THE PARSEES.

The election of Mr. Dadabhai Naoroji, a Parsee, as Member of Parliament for Central Finsbury, is one of the remarkable events of the year, and, amongst other things, it has called the attention of the public to the sect or religious community of which Mr. Naoroji is a member.

The Parsees or Zoroastrians, sometimes called the Fire Worshippers of India, are not natives of the country, but the descendants of the ancient Persians. The term Parsee is just the Hindustani for Persian. The total number of Parsees in India is extremely limited, being just over 90,000, but their influence, especially in commerce, is very great, and they are known far and wide for their natural genius in trade, their intelligence, and their munificent charities.

Bombay is the great centre of this community, though members of it may be found residing at Ahmedabad, Poona, Surat, Calcutta, and other places. Mrs. E. F. Chapman, referring to the Parsees in her book entitled "Sketches of Some Distinguished Indian Women," says, "Their position in India may in many respects be said to be analogous to that of the Jews in Western Europe. Like the Jews they have lived for centuries as exiles and aliens in a foreign land, keeping themselves distinct from the people among whom they dwelt, in their religion, their dress, and their social customs, and seldom inter-marrying with them. Like the Jews they have distinguished themselves by their aptitude for business, their enterprise, and their commercial prosperity, as well as by their loyalty to the Government, although, like the Jews, the Parsees are seldom, if ever, to be found in the ranks of the Army."
The story of the entrance of the Parsees into India is quite a romance, and takes us back to the seventh century, when the Mohammedans from Arabia overran and captured Persia, in the reign of the Caliph Omar. Yezdeghird was the last monarch of the ancient Persian dynasty, and at his overthrow and death the people of the country, who in religion were Zoroastrians, or popularly Fire-Worshippers, were commanded to give up their own faith and adopt that of the Mohammedans.

The bulk of the people of Persia, afraid of the swords of the Moslems, agreed to the change of religion, but some, having the courage of their convictions, refused thus to demean themselves, and preferred death or banishment. Many were slain, but a few escaped, and retired to desert places and bleak mountains in Korasan, where for a while, some say for many years, they were left in peace. Gradually, however, the power of the Moslem arms extended to Korasan, and the hunted Zoroastrians fled to the island of Hormuz, in the Persian Gulf, where again they were unmolested for a season. After fifteen years, however, the Moslems were once more upon the track of the fugitives, and this time with the determination to exterminate them. The enemy were baulked of their prey, however, for on arrival at Hormuz they found that the forlorn band of persecuted Fire-worshippers had flown, and was beyond the reach of pursuit.

Like the Pilgrim Fathers of later days, the Persians had taken to the sea, resolved to cross the ocean, and to found a new home for themselves in a far country. Sailing eastward, they stayed for a time on an island called Din, but soon they moved on and on, and after narrowly escaping shipwreck, they landed at a port called Sanjan, on the coast of Guzerat, in India. Thus did the loyal few forsake country, friends, and worldly possessions, in preference to giving up their faith in the religion of their forefathers.

Having landed at Sanjan, the exiles, a mere handful of people, sent a deputation to wait upon Jado Rana, the Hindu prince of the country, to ask for permission to settle in the land. This Prince seemed disposed to be friendly, but he requested, ere replying to the entreaty, to be made acquainted with the religious creed of the strangers. The reply of the Persians, or, as we may now call them, the Parsees, was as follows: “Hear, O illustrious prince, what we relate of our faith. Be not afraid of us. No evil will befall thee from our arrival here. We will be friends

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to all in Hindustan,—know for certainty that we worship the god, Yezdān. On account of our faith have we fled from the unbelievers. We have abandoned all our possessions. We have encountered difficulties in a long journey. House, and land, and possessions we have at once abandoned. We are the poor descendants of Jamshid. We reverence the moon and the sun. Three other things we hold in estimation—viz., the cow, water and fire. We worship fire and water, also the cow, the sun and moon. Whatever God has created in the world we pray to.”

The Prince of Sanjan was satisfied with the account the Parsees gave of themselves, and expressed his willingness to let them stay in his dominions, and to afford them protection, on certain conditions. First, the refugees must give up their own language, and, for the future, speak Guzarati, the language of the land of their adoption. Secondly, their women must exchange their own peculiar dress for the garments of the country. Thirdly, the men must forego the use of military arms and armour, and become peaceful citizens; and fourthly, the marriage ceremony amongst them must be celebrated at night and not by daylight. The Parsees, after a little consideration and hesitation, agreed to these terms, and were then, in the year A.D. 717, allowed to settle in the country; and in India they have remained ever since; and, as I have already said, they have grown into a prosperous, if not a very large community.

It may be asked: “Did the Parsees keep their part of the agreement”? Practically they did, though not to such an extent in some particulars as to lose their individuality or nationality amongst their new friends the Hindus. For example, the Parsees only retain their old Persian dialect in the exercises of religion. For general conversation in public, and even amongst themselves in private, they invariably speak Guzarati, and seem to have as much affection for it as the Guzaratis themselves. With respect to dress, a Parsee lady wears a Sari like her Hindu sisters, only the upper part of it instead of passing from the right waist diagonally over the chest to the left shoulder, is carried up the left side over the head, and brought from the right shoulder to be tucked under the left waist. Moreover, a Parsee lady has a relic of ancient Persia round her head in the form of a white handkerchief, and this distinguishes her from a Hindu lady.

Sir Edwin Arnold, referring to this peculiar custom in
"India Revisited," says: "It is incumbent on Parsee ladies to wear a rather ugly white band drawn tightly over the crown and brows, and this remnant of early times has resisted even the new taste for silk stockings, satin shoes, and European ornaments. But the pretty Zoroastrians, who possess the finest and glossiest black tresses in the world, object to their concealment, and so the white head-band is pushed farther and farther back, until it threatens to disappear altogether under the silk sari of violet or rose, sea-green, or sapphire, drawn so coquettishly over the head."

With respect to the agreement not to wear armour, or to bear arms, the Parsees have kept it more or less strictly all along. In times of extreme peril, now and again, they have fought in their own defence, but at the present day they are an eminently peaceable people, and never follow the trade of war. It is said that when the Parsees first gave up their armour they symbolised it by a thin muslin shirt, which they wear next the skin, and which is called a Sadaro. As this garment is worn by men and women alike, however, the foregoing explanation of its origin is open to question. No one, not even a Parsee himself, now seems to know why it is worn.

The Parsees, like the Hindus, have the investiture of the sacred thread, only it consists of seventy-two threads, and instead of being worn over the shoulder it is used as a girdle round the waist. The knot by which it is tied is undone daily, and a prayer is repeated over it when it is re-tied. Ladies as well as gentlemen wear this sacred thread, which is supposed to preserve both body and soul from the power of the Evil Spirit, Ahriman, who is represented in the Parsee faith as antagonistic to the Good Spirit, Ormuzd.

The name Fire-worshippers has been given to the Parsees on account of their extreme veneration for the sun, and for fire. There are some who say that this peculiar people actually worship fire, and perhaps some of the ignorant and more superstitious amongst them do. The majority do not, but simply venerate fire as the representative of Him who is the Eternal Light. "God, according to the Parsees, is the embodiment of glory, effulgence, and light, and a Parsee engaged in prayer is directed to stand before fire, or with face to the sun, as proper symbols of the Almighty. Fire is the best and noblest representative of the Divinity in its brightness, activity, purity, and incorruptibility; while the sun is the best and most useful of God's creation."
The Parsees have what are called Fire Temples, in which to perform their religious ceremonies. These are small, unpretentious buildings, and each Temple contains an altar, on which is found a portion of the "Holy fire," which is said to have come down from Heaven originally, and which is designed to be a perpetual reminder to the faithful of the Eternal Light, even God Himself. This fire, which is called Bahran, is never allowed to die out, but is fed day and night by the priests, who are in constant attendance. The worshippers gather round it reverently at the time of service, taking care not to approach very near it. Even the priests approach it only with a half-mask over the face, lest their breath should defile it, and never touch it with their hands, but with sacred utensils.

Offerings are made to the fire as the representative of God—offerings of flesh, milk, butter, and homa twigs; and as these things are presented in sacrifice by the priests the people signify their approval with bowed heads. Prayer, and the reading of a lesson from the Parsee scriptures follow. Then the priests chant the praises of Ormuzd, pour out a libation of homa juice to the sacred fire, perform other religious ceremonies, and finally conclude with prayer, especially for kings, and all in places of authority and power, that righteousness may be done throughout the earth, and that peace may everywhere prevail. No stranger is admitted at any time within the doors of a Parsee Fire Temple, as to do so would be unpardonable profanity.

The Parsees have the reputation of being a very upright people. They have the highest character for honesty, industry, peaceableness, intelligence, and benevolence. Truthfulness, moreover, is a heritage of the race. The evil spirit, Ahriman, is called "the liar of liars," and young people are exhorted to beware of becoming like him.

The Parsees have been foremost amongst the races of India in taking advantage of European education for their children, both boys and girls, and have had them taught every accomplishment. Commenting on the changes wrought of late years in the Parsee community, Mr. Râjendralala Mitra, LL.D., C.I.E., in a lecture given in Calcutta, said, "At the beginning of this century the Parsee at home differed very little from his Hindu fellow subjects. The furniture of his house was the same, and he enjoyed life squatting on cushions and carpets like the Hindus. His victuals consisted of rice, home-made unleavened bread, kid, mutton, and vegetables, dressed
exactly in the same way as Hindu dishes are. He ate from plates of silver, bronze, or brass, according to circumstances, as did the Hindus; and his lady sat apart, and took her meals separately from the male members of the family. Amongst the higher and middle classes of Bombay, these customs have been entirely given up. In no respectable Parsee house are the old farsh or takia to be met with—chairs and couches have entirely set them aside. Metal plates have made room for glass and china; the meal is now served on English tables; and tea, leavened bread, and pastry, figure thereon. At ordinary meals the rice and curry still hold their ground, and on ceremonial occasions English dishes are generally eschewed. The restriction about the lady of a family dining with her male relations has also been to a great extent set aside. Mrs. Bomanji sits at the head of the table, and distributes tea just in the same way as does Mrs. Jones, Brown, or Robinson. Her presence, too, serves in a great measure to improve the decorum and tone of conversation at table.

Thus "the old order changeth, giving place to new," yet it has to be said that as a rule Parsees will not invite individuals of another religion or nationality to dine with them, having not yet seen their way to break through all caste distinctions.

Parsees are fond of active exercise, and in this they differ from Hindus and Mohammedans, who love to take life easily, even in their play. A Parsee boy may not always be the dux of his class at school, but he is always leader in the playground. Parsees play both cricket and football with creditable energy and skill, and all manly games are their delight. Consequently in physique this race is the superior of most Indian races.

Notwithstanding their general intelligence and good sense, the Parsees in one direction display surprising superstition. They have absolute faith in the exploded science of astrology. "They will do nothing without consulting the stars—their conjunctions and their oppositions. They rarely start on a journey without being satisfied that no adverse star stands in the way, and no marriage can be solemnised among them without a careful scrutiny of the relative position and disposition of the heavenly bodies." They believe also in lucky and unlucky days, and kindred superstitions, just like the rest of Easterns.

The religious book of the Parsees is called the "Zend-Avesta." It is a small work, chiefly taken up with remarks about ceremonial cleanliness and the evils which result from
the neglect thereof. The Parsees say that at one time their forefathers had a very voluminous sacred book, which gave instructions concerning good actions, which explained religious duties and the way to obtain Paradise, which gave a full account of the Spirit of Good and the Spirit of Evil, and of the angels in heaven, and countless other matters. However, that old book has been lost, and of the present book—the "Zend-Avesta"—the Rev. John Milne, M.A., in his St. Giles' lecture on the subject, says: "When it was discovered to the learned of Europe in the middle of last century, its uncommon stupidity led half of its critics to pronounce it a forgery. Its oldest morsels are the most spiritual; the newer parts view religion through the eyes of priests, scribes, and Pharisees. No great religion has left so poor a record."

