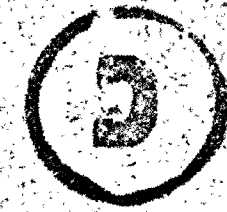


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MADRAS CHRISTIAN COLLEGE
MAGAZINE.

APRIL, 1891.

*THE CHARACTER OF CHRIST: ITS CATHOLICITY
AND COMPLETENESS.*

"If Christ, as thou affirmest, be of men
"Mere man, the first and best—but nothing more,—
"Account Him, for reward of what He was.
"Now and for ever, wretchedest of all.
"For see; Himself conceived of life as love,
"Conceived of love as what must enter in,
"And up, make one with His each soul He loved :

"With me as Pamphylax, with him as John,
"Groom for each bride. Can a mere man do this ?
"Yet Christ saith, this He lived and died to do.
"Call Christ, then, the illimitable God,
"Or lost !"

But 't was Cerinthus that is lost.

R. BROWNING.

EVERY reader of the four gospels finds himself confronted in their pages by a personality that he recognises as quite extraordinary. All educated men who have studied the works of great authors must be familiar with a number of wonderfully delineated characters. A student especially of such a master genius as that of Shakespeare is filled with admiration of the well drawn characters of so great a literary creator. But when we read these simple gospels, totally deficient as they are in literary adornment, admiration is altogether an inadequate word to express the feelings stirred within us by the Grand Person who confronts us there. We are more than astonished : we reverence, and say : Who can this man be ? He is no literary creation. To create such a character was an achievement far beyond the power of earth's most gifted literary genius ; and far more was it beyond the powers of those simple,

plain spoken, plain feeling, unimaginative Galilean peasants. They merely tell in the easiest, simplest language, free from all artifice and elaboration, just what they have seen and heard, without a word of comment or explanation.

We have, depicted in these simple records, a man acknowledged by the universal consent of persons competent to judge, to be one whose character, and personal influence as a teacher, have exerted an unparalleled influence over the affairs of men. We meet in these plain narratives a man who spoke with searching directness and unflinching boldness a most revolutionary message—and that with a quiet authority that commands respect where it does not exact obedience. In the person of Jesus Christ we have a man presented to us who is, in the opinion even of the majority of unbelievers, either the greatest of earth's great ones as a real being, or the most amazing product of literary fiction.

A thinker such as Mr. Mill has remarked that it is inconceivable that the Jesus of the Synoptic Gospels is an ideal creation: because His character is absolutely above the conceptions of His immediate followers and of the early Christian Church. They could not have invented such a man. Now though Mr. Mill and many similarly-minded, regardless of the evidential difficulties that beset their path, would endeavour to eliminate what is called the supernatural element from the person of Jesus Christ, they still cling to the fragment that they so arbitrarily mutilate and pay it homage. They tear the gospels to pieces and then patch them up together after a fashion; and thus having made a new Christ, still find enough of the real Christ left to command their reverence.

We are not left in the dark as to what kind of a Christ the evangelists, or such as they, would have fashioned if thrown on the resources of their own imaginations. The apocryphal gospels give us a very exact idea of the sort of fiction that would have found favour in that age. The spurious gospels, based in many cases on legends in circulation at an unquestionably early date, fill up the gaps in our Lord's life with silly stories and absurd miracles that offend against our better feelings. The real Christ of the genuine gospels is a glorious Christ, a perfect being: while the mythical Christ of the spurious gospels is altogether undignified—and these fiction writers do not add to the truth one single word or act at all conducive to edification or moral elevation. From the early ages of Christianity there arise a real Christ and a fictitious Christ: and we value the latter only as it helps us to appreciate the former.

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We see on the one hand the kind of great Teacher that that age would have created: and on the other hand we see the Christ whom their ideas could not conceive but whom from the very absence of the imaginative faculty in them they could truthfully transcribe. It would be far too difficult a task to endeavour to pourtray from the gospel records a true picture of the perfections of Christ. The various little touches that contribute to the glorious picture are so many that none but the most accomplished artist could tell exactly how the grand final effect is produced. Every little stroke of the pen has helped to contribute to that matchless portrait, and it would obviously be vain labour to attempt to reproduce each minute delicate stroke and touch. To some great salient features alone would I call attention.

Notice to begin with the wonderful humility and the equally amazing self-assertion of Christ. We should have said that such contradictory features could never be combined in one man. No literary artist would have ventured to combine them. But here in Jesus Christ we find them most naturally blended and we exclaim that this can be nothing but the truth. The greatest earthly genius, still less an ignorant and superstitious fanatic, could not have given reality to a character possessing such contradictory elements. He could not have invested it with the appearance of probability: yet here we see it clothed in absolutely convincing truth.

Let us consider for a moment the humility. I will say nothing of the manger and the cross, because some one may say they were not of His choosing. I of course believe that they were most emphatically His choice, but in the presence of unbelievers my belief naturally cannot have weight. At any rate for thirty years He lived as a village carpenter in absolute obscurity. He always consistently showed Himself the friend of the poor and the despised. He took the little children in His arms and said that he who received a little child in His name received Him. He specially singled out for praise the offering of the poor widow's mite. All the sinners and the outcasts of the world found a friend in Him. He was never afraid of His holiness suffering by contact with sinners. He would eat and drink with the lowest, and when the ceremonialists objected, replied, "I came not to call the righteous but sinners to repentance." He had a marvellous power of proving Himself a friend of sinners and at the same time a pronounced hater of sin. To my own mind in those wonderful words to the sinful woman, "neither do I condemn thee: go and sin no more," we

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have a matchless revelation of the truest humility, when we remember that they were spoken by Him who was absolutely without taint of sin. They brand most terribly the sin but are full of love to the sinner. Any candid reader of the gospel will see that Jesus never casts off His garment of humility. In the finest touches it can be traced as underlying the whole fabric of the Record. And now notice further that with all His humility Jesus Christ never betrayed the remotest consciousness of any sin in Himself. He persistently required repentance from others: was continually warning them of the danger of final rejection in the Day of Judgment. For His own part he never breathes a word of regret for anything done amiss, or any duty neglected. He assuredly deemed Himself absolutely free from sin: and He was one who knew and shows us that He knew all that was in man, and certainly knew all that was within Himself. There is no sin that He denounces more scathingly than hypocrisy. Nothing was more abhorrent to His nature than profession apart from practice. But for His own part He can calmly say in public, "Which of you convinceth me of sin?" and no one has a word to say that will carry conviction. Moreover Jesus not only asserts His own sinlessness, but declares that the judgment of hypocrites and sinners is committed to Him. He declares that He will exclude such from His kingdom, saying, "Then will I profess unto them, I never knew you: depart from Me ye workers of iniquity." Jesus distinctly claimed to be morally perfect and has said to all His followers that it is enough for them to be like their Master. That He was mistaken as to His perfection we cannot believe. We can find no fault in His words or His acts and for His thoughts we must accept His own testimony.

The errors that any writer of fiction might have made in delineating such a character are innumerable. The errors that they might have made in sketching the historic framework of His life are also innumerable. Students of Shakespeare know what a number of mistakes that great writer has made in historical matters. But it is not so with the gospels. Historical criticism and investigation of modern times have only served to verify the historical accuracy of the gospel narratives. The evangelists have succeeded where the greatest scholars and antiquarians would surely have failed, because they dealt in fact not fiction. They wrote of events among which they lived.

There are many other traits in the character of Christ that were

day. There is His absolute unselfishness, seen even in His anger. On several occasions anger has been ascribed to Him: but it was always that indignation that was aroused by extreme forms of sin, or selfishness. He was never angry for any personal cause: never provoked by any evil done to Himself.

Four writers, moreover, combine to delineate this unique personality. Their narratives are largely supplementary to one another and yet the character, transcendent as it is, remains the same. All four evangelists place before us the same marvellous combination of the humble and the lofty, the human and the divine, in one personality. All four without any effort steer clear of the rocks and shoals that would infallibly have shipwrecked such an attempt, had it been the outcome of imaginative genius of the highest order. But strangely enough those who would throw discredit on these narratives do not credit the writers with superlative genius, but on the contrary depreciate them as superstitious and credulous fanatics. That such men should have succeeded where the greatest geniuses have failed is absolutely preposterous.

There is one point in the character of Jesus that deserves the minutest attention: and that is its universality of type.

Now supposing Jesus Christ to have been an ordinary man, then most certainly He must have been a Jew. Supposing Him to have been an ordinary man, but subsequently idealised by Jewish writers, then He would have been even more characteristically Jewish, for they would have made Him into their ideal national hero, the grandest specimen of their race that they could conceive.

But the marvellous feature of the personality of Christ is its catholicity. He is a man: perfect man; and as such, appeals to men of every race. When in contrast to Him we consider other great religious leaders we can better appreciate this feature. Take such persons as Gautama and Krishna. They have little or no charm for Englishmen or Western peoples generally. We may admire Gautama much: but we should never think of imitating him. He is not practical enough. He is thoroughly oriental. And with regard to Krishna, nobody but a Hindu can easily admire him. Whether he is a real person or no, matters little; but such as he is described to us, he repels us and we should rather seek to avoid his example than to imitate it. But on this subject I do not desire to dwell. I only would point out that such personalities as Gautama and Krishna have very strong national and topical characteristics that quite unfit them to be the perfect examples for all mankind or the

highest ideals of human excellence for the imitation of all races of men. They cannot, and do not influence people of another race. On the other hand Jesus Christ calls forth the admiration of people of every tribe and tongue. He draws all men unto Himself; even as He said He would.

Now let me say a few words more particularly concerning this completely catholic character. It is, broadly stated, an absolute embodiment of Love, and as such must be Final. But we shall understand such a wide statement a little better if we note the absence of the transitory in the Person of Christ, the absence of any incompleteness. Roughly speaking the great men who have lived in this world are divided into two classes. There are, so to speak, the grand men and the good men—those whom we admire, and those whom we love. There are many great characters in history who win our respect: we reverence them as splendid characters, but at the same time we cannot love them. There is somewhere a sensible deficiency in them and we only reverence and not love. Then there are others whose achievements perhaps were not so great but to whom nevertheless we are wonderfully drawn. We can see very clearly no doubt where they failed; but all the same they command our affection. I would suggest to those interested to supply examples of these two hemispheres of character for themselves. Examples will be found in abundance. For my own part Becket and Anselm immediately occur to me. Becket was a strong iron built man and I can admire him as such. Anselm lacked some of those rugged elements of character—he seems to me sometimes to have been weak—but for genuine goodness I could love him. They are truly typical heroes.

But when we come to Jesus Christ, we cannot place Him exclusively in either of these categories. He belongs to the characters we reverence, and no less so, to the characters we love. He is neither characteristically noble nor characteristically good. He is both noble and good; both reverend and lovable in a supreme degree.

Then other great men have been very largely moulded by the influences of their profession or trade. There are men whom we might regard as ideal soldiers, ideal statesmen, ideal philosophers, ideal painters, and so on. But it is not so with Jesus. He furnishes no doubt a wonderful example to working men and to religious teachers: but that is but a fragment of Him. He is far more than

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Nothing that is in any way transitory and accidental was determinate of His character and personality.

But, most remarkable of all, is the absence of any racial characteristic in Him. In the characters of all the great men of this world a careful observer will always detect some feature that betrays the nationality of the man. An ordinary man cannot escape the influence of his surroundings. An Englishman be he never so great will always remain an Englishman, and usually the greater he becomes the more emphatically his traits of character as an Englishman appear. Now consider Jesus. He lived at the meeting point of the three great races of the old world. He was brought up in a Jewish home and went in and out continually among Jews. He was an educated man and a most profound thinker and He mixed and argued with men of Greek education and Greek habit of mind. He was the founder of a tremendous organisation, a new church to embrace all peoples, and He saw all around Him the evidence of the ruling and organising powers of the Roman intellect. We should under such circumstances be tempted to imagine that He could not escape such powerful influences as these. We shall detect the Jew, the Greek, or the Roman in Him. But on the contrary we do not. He is not a Jew: He is not a Greek: He is not a Roman. Had He been so, only they of His own race could have adopted Him as their ideal hero. He is a man, perfect man, entirely devoid of racial characteristics, and He can be an Englishman's hero or a South Sea Islander's hero. He is absolutely catholic.

Then again the events of His own day have not affected His personality. Many of this world's heroes are absolutely moulded by the times and events amidst which they lived. Take such a man as Cromwell. He is absolutely the product of his own age. He would be altogether out of place now. He is no example for the men of to-day. Jesus lived in very stirring times: He lived just at an epoch when the people were most eager to find a national leader and to assert themselves amongst the nations. His age demanded emphatically a patriotic head, and we might well have imagined that no great man at that epoch could have avoided the influence of the general mind of his day or been unmoved by the seething patriotism all around him. But in the character of Jesus nothing temporal is found. He is as splendid an example for men of the year 1891 as He was for men of the year 1. No accidents of place or time have left any mark upon Him. He is the hero of all races and of every age.

The more one thinks of this catholicity of character the more it overwhelms one. Who can such an one be? He is utterly different from any other man that ever lived, and yet He is essentially man. We strive in vain to imagine any more perfect realisation of God incarnate among men? That is the only solution of this mystery. There is an absolute simplicity about the character although it is so transcendent. The most tremendous utterances seem to come so very naturally from His lips. No other man could have said, "Come unto me all ye that labour and are heavy laden and I will give you rest." Such words must come either from a man that is beside himself or from one who is more than man. The sequel decides this for us. Millions have heard those words, and have gone unto Him and have found rest. The assertion has been verified—the claim of its assertor has been vindicated. He has spoken as none other man spake—He has claimed what no other would dare to claim. His words have been found to be true and His claim accepted. He is beyond and above us, and yet He is of us. He is God become man for our sakes.

ARTHUR WESTCOTT.

A SYRIAN CAUCUS.

THE first native of Malabar that ever received consecration as metran of Malankarai directly at the hands of the Jacobite Patriarch of Antioch was Mar Athanasius Matthew. This Matthew was a student in the old Syrian College at Cottayam, when it was under the charge of the Church Missionary Society, and was one of the deacons selected in 1837, as its most prominent students, to be further trained in the Church Missionary Society's Institution at Madras. After some years' study there he was dismissed as unfit for the ministry. Thereafter he proceeded to Mardin in Armenia to visit the Patriarch, as well as the churches and convents in that region. He was graciously received by His Holiness, who entertained him under his own roof for seven months.* It so happened that, at the time of Matthew's arrival, the mind of the Patriarch was perplexed in regard to the state of things in Malankarai by some doleful and perhaps not altogether unprejudiced accounts that he

* Cf. *Nestorians and their Rituals*, by the Rev. George Percy Badger. Vol. I., p. 71. London: Joseph Masters, 1862.

had just received from that diocese. It appears that between 1825 and 1842 the Syrian community, or rather the Adullamite section thereof, had addressed the Patriarch eleven times, soliciting that a metropolitan should be sent them, and stating that they were as sheep having no shepherd; that the Syrian Church in Malabar was in a state of widowhood; that its spiritual concerns were in a declining condition; that, being without a duly constituted metropolitan and priests, they were deprived of the benefit of baptism, absolution, mass, and other sacred rites; that they had no Morone (holy oils); that a priest ordained a priest and a priest consecrated a metran; that the Patriarch should prohibit the priest, Mar Cheppat Dionysius, who wore the sacerdotal habit of metropolitan from wantonly transgressing the canons of the Church; and that a metropolitan should be sent, reputed for piety, wisdom, and discretion, provided with the necessary holy oil and religious books. Accordingly in the station or commission given to Matthew, the Patriarch says:—"While we were labouring with all these thoughts, as to who should be sent to Malayalam, there came our dear son Matthai from you in peace! On seeing him we were much pleased with him and said that, as one has come from among them, it is best above all that he should be the father and ruler of them. So first we ordained him as deacon, thereafter as kattanar, subsequently as ramban or arch-deacon, and afterwards as metropolitan."

This was in 1842. In the following year Mar Athanasius arrived in Malabar to take possession of his see. But then his difficulties began. There was already a metran in possession. Mar Cheppat Dionysius, holding as he did a royal proclamation which recognised him as the regular accredited bishop of the Syrians, declined to vacate his see in favour of the new claimant. In these circumstances Mar Athanasius made appeal in a series of letters, year after year, to the British Political Resident at the court of Travancore. His plea was that he had been properly ordained by the Patriarch and that the Syrian community were longing to see him invested with the tokens of his rightful authority over them, whereas Mar Cheppat Dionysius had never been properly ordained, having received consecration neither from the hands of the Patriarch direct nor by delegation from that dignitary, and that he had not a majority of the Syrians in his favour. Still the Resident seems to have turned a deaf ear to all his pleadings.

Meanwhile Mar Cheppat Dionysius and his kattanars were by no means idle. They were busily engaged in sending to Mardin repre-

sentations of the life and doctrine of Mar Athanasius Matthew very damaging to him; so that the mind of the remote Patriarch was as much perplexed as ever. He therefore sent Mar Koorilos (Cyril) to make enquiries on the spot. It appears that Koorilos was entrusted by the Patriarch with blank papers, signed and sealed by him, for such use as he (Koorilos) might have occasion, such for instance as to issue an interdict if he found Mar Athanasius guilty of heretical practices and to issue a staticon to one who should take his place. Armed with these instruments Mar Koorilos arrived in Malabar, and, on an interview with Mar Cheppat Dionysius, declared himself Metropolitan of Malankarai duly consecrated and appointed by the Patriarch, to supersede Mar Athanasius, showing as his credentials a staticon in his own favour which he had forged on the blank papers entrusted to him. There is no doubt that Mar Cheppat Dionysius lent himself to this most daring and sacrilegious act to defeat the aspirations of his opponent. At all events Mar Dionysius made over the charge of his office to him and gave intimation of that fact to the British Resident.

It became necessary therefore for the Sirkar to take some action, and accordingly a committee was appointed to enquire and report. The circumstances under which the committee was appointed are interesting. "A proclamation having been issued by the Acting Dewan of Travancore in January 1848 to the effect that whereas both Mar Athanasius and Mar Koorilos, who arrived in this country in the years 1843 and 1846 respectively, have produced to the British Resident credentials from the Patriarch of Antioch, appointing them severally metropolitan of the Syrian Church in Malabar, and that whereas one party of the Syrian community desire to receive Mar Koorilos as their metropolitan alleging that the documents produced by Mar Athanasius are not genuine, and the other party desire to receive Mar Athanasius as their metropolitan alleging that the documents produced by Mar Koorilos are not genuine: the Sirkar, before recognising either of the two persons above-mentioned as the Syrian metropolitan, deem it necessary that enquiry should be made into the dispute between the two parties; and with that view have appointed, with the concurrence of the British Resident, four Sirkar officers to form a committee for the purpose of instituting such enquiry, and that Mar Athanasius and Mar Koorilos together with two kattanars and four principal parishoners of each of the Syrian churches are required to attend at Quilon (on a given date) to answer such questions as may be put to them by the said committee."

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The finding of this committee was that the documents submitted by Mar Koorilos were forgeries; that he had lent himself to acts which no man of principle would be guilty of, thereby compromising his character and the dignity assumed by him; that the charges which were made the grounds for the alleged supersession of Mar Athanasius were entirely unfounded; that, independently of the staticon possessed by Mar Athanasius being unquestionable, his selection as a native of the country being in strict accordance with former precedents, it was but just and reasonable that he should be recognised and proclaimed by the Sirkar as metropolitan of the Syrian Church.

Thus the pretensions of Mar Koorilos were finally disposed of; Mar Dionysius resigned his dignity on account of old age; Mar Athanasius was by royal proclamation declared metropolitan, he having brought a letter from the Patriarch of Antioch for that dignity; and all comprising the Pothencoor Syrians in the diocese were enjoined to acknowledge him as such and to "conduct themselves in conformity with past customs." This happened in 1852, so that after ten years of painful waiting and struggling, Mar Athanasius attained the summit of his ambition.

But "uneasy lies the head that wears the crown." During the sittings of the Quilon committee and before the royal proclamation of 1852, fresh trouble arose. A letter from the Jacobite Patriarch of Antioch, addressed to Mar Cheppat Dionysius and based on representations made by Mar Koorilos and others, intimated that he had sent Mar Athanasius Stephanos Episcopa and with him Ramban Simon. "Therefore let them rule with you and with Mar Koorilos, our spiritual son," wrote His Holiness, adding that he had sent with these officers service-books to be copied and placed in the churches, and holy Morone (sacred oils), and that he had further instructed them to collect the *Rasisa*, an ecclesiastical tax "due to the chief Preceptor of the Apostolic See."

Stephanos, having duly reported his arrival in Malabar to the British Resident, was informed by that officer that it appeared to him that the Patriarch in sending Stephanos must have been acting on most incorrect information; that neither the money intended for the Syrian College at Cottayam nor any funds derived from the Syrian community were at the disposal of the Patriarch; that the College funds were controlled exclusively by the local authorities in Travancore and no foreign prelate could have any right to meddle with them. Besides, to carry out the Patriarch's wishes would be

in direct violation of the orders of the Madras Government, to which he would refer. What action, if any, the Madras Government took is not known. However Stephanos was not to be put down. He entered the Syrian churches and preached, and evidently a quarrel arose, and the Dewan interfered to quiet the disturbance. A further appeal to the Resident being of no avail, Stephanos addressed the Honourable Court of Directors in London, who sent a despatch in which they repeat that their policy of "absolute non-interference with religious matters must be adhered to." Such matters, they add, are to be determined by the Syrian Church alone, "and it is for them to recognise or not the pretensions of any ecclesiastic who may be hereafter sent into the country by the Patriarch of Antioch." This despatch was dated 13th May, 1857, after which Mar Athanasius seems to have been allowed to reign in peace for the next eight or nine years.

But in 1865 another native of Malabar, said to be "connected with the Powlomattom family by relationship," and henceforth known as Mar Dionysius Joseph, went to the Jacobite Patriarch of Antioch at Mardin and got himself consecrated and appointed as metran of Malankarai. The Patriarch appointed him metropolitan because complaint of heresy and objectionable practices had been received, though as usual not verified, against Mar Athanasius Matthew. In the following year Mar Dionysius Joseph returned to his native land where he hoped to be in due course established on his episcopal throne. With a view to attain this desirable end he addressed the Dewan of Travancore on the subject of his appointment to the metranship and of Mar Athanasius's deposition, and prayed for recognition by the Sirkar and the granting of facilities for his installation. But he received no redress. The Sirkar's principles were those of perfect neutrality in religious matters. To this official declaration the Dewan (4th July, 1866) added his advice that "the only satisfactory course for the dissentient parties to pursue would be to effect a compromise, and, failing that, to go to law. If the case of one church were taken to court and there decided, the principle involved would be settled and would apply to all similar cases."

In 1869 Mar Dionysius Joseph addressed a memorial to the Government of Madras complaining of his anomalous position and begging redress. But His Excellency in Council did not see his way to interfere with the possession of the Syrian churches then avowedly in the hands of Athanasius, and referred the petitioner

to the advice given by the Dewan of Travancore, already quoted. At the same time the Government of Madras ordered that the moneys, lying in the Resident's treasury to the credit of the Syrian Church, should be paid over to Mar Athanasius, these being thirty years' accumulations since the date of the arbitration.

But the mind of the resourceful rival was still restless. In 1874, as a last resort, he made his appeal to the Patriarch at Mardin; and that dignitary warmly espoused the cause which was identified with that of his own supremacy in Malabar. He determined to leave no stone unturned till he should see his authority fully established (we may not say *re-established*) in Malankarai. With this view he undertook, what must have been to him a novel task, a journey to London by way of Constantinople, his object being to associate with himself at the latter place the Jacobite Metropolitan of Jerusalem. In London he had interviews with all from whom he expected help. But on the whole his visit was disappointing. The Archbishop of Canterbury met him at his residence in Addington Park, near Croydon, and, after a short service in the private chapel, read to him a letter, being a reply to the Patriarch's, which he afterwards handed over to His Holiness. The Archbishop's attitude on the question was perfectly distinct. He had been in communication with the Bishops of Calcutta and Madras on the subject, and he had come to the conclusion that Mar Athanasius, and not Mar Dionysius, ought to be supported as Metran of Malabar; and that the cause of true religion would be safer in the hands of Athanasius, who, he was assured, had the confidence of the great majority of the Native Church, and who represented the principle of that Church's independence and its desire for reform. His Grace further suggested, for the consideration of His Holiness the Patriarch, whether it was desirable to endeavour to maintain over the Syrian Christians of Malabar a control which could only be nominal over so distant a church, with which communication must be difficult, and the members of which seemed entitled to independence in the selection of their own bishops. The Archbishop further showed the relation in which colonial churches stood to the mother church of England and concluded by seriously recommending "some similar re-adjustment of the relations at present existing between your Holiness' See and the Christians of Malabar."*

* See the *Guardian* of 16th September, 1874. Also same paper of the 23rd *id.* for the Patriarch's reply.

The English visit having resulted in practical failure, His Holiness of Mardin next turned his steps towards Southern India, where he hoped in some degree to overawe Mar Athanasius Matthew by his presence; and, at all events, to obtain an interview with the authorities in Travancore and with representatives of the Government of Madras. He arrived in Travancore at the beginning of 1875 and exerted himself in the interests of his Church as much as possible. His success was considerable. He accomplished three things, all of which tended powerfully towards the establishment of his ecclesiastical supremacy in Travancore. The first of these achievements was a change in the attitude of the Sirkar towards the appointment of metrans of Malankarai. This was brought into practical effect by the withdrawal of the royal proclamation made in 1852 in favour of Mar Athanasius Matthew. That proclamation had been interpreted as securing the metran's position against litigation; but now, on the 4th of March, 1876, a new royal decree was issued proclaiming that "whereas representations have been made that the Patriarch of Antioch or his predecessor claims to have desposed the said Mar Athanasius and to have appointed another metran, this is to inform all whom it may concern that the former proclamation is not to be considered as in any way precluding the courts of law from deciding on the rights to churches or church property or the power of appointing or removing officers connected with the Church." "The action of His Highness the Maharajah's Government," it went on to say, "will be confined to the maintenance of peace and good order, any apparent connection with appointments, relating to the Syrian Church which proclamations issued under times and circumstances now altered may seem to indicate, will henceforth be avoided." This action on the part of the Sirkar did not immediately affect the state of affairs in the Church, but the Patriarch promptly followed up his first success.

Accordingly, the second great achievement of His Holiness during his sojourn in Travancore was to convene a meeting which was dignified with the name of a synod, but which was really of the nature of a caucus. It was held at Mulanthuruthu in June 1876, when, to the discomfort of all concerned, the south-west monsoon was at its height. It was moved that His Holiness Maran Mar Ignatius, Peter III., Patriarch, the chief authority in the Apostolic Throne of Antioch and the Holy Father of the Jacobite Syrians of Malankarai, should be requested to preside over the deliberations of the assembly, which he was pleased to do. In his opening speech he

perhaps intended to give a veracious account of the situation, but in this respect at least he was not successful, and it is difficult to acquit him of the charge of deliberate prevarication. He not only thought it consistent with his dignity to brand Mar Athanasius Matthew with the title of Beliar (Belial), but also to represent the Sirkar as saying in its recent proclamation "since the Patriarch has dismissed him (Athanasius), we also dismiss him from the Church." By this wickedly false rendering of the royal proclamation, coming from the lips of such a high dignitary, the simple folks who heard him must have been grossly misled.

