Training School in English, Algebra, Arithmetic, and Geography, and was pleased with the progress which they had made. Mr. and Mrs. Banerjee deserve well of the public for the flourishing condition of the School. The arrangements in the boarding establishment can be safely recommended to Hindus generally." The Indian Daily News adds: "This is fair testimony as to the work of the Institution, and as that grows so will its influence extend. The concluding remark of the Inspector should tend to remove suspicion from the minds of those who may entertain doubts as to the nature of the Institution and the work carried on there."

An agency has been started at Triplicane, Madras, called "The Diffusion of Knowledge Agency," its aim being to diffuse useful knowledge on subjects of practical interest among the masses of the people. We have received the first number of the monthly Tamil Magazine and Review (Viveka Chintamani), which the Agency brings out, to which we note that Rao Bahadur R. Raghu Nath Row is a contributor. An Association of Helpers is to be formed to visit the villages, and to make the Magazine widely known among those for whose reading it is intended. Newspapers have not yet become acceptable to the village folk. The new idea has met with considerable sympathy, but it will take some time for the Magazine to succeed. The contents indicate the aims of the editor, which seem to be excellent. We wish success to the undertaking. There cannot be too many workers in the direction of dispelling ignorance and superstition.

Mr. Mir Shujat Ali Khan, a Statutory Civilian, has been appointed Deputy Commissioner of Bangalore by the Government of the Maharaja of Mysore.
A Law Class has been organised at Rangoon, and Mr. Chan Toon, Barrister-at-Law, is to be the first Professor.

We have received from Mr. M. Shama Rao, M.A., the latest report of the Mysore Branch of the National Indian Association. The annual meeting was held on April 30th, the Rev. H. Haigh in the chair. It is satisfactory that the subscriptions showed an increase of Rs. 126 over those of the previous year. Four Technical Scholarships had been awarded for printing and carpentering; grants in aid were made to two girls' schools. A Conversazione was held in November on the departure to England of Dr. and Mrs. Benson, and Mrs. Benson gave a party for ladies just before leaving. The Rev. H. Haigh had kindly given a lecture for the Association on James Russell Lowell. A vote of thanks was passed to Mr. M. Shama Rao for his activity as Secretary. The Dewan Bahadur K. Sheshadri Iyer, Esq., C.S.I., is President of the Branch.
PERSONAL INTELLIGENCE.

H.H. Maharaja Sayaji Rao Gaikwar of Baroda, and H.H. Maharani Chimnabai Sahiba, and their two young sons had the honour of being received on July 5 by her Majesty the Queen at Windsor Castle.

Their Highnesses were attended by Shrimant Sampatrao Gaikwar (brother to his Highness) and Shrimant Sitabai, Mrs. Elliott, and Rajasbri Vasudev Madhav Samarth (Chief Officer of the Gaikwad), all of whom had the honour of being presented to the Queen.

The Maharaja Gaikwar and party have now left England for Switzerland.

The following were called to the Bar on June 29th: Inner Temple.—Abdul Majid Rhan; Philip R. Valladares; Syed Mahdi Hasan, B.A., Cambridge; Manekji Pestonji Modi. Middle Temple.—Muhammad Shafi, Middle Temple International Law Scholar; Mahtabuddin Ahmad, Calcutta University; B. J. Mozmoondar; Mohammad Zahoor, St. Xavier’s College, Calcutta; Syed Hasan Imam; Peary Chand Dutt; Mahomed Ahmed Uddin, B.A., LLB., Cambridge; Ali Hosain Khan; and Abdul Hakim Khan. Gray’s Inn.—Prabh Dial, B.A., Cambridge; W. Burton, University of Madras.

The Benchers of Gray’s Inn have awarded to M. Manmohan Lal Agarvala the Bacon Scholarship of £45 per annum, tenable for two years, and also a second prize of ten guineas.

Miss Cornelia Sorabji, B.A. (Bombay), who has studied at Somerville Hall, Oxford, was allowed by a special decree of Convocation to appear in the B.C.L. Examination, which is the highest Law Examination of the University of Oxford. Miss Sorabji passed in Honours, and the examiners expressed surprise at her having, in two-years, prepared for this very difficult examination.

In the recent Examinations of the University of Edinburgh, his Highness the Thakore Saheb of Gondal, G.C.I.E., D.C.L., LL.D., Ahmed Mirza, and D. A. Turkhud have received the degree of M.B. and C.M.

Mr. S. B. Mitra has passed the M.B. Examination of the University of London.
In the Primary Examination of the Society of Apothecaries Part II., Rukhmabai (Royal Free Hospital) passed in Anatomy and Physiology, and C. Basan (Middlesex Hospital) Part I. in Materia Medica, Botany and Pharmacy, and Part II. in Physiology.