In writing of the Parsees, one remarkable custom of theirs cannot be overlooked, as it differs so much from anything that exists among other races. The custom I refer to is the manner in which the dead amongst them are disposed of. It might be thought that fire-worshippers would burn their dead like the Hindus; but no! fire is considered too sacred a thing to be profaned by a dead body. The earth also must not be contaminated by a body from which the soul has departed. As then, the Parsees, owing to their religious scruples, can neither burn nor bury their dead, they have recourse to exposing the bodies on what are called Towers of Silence.

I visited the Towers of Silence at Bombay, and witnessed the funeral of a little girl. Visitors are only allowed within a certain distance of the Towers, but I was near enough to see all that passed. The finest Tower at Bombay is over 90 feet in height, and has a circular inside platform of 300 feet, with central well about 150 feet in circumference. The circular platform at the top of the tower is entirely paved with large stone slabs, well cemented, and divided into three rows for the reception of the dead bodies of males, females, and children respectively. The bodies are taken in by the priests who are dedicated for life to the Towers of Silence.

At the funeral I witnessed there were very few mourners, but the few there were walked behind the bier in pairs, each couple joined hand-in-hand by holding a white handkerchief between them in token of sympathetic grief. The bier was made of iron and was carried by the priests. As the procession drew close to the Tower it stopped, and the mourners then turned back, while the
priests carried the body of the departed child within the
gloomy edifice, and up the staircase to the top of the
building, where they "exposed" it in the children's
portion.

It was a strange sight and a sad one for mourners and
spectators. Vultures and other birds of prey were hovering
round, and when the priest withdrew they alighted upon
the exposed body, and within an hour or so, I was told,
nothing would be left but bones, which, when perfectly
dried up by atmospheric influences, would be thrown down
the central well, where they would gradually crumble to
dust. Thus do the Parsees dispose of their dead.

What a romantic history the Parsees have! And how
extraordinary some of their customs are! It is surprising
to think of this people preserving their individuality
through all the centuries since they landed on the shores of
India, and to all appearances they seem destined to remain
"a peculiar people" for generations to come.

Reims, France.

John J. Pool.

Note by Ed. I. M. & R.—The garment called a Sadaro, or
Sudrah, above referred to, appears to be symbolical of righteousness.
Its name is said to be derived from two Persian words: Sud
(profit) and Rah (way). Thus the name means "a garment
leading to the right and profitable path." The Avesta says: "It
is necessary for a Mazdayasnian to put the Sudrah on his body and
to bind the Kusti on his waist, because the body is protected and
the soul is much benefited thereby."
Buddhism is said to be the finest religion invented by man, and so I believe it is. Its code of morals is very high. Love of parents, kindness to the sick and helpless, love even of enemies is taught, besides the abstaining from all unjust dealing, all intoxicating drinks and sinful pleasures; but, as may be supposed, practice is very far behind profession.

However, the strength of the religion has from the first undoubtedly consisted in its great and wonderful monastic system, every male Buddhist having at some period of his life to live in a monastery, submit to the rule of his order, and adopt the yellow robe of the monk. Every village, and almost every hill, has its elegantly shaped pagoda, the umbrella-like head, or apex, being often capped by a handsome framework of metal gilt, and this framework fringed with little bells, which tinkle sweetly with every breeze. In all the large towns and cities are immense monasteries, generally the best building and occupying the best site that can be found, and treated with the utmost care and reverence by all. The monks, or Hpoongyees, subsist upon the free-will offerings of the laity, and their persons are held in the highest esteem and veneration. Of these Hpoongyees there are still great numbers, but from various causes they have of late years, and especially since the downfall of the Burmese monarchy, greatly diminished in numbers. At one time, in Mandalay, the capital of Burmah, they seemed to constitute nearly half of the population, and there were in and about the city, according to the King's own statement, some 20,000 Hpoongyees, and this out of a population of about 100,000. Now, however, we should probably be over the mark if we computed the Mandalay monks at 5,000.

The monasteries are the national schools of the country, and in them the youths of the nation are able to receive from the monks a "free education," such as it is, to fit them for their duties of life. The day scholars learn their Thimbon-gyi or spelling book, the Min-ga-la-thot or catechism, and perhaps a little arithmetic in Pali, but as the monks
cannot be said to be a very learned body, or the most intelligent of the people, the instruction given is very elementary indeed. One of the cleverest and most intelligent monks I ever met was a young man trained in the S.P.G. school, at Mandalay. He left the school, entered a Burmese monastery, and became a very successful teacher.

Novices are admitted generally at the age of 12 or 14, some even at 9 and 10. Then like the founder and author of the system, they must make the renunciation of worldly vanities. The head is shaved, and the young novice is provided with the eight articles he is allowed to possess, viz. (1) yellow robe, (2) upper mantle, (3) waist cloth, (4) girdle, (5) begging bowl, (6) filter, (7) water-strainer, and (8) needle. Other articles have been added—e.g., sandals and sunshade, but it only proves the growing dislike to restraint, and a desire for a more luxurious way of living.

In years gone by one very rarely heard of a monk leaving the monastery under five years or Wahs—i.e., Lents; now, however, a few months seem to suffice, and I have frequently been asked by my own pupils for permission to absent themselves from school for a month or so, in order that they might enter the Burmese Monastery, to wear the yellow robe and to fulfil the Law. The less said about the life within the monastery walls the better, and one has frequently been obliged to strike off the school rolls, names of boys who have returned to us from the monastery. The idea that the monastery once quitted cannot be re-entered is utterly wrong, for I have known many cases where this has been done not once or twice, when either the monk after becoming a man discovers the lay-life unsuitable, or when he experiences difficulty in obtaining food or work; and, indeed, several cases have come under my personal observation of “Dacoits”—i.e., Bandits, being received into the monastery, and having been caught while wearing the yellow robe and passing themselves off as quiet inoffensive Hpoongyees.

The Hpoongyee is at all times an object of great reverence and veneration, and, in fact, to shew disrespect to him is to be guilty of a great crime, which is punishable by being cast into the deepest hell. Every year adds to his sanctity, and the greater the number of “Wahs” kept, the greater he is reverenced and esteemed. Each monk generally has a number of special supporters, relatives or personal friends, to whom he recites the Law on Sabbath or worship days, and sometimes he goes to repeat the sacred words of Buddha in their houses. Every monk
must go forth in his daily round with his begging bowl to receive the alms of the faithful, which he must accept in solemn silence and apparent indifference.

There are no "secular" clergy in Burmah. All must live in the monastery and keep distinct from the laity. Dissent and schism are almost unknown, and in Upper Burmah the quarrels between the rival sects, the Mahagandhis and the Sula-gandhis, rarely if ever occur. Sometimes the monks fall out among themselves, and great difficulty is experienced in settling matters; and I was greatly amused one day at being called in as a "brother Hpoongyee" to arbitrate and settle a dispute between two rival sections in a neighbouring monastery. As I stated before, the learning of the monks is over-estimated, and very few monasteries possess really valuable libraries, and even the Royal Library at Mandalay was said, by one who ought to know, to have been very disappointing. The monks themselves read but little, and never attempt to bring out any new books.

Wall paintings are now and then seen, and one remembers a very interesting series in a pagoda visited a few years ago. The scenes represented events in the life of Gautama. Beneath all the rest was a picture of hell and its torments. The first place in suffering seems to be given to those who revile and disobey the Hpoongyees; then those who kill cows; next in order come adulterers, liars, bad wives, each receiving appropriate punishment; then fishermen, then those who were disobedient to parents and teachers; then killers of pigs and fowls, then those who kill lice, &c.—their punishment is to be buried beneath two mountains. Last of all those who use false weights and scales. The whole was well done, but by a curious anachronism you saw soldiers with muskets and modern uniforms in pictures of events which are supposed to have taken place thousands and even millions of years ago.

I have never found the monks in any way hostile to the teaching of Christianity, though very few care to talk about religion, and thus show great indifference, and this, I am afraid to say, is also painfully true to a great extent amongst Burmans generally. I suppose it is because they consider a change in religion of any creed, is only another phase of life through which Buddhism teaches they must pass.

GEORGE H. COLBECK.

(From an Oxford Paper.)
PUBLIC HEALTH IN INDIA.

SEVERAL Indian newspapers have lately, we are glad to find, brought forward the important subject of village sanitation, in consequence of the correspondence of Miss Florence Nightingale and the Poona Sarvajanik Sabha. Some months before the meeting of the International Congress of Hygiene and Demography in August 1891, Miss Nightingale wrote to the Secretaries of the Sabha, urging that they would assist to make this matter prominent at the Congress. They acted on her suggestion by securing some valuable papers from their members, which proved of help in the discussion. The Indian Committee of the Congress, at its close, signed a memorandum expressing their opinion that "the insanitary condition of the rural village in India is a very serious evil, and that active measures are required to obviate the existing injury to public health." They also supported the view of the Poona Sabha, that a part of the village cesses, which cesses are expended at the discretion of the Local Board, should, by order of the authorities, be definitely set apart for sanitary improvement in every one of the contributing villages. This is a point upon which Miss Nightingale also dwelt very strongly in a letter which she addressed to the Secretary of State, and which was forwarded by him for the consideration of the Governments of India and of Bombay. It appears from that letter that the Bombay Village Sanitation Act of 1889 fails to produce the desired results, because the Local Boards are apt to spend the cesses in other than sanitary improvements, whereas the debate on the Bill showed that the main object of the measure was "to constitute a good village organisation for purposes of village sanitation." As Miss Nightingale justly says, "A village free from choleraic and typhoidal poisons is more important to the village population than the best means of communication." It is to be hoped that the Indian Governments, which have already done so much for sanitation, may provide that the Local Boards shall spend a larger proportion of the village cesses than now in rendering each village less hurtful to health.
In Miss Nightingale’s letter to the Poona Sarvajanik Sabha, she suggests some practical methods by which the Sabha, and, in general, educated Indian gentlemen, might help forward sanitation. A system of lectures with demonstrations might be organised in all the small towns and villages, for which, probably, the village school-rooms would be available. “If villagers are not taught the simple things that they can do for themselves to promote health at home, law cannot force them, nor can funds help them. Ignorance and devotion to custom are, no doubt, the greatest hindrances to sanitary improvement, and not only in India, but among large classes in England. Sanitary primers for the schools are important, such as have indeed been prepared by some of the Education Departments—but also, as Miss Nightingale says, “it is necessary that the schoolmaster should believe in sanitation.” Again, municipal and sanitary reformers ought to take care that not only the parts of the towns and villages which are in public view should be well attended to, but also those that are out of sight—the bye-lanes and back streets; and sub-committees for sanitation might be formed from among the members of the municipalities and local boards to act in concert with the health officers. Moreover, Miss Nightingale urges that one of the first duties of the educated gentlemen is “to influence their ladies.” “The domestic health,” she continues, “depends on the woman.” Yet is it not sometimes the case that the native gentleman, even when he knows, is unwilling to interfere with his own wife? The ladies must be paramount, whether instructed or uninstructed, in their own household. Let the ladies be first instructed by their own husbands and fathers, we humbly suggest; and let them then instruct other women, for women can only be taught by women in these matters. Least of all can they be taught by legislation. A private public opinion must, so to speak, be created among them, how to save their own and their children’s health.”

“Let the East meet with the West to learn and to teach in matters of life and death.”