Without attempting to give anything like an exhaustive account of the proceedings of this meeting, I shall content myself with the following *precis* of the resolutions, which may be accepted as fairly indicative of the contents of the whole. It was resolved (1) that the people of each respective parish should execute and register a deed of covenant binding themselves to be subject to, and never to transgress the mandates of, the See of Antioch; (2) that lists should be made of the families in each congregation and of their Karanavers (elders), that a book of canons should be printed and a copy placed in each church, and that a register of baptisms, marriages, and burials should be kept in all parishes; (3) that an association of the whole race should be formed and called the Syrian Christian Association, of which the present Holy Father and his successors should be the patrons, and the ruling metran, the president; (4) that, whereas it would be difficult for all of them (*i.e.*, the whole race of the Syrians) jointly to carry on the affairs, a chief committee composed of eight priests and sixteen laymen, with the ruling metran for president, should be formed, with a paid secretary and a cash-keeper; that they should be "made responsible as managers and responsibility-bearers to manage and control all the religious and social concerns of the whole of the people in general;" and that, in particular, they should be responsible for collecting and remitting *Rasisa* to His Holiness the Patriarch, and for collecting the moneys due to the ruling metran by the churches; and (5) that, as it would be difficult for all of them (*i.e.*, the 'chief committee' of twenty-four) jointly to conduct and carry on all litigations arising generally as to religious or social matters, the president, Mar Dionysius, Metropolitan, should be the person who should have power to carry on all such and to collect the moneys necessary for the purpose, and that the members of the committee should be auxiliaries to him therein.

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Such is the gist of the proceedings of the meeting at Mulanthuruthu as reported by those who took part in it. A great many questions may fall to be discussed in a future study concerning this caucus; such as, how many were invited to attend it, how many were present, how many churches were represented, how far the proceedings may be regarded as a proof of the people's acceptance of Mar Dionysius Joseph as metropolitan, and whether the document setting forth these proceedings is in all respects genuine and trustworthy. But, assuming the genuineness of the document in question, it would appear that the practical outcome of these proceedings was to invest Mar Dionysius with a sort of power of attorney to act on behalf of the Syrians who agreed with him, in the matter of the approaching litigation, which now seemed imminent.

The third strategic move made by the Patriarch during His Holiness' sojourn in Travancore, was to divide the province of Malankarai into seven dioceses,* that number having been fixed on probably from the consideration that St. Thomas was believed to have planted seven churches in Malabar; and, having assigned to Mar Dionysius Joseph, who had been consecrated in 1865, the charge of the church of St. Thomas at Quilon and the surrounding churches, he proceeded to consecrate six more metropolitans, as they are called in their staticons, and to assign to each of them a see. From the documents it would seem that the seven metropolitans were intended to be of co-ordinate rank and all directly responsible to the Patriarch; yet the seniority of Mar Dionysius Joseph would naturally secure for him a precedence over the other six and make him at least *primus inter pares*. And it is probable that the Patriarch intended this. "At all events, the other six metropolitans recognise Dionysius as such, and testify that to him belongs not only the charge of the diocese of Quilon, but also "what is comprised in the Cottayam seminary and all general matters in the whole of Malayalam."

There is one curious circumstance connected with the consecration and appointment of these six metropolitans. In the staticon given to one of them (and it is the same for all), there occurs this remarkable sentence, "Should he show defiance, and infringe the canons of the Fathers and the true faith, he would not only render

himself, in terms of the written deed of consent passed by him at his consecration, excommunicated and accursed; but he would also be tried in terms of the temporal registered deed he has passed and would be declared to have forfeited his dignity." And correspondingly in the said 'temporal registered deed', the following occurs:—"It is competent for your Holiness to dismiss me from all churches, and to publish that I am a liar so that I may not be believed anywhere, if I should violate in any way this agreement executed by me of my own free will and consent. When such is done by Your Holiness or Your Holiness' successors, I bind myself to pay two thousand and eight hundred and fifty (2,850) British Rupces to Your Holiness or successors."

This appointment of additional metropolitans was intended to be a "counterforce against the (hitherto) absolute authority of the prelates of Malayalam," and it would largely tend to give roots to the Patriarch's authority in the province. What view Mar Dionysius Joseph may have privately taken of this arrangement, is not recorded. It must have greatly altered his prospect of being the sole Jacobite metran in Malankarai, but it is possible he may not have objected to this. His Patriarch's will in the matter may have been his pleasure. But if Mar Dionysius Joseph did not suffer from the pangs of wounded ambition, he must have groaned under the heavy bills of costs he had to pay. Being mainly responsible for having sent the Patriarch to England to interview the authorities there on the subject of his grievances, and for having brought that dignitary to India, he was held responsible both for the heavy travelling expenses of His Holiness with a retinue suitable to his position, and for the legal expenses incurred during his temporary stay in Travancore. On this phase of the subject a curious sidelight may be allowed to fall. It has been said by one of the missionaries* of the Church Missionary Society, who was in the country at the time, that the Patriarch's "conduct was so violent and his greed of gain so insatiable that even Mar Dionysius, who had invited him into the country, was at length unable to work with him, and there was a rupture between them;" and the same authority adds, by way of illustrating the above characterisation, that at the church of Parur the Patriarch opened the grave of an eminent church dignitary in the hope of finding treasure.

* The seven dioceses were Quilon, Thumpone, Niranom, Cottayam, Arthar, Kandanad, and Ankamali, together with the churches surrounding them respectively.

* See Paper on the 'Syrian Christian Church' by the Rev. R. H. Maddox in *The Report of the Missionary Conference, South India and Ceylon, 1879*. Vol. II., p. 181. VIII.—10. 47

At length, however, towards the end of 1876, after a sojourn of about two years in Travancore, His Holiness returned to Mardin.

During this memorable period, the Syrian Church was unfortunately agitated by troubles due to other causes than the presence of the Patriarch. A new sect sprang up early in 1875 as a result of the extravagances which had marked the revival of religion there in 1873-4. The revival effected much good in the quickening of the Syrian and other Christians, but some fell into errors and absurdities arising from defective education, want of judgment, and an overwrought imagination. A Syrian Christian in the Quilon district made pretence to inspiration and the gift of prophecy and prophesied the second coming of our Lord in May 1881. A native clergyman of Mavelikara, the Rev. Justus Joseph, along with his mother and brother, all agents of the Church Missionary Society, were led away by this false prophet, Thomman, and at once devoted themselves to the spread of his novel teaching. They published in the Malayalam newspapers 'a divine proclamation' to the effect that there remained only six years from May 1875 until "the glorious coming of King Jesus of Nazareth on the fiery cloud;" and, as He was to appear suddenly, all were exhorted to repent. From the period of six years here specified, the new sect was popularly known as the Six Years' Party, but they called themselves the Revival Church, though in reality they were very different from the revivalists. In course of time their numbers amounted to about five thousand, including some eighteen Syrian priests and about three hundred of the adherents of the Church Missionary Society. They had many prophets, and they proceeded to appoint apostles in all their congregations.

These prophets pretended to be directly inspired by the Holy Ghost and they went about preaching the coming of the Lord, directing their principal efforts to the Syrian and Protestant Christians, and doing little or nothing for the conversion of the heathen.

Marvellous absurdities and fanaticism were practised. They went in a kind of procession to church, ringing a bell and singing. Then they circumambulated the building three times before entering. In the centre a table was placed which they regarded as 'the throne of God'. At the four corners were stationed four chief men, 'the four living creatures', and around these 'the four and twenty elders', and then the common people. The prophets beat their breasts and went through the congregation using alarming threats and making the people pray and utter specific and detailed con-

fession of their sins. One of the prophets with singular candour called himself 'the ass-prophet', whose functions were 'roaring like a wild beast', and 'sealing the hundred and forty and four thousand', admission to this last ordinance being effected by two prophets joining hands and forming 'the strait-gate', through which candidates for sealing were obliged to pass.

In 1876 a prophecy was announced that there should be darkness over the face of the earth for three days from the tenth to the twelfth of August inclusive; and a telegram to that effect was despatched to the Queen of England, which was returned to the sender from Bombay, and another to the Maharajah of Travancore, who is not reported to have altered his public policy or his private arrangements in consequence. The utterance of the prophecy produced great excitement for a time, but gradually it came to be treated as a joke. During the appointed days one would intentionally stumble against another, and then apologise saying that he could not see. By the complete failure of this prophecy a heavy blow was inflicted on the party; from which, however, the leaders attempted to rally, denying the failure and saying "confusion is darkness, terror is thick darkness," so to make-believe that this was what they meant from the first.

The ludicrous elements in this story are sufficiently patent, but it is not without pathetic touches. In July 1878 the ranks of the Six Years' Party were visited with small-pox; and, as one fell ill, all the others considered it a sacred duty to visit him and even to fall upon his neck and kiss him. The consequences need scarcely be told. In spite of their professed belief in their immunity from the disease, it rapidly spread, and among those who died were three of the prophets, including the head-prophet. Thomman's death was kept a secret as long as that was possible, for a prophecy had declared that he and 'the ass-prophet' were Moses and Elias, and that they would not die before the expiry of the six years.

As time wore on the practices of the new sect as well as their teaching underwent considerable modification. The repeated failure of their prophecies exposed them to the unsparing ridicule of their neighbours, and led among other things to an indefinite extension of the six years. The faith of the sect in its own fundamental tenet seems to have evaporated before the arrival of the favourite date. At all events, the Six Years' Party has passed away as such, but it was a vexatious element in the community, so long as it lasted, and

helped sadly to embitter the later years of the life of Mar Athanasius Matthew.

It was in July 1877 that that prelate passed away. His death, heralded by changes, violence, and disorder in his diocese, was due to blood-poisoning, caused by the bite of a rat. For a quarter of a century he had occupied the episcopal throne of Malankarai; and, more than any of his predecessors, had attempted to reform his Church. The sympathies of his manhood were those he imbibed in the course of his early training. During his regime, "every encouragement was given to the reading of the Scriptures, translated by the missionaries; prayers in the church were conducted in many instances in the vernacular; invocation of saints and worship of relics with other superstitious practices introduced into the Syrian worship by the Roman Catholics, were excluded; Sunday schools, Bible-readings, preaching and other active efforts to spread the truth were fostered and encouraged,"* and all the ordinary apparatus of evangelical work was used for promoting the good of the Syrian Church. Among his last instructions he gave orders that, though it was customary for the Syrians to bury their metrans in a sitting posture, robed as on state occasions, within the chancel of the church, this ceremony should be dispensed with in his case as tending to superstition. He ordered a coffin to be prepared some days before his death, and expressed his desire to be interred in the open grave-yard of the Maramena church, beside the grave of his uncle, a once famous Malpan of that church, and the father of reformation amongst the Syrians.

It is not easy, however, to make an analysis of the character of Athanasius altogether creditable to him. He was undoubtedly a man of ability, who managed to attain to the highest position in his Church and to hold his own to the last against considerable opposition. The phase of his character which may be most easily assailed is the palpable inconsistency of his maintaining—previous to 1852, when a royal proclamation was issued in his favour—that he held his office in virtue of his consecration by the Patriarch of Antioch, and that the Patriarch of Antioch was supreme in matters spiritual in Malabar; while at a later stage, when the Patriarch, for reasons satisfactory to himself, wished to depose Athanasius, the

* Report of the Missionary Conference, South India and Ceylon, 1879. Vol. II., pp. 180-1 Madras: Addison & Co., 1880.

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latter denied his authority and held his ground in spite of His Holiness of Mardin. His action in this matter has been severely criticised by the judges in the courts of Travancore, and there is no doubt that he laid himself open to the charge of inconsistency amounting perhaps to immorality. On the other hand, it is at least possible that the bishop's change of opinion may have been an honest change. The missionaries of the Church Missionary Society, who had ample means of watching him, seem to have believed in him to the last. Moreover, he received the approbation of the English Bishops of Madras and Calcutta, and, finally, of the Archbishop of Canterbury. But whether his change of opinion was honestly made or not, his individual action could in no way bind the community, or affect the law of the Church, or prejudice the cause of his successor. His tergiversation, if such it must be called, could at the worst serve only to discredit himself.

Such a man as Mar Athanasius could not be supposed to have watched the tactics of his rival and to have sat still with folded hands. He determined at an early stage of the proceedings to checkmate Mar Dionysius if he could, and so in 1868 he consecrated his younger brother, Thomas, as his successor. On that occasion he invited his neighbour, Mar Koorilos of Tholiur, to unite with him in the act of ordination; and thousands of his own people were present from all parts of the diocese to witness the interesting spectacle and to indicate by their presence how thoroughly they approved of their metran's act for securing the succession in accordance with the 'use and wont' obtaining in Malankarai. Mar Athanasius Matthew also took the precaution to make a will in his brother's favour; so that, on the death of the former, Mar Athanasius Thomas quietly entered on the duties of his office as metran and manager of the property held by the metran in trust for the Syrian community.

Presently another caucus on the same lines as the meeting at Mulanthuruthu was summoned to meet at Parumalai in 1878, under the presidency of Mar Dionysius Joseph, and the preparations for litigation were completed. The precise character of these meetings has been well defined by the Chief Justice and Mr. Justice Sitarāma Iyer in their judgment in the Royal Court of Travancore. They set forth the objects of the meetings as being for the recalcitrant party "to arrange the details of their further action to establish on a firm basis the supremacy of the Patriarch, as well as to settle the ways and means to oust" Mar Athanasius Thomas

from his newly acquired position, and to secure to Mar Dionysius Joseph "the undisturbed exercise of his episcopal and temporal functions." "These," add the Hindu Judges, "we consider to be the sole objects of the proceedings at those meetings;" and herein we have a tolerably exact definition of a canon.

GEORGE MILNE RAE.

THE YUGAS.

A QUESTION OF HINDU CHRONOLOGY AND HISTORY.

It must be evident to all ordinary observers of Hindu Society that it is now in a state of ferment in relation to many religious and social problems; and I therefore venture to believe that an investigation of the subject of the *Yugas* will prove at present highly interesting. It is a subject that requires much more study and attention than I have been able to bestow on it, and I am fully aware that my handling of it is, in many respects, defective. However, its intrinsic importance at the present time has been my only motive for writing about it; and, if abler men with fuller information on the various topics dealt with in this paper will come forward to give us the fruit of their study and research, I shall myself be delighted to have opportunities of extending my knowledge of the subject. Meanwhile, let me hope that my present attempt to deal with it may not have been made in vain.

From the time that men first began to think, the various natural divisions of time must have forced themselves on their attention. The ideas of the day, the month, and the year, which are derived from periodically recurring physical phenomena, are common to the whole of the human race. The habit of reckoning a day from sunrise to sunrise, a month from full moon to full moon, and a year from spring to spring, is common all over the world. The division of time into weeks and seasons also depends on certain physical phenomena. The week was perhaps originally suggested by the phases of the moon, and the names of its days seem to have been derived from the seven planets of early geocentric astronomy. The idea of the seasons depends upon a regular succession of systematically recurring changes in the appearance of nature. The geographical and climatic conditions of a place go largely to determine this succession of changes; and, while Euro-

peans have four seasons in the year, we in India have six; and in old Sanskrit literature there is evidence to show that the Hindus did not always have six seasons in the year. Other divisions of time, such as the hour, the minute, and the second, are more or less arbitrary and conventional.

In the *Sūryasiddhānta*, Chapter I., the following measures of time are adopted:—"The time of the denomination *Mūrta*, मूर्त, which means embodied, that is, definite and knowable, begins with *Prāṇa*, प्राण, the time of one respiration, taken to be equal to four seconds; and the time known as *Amūrta*, अमूर्त, namely, that which is not *Mūrta*, begins with *Truṭi*, त्रुटि, a very small portion of time equal to $\frac{1}{3,375}$ th of a second. An interval of time containing six *Prāṇas* is called a *Paṇu*, पल, and that which contains sixty *Palas* is called a *Ghatikā*, घटिका. The time containing sixty *Ghatikās* is called a *Nakshatra-Ahōratra*, नाक्षत्राहोरात्र, a sidereal day and night, and a *Nakshatra-Māsa*, नाक्षत्रमास, a sidereal month, consists of thirty *Nakshatra-Ahōratras*. Thirty *Sāvāna*, सावन, days, that is, days depending on sunrise or the libations, make a *Sāvāna* month, the *Sāvāna* day corresponding to the popular day measured from sunrise to sunrise. Thirty lunar days make a lunar month; and a solar month is the time required for the sun to move through any one sign of the zodiac to the next. A solar year consists of twelve solar months, and this is known as a day of the gods. The *Ahōratra*, i.e., the day and the night, of the gods and of the demons are mutually the reverse of each other, the day of the gods corresponding to the night of the demons, and the night of the gods to the day of the demons. Sixty such *Ahōratras* multiplied by six make a year of the gods and demons. An interval of time containing 12,000 years of the gods is called a *Chaturyuga*, चतुर्युग, the sum of the four *Yugas*, *Kṛita*, *Tṛeta*, *Dvāparā* and *Kālī*. These four *Yugas*, including their *Sandhyā*, संध्या, and *Sandhyāmsā*, संध्यामस, contain 4,320,000 solar years. The numbers of years in these four small *Yugas* are respectively proportional to the numbers of the legs of *Dharma*, धर्म (virtue), in them, it being stated in the *Mahābhārata* and elsewhere that *Dharma* rests on four legs in the *Kṛitayuga*, on three in the *Tṛetayuga*, on two in the *Dvāparayuga*, and on one leg only in the *Kāliyuga*. The tenth part of the number of years in a great

Yuga of 4,320,000 years multiplied by 4, 3, 2, and 1, respectively, make up the years of each of the four little *Yugas*, the *Krita* and the others. The years of each of the little *Yugas* (thus obtained) include in them each its own sixth part forming the sum of the years of each *Yuga's Sandhyā* and *Sandhyāmsā*, the junction periods at the beginning and end of each *Yuga*. Seventy-one great *Yugas*, containing 306,720,000 solar years, constitute a *Manwantara*, मन्वन्तर, a period from the beginning of a *Manu* to the end, and at the end of each *Manwantara*, 1,728,000 years, that is, the number of solar years in the *Kritayuga*, form what is called its *Sandhi*, सन्धि; and this is the time when a general deluge occurs. Fourteen such *Manus* with their *Sandhis* constitute a *Kalpa*, कल्प; at the beginning of which also there is another *Sandhi*, having as many years as there are in a *Kritayuga*. Thus a thousand of the great *Yugas* (of 4,320,000 solar years each) make a *Kalpa*, at the end of which happens the destruction of the whole world. It is a day of the creating *Brahma*, and his night also is equal to the day. The age of *Brahma* is made up of a hundred years composed of such days and nights as have been mentioned above. One half of the present *Brahma's* age has already elapsed, and the present *Kalpa* forms the first of the other half. Out of this present *Kalpa* six *Manus* with their *Sandhis*, and twenty-seven great *Yugas* of the seventh *Manu*, called *Vaivasvata*, have passed away.

Thus, from the time of one respiration equal to four seconds, we are step by step led to the very long life-period of *Brahma* extending over 311,040,000,000,000 solar years. The *Sūryasiddhānta* is traditionally considered to be among the oldest of modern Indian astronomical works; and it is now according to its own professions 2,164,992 years old, having been revealed, as is supposed, at the end of the last *Krita* age. *Aryabhata*, one of the early modern Indian astronomers, who, according to his own statement in the *Aryabhatasāstra*, was born in A. D. 476, is known to have composed a commentary on this standard work of Indian astronomy. Professor *Weber* guesses that *Asura Maya*, to whom the sun himself is said to have revealed the contents of this work, was probably none other than the famous *Ptolemy*. It is, however, worth while observing that the above astronomical statement of the various divisions of *Mūlta* time takes the *Purāṇic* account of the creation and destruction of the world for granted, and refers to the long

prevalent notion of the gradual decay of virtue from the *Krita* to the *Kali* age. A *Purāṇa* is commonly defined as the work which treats of five topics, viz., (1) primordial creation or evolution of matter with its manifold possibilities of development and change; (2) secondary creation of form-possessing conscious and unconscious bodies from primordial matter; (3) genealogy of the gods and patriarchs; (4) periods known as *Manwantaras*; (5) the history of the dynasties of kings. The name *Purāṇa* itself means 'old', and the fact that most, if not all, of the *Purāṇas* and similar works are said to have been narrated by *Sūta Ugrasravas*, the son of *Sūta Lōmaharshana*, throws some light on the origin and growth of *Purāṇic* literature. In the words of Professor *Wilson*, "the origin of the *Sūta*, whether legendary or rational, the duties which are assigned to him, and the right conceded to him of teaching the *Purāṇas*, seem to throw some light on the early history of these works. In all probability, they were at first the traditional tales of a race of family poets, who corresponded precisely in character with the scalds and bards of the north, and were at once the eulogists of the chief and chroniclers of the family. In this manner some historical traditions were preserved, before they were formed into any systematic account, but of course imperfectly and rudely. With the genealogies the poets blended, no doubt, fanciful and mythological fictions, and these were the materials which later writers wove into a connected form, and from which they constructed the primitive *Purāṇas*. The character of the compilers, that of religious men, gave however a new complexion to the composition, and the mythological and marvellous portions came to usurp an undue importance to the neglect of the historical records. The genealogies were, however, probably preserved with some more care, as they were connected with the worship of certain deities, or deified princes, particularly *Rāma* and *Krishna*. To the mythology also systems of Cosmogony, Geography, and Astronomy, were added, and the five divisions of the *Purāṇas* were then complete." Thus the *Purāṇas*, having originally been of a fairly historical nature, gradually became more and more comprehensive, so as to include much false and real knowledge, as well as fanciful and extravagant fictions; and there is about their theoretical nature at least an ideal *a priori* perfection. They all generally begin with the creation or evolution of primordial matter, and thence trace the progress of the universe through various stages to its final destruction or dissolution. To suit this over-perfect ideal, there is a system of chronology

capable of measuring intervals of time, from the twinkling of an eye, to the inconceivably long life-periods of a series of *Brahmas*.

The *Vishnu Purāṇa* in Book I., Chapter ii., 26, says:—"The deity Time is without beginning, and to him there is no end; from him the revolutions of creation, continuance, and final dissolution unintermittingly proceed." This same work, which is considered by the orthodox as highly authoritative among the *Purāṇas*, gives, (in Book I., Chapter iii., 1, *et seqq.*) the measures of time above referred to. "Though eternal, Brahma is figuratively said to be born, and his life is known to be made up of a hundred of his own years. That period is called *Parī* (परि), and the half of it is known as *Parārdha* (परार्ध). You have been told, O sinless Maitréya, the time form of Vishnu, and learn now how the life limits of Brahma are thereby to be made out, how the life limit of other created things, animate as well as inanimate, of all such as the earth, the mountains, and the oceans. O best of sages, fifteen twinklings of the eye make a *Kāshthā* (काष्ठा); thirty *Kāshthās* one *Kalā* (कला); and thirty *Kalās* one *Muhūrta* (मुहूर्त). Thirty *Muhūrtas* are known to make a day and a night of human beings, and a similar number of days and nights make a month of two *Pakshas* (पक्ष). Six months are known to form an *Ayana*, अयन (the period of the sun's progress to the north or south of the equator, i.e., from solstice to solstice); and two *Ayanas*, the northern and the southern, compose the year. The southern *Ayana* is a night, and the northern *Ayana*, a day, of the gods. Twelve thousand divine years, each composed of 360 such days and nights, go to constitute the period of the four *Yugas*, known as *Krita*, *Trēta*, &c. Learn now how they are distributed: the *Krita* age has 4000 divine years; the *Trēta*, 3000; the *Dwāpara*, 2000; and the *Kali* age, 1000: so those acquainted with antiquity have declared. The period that, preceding a *Yuga*, has as many hundred years as there are thousands in the *Yuga*, is called a *Sandhyā*; and a similar period coming after a *Yuga* is called *Sandhyāmsā*; the interval between the *Sandhyā* and the *Sandhyāmsā* being (here) known as the *Yugas* denominated *Krita*, *Trēta*, &c. The *Krita*, *Trēta*, *Dwāpara*, and *Kali* (here with their initial and terminal junction-periods) together form the period of the four *Yugas*; and a thousand aggregates of these four *Yugas* are a day of Brahma, and there are fourteen *Manus* in the day of Brahma. A

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little more than seventy-one *four-Yugas* are reckoned as one *Manvantara*. At the end of Brahma's day a dissolution of the universe takes place."

It is clear from this extract that, except in regard to the divisions of time shorter than a day, there is little difference between the astronomical statement and the *Purāṇic* statement of our chronology. These calculations and tables of measurement of time are found in most of the *Purāṇas*, with occasional alterations and additions of no very special importance; and this same system of chronology is the one that is in daily use among us, our calendars are all based on it, and the performance of our religious rites in some way or other presupposes it and depends more or less upon it. While "the divisions of time into days, weeks, months, seasons, and years, are more or less intelligible as long as they correspond to some regularly recurring natural phenomena, what do those apparently fantastic and unimaginably long measures of time known as the *Yuga* and the *Kalpa* mean? The idea that one human year is equal to one day of the gods seems to be a fairly old one in India, for in the *Taittiriya Brāhmaṇa*, III.-9-22-1 it is clearly stated that "that which is one year with us, is a day of the gods." (एकं वै एतन् देवानाम् अहर्यत्संवत्सरः) If the north pole of the earth be supposed to be the abode of the gods, the merest rudiments of astronomical knowledge will tell us that, for six months in the year, they will be in a position to enjoy continuous sunshine, and that, for the remaining six months, the sun can never be seen above their horizon. If the north pole becomes the abode of the gods, naturally enough, the demons are made to occupy the south pole, and hence their nights and days correspond to the days and nights of the gods. There is also a current notion in our society, taking its origin also from *Vēdic* literature, that the spirits of the departed have their abode in the moon, and in consequence a day of the *Pitris* (पितृ) is said to be equal to a month of ours. Thus in these ideas we see a somewhat hidden statement of scraps of early astronomical knowledge.

Let us see if the ideas of *Kalpa*, *Manvantara*, and *Yuga*, apart from indicating, perhaps, that time is endless, have any such meaning. In a paper contributed by Samuel Davis to the *Asiatic Researches*, and dated the 15th of February, 1789, we find the following:—"It has been common with astronomers to fix on some epoch, from which, as from a radix, to compute the planetary motions;

and the ancient Hindus chose that point of time counted back when, according to their motions as they had counted them, they must have been in conjunction in the beginning of *Mésa* or *Aries*, and coeval with which circumstance they supposed the creation. This, as it concerned the planets only, would have produced a moderate term of years compared with the enormous antiquity that will be hereafter stated; but, having discovered a slow motion of the nodes and apsides also, and taking it into the computation, they found it would take a length of time corresponding with 1,955,884,890 years now expired, when they were so situated, and 2,364,115,110 years more, before they would return to the same situation again, forming together the grand anomalistic period denominated a *Calpa*, and fancifully assigned as the day of Brahma. The *Calpa* they divided into *Manwantaras*, and greater and less *Yugas*. The use of the *Manwantara* is not stated in the *Sūryasiddhānta*, but that of the *Mahā*, or greater, *Yuga*, is sufficiently evident, as being an anomalistic period of the sun and moon, at the end of which the latter, with her apogee and ascending node, is found, together with the sun, in the first of *Aries*; the planets also deviating from that point only as much as is their latitude and the difference between their mean and true anomaly."