Subhan Ali (Lahore Medical School, Punjab), has passed the Second Examination of the Conjoint Board in Anatomy and Physiology.

Mr. Dadabhai Naoroji has been elected a member of Parliament for Central Finsbury. He has received very many congratulatory letters and telegrams from all parts of India, and his friend, Dr. D. P. Cama, of North Kensington, has presented 100 guineas to the Lord Mayor on the occasion, for the Mansion-House poor-box. Mr. Cama has also written to the electors of Finsbury a letter of thanks in which he says that their new member will certainly justify their choice. Mr. Dadabhai Naoroji has been invited to join the Committee of the Cobden Club. On July 23rd, his Indian friends resident in this country celebrated his return to Parliament by a banquet at the Holborn Restaurant, at which Mr. M. M. Bhownaggree, C.I.E., presided.

Arrivals.—Mr. Harkissen Das Badra from the Punjab.

Departures.—Mr. Syed Mahdi Hasan and Mr. Hari Singh Gour, for the Central Provinces; Mr. M. Shafi and Mr. Prabh Dial, for the Punjab; Mr. Syed Emam Hassan and Mr. M. Zahoor, for Behar; Mr. M. P. Modi, for Bombay.

We acknowledge with thanks: Select Papers, Speeches, Poems, connected with Pachaiyappa Mudaliar and his Charities. By V. Krishnama Chariar, Rao Bahadur.—Report on the Administration of Pudukkota for the year 1890-91.—The Slaves of the Soil in Southern India. By the Rev. T. B. Pandian.—The Viveka Chinthamani, a Monthly Tamil Magazine & Review.
NATIONAL INDIAN ASSOCIATION.
IN AID OF SOCIAL PROGRESS AND EDUCATION IN INDIA.

Patroness.

HER ROYAL HIGHNESS THE PRINCESS OF WALES.

Vice-Patrons and Patronesses.

†His Royal Highness the Duke of Connaught, K.G.
Her Royal Highness the Duchess of Connaught, C.I.
The Marquis of Lansdowne, K.C.M.G.
The Marchioness of Lansdowne, C.I.
The Marquis of Dufferin and Ava, G.C.B.
The Marchioness of Dufferin and Ava, C.I.
The Marquis of Ripon, K.G.
The Marchioness of Ripon, C.I.
†The Earl of Northbrook, G.C.S.I.

‡The Countess of Lytton, C.I.
Lord Napier and Ettrick, K.T.
H.H. the Nizam of Hyderabad, G.C.S.I.
‡Sir James Fergusson, Bart., M.P.
G.C.S.I., K.C.M.G.
Mary Lady Hobart, C.I.
Baroness Kinloss.
†H.H. the Begum of Bhopal, G.C.S.I.
‡H.H. the Maharaja of Mysore, G.C.S.I.
H.H. the Maharaja of Kuch Behar, G.C.S.I.
H.H. the Maharani of Kuch Behar, C.I.

President:—LORD HOBHOUSE, K.C.S.I.

Vice-Presidents.

Sir Steuart C. Bayley, K.C.S.I.
Lady Bowring.
Dr. Beddoes.
Sir Frederic Jas. Halliday, K.C.B.
Sir William Muir, K.C.S.I.
Miss Florence Nightingale.

General Sir Henry W. Norman, K.C.B.
Sir John and Lady Phear.
Sir Albert Sassoon, K.C.S.I.
H.H. the Maharani Surnomoy, C.I.

Those marked with † are Life Members.

Council.

Mrs. J. B. Knight.
C. R. Lindsay, Esq.
*Lady Lyall. [K.C.S.I.
*Lt.-General Sir Richard J. Meade
*Lady Meade.

Dadabhail Naoroji, Esq.
Lt.-General Charles Pollard, R.E.
Eyre B. Powell, Esq., C.S.I.
Hodgson Pratt, Esq.
*Mrs. Lesley Probyn.
The Lady Reay.
*Rafiuddin Ahmed, Esq.
G. F. Sheppard, Esq.
*Mrs. Sheppard.
Mrs. Short Smith.

*Thos. H. Thornton, Esq., C.S.I.
*Sir Charles A. Turner, K.C.I.E.
Dr. Forbes Watson.
Professor Sir M. Monier-Williams
K.C.I.E. D.C.I., LL.D.

*W. Martin Wood, Esq.

Mrs. H. Woodrow.

Those marked with * form the Committee.

Hon. Secretary.

Miss E. A. Manning, 35 Blomfield Road, Maida Hill, London, W.
Assistant Hon. Secretary.

Miss Teschemacher, 8 Aberdeen Road, Highbury, N.

Hon. Treasurer:—Stephen N. Fox, Esq., New University Club S.W