We may add that among other insanitary arrangements in India, attention has lately been called to the very bad condition of the buildings used for Primary Schools, in Bombay. There are fifty-five Municipal Schools, some of which are rent free, and it appears from a report by the Secretary of the Joint Schools Committee (quoted in the Advocate of India) that, with few exceptions, the accommodation is deficient, and that there is a serious want of
sanitation. The children are often crowded into small dark rooms, and the "masters are tolerant even of sanitary evils which are removeable." There are great difficulties in the way of obtaining better buildings. No specially-constructed primary school-houses exist, and in Bombay house-rent is very dear, while the school funds are small. Besides, the choice of position is restricted, for the parents cannot send their children to a distance from their homes. Landlords, too, are very unwilling to undertake repairs. A few schools have lately been removed to better quarters, but there are scarcely any satisfactory houses available, so that the only real remedy, as stated in the report, is that the schools should be housed in specially-erected suitable buildings, as is the case in England. "If simple sanitary rules," writes, moreover, the Secretary, "were prepared for instruction in the schools, their educational value will be great both to masters and pupils." The same evils abound in other parts of India, and there can hardly be a more fertile cause of a low state of public health than keeping children for several hours daily in a poisonous atmosphere—for fresh air is as essential as food to their well-being.
THE DISTRICT NORTH OF THE MAHI RIVER.

[We are indebted for this article to an Indian gentleman well-acquainted with the Mahikantha District. The first part of his paper we have been obliged only to summarise.]

The Mahikantha (or bank of the Mahi) Agency, in the extreme north-east corner of the Bombay Presidency, near the Gaikwar's territory, has as yet been comparatively little affected by European influence, and it presents many curious features which illustrate the state of India in past times. It consists of the state of Idar, governed by a Maharaja, and of numerous small Rajput states, and besides, of lands possessed by the Kolis and Bhils, aboriginal inhabitants of those parts. The Idar State includes about half the inhabitants of the district. In the remaining portion there exist still lawless tribes, to whom the hills, which are connected with distant ranges, the deep ravines, and the dense forests afford excellent hiding-places, and innumerable facilities for eluding pursuers. Wild animals abound, such as tigers, bears, leopards, panthers, hyenas, wolves, boars, monkeys, and foxes, and many kinds of deer and antelopes. Snakes, too, are met with of all sizes and sorts, both venomous and harmless. The Mahikantha is watered by seven rivers, one of which, the Sarasvati, after a course of 112 miles, loses itself in the sands of Cutch without reaching the sea. The level parts being easily watered support an agricultural population.

The traditions of the Idar State, which includes half the inhabitants of the Mahikantha, go back to mythical times. In the Copper Age its rulers are said to have been demons (Rakshasas), whom a great sage succeeded in destroying. In early historical days it was peopled only by the Bhils and Kolis; but in the eighth century of our era some Rajputs settled there, and when the Mussulman conquests began, more and more Rajput tribes were forced to take refuge in the Mahikantha hills. Some of these people intermarried with the old inhabitants, the Kolis, and thus lost caste. Others became small chiefs, and
when the Mohammedans had conquered Gujarat, several of
them embraced Islam, and received grants of land. In the
beginning of the eighteenth century, the Mussulman power
decayed; but the rise of the Marathas prevented local inde­
pendence. The chiefs of Mahikantha became tributary to
Baroda. That State, however, proved not strong enough to
control the lawless tribes of the district, and in 1811, the
British Government undertook to collect the tribute for
the Gaikwar and to maintain quiet; but the Koli chiefs
appear to have been left undisturbed in regard to the
levies of blackmail on their more peaceable neighbours.
Further changes occurred, which led to a condition of
serious lawlessness in the Mahikantha, and finally, in 1820,
the management of the district was made over to the British
Government, and a Political Agent was appointed. The
chiefs were required to sign agreements that they would
abstain from plunder, protect traders, and submit disputes
to arbitration. The state of things improved somewhat;
but an attempt was next made to govern the district through
the Resident at Baroda. This failed, and again dis­
turbances occurred. Cultivators were robbed of their pro­
duce by outlaws, and public confidence was destroyed. On
one occasion the British Agent, Mr. Erskine, hearing that
the three wives of a Raja were to be burnt at the
cremation of his body, advanced with some troops to
prevent it, but he was unsuccessful, and had to face much
disorder. The practice of sati was, however, later, put a
stop to by Sir James Outram, who, with great difficulty,
also kept the wild brigands in check. In 1857, measures
were considered necessary for securing the registration
of arms, which naturally proved very distasteful to the
chiefs; some of them went into outlawry, and conflicts
became frequent. By degrees the people have taken more
to agriculture, instead of maintaining themselves only by a
predatory life.

The Maharaja of Idar conducts the business of his
State independently, except that in political matters he
is advised by the Political Agent. In the other parts of
Mahikantha the Political Agent has more authority.
There are about 50 small chiefs, who are divided into
several classes, each class being allowed a varying amount
of jurisdiction. In former times civil suits were settled
by arbitration, which, in some cases, was a better mode of
ending disputes than applying to courts of law; but there
used to be frequent attempts to bribe the arbitrators, and
these were apt to absent themselves, and to delay attending
the affairs on hand. Even now the officer who settles disputed questions is often, however honourable or influential he is, suspected of dishonesty by the unsuccessful party.

The soil in the Mahikantha is of two kinds, light and sandy, or black. Both are very rich. Near the hills to the north and north-east, the land, though poor and stony, if better tilled, would yield rich crops. The south and west lands are level, and generally very fertile. In some parts there is a large watered area. In other parts, owing to the water being too far below the surface, tillage is entirely confined to rainy season crops. There are districts which yield, without watering, wheat, barley, &c. Irrigation is chiefly carried on from wells and ponds. The chief watered crops are wheat, barley, sugar-cane, and garden produce. Where land is plentiful and the population small, fields are allowed to lie fallow every third year. In the more densely populated villages, as the land cannot be left fallow, to prevent exhaustion it is manured, and a rotation of crops is practised. As in England, wheat, barley and cheno, sown in dry lands in October and November and reaped in March and April, are cold weather crops (rabi); the rest are rainy season crops (kharif), sown in June and July, and reaped in October and November. Rice sown in nurseries and planted out, requires moist and marshy land. It is of seven kinds. Wheat of two kinds grows freely, especially in the valleys in the north of the district. If watered, they are of excellent quality. Millet (Bajri), the common food of the people, is grown in the plains and not in the hilly parts. It thrives best in sandy soils. Maize (makai) is grown much in the hilly parts. Grain (Chana), a rabi crop, is sown in dry land in September and October, and reaped in March. Cotton is sown in July and August, and reaped in January and February. Its cultivation is not very large. Sugar cane is sown in March and April, and cut after twelve months. Before growing sugar cane, a field is allowed to lie fallow for one year. Oil seed is sown in July and reaped in November. The chief evils to which crops are subject are mildew, insects, and locusts. But these evils are rare, and when they do come, they are seldom so wide-spread as to affect the general harvest. There is no known cure for blight. In fields under irrigation, white ants are destroyed by putting tobacco into the trough through which the water flows. The castor-oil plant is also sown with other crops, it being fatal to these insects.
When a cultivator owes money to several creditors, he who advanced money for seed is held to have the first claim on the debtor's crops. None of the Mahikantha Courts ever order the sale of land in liquidation of debt, and among the cultivators, land sales are only occasionally made. When a money-lender makes an advance, he generally insists on receiving in mortgage some of the debtor's property, such as his cattle, or house. When land is mortgaged, it generally remains with the mortgager, who makes over to the mortgagee a portion of the produce. The cultivators admit the usefulness of the money-lenders, but complain of the hardness of their terms. Neither cultivators nor artisans have intelligence enough to prevent the money-lenders from bringing false claims and extorting oppressive rates of interest, being themselves illiterate. The indebtedness of poor Bhil and Koli cultivators in many cases leads to crime.

In most parts of the district, especially in the Idar state, the Imperial rupee is the standard in common dealings. In some other parts, Baroda babasai and sicca rupees are also in use.

Kolis and other field labourers are paid about 4d. a day; smiths, bricklayers, masons, and carpenters about 1s. a day. Day labourers are generally Kolis, who offer their services either as partners or as field workers. As partners, they get a third or quarter of the crop, and as workers, if engaged for the whole year, about 200 lbs. of grain, and if engaged only for a time, then 2d. worth of grain, besides food for the day. Women and children are employed as day labourers at rather less wages than the men. Payment for field work is made in grain, not in cash.

Mahikantha bullocks are worth from £1 to £20 a pair. They are reared by all classes of husbandmen, and are set to work when four years old. In ploughing and working wells one pair is used; in drawing carts with a load of about 1,500 lbs., from two to three pairs. Vanjaras (caravans) have pack bullocks to carry grain, &c. in a long bag, with a mouth in the middle, thrown across a saddle of rope and cotton rags. These pack bullocks are left to pick up what they can, while other bullocks are stall fed on grass, oil cake, grain, &c. Cows are worth from 10s. to £2, giving milk from two to five pints a day. Female buffaloes are worth from £2 to £5, giving milk daily from five to ten pints; they are fed like cows. Camels, worth from £2 to £10, are used both for riding and
carrying loads. Most of them live entirely on the leaves of trees, especially nimb trees. The best riding camel travels over 150 miles in a day. Horses, worth from £7 to £20, are reared for riding by Rajputs, and others. Their monthly keep, grass and grain, costs £1, the most. Donkeys, worth from 16s. to £1, are reared and used for carrying loads by potters, grain carriers, washermen, and basket-makers. They live on chaff, or are left to pick up what they can. Peafowls abound in bushlands, and in the outskirts of villages, but as they are sacred to Krishna, Hindus of all classes think it wrong to kill them. In ordinary years the necessaries of life are cheap and plentiful; and if the ruinous expenditure now enforced by caste customs on family observances were to fall into disuse, the condition of the masses of the people would rapidly improve.

Idar, Ahmednagar, and Pethapur are famous for arms and cutlery. Ivory bracelets are made at Idar, jars for holding clarified butter, also small oil jars and scales. Mochis (generally Hindus) make, for local use, shoes, country saddles, knife cases, and small boxes. The manufactures are mostly carried on by the people on their own account and in their own houses. The chief craftsmen are carpenters, blacksmiths, weavers, dyers, and turners. Blacksmiths of Pethapur, Ahmednagar, and Idar, and a very few carpenters of Idar, are skilled and clever workmen; but having no wide scope, encouragement, or appreciation of their art, except from H.H. the Maharaja of Idar, the best workmen generally go to Bombay and other places for employment. Of weavers, Dheds all over the district make coarse cotton cloth. At Ahmednagar in Idar, Shia Bhoras are weavers of coarse dhotis and other articles of dress. At Pethapur the finest weaving in the district is the work of the Moomna sect. The cloth made by them is woven from silk and cotton yarn. The best dyers are at Pethapur, the best wood-turners are at Idar. They turn and colour in a finished style tentpoles, cot and cradle-legs, and toys of various descriptions.

In the Mahikantha all classes of traders have each a Mahajan (Association or Chamber of Commerce) composed of the chief men of the community. To them marriage and other caste questions are referred for settlement. The Mahajan enforces its decision by refusing to have any dealings with a disobedient member. Mahajan funds are derived from gifts on occasions of marriage or death, from fines on breakers of caste rules, and from intestate
property without heirs. They are spent on religious objects and on matters touching the interests of the community. The leading men of the different Bania castes are called *sheths*. They get certain emoluments and privileges from the State in consideration of services rendered and hereafter to be rendered in carrying out measures of the State, chiefly relating to taxation.