Mr. Davis observes again in the same paper: "The division of the *Mahāyug* into the *Satya*, *Trēta*, *Dwīpara*, and *Kālī* ages does not appear from the *Sūryasiddhānta* to answer any practical astronomical purpose, but to have been formed on ideas similar to the *golden*, *silver*, *brazen*, and *iron* ages of the Greeks." But whatever be the origin of these cycles and ages of Hindu chronology, that we are all now in the *Kālī* age of rapidly decaying virtue, is on the lips of every aged member of our society; and even learned judges of law-courts write about the legality or otherwise of certain social and other practices in the *Kālī* age; as if Hindu society and its religious, moral, and other practices had been once for all stereotyped in the beginning of it. While nobody quarrels with those who believe that the character of society will change from time to time, and that practices common at one time will not be valid at all times, it is still highly desirable that those who talk or write about the peculiar features of the *Kālī* age, should know a little at least about what this division of time into *Yugas* means, and when and how it arose in India. Such divisions of time are not known to be common in many other countries, and some may even think, like James Mill in his *History of India*, that a

chronology, involving such immeasurably long periods of time, is a sure sign of savagery on the part of the people who adopt it. However, it will be instructive to see clearly how far the interpretation of Indian chronology, given by Mr. Davis in the above extracts is a correct one. As to his astronomical interpretation of the *Kalpa* and the *Mahāyuga*, there can be no two opinions. We find the following in Bhāskara-chārya's *Siddhānta-Sirōmaṇi*:—"Here at the centre of the earth one end of a string is supposed to be tied, and the other end of it is tied to the star-circle (in the plane of the ecliptic) at the commencement of the constellation *Āśvini*. In the beginning of creation Brahma placed the moon and other planets like beads attached to that string." Elsewhere in the same work it is stated: "On Sunday at sunrise in the town of Lanka (a conventional place on the equator among Hindu astronomers corresponding to the longitude of Ujjein—their 0°) the commencement of the spring, the first day of the bright fortnight, the day, the month, the year, the *Yuga*, &c., took place simultaneously." In explaining this passage, it is observed that the *Manwantaras* and the *Kalpa* also commenced just then. Kamalākara Bhaṭṭa says in his *Siddhānta-tattvavivēka*: "When, at midnight in Lanka, the planets, their apogees, and nodes, all set in motion, happen to be at the same time in conjunction at the beginning (*i.e.*, the first point) of *Aries* in the *Nāḍi-circle* (the plane of the ecliptic), then, they say, the time known as *Sṛishti* (सृष्टि), creation, occurs. The good declare that the time by which the same conjunction takes place again is a *Sṛishti-Kalpa* (सृष्टिकल्प)." To confirm this view, Kamalākara quotes an extract from the *Vishṇudharmottara*, which also says that, in the beginning as well as the end of the *Kalpa*, on a Sunday, the planets, their nodes, and apogees are all in conjunction in the longitude of *Lankā* at the junction-point in the heavens of the signs *Pisces* and *Aries*.

Thus it becomes clear that the word 'creation' in Hindu astronomy refers to an instant of time when Brahma is supposed to have placed all the planets in a line, so that the Earth, the Moon, Mercury, Venus, the Sun, Mars, Jupiter, and Saturn might be in a regular ascending order one above another. And at that instant Brahma is said to have started the seven planets to go on, each in its own path of continuous revolution round the earth. This theory of creation strongly reminds one of the incidents of a race, and is too exact to be true. Modern scientific discoveries with the tele-

scope and the spectroscope lend very strong support to the nebular hypothesis of the origin of our solar system. It follows as a matter of course from this theory that all the planets and the satellites belonging to this system could not have come into existence at the same time, in the state in which they now are. The time that is supposed to have elapsed since the beginning of the present *Sveta-Varāha Kalpa* is even beyond the limit admitted by modern geology. We can easily reckon how many years ago, according to the *Sūrya-siddhānta*, the creation of our present planetary system should have taken place. The computation may be made thus:—

<i>Sandhi</i> at the beginning of the <i>Kalpa</i> = ...	1,728,000
Six* <i>Manwantaras</i> = 308448000×6 = ..	1,850,688,000
27 <i>Mahāyugas</i> of the seventh <i>Manwantara</i> = $4,320,000 \times 27$ =	116,640,000
The <i>Krita</i> or the <i>Satya</i> age of the 28th <i>Yuga</i>	1,728,000
The <i>Treta</i> age of the <i>Yuga</i>	1,296,000
The <i>Dwāpara</i> age of the <i>Yuga</i>	864,000
* Years elapsed of the <i>Kali</i> age	4,992

Total 1,972,948,992

That all the planets of the solar system, now known to be about three hundred, revolve round the sun very nearly in the same plane and in the same direction, that all of them rotate also on their own axes in the same direction, that most of the satellites also revolve round their principals in the same direction, that they are all made up of the same or similar kinds of matter, and "that the planets near the sun possess a density about twice as great as that of granite," while those lying near the outer limits of the system "are composed of matter as light as cork," all these facts render the truth of the nebular hypothesis so probable that the chances against it are said by Ball in the *Encyclopædia Britannica* to be to the chances in favour of it as one is to a number made up of sixty figures. Regarding the age of our earth, it may be said in the words of Geikie "that geological evidence indicates an interval of probably not much less than 100 million years since the earliest forms of life appeared upon the earth and the oldest stratified rocks began to be laid down." Calculating from the existing polar flattening of the earth and the tidal retardation of its rotation, from the known rate of increase of temperature beneath the surface of the earth, and

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the present rate of its loss of heat, no less an authority than Sir William Thomson has come to the conclusion that, most probably, the antiquity of the planet we live and move upon cannot be much more than 100 million years. In these days, what educated man does not know something at least of the evolutionary progress of the earth and of the animal and vegetable life thereon?

Modern science offers, then, no justification for this running-race theory of creation, taught by the *Purāṇas*, and readily adopted by most of our comparatively modern astronomers. On a little consideration, it must become clear that this theory of creation had, in fact, its origin in the early calculations of ancient Indian astronomers, although they themselves had, perhaps, nothing to do with the actual weaving of it. The *Purāṇic* writers, however, seem to have suitably adopted for their own purposes the results of the observations and calculations of those early astronomers, and to have thus given birth to their own imaginary tales of creation. The mean revolutions of the planets, of their nodes and apsides, are thus given in the *Sūryasiddhānta* and the *Siddhānta-Sirōmaṇi*:—

Sūryasiddhānta. *Siddhānta-Sirōmaṇi*.

1. In a great <i>Yuga</i> of 4,320,000 years, the Sun, Mercury, and Venus, and the <i>Sighrōchhas</i> (i.e., the farthest points from the centre of the earth* in the orbit of the respective planets) of Mars, Saturn, and Jupiter, moving towards the east make 4,320,000 revolutions about the earth.	1. In a <i>Kalpa</i> of 4,320,000,000 years, the Sun, Mercury, and Venus, make 4,320,000,000 revolutions round the earth; and the <i>Sighrōchhas</i> of Saturn, Jupiter, and Mars also make the same number of revolutions.
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2. In a great <i>Yuga</i> there are 57,753,336 revolutions of the Moon, and 2,296,832 revolutions of Mars.	2. In a <i>Kalpa</i> there are 57,753,300,000 revolutions of the Moon, and 2,296,828,522 revolutions of Mars.
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3. In a great <i>Yuga</i> there are 17,937,060 revolutions of the <i>Sighrōchha</i> of Mercury and 364,220 revolutions of the planet Jupiter.	3. In a <i>Kalpa</i> there are 17,936,998,984 revolutions of the <i>Sighrōchha</i> of Mercury and 364,226,455 revolutions of the planet Jupiter.
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4. In a great <i>Yuga</i> there are	4. In a <i>Kalpa</i> there are
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* According to Pandit Bāpu-Dēva Sastri of Benares.

7,022,376 revolutions of the *Sighróchcha* of the planet Venus, and 146,568 revolutions of the planet Saturn.

5. In a great *Yuga* there are 488,203 revolutions of the Moon's *Mandóchcha* (apogee), and the number of the retrograde revolutions of the moon's ascending node is 232,238.

6. In a *Kalpa* there are 387 revolutions of the *Mandóchcha* of the Sun, 204 of that of Mars, 368 of that of Mercury, 900 of that of Jupiter, 535 of that of Venus, and 39 of that of Saturn.

7. In a *Kalpa* there are 214 revolutions of the node of Mars, 438 of that of Mercury, 174 of that of Jupiter, 903 of that of Venus, and 662 of that of Saturn.

7,022,389,492 revolutions of the *Sighróchcha* of Venus, and 146,567,298 revolutions of the planet Saturn.

5. In a *Kalpa* there are 488,105,858 revolutions of the Moon's *Mandóchcha*, and 232,311,168 retrograde revolutions of the moon's ascending node.

6. In a *Kalpa* there are 480 revolutions of the *Mandóchcha* of the Sun, 292 of that of Mars, 332 of that of Mercury, 855 of that of Jupiter, 653 of that of Venus, and 41 of that of Saturn.

7. In a *Kalpa* there are 267 revolutions of the node of Mars, 521 of that of Mercury, 63 of that of Jupiter, 893 of that of Venus, and 584 of that of Saturn.

From a comparison of the two columns in the above table what do we learn? The first thing that strikes us is that the data given by the two authorities rarely agree. Now the *Súryasiddhānta* is alleged to be an ancient authority, and the *Siddhānta-Sirómani* is well known to be a modern one. The data given in the current *Súryasiddhānta*, regarding the revolutions of the planets and of their nodes and apsides, have been shown to differ even from those that are given in Varāha-Mihira's *Pancha-siddhāntikā*, in the portion where he deals with the *Súryasiddhānta*. And it is now believed that the current *Súryasiddhānta* is a comparatively recent, corrected, and altered form of another older work that went by the same name. However, it can be easily seen that, according to the *Súryasiddhānta*, at the beginning and end of a great *Yuga*, of 4,320,000 years, the seven planets, the *Sighróchchas* of Mercury, Venus, Mars, Saturn, and Jupiter, and the ascending node and apogee of the moon, are all to be seen, taking only their mean revolutions into consideration, in conjunction at the first point of Aries; while a grand conjunction of all these, and of the nodes and *Mandóchchas* of the other planets, takes place only at the interval of a *Kalpa* of 4,320,000,000 years. It need be no matter for surprise that the

Súryasiddhānta and the *Siddhānta-Sirómani* do not agree in all their details, although they both adopt the same durations for the *Kalpa* and the *Maháyuga*. All thoughtful Indian astronomers have believed in what is called the *Bija* in our astronomical language, that is, corrections made from time to time in observations and data previously recorded and believed in. They readily recognise that, in the science of astronomy, the authority of *ipse dixit* ought to find no place; here only that must be the truth which corresponds with the results of direct observation. If we compare the table above given with the table of elements in any modern European work on astronomy, it becomes apparent that the data of the Indian astronomers are far from correct. Nevertheless, it is plain that the *Kalpa* and the *Maháyuga* are hypothetical periods of time depending upon certain conjunctions calculated from such observed data as were in those very early days available. In the *Súryasiddhānta*, (I. 24), it is stated that "47,400 years of the gods elapsed in the course of the god Brahma's creation of animate and inanimate things, of the planets, stars, gods, and demons, &c." What is the meaning of the statement that Brahma should have taken as much as 395 great *Yugas* to finish his work of creation? The commentator on the *Súryasiddhānta*, whom Mr. Davis quotes in the paper already referred to, says in this connection:—"In the *Súryasiddhānta*, *Soma-siddhānta*, *Prajāpati*, *Vasishtha*, and other *Sāstras* this deduction is required to be made from the *Calpa*, because at the end of that term the planetary motions commenced. The son of Jishnu, who understood four *Vēdas*, and Bhāskarācharya, considered these motions as commencing with the *Calpa*. . . . Brahmagupta's rules are consistent with the practice of the *Pandits* his predecessors; and he formed them from the *Purāṇa Vishṇu-Dharmottara*, wherein is contained the *Brahma-Siddhānta*; and the periods given by Aryabhatta are derived from the *Parasera-Siddhānta*: the precepts of the *Munis* are therefore the authorities of Brahmagupta, Aryabhatta, and Bhāskarācharya, whose rules cannot be deceitful. . . . If a planet's place, computed both by the *Súryasiddhānta* and *Parasera-Siddhānta*, should be found to differ, which rule must be received as right? I answer that which agrees with his place by observation: and the *Munis* gave the same direction." Thus, even among ancient Indian authorities, there must have been differences of opinion as to whether the first conjunction of the *Kalpa* took place at its beginning, or 395 *Maháyugas* after it began. Moreover, some of them

supposed the *Kalpa* to begin at midnight, while others supposed the commencement of the same to take place at sun-rise. But all seem to have believed that the same length of time goes to make a *Kalpa*. From this Mr. Davis has rightly inferred that this deduction of 47,400 divine, or 17,061,000 human, years might have been "intended as a correction, which without altering the date of the *Calpa* as settled, probably, by yet more ancient astronomers, might (joined perhaps with other regulations) bring the computed places of the planets to an agreement with their observed places, when the *Sūryasiddhānta* was written." These epochs and cycles are so large that even very small errors cannot be neglected as insignificant; and it has been calculated that an error of the ten-millionth part of a second, in the measurement of angles, in one day amounts to more than 43° in the computation of a *Kalpa*, and the mistake of one-tenth of a respiration—time in one solar (*saura*) year makes a difference, in the same period, of 20,000 days.

M. RANGACHARIYAR.

THE INFLUENCE OF THE BACONIAN PHILOSOPHY ON MODERN EDUCATION.*

In the whole range of educational history there are few studies which are more interesting, disciplinary, or instructive, than an investigation of the influence exerted on education by that great revolution of philosophic thought which Francis Bacon inaugurated. The study is deeply interesting, because it is a pleasure of the highest type to follow the course of human thought; it is highly disciplinary because it leads us to perceive that beneath the seemingly confused and disorderly mass of educational opinions there runs a uniform principle which reduces it to a definite organic whole; and it is further eminently instructive as it furnishes us with a touchstone, as it were, by means of which we may test the whole body of educational doctrines.

But before proceeding to trace the influence of Bacon's philosophy, we think it desirable to take a brief survey of the state of philosophic thought, at least in its bearings on education, previous to the advent of the *Novum Organum*. For every great step in the

upward march of human thought is not a creation but a growth—a slow and steady evolution from pre-existing conditions; so that any attempt at a clear comprehension of any particular opinion should be based on an accurate knowledge of opinions which preceded it. Hence arises the necessity for the educational thinker who sets himself to understand the origin of the Baconian reform and its influence on modern pedagogy, to take a retrospective survey of the educational side of the philosophic thought that obtained in the Middle Ages.

In giving an account of what is called the 'Old Education', we shall pass over the ancient Greek and Roman learning as being too remote for our purpose; and begin with the monastic schools of the 6th century A.D. It is known that education in those turbulent times was in the hands of the Church, because it was only the clergy who felt the need, or had leisure and opportunities, for study. It is also known that the sole preoccupation of the Church was to give children a rigidly religious education, so that they might become pious men and zealous preachers; for the monks held that this life of ours is only a state of preparation for the life to come. When education took this religious turn, it came naturally to be based on authority and precepts. Implicit obedience to the Scriptures and the Fathers was the fundamental law of all discipline in the monastic schools. Education thus became dogmatic and arbitrary, and, demanding blind submission, stifled all free enquiry. To question any of the doctrines of the Church was considered heresy and even betokened satanic malevolence. Further, as the doctrines and the precepts of the Church were expressed in language, and as they were only to be got up without any questioning, education became little more than a process of memorising. The memory was exercised to the total neglect of the other faculties, and words were exalted over things.

If this was the state of education during the days of the monks, it was not much better in the hands of their successors, the schoolmen. The studies which these latter patronised were grammar, logic, theology, and metaphysics. The schoolmen were in their turn slaves of authority. To the authority of the Scriptures they superadded that of Aristotle. They thus only aggravated the bondage of the human mind, though they made undue pretension to reasoning and free inquiry into the foundations of their theological and metaphysical dogmas. But their inquiry and their reasoning consisted merely in childish wranglings and specious sophistries,

* A paper read before the Saidapet Teachers' Association.

indulged in with a view to establish and ratify their pre-conceived theories and dogmatic principles. In fine, their logic was deduction. But deduction without induction is of no avail. Deduction cannot test the validity of the major premise of the syllogism, cannot certify as to the truth of the general principle from which it starts. If the schoolman, therefore, started from a certain general principle, the truth of which he did not question, because it had the sanction of Aristotle or of the Scriptures; and if, consequently he did not attempt to test it by an observation of facts and things; the farther he went in his deductive inferences, the farther he went astray from the road to truth and the more deeply did he establish himself in error. Thus we see that, in spite of the apparent exercise which the schoolmen gave the intellect, there was no real and healthful development of the critical faculty, or at least of that phase of it which is concerned with the investigation of truth and things. In the absence of this wholesome communion with nature and truth, education still continued to be a process of memorising a series of words, the meaning of which was not understood.

Now, when education degenerates into a system of memorising it is sure to become a bar to all human progress. Instances of this tendency are not far to seek. Take the case of the Hindu nation. Its historic method of education has consisted in storing the memory with an accumulation of ill-digested words, so that the knowledge thus acquired has begotten a conservative tendency in the mind, which in its turn, has come into conflict with the opposing tendency of progress and acted as a perpetual obstacle to all advancement. The same law operated on the education of the Middle Ages. Memorising gave birth to conservatism, and conservatism opposed all progress. Ten centuries and more of education under the old system had produced scarcely any beneficial results. Men began to awaken to the extreme barrenness of the old education and the human mind, disgusted with the perennial memorising and eternal juggle with words, recoiled on things and returned to realities. Unable to bear any longer the Ethiopian darkness of despotic dogmatism, man's reason sprang up, with the glee of liberated prisoner, to gambol in the sunshine of liberty. It must have been so. Whenever any error reaches its *ne plus ultra*, reaction must and will set in; and a conspicuous instance of such a reaction, we see, in this rebound of the human mind, which began its resistless career in the Renaissance and reached its culmination in the Baconian revolution.

The European mind being thus prepared to welcome any change, it is no wonder that the Renaissance, which commenced in Italy, spread rapidly throughout Christendom. Nor was this all. The conquest of Constantinople in 1453 by the Turks, and the consequent dispersion of the learned Greeks throughout Europe, was another very important circumstance that favoured the progress of the Renaissance. But what was the practical outcome of this revival as regards education? How far was the Renaissance an advance upon the dry formalism of the Middle Ages? How far was it a step in the direction of modern realism? We think the best that can be said on this head is that, by making education more or less secular, it did away, to a certain extent, with that blind submission to authority which had characterised the Middle Age education, and that it introduced the human mind to a closer communion with the living substance of thought, by superadding the classical writers of Greece and Rome to the dry bones of grammar, rhetoric, and logic, which had up to that time formed the staple commodities of school instruction. These changes, indeed, formed a step,—a decided step—towards realism, and we are thankful to the Renaissance for it. But to claim any higher credit for this movement of thought, to hold, as some writers do, that it was synonymous with realism appears to us to be unwarranted. For if the Renaissance led men to study realities at all, it was though the imaginative works of Greece and Rome; if it interpreted nature at all, the interpretation was poetic and not scientific. But this, we need scarcely remark, is not the essence of realism, which demands such a vigorous study of fact and nature that there may be a faithful correspondence between the knowledge thus acquired and the external reality.

Coming next to another closely allied movement—the Reformation—we recognise another step in the right direction. By its doctrine of individual responsibility in spiritual matters, and by its trust in humanity, Protestantism gave a great impetus to popular education and allowed liberty of thought and freedom of discussion. This was again another blow to the reign of authority and the rule of submission. But this emancipation of the mind confined itself chiefly to the free interpretation of the Scriptures and did not proceed to enquire into the foundations of things. Nor did it substitute any of the real sciences for the old curriculum of rhetoric and grammar, logic and metaphysics. There was, too, another radical defect in the schools of the Reformation—want of method, for which they had to pay very dear.

Now we have reached the great epoch which is our proper theme. But, before going into it, we shall do well to take stock, as it were, of what we have already said, in order to see clearly our position. We have seen that the end aimed at by the Old Education was perfection of self with a view to spiritual communion with God. To gain such an end, education became dogmatic, and learning came to consist in an unremitting memorising of meaningless symbols. This abnormal activity of the memory engendered conservatism, which acted as a perpetual bar to progress. Even the efforts of the Renaissance and of the Reformation failed to ensure advance through want of method, and through lack of that zeal, in their successors, which had characterised Luther and Melancthon, the first founders of the Reformation schools.

Just at this juncture, there appeared a book which was to change the destinies of the world,—the work of a teacher who was to be the pioneer of a new civilization. That book was the *Novum Organum* of Francis Bacon. As a teacher Bacon had the wisdom and the courage to point out the defects of the time-honoured theories and the time-killing studies of his day; and his famous work has been a standing protest against error and pedantry and has victoriously fought the battle of human emancipation. To recount the details of the Baconian reform is beside the mark and beyond the limits of the present paper. All that we want for our purpose is an outline of the broad principles underlying the new philosophy. Bacon begins by showing clearly the futility of the method in vogue, by proving that the deductive method, while useful in its place, should not precede but succeed the inductive method, and by exhorting thinkers and teachers to commune with nature and not depend upon authority for the first truths. He next proceeds to warn enquirers against certain 'idols of the mind', which interfere with the clear apprehension of truth, and thereafter, dwelling for a little on the long-continued reign of error, points out the grounds on which the hopes for a better future may be founded. He finally enunciates and explains his methods of induction, which are the means by which nature should be coaxed to divulge her secrets. In fact, Bacon cleared the way to, and supplied the means for, the discovery of truth.

But one might object, "True, Bacon has laid down the laws of discovery and has therefore done good service to the development of the sciences. But what has the discovery of scientific truths to do with education?" This is indeed a plausible objection and

should be met in a detailed manner. Education is both a science and an art, and according to the objector's own admission, it is clear that Bacon's method is applicable to the scientific phase of education. It is induction that can give us an accurate knowledge of the laws of mind and body, which form the theoretic basis of education. In other words, it is to be taken for granted that the objector allows that psychology and physiology are inductive sciences. Psychology, in fact, owes its origin and development to the fruitful method of Bacon, for Locke, the father of the English and French schools of psychology, pursues, in his well-known Essay, the very same methods which Bacon recommended. The other part of the objection, however, namely, that regarding the connection between the Baconian method and the art of education is not so easily answered. If Bacon's method teaches us those principles of obedience to which is necessary to the discovery of truth; if it teaches us the method by which all men know when they know truly, have we not then implicitly learnt the proper method of teaching children? If in knowing how the adult learns, the objector has not implicitly understood how the child learns, he must then be supposed to hold that there are two modes of acquiring knowledge,—one for grown-up persons and another for children? But is that true? Are there two different systems of mental laws? Do the minds of grown-up persons obey laws different in kind from those which govern the minds of children? Is not the child the little man? To take an analogy, is the digestion of the child different in kind from that of the adult? Does the plant thrive in a different fashion from the tree? To each of these questions the objector must return an unqualified 'No'. If then the mind of the child has to pass through the same stages of progress in the acquisition of knowledge as the mind of the grown-up man, has not Bacon done good service—indirectly it may be—to the art of education in laying down certain precepts to guide inquirers after truth? Cannot these precepts be easily translated into rules of pedagogy. The fact now under consideration is put by Herbert Spencer in a slightly different form. He describes the education of the child as a process of rediscovery, that is, the child when rightly taught walks over the same track that the race has travelled over. Though we cannot subscribe to this view in its entirety, yet we hold it contains a considerable quantum of truth in so far as it maintains the existence of a close similarity between the relation of the mind of humanity to external phenomena, and that between the

child's mind and the same phenomena. The theory affirms that the child in its process of acquiring knowledge has to pass through comparisons, contrasts, and experiments similar in kind to those which have secured for the race the knowledge it possesses. If this theory is true, if it is true that the methods which scientific men employ in their search after truth are just the methods followed by rightly taught children in their acquisition of knowledge, does it not follow that an acquaintance with Bacon's reformed methods of discovery is necessary to every schoolmaster who wishes to perform his duties successfully? And has not our imaginary antagonist to withdraw from the field?

We have thus established the general fact that Bacon's method of discovery contains by implication the method of teaching. We have next to descend to particulars, and exhibit a few of the more important applications which either have already been made or might in future be made to the art of Education.

Bacon holds that the end of all knowledge is to ameliorate "the estate of man," to increase his happiness in this world by endowing him with discoveries and powers which could only result from an understanding of nature. This ideal of Bacon is in direct antagonism to that of the Old Education, which held that this life of ours is not worth living, and that the true goal of knowledge lies in knowing how to withdraw self from the attractions of this world, and in preparation for the higher life. This difference in the ideals could not but make itself felt in the character of the education given and the means employed for its acquisition. For there is no ignoring the potency of ideals. Hence, we find that, while the old education exalted humanistic studies, the grand panacea of the new is the sciences. Another consequence of the new ideal is the banishment of authority and dogma from schools. It will not do for the modern schoolmaster to teach that the earth is flat, because the sphericity of the earth is not reconcilable with the teaching of the Fathers. Nor will it do for the modern professor to teach that "Nature abhors a vacuum," because Galileo has affirmed it. The course to be pursued by the modern teacher is to abandon authority and to put the pupil in the way of testing every general principle for himself.

As a consequence of this, the ancient method of memorising has lost its ascendancy. In fact, there have arisen schools of educationists, like the Innovators, who doubt if there is any part of the school curriculum that should be learnt by heart as a distinct exer-

ise in memorising. On the other hand, the watchword of modern education is: "Train the senses, the observing powers, the thinking faculties."

Bacon further maintains, as we have seen, that a science, in order to be true, accurate, and fruitful, must be based on a faithful interpretation of nature. "We can only conquer nature," he says, "by first obeying her." This postulate has furnished the great pedagogical precept, "Follow nature." Modern teachers have come to recognise that teaching, to be successful, should more and more increasingly be in conformity with the order and methods of nature. They have recognised that there is a certain order in the evolution of the mental faculties of the child, and that there is a certain knowledge which forms the proper aliment of each faculty. It is in a recognition of this law that modern educationists like Bain have attempted a classification of school studies, according to their psychological correlation.

It is also coming to be realised that successful teaching requires as little interference of the teacher, and as much exercise of the child's own activity as possible; for every forward step in our knowledge of nature impresses us more and more with the truth that there is in things an inherent self-sufficiency which should be respected and made use of. Hence there is wisdom and truth in the modern educational principle that the child does not learn by being told, but by exercising its own self-activity.