There are seventeen periodical fairs, of which Samlaji fair (on the frontier of Idar), held every year in November, and Khed Brahma fair (fifteen miles north of Idar), held yearly in February, are the most important. Each lasts for fifteen days. At both articles of trade are, brass, copper and iron ware, cotton fabrics, brocade from Ahmedabad, and embroidered work from Pratapgadh and Meywar, pearls, country ornaments, grain, and cattle.

**Purnanand Mahanand Bhatt.**

*(In a succeeding article the wilder inhabitants of the Mahikantha will be described.)*
SELECT PAPERS, SPEECHES AND POEMS CONNECTED WITH PACHAIYAPPA MUDALIAR AND HIS RELIGIOUS AND EDUCATIONAL CHARITIES. Edited, with an introductory memoir, by V. Krishnama Chariar, Rao Bahadur. Madras, 1892.

Simultaneously with an appeal to the Maharajas and other wealthy Hindus of Southern India for a lakh or two of Rupees in order to establish additional Chairs in the excellent College at Madras known as Pachaiyappa's Rao Bahadur, V. Krishnama Chariar, one of the Trustees has published a sketch of the life of Pachaiyappa, as well as several memorial poems and anniversary speeches relating to him and to the institution that bears his name; for this is the fiftieth year since this College began its existence—not, however, as a College, but as an unpretending boys' school, to give elementary instruction in English and Science and the Vernaculars to the children of the poorer classes. Seven years after the foundation of the school—in 1849—fees began to be demanded from those who could afford to pay them, and, notwithstanding the innovation, the numbers continued to increase. Thousands of boys have received their training at this institution, which, from 1850, has had a good building of its own, and which, by raising its standard of teaching, has gone on to prepare for Matriculation, then for the First Examination in Arts, and, since two years, for the B.A. degree, while still keeping up well-organised school classes.

Pachaiyappa's College is entirely Hindu in regard to its management, but its Principal is from Europe, and the students take a good place in the Madras University Examinations. At present the number of professorships is very limited. The Trustees are, therefore, most anxious to found a Chair of Mathematics, and one of Physical Science, so that more of the optional branches for the B.A. degree may be prepared for at the College by its students.

Pachaiyappa did found the College, and yet he did not—which contradiction must now be explained. He was born, not far from Conjiveram, in 1754, and his widowed
mother brought him up amid difficulties, but he showed very early a capacity for business; so he became a commercial agent, and a Dubash for English merchants (meaning interpreter, originally, but by degrees a broker), in the disturbed early times of the East India Company. He and the other Dubashes, being able to make themselves very essential in the varied financial transactions of the period, seem to have lived in grand style, wearing expensive rings and ear-ornaments, and bangles of precious stones, "white muslin robes, bright lace shawls and turbans," and travelling about in gay palanquins. A portrait of Pachaiyappa at the beginning of this volume shows his splendid apparel. His biographer, however, states that his jewels, &c. "only adorned the outside of his person," and "were not the subject of his thoughts and of his conversation." He was later engaged in regard to army supplies in the military operations against Hyder Ali, but his fortune was chiefly made through his being appointed agent to the Tanjore Raja, who had to pay an annual tribute to the British Government, and was willing to allow Pachaiyappa a discount of 10 per cent. for making the remittance regularly and in due form. From that time Tanjore became his place of residence, and he spent his days, besides carrying on his banking business, in relieving poverty, studying religious books, and encouraging scholars, especially students of Sanskrit. He is said to have been just and honest, as well as generous, but as to his invariable integrity there seems to be some doubt.

Having no children, Pachaiyappa took a second wife, upon which Mr. Krishnama Chariar observes, "Although such second marriage is, in such circumstances, permitted by the Hindu law, still experience shows that misunderstandings arise, and, as an old Hindu sage says very feelingly, 'With sorrow does he eat who has two contentious wives.'" He adds that as the first wife had the advantage of good birth, while the second "had the conceit of having come from a rich family, difference and discord could scarcely be avoided. As the two ladies could not live in harmony together, they lived separately, and the second wife presented Pachaiyappa with a daughter." Now it was that Pachaiyappa began to think of spending his wealth in charity. In 1792 he had a stroke of paralysis, from which he recovered enough to resume his work as a banker, and as agent to the Raja of Tanjore. His health, however, soon gave way, and he died in March 1794.
A few days before his death, Pachaiyappa made a will, in which he devised all his property to charitable and educational objects. A large number of temples benefited by this disposition, and also many seminaries, chiefly of Sanskrit learning. Of course, at that time none of the present educational institutions had been founded. Nor probably would such have gained the sympathy of this orthodox Hindu. But he had left his money in the hands of executors, who wasted most of the capital, and failed to carry out the testator's desires. This neglect came to the notice of the Madras Government, through Mr. George Norton, Advocate-General, and the result was that the Supreme Court compelled the representatives of the executors to hand over more than £75,000; and in 1891, nearly fifty years after Pachaiyappa's death, nine Trustees were appointed, all Hindus of known character, who were empowered to administer the funds. About half of the sum was appropriated to the support of temples, and the remainder was to be used for educational purposes. But the times had changed; other learning than that taught by the Pundits was now in request, and so the Boys' School—now the College—was established at Madras, and other schools were started elsewhere. Thus it comes to be a fact that Pachaiyappa did and yet did not found the College that bears his name. His general intentions have been carried out, but under modern methods. As Mr. V. Krishnamachari says at the end of his biographical sketch, the fund "under the name of 'Pachaiyappa's Educational Charities' has continuously disseminated the blessings of a wise and generous culture to thousands of youths of the Madras Presidency."

A chief point of interest in regard to the College is that its management is distinctively Indian. It is a useful and flourishing institution; but additional funds are needed for its complete academic equipment, and we hope that the jubilee appeal will be very successful.

LETTERS FROM MANDALAY, written during the troublous years of 1878—79, and during the last Burmese Campaign of 1885—88. By the late JAMES ALFRED COLBECK, S.P.G. Mission Priest. Edited by George H. Colbeck. 2s. 9d. nett. (Knaresborough, A. W. Lowe.)

THIS little volume is affectionately dedicated "to a loving and noble-hearted mother, who gave four sons to Burmah,
two of whom were laid to rest in the peaceful churchyard of Mandalay." The letters are chiefly extracts from private communications, and relate to the affairs of the state in which, from his position as one of the few British residents in Mandalay, the writer was necessarily mixed up.

Mr. Colbeck arrived in Mandalay in August 1878, to take charge of the mission church, school, and clergy-house, which had been erected at the entire expense of the old (Burmese) king, and which was adorned with a beautiful marble font, the gift of her Majesty Queen Victoria. A month later the old king was lying on his death-bed, and Mandalay was a place of plots and counter-plots. A general massacre of princes and princesses was threatened, and all Mr. Colbeck's energies were directed to aiding and sheltering their escape, and to providing them with a place of refuge in the British Residency. Among those who thus escaped were the Nyoung Yan Prince and his wife. Then Thibau was declared king, and "has taken a fancy to throwing spears about at those who offend him." Another letter records the escape of the refugees in a British steamer, and then follows an account of the massacre, by order of the king, of "as many members of the old royal family as he could lay old of. Thirty members of royal blood have thus been sacrificed, and many others connected with them." Continual alarms and troubles succeed, and the Resident declares he will either have things on a better footing, or go away, and take the British away with him." A graphic description is then given of the exodus of British subjects from Mandalay—"that sink of iniquity."

On the 18th December 1885, Mr. Colbeck is again in Mandalay in the capacity of Chaplain of the British Forces, who have dethroned Thibau, and occupied the city. Mr. Colbeck writes:—

My dear old teacher, Dr. Rost, of the India Library, London, will doubtless be very glad to hear we have saved the Palace Library. It was being sold bit by bit for Prize Money, but I suggested to General Prendergast that it would be a graceful act on the part of the Army to make a present to our Universities at home, instead of making mince-meat of the books. He at once agreed. . . . I picked up a pretty gold book—palm leaves, and written with an iron stylus—and found it was a book of meditation and devotion, belonging to the Princess of May Doo, one of the wives of King Bah Gyee Daw, who fought against us in the first Burmese War. Another book was a part of an illustrated life of Gaudama.

Another interesting piece of spoil came into my hands. I
opened an old box, looking for Pali books again, and found what seemed to be like a lady's writing case and blotting book. It was rather pretty, glass backs, with floriated gold borders, and a water fountain in mother-o'-pearl. Inside was crimson silk, and, what do you think? a Burmese document on stiff paper with gold margin, signed "Dalhousie," and I found it was the State dispatch which settled the British boundary after the second Burmese War.

The reception of the Viceroy and Lady Dufferin is pleasantly described. A state visit by the Commander-in-Chief, Sir Frederick Roberts, forms the subject of another letter, at which "the Burmese interpreter got fogged in his head," and Mr. Colbeck was asked to take his place, so, he says, "Missionaries do come in useful sometimes." The close of the interview is remarkable for the homily which the Tha-tha-na-baing (the Buddhist Archbishop) gave the Commander-in-Chief on his duty as a ruler. He said :

"I have four words to say, and wish you to take them as principles of your Government. They are Myitta, Garuṇa, Mudita, and Upayka.

My-it-ta is love—the love and kindness you should show to all people under you.

Garuṇa is mercy—regard all people as your own flesh and blood, your own children.

Mudita is beneficence—that which causes gladness to those about you and subject to you.

Upay-ka is discrimination and moderation in dealing with those who offend, remembering that they are fated to be bad, so do not punish them as though they could help it."

The next letters describe visits to Military and Missionary out-stations, the discomforts of which were met in the brave, cheerful spirit which characterise this interesting correspondence. The last letter is dated February 27, 1888, from the Madaya Mission House, and speaks most hopefully of the prospects. "My longing," he says, "for a real genuine Burmese congregation is satisfied." To this letter is appended the following note: "Four days after writing this letter the writer entered into his rest."

Jas. B. Knight.


This pamphlet contains an earnest appeal on behalf of the numerous class in Southern India which may, in a general
way, be indicated as Pariahs—people of very low caste, and of no caste at all—probably connected in descent with the early inhabitants of India, whom the Aryan immigrants treated, not unnaturally, as their inferiors. It appears that about a sixth of the population of the Madras Presidency are included in this despised class. Mr. Pandian shows that their condition is one of hopelessness and oppression. The Pariahs have to live in the villages at a distance from the caste people, in miserable insanitary huts. They are forced often to work without pay for their landlords, and are punished severely if they venture to assume independence. Their isolation re-acts upon their social habits, which are very uncivilised. The caste men seem to be determined that the Pariah shall not rise out of his unhappy condition, for, if he should by great efforts become an owner of property, or a village dealer, they unite to keep him down, and though his rights are recognised by law, he is seldom able to claim them, because his opponents can by influence prevent his success in the Courts. The practical suggestions made by Mr. Pandian are: That Night Schools for adults, free Primary Schools, and Industrial Homes for orphans should be established for the Pariahs, and that tracts of land near the large towns, supplied with suitable dwellings, should be set apart for them, where they could undertake various kinds of remunerative manual labour, and be placed under the elevating influences of the schoolmaster and the religious teacher. The writer of the pamphlet has already himself started one Night School and one Primary School for this class of people. He is aware of the great difficulties attending his scheme, but he feels that a beginning should be made, and he hopes that, should he fail, those who follow him may succeed better. He does not expect so much help from his own countrymen as from “Great Britain, Australia, and America,” because the British race has so often practically shown its hatred of slavery and serfdom. Mr. Vedanayakam Pillai, in his Introduction, supports the appeal, and says that the picture of the Pariah’s condition is not overdrawn. Mr. H. B. Grigg, Director of Public Instruction, is also quoted in reference to this question, as in his late Convocation Address he urged that where the Pariahs had had a fair chance in life they had proved themselves useful members of society. It is to be hoped that with the spread of more humane views as to mutual duty, the educated Indians will themselves endeavour to improve the position of these helpless
classes by securing for them just and fair treatment, and by encouraging their endeavours to rise in the social scale.