There is yet another important deduction to be drawn from the new philosophy. Bacon, as we have said, condemned as unscientific the old method of starting with dogmatic principles and then proceeding to apply them to particular cases; and he proposed instead the reverse process of proceeding step by step and with due caution from the particular to the general. This, he held, was the only safe and sure method, and this has been adopted, intact by modern pedagogy. "From the particular to the general," is the one precept insisted on by all educationists from the time of Comenius. This principle, however, has been paraphrased in various ways. One form of it is, "Proceed from the concrete to the abstract," with regard to which it need hardly be pointed out that the concrete is particular and the abstract general. Another form is, "Proceed from the indefinite to the definite, or rather, from the empirical to the rational." Here the terms 'indefinite' and 'empirical' apply to that stage of indistinct and inaccurate knowledge which precedes the final stage of scientific induction. A third

form is, "Proceed from the simple to the complex," and here again we see that the simple is coincident with the particular, and the complex with the general. A fourth form in which the principle appears is, "Proceed from the known to the unknown." This means that the child can learn a new fact only in so far as it presents features already familiar. One might suppose it impossible that this plain psychological fact could be misunderstood, yet, as a matter of fact it has been misunderstood, and that by no less an authority than Mr. Payne. He stigmatizes the principle under review as "a bit of educational cant that passes current to save the labour of thinking." His objection is that this 'dogma', as he styles it, is in direct conflict with a normal law of the mind,—namely, "The mind descends from the whole to the parts, from the vague to the definite." He maintains that the precept, "Proceed from the known to the unknown," means, to quote his own words, "that the pupil should master the elements of a complex notion before the notion itself has been presented." But this interpretation is altogether gratuitous. Mr. Payne evidently assumes that 'the known' contemplated in the principle is the part, and 'the unknown' the whole; and thus makes out, much to his own satisfaction, that the principle violates a fundamental law of the mind. But why he makes such an unwarranted assumption, and why he does not consider it more reasonable to regard the whole as the known and the part as the unknown—all this seems to us not easily explicable. In fact, the supposition that the first known is the whole or at least is regarded as a whole, is truer and more tenable. When a notion is presented to the mind, it is *per se* first apprehended as a whole whatever may be its relation to another notion—whether of a whole to its parts or of a part to its whole. The mind first seizing the notion as one undivided whole, proceeds next, by a distinct effort, to analyse it into its constituent parts, which at the outset were not discerned. The same question may be looked at from a slightly different point of view. Like other living things, the mind develops, and the law of all development is the disintegration of homogeneity into heterogeneity. The first impressions of the child are homogeneous wholes, whose parts the imperfect faculties of the child cannot discern. But as the child's experience widens, and his faculties develop, the homogeneity gradually gives place to heterogeneity, and the child comes to discriminate parts in what was hitherto considered as an undivided whole. Thus we see clearly that the known is not the part but

the whole, and that from this known the child proceeds to the parts, which are the unknown. This principle which has been thus misunderstood may also be rendered into, "Proceed from the old to the new," which will mean that the new should be linked to the old.

We have thus discussed some of the most important principles of modern education. These, it may be observed, are positive precepts telling us how we should do. But there are a few negative principles which may be deduced from the warning which Bacon gives to scientific enquirers against what he calls 'the idols of the mind'. Under this term he includes all the fallacious tendencies of the human mind which tend to lead enquirers astray from the road to truth. How real the danger of these 'idols' is and how insidious their approach, may be gathered from the sequel.

One very common mental tendency is to generalise on an insufficient basis. From one or two instances children are apt to jump to a universal conclusion. Because, for instance, a Hindu child sees that John and James drive in coaches, he concludes that all European children do so. The duty of the teacher in such a case is to correct this erroneous bent by citing instances to show the hastiness of the child's conclusion, and to impress upon the child the necessity for being cautious in his generalisations.

Another misleading tendency consists in supposing that the existence of a word means the existence of the corresponding thing. The word 'fortune', for example, which is at best a convenient name for a set of accidental circumstances, is often personified into a mysterious being dealing out weal and woe to man. This tendency sometimes manifests itself in a very ludicrous form, especially in children, when they meet your scepticism by "No, sir, it is said so in a book." The duty of the teacher here is to show clearly how far words and books are reliable, and why language and print are not always to be trusted.

A third tendency of the mind that Bacon points out is the special partiality of some to one line of study or to one department of knowledge, and of others to some other. This, however, cannot be regarded as a totally fallacious tendency of the mind, but it needs to be carefully kept within bounds. With this might be connected the modern educational precept that children, for a considerable period of school life, should receive an all-round education, and that their special inclinations should not be fostered till a certain stage of general advancement has been reached.

In our survey, so far, of Bacon's influence, we see that that in-

fluence has been for the good of education. But there is no un-mixed blessing under the sun. Even the most perfect schemes are apt to be distorted and abused under the disturbing influences of human passions and human frailty. And here we have a case in point. The human mind in extricating itself from the oppressive trammels of the old education, rebounded to the opposite extreme, and in avoiding one error, it fell, at its first onset, into another. If the old education aimed at a knowledge of self, the new is pre-occupied with a knowledge of the external world. If the Church dominated the old, the State governs the new. If the old was too religious in its character, the new errs by being too secular. If authority and tyranny were the rule of the old, licence and anarchy are the order of the new. If the old divorced words from things the new exalts things over words. If humanism reigned over the old, realism is the be-all and end-all of the new. If the old consisted of the intuitions of intellect, the new is made up of the intuitions of sense. If in the old the memory overruled the other faculties, these eclipse the memory in the new. If the old was dry and tedious, the new is complaisant and easy.

This new superstition was but a necessity of the times, and only illustrates the law of reaction which Herbert Spencer enunciates thus: "The suppression of every error is commonly followed by a temporary ascendancy of the contrary one." And if history teaches us one lesson more certainly than any other, it is that the pendulum of human opinion after its temporary oscillations between two extremes will ultimately settle in that position of the golden mean wherein lies all true wisdom. And that we are already on the way to such a harmonious combination of the old education and the new, we have unmistakable indications. Educationists of the present day have already begun to see that the true end of education lies neither in a knowledge of self by itself nor in that of the world by itself but in a union of the two. While they are not bigoted in regard to religion, they yet feel the necessity for moral instruction. While they desire freedom for their pupils, they do not altogether set aside authority. Our modern schools are no more mere classical lyceums or scientific laboratories, but centres uniting disciplinary humanism with instructive realism. They are no longer scenes of astounding feats of mere memory, but homes of its happy union with the other faculties. They are no more places of hard lessons and harder ferules, but centres of pleasing instruction and mild discipline. In a word, having given up the superstitious reverence for

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authority and the gigantic processes of memorising which characterised the old education and having got rid of the excesses into which the new at first fell, we of to-day stand at the threshold of a new dispensation which harmoniously combines the old education and the new, and bids fair to promote steady advancement and universal progress.

C. T. PARTHASARATHY MUDALIAR.

LITERARY NOTICES.

The Pleasures of Life. By Sir John Lubbock, Bart., F.R.S., D.C.L., LL.D., President of the London Chamber of Commerce, Principal of the London Working-Men's College, and Chairman of the London County Council. London and New York: Macmillan and Co., 1890.

WE can thoroughly recommend this book to our readers. The author is a man who has found devotion to literature, art, and science quite compatible with attention to business and the more practical concerns of life, and one has only to read the title-page of the present work, which we have transcribed above, to see how successful he has been in every department to which he has put his hand. His life has been and still is a very full one. This very fact and the fact that his life has been a comparatively bright one have been regarded by some of his critics as to a certain extent unfitting him to judge for others. But in the first place the man who has experienced the pleasures of life is surely better qualified to write on such a theme than the man who has not had that experience. In the second place, though Sir John Lubbock's lines have been cast in more pleasant places than those of the majority of men, no reader of the present volume can fail to see that he owes no small part of the pleasure which he finds in life to his own perseverance and industry, and he too, as he says, has had his sorrows.

Of the pleasures of life on which Sir John Lubbock writes, many are within the reach of everybody—though none of them will come to people who do not make an effort to find them. Others, again, have been brought within the reach of many in this country by the spread of education, and we may hope that, as education still further advances, not only will these be more widely enjoyed but more will be added. To the pleasures already within the reach of our educated men, Sir John Lubbock has himself added one—the pleasure of reading this book. In writing it he has not aimed at great originality on his own part: he has sought rather to illustrate and enforce the truths of which he speaks by

quotations from the writings of distinguished authors in whose works he has found most comfort and delight. This by no means easy task he has performed with judgment and taste; and the result is a work which has already been and will be widely read both for the sake of the immediate pleasure which it affords and for the sake of those pleasures to the attainment of which it points the way.

We may mention in conclusion that in little more than three years twenty-one editions of the first part of the book, representing seventy-four thousand copies, were published, and that of the second part eight editions, representing thirty-seven thousand copies, have been published since April, 1889.

Pharmacographia Indica. A History of the Principal Drugs of Vegetable Origin met with in India. By W. Dymock, C. J. H. Warden, and David Hooper. Part III. London: Kegan Paul, Trench, Trübner, and Co., Ltd.; Bombay: Education Society's Press; Calcutta: Thacker, Spink, and Co.

This Part of the *Pharmacographia Indica* seems to be quite equal in quantity of matter and general excellence to the two earlier parts, and contains a number of articles of more than common interest. One naturally turns first to the article on cinchonas, not only on account of the importance of the drugs obtained from these trees but also because one at least of the authors is a specialist on this subject. After enumerating the principal species the article goes on to treat of the 'History, Uses, &c.' of the drug. The history of its discovery by the Jesuits in Peru and its introduction by them into Europe about the middle of the 17th century has been frequently related. The drug was admitted into the *London Pharmacopæia* in 1677, and by 1770 it was well known in India even amongst the native physicians. In these early days it was simply the powdered bark that was used, and quinine was, apparently first employed in India in 1826, when the Bombay Government purchased a small quantity of it at £28-10-8 per pound! The great demand for the drug in India led to the sending of an expedition to South America to collect seeds and plants, and in 1861 some of these reached India and were handed over to Mr. Melvor, the Superintendent of the Botanical Gardens at Ootacamund. In the 30 years that have passed since then the cultivation of cinchona has spread to such an extent and the processes for extracting quinine have been so greatly improved that instead of the price charged in 1826 sulphate of quinine can now be purchased at less than one shilling an ounce. After the history of the drug comes careful description of its action in small and large doses. In connection with this we need only note the comparatively recent discovery that

"the most important property of quinine is its destructive action upon the

low animal organisms (hæmatozoa), whose presence in the blood has been shown by Laveran to be the exciting cause of malarial fevers. . . . Laveran's observations, which have now been amply confirmed, show that the hæmatozoa of malaria are present in the blood in the greatest number immediately before the febrile paroxysm, which is an effort of nature for their destruction, and that the administration of the cinchona alkaloids, and more especially of quinine, has a marked effect in reducing the number of these parasites, and inasmuch as they remove the cause of the irritation, they also prevent the recurrence of the febrile paroxysms."

This theory also explains the use of small doses of quinine for preventing fever. As regards the use of the drug the authors point out that

"in malarial fevers quinine should be administered in such a way that the last dose should be ingested about 2 hours before the expected return of the paroxysm, and the first dose 4 or 5 hours previous to the last. When there is sufficient time, its influence is always very sensibly aided by the exhibition, 12 or more hours before, of a mercurial or other purge."

The cinchona plantations and the harvesting of the bark are next discussed, from which we gather that while stripping, shaving, and coppicing are most largely used in the Madras plantations, uprooting seems to be almost universally adopted in Bengal. The last part of the article is taken up with a 'Description' of the drug, which includes an account of the chemical composition of the several alkaloids found in cinchona bark and of the proportions in which they occur in the several varieties. It also contains some references to the valuable work done by Mr. Hooper in connection with the influence of shade, manures, age, &c., on the alkaloids. This abstract of the account given of cinchona will indicate the manner in which the authors have done their work, producing an article which is not only of value to the specialist but of interest to the general reader.

From the interesting article on coffee we may make one extract:—

"It has been proved by experiment that under the influence of coffee the amount of blood circulating in the brain is reduced, but that it is brought to the nerve tissues under increased pressure, hence assimilation of nutritive material should be increased in rapidity if lessened in quantity. Prolonged mental labour produces cerebral congestion and drowsiness, and it is this condition apparently which coffee corrects by contracting the blood vessels and lessening the amount of blood in the brain. . . . But if taken in excess, it paralyzes the digestive function and causes venous congestion of the liver. . . ."

Of the medical parts of the book we are not competent to form an opinion, but we have no hesitation in saying that as far as the descriptive and chemical parts are concerned the work is admirably done. This being so it seems a pity that the publisher's part has not been better executed. The paper is poor and the printing far from good. The printing of chemical formulæ is specially objectionable.

The Church of the First Days: Lectures on the Acts of the Apostles. By C. J. Vaughan, D. D., Dean of Llandaff and Master of the Temple: formerly Vicar of Doncaster. London: Macmillan and Co., 1890.

It is now about twenty-six years since these well known lectures by Dean Vaughan first appeared, but the lapse of time does not seem to have diminished their popularity. This new edition differs from those which preceded it chiefly in form. Messrs. Macmillan and Co. have now issued in one volume '*The Church of Jerusalem*', '*The Church of the Gentiles*', and '*The Church of the World*', each of which formerly occupied a separate volume. The only other change that has been made is, that, wherever it has seemed to be advisable, the renderings of the Revised Version have been substituted for those formerly given. These lectures on the Acts of the Apostles which were delivered in the first instance by Dean Vaughan "in the Parish Church of Doncaster, in the ordinary course of parochial ministration," possess all the qualities which made the Master of the Temple one of the most popular preachers in London. The expositions are clear and full without being lengthy or diffuse, and they show at the same time spiritual insight, imaginative power, and a keen appreciation of the wants of men. Criticism of these lectures is really out of date, but one or two extracts from the third part, '*The Church of the World*', may suffice to show Dean Vaughan's method and style.

"Not in vain had he spoken even this once. One man described as the *Areopagite*, an officer probably or assessor of the court of Arcopagus, was a convert to the word spoken. He, and others also, *came to the Apostle, and believed*. They were not ashamed to be in his company, even in those high places of learning and arrogance. And not in vain certainly had St. Paul spoken for all time, leaving on record for ever a glorious example of a Gospel to the heathen. Well had it been, my brethren, if the same wisdom had ever been taught in the world's dark places; if a like recognition had always been made of a Divine witness in man, a Divine seed and spark of light, waiting only the hand of Revelation to kindle it into a pure steady flame; if instead of trampling upon man as he is, or flinging headlong before him that *pearl of great price* of which he knows not yet the value, Christian teachers had begun by drawing from within that latent instinct, and stirring into activity that dormant conscience, by which man, however debased, however degraded, does to the end differ from the beasts that perish."

"St. Paul was (in the best of all senses) a 'waiter upon Providence'. He did not rush into a city with a ready-made lecture or sermon, and deliver it amidst scoffing and mocking crowds in the chief place of concourse. When he reached a new scene of labour, he thoughtfully surveyed the opportunities which it afforded to his Gospel. Was there any family, or any body of persons in that place, prepared in any degree for its reception? Who was there who already believed in the one true God? Who was there already in

possession of that inspired Scripture, which, even in its earlier and darker half is able by God's grace to make men wise unto salvation? To that house or to that community he first applied himself. Jesus, he said, had come from that God; Jesus, he said, had fulfilled that Scripture: He was the promised Saviour, the expected Redeemer: they were looking for Him and He had come. . . . That was St. Paul's method wherever he found himself. His object was not to create a nine days' wonder, but to lay a solid foundation for a real and abiding superstructure; a foundation of unassailable truth and a superstructure of unassailable faith. To him twelve men, really convinced and thoroughly changed, were worth whole crowds of surprised and amazed and admiring auditors, who came to wonder and departed to forget."

"I wish . . . to clear the way for the practical and most solemn enquiry, *Have ye received the Holy Ghost, in His graces, in His individual and personal influences, in those things which all may have now and yet which not all now possess, since ye, ye yourselves, came to believe?* It is in reference to these graces, most certainly, most distinctively, of all, that the words of the great Apostle were written, *Now if any man have not the Spirit of Christ, he is none of His.*" I need say to no one here present, that in this respect the Holy Spirit is only where He acts; and that, where He acts, He shows that He is acting; and that where He shows this operation, it is by signs of a certain particular nature, written down for us (that we may all know them again) in Holy Scripture. *Thou hearest the sound thereof, but canst not tell whence it cometh and whither it goeth; so is every one that is born of the Spirit.* And you are all familiar with one place in Holy Scripture, where the chief signs of the Holy Spirit's working in a man are brought together and as it were counted over. That passage is found in the 5th Chapter of the Epistle to the Galatians. I cannot enumerate to-night all those qualities which together are there called *the fruit of the Spirit* and contrasted in detail with *the works of the flesh*; the signs of Divine renewing grace, with the indications of fallen and corrupt human nature. I will select almost at random just three of them, to serve as heads of enquiry, when we are asked by St. Paul, and by One greater still, *Have ye received—hast thou received—that Holy Spirit, which all who believe in Christ were to receive.*"

These extracts may help to show to those who are unacquainted with Dean Vaughan's lectures how intensely practical his preaching is, and may serve to illustrate his method of applying to the life of to-day the great principles which were at work in the time of the Apostles.

A Text-Book of Geometrical Deductions. Book I. By James Blaikie, M.A., and W. Thomson, M.A., B.Sc. London: Longmans, Green, and Co., 1891.

The authors of this book of deductions are both well known for elementary works on mathematics. Blaikie's *Elements of Dynamics* is extensively used by certain classes of students in England, and Thomson's *Algebra*, which is probably the best text-book that has yet been written for use in high schools, is pretty well known in this country. The

object of the work under review, of which additional parts are in preparation, is to afford a systematic course of training in the art of solving geometrical deductions or *riders*. Whatever be the reason, it is an undoubted fact that in this country, and elsewhere, too, we believe, the number of those who turn their study of geometry to so good account as to be able to solve even simple deductions with anything like tolerable readiness and certainty, is lamentably small. If this is to any large extent due to want of systematic instruction the present work is calculated to do much good. It is adapted to students possessed of even the most moderate aptitude for geometrical study, and is well fitted to bridge the chasm that for the great majority of students seems to separate ability to follow the reasoning by which a particular geometrical result is arrived at from ability to construct such reasoning.

The methods employed seem to be generally clear and concise. We have noticed two things, however, that call for criticism. The proof of the standard theorem on page 33 is needlessly long, and the proof of the theorem on page 27 involves an assumption for which we find no justification in the preceding pages—the assumption that a certain point C will fall on a certain point F.

Higher Geometry. Containing an Introduction to Modern Geometry and Elementary Geometrical Conics. By W. J. Macdonald, M.A., F.R.S.E. Edinburgh: James Thin, 1890.

In this little work the student of geometry will find concise and well arranged proofs of the fundamental theorems in what is known as the modern geometry of the straight line and the circle, as well as of several important propositions in conic sections. The part of the book which deals with the straight line and the circle will be found more useful than the part which treats of conic sections, which is somewhat incomplete. It is nowhere proved, for instance, that a straight line which meets a conic meets it in general in two points, and the way in which the properties of intersecting chords of a conic are treated is far from satisfactory. In noticing the recently published treatise of Messrs. Cocksott and Walters we stated our objections to the use of the method of projection except as an alternative method, so that we need not go into the matter now. We notice that the author differs from other writers on conic sections in the use of the term 'director circle'. It is curious to note that the specimen pages of the work issued for advertisement purposes contain a proposition from the first part of the work involving the use of the term 'conic section', which is defined only in the second part.

We have before us several of the publications of the Christian Vernacular Education Soc'y. *The Principal Nations of India* is a very in-

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teresting and useful compilation from the works of Hunter, Dalton, Caldwell, Cust, Latham, and others. *Anglo-Indian Worthies*, by Henry Morris, M.R.A.S., F.R.G.S., has been written with the object of showing the people of India how sincerely some of the best and greatest English administrators cared for them, felt with them, and loved them. Of those whose lives have been selected by the author for this purpose, we need only mention Sir Thomas Munro, Sir Henry Lawrence, and Sir Donald P. McLeod, to show how acceptable his little work should be to Indian readers.

Among recently published Papers on Indian Reform are *Testimonies of Great Men to the Bible and Christianity*; *Purity Reform in India*; and *Civilization, Ancient and Modern, Compared: with Remarks on the Study of Sanskrit*.

NOTES AND EXTRACTS.

THE subject of female education has within the last few weeks been brought very prominently before the public of Madras. At the anniversary of Bishop Corrie's Grammar School the Rev. J. W. Foley made reference to the fact that the Committee of the School had agreed to establish a High School for girls in connection with the existing one for boys. He said that the European and Eurasian community in the neighbourhood of Bishop Corrie's School had begun to feel the need of a school which should provide for girls an education similar to that which has long been provided for boys by the existing school. Mr. Foley pointed out that, as circumstances are at present, girls who desire to become teachers and mistresses or to qualify for useful positions in life must pursue the same studies as boys and up to the same standards, the inference from which is that as there are high schools and colleges for boys so there must be high schools and colleges for girls. He did not touch on what is perhaps a more important part of the whole question of female education—the question whether high schools and colleges for girls should be modelled on the lines of existing schools for boys.

This question was taken up by Dr. Miller in the course of a very interesting and suggestive address delivered at the jubilee ceremony of the Free Church of Scotland Mission Girls' Schools. A jubilee, said Dr. Miller, was an occasion on which it behoved all interested to look forward as well as backward. Looking backward and contemplating the facts that had been set before the audience by the Rev. G. Milne Rae, the Secretary of the Mission, they had reason to be thankful. From a very small beginning the school in which they were assembled had developed into a large and flourishing school, and not only so but from the same

small beginning had grown the many thousands of Hindu caste girls who are now receiving instruction in Southern India, themselves one of the many evidences betokening changes in the tone of feeling among the leaders of Hindu society and in the character of Hindu homes,—changes, said Dr. Miller, great and beneficent already, but full of promise of still greater and more beneficent results. These changes, he said in substance, have placed the work of female education on such a stable foundation that it is in no danger of going back or perishing even should it fail to receive support from those agencies by which it has hitherto chiefly been carried on. Thus one kind of difficulty and danger is at an end, to be inevitably succeeded, however, by difficulties and dangers which may prove to be no less formidable than the danger which has been left behind. With one of those referred to by Dr. Miller we do not concern ourselves, though we do not regard it as by any means less deserving of attention than that to which we are about to direct attention. Referring to the progress of female education among caste Hindus during the last fifty years, Dr. Miller said:—

“There can be no doubt that now the time has come when education of a more advanced description is imperatively necessary. The question and the difficulty arises of what particular kind that advanced education is to be. Is it to be an exact reproduction of that style and manner of education which, under various influences, has been hammered out for the other sex? That is a question that deserves full discussion and deep consideration. It is a question on which I have no right to give an answer now, and on which I shall not attempt to say a single word, as it were *ex cathedra*; but I may say that for myself I am not altogether pleased or satisfied when I hear of this young lady or that young lady passing the Matriculation Examination, or the First Examination in Arts, or becoming, wonderful to tell, a Bachelor! I cannot say that those things are to my mind causes of altogether unalloyed satisfaction. I am willing to admit that it is better that this kind of higher education should be given and should be appreciated than that girls should stop short at an altogether inferior stage.” But I am not satisfied that this is exactly the best course to follow, and it is with some considerable qualification that my satisfaction presents itself to me when I see offers of scholarships for girls to go up to exactly the same examinations as boys and young men. I think that this whole question needs deep reflection and calm enquiry. It seems to me that even for young men there is very great need of variety in the type and form of education. It is, I think, a thing to be very greatly regretted that to so very large an extent as yet the education of young men in this country has, unavoidably I admit, been largely cast in a single mould. If the higher education of the gentler sex is to be cast in exactly the same mould it is a thing in which I, for one, shall not altogether rejoice. Here I think Nature, or to use better or more reverential language, God himself has pointed out that there should be differences and variety, and I think it will be a calamity to the country if those who guide female education are content that it shall be in its higher development merely a repro-

duction of exactly the same model that we have in the case of boys and young men. I am not prepared to point out the remedy. I am only calling upon those who are interested in this special work to see the need of some remedy.”

More recently, Dr. Duncan, in his address to the graduates of the University, sought to impress upon the educated young men before him the important duty which they owe to their women in the matter of education. He pointed out the absolute necessity of educating their women if they desired to see India numbered among the progressive nations of the earth, and the great loss which not only themselves but their wives and sisters had to suffer, because they denied to their women that knowledge which they regarded as a priceless possession for themselves. And what about the children, Dr. Duncan asked? Let him answer in the following words:—

“If you wish your women to be something more than the physical mothers of your children, you must see to it that they are educated. The influence of the mother's character on her children during infancy is admitted by everybody. Yet how few realise what that means! How can an illiterate, uncultivated, perhaps infantile mother watch over the opening faculties of her child and mould its character for good? One cannot trust to maternal instinct and common sense alone in such an important matter. Maternal instinct is a sorry substitute for intelligent judgment, and common sense is very uncommon in an uncultivated mind. There is no more reason why the moulding of the characters of the young should be entrusted to the instinct and common sense of uneducated people, than there is for entrusting any other human pursuit to such guidance. There are, on the contrary, very powerful reasons why the first years of life should be placed under the most highly trained intelligence, the experiences of these years being those that exert the most lasting influence for good or evil in after life. And reflect, gentlemen, on the future of your society. Unless you earnestly and manfully and successfully grapple with this question of female education, there can be no lasting social development, and in the absence of development there must come decay. If hereditary transmission be true at all, it applies to mind as well as to body. We may not yet have discovered, we may never discover, the intermediate links in the chain of causation by which the intellectual and moral qualities of parents are transmitted to their children. The fact is, nevertheless, indisputable. And if there be any truth in the belief that intellectual endowments take more after the mother than after the father, the question becomes all the more serious. The child of parents possessing well developed bodies and minds begins life with faculties and capacities, which, in proper conditions and in due course, grow up to the maturity of manhood or womanhood. Not so with the offspring of a mother whose faculties are infantile and undeveloped. The mental development of the child is speedily arrested, the faculties retaining to the last the inherent weakness of their maternal source—a weakness which will prevent them from ever growing into a vigorous maturity. Do men gather grapes of thorns, or figs of thistles? Can the plenitude of intellectual and moral power be reaped as an

inheritance from a mother, perhaps a child-mother, whose faculties have lain dormant, or, if at all roused to activity, have been arrested in their development almost at the outset? For the sake of posterity, therefore, I entreat you to do what you can to remove one of the greatest blots on your social system. Let me not be misunderstood. Do not imagine that I mean to point the moral that may be drawn from the appearance amongst you of four representatives of the gentler sex. For the second time in the history of the University a lady has been admitted to the degree of Licentiate in Medicine and Surgery, and for the first time ladies have been admitted to the degrees of Bachelor of Medicine and Master in Surgery and Bachelor of Arts. It is most meet that a modern university like this should open its doors to the one sex as well as to the other; so that women, who possess the means and the mental endowments, may receive the highest education, both general and professional. But I do not advocate that all your women should be educated up to this high standard. I do not ask that in every household there shall be a blue-stocking; though amid the manifold interests of the complex society of the nineteenth century, even the blue-stocking may find her appropriate sphere and function. The cause which I earnestly commend to your sympathy and co-operation is the bringing about of such modifications in your social customs as shall render it possible for young women to obtain an amount of education sufficient to call into exercise and harmonious development those faculties and capacities which in their present condition lie dormant, or reach only a dwarfed stunted growth. Their well-being and your own well-being, the well-being of your children and the future growth of your society, depend on the manner in which you perform this primary duty of educated men. The solution of this momentous question is, I grant, beset with difficulties, and it is not for me to say how they are to be overcome. In this matter, gentlemen, the people of India must work out their own salvation. Do not, however, too readily, acquiesce in the conclusion that the problem is absolutely insoluble, or that it cannot be solved within any measurable period of time."