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**THE CANADA EDUCATIONAL MONTHLY & SCHOOL MAGAZINE.** Toronto. June—July, 1892.

This Magazine can be recommended for wise and helpful views on many of the educational questions of the day. The teaching that it tries to promote is not of an ordinary type, but that which really cultivates and develops the nature of the pupils. With regard to the training of teachers, the opinion of Horace Mann, just fifty years ago, is quoted as follows: "Without good teachers there cannot be good schools; and we have as little right to expect good teachers without adopting means to prepare them as we have to expect beautiful gardens and cultivated fields to spring up spontaneously in the wilderness."

A Convention of the Canada Teachers' Association was to be held this summer—an Association which appears to be producing good effects in keeping a high ideal before the minds of teachers in the Dominion.

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We have received several numbers of *Culture*, a small Magazine, the object of which is to advance religious and social reforms. It was started in 1888, but for three years it has been in abeyance, re-appearing in January 1892. Its articles appear to be instructive, and to have a good tone, and it supplies pleasant reading for young students.
NEW BOOKS RELATING TO INDIA.


OMARAH’S HISTORY OF JAMAN. Translated by H. C. Kay. 17s. 6d. net. (Edward Arnold.)

HISTORY OF ASIATIC CHOLERA FROM 1781 TO 1892: its Causes and Treatment. 2s. 6d. (Macmillan & Co.)

RANJIT SINGH: and the Sikh Barrier between our growing Empire and Central Asia. By Sir Lepel Griffin, K.C.S.I. ("Rulers of India" Series.) 2s. 6d. (Clarendon Press.)


The Academy, August 13, has some interesting notes on Indian Philology and Literature. It gives also a short summary of the Address of Sir A. W. Croft, as President of the Asiatic Society of Bengal, on the Vernacular Literature of India published during the past year.

During the meeting of the Oriental Congress, commencing on the 5th September, Messrs. Luzac & Co. propose to hold an exhibition at 46 Great Russell Street, of all Oriental works which have been published in England since 1889.
THE MIGRATION OF SYMBOLS.

[The following article on the Migration of Symbols, a subject of growing interest, is taken in its entirety from the Athenæum of August 13th.]

La Migration des Symboles. Par le Comte Goblet d'Alviella, Professeur d'Histoire des Religions à l'Université de Bruxelles, Président de la Société d'Archéologie de Bruxelles. (Paris, Leroux; London, Dulau & Co.)

Those who are familiar with the learned papers contributed during the last four years by Count Goblet d'Alviella to the Bulletin de l'Académie royale de Belgique on the “Trisula of the Buddhists,” the “Winged Globe,” the “Gammadion or Svastika,” and the “Trees of Paradise,” will warmly welcome the present publication, setting forth in systematic form, and with a fulness of reference to original authorities, and of illustration from authentic examples, the matured and permanent results of the accomplished author's examination of a fascinating subject. It has been treated by others in a similar comprehensive spirit, but never before in the same thoroughly scientific manner; and thus, while the merely deductive writings of Dupuis and Creuzer have, in spite of their erudition, but served to discredit it, and are already obsolete, Count d'Alviella, by pursuing its investigation on an inductive basis, has at once, and, so to say, single-handed, restored it to its proper position as a department of exact archaeological research, and produced a work which will have an abiding influence on the whole future of the study of symbolism, and also, we would fain hope, on that of Western decorative design.

Of course, the way has been prepared for Count Goblet d'Alviella by the rich discoveries of the remains of ancient art made during the passing generation in Egypt, Phœnia, Syria, Mesopotamia, Phrygia, and Greece, and by the wide interest created by the International Exhibition of 1878 in the still ancient arts of India. All this Count d'Alviella frankly and most generously acknowledges; but none the less is his merit in having applied the principles of observation and comparison to the classification of the mass of materials thus placed at his disposal, and elaborating therefrom, in the laborious processes of patient analysis, a volume that must always remain a locus classicus on its special subject.

The general conclusion arrived at by Count Goblet d'Alviella is, as indicated by his title page, that the religious symbols common to different races of mankind have not independently originated among them, but have, for the most part, been carried from one to the other in the course of migration, commerce, and conquest; and his great achievement is to have demonstrated this by an overwhelming indication of instances. The imprint of “the feet of
Buddha,” stamped on the cover of Count d’Alviella’s volume, further indicates his tentative opinion that the more notable of these symbols were carried over the world in the footsteps of Buddhism, or rather of the commerce with Mesopotamia and Egypt, promoted respectively by Nebuchadnezzar III. and Psammeticus I., out of which, through the internationalisation of Hinduism, Buddhism arose in India; just as later on, under the influence of the continued intercourse thus initiated between the countries of the Indian Ocean and the Mediterranean Sea, Christianity and Mohammedanism were successively developed from Judaism.

One of the most remarkable instances of the migration of a symbol is that afforded by the tri-skelion, or, as we more familiarly know it, “the ‘three legs’ of Man.” It first appears on the coins of Lycia, circa b.c. 480; and then on those of Sicily, where it was adopted by Agathocles, b.c. 317—307, but not as a symbol of the morning, mid-day, and afternoon sun, but of the land of Trinacria, i.e., “Three Capes,” the ancient name of Sicily; and finally on the coins of the Isle of Man, on which it seems to refer rather to the position of that island between England, Scotland, and Ireland, than to its triangular shape. The tri-skelion of Lycia is made up of three cocks’ heads, a proof, added to that presented by the cock portrayed on “the Harpy Monument” at Xanthus, that in the fifth century B.C. this exclusively Indian bird had already reached the Mediterranean Sea. But on the coins of Sicily and of the Isle of Man the tri-skelion consists of three human legs of an identical pattern, excepting that those of the latter island are spurred. This form of tri-skelion is borne on the arms of several old English families, and it was in all probability first introduced into this country by some Crusader returning from the East by way of Sicily. Then there is the history of the migration of the symbol of the “double-headed eagle.” It is now borne on the arms of Austria and Russia, and, as a type of the Garuda bird, is to be found everywhere in Southern India: on the temple sculptures, in carved wood, on embroidered printed, and woven cloths, and on amulets. Also the cherubim guarding “the tree of life” on the modern Syrian amulet of silver, presented by Sir G. Birdwood to Count Goblet d’Alviella, and figured by him at p. 249, are distinctly modelled on the traditional type of the “double-headed eagle.” It first appears on the so-called Hittite sculptures at Eyuk, the ancient Pteria, in Phrygia. In 1217 it is seen on the coins and standards of the Turcoman conquerors of Asia Minor; and H. de Hell, in his “Voyage en Turquie et en Perse,” reproduces (plate xlii.) a variant of it from the walls of their old fortress at Diarbekr. Now it was in 1227—28 that the Emperor Frederick II. undertook the sixth Crusade, landing at Acre in the latter year, and being crowned King of Jerusalem in 1229; and within thirty years from these dates we find the symbol struck on the coins of the Flemish princes, such as Otho, Count of Gueldres, Arnold, Count of Looz, and Robert de Throuette, Bishop of Liège. About 100 years later, in 1345, it for the first time replaced the
THE MIGRATION OF SYMBOLS.

single-headed eagle on the armorial bearings of the Holy Roman Empire.

The *tri-skelion* is but a modification of the *gammadion* or "fylfot-cross," the *svastika* of the Hindus. The latter was long ago suspected by Edward Thomas to be a sun symbol; but this was not positively proved until Mr. Percy Gardner found a coin of the ancient city of Mesembria in Thrace stamped with a *gammadion* bearing within its open centre an image of the sun—Mesembria meaning the city of "Mid-day," and this name being figured on some of its coins by the decisive legend $\text{MES} \quad \text{E}$! Such a discovery makes one of the "fairy tales of science," and inspires the sequestered student of "the days of old, the years of ancient times," with the perennial hope that is the highest refreshment of all labour. The *gammadion* has travelled further afield than any other symbol of antiquity; and from Iceland, which it reached in the ninth century A.D., and Thibet and Japan between the third and eighth, and China, Persia, North Africa, France, Germany, Scandinavia, and the British Isles between the second century A.D. and the second B.C., and India and Sicily between the third and fourth centuries B.C., and Asia Minor and Greece between the sixth and twelfth centuries B.C., Count Goblet d'Alviella traces it back at last to the Troad as the cradle of its birth, some time anterior to the thirteenth century B.C. The Winged Sun, "the Sun of righteousness with healing in its wings" (Malachi iv. 2), is another symbol that has wandered under various modifications into every part of the Old World, until it appears over the doors of the Secretary of State's room at the India Office, reduced to a circle, with two appended flowing ribbons, representing the two *urceus* snakes of the original Egyptian Winged Sun, the *urim-thummim* jewel attached to the divining zodiacal "breastplate" of Aaron.

One of the strangest results of the critical study of these symbols is the establishment of their essential paucity. They undergo, alike through degradation and exaltation, and a sort of ceaseless interfusion also, infinite permutations of both type and meaning, but in their original forms they are found to be remarkably few. They were at first but the obvious ideographs of the phenomena of nature that made the deepest religious impression on primitive man, such as the outstretched heaven above and the outspread earth beneath, both of which were naturally divided into four quarters—the east, facing him, as he watched anxiously for the returning sun, the south on his right, the west at his back, and the north on his left; and this fourfold heaven and earth he symbolised by a circle or square divided crossways, from which he was led to conceive of a heavenly paradise watered by four rivers, and of a four-square "heavenly city," and gradually to model in their similitude the four-square cities of antiquity, and those four-square, well-watered gardens the ground plan of which yet survives in many parts of modern India. Then came the observation of the daily miracle of the phenomena
of human and animal and vegetable reproduction, expressed at first, as still in India, by the most directly realistic symbolism, and afterward by the lotus flower, the date palm, and other conspicuously phallic flowers and trees; and that the symbolical "Tree of Life" of the ancient Assyrians and Babylonians is, indeed, but a conventionalised representation of the date palm, is sufficiently shown by the descriptions given of the ornaments of the temple of Ezekiel's vision, chap. xli. 18; "And it was made with cherubim and palm trees, so that a palm tree was between a cherub and a cherub." And again of the south gate of the temple it is written, chap. xl. 26: "And there were seven steps to go up to it, and the arches thereof were before them: and it had palm trees, one on this side, and another on that, upon the posts thereof." These are exact descriptions of the architectural decoration of the temples and palaces of Babylon and Nineveh. But beside the sun and moon, the planets of the ancient astronomers came slowly into the observation of archaic man, and the whole universe was perceived to be full of life, which he now symbolised as a "Holy Mountain," and a cosmical palm, deep rooted in this earth—"the garden of Eden" of the Semitic races—and lifting up its laden branches of clustered dates to the highest heavens; and again he symbolised the universe by a virgin mother. Everywhere he saw creative force in operation, and everywhere adopted the most homely exponents of that force as the visible and material symbols of the invisible spiritual creator, or creators, in whose express image he postulated that the worlds were made. It was in this ingenuous, unaffected spirit that the Semitic nations named their phallic stone, or phallic tree, beth-el, the "house of God," or simply el, the Godhead's self. Ashtaroth was symbolised by the phallic Cupressus semper virens, one of the original "arbores vitae"; and from it are derived not only the pyramidal figures of her in Phœnician sculptures, but the stiff cypress-like representations on the democratic jewellery in Southern Europe of the Blessed Virgin, to whom we have also consecrated, since the sixteenth century, the American "arbor vitae," Thuja occidentale.

At every page we have similar pertinent exemplifications of "the long results of time," worked out with rare scholarship, conscientiousness, and enthusiasm, and with that clearness of literary exposition for which Count Goblet d'Alviella is distinguished. His book is, therefore, likely to be as welcome to the general reader as to the specialist. We wish, however, to particularly recommend it to the earnest attention of the students of ornamental art, for it is a book which, like Husenbeth's "Emblems of the Saints in Art," should always be with them. Beauty in decoration should never be sacrificed to symbolism, but it is enhanced by being symbolical; while to use these ancient symbols irrespective of their significance is to make nonsense of any artistic composition, and is, in reality, as offensive a solecism as the use of fine words by ignorant and pretentious people without an adequate knowledge of their meaning and etymology.
I rejoice to see Mrs. Sheppard's article on Woman's Work in India in the Indian Magazine & Review for August, coming as it does, soon after the appearance of the Hon. Mrs. Lyttelton's article in the pages of the New Review for June, which has been noticed by Mrs. Knight in the same number of this Magazine. On reading Mrs. Sheppard's contribution, I have been tempted to write these few lines. If India possessed even a few hundred ladies of Mrs. Sheppard's noble views and wishes, how soon and how greatly would the aspect of the whole of the social fabric in that country be changed, and how greatly strengthened the power of British rule in India would be! I firmly believe that the stability of British rule in that vast continent will, for the future, depend immensely on the attitude of the Europeans towards the Indians (I mean, not the political, but the social attitude); with the immense progress which English education, in every sense of the word, has made in the latter days of British rule in India. The good feeling between the rulers and the ruled cannot now be maintained with the "strong hand" of military despotism; it will have to be maintained by a policy of conciliation; and as the Indians have hitherto been held in check by the unsocial attitude of the Europeans resident in India, the overtures for this policy must now proceed from the ruling race. I venture to make the latter observation from my personal knowledge of English life in India—a knowledge which I am rather sorry to be able to say, only very, very few Indian gentlemen have the opportunity to gain, while residing at stations composed exclusively of European residents. When I say this I do not, for a moment, wish to suggest that this attitude of coldness and distance by the rulers towards the ruled, has been without its reason. Residence for a short period in this most enlightened country (England), and the few opportunities I am having of seeing English life in England, have greatly strengthened my views that European life as lived in India (with reference to social intercourse with the Indians) has its justification. But, I venture to submit, the time has now come when these
great barriers (prejudice on the score of tint of skin and of social inequality between the two nations) will have to be removed by the hand of conciliation. The circumstances that brought about these prejudices do not now exist to the extent that they did many years back. The hand of co-operation and sympathy with the now better educated Indians must be more freely extended in India. Perhaps to suggest a closer tie of friendship (socially speaking) would be asking for too much at this stage; but, at least, it is time a very fair beginning on a less restricted scale was made. I freely admit, and I hope all who have been to England, and have tasted the hospitality of the British, will unhesitatingly join me in the admission—that India is, undoubtedly, backward in matters social (leaving aside matters educational and political). When I say this, of course I am taking class for class—the aristocracy, the middle, and the lower classes—of India as compared with those in England. Without meaning to be censorious, I venture to say that this backwardness—the fault for this state of affairs in India—is due partly to the rulers of India as well as to its people themselves. If the British in India had taken the Indians by the hand years ago, and educated them by adopting a less restricted social intercourse, the social aspect of that country would by this time have changed enormously. It has been the cold, haughty demeanour of the rulers in days gone by, and—it pains me to have to say so—in the present day, which has not only kept the people socially illiterate, but which is now, unfortunately, beginning to alienate them from their rulers. Of course, there are favourable exceptions, as Mrs. Sheppard's details show.

M. M. Murzban.
THE POLYTECHNIC SCHOOL (POLYTECHNIKUM) OF ZÜRICH.

The Polytechnic Institute at Zürich is a grand institution of its kind. It is one of the largest and best in Europe. I should think in some of its departments it is the most complete that exists. I have seen Owens College, Manchester, though hurriedly, and I have read something about the technical schools in Germany, but I do not think that these come up to the Zürich Polytechnic School. Owens College is celebrated, owing to Professor Roscoe, for the facilities it affords for the study of Chemistry, both theoretical and applied, but I do not think the Zürich Institute can be beaten in comparison. Such a large Institution, representing an immense outlay of public funds, cannot have been the work of caprice on the part of an individual, or of a corporate body, nor is it intended to serve only as an ornament to the town. It meets a real want, one that was keenly felt by the Swiss people, of an institution thoroughly equipped with the appliances of modern scientific education; and the colossal funds which they have voted for the creation and maintenance of the Institute testify to their earnestness in satisfying the want. They felt that they needed a National College for superior technical instruction, and they set about the task of securing such a College in no half-hearted manner.

At first the idea was to establish a Swiss University and a Polytechnic School, but the project of a University dropped, and the Polytechnic School alone was created. The idea then was to limit the scope of the Polytechnic School to (1) Civil Engineering, (2) Mechanical Engineering, and (3) Technical or Applied Chemistry; but, the scheme of a University having fallen through, it was thought necessary to extend the scope of the Polytechnic School by the addition of the studies of Architecture, Sylviculture, and of a course of liberal education—viz., Political History, Literature and the History of Art, Political Economy, Pure Mathematics, Natural Science,
and Public Law. The School was also intended to train teachers for Technical Instruction.

From remote times public instruction in Switzerland has been regarded as the concern exclusively of each separate Canton for its own population. There was no desire for co-operation or a collective provision for superior or higher class education, whether theoretical or practical; but such a desire arose in the course of time, and the Polytechnic School—the only educational institution maintained by the Swiss Confederation—is the outcome of that desire. Switzerland has never been a rich country, and the rigour of its climate and the poverty of its soil have always exacted from the inhabitants a life of patient industry and unflinching perseverance; but in these days of fierce struggle for existence, the children of Switzerland cannot afford to do without a sound intellectual culture and a thorough knowledge of the technical arts: "L'époque actuelle a besoin de techniciens très cultivés et fortement préparés. Elle a besoin de spécialistes qui apportent à un haut degré dans la solution des problèmes techniques une intelligence développée par la science. Notre École se propose d'en former."

Great importance is attached in the curriculum of the School to practical training: "L'Ecole ne veut pas seulement former ses élèves dans les salles de cours et les salles de dessin; elle desire qu'ils travaillent dans les laboratoires et dans les champs, où ils peuvent au moyen d'observations et d'expériences personnelles se familiariser avec la réalité." To promote this object nothing is spared. Large sums of money have been expended in setting up laboratories for chemical and physical research. There is an Observatory attached, and each department has its Library and Museum. One finds, also, model farms in connexion with Agriculture, Forestry and the testing of seeds.

The Departments of study are as follows:

1. Architecture, 3½ years. 2. Civil Engineering, 3½ years. 3. Mechanical Engineering, 3½ years. 4. Applied Chemistry (including Pharmaceutical Chemistry), 3 years. 5. (a) Agriculture, 2½ years; (b) Forestry, 3 years. 6. Normal class for Mathematics and Natural Sciences, for those who wish to follow the profession of teachers. 7. Moral and Political Sciences (or Liberal Arts).

The above Departments together form the Polytechnic School. Each has a set of rooms for lectures, Laboratories or practising rooms, Libraries and collections of objects, or
Museums,* and each also a complete staff of Professors and Assistant Professors and other necessary teachers.

To some of the Departments there are other Institutions attached. These work in connexion with them, but are under separate direction and administration. They are:

(a) The Federal Institute for testing the materials of construction. [This Institute is attached to the first three Departments mentioned above.] (b) The Central Station of experiments in Forestry is attached to the Department 5 (b). (c) The Federal Station of Agricultural Experiments is attached to the Department of Agriculture and comprises (1) The Station of experiments of Agricultural Chemistry. (2) The Station for the Control of seeds. Lastly, there is the Central Station of Meteorology, which is not quite so directly connected with the Polytechnic School as are the other Institutions above enumerated.

The names of the above Departments of study indicate their scope, I think, sufficiently clearly. How the end stated above—viz., of imparting a practical technical education combined with scientific culture—is attained, can be best seen by reference to the course of lectures announced in any one year and the subjects treated in that period of time. For instance, at pages† 10—17 of the programme of studies for the year 1891-92, we find the names of the professors and the subjects on which they


† Vide also statement of lectures given in the winter and summer sessions of 1887-88, page 13 of the book “L'Ecole Polytechnique Fédérale.”
proposed to lecture in that year; also a reference to article 5 of the Regulation of 14 July 1873, will give a complete idea of the subjects of study prescribed under each of the above heads. The subjects belong to the higher sphere of thought and learning, and the range covered by them is extensive. The School, it will thus be evident, is not a mere ordinary school of technical handicrafts, but a colossal college of higher technical science. It also aims at meeting the ever-growing wants in technical matters of the country in regard to its industries. It is hardly needful to state that the Polytechnic school of Zürich differs from a University in this, that it devotes full attention to the practical and technical portion of the subjects it undertakes to teach, though not to the exclusion of theory, to which it attaches no less importance in its curriculum. A University limits its efforts more exclusively to the latter aspect of the subjects it teaches.

To the list of studies mentioned above a quite separate set—viz., of Military Science—is added, and an idea may be gathered of the quality of work insisted on in this branch of study when it is stated that in 1891-92 the subjects of lecture were: (1) general theory of arms; (2) permanent fortifications; (3) the scope of infantry—theory and practice; (4) Reconnaissances; (5) Interior Ballistic, and (6) History of war, combined with tactics.

The President of the School (Colonel Blenler), who was so extremely kind as to personally show me over all the several Departments, assured me that no distinction of nationality was made in the admission of students to any of the above branches of study, including the classes for military science. This fact is worthy of note.

I need not attempt a description of the minute care bestowed in fitting up each Laboratory with the latest appliances of scientific study. Suffice it to say, that no pains are spared and no funds stinted to make each Department complete, as far as possible. For the organisation of the School, for the collection of materials and appliances, for increase to old establishments or the creation of new ones, for new buildings, &c., the Confederation has voted, from time to time, various sums, the total of which exceeds four million francs.

The annual expenditure of the School is about eight hundred thousand francs, and is growing every year. [I wanted details of the annual expenditure for each Department separately, but I was told that no such details were kept.] All the buildings of the different Departments are
very close to one another—a circumstance which very much tends to the convenience both of the students and of the administration.

The Professors, Assistant-Professors, and the Teaching Staff, are very carefully selected. The Professors are appointed for ten years at a time, and some are elected for life; but all are under the obligation of giving “a sufficient number of lectures,” and are always under the necessity of showing themselves deserving of re-election by the quality of their work. Some of the Professors are eminent men of European reputation, well-known for original research. Every facility is afforded for original research to all the students, and eminent men from other countries also come, and are allowed access to the Laboratories for this purpose.

As may be gathered from the above description of the school curriculum, the school aims at a very high proficiency in practical sciences. It grants a diploma* to such of the students as complete their studies to the satisfaction of the school authorities in all the examinations.

To obtain the diploma is no easy matter. One has to go through a very hard course of study and to pass strict examinations, written and oral. The diploma is the highest testimony to a man's work and worth as exhibited in his course at the school; and every care is taken by the professors that it is conferred on the students who deserve it, and on no others. Not every one who goes out of the school can hope to obtain the diploma, for it is the highest certificate of the scientific and technical capacity of the student who wins it. It shows that the student on whom it is conferred is capable of exercising the profession for which he underwent preparation at the School. It is intended to be a well-deserved distinction. There are prizes and rewards attached to the school, also scholarships and free studentships are awarded. Great care is taken to encourage merit and stimulate industry and application in the student, as well as to eliminate from the classes students who will not profit by their stay at the School. No student who gets plucked twice at any one of the examinations continuously is allowed to attend the School. He is regarded as a bad boy, whose infection should not spread to the others.