Dr. Duncan reminded his hearers that several of the essential conditions of success were already in their midst, and concluded by telling them that the main thing required was that they should feel the urgency of the question.

Still more recently, at the distribution of prizes to the pupils of the Doveton Girls' School, Miss Keely, who has done so much for the higher education of Anglo-Indian girls, took occasion to refer to the subject. Personally interested as she has been in many of the girls who have won successes in the University she could not but feel a certain satisfaction where Dr. Miller saw cause for deep reflection and calm enquiry. But the drift of her remarks showed that on the general question she was in thorough accord with Dr. Miller, and that the direction which her own work has taken has been determined by necessity more than by choice. And we are sure that no one would be more ready than Dr. Miller to believe that the higher education which it has been possible to

give to the girls of this country has done all that Miss Keely claimed for it—that it has made them wiser, better, happier; nor would he or any one else seek to maintain that the higher education of girls had gone far astray were every teacher, looking at the lives of those whom she had educated, able to say with Miss Keely:—

"I see in those girls' lives the fruits of patient industry and perseverance, the development of much that would otherwise probably have lain dormant, much that tends to their happiness and well-being, adds to the comfort of their homes, and gives enjoyment to their friends. I see good, thrifty wives and mothers, whom education has taught to govern their houses and families with prudence and wisdom, enabling them also to contribute those little refinements and elegancies which make home the most attractive place in the world."

Still, the important question is not whether such results can be produced by the existing system of higher education for girls, but whether that system is in all respects the best that can be devised for accomplishing in the case of girls objects which it does not very perfectly accomplish in the case of boys. That it is not the best Miss Keely would probably be the first to admit, and therefore it is well that the subject has been brought so prominently to the notice of the public.

The Report of the London Mission, Cuddapah, like the Report of the Wesleyan Mission, Mysore, which we noticed last month, will be read with somewhat mingled feelings. As a record of the progress that has been made in the past and as affording indications of what may be accomplished in the near future it is both encouraging and hopeful. At the same time the reader will note with regret the fact made plain on almost every page that the Mission staff is not keeping pace with the natural expansion of the work, and especially that in recent years the work of education has not received the attention which it needs. From certain figures given in the Report it appears that the number of converts baptized by this mission is very nearly proportional to the number of men sent to instruct the people.

It must not be supposed that the staff of the mission has not been materially strengthened in recent years. Whereas there was but one European missionary in the district up to 1882, there are now four, and a medical missionary has been appointed who is expected to begin work at the end of the present year. Substantial additions also have been made to the grants received for the support of native workers. But the wonderful success that has attended the work of the missionaries in the Cuddapah District has made the needs greater than ever. Our readers are probably aware that in this district a considerable section of the population, the Mala community, has begun to make a general movement towards Christianity. More recently, too, the Sudra population

has given indications that it will before long move in the same direction. Recognising these movements as providential the missionaries of the London Mission have met the wishes of the people by sending them instructors as they could afford to do so, and by formally receiving many of them into the Christian Church. In this way they have come to have the spiritual oversight of six thousand baptized people and adherents belonging to the Mala community, and a small but rapidly increasing number of Sudras. The gain to Christianity which results from movements such as those to which we have referred is well explained by the Rev. W. H. Campbell in an article contributed to the February number of the *Harvest Field*, and to that article we refer those of our readers who wish to know more on this important subject. The difficulties and the responsibilities which have to be met by any mission that receives large accessions such as those which have taken place in the Cuddapah District are many and serious. For one thing the great majority of those who accept Christianity have a very imperfect knowledge of Christian truth and have probably made but small progress in spiritual life, so that if they are ever to become true followers of Christ they must receive further instruction and guidance. However urgent may be the call to send teachers and preachers to people still outside the Church, missionaries must see to it that they do not neglect their duty in building up the Christian character of those who have already put themselves under their charge. But when accessions are rapid this necessitates a rapidly increasing agency, and often the withdrawal of agents from promising work of other kinds,—both difficulties which most missions find it hard to overcome. Still when the men to whom these difficulties present themselves are men who have formed a right conception of the nature of their work it may be taken for granted that they will do the best they can in the circumstances. We have every reason to believe that the Cuddapah missionaries are fully impressed with the great responsibility they have taken upon themselves by becoming spiritual guides to such large numbers of the Mala community, and that they will make every effort they can to afford to these people the instruction and guidance of which they stand in need.

We note in conclusion a sentence which in our opinion is far from happy. After comparing the smallness of the agency available with the magnitude of the work to be accomplished the Report goes on to say "We are attacking the enemy, however, with all the strength we can engage, and we have experienced some measure of success; for movements towards Christianity are developing among the Sudra population." Now we presume the word 'enemy' here refers to the "ignorance, prejudice, and inertia" spoken of in the previous paragraph, and its use in this relation is unobjectionable. In this case, moreover, the statement in the second part of the sentence has a logical connection with the state-

ment in the first part. But many good people who read the Report are likely to form a very different idea of who the enemy are, and it would surely be very ungenerous, to say the least, to speak of people favourably disposed towards Christianity as enemies. There is undoubtedly high authority for using the language of war in connection with Christian work, but if it is to be rightly used in this way it must be used with great care.

We have in another note referred to Dr. Duncan's admirable Convocation Address and quoted largely from it, but we think it highly desirable to draw the attention of our readers to a part of the address dealing with an aspect of education which it seems to us receives but scant consideration from many educationists of the present day. While counselling those whom he addressed to pursue, with all the earnestness and assiduity of which they were capable, the particular branch of knowledge which natural inclination and aptitude, strengthened and methodised by academic discipline, might urge them to follow, Dr. Duncan said he should fail in his duty were he to abstain from inviting their special attention to the claims of one department of thought. He said;

"It may not be the fashion now-a-days to profess a high regard for speculative philosophy and metaphysics. Metaphysics may have deservedly become a by-word and a reproach, and Michelet may have rightly defined it as the art of bewildering one's self methodically. I am not concerned with defending the speculations which under the name of metaphysics, or ontology, or theology, engrossed the minds of men since the dawn of reflection. But I am deeply interested in getting you to understand and appreciate the spirit of enquiry, of which metaphysical speculations, however erroneous they may be, are the outward expressions. The ever-increasing volume and the ever-multiplying ramifications of knowledge render specialisation a more and more pressing necessity for each succeeding generation. To few men is it permitted to gain a minute acquaintance with more than one science. And what is true of the man of science is true also of the college student. The tendency of modern academic regulations is to confine the student to a comparatively small number of subjects. But this specialisation, necessary though it be, has its disadvantages both in respect to the training of the faculties and in its bearing on that adequate knowledge of the universe which is the aim of the highest scientific thought. Each science professes to give the last word that can for the time being be said, not on the universe as a whole, but on that particular part of it with which it is concerned. Chemistry gives us the final conclusions of the chemist with regard to the phenomena and laws of chemical combination. Biology systematises the latest conclusions with respect to the phenomena and laws of life. Psychology confines itself to the domain of consciousness. Each science presents, therefore, only a partial view of nature; and this fact should never be lost sight of. For partial or one-sided views become harmful when, forgetting their real character, we treat them as complete and all sided. Now, this is precisely what the specialist is in danger of

doing. The more the mind is engrossed with a particular branch of knowledge the greater is the tendency to treat all other branches as of less importance and, therefore, as less deserving of study. This scientific bias, if unchecked, may lead to the other sciences being ignored altogether, the favourite science being looked upon as affording a complete account of the universe—as embracing the Alpha and the Omega of knowledge. Against this tendency—a tendency favoured by the training you have received—you must ever be on your guard. If the several sciences give only the final deliverances that can be made for the time being in their respective spheres, something more is needed before we can be said to possess a genuine and comprehensive conception of the universe. What is that something more? It is included in what Aristotle calls the 'First Philosophy', it is the undercurrent in all metaphysical speculation, it finds its highest expression in theology. Each science, in its search after unity of cause and law, ultimately arrives at certain laws of the highest generality as far as that science goes. It is the business of the First Philosophy to gather together these general laws, with a view to their being combined into a few still more general principles. And it is only when the final utterances of all the sciences have been thus co-ordinated and, if possible, subordinated to higher generalisations, that we can be said to have an adequate conception of the universe as a whole. To reach this lofty point of view, a minute acquaintance with all the special sciences is not necessary. The branches of knowledge are many, but the intellectual faculties employed and the operations carried on in scientific investigation are comparatively few. A mind thoroughly trained in habits of observation, experiment, comparison, abstraction, generalisation, and inference, possesses all the fundamental qualifications for undertaking the task of discovering those higher generalisations which unite the different and often seemingly-conflicting conclusions of the several sciences. Cultivate, therefore, this habit of bringing the conclusions of the special sciences face to face, of comparing them one with another, of seeking for some higher or more general principle or law of which they are the specialised forms. This is the genuine breadth of culture. This it is that shows us the special sciences in their true proportions, as parts of one stupendous whole, and gives us a conception of the universe at once comprehensive and satisfying."

Of all that has been said in these words we most thoroughly approve, and we cannot but regret that except in one of the optional branches of the B.A. curriculum, and in a casual way, perhaps, in the other branches, the University of Madras makes no provision for imparting to its students the kind of culture referred to. The consciousness of how much we ourselves owe to methodical instruction in the principles underlying the study of nature and man makes us realise how much the majority of our students lose for want of such instruction; and our every day experience only serves to make the realisation of this loss more complete. We hope the University may yet see its way to remedy such a serious defect in its system of liberal education. At the same time we are aware that there are many who are, by no means so fully convinced as we of the existence of

this defect, and who would no doubt maintain that the need for a remedy is far from being so urgent as we think.

Now that the Age of Consent Bill has become law we hope the people of this country will recognise their duty and see to it that no unnecessary difficulties are thrown in the way of those whose function it will be to administer the law in its amended form. While the Bill was under discussion we expressed our regret that the intentions and policy of the Government should have been misrepresented and opposed by men of whom better things were to be expected. We are all the more pleased, therefore, to learn that the Government did not altogether apply in vain for help to the leaders of Hindu society. Sir Charles Elliott has paid a high tribute to the general good sense and moderation of opinion displayed by the noblemen and gentlemen of Bengal whom the Bengal Government consulted. He said:—

"We called on about forty persons altogether to assist us with their advice, and the answers we received form a decidedly valuable contribution to the literature of the subject, and contrast remarkably with the heated language used in public speeches and in many articles in the public press. These replies were carefully analysed in the report which the Bengal Government submitted to the Government of India, and we hold that both with reference to the number of the writers, and also to their social influence and intellectual importance, the weight of opinion was, on the whole, in favour of the Bill. But what struck me most was the strong sense of responsibility with which the subject was discussed, and the evident desire to recognise the good intentions of Government and to assist it as far as possible in attaining its object. It is a very hopeful sign when the recognised leaders of society are possessed by such a feeling as to their relations to the Government, and I am sanguine that when the dust of this controversy has cleared away, no bitterness will be left behind, and it will be admitted that this amendment of the law was, on the whole, sound and judicious."

COLLEGE NOTES.

FORMER students will not be hard on me for my silence in last month's magazine. They know enough, if they will but think of it, to make them readily believe me when I say that the early months of each year bring such burdens with them as do not leave me a moment for any duty which it is at all possible to postpone. There is the putting together of the results of examinations in the former year, and that co-ordination and comparison of these results on which depends not only the award of prizes, but also, what is perhaps the most perplexing of all my routine

labours, the determination of promotions from class to class. I suppose that thoughtless boys in the school, and perhaps also in the college, imagine that such promotions are made in some easy, haphazard, way which causes little labour and no anxiety. But, though they may have failed to think of it when they were being trained, old students should understand by this time that there are few things more harassing or trying than the task of settling whether pupils and students are to be placed in a higher class than the one they have last passed through. Ordinarily, of course, it is plain enough about the majority of a class either that they should, or that they should not, be promoted. But in every class-list, there are some doubtful cases, and often there are many, which necessitate inquiry into the character, and habits, and previous history, of each boy, before a proper decision can be formed. There are many things for which boys are less grateful to their instructors than they ought to be. Perhaps there is nothing for which they forget to be grateful so completely as the trouble that is taken in placing them in the class in which they are likely to get most good.

Then again, there are the calculations and other materials on which the Report of the College Council for each year is based. And there is all the care and all the correspondence—few know how large its volume is,—connected with the admission of new pupils and the formation of the classes for the year. It is at the same season that changes in the staff of the school commonly take place; and some, at all events, of my readers are in a position to have a fair idea of the extra demands on the time, and thought, and temper, of a headmaster, when a class and its teacher are as yet unacquainted with each other. It is at the same season that certificates for those leaving school or college have mostly to be written; of course after the facts on which they must be based have been searched out and considered.

These are only a few specimens of the addition which the commencement of the college year makes to duties which, even when things have settled down into their ordinary course, are sufficiently laborious. And it is at the same season that duties unconnected with classes or class-teaching—duties connected with societies and committees outside the college,—are likewise heaviest.

But why do I refer to these things now? It is not that I mean to found on them an appeal for sympathy or forbearance,—though when I remember how many letters reach me at the time of greatest pressure requesting “a good certificate by return of post,” I am not sure that such an appeal is altogether needless. Neither do I mean merely to apologize for my silence last month; for, after all, no apology is required for that. I have not undertaken to supply College Notes for all, but only for most, of the numbers of the magazine. I refer to the burdens incident to the five or six weeks which lead off the earlier of our

to terms, because there are one or two of them which former students could do something to lighten, or which, for other reasons, it is desirable to speak about.

For example, a great deal would be done to relieve the extra pressure, if former students, and those connected with them, would see that their younger friends came for admission at the proper time. I do not know that the trouble arising from the failure of candidates for admission to do this, has been greater this year than it has often been before. But it has been very great. I wish my readers to have some idea of how the thing operates.

Boys applying for admission to the school ought of course to be present on the day when the school re-opens; and, in the great majority of cases, there is no reason why they should not be so. It is true that some of the classes in the college cannot be formed until the University publishes the results of its examinations. Some latitude must therefore be allowed in them, especially to those who come from distant towns or districts. For the sake of clearness therefore let us look only at the classes of the school, remembering that the same principles apply, though not with rigid exactitude, to the classes of the college likewise. Now it is known, perfectly well and very widely, how for a long series of years it has been impossible to receive, into the secondary, or advanced, classes, anything approaching to the whole number of the candidates for admission. Yet here is what usually happens, and what has happened very conspicuously this year. On the day of reopening, enough, or sometimes far more than enough, of candidates appear to fill up all the vacancies in every class. As soon as they can be examined, these boys are placed in the classes they are fit for. When this has been done and the promotions have been made, the classes have to all appearance been formed for the year. But of the candidates thus coming forward on the proper day, many have no very particular right to admission; and some might well enough go on in some other school in Madras, which they have already been attending. If there be no room in the class they are found fit for, these are without hesitation sent away. So far, so well. The difficulty comes later. Daily, for some weeks after the reopening day, boys drop in with letters craving that they should be admitted. They are the brothers, nephews, cousins, or frequently the sons, of old students; or their parents or guardians are acquaintances of old students; or they have some other plea of this sort which in its own place is very weighty. Then my difficulties begin. If only there were room, I should gladly take boys who have thus some hereditary connection with the Institution or with whose guardians I am already in friendly relations. I should, if all other things were equal, give such boys a very decided preference to those who have no special connection with the Institution. But I cannot

keep room in every class on the chance of such boys appearing. It would be unfair to send away boys who come at the proper time in order that it may be possible to take in those who come too late. And even if I resorted to this method of meeting the difficulty, I fear it would only make the evil greater. If those whose boys had special claims to be admitted knew that room would be reserved, it would only make them still more dilatory in sending them. On the other hand, it is most undesirable that those boys should be compelled to go to another school whose fathers or guardians have deliberately chosen to send them to the Institution, and have, in many cases, made elaborate arrangements for their being educated in it. Everything that brings schools on the one hand and parents or guardians on the other into close connection and co-operation,—everything that brings boys properly under authority,—should, in the present condition of the country, be strengthened as much as possible. Thus I am placed between two fires. And so, there often arise anxious consultations with the teachers of classes as to whether one boy more, and one boy more, can possibly be taken;—the result being sometimes that classes become too large and sometimes that boys whom I should like to have under my care much better than a very large proportion of those who have been admitted, are reluctantly sent away. In the last case, there next arises the necessity of writing letters to explain why the boys have not been admitted, and very often of receiving and replying to other letters which plead that each particular case should be treated as a 'special' one.

Few would believe,—and if it were calculated out and put in definite figures, I dare say I should hardly believe myself,—how large a proportion of my time and strength is consumed in this way throughout the early weeks of every school year. The relief would be very great if all former students, and all whom they are in communication with or can influence, would take some pains to see that every candidate for admission to the school classes were present on the day fixed for the reopening, and if they would, as far as possible, act similarly in the case of every one whom they wish to have admitted to the college.

This is not the only one of the difficulties incident to the commencement of the session on which it was my intention to touch this month. But, as my remarks have run to some length, I shall for the present pass the others by; especially as there is a matter of an entirely different kind, to which I think it advisable to advert.

I was glad to see in the magazine for March a large response to my long neglected request for some discussion of the lectures which I published last year. I should have liked it better if the first conspicuous response had come from a former student. There is no reason why a response of the same kind as the one that has been given should not have come from such a quarter. I am sure there are some old students,

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especially some of those who are Christian by descent and training, who substantially agree with the letter, which was published last month. They should not have left the statement of those objections to an outside friend. The fault however does not lie with my critic. I am indebted to him for the help which his letter will afford in awakening thought, by directing attention to the difficulty of adequately presenting the great subject with which I tried to deal. He has taken the line of remark to which I referred in my closing lecture. He has raised some of the questions which, in it, I deliberately set aside, promising however that, if proper help were given me, I should try to discuss them at some later stage. I cannot indeed discuss them sufficiently at present. I shall not, in the meantime, try to do more than offer a few rather disjointed remarks on Mr. Painter's letter. But these will at least prepare the way for fuller discussion afterwards.

1st. I think that an unnecessary obstacle to right discussion is raised when I am pronounced to be a follower of "certain German schools of thought." The views I endeavoured to put in shape are drawn from no more remote source than the simple reading of the Scripture record. However imperfectly they may be expressed, they are the views which would naturally occur to any one who should read the history contained in the Old Testament and the New, in a plain straightforward way and without being influenced by dogmatic systems drawn from an external source. Certainly it is in this way that my views have been formed. They have not been drawn from any German, or other, "schools of thought."

2nd. Of course it may be caused by imperfections in my method of expressing myself, but, whoever may be in fault, there is a grave misapprehension when Mr. Painter argues as if I thought that ethnic systems stand "in the same category with Judaism and Christianity," so that "the difference between them is of degree rather than of kind." That may be the teaching of some schools of thought, but it is as different as it well can be from mine. I thought I had enlarged sufficiently upon how corruption had been active everywhere and had,—in some sense of the phrase,—defeated the practical working out of the purposes of God. I pointed out indeed,—but in this I do not think Mr. Painter will disagree with me,—that this same corruption has been at work within the Christian Church as well as beyond its bounds, so that any practical exemplification which Christianity has as yet received in the common world of men is a terribly defective thing. But the history of the divine government of the world affords us the means of knowing what Christianity ought to be and may yet become even as a matter of realized practice. It enables us to distinguish between Christ's Christianity and the corrupted version of it which man has given in his practice hitherto. It is a distinction which we have not, and never can have, the

means of making, in the case of any scheme of ethnic thought. The mere fact that we have the means of making such a distinction points, in my opinion, to Christ as being the divinely appointed centre of the world's history, and puts Christianity in an altogether different category from any other scheme of thought whatever. Undoubtedly practical Christianity, as exemplified in any church, or society, or nation, is so far in the same category as practical Hinduism, or practical Buddhism, that comparisons may be made between them and likenesses or contrasts pointed out. But God has so arranged that in Christ,—in all that led up to him and all that directly flowed from him,—we have a core of certainty, and a core of truth and purity, which is wholly wanting elsewhere. That single fact seems to me to make all the difference in the world.

3rd. I should be as sad as Mr. Painter can be if I thought that any influence I possess "should be used to hinder one soul coming forward into the light from confessing Christ before man and becoming His disciple." But I fail to see how anything I have said should give rise to the fear that my influence will be used in so sad a way. Of course the fault may be in my mode of statement, but, whatever be its origin, there has here again been complete misapprehension. When God's voice has called a man to join the Christian society by baptism, I humbly hope that such influence as I may have will be always on the side of urging him to follow wherever that voice calls, however terrible the cost may be. But the voice of God is not the voice of man. There is need of the utmost care lest sometimes the latter be substituted for the former. For myself, I believe in a living God who still speaks to men and makes his will and his call known to them, as really in this age of ours as in any other. The line of thought which Mr. Painter follows seems to proceed rather on the supposition that God has left the world, speaks to individual men in it no longer, has handed them over to the guidance of a few general rules, and that one of these rules is that the first condition of his having any friendly relation with them is that they submit to be baptized. I do not believe that Mr. Painter holds this or anything like this. I only say that as my words appear to him to be liable to misapprehension of one kind, his words appear to me to be liable to misapprehension of this very fatal kind. But I do not rush to the conclusion that he really means all that his words seem to me to be fitted to suggest. On the contrary, I think Mr. Painter will agree with me in saying that any line of thought which puts a fixed rule in place of the actual voice of God, speaking to individual men and helping them to see the duties to which He calls them from day to day, is absolutely opposed to the whole tenor of the Old Testament, to the whole teaching of St. Paul, and to the whole example of Christ himself.

I fear, however, that the source of our mutual misapprehension on this

point can hardly be detected and removed without fuller discussion than I can find time for now. Still, one or two things should be said. To confess Christ before man and to join that society by which Christ chiefly carries out his gracious purposes for men, is the duty of every one who looks to Christ as his Saviour and his Master. Baptism is the customary and authorized way of joining that society. He who hears God summoning him to join Christ's society and yet holds back from doing so, thereby denies Christ and cuts himself off from the source of spiritual life. And to the decision of this question, whether he is to belong or not to belong to the new heavenly kingdom, in which he who is least is greater than the greatest who is outside it, every one is always tending who learns of the divine revelation that has been made in Christ, or comes in any way under Christ's influence. In all this I thoroughly agree with Mr. Painter. All these truths I wish to state as strongly as he or any one can wish. The difference between us,—if a difference there be,—probably lies in the question about when this full transition into the kingdom of heaven must be made,—about whose is the call which must be listened to in making it. One view appears to be that he who is looking to Christ as the Saviour must follow in this matter the voice of missionaries, or of the church, and that this voice tells him, on the authority of Scripture, that as soon as he is convinced of Christ's divine mission he must join Christ's society or refuse to do so at his peril. The other view, and it is that by which I hold, is that this is a matter on which no universal rule has been or ought to be laid down, and that it is a matter on which the opinion of the church, of missionaries, of men in any form, has no right to rule. This second view is that to each man whom Christ is training on earth for the Father's eternal service, the divine Spirit, who has his own way of speaking to such men, will send the call when the fit time comes, and that if other men interfere before that time they do so at their peril. To one man the call may come early, to another late; for the wisdom of God is manifold. But to every man who is learning the lessons which God is teaching him in his providence, in his revelation, and by his Spirit, this call will come at the proper time, and strength to obey the call may be expected to come along with it. If there be danger, and I grant most freely that there is danger, lest ears be closed when the divine call comes, there is danger also lest man's voice be regarded as God's, and lest a step be thereby taken to which one has not been called, and on which accordingly there will no blessing rest. The consequences of yielding to the one temptation are as fatal as those of yielding to the other.

It is the presence or the absence of spiritual life—it is not the belonging or not belonging to the Christian society,—that makes the difference between one man and another. The inward life tends ever towards making a man join the outward society; but the time when the life is

thus to receive its full expression must be determined in each case by the living, ever-present, God alone. It is not to be settled by any rule nor is it a thing which any one man, or body of men, can determine for another. Thus every living plant is tending towards the bearing of flowers and fruit. If it never bears these, it is a failure. If it refuses to bear them when the flowering time has come, it perishes. But the question as to what is the proper time for bearing them, does not depend upon the will or the ideas of the husbandman. It depends on conditions of soil and climate, and on circumstances in the nature and the history of the plant itself, with which the husbandman cannot intermeddle. There are methods, indeed, by which he can force the flower to blossom before the plant has reached maturity; but if he resorts to these, the result he must expect is ruin to the plant.

In the parable which has laid down for all time the first principles of the growth of the kingdom of heaven, the kind of seed which sprang up most speedily was not the kind that bore fruit, some thirty, some sixty, and some a hundred fold. In all earnestness I would ask the question whether desire to swell the list of converts and to win the praise of men, rather than the desire to be God's fellow-workers, is not the main factor in the genesis of the idea that the reception of baptism must be an immediate result of the commencement of spiritual life.

4th. I have tried to clear up one source of Mr. Painter's misapprehension of my lectures. There is another on which something should be said. I cannot help thinking that Mr. Painter's line of thought is swayed, though I am sure it is unintentionally, by the very common presupposition that all that a man does, believes, and professes, must be guided by the one object of securing his own welfare. This seems to be the sole point of view in which the question about baptism is regarded by Mr. Painter. His words—I do not mean his real thoughts—appear to me to amount to something like this:—God requires baptism as a condition of salvation, and therefore it is the duty of every man to be baptized. If confession by means of baptism were not a condition of salvation, such confession would be unnecessary. But as God alone can settle conditions of salvation and as he has chosen to make this one of them, it becomes a man's duty, because it is evidently his interest, to submit to it. To me this appears to be simply saying in other words that enlightened self-interest is the highest, attainable rule of life. I am sure that Mr. Painter does not hold this. Only I think that the colouring which this too common idea gives to ordinary thought is one of the influences which have led him to misapprehend me. Here again I press this matter on him only so far as to get him to see that it is not an easy thing to state great truths in language which is not open to serious and even dangerous misapprehension. But though I am certain that Mr. Painter does not wish it, his whole treatment of the question of baptism

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is fitted to encourage the view which is far too powerful over all men's thoughts,—the view, namely, that the one question about religion which any wise man will ask is, "What religion will best secure my interests, especially in the world beyond death, if such a world there be?" Now I refuse to take up the question of baptism, or any question of the kind, in this as the controlling point of view. Any scheme of thought which makes self-interest the only, or even the foremost, consideration with a man, is opposed to the Gospel of Christ. If any man is baptized *simply to secure his own future well-being*, (and, however unintentionally, it is to this that Mr. Painter's language seems steadily to point), he plunges into ruin. He cuts himself off from God in Christ. He puts baptism in the place in which circumcision was put by those Judaizing Christians to whom St. Paul wrote in deep concern, "Behold I Paul say unto you that if ye receive circumcision Christ will profit you nothing. Ye are severed from Christ. Ye are fallen away from grace." To any one who thinks that this question about baptism is to be settled by considerations of what it is safe or unsafe to do,—to any one who would practically substitute enlightened self-interest for the drawing power of a Heavenly Father's love and of the Saviour's revelation of that love,—I must recall that far-reaching saying in Christ's last address to the representatives of the common world, "He that loveth his life loseth it."