* Diplomas are granted in each of the following subjects: (1) Architecture; (2) Civil Engineering; (3) Mechanical Engineering; (4) Chemistry or Pharmacy; (5) Agriculture; (6) Forestry; (7) Mathematics or Physics.
Discipline is maintained and insisted on in the school. (Vide Regulations—articles 28 to 34.) But the school does not admit boarders, and, consequently, does not profess to exercise the strict supervision over its students in morals and general good social behaviour, which some of the schools elsewhere offer to do, with, or mostly without, appreciable success.

There is an entrance examination held every year for admission to the school; but it is not necessary that every intending student should pass it. The Professors can exempt any student—wholly or partially—from appearance at this examination, if the students hold a certificate from a recognised preparatory school, showing proficiency in all or some of the subjects in which they would otherwise have to be examined. Students must be eighteen years of age before they can be admitted, though exceptions—very rare—are made in favour of students of younger age who can satisfy the Professors regarding their proficiency (maturité) in certain or all of the subjects.

But there are two kinds of students: (1) Regular students and (2) Auditors. The latter may, under certain rules, attend lectures in particular sections if they wish to perfect their knowledge in any subject. Men of mature age who have previously devoted themselves to the practical working of professions, such, for instance, as agriculture, can be admitted to the benefits of the lectures and laboratory practice in the School and are allowed facilities to carry on their studies.

Considering the advantages offered, the fees cannot be considered unreasonable or heavy—viz., 100 frs. per annum for use of Library and Lecture-room. To this must be added a fee of five frs. on an average for a course of lectures given by Professors or private Tutors at the School. Including the above fees and the cost of living at Zürich, an Indian student would be very well provided if he were granted about £15 per month, or about, say, 3,700 francs at the outside, per annum.

In the year 1890-91 there were 676 regular students in the several branches as follows:—

<table>
<thead>
<tr>
<th>Subject</th>
<th>Swiss</th>
<th>Foreigners</th>
<th>Tot.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Architecture</td>
<td>28</td>
<td>16</td>
<td>44</td>
</tr>
<tr>
<td>2. Civil Engineering</td>
<td>65</td>
<td>105</td>
<td>170</td>
</tr>
<tr>
<td>3. Mechanical Engineering</td>
<td>104</td>
<td>106</td>
<td>210</td>
</tr>
<tr>
<td>4. Applied Chemistry</td>
<td>58</td>
<td>100</td>
<td>158</td>
</tr>
</tbody>
</table>

Students:
THE POLYTECHNIC SCHOOL OF ZURICH.

Students:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Swiss</th>
<th>Foreigners</th>
<th>Tot.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Forestry</td>
<td>18</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>6. Agriculture</td>
<td>26</td>
<td>12</td>
<td>38</td>
</tr>
<tr>
<td>7. Normal classes</td>
<td>29</td>
<td>7</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>328</td>
<td>348</td>
<td>676</td>
</tr>
</tbody>
</table>

The two branches of Engineering, and Applied Chemistry, seem to attract the majority of students, and of the 348 foreigners, 311 were students of these three branches. This is remarkable.

As stated above, I went over nearly all the rooms of the School. I am not an expert in matters of technical education, but yet I think I may state that it did not strike me that the Agriculture and Forestry Departments were so well provided as to equal, not to say excel, similar Departments elsewhere. The School of Forestry at Nancy in France has a reputation not inferior—certainly, superior—to the Forestry Branch here; and I think the College of Agriculture at Cirencester in England will be able to hold its own with regard to teaching in its special branch with the Zürich Polytechnikum. I do not think, moreover, that the College of Science at Poona will suffer in comparison with the Polytechnikum in regard to the studies of Architecture and Civil Engineering; but in Mechanical Engineering and applied Chemistry and Physics, the Polytechnikum will brook no comparison. The teaching in these branches is most efficient, and work by students in the Laboratories is insisted on and encouraged. This circumstance is calculated to make the students thorough in their grasp of the subjects and confident in the practical application of the principles taught to them, while at the same time it brings originality into full play. The Laboratories attached to these Departments are in every respect perfect, and are of two kinds—for practice only and for research. The advanced students are allowed to join in the original researches on which the Professors are engaged, and are thus trained to carry on some of the most difficult investigations; so that, when they leave the School, they go out into the world thoroughly well-trained, not only to take up the ordinary duties of practical mechanical Engineers or Electricians, but possessed of the training and knowledge to carry on original study. All the uses of electricity, the science of photography, analytic chemistry, assaying, geology, and several other connected
subjects are taught in such a manner that the students acquire a thorough grasp of them. We have in India no College or any other Establishment where, for instance, dyeing and the nature and application of colouring matters, and the making of textile fabrics, are taught exactly as if in a workshop. Our Medical College at Bombay does not offer to train young men as practical druggists; and no country stands in greater need than Gujerat of an institution similar to that at Zürich for the testing and selection of seeds.

I think I have noted the principal special features of the Institute. It is one of undoubted utility to Switzerland in particular, and to other countries also. As an institution which charges its professors to be constantly working at original scientific research it is unequalled, and is unquestionably useful to the whole world.

The question most natural to ask is, Can we set up such an institution at Baroda? My answer would be that, by spreading the necessary expenditure over about a quarter of a century, we could create such an Institute, and that we need not be disappointed if we do not find, as is probable, that the people take much serious interest in it at first. But I think once such an institution is set up it will gradually vindicate its existence by attracting a respectable number of young men to study the higher branches of technical science. The desire, I think, is felt, though feebly at present, in India for Technical Education.

A visit to the industrial centres of England and of other European countries shows at once to the intelligent observer where our defects in this respect are: I think these defects are principally due (1) To want of primary education in the lower classes which would make them better workmen; and (2) To want of technical knowledge in the middle classes. The latter classes, I think, have not yet had the opportunity of fitting themselves to take their proper position with regard to the material development of India. In spite of this stolid apathy to technical education, I am certain, if advantages such as those which will follow the creation of a Technical Institute were offered, there would be a remarkable turn given to the energies and aspirations of the young men, who now only pine for a small office, and allow themselves to waste and vegetate. The scope for the employment of young men trained in superior technical instruction is daily extending in India. The railways and the spinning factories are a ready field. Then, the several uses to which electricity will be sub-
mitted demand trained electric engineers and elec­
tro­
tech­ni­cians. The calico-painting, dyeing, and colouring
Industries, the work of the druggist and practical chemist
are awaiting the attention they deserve at the hands of
Indian gentlemen. It is needless to add to the list. To
my mind there is no doubt that a technical institution is
a want seriously felt in India.

I would not, however, advise the attempt to set up the
Zürich Polytechnikum at Baroda in all its branches. I
think Bombay being the centre of mechanical Industry in
that part of India, the Victoria Technical Institute may be
left to develop itself into a full-grown Institute for the
practical training in higher Mechanical Engineering. The
Science College of Poona may in time grow into a complete
Civil Engineering College, which name it had and has
only recently abandoned. Practical Architecture also
belongs naturally to the latter institution. The College
at Baroda is working in connexion with the University
of Bombay in respect to Arts and some Branches of
Science. I think the Science Department of the Baroda
College may, by a steady policy, be so endowed both
in money and men as to be in every sense of the term
a College for Technical or Applied Chemistry in all
its Departments, as organised at Zürich. We have
already Agricultural Classes in the Baroda College.
These may be developed into an Agricultural School;
and the Department of Forestry added to the existing
Forest Department at Baroda; that is to say, the four Branches of (1) Applied Chemistry, with all the
subordinate and accessory subjects, as now taught at
Zürich, (2) Agriculture, (3) Forestry, and (4) Moral and
Political Sciences with Pure Mathematics, may all be taken
up at Baroda and specialised. There are already
beginnings made in all except Forestry, and it only
requires to be stated, as a matter of settled policy, that
these branches of study will be developed as departments
of Higher Technical Studies. To further that object, in
spite of disappointment in respect of attendance of
students, a stated sum of money must be sanctioned for
fitting up suitable Laboratories, a Museum for each
branch, and providing instruments of the latest patterns.
Separate buildings when necessary may also be provided,
as accessories to the present College. In the course of
time a high-class institution will thus grow up, the teaching
of which should command respect; and the Diploma of
the Baroda Technical University may (and ought to) be
regarded as a high-class Certificate for proficiency in the above branches of study.

Such an institution will be a permanent monument of its Donor. I think that the division of studies between Bombay, Poona, and Baroda, which I have above suggested, is really not a division, but a kind of cooperation. Each place will thus devote all its energies to its particular department, and, as much as possible, specialise itself for those studies. The financial resources of each will be better concentrated on special studies instead of being frittered away, as at present, on too many varieties of studies. This kind of cooperation may be carried to a further point in Gujerat. At present there are three Arts Colleges in that Province—viz., at Baroda, at Ahmedabad, and at Bhownagger. All three are working in connexion with the Bombay University. To a certain extent it is desirable that they should continue to work so, but what suggests itself as a very useful and, on that account, desirable change is that these three Colleges may well co-operate, so to say, in specialising their Art studies. Ahmedabad, for instance, may make a speciality of Sanskrit and Literature; Bhownagger of Pure Mathematics; and Baroda of Philosophy and the Natural Sciences. Such a division ought, I think, to tend to much desirable economy, and to the husbanding of the energies and resources of each College, with a view to their more effective application to the encouragement of special studies. One example may be taken for supposition. We have now three Professors of, say, Mathematics. Let us suppose that their collective pay comes to Rs. 1,200. We can have for that sum, if not for less, a really first-class Cambridge man, who will devote all his energies to the work before him, instead of three average men, who must at the same time always grumble that they are not well-paid.

I need not, however, seem to wander from the subject. My opinion is that the present Baroda College is well suited to develop partially into a kind of Polytechnikum, such as they have at Zürich. I earnestly believe that such an Institution will be fruitful of beneficial results, not only to Baroda, not only to Gujerat, but to several other parts of India, just in the same manner as the Zürich Polytechnikum has become the resort of students from all the countries of Europe, and of some even from America.

I think the high school of Baroda may be separated from the College. It may be assigned by-and-by a separate
location, and to the College Department may be assigned an independent existence with the above branches of study considerably enlarged. And without meaning a reflection upon the present professorial staff, I think some of the principles of selection of the Zürich Polytechnikum may be adopted, and a set of rules may be framed with the object of ensuring professorial work both in quantity and quality adequate to the outlay. The rule for appointing professors for ten years only but re-eligible, appears to be a commendable one; and under it, as I am informed, no Professor has yet been dismissed after the close of his decimal period. This is, I think, only a proof of the excellence of the rule, if it promotes industry and research on the part of the Professors in order to merit re-election.

At the same time, I think a few young men may be sent from time to time to pass through the course of the Zürich Polytechnikum. Those selected must have previously undergone a certain training in the special branches for which they may be intended. Such young men will come into contact with the celebrated Professors of the Polytechnikum, and will receive the special advantage of being trained for original research. They will acquire knowledge, so to say, at first-hand, and will have opportunities of acquiring the training which they do not get at present in India, and of thinking out the solution of problems for themselves. The latter is a particularly strong point in the method of teaching adopted at the Polytechnikum.

V. M. SAMARTH.

Switzerland.
EURASIAN PROGRESS.

We have received the Fifteenth Report of the Eurasian & Anglo-Indian Association, which has its head-quarters at Calcutta, and aims, as its general object, at promoting the social, moral and intellectual advancement of all Eurasians and Europeans residing in India, protecting their rights and position, and furthering their common interests. The Association has done valuable work in urging upon Government the claims of this now large and too neglected community, and we are glad to observe that the Lieut.-Governor of Bengal is its Patron. The directors have facilitated the admission of Indo-Europeans into the Medical, the Pilot and the Railway Services, the Opium Department, and the Rurki College for Civil Engineering; they have established a Family Benefit Fund, which numbers 627 members, and an Employment Register; they have secured means of education for promising students; and they were successful, in conjunction with the District Charitable Society, in obtaining from the Local Government sanction for the appointment of a Commission to enquire into the causes of the extreme poverty of a large class of the Eurasian residents in Calcutta. Since January 1891, a monthly magazine, called the Eurasian & Anglo-Indian Recorder, has been undertaken for the advocacy of the interests of the community. The present Hon. Treasurer is Mr. Dissent, under whose management the finances, notwithstanding additional expenditure, have improved during the year. The existence of this Association and the earnestness of the directors, show that an independent spirit is not absent from the Eurasian body, and we sincerely hope that, through increased individual development and widened opportunities, its members will be able by degrees to take a higher stand in all lines of life and activity.
THE WIDOWS’ HOME AT BARANAGAR.

The Indian Daily News of July 19th, referring to the progress of education in Bengal, makes the following remarks in regard to Mr. and Mrs. Banerjee’s admirable Training School and Home for Widows. We have much satisfaction in calling attention to the article:

The next departure should be in the direction of primary education for the people. If the country is to advance, the body and the tail must move as well as the head. And for the full purpose of education the two halves of the community must be educated. The “better half” has hitherto been strangely neglected; but there are some indications of movement in that direction. Educated men will not mate satisfactorily with ignorant wives, and the movement must go on. The danger is not of its going on too quickly, for the feeling in this respect is strongly conservative. Here and there we see departures from routine or the accepted order of things. An instance occurs in the institution of Baranagar, where on Saturday last a very interesting ceremony took place in a quiet way by the distribution of prizes to the inmates of the Female Boarding School and Hindu Widows’ Home. Mrs. Colquhoun Grant, Hon. Secretary of the National Indian Association, presided. The Hall was tastefully decorated with flowers and leaves, and the girls and widows showed by their cheerful faces how happy they felt in their hearts in being under the parental care of Mr. and Mrs. Sasipada Banerjee. The occasion was not made public, and the managers were wise in not doing so, for the country is not yet prepared to make a show of their ladies; and as the school is a new departure in the educational policy of the country, and as it is the first attempt to train up Hindu widows with a view of sending them out as teachers, it would be very desirable to train them in such a manner that their services will not appear foreign to the taste and feelings of the people, but will be accepted as quite natural to the country. Reformation seasoned by such careful considerations take root, and will make its influence felt. How much labour and energy are lost for want of such consideration! We can quite understand that the attempt
to make the Institution national may not be readily appreciated in the beginning, but it will be seen from five years' experience that the work is beginning to be appreciated, which is a great step gained. It is not surprising that the country should be slow to help it, for it must be appreciated before people will give it their support....

The first Hindu widow admitted in the Baranagar Institution was on the 2nd February 1888, and in these five years, though the work has not made very rapid progress, it is no small satisfaction to see that the influence of the novel experiment has been felt far and wide in the country. Girls have come to the Home from Calcutta, 24 Pergunnahs, Hooghly, Burdwan, Pubna, Faridpur, Barisal, Mymensingh, Sylhet, &c., and every year the number of Hindu widows is increasing. That the influence (however small) of the new current is not merely on the surface of Hindu society may be inferred from the fact that married Hindu ladies from the Zenana and of position now and then pay private visits to the Home, with a view to see for themselves how it was managed, and on one occasion they were so pleased with it that they sent some pecuniary help. These little matters show the real current of the movement.

The line of work and the teaching are also approved by the Government Inspecting Officers, who have in their several visits expressed their satisfaction with the progress shown by the girls. The instruction is not confined to books, but the boarders are taught cooking, sewing, and useful household work. These are movements to be read as signs of the times which it is not wise to disregard.
The Alexandra Native Girls' English Institution Report for 1891-1892 contains a satisfactory account of the progress of this School. Mr. Acworth, C.E., presided at the prize distribution on March 11, and Mrs. Acworth gave away the prizes. The Report was read by the Honorary Secretary, Mr. J. C. Cama. Last year, for the first time, pupils were sent up for the Bombay Matriculation Examination, when five out of eight passed. This year, five were sent up, and three passed—a good proportion. It is interesting to learn that all these three, Navajbai Manekjee Mehta, Sunabai Beramjee Gazdar, and Jaijee Burjorjee Spencer, are utilising their attainments by undertaking further study in practical work. Miss Mehta has joined the Grant Medical College, for medical study, Miss Gazdar the Wilson College, and Miss Spencer has become teacher of Mathematics in Mrs. Nanabhai's Girls' School. The reports of the various Examiners bear testimony to the care of the teachers and to the industry of the girls, while the continued supervision exercised by Miss S. Manockjee Cursetjee, daughter of the founder, has an admirable influence upon the School.

We are glad to learn that the Maharani of Kuch Behar, who has been for some time out of health, is now much better. After visiting Ceylon and Bombay, Her Highness has been staying for a time at the Hill Sanitarium, Darjeeling.

Khan Bahadur Cowasjee Jamsetjee Lalcaca, who has had much experience in Post Office service, has been appointed Deputy Postmaster General of Eastern Bengal. It has been stated that he is the first Parsee appointed to such a well-paid and honourable place in the Post Office, but Mr. J. J. Badshah has long held a higher appointment, we believe, in the North West Provinces.

We have before referred to the Stewart Tannery and Leather Factory at Agra, founded by two Brahmin brothers three years ago. It is satisfactory to find from the latest annual report that the Factory is in a flourishing condition. Lord Roberts gives it his patronage, and it has already received contracts for the Military Departments. The Tribune observes that "it requires a good deal of courage for a Brahmin to engage in the leather trade without being ashamed of it." The management is entirely Indian.

We have received a Classified Catalogue of the English books in the Shri Sayaji Library at Baroda, which has been founded for
the use of the public by Shrimant Sampatratu R. Gaikwad, brother of H.H. the Gaikwar. The English Department consists of an Oriental collection, including books of reference, and Oriental books of Description, History, Sociology, Theology, Philosophy, Literature and Philology, useful and Fine Arts, Sports, &c., and also a large general collection arranged in the same manner. The Catalogue makes a thick volume, and there seems to have been much judgment shown in the selection. Besides English books, there are a number of books in Sanskrit, Marathi and Gujarathi, a catalogue of which is in the press. Shrimant Ganpatratu Gaikwad, another relative, who studied for the Bar while in England, is President of the Library Committee, which advises the Librarian in matters of difficulty, and helps him to enforce the strict observance of the rules that have been formed. Shrimant Sampatratu takes great interest in educational matters, and this Free Library, which he has established at a large expense, will help to develop mental culture at Baroda; also it will prove invaluable as a mine of information for those who are engaged in research.

We have the satisfaction to state that Shrimant Sampatratu Gaikwad has constituted himself a Life Member of the National Indian Association. He has been lately elected one of its Vice-Presidents. Rajashri V. M. Samarth, Chief Officer to H.H. the Gaikwad, who has described the Polytechnic Institute at Zurich in this number of our Magazine, has also become a Life Member.

We regret to have to record the death, after a long illness, of Dr. Forbes Watson. He joined the Bombay Medical Service in 1850, but was compelled by ill health to return to England after three years. He then devoted his attention to sanitary matters, and at his suggestion the Court of Directors appointed a commission to inquire into the nutritive value of the food grains of India, and the feeding of troops at sea. Dr. Forbes Watson was later appointed, by Lord Derby, Reporter on the Products of India, and Director of the India Museum, and in this capacity he became much connected with the Indian Departments of the various International Exhibitions, beginning with that of 1862, in London. He wrote frequently upon the true functions and scientific value of Exhibitions. The Times thus concludes a notice of Dr. Forbes Watson: "As a man, Dr. Forbes Watson was remarkable for his kindness of heart, engaging manners, and untiring energy, and the work he accomplished in promoting trade between India and England is great and enduring."

Lord Reay opened, on June 4th, at Edinburgh, the Sciennes Public School, which was recently erected under the Edinburgh School Board. The company assembled first in the infant department, where the scholars sang
several songs, and illustrated the Kindergarten games, under the direction of their teachers. Lord Reay was then conducted over the building to inspect the class-rooms, gymnasium, and swimming bath. After a musical performance by the pupils of the higher classes, the Chairman of the Board detailed some facts about the school, which has accommodation for 1,750 children. It seems that it is built on the site of an old convent, which was named after St. Catherine of Sienna, hence the rather peculiar title of the school. Lord Reay congratulated the ladies and gentlemen of the Edinburgh School Board on the noble building which they had erected. He referred to the great importance of secondary schools, and explained his views as to the subjects which should be taught in such schools. The Sciennes School, where they had met, was a Primary School, but it could easily add on a secondary department, and in Scotland "the traditional love of education had created a general dislike to any system which would draw a hard and fast line between Primary and Secondary Schools." There were plenty of facilities for secondary education of a classical type. The Secondary School that he had in view would discard classics, and would give "the best preparation for the struggle of life for those who had to engage early in that struggle. Science, modern languages, history, and political economy would be the essentials of such education. He would especially cultivate the patriotic instincts of children by reminding them of the self-sacrifice and the noble deeds of their ancestors. Evening Schools and Day Industrial Schools were also very important links in the chain of education. At the banquet given to Lord Reay, he referred to the graded system of education in India, which had been accepted by all classes of their countrymen, native as well as English, as a very satisfactory development of education.
PERSONAL INTELLIGENCE.

Her Majesty has conferred on Her Highness the Maharani Chimnabai Saheb of Baroda the Imperial Order of the Crown of India. We regret that last month we made an error as to her Highness's name, writing Jumnabai for Chimnabai.

The Queen has conferred a similar honour on H.H. Lady Nundkooverbai Bhugvut Sinh Jareja, Rani Sahib of Gondal.

Mr. M. M. Bhownaggree, C.I.E., was received, prior to his departure for India, at Marlborough House by the Prince of Wales, who desired to mark his appreciation of the active interest taken by the Maharaja of Bhownagger, and by Mr. Bhownaggree himself, in the Imperial Institute.

At an Examination held in July, the Council of Legal Education awarded Certificates to Todar Mal Bhandari and Prabhu Das Singha (Middle Temple); Nehal Chand and Pundit Mohan Lal (Lincoln's Inn).

Mr. Subhan Ali, Student of the Lahore Medical School, Punjab, has been admitted Licentiate of the Royal College of Physicians, London.

The Mahommedan Social & Literary Association, Bombay, held a special meeting on July 7th at the residence of Mr. Abdussathar, to give a reception to Mr. M. P. Srivastava on his return to India after being called to the Bar; Mr. Budruddin Abdulla Koor, J.P., in the chair. A congratulatory address was read by the Hon. Secretary. Mr. Srivastava replied at some length, and after other speeches he was garlanded in the Indian fashion, and the meeting closed.

Arrivals.—Mr. and Mrs. Cowasjee Dinshaw, from Aden; Mr. Khillagar Dhaibar.

Departures.—Mr. and Mrs. Tarachand and daughter; Mr. and Mrs. Jehangir Tarachand; Mr. K. R. Lalkaka, all for Bombay; Tsaw Chey, and Tsaw Loo, sons of the Tsawbwa of Thibaw (one of the Shan States), for Rangoon; Dr. Ramasawmy Iyengar (who will join the Medical Service of the Mysore State), for Bangalore; Mr. M. Ghose, Madras C.S., for Calcutta.