5th. There are some things in the letter I am considering about the bearing of which on the matter in hand I am quite in the dark. For example, I cannot see the object of the quotations from Sir Monier Williams. Of one passage thus quoted I strongly disapprove, that which makes 'a Sacred Book' the only 'mainstay' of men. It is not any book, it is only the Father and the Saviour to whose presence the book testifies, that can be a stay to any man. When the Israelites thought that the ark could save them and forgot the living God of whom the ark was but the silent witness, they were mercifully undeceived by the ruin which their error brought along with it. But I heartily agree in saying that "Christianity must not be watered down to suit the taste of either Hindu, Parsi, Confucianist, Buddhist or Muhammadan." And it is perfectly true that "whoever wishes to pass from the false religion to the true can never hope to do so by the rickety planks of compromise," whether the religion that he leaves be some corrupted scheme of ethnic thought or some corrupted version of the truth which was taught by Christ. He must leap the gulf in faith and the living Christ will spread his everlasting arms beneath and land him safe on the Eternal Rock." All this is good and true. My puzzle is to discover what bearing it is supposed to have on my attempt to show that Christ is the centre of God's dealings with mankind, and that for his glorious appearing and world-wide recognition a preparation has been going on in every land and age.

6th. I think I have shown both that Mr. Painter has misapprehended me and that his own statements of truth, if they be judged in the same way as he judges mine, are liable to be very gravely misapprehended. But it would be a very faulty logic which should infer from this that the statements with which he finds fault are altogether right. One has need always to bear in mind the undeniable, but constantly neglected, truth that human language, at its best, admits of no more than approximate accuracy. Absolutely precise statement is impossible. The utmost that a writer or speaker can hope for is to leave a correct general impression of his meaning on those whom he addresses. Now the impression left by a writer on his audience, or readers, depends on them as well as him. Thus, *to my own mind*, the words I used do not seem liable to be misunderstood as they have been. And now it seems to me that these few rough remarks should be enough to remove misunderstanding. But it does not follow that I am correct in either of these views. It may be that my words have left a different impression from that which I desire on others as well as Mr. Painter. It may be that even yet they will not evoke the thoughts and feelings I meant them to evoke, unless they receive considerable remodelling and addition. It may be that, in the state of mind prevailing among those whom I addressed, my statements are really fitted to lead to other inferences as little intended by me as those which Mr. Painter has drawn from them. In particular, it may be that one who knows so well as I do how widespread the idea is that selfishness is the only basis of religion, ought to have done more to render clear what the real basis of personal religion according to the Christian conception is.

All this requires consideration. I cannot at present give it the consideration that it needs. Indeed no consideration will enable me to do what requires to be done without much help from others. I need to know how my words have actually affected other minds before I can adjust them so that they may leave the impression I wish them to leave. Therefore I am obliged to Mr. Painter for having criticised them in a manner sufficiently outspoken. I am glad also that my appeal on this subject in the February number of the magazine has begun to be responded to. I hope that other friends will be encouraged now to give me their views on the lectures and on the subject of which they treat. I shall be glad if some should criticize them from some other point of view than that taken by Mr. Painter and by one or two others from whom I have recently received communications.

I hope to consider carefully whatever may thus be said either to me or about me. And I hope that some day I shall be able to supplement what I have said, and thus to make my treatment of the great theme I have dared to grapple with perhaps less open to misunderstanding, and if not adequate,—that is beyond hope when one deals with a

subject so intricate and vast,—at least less inadequate than it has been as yet.

WILLIAM MILLER.

SCIENTIFIC AND LITERARY JOTTINGS.

THE total number of hours of bright sunshine in Madras during March was 317 out of 372 hours during which the sun was above the horizon. This is equal to 85.2 per cent. of the possible, which is larger than in any previous month since observations were begun last August. The average percentages for other Indian stations are as follows:—Lahore 65, Dehra 54, Allahabad 81, Calcutta 76, Jeypore 75. In the first week of the month the percentage rose to 92.2, but after that the mornings became cloudy and usually no sunshine was recorded before 7 A.M., while on the 28th the record did not begin till 9.10 A.M. and on the 31st there was only half-an-hour of sunshine before 11 A.M. For India as a whole the most remarkable feature of the month has been the large depression of the day temperature below the normal. Madras and Burmah, however, have been exceptional in this respect, and on several occasions the temperature has been above the average. The snowfall on the Himalayas has been heavy and has continued late, which augurs ill for the early setting in of the summer rains. On the other hand it is possible that the cold of March has been so widespread that it will not have the same prejudicial effects as when confined to a relatively small area.

THE extraordinary effect produced on the tensile strength of aluminium by alloying it with small quantities of copper is well shown by some recent experiments made in connection with aerial navigation for military purposes at Chalais. Pure aluminium was taken and alloyed with copper and the alloy was then rolled into sheets 1 mm. thick. The aluminium alone had a tensile strength of only 12 tons weight per square inch; with 2 per cent. of copper it rose to 19.65 tons; with 6 per cent. to 24.7 tons; and with 8 per cent. it fell to 22.7 tons.

WE mentioned some time ago the arrangements that had been made to determine with great accuracy the difference of longitude between Greenwich and Paris. The observations have now been reduced, and it appears from a communication made by Mr. Turner to the Royal Astronomical Society that the results are far from satisfactory. The English final result was 9°20'84 while the French determination was 9°21'04—a difference of two-tenths of a second. This is very disappointing, for every precaution was apparently taken to obtain trustworthy results,

and it was expected that almost perfect agreement would be attained. During the present year measurements are to be made of the difference of longitude between Greenwich and Montreal, and when that has been completed another attempt will be made to get the true difference between Greenwich and Paris.

In discussing, in *Nature*, the sunshine of London Mr. F. J. Brodie takes the Greenwich observations as giving a fair average for London as a whole, and as these have been made continuously for 14 years the data are sufficient to enable trustworthy averages to be deduced. A few of the results obtained may be not without interest to residents in a country where the tendency is to complain of too much, rather than of too little sunshine. For the whole year the average number of hours of sunshine is 1,214, or only 27 per cent. of the possible amount, or, to put it in another form, the average daily amount is less than half the possible amount on the shortest day of the year. The average number of days in the year on which no sunshine is recorded is 94, or more than one-fourth. As regards the distribution during the year the sunniest month is May with 37 per cent. of the possible amount. June has 35 per cent., and July and August 34 per cent. each. December is the dulllest month, with only 8 per cent. of the possible, or an average of 0.7h. of sunshine per day. In December of last year the total duration of sunlight was less than 2 hours and there were 28 days (of which 18 were consecutive) on which there was no sunshine. The sunniest year in the whole fourteen was 1887 with 1,407 hours, and the dulllest 1879 with only 984 hours.

MR. SHELFORD BIDWELL, writing in *Nature*, describes an 'automatic lamp-lighter' which lights an electric lamp whenever the room becomes too dark to admit of a person reading in it with comfort. The sensitive part of the lamp-lighter is a selenium cell which has a resistance of 50,000 ohms in the dark and not more than half of this in diffused daylight. This is joined up with a battery and a relay in such a way that when the resistance falls to a certain point the tongue of the relay goes over and closes a second circuit, which in turn actuates a magnetic switch in the lamp circuit and lights the lamp. The relay is adjustable so as to admit of the lighting taking place at any desired amount of darkness, and so sensitive is the arrangement that in the instrument actually used if the adjustment be made so that the lamp circuit is just closed when a single candle is burning at a distance of $7\frac{1}{2}$ inches from the selenium cell, then when the candle is moved slowly towards the cell till the distance is decreased to $6\frac{1}{2}$ in. the increased light will break the circuit and the lamp will be extinguished. When the candle is moved back to $7\frac{1}{2}$ in. the lamp will be relighted.

DR. JOULE, as reported by Maxwell, came to the conclusion, many years ago, that a magnet used for the determination of the dip should not be more than five inches long. He further stated that "when it is eight inches long, the bending of the needle tends to diminish the apparent dip by a fraction of a minute." In spite of this needles 9 inches long have been used at Greenwich and some other observatories and the results are published year by year of the determinations made by means of needles 9 inches, 6 inches, and 3 inches long. Professor Schuster, in the *Philosophical Magazine*, has calculated the amount of the error which might be expected for needles of the size and shape of those used at Greenwich, and finds that the difference in the results for the three needles can be fully accounted for by bending, and that therefore there is no reason why long needles should not be used if the results obtained with them are corrected for this bending error. The advantage of using long needles of course is that it is much easier to make accurate measurements of the angles.

MR. J. G. BARTHOLOMEW in his third article in the *Scottish Geographical Magazine* on the mapping of the world, gives the following general summary of the amount of geographical survey work accomplished on the continent of Asia:—

Area of detailed topographical surveys, (scale 1 : 500,000 and larger) ...	1,500,000 sq. miles.
„ general topographical surveys (scale 1 : 63,360 and larger) ...	1,570,000 „
„ geographical reconnaissance sur- veys (with travellers' route maps, &c.) ...	6,180,000 „
„ general geographical sketch maps (largely approximate) ...	8,240,000 „
„ unexplored country ...	750,000 „
Total area of Asia ...	17,250,000

DR. BECKER, an assistant in the Royal Observatory, Edinburgh, has published (*Trans. Roy. Soc. Edin.*, Vol. xxxii.) an elaborate map of part of the solar spectrum at medium and low altitudes. The map extends from wave-length 6,034 to wave-length 4,861, that is, from a point between C and D to a point near F. The observations were made with a Rowland's grating and the positions and intensities of the lines were recorded by pricks on a fillet of paper moved by wheel-work connected with the grating. The observing telescope was fixed and lines were brought into the field of view by moving the grating by means of a train of wheels giving a multiplying power of 16,800. The scale is a very

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large one, giving $19\frac{1}{2}$ inches for the distance between the two D lines, and 31.4 feet for the whole of the spectrum observed. The catalogue contains 3,637 lines, of which 928 are telluric lines. With the exception of 28, these telluric lines can be divided into three bands. The first of these extending from $\lambda 6090$ to $\lambda 5665$ is divided into two distinct groups known as the rain-band and the δ -band; the other two extend from $\lambda 5538$ to $\lambda 5386$ and from $\lambda 5111$ to $\lambda 4981$. The last of these is the band used by Mr. Maxwell Hull in Jamaica as a rain indicator.

G. M. S.

MR. T. K. CHEYNE in reviewing Mr. G. A. Smith's *Isaiah, Vol. II.*, says that "it is needless to mention the literary merits which in reviews of the first volume of this work were so abundantly recognised. This is, indeed, one of the few theological books which it is a pure pleasure to read; nor need one, in the case of the present volume, add the qualifying remark that the homiletical element is somewhat unduly large. The scholarship, too, is still as accurate as might be expected from Mr. Smith's excellent training."

MESSRS. MACMILLAN AND Co. announce the publication of the late Dean Church's personal reminiscences of the Oxford Movement. The work contains a record of the principal phases of the movement during the twelve decisive years 1833 to 1845, with character-sketches of Newman, Keble, Hurrell Froude, W. G. Ward, &c. The book is published at a net price, and is an attempt on the part of a prominent firm of publishers to remove that standing anomaly of the publishing trade—the issue of books at a price $25\frac{1}{2}\%$ above what is now regarded as their market value.

FIVE years ago a volume, *Studia Biblica et Ecclesiastica*, appeared as the fruit of the labours of members of the University of Oxford. A second volume now tardily appears, consisting of seven essays, the result of five years' leisurely collection. The most important essays are 'The Origin and Mutual Relation of the Synoptic Gospels', by Mr. F. H. Woods, and 'The Authorship and Titles of the Psalms according to early Jewish Authorities', by Dr. Neubauer. Mr. Woods arrives at the conclusion that the original basis of the Synoptical Gospels coincided, in its range and order with our St. Mark. Dr. Neubauer after minute historical examination finds that nothing but conjecture has yet been reached, and that no conclusions worthy of the name of knowledge have yet been gained.

MR. H. G. KEENE, author of *The Fall of the Moghul Empire*, has written a life of Madhoji Sindia, the greatest statesman and ruler of his line, for the Rulers of India series. He has had the use of a portrait of him painted in oils by a wandering Italian artist (name unknown) now in

the possession of Sir Mountstuart E. Grant Duff. This will appear as a frontispiece to the volume.

RECENT PERIODICAL LITERATURE.

The Nineteenth Century for March seems duller than usual. It is wonderful how much dry reading Mr. Knowles can compress into the hundred and sixty pages of his review, and yet few of the articles are without some interest. We think, however, that the editor would act wisely if he sometimes inserted a note to the effect that no more communications on a particular subject would be accepted. Mr. Huxley might now allow the swine to pass into the abyss in silence. We have had enough of them; and by this time he might see that he will not bring to an issue the great question of the composition of the Gospels on that point. The article of greatest interest is the one that stands first, 'The Women of India', by the Marchioness of Dufferin and Ava. There is for those in India nothing novel in it, but it is calculated to do good at home. We admire the wisdom and the modesty of such an admission as this with which the noble lady prefaces her remarks:—

"There is, in fact, no statement one can make from personal observation of one part of India which is not open to flat contradiction from good authorities in another. The ways of the north are not those of the south, and the customs of the east differ from those of the west; while even in a single province, differences of caste, religion, and race cause an infinite variety of habits in the people; so that any one who has tried to discover the truth on one particular point with regard to the natives of India will have found that every general assertion made with respect to their customs must necessarily be burdened with innumerable exceptions."

The writer, while by no means seeking to minimise the evils of the lot of Indian women, endeavours to show that the life they lead is not altogether the existence of unrelieved gloom presented by the conventional

picture. The freedom of the women of the lower castes is not forgotten; and the influence exercised over the family and sometimes even over a State by those who dwell behind the purdah is shown to be not consistent with that view which depicts the native woman as "invariably downtrodden and helpless." Lady Dufferin is not in favour of the removal of the purdah, at least not of its immediate removal.

"I, for my part, consider that under the present conditions of Eastern life the zenana system offers many undoubted advantages. I think that neither the men nor the women of the country are prepared for its abolition; and while I would earnestly advocate improvements calculated to give interests, occupations, outdoor exercise, and innocent amusements to zenana women, I have no desire to touch their privacy."

Acknowledgment is made of the services rendered by lady missionaries in the direction here referred to. But the work that is now being done by the Societies and Churches in sending out fully qualified lady doctors has been lost sight of by the writer. In dealing with the peculiar trials of an Indian woman's life the three points dwelt upon are infant marriage, widowhood, and medical relief.

This number very properly includes an article on John Wesley, by the Rev. Hugh Price Hughes. There is a tone in the paper which we do not like, but it is nevertheless an able summary of the work of the great evangelist. Mr. Hughes gives a dexterous turn to a quotation he makes from a pamphlet recently issued by "a distinguished professor of theology in a South German University."

"The key note of this pamphlet is expressed in the following startling sentence: 'Methodism is on the point of becoming, in evangelical Christianity, practically, if unknown to many, the

ruling power, like Jesuitism in Catholic Christianity. The learned writer is by no means an admirer of Methodism. He regards the fact he has discovered as 'in many respects one of the gravest signs of modern Christianity.' I believe future ages will prove that this anxious German professor is one of those extraordinary or privileged men who, by some flash of genius or revelation of God, see long before their fellowmen the meaning or the drift of world-history. I am equally confident that his boding fears are quite unnecessary. All modern religious history is summed up in the two momentous facts that Ignatius Loyola has captured the Catholic Churches, and that John Wesley has captured the Evangelical Churches. Jesuitism and Methodism—these are the two ultimate forms of intense, logical, thorough-going Christianity. Absolute subjection to the Church, or absolute subjection to the Christ—there is no other alternative for the enthusiastic 'out-and-out' Christian of the twentieth century. Absolute subjection to a Creed is no longer possible. Men are becoming too much in carcase for any illogical compromise. John Newman found that a *via media* was impracticable and hopeless, and became a Romanist. John Wesley made the same discovery a hundred years earlier, and became a Methodist."

We admire the skill of Mr. Hughes in turning aside the insinuation of the German professor; we are, however, not quite so sure of his fairness. Not so very many months ago, Mr. Hughes might have remembered, he himself tried to play the part of General to this Evangelical Jesuitism, with what result and with what honesty all the world now knows. Mr. Hughes must pardon us if we have a longer memory than he has himself, and if we are not quite prepared to accept his construction of the German professor's words.

There is another passage in the article which we think is worth calling attention to. It deals with the salvation of the heathen, and is capable of another application than that evidently intended by the writer.

"The London Conference of 1770 adopted certain resolutions which, not unnaturally, produced an outburst of tremendous indignation on the part of (Wesley's) orthodox Calvinistic friends.

The resolutions of the Conference, then as now, were expressed in the form of question and answer, and we can imagine the horror with which many of his clerical acquaintances would read the following:—

1. Who of us is *now* accepted of God?—He that now believes in Christ, with a loving, obedient heart.

2. But who among those that never heard of Christ?—He that feareth God, and worketh righteousness, according to the light he has.

3. Is this the same with 'he that is sincere'?—Nearly, if not quite.

Thus, more than one hundred years ago, the Methodist Conference, under the direction of John Wesley, asserted in the most explicit terms the exact opposite to the Athanasian Creed, and declared that the heathen could be saved. No wonder that Toplady, the Countess of Huntingdon, and many other godly people, filled the whole land with their loud complaints. But Wesley never swerved from the position he then assumed. On another occasion he wrote in his Journal:—"I read to-day part of the meditations of Marcus Antoninus. What a strange Emperor! And what a strange heathen! Giving thanks to God for all the good things he enjoyed—in particular for his good inspiration, and for twice revealing to him, in dreams, things whereby he was cured of otherwise incurable distempers. I make no doubt that this is one of those 'many' who shall 'come from the east and the west and sit down with Abraham, Isaac, and Jacob,' while 'the children of the kingdom'—nominal Christians—are shut out."

"Here, then," Mr. Hughes goes on to say triumphantly, "John Wesley anticipated the most liberal evangelical teaching of our own time, by calmly asserting the undoubted salvation of a heathen Roman Emperor; which conviction, I need scarcely add, logically involved the salvation of Buddha, Confucius, Zoroaster, and all the honest and humane teachers of every age and land."

We do not suppose Mr. Hughes was thinking, when he wrote this, of the nature of the missionary policy that such a position would warrant, but we trust that if he ever again proposes a new missionary policy for India he will keep in mind both John Wesley's words and his own. If he forgets that Mr. Hughes of the *Nineteenth Century* is the same person as

Mr. Hughes of the *Methodist Times*, he need not be surprised if other people will aid him in the work of self-identification.

'The Advantages of Poverty' is the rather strange title which Mr. Andrew Carnegie gives to his further remarks on the use that ought to be made of wealth. Sir Benjamin Baker writes an interesting account of the ship railway which "will, it is hoped, before long be carrying ships weighing two thousand tons, seventeen miles overland across the Isthmus of Chignecto between Nova Scotia and New Brunswick." Ships will in this way be enabled to pass direct from the Bay of Fundy to the Gulf of St. Lawrence, and so be saved "the long voyage of 600 miles round the exposed coast of Nova Scotia." The editor himself contributes a paper, 'The Joke about the Elgin Marbles', in which he points out that Mr. Frederic Harrison's proposal to restore the Elgin Marbles to Athens was really intended to satirise the flabby sentimentalism which so largely pervades modern politics. There must, we should think, be something faulty in 'a joke' which requires an editorial to help people to see it.

The first place in the current number of the *Westminster Review* is given to an article by Mr. F. C. Conybeare on 'Recent Oxford Theology'. Only about half of the article, which is a short one, deals with the subject that gives it its name, and by far the larger part of that is occupied with a criticism of Mr. Gore's contribution to *Lux Mundi*. As the writer belongs to the Robert Elsmere school of thought he of course does not consider that Mr. Gore goes far enough, but he hails the appearance of *Lux Mundi* and Bishop Temple's Rampton Lectures as a sign that there is growth in the Church. There is nothing very new in this article. Perhaps the most striking thing in it is the expression of the feeling of sadness and the sense of isolation which the inability to believe so often brings with it.

"It is hard to stand alone, and many who have an overdose of reason in their

composition must deplore that they cannot be faithful members of a vast outward unity like the English or Roman Church. If one could but stifle those obstinate questions, Did this actually occur? Is it true? what a blessed asylum in sin and sorrow, what organised guidance of one's efforts of thought and practice, often now half palsied by desultoriness and disconnection with any great fellowship, what refuge from individualism in a thousand distressing moods could one not find in one or the other of these communions? How much strength is added to him who feels that he is no unprotected pawn in the game of life, but a marshalled unit in the progress of a church divinely ordained, ushered into the world with miracles, and guarding throughout the ages, by an unbroken line of apostles, bishops, and martyrs, the sacred mysteries revealed by its divine founder."

The name of the author of the article on 'Warren Hastings and his Libellers' is not given, but the initials L. J. T., are sufficient to show that it is by Captain Trotter, who once and again has come forward to defend the much maligned Governor-General. The occasion of this article is the comparatively recent publication of three large volumes of state papers covering the thirteen years of Hastings' rule. These "Selections from the Letters, Despatches, and other State Papers preserved in the Foreign Department of the Government of India 1772-1785" have been edited by Professor Forrest, and by means of them historians are now "enabled to form an independent judgment of events, and still more of the actors and their motives." The opinion of L. J. T. is that "the judgment so formed in respect of Warren Hastings by any man of average honesty and shrewdness will inevitably quash the verdict formed by Macaulay on the evidence supplied by Burke and Mill." Macaulay and Mill are not unnaturally somewhat roughly handled for their unfairness; the former is specially censured for his 'cock-sureness' and the unjustifiably savage attack he made on Sir Elijah Impey. It is a Francis, however, that the writer chiefly pours out the vials of his wrath, as when he calls him "a man who shrunk from no crooked,

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base, or underhand method of gratifying his malice or his ambition," and, if, as seems probable, "most of the charges brought against Hastings were concocted or inspired by Francis himself," the language used cannot be said to be unwarrantably strong.

In an article on 'Consanguineous Marriages', Dr. S. A. K. Strahan maintains that the degenerate conditions frequently met with among the children of parents who are close blood relations are due not to the mere fact of blood relationship in the parents but to a quite different cause. "In consanguineous marriages the danger lies in the strong probability there is of both parents bearing some particular taint, which will be deepened in their children, yet which might be escaped if they each married a person not bearing that same character. The blood relationship in itself is innocent." Dr. Strahan also points out that there is such a thing as 'social consanguinity', that is, similarity of temperament produced by a common environment. Living under similar conditions tends to produce similar diseases and degenerations irrespective altogether of blood relationship. This the writer considers is "a potent factor in the production of all hereditary degenerations. It is the great curse which dogs every exclusive tribe and class, and hurries them to extinction." It would thus seem that the marriage of the high-born lord with the maiden of low degree of which the poets speak is a good thing not only for the maiden but also for the noble family into which she marries. Dr. Strahan concludes with one or two lessons, the chief of which is that "consanguineous marriages are in all cases dangerous, and are becoming with our advancing civilisation more dangerous every year."

'The Fetish of Charity' is a somewhat violent attack by Emily Glade Ellis upon the charitable institutions of the present day. How sweeping her condemnation is may be seen from the points she attempts to prove. "The charitable system (1) invites and creates gross errors of administration. (2) It shifts the duties of the whole community on to the shoulders

of a generous minority. (3) It demoralises those who give. (4) It demoralises those who receive. (5) It intensifies the very evils which it was designed to cure."

In a short but interesting article on 'The Economic Side of History' Mr. H. de B. Gibbens draws attention to the fact that in most histories one of the most important questions is seldom discussed. Much space is occupied with the details of bygone wars, and yet the question is rarely asked, "How was the making of history paid for? Who paid for it? and how was that portion of history rendered possible?" The article contains a brief sketch of the economic history of England and concludes with one or two criticisms on the evils of the present industrial system.

Industrial and economic questions are also dealt with in an article by Mr. E. M. Stevens on 'The Impolicy of Strikes', in which the dangers that threaten the industrial supremacy of Great Britain in consequence of the present attitude of the working classes are pointed out. The article is temperately written, but the author holds strongly that "strikes aggravate rather than mitigate the evils which they profess to cure."

The other articles in this number are 'Sir Walter Scott's Journal', by Mr. D. F. Hannigan; 'Realism on the Stage: How Far Permissible?' by Mr. W. J. Lawrence, and the usual reviews of contemporary literature.

The *Fortnightly* is scarcely up to its usual level. The present issue contains nevertheless several important articles dealing with the politics of countries in both hemispheres. 'Canada and Imperial Federation' is dealt with by the Attorney-General for Nova Scotia, who sums up his views in this way:—

"Canada is prosperous, contented, and happy. She may have errors and evils in her administration, but the remedy for these is in the hands of her people. She is growing and will continue to grow. She is loyal to the Empire, but cannot afford to be always a colony. She may become part of the Empire under a general confederation of the English speaking communities scattered throughout the world. And she may be

absorbed in her great neighbour. But the stronger probabilities are that she will eventually take her place among the nations of the world with splendid prospects of greatness and power. In which case, and in any case, her people will never forget the great nation from whom they derived their origin, and whose qualities implanted in them constitute their strongest hope of success and glory."

'The Outlook in France' is Mr. Herbert's second article on the French body politic and its diseases. He shows how the dominant party has succeeded in drawing the judicial administration of the country into its own control and gives illustrations of the inevitable evil results.

Mr. Hulme-Berman, as the result of investigations made on the spot, considers that the difficulties in Macedonia are at present the most threatening aspect of the great Eastern question. "The point at issue," he says, "though it is not often so nakedly stated, is simply which of the three adversaries, Greeks, Serbs, and Bulgars, is to be so favoured by Turkey as to enable it, when that Power is in extremity, to seize Macedonia for itself." The crisis in the Eastern Question is the subject of still another paper of the same kind.

Mr. Thomas Hardy's psychological study, as probably is ought to be called rather than a story, is not without interest, but the reader is repelled, as he frequently is in Mr. Hardy's work, by the author's characteristic want of sympathy. There is no charm, nothing even pleasant in the sketch.

An interesting point is emphasised by Mrs. Gribble in protest against Miss Cobbe's estimate of Greek religion as expounded in a recent number of *the Contemporary*.

"The whole truth is that the Greeks, unlike the Jews, did not narrow the realm of the Divine to the realm of the moral consciousness only. The sense of Beauty and Truth and the guiding and controlling power of Reason were recognised and adored equally with the sense of morality, as an emanation and revelation of God. Perhaps it is the unconscious desire to restore the lost balance of our

powers that works in the minds of many a modern atheist. It may be the fact of Christianity having so long denied that the revelation of Beauty is any part of the revelation of God, which has prompted them to deny that there is any revelation of Him even in ideal goodness."

The Contemporary Review gives its opening pages to an unsigned article on 'The Tzar and the Jews'. It professes to be written by an Englishman of many years' residence in Russia, who however claims no information from any authoritative source. The treatment of Jews by the Russian Government has for many years excited public indignation, and recently has called forth strong protests, more particularly from a meeting in London presided over by the Lord Mayor. This fresh indignation was called forth not by new enactments, but by a more vigorous attempt on the part of the Russian Government to carry into effect laws already in force. The recent persecution of Jews in Russia therefore is no new movement called into existence by some sudden temporary excitement, but is the outcome of a feeling which has gathered strength since the promulgation of the 'May Laws of 1882'. The Russian Government has issued instructions that these laws are to be strictly observed and enforced. It is thus hardly surprising that the memorial sent under the name of the Lord Mayor should have been returned as an officious interference on the part of outsiders. For a policy which has been for years in existence and which it is now found advisable to enforce more rigorously can hardly be the result of caprice. It must be based on reasons which tell powerfully with the Russian Government. It is to elucidate these reasons that the present article was written. The writer contends, in opposition to the meeting in Guildhall, that religion has got nothing to do with the question. The real cause is much the same as it was in Pharaoh's time. Jews are becoming too numerous and too influential, and the Government is afraid of them. They are regarded as a standing menace to the stability of the Empire. The action of the

Government is prompted by the desire of self-preservation. Various opinions and arguments are adduced to prove this position. The Jews are increasing rapidly, at a much higher rate than the other sections of the population. Then again they are not agriculturalists but middlemen, and do little either as producers or as soldiers for the country. The peasants are in the hands of the Jews, and little can be done in the way of educating them until they are out of their hands. "He is sadly in want of instruction in the advantages of industry, thrift and economy," as well as of agriculture, but "no amount of good advice will benefit him if the Jew is always at hand to ply him with drink and help him with money." It is very easy to set the antipathy down to religious persecution, but it must be granted that the contention of the author of this article is in keeping with the position taken up by many earnest men in Germany, where a similar, though less violent feeling prevails.

Mr. Henniker Heaton writes an article of very great practical importance on 'Postal and Telegraphic Reforms',—an article which will compel attention, and, we hope also, will produce valuable results. With most of the reforms contended for readers in India have no immediate personal interest, but there are certain features more directly connected with India. It is to the credit of the Indian Post Office, that it has shown the way to England in several particulars. Mr. Henniker Heaton urges the introduction of the value payable post, similar to the method in use in India, and recommends the adoption of the plan of sending cash with a telegraphic money order which is also in use in India. Mr. Heaton urges also the introduction of an international postage stamp which can be used in any country, or in specified countries included in the Union, for the transmission of mail matter, or for the remitting of small sums of money not exceeding one shilling. On the question of Imperial Penny Postage Mr. Heaton declares that there is no good reason why it should not be instituted at once, but there

are reasons for abstaining from a discussion of this reform at present. It is, however, he says, receiving the attention of Government.

In common with many other magazines, the *Contemporary* devotes an article to John Wesley. It is from the pen of Archdeacon Farrar, who expresses his admiration of the man and sympathy with his work in no stinted terms. The article is an outline of Wesley's life, with an attempt to indicate "those conditions of his labour and of his character which secured to him the supreme honour of evoking the dormant religious instincts of millions of human souls." It traces the early struggles of Wesley and his long career of unflinching fidelity to his ideal amid torrents of abuse and ridicule. "The most simple, the most innocent, the most generous of men, he was called a smuggler, a liar, an immoral and designing intriguer, a Pope, a Jesuit, a swindler, the most notorious hypocrite living." Yet the revival of religion under him prevailed in spite of hostile bishops, furious controversialists, jibing and libellous newspapers, it prevailed, because "one with God is always in a majority." The societies that have sprung from his work now number 5,250,000 members, and if children and general worshippers be counted there are perhaps 25,000,000.

Mr. Francis Pook writes on 'The Eclipse of Justice', pointing out the evils which arise from the excessive inequalities that exist in the punishments inflicted by different judges for crimes similar in nature. To remedy this he urges the codification of criminal law, an agreement among judges themselves on the principles on which the length or shortness of sentences should be regulated, and finally the appointment of a court of Criminal Appeal.

A critical estimate of Mr. Rudyard Kipling is given us by Mr. J. M. Barrie, who declares that Mr. Kipling's chief defect is ignorance of life.

The other articles in this number are 'Pessimism as a System', by Mr. R. M. Wenley; 'The Anabaptists and their English Descendants', by

Mr. Richard Heato; 'A Scene from Ibsen's *Brand*', by Professor C. H. Herford; 'A Home for the Dying', by Mr. A. T. Schofield, M.D.; 'The Battle of Balaclava', by Mr. Archi-

bald Forbes; 'Hydrophobia and the Muzzling Order', by Mr. G. J. Romanes, F. R. S., and 'The Question of the Irish Leadership', by Mr. J. J. Clancy, M. P.

CORRESPONDENCE.

THE CHRISTIAN CONCEPTION OF GOD'S DEALINGS WITH MANKIND.

SIR,

THE subjects of which Mr. Painter has written are so important that, to avoid misunderstanding, it would have been well had he used the terms which have been employed by Dr. Miller. Since he has preferred to use other terms, it would have been convenient if he had here and there subjected those used by him to exact definition. But he has done neither the one thing nor the other. Though Mr. Painter writes with apparent decision, I find it difficult to believe that he has fully thought out for himself some of the points referred to in his letter, and if he can find time to do this, I am of opinion that he will clearly understand the positions and heartily endorse the statements as a whole against which he has ventured to protest. In his brief treatment of a large subject, Dr. Miller occupied a synthetic standpoint, but Mr. Painter has not ascended to that high level. His point of view is antithetic, and in the narrow place in which he stands he finds himself surrounded by what seem to be sharp antagonisms. Before writing his letter he should have climbed up to Dr. Miller's position.

As a missionary, it has been my duty to study the faiths and the Shastras of South India, as well as our Christian sacred books, and I have felt the need of exact thinking and explicit statement concerning some of the points hinted at in Mr. Painter's letter. For if we are ignorant of the writings held in reverence by Hindus, or unjust towards them, we may seem to more intelligent men to be endeavouring to make Christians on false pretences, and the injustice of

which we are guilty may be charged upon the Christianity we preach, and this none of us would desire.

Mr. Painter believes "that God does care for all men," and that "he has not left Himself without witness to the heathen nations," and he acknowledges that there are truths enshrined in most of the heathen systems, that is, sacred books. Why did he not tell us exactly what he means? How, and how much does God care for Hindus? Has He placed them amid conditions in which spiritual as well as bodily life is possible to them? Again, what are the truths enshrined in heathen systems? Whence are they? If from God, can Hindus find salvation by obeying them?

He says he cannot see that the presence of truths in heathen sacred books proves these books to be revelations from God. How could he? But in thus distinguishing between 'truths' and 'books', by a parity of reason, he will find himself compelled to admit that the presence of 'truths' in the Christian sacred books does not prove these 'books' to be revelations from God.

He appears to endorse the statement of Sir Monier Williams to the effect that "non-Christian Bibles are all developments in the wrong direction. They all begin with a few flashes of light and end in utter darkness." But the statement is not true. We may excuse Sir Monier Williams making a blunder, but Mr. Painter is a South Indian missionary and should have studied the books which he defames. I invite him to show us the luminous beginning and the dark ending of the sacred books of the Tenggalei Vaishnavas and the Saiva Siddhantis—two of the leading sects in South India.

It is a far cry from the first Vedic

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thought to the *gāna* and *bhakti* of later times, and the student of Indian religious literature finds that the evolution of thought in India has been a progress, not a decline, though here as elsewhere there has been an evolution of that which is bad, as well as of that which is good.

When Mr. Painter tells us that "Christianity . . . asserts that it is the sole revelation from God." I do not understand him, for he has given us no definition of Christianity. But if his meaning be that the Christian sacred books contain such an assertion, let him point it out. I have never found any such statement in our sacred books.

It is when he comes to deal with the relation of Hindus to Christ and Christianity that he falls into the most serious confusion. He does not appear to have thought out this matter even from his own standpoint, else he could not have objected to Dr. Miller's statements. Judging from the admissions he has made, he has only to carry his own thinking to its logical conclusion to find himself in exact agreement with what he now deplures and condemns. The question which he raises should be plainly answered. May a Hindu acquainted with Christianity and reverencing Jesus Christ as divine, remain in his own faith without receiving baptism, and if so may he hope to serve God and find salvation? Mr. Painter appears to say 'No'. But if so, what value does he attach to the truths which Vaishnavas and Saivas possess? Are they saving truths? And how does he interpret the axiomatic saying that "God is no respecter of persons; but in every nation he that feareth God and worketh righteousness is accepted of him"? Unless God has been truly revealing himself within and without heathendom, whence have come that knowledge of truth and those longings after God in India which no man can gainsay? If Mr. Painter will turn to the Old Testament he will find instances of men who were servants of God although they neither believed in Christ nor were baptized, and in the New Testament also he may find similar illustrations. Christianity and other reli-

gions are seen in contact in the Acts of the Apostles, and there we find a recognition of the fact that true piety can exist in men who are not baptized. More than this, the writer of the Acts, when speaking of the piety of men who had not become Christians, does not use other and inferior terms to describe it, but terms which are elsewhere used to describe Christian piety. Cf. Acts viii. 2; x. 2; xvii. 23 with Acts iii. 12; 1 Tim. ii. 2; 1 Tim. iii. 16, and other passages.

That a Hindu cannot formally accept Christianity without frank and loyal avowal is so evident that the call for 'proof texts' might be dispensed with. No one will dispute the statement that baptism is in harmony with such an avowal. But here again, Mr. Painter, busy with proof texts, gives but scant attention to facts, for he says, "In fact baptism as far as we are aware, followed belief in every case." Excepting the *jaṭṭ* to whom he refers, the New Testament does not show that Gentiles who embraced Christianity were generally baptized. He says he can quote hundreds of examples. Let him quote half a dozen to show that baptism followed belief in the case not of Jews and proselytes, but of the heathen who embraced Christianity in New Testament times.

Views like those of Mr. Painter make Christianity appear small and unattractive, and are not in harmony with the facts visible in God's dealings with the races of men. But until Mr. Painter makes room for these facts, and recognises the unity of truth and the unity of the race, it will be impossible for him fully to understand a view like that of Dr. Miller, which is an interpretation of the facts of history so far as they are known to us, and in perfect harmony with the teaching and practice of Christ and his Apostles, as well as of the noblest of the Christian fathers. At present he seems to me to substitute for Christianity a narrow dogmatism which may serve to irritate intelligent non-Christian religionists, but which does not exhibit the truth in its grandeur and symmetry.

G. MACKENZIE CORBAN.

THE MADRAS CHRISTIAN COLLEGE MAGAZINE.

MAY, 1891.

A MODERN APOSTLE.*

A 'LIFE' of Dr. Somerville was inevitable. The career which closed a little more than a year ago, with its wealth of incident, its uniqueness and freshness of power, could not pass away without some memorial of it. Many qualifications pointed out Dr. George Smith for the task of biographer; and he has told the story well. The task before him, congenial as it must have been, was by no means an easy one. Dr. Somerville's life, it is true, was simplicity itself. Its secret lay on the surface. Moreover, it was full enough of movement and incident, and not wanting in striking and at times almost dramatic situations. There was not therefore for the biographer the difficulty of a complex life or of one in which the motive was hard to find. Neither was there the flatness of an uneventful course to fret him. The hardness of the task lay in the very elements from which the life derived its greatness, namely its open, childlike simplicity of purpose, and its singular uniformity of effort throughout the long course of fifty years. The history is the history of one scene: and the recurrence of that scene—the 'apostle' and the vast crowd he is moving—tends to overwhelm the reader. Dr. Smith has succeeded, however, and his book brings before us the man as he was known and felt to be.

Somerville was born in Edinburgh in the year 1813, the same year in which his playmate and classfellow at school and college, Robert Murray McCheyne was also born. The two boys had much in common. They entered college together in 1827 and had the reputation of being "foremost in athletic sports, in dancing and

* *A Modern Apostle, Alexander N. Somerville, D.D.* By George Smith, C.I.E., LL.D. London: John Murray, 1890.

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in youthful frolic." They were both handsome and accomplished and the favourites of their year. A new influence, however, breaking upon them in the full tide of their buoyant careless life, changed its direction. They felt they had become new men. Their friendship was touched with a new sacredness; and both felt themselves called to a new life and new responsibilities. Dr. Chalmers was then at the height of his commanding influence in the Divinity School of Edinburgh University. His class-room was crowded not only by students but by 'students of an older growth'—men of all professions who were drawn to the feet of the wonderful professor by whose spell new worlds of thought and inspiration had been called up. The two lads finished their Arts course, and with the intention of preparing themselves for the ministry of the Church of Scotland they entered the Divinity School and became the pupils of Chalmers and Welsh. The influence of their classes remained with them through life; but hardly less powerful or formative was that of the college life itself and specially of the friendships which were made there. There was the Theological Society for the study of whatever "might shed light on the word of God," and the Missionary Society, for work in the neglected parts of the city. Into the varied activity which these Societies created was drawn a band of singularly earnest and high-toned men, many of whom have since distinguished themselves by their eminent services in the Church and in the country, and of whom a few yet remain to us. Of these the Rev. Dr. A. Bonar of Glasgow, one of Somerville's closest friends, became the biographer of McChesney, whose too early death was the first breach in the circle; and he thus records his recollections of his two fellow students:—"I sometimes think that we three at that time were like the three disciples you read of—Peter, James, and John—before the day of Pentecost. Mr. McChesney was the beloved disciple, and Dr. Somerville was Peter fervidly earnest always, sometimes impetuous, and even impatient; but there was one thing that can be said of him that could not be said of Peter—he never denied his Lord once that I have heard of, and I knew him for sixty years." McChesney died at thirty; but his memory will always be fragrant in Scotland. "The beauty of his character and the impassioned fervour of his direct appeals to the conscience and the heart, threw a halo round his brief but earnest ministry which, after the lapse of nearly half a century still survives either as a solemn personal memory or a hallowed tradition."

He was typical of the kind of atmosphere about Somerville in

these college days. He and Somerville used to discuss the 'future', as students will; but they were no schemes of vulgar ambition which occupied their thoughts. Dr. Duff had come home from Calcutta. His fervid speech had kindled the imagination and fired the enthusiasm of the youths. Visions of splendid service or of still more splendid sacrifice rose before them: and grave questionings were stirred within them. They had long walks together,—by Duddingston Loch, and by Craighleith—they had an interview with Dr. Duff himself. The one question was uppermost in their thoughts,—Was it the will of God that they should go to preach the Gospel in heathen lands? They were ready to go, but the call did not come, and they braced themselves to do work that lay nearer to hand. The three became candidates for the same church, St. Peter's, Dundee. McChesney was chosen, and Somerville went to Dunipace.

Dr. Bonar tells a story of him which is characteristic of his life-long manner. He stayed three miles from his church at Dunipace, but he used to set out very early on Sabbath mornings. "Why? That when he came to the village or the houses near it, he might knock at the doors of the sleepers. He would knock at the doors of the sleeping householders and awake them, and call on them to arise and come to the house of God. He made that a habit, and the people soon knew that their young minister was in dead earnest to win their souls."

It was in Glasgow, however, in 1837 that Somerville began his ministry proper in Anderston Church, of which, in four different buildings he remained minister for a period of fifty-two years. The social reforms which Dr. Chalmers had succeeded in bringing about in Glasgow [1834] prepared a splendid field for Somerville's energy to spend itself to the best possible advantage. His pulpit and pastoral work was naturally his first concern, but he found time to do an enormous amount of work in the city of a social and philanthropic kind. His church was the centre of it all. "It was the warmest church in Glasgow," wrote one who knew it well. Men of all classes were to be found in it, drawn by his fame as a preacher. They caught his spirit, and the congregation at Anderston soon took the lead among the churches. It was alive with industry—the pastor being "the leader of an army of Christian agencies." The enumeration of these shows that there is hardly a form of religious effort in which churches to-day feel themselves to be original and advanced which did not flourish thirty-

five years ago at Anderston. And of them all Somerville was himself the life and soul. Chief among all the agencies were his classes for young men and young women, for which he prepared himself hardly less carefully than for his pulpit work, and by means of which his church became a great "nursing-place for evangelists for service both at home and abroad."

As a preacher he is difficult to describe. He had all the external qualities which give charm and power to the orator, and he had the power to use them. Nature had given him a commanding presence and a splendid voice; but scarcely less marked were the finer qualities of his heart and mind. The Rev. A. Black thus records his recollections of him:—

"His preaching was not, perhaps, of the most severely logical type, and his discourses were often such as would occur to no other man. But for illustration and dramatic power and picturesque description, together with an overmastering passion for the salvation of his hearers, Dr. Somerville stood alone. Some of the appeals at the close of his discourses still linger with the writer, as the dying echoes of an awful thunder. They were indeed terrific at times. The whole soul of the preacher was thrown into them. And as he went on to enforce the necessity of now laying hold of Christ for salvation, he kindled with an earnestness and energy almost superhuman, and, indeed, made the hearer quite feel that the lights and shadows of another world were playing round him."

His sermons were never learned, yet "all through his ministry he was loyal to the instinct of the scholar, and though he never obtruded his learning it lay behind, and in a measure revealed itself artlessly even in his most unpremeditated utterances."

For twenty-three years—1837-1860—Glasgow was the scene of his labours. They were years of unremitting work, broken only by a short tour through the Continent of Europe and Egypt (1848), when the continuous strain of eleven years had made rest and quietness a necessity. During these years the African Missionary Society, and the Glasgow Bible Society, to both of which he became secretary, absorbed much of his attention, and it is hard to imagine how he found time in his busy days for the immense amount of work he was able to give those Societies, or for the equally arduous exertions he made in the 'rescue-work' among the outcast population of his own city.

Most men with such a record as Somerville's would have taken for granted that the line of their life-work was practically fixed. But at fifty Somerville was unfettered. Indeed it was only then that the first shadowings of what was to be conspicuously his life-work

began to appear. His interest had been excited by the religious condition of Spain, and with the hopefulness and buoyancy of youth itself he threw himself into the work of reforming the churches of that unhappy country. Six times he visited the country, and for ten years he devoted himself to its regeneration. He hoped against hope, and at the close of it all he was forced to speak of the 'outlook' in Spain in these words:—"What but perplexity can we expect where principle is so low and selfish aims are so paramount, where religious truth is unknown and corruption widely prevails?"

Spain, however, was but the introduction to a wider field. He was sixty-one years of age when Mr. Fordyce of the Anglo-Indian Evangelisation Society met him casually and half in thoughtlessness said to him,—“I wish you were fifteen years younger, Mr. Somerville. If you were I would ask you to go to India.” With characteristic openness he answered,—“They used to say that I had two wings. I think I have four now.” Mr. Fordyce understood his figurative speech and in a few days Somerville was on his way to India as an evangelist to his own countrymen there. His mission extended over six months, and is still affectionately remembered by many. In passing he made a short stay at Madras and saw the Christian College, where he “spent a few hours with eyes of wonder.” Recollections still linger among the students of that day of the visit he paid later on. * There was something strangely fascinating, it was easily seen, in the sight of the old man eloquent, with the flowing locks of age, and the light-hearted freshness of youth. And his words were such as found the conscience and the heart. Altogether he was, on Indian soil 156 days, but notwithstanding the great distance travelled over, he was able to conduct in all 351 religious services.

He had barely returned home and given an account of his Indian tour when his Church sent him out—this time to Canada—to bear messages of brotherly greeting to the Presbyterian Church there and to preach the Gospel in every city. While he was there, it began to be felt at home that Somerville's true 'call' was not to the ministry of the Word to a single congregation, but to the preaching of the Gospel throughout the world. In December 1876 the Directors of the Glasgow United Evangelistic Association met and resolved to invite him to give up his ministerial charge, “and for the future devote his life to the furtherance of the Gospel at home and abroad, but especially among the English speaking people in foreign lands, and, as far as in his power, among the non-Christian

natives of these countries." This call to preach the Gospel "wherever the English language is spoken" was one after Dr. Somerville's heart. He accepted it with eagerness. Arrangements with his congregation were easily made, his generous and unselfish nature making the financial part of the arrangements the easiest of all.

These being completed he was again under way without delay. Time he felt to be pressing, for he was sixty-four years of age. Australasia was the scene of his next campaign—the first after entering on his formal 'apostolate'—and it occupied eighteen months. At Sydney his ready art and common sense were put to the test in answering questions put to him by the audience. Many of the questions were of course put with the genuine desire for help and guidance; but some were frivolous. For example, he was asked, "Who was King David's mother?" To which Dr. Somerville replied, "I have no doubt she was a most excellent lady. I think there is only one passage in the Bible where reference is made to her, and her name, I believe, is not mentioned at all; but there is one thing about the subject (although the Scripture may be silent upon the point) that is sufficiently clear, and that is—that King David had a mother." But throughout the colonies, and the adjacent islands which he visited, his presence was felt to bring spiritual quickening.

He returned home but only to prepare for fresh enterprise: and now the record of his goings and comings grows so large that we can do no more than follow him. A short visit to Ireland, then to Paris, thence to Brittany and the South of France, thence for three months in the principal towns in Italy, thence to North Germany, Russia, and South Germany. On his return home a letter from the Reformed Churches of Cape Town came to him telling him that South Africa alone was left of the British Empire for him to visit. He was about to enter his seventy-first year, and for a time the state of his wife's health made him hesitate. But no sooner did she recover than he made arrangements for a visit to South Africa. After a successful tour in Natal he went to the Zulus, and afterwards to the Boers and the Kafirs, among whom a new mission was opened, which, as 'The Somerville Mission', perpetuates the memory of his apostolic visit.

The fatigues of his African expedition brought on an illness from which, however, he had no sooner recovered than he was once more in action. He resolved to visit the Greek speaking peoples of Eastern Europe and of Asia Minor. The newspapers in Athens

were on the whole friendly, though they viewed his *modus operandi* as both peculiar and original. Controversial subjects he naturally avoided, and his winning manner disarmed prejudice and gained for him everywhere a sympathetic audience. At Athens, however, he met opposition. A priest who unsuccessfully attempted to disturb him on his first visit had organised an attack when he returned and so excited the people that they stoned his interpreter. His own venerable and dignified demeanour perhaps saved him from their fury. At all events they did him no violence and he was able to make his way to his hotel in safety. Athens was ashamed of the affair, however, as well it might, and on the following day the whole press apologised for the outrage, charging the offenders with barbarous conduct. The conduct of the priest was referred to the Archbishop by the Greek Minister.

No part of this tour, however, was more fragrant of 'memories' to Somerville than his journeyings "in the region of the seven Churches." He visited them all, and after a short tour by the Bosphorus returned home.

The Church at home had been waiting to make some fitting recognition of his conspicuous services, and in 1886 conferred on him its highest honour by making him Moderator of the General Assembly. The duties of the chair he discharged with dignity and grace. On the 'Foreign Missions Evening' he introduced the Honourable Ion Keith-Falconer, the distinguished Oriental scholar, who had devoted himself to the mission work in South Arabia, and who was about to embark on what proved to be a bright but too brief career. There were also four young missionaries, two for India, one for Africa, to his own Somerville Mission, and one for the New Hebrides—whom the Church was sending out and to whom the Moderator gave the usual 'charge'. Among these was the Rev. A. S. Laidlaw, B.D., now of the Madras Christian College. "The college," said the Moderator, "is one of the most remarkable, one of the most wonderful colleges and Christian seminaries to be found in the world. It is presided over, as we all know, by the Rev. Dr. Miller. He is quite a master of the situation he occupies."

At that same Assembly from which he had sent so many to work in foreign lands, he himself received a new call to further labour, to which despite his seventy-three years he promptly responded. A strong appeal was made to him to make a mission tour through the Highlands and Islands of Scotland. A plan was drawn up, dividing the region into six sections, and within five weeks after

the close of the Assembly the actual itinerary was begun. It occupied ten months. His last tour, following close upon it, was among the Jews in Bohemia, Hungary, and Eastern Europe generally.

But the end was drawing near. His missionary speech at the Assembly of his own Church—which will be long remembered—and his address on Jewish Missions before the Assembly of the sister Church of Scotland were his only remaining public acts. At the pleasant watering-place of Kilmarnock on the Clyde he spent four weeks in the autumn of 1889. An 'access of weakness' overtook him, but he was able to make the journey home to Glasgow, in time, however, only to pass away. His death was gentle as it was sudden. He was in the arms of his son, when a stroke of faintness came on him, making him call out, "Oh, what's this?" His wife asked, "Is he suffering?" and the reply was "He is in Heaven."

There was a touch of the old pilgrim about him to the last. He had asked to be buried in his ordinary clothes and he desired that his boots might not be too clean but have a little of the dust of earth upon them as became a traveller. Such was his own conception of his own usefulness.

Dr. Somerville, we have said, was unique. The memory of him which lingers with those who knew him is that of a man in whom faith had produced "a degree of certainty not very distinct from triumphant elation," and the testimony of one and all who heard his compassionate appeals—even when they rejected his message—was that he was a man of God. The true monument of his life is in the countless number of lives which were quickened by him and in the impulse he gave to spiritual life and work—an impulse, may we hope, which will not soon be spent.

J. COLVILLE PEATIE.

THE YUGAS:

A QUESTION OF HINDU CHRONOLOGY AND HISTORY.

The word *Yuga* is derived from the Sanskrit root *Yuj*, 'to join', and is both in meaning and etymology allied to the astronomical term 'Conjunction'. It is a well known fact that, with the ancient Hindus, religion was the sole incentive to the investigation and study of grammatical, geometrical, astronomical, and other problems

they loved religion for its own sake, and cultivated other fields of thought only as handmaids to religion. Their desire to preserve and understand the sacred hymns and prayers of their fathers led them to study and formulate grammatical rules; and who does not know the marvellous advance which the Hindus have made in the science of grammar? It is evident from the *Sulva-Sūtras* that it was for purposes of constructing the various forms of altars in their sacrifices that they so very early cultivated a knowledge of geometry; and some European scholars are now said to hold that India is actually the cradle-land of this most admirable science. Professor Max Müller has more than once pointed out that astronomy has had an indigenous origin and development in India, although, later on, the Hindus seem to have derived much help and information from the Greeks. In fact, the word *Ritvik* (ऋत्विक्), which very early came to mean the priest engaged in sacrificial rites, has to be etymologically interpreted as one who performs the sacrifices in the proper seasons of the year. Regarding the early astronomical observations of the Hindus, Dr. Martin Haug expresses the following opinion in his introduction to the *Āitareya Brāhmaṇa*:—"A regulation of the calendar by such observations was an absolute necessity for the Brahmins; for the proper time of commencing and ending their sacrifices, principally the so-called *Sattras* or sacrificial sessions, could not be known without an accurate knowledge of the time of the sun's northern and southern progress. The knowledge of the calendar forms such an essential part of the ritual that many important conditions of the latter cannot be carried out without the former. The sacrifices are allowed to commence only at certain lucky constellations, and in certain months. So, for instance, as a rule, no great sacrifice can commence, during the sun's southern progress (*Dakṣiṇāyana*); for this is regarded up to the present day as an unlucky period by the Brahmins, in which even to die is believed to be a misfortune. The great sacrifices take place generally in spring, in the months *Chaitra* and *Vaiśākha* (April and May). The *Sattras* which lasted for one year were, as one may learn from a careful perusal of the 4th book of the *Āitareya Brāhmaṇam*, nothing but an imitation of the sun's yearly course. They were divided into two distinct parts, each consisting of six months of thirty days each; in the midst of both was the *Vishuvan*, i.e., equator or central day, cutting the whole *Sattra* into two halves. The ceremonies were in both the

halves exactly the same; but they were in the latter half performed in an inverted order. This represents the increase of the days in the northern, and their decrease in the southern, progress; for both, increase and decrease, take place exactly in the same proportions."

In the *Védāṅga* known as *Jyōtiṣha*, the astronomical data given in which carry us far back into the twelfth century before the Christian era, we find it stated: "The object of the *Vēdas* is the sacrifice, and the sacrifices are instituted according to a certain order of time. Therefore whosoever knows this *Jyōtiṣha*, the science dealing with the regulation of time, he knows the sacrifice." In whatever way primitive man may have been led to observe the heavens elsewhere, there can be no reasonable doubt that in India religious zeal offered the most potent motive for all the interesting early astronomical observations of the Hindus.

It is pointed out in the first volume of Muir's *Sanskrit Texts* that "this elaborate system of *Yugas*, *Manvantaras*, and *Kalpas*" finds no place in the hymns of the *Rigveda*. The authors of the hymns, however, are shown to be "familiar with the word *Yuga*, which frequently occurs in the sense of age, generation, or tribe;" and passages are cited in which *Yugé* *Yugé* occurs in the sense of 'in every age', and *Uttarā Yugāni*, *Uttarē Yugé*, *Pārvāni Yugāni*, and *Yuga Jūna*, are used to mean 'future ages', 'in a latter age', 'former ages', and 'a past age', respectively. In many passages this word *Yuga*, when used in combination with *Manushya*, *Mānusha*, *Manushab*, or *Janānam*, is said "to denote 'generations of men', or rather in some places 'tribes of men'." In the *Rigveda* I.-158-6, the *Rishi* *Dirghatamas* is said to have "become worn out in the tenth *Yuga*;" in X.-72-2f, a first or an earlier age of the gods is mentioned, wherein the existent is said to have sprung from the non-existent; and in X.-97-1, certain plants are said to have come into existence three *Yugas* before the gods. Muir also quotes a passage from the *Atharva Vēda* (VIII.-2-21) which he translates thus:—"We allot to thee a hundred, ten thousand, years, two, three, four, ages (*Yugas*)." And, from this passage, he thinks that "we may with probability assume that the periods here mentioned proceed in the ascending scale of duration," and that "two *Yugas*, and perhaps even one *Yuga*, must be supposed to exceed ten thousand years." In the *Brāhmaṇas* also, so far as at present known, there seems to be no mention made of any such long cycles as our current *Kalpas*.

Even in the *Rigveda* there is evidence enough to show that during

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those very early times the Hindu people observed the heavens with some care. Professor Max Müller has prominently brought to light the fact that in the *Rigveda* (X.-85-2) the moon is said to be "placed in the lap of the *Nakshatras*;" and in this same oldest literary record of the Aryans there has also been pointed out a reference to the twelve months of the year and to the additional extra month, now known among us as the *adhimāsa* (I.-25-8). This reference clearly indicates a definite knowledge of the length of the solar (*Saura*) year, and of the lunar synodic month. The full-moon and the new-moon sacrifices are perhaps the oldest of their kind in the religious history of India. The phases of the moon being so readily observable, it is probable that, as suggested by Professor Weber, the idea of a period of time known as a *Yuga* and depending upon a conjunction of certain heavenly bodies, was originally derived from a knowledge of these phases. The Professor, further, strengthens this supposition by referring to a passage cited in the *Shadvimśa-Brāhmaṇa*, wherein "the four *Yugas* are still designated by their more ancient names, and are connected with the four lunar phases to which they evidently owe their origin." One of the oldest Sanskrit names for the new moon is *Darśa* (दर्श), which is interpreted in the *Anura-Kōśa* as a meeting of the sun and the moon. It is derived from the root *dris* (द्रिश्) 'to see', and may literally mean the time when the sun and the moon visit each other. There is also old mythological and other evidence which leads us to conclude that our forefathers observed many other kinds of interesting celestial conjunctions; and in all probability the earliest conception of a *Yuga* meant the period from new-moon to new-moon.

The earliest recorded *Yuga* is, however, the lustrum of five years. The *Védāṅga Jyōtiṣha* deals with this *Yuga* of five years, which "begins with the bright half of the month *Māgha*, and ends with the dark half of the month *Pauṣa*" (माघशुक्लप्रपन्नस्य पौषकृष्णसमापिनः । दशमस्यर्धवर्षस्य कालज्ञानं प्रचक्षते). This *Yuga* of five years is mentioned by Varāha-Mihira and other later Indian astronomers, and our common cycle of sixty years is divided into twelve *Yugas*, each being dedicated to a particular deity. Professor Weber thinks that the "earliest allusion to the quinquennial *Yuga* occurs in the *Rik* itself," and alludes to the passage—*Shodhā Yuktāh pancha-panchā cahanti*—(षोढायुक्ताः पञ्चपञ्चा ब्रह्मन्ति) in the *Rigveda* (III.-55-

18). Garga, a well-known astronomer of the "first century before Christ," is said to give in his work four distinct measures of time:—the *Savana* (libatory), the *Saura* (solar), the *Chandra* (lunar), and the *Nakshatra* (siderial); and he is familiar with the quinquennial as well as the *Krita* and the other *Yugas*. The data required for the formation of the lustrum of five years are the durations of the solar year and of the lunar synodic month; and it has been shown that a knowledge of them is clearly implied in the *Rigveda*. Taking the solar year to consist, approximately, of 366 mean *Savana* (libatory) days, and the lunar synodic month of 30 similar days, if we suppose the sun and the moon to start together from conjunction at the beginning of a year, six days before the end of it they must be found in conjunction again for the last time in the course of that year. At the end of five solar years, they will be in conjunction in the same part of the ecliptic circle as at the beginning of the first year of the lustrum. Each of the five years has its own special name, current even, in fairly ancient Vedic works, in the *Taittiriya Samhitā* (V.-5-7-3-4), *Taittiriya Brāhmaṇa* (III.-10-4-1), and the *Vājasaneyi-Samhitā* (XXVII.-45). They are called in order, *Samvatsara* (संवत्सर), *Parivatsara* (परिवत्सर), *Idavatsara* (इडावत्सर), *Amravatsara* (अनवत्सर) and *Idvatsara* (इडवत्सर). The *Rāmaka-Siddhānta*, as given in Varāha-Mihira's *Pancha-Siddhāntikā*, does not, it is said, contain the *Yuga*-system of the *Sūryasiddhānta* and other similar works. However, there is in the *Rāmaka-Siddhānta* also a *Yuga* of 2,850 years, evidently based upon the celestial movements of the sun and the moon. The *Indian Antiquary* of May 1890 gives the following details regarding this *Yuga*, as obtained from Varāha-Mihira's *Pancha-Siddhāntikā*. In such a *Yuga* of 2,850 years, there are, it is said, 2,850 revolutions of the sun, 38,100 of the moon, $322 \frac{288}{3031}$ of the moon's apogee, $153 \frac{24880}{165111}$ of the moon's node, and 10,40,953 of the *Savana* (libatory) days, 34,200 of the solar months, 1,050 of the intercalated months, 35,250 of the lunar months, 10,57,500 of the *Tithis* (lunar days), 16,547 of the expanded *Tithis* (*Avamāni*).

These data clearly show that the *Rāmaka Yuga* was also intended to facilitate the calculation of the Hindu calendar. In an appendix to one of his essays, Colebrooke has given Aryabhata's system of *Kalpas* and *Yugas* on the authority of Brahmagupta; and Dr. Bhau Daji has given in one of his papers the passages from Brahmagupta and Aryabhata bearing on these and some other points.

From these we learn that Aryabhata divided the *Mahāyuga* of 4,320,000 years into four equal parts, and thus assigned equal durations to the four little *Yugas*—*Krita*, *Trétā*, *Dvāpara*, and *Kali*. According to him seventy-two *Mahāyugas* make a *Manvantara*, and fourteen *Manvantaras* make a *Kalpa* of 1,008 *Mahāyugas*. Further, with him also the *Kalpa* is equivalent to a day of Brahma, at the beginning and end of which, it is supposed, the creation and the dissolution of the universe respectively occur. Notwithstanding the simplicity for purposes of astronomical calculations readily observable about this system, Brahmagupta finds fault with Aryabhata for altering, as he does with the author of the *Rāmaka-Siddhānta*, for ignoring, the system of *Yugas*, *Manvantaras*, and *Kalpas* given in the *Smṛitis*. If we take the most authoritative of these *Smṛitis* among us, namely, the *Manu-Smṛiti* or the *Mānava-Dharma-Śāstra*, we find it stated therein (I.-69 to 71) that the *Krita*, *Trétā*, *Dvāpara*, and *Kali Yugas* consist respectively of 4,800, 3,600, 2,400, and 1,200 years, including their *Sandhyās* and *Sandhyāmsas*, and that this *Chaturyuga* has been calculated in the beginning. The latter half of the last *śloka* referred to here runs thus:—*Ētat dvādaśa-sāhagram devānam Yugam uchyoṭē* (एतत् द्वादशाहस्रम् देवानाम् युगमुच्यते). This is ambiguous, and may mean either that the *Yuga* of the gods is equal to this *Chaturyuga* of 12,000 years, or that it is equal to 12,000 of these *Chaturyugas*. Médhātithi, an older commentator on *Manu*, says that the years referred to in the above verses are those of the gods, equal to 360 of ours, and that the *Yuga* of the gods is equal to 12,000 of these *four-Yugas*. But Kullūka, a later commentator, points out that Médhātithi's explanation is "mistaken and must not be adopted," and that the *Yuga* of the gods is made up of 12,000 divine years. "Thus the *Manu-smṛiti* is interpreted so as to agree with the *Purāṇas* and the orthodox *Siddhāntas*. In Chapter 188 of the *Vana-Parvan* of the *Mahābhārata*, the following statement occurs in relation to the *Yugas*:—"They say that four thousand-years make the *Kṛitayuga*, as many hundred-years make its *Sandhyā*, and the *Sandhyāmsa* is of the same kind. Three thousand-years are here said to be the *Trétayuga*; as many hundred-years make its *Sandhyā*, and then there is the *Sandhyāmsa*. Thus two thousand-years measure the *Dvāpara*. It has also a *Sandhyā* of two hundred-years, and its *Sandhyāmsa* is of the same kind. Similarly, one thousand-years is known as the *Kaliyuga*, it has a *Sandhyā* of hundred-years, and then there is

the *Sandhyāntā*. When the *Kalīyuga* is worn out, the *Kṛitayuga* begins. This period of 12,000 years is called by the name *Yuga*. As pointed out by Muir, we do not see in the whole of this passage "any mention made of the years being divine years," and how far Kullūka's interpretation of *Manu* is traditionally the oldest and the most authoritative is still an open question.

The ten early patriarchs of the Chaldeans are said to have lived for a period of 432,000 years; and this corresponds to the duration of the *Kalīyuga* as now current, and is equal to a tenth part of the anomalistic period known amongst us as the *Mahāyuga*. It might therefore be suggested that India derived a knowledge of the periods represented by *Kalpa* and *Mahāyuga*, directly or indirectly, from Chaldean astronomy. But beyond the coincidence pointed out above, and the fact that the Chaldeans were in the habit of making astronomical observations and calculations very early in the history of the human race, we have not data enough to establish this view. It has been already mentioned that the data given in the current *Sūryasiddhānta* are different from those that are given in the *Sūryasiddhānta* portion of the *Pancha-Siddhāntikā* of Varāha-Mihira; and it is said that both these suppose Brahma to have been engaged for 17,064,000 years in the creation of the animate and the inanimate world. It has also been pointed out that, according to Mr. Davis, this implied a kind of *Bija* or correction, and that the *Sūryasiddhānta* must have adopted 4,320,000,000 mundane years as the length of a *Kalpa* from some previously existing authoritative source. Professor Weber says that Megasthenes "informs us of a fabulous division of the mundane ages analogous to that given in the epic;" and Mr. Dutt in his *Ancient India* has stated that Garga, who lived in the first century before Christ, "speaks of the four-yugas, the third ending, and the fourth beginning, with the war of the *Mahābhārata*." It seems clear, however, that most Indian astronomers have all along taken the *Kalpas*, *Mahāyugas*, and *Yugas*, though perhaps based on some kind of old tradition, as mere astronomical conventions. Aryabhata was certainly aware of the *Puranic* and *Smṛiti* periods of *Kalpa*, *Mahāyuga*, and *Yuga*, as being those that were adopted as authoritative in the *Sūrya*—and other *Siddhāntas*. Nevertheless, having understood the import and purpose of the astronomical adoption of these periods of time, he did not hesitate to simplify them even by handling them in an unorthodox fashion. It has been made out by

calculation that the beginning of the current *Kalīyuga* took place at the midnight of Thursday corresponding to the "17th-18th February, B.C. 3102, old style." From the beginning of the current *Kalpa* to the beginning of the current *Kalīyuga* the time elapsed is seen, as mentioned in the *Sūryasiddhānta*, to be equal to 456·7 *Mahāyugas* of 4,320,000 years each; but owing to the time taken up by Brahma in the act of creation, the first grand conjunction of the *Kalpa* and the first start in the race of planets took place 3·95 *Mahāyugas* after the beginning of the *Kalpa*. Therefore the current *Kalīyuga* must have begun 452·75 *Mahāyugas* after the first conjunction of the *Kalpa*. However, it is quite true (as mentioned already) that some other astronomical works suppose the first grand conjunction of the *Kalpa* to have been coincident with its beginning; and they accordingly give different data in their tables of elements. By a reference to the table of the elements given in the *Sūryasiddhānta*, it may be seen that the number of mean revolutions of all the planets in a *Mahāyuga* is divisible by four. Hence at the beginning of the current *Kalīyuga* and the end of the last *Kṛitayuga*, there must have occurred, in accordance with the data already given, conjunctions of all the seven planets. "The present Hindu astronomers therefore find it unnecessary to go farther back than the beginning of the *Kalīyuga* in determining the mean longitude of the planets themselves; but, for the position of their apsides and nodes, the elapsed time since the creation, must be used." Under these circumstances, Aryabhata's equal quadruple division of the *Mahāyuga*, his making a *Manvantara* contain seventy-two *Mahāyugas*, his giving 1,008 *Mahāyugas* to a *Kalpa*, and his supposing the beginning of the *Kalpa* to have occurred at the midnight of a Thursday instead of the usual midnight of Saturday or the morning of Sunday, are all very readily intelligible. Can we any longer doubt, then, that these periods, viz., the *Kalpa*, the *Mahāyuga*, and the *Yuga*, are the results of early astronomical calculations conducted backwards, at some now unknown time in the history of India, from data previously observed and recorded or otherwise obtained?

M. HANGACHARIYAR.

SIR THOMAS MUNRO.*

THE visitor to any of the large cities on the continent of Europe sees in every square or suitable street-corner statues or busts of the great men of the district, who in their lifetime shed a lustre on the place of their habitation. While yet alive they conferred a glory on these cities; and in order that the glory might abide, their fellow townsmen erected lasting memorials, imperishable as the stone out of which they are hewn. There can be no question that the custom is a good one. The youth of the district learn the history of their native place in the most living way, by associating it with living men, instead of with abstractions whom they know only through the pages of a text book. They take a pride in the annals of the past, of which these statues continually remind them, their local patriotism is stimulated, and the memory of the mighty deeds of former great ones is always present, urging them to be true to the traditions of their country.

But in Madras, such public memorials are strangely few. 'Sermons in stone' telling of the great and good of former generations, are conspicuous only by their absence. How comes this to pass? Not certainly because Madras has not been served by sons worthy of such honour. The names of those who have gained imperishable fame in the southern Presidency, of which Madras is the capital, are numerous, and the claim of many of these to lasting memorial in stone or bronze would be disputed by few. Not there are we to find the reason of this strange paucity, but more probably in the changing nature of the population, which is almost unavoidably productive of a deplorable lack of public spirit. But this notwithstanding, Madras is not altogether without her public statues. She rejoices in the possession of three. (I except the statues in her churches which are 'public' in a very limited sense, being viewed by a mere handful of the 450,000 inhabitants.) Three statues only are open to the public gaze—one, the last erected, in honour of her Gracious Majesty the Queen Empress; the second, in honour of that hero of the Mutiny, General Neil; the third, the first erected, in honour of one of the best governors Madras has ever seen, Sir Thomas Munro. It is with Sir Thomas Munro, the first of the two illustrious Scotsmen thus honoured by Madras, that we

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are concerned now, and without further introduction we shall enter on the study of his career.

He was not born 'Sir' Thomas: that desirable prefix was wanting in his early days, and he spent his youth as plain 'Tom Munro'. He was born at Glasgow on the 27th of May, 1761, his father being a well-to-do merchant trading chiefly with Virginia. The son received a good education first at the Glasgow Grammar School and then for three years at the University. In his studies and his amusements he was a leader amongst his companions, and seems to have taken equal delight in both, giving himself heartily to study when studying, and just as heartily to amusements when the time for such arrived. The American War brought about a change in his prospects, as by it his father's business became involved, and the sons of the family had to look about for a means of livelihood. Thomas Munro turned his thoughts to India, which was at that time looked on as the hope of all in distress. The Company's service offered a career with good prospects to all who could withstand the climate, and as young Munro had an excellent constitution which had been rendered more excellent still by much physical exercise, to India he came. His father's influence secured for him a nomination to a cadetship in the Company's Army, and accordingly he sailed for Madras where he arrived on the 15th of January, 1780, a lad not quite nineteen years old. The story of his experiences on landing is told by himself in one of his letters home, and is very amusing. It may be given as a break before entering on the story of hard and serious work with which the rest of his life was filled. He writes to his mother as follows:—"When the ship anchored in the roads, a number of natives came on board. They were dressed in long white gowns! one of them a grave decent looking man came up to me: he held a bundle of papers in his hand which he begged I would read; they were certificates from different people of his fidelity and industry. He said that strangers on their arrival in India were often at a loss for many necessary articles, but that I need give myself no trouble, for if I would only give him money he would purchase for me whatever I wanted! he would attend me as a servant and would be content with such wages as I should think upon trial he deserved! I congratulated myself on having met with so respectable a person in the character of a servant." To shorten the story, he engaged this 'respectable person' on his own very easy terms. The servant then inspected the clothes his new master had

brought from England and shook his head over them, assuring his master that nobody wore such clothes out in India. Munro was in great perplexity as he had only a few guineas with him, which he could not spare. However, the servant was fertile in resource. "It was usual for European gentlemen to give their European clothes as a present to their servants, but he would try to sell master's clothes for him, and if master would give him six guineas in addition, he could then buy for master all that he required." Munro was new to the wily ways of such 'respectable persons', gave him his clothes and six guineas, and waited his return with the requisite garments. But alas for his faith in human nature; the treasure of a servant never returned, and Munro was left penniless and almost garmentless as well, several months elapsing before he was able out of his meagre pay of thirty rupees a month to procure the clothing that he required. A bad impression of the native character he must have received from this incident; but fortunately he was not a man given to drawing hasty conclusions from insufficient premises, so that the episode did not produce in his mind that bias which in the case of very many it would undoubtedly have caused.

The year of Munro's arrival was a critical year for the British power in India, and nowhere more critical than in Madras. The native princes of the country had observed with alarm the growing wealth and power of the traders from the west, and in the face of a common danger they had laid aside for a time their own minor strifes and jealousies and banded themselves together to expel the strangers. The most powerful combination which India had ever witnessed had been formed. The chiefs of the Mahratta country, the Nizam of Hyderabad, and Hyder Ali, the powerful Rajah of Mysore, had made common cause against the British, and were taking active measures to drive them out of India. To Hyder Ali was allotted the task of dealing with Madras, and at the head of an army of 90,000 men he burst upon the Carnatic, devastated the country with fire and sword, captured Conjeveram, and came within striking distance of Madras itself. This was in July 1780, six months after Munro's arrival. The young cadet had not long to wait before receiving his baptism of fire. In almost all the battles that took place during the campaign he was a combatant, and though no particulars of his conduct in the field have come down to us it is evident that he merited the approval of his superior officers, as we find him gazetted quartermaster of a brigade after only two years service. His letters home at this time are

both numerous and full, and for this reason we are surprised to find almost no mention of his own personal experiences in the engagements. The course of the campaign is clearly traced, and by his sensible remarks on the generalships of the commanders he shows that he had all the instincts of a soldier, yet regarding personal adventures there is an almost absolute silence. This fact—so unusual in the correspondence of young soldiers—points to a pronounced feature in Munro's character which marked him all through his life, *viz.*, his abhorrence of boasting and his dread of anything like self-praise. From the commencement of his career he did his duty in an excellent manner, but regarding its excellence he himself never says a word. After the peace with Tipu in 1784 Munro spent three years in various cantonments doing duty with the troops. His military duties, however, not occupying his whole time, the spare hours at his disposal were utilised by the young lieutenant in a manner that bore good fruit in after years. Seeing that India was to be the scene of his life's labours, he from the first set himself to acquire a good knowledge of the people and their languages. In the comparative quiet of these years he assiduously studied and fairly mastered Hindustani and Persian, and laid the foundation of those linguistic powers which among other qualities rendered him a marked man. His industry soon bore fruit. In 1788 he was promoted to a staff appointment and gazetted an assistant in the Intelligence Department under Captain Read, an officer of great talent and high administrative ability. The Nizam had recently ceded to the British the district of Guntur, and there for two years Munro was stationed.

On the breaking out of the third Mysore war, however, his soldier-blood grew hot within him and he panted for the field. The more prosaic work with which he was occupied grew irksome when the rumours of war came thick and fast, and accordingly he resigned his staff appointment, and rejoining his regiment (the 21st Madras Infantry), marched with it through the Baramahal (now the Salem District) on to face the Tiger of Mysore. In this campaign again we know little of his personal actions, the same modesty as before confining him in his letters to lucid accounts of the actions of the army as a whole. At the close of the campaign, as is well known, Tipu was obliged to give up half of his territories, the ceded portion being divided amongst the three allies, the Mahrattas, the Nizam, and the British. To the British there fell the goodly district of the Baramahal, and no time was

lost in bringing it under satisfactory management. The Chief Commissioner entrusted with the administration was Captain Read, and as his assistants he chose three lieutenants, one of whom was his old subordinate Thomas Munro. This brings to a close the first part of Munro's Indian service—a period of twelve years—and with it closes also his military career, one short but brilliant episode occurring long afterwards being alone excepted. During these twelve years he was in a subordinate position, and naturally under such conditions had little scope for exhibiting his wonderful individuality. His duty was rather to carry out the plans of others, than himself to plan, but the thoroughness with which he performed the former duty augured well for the time when he should have to discharge the latter. That time had now come, though still for some years he was to be an assistant and not a chief, but his duties as assistant in the administration of a large province were such as to call in many cases for independent thought and action.

We enter now on the second part of Munro's career. He is now a man of thirty-one years of age, with twelve years' experience of the country and its people.

On entering on the duties of his office Captain Read divided the district into three divisions, one division being assigned to each of his assistants, while he himself exercised a general supervision over all. In the position to which he was told off Munro lived and worked for the next seven years—a period to which he used to look back as the happiest in all his life. It was also one of the most important, as in the revenue work of these years he formed certain definite views on the 'Settlement' question and had ample time to test their correctness by experience of their working. The Revenue question was one of the burning questions of the time, and then as now Bengal would fain have given the lead to all other provinces; but then, as often since then, Madras carved out a more excellent way, showing that all administrative talent did not dwell in the north. The permanent Revenue Settlement of Lord Cornwallis had just been decreed, by which the lands of Bengal and Behar were given over in perpetuity to a body of zemindars on condition of a fixed annual assessment being paid by them. The rights of the ryots, whose claim to the land dated from before the zemindars, were practically overlooked, but a body of landed proprietors was created who were expected to show the same active interest in the agriculture of their estates as was shown by landlords in England. Time has shown how fallacious were such hopes,

but in theory the scheme looked well and the ease with which the revenue was collected caused the directors of the Company to meditate extending the system throughout their possessions. In the Baramahal a new district had come into their hands where it was hoped the new method would be adopted. Definite instructions were not given, however, and in Captain Read, their Commissioner, they were fortunate in having an able and sagacious administrator. In his views Munro coincided, and was always ready in after life to confess how much he owed to his training under him. They found the district suffering much from the exactions levied during the time of Tippu's rule. The middle-men appointed by him for the collection of the revenue had seen first of all to the filling of their own pockets and then those of their sovereigns. The double drain had been too heavy for the inhabitants—large farms were unknown and the land was found parcelled out among multitudes of poor ryots. Middle-men had worked the mischief, so Read seconded by Munro resolved to have nothing more to do with such rapacious gentlemen. The settlement was accordingly made with the ryots themselves. Each man's holding was measured separately and the assessment fixed, which he paid direct to the Company's Treasury. This was the origin of the ryotwar system, which has since been adopted in a modified form throughout the greater part of the Madras and Bombay Presidencies. Dealing with each individual ryot involved naturally a great amount of labour, but labour was a thing from which Munro never shrank, nor did he do so in this case. Quickly mastering Canarese he was able to conduct his business without the aid of an interpreter, and this coupled with his well-known kindly sympathy for the natives gained him a wide popularity. In the settlement and administration of the district seven years glided swiftly and quietly past. To many the enforced isolation for weeks on end from all European society would have been unendurable, but Munro was not one of those whose pleasures depend solely on society. Society he could enjoy, but fully as much did he enjoy the freedom and unconventionality which his mode of life made possible. In the beauties of nature he found a never failing source of pleasure, and the absence of European companions served to draw him closer to the natives of the country, in whose company he found both pleasure and instruction. This is one feature of the India of the past that contrasts most forcibly with the India of to-day, and it is not doubtful on which side the advantage lies. The greatly increased European population and

the enormous improvement in the ease and expedition of travelling have made such close intercourse between European and Native much less common than it used to be, because much less necessary, and in many cases there is, as a consequence, a lessened appreciation of each other's good qualities. This is a misfortune—a very great misfortune—but it is the result of changed circumstances rather than of changed men. Had we the men of last century with us to-day, the probability is that they would act very much as do their descendants: and this should be remembered when we draw comparisons between the different generations, otherwise there is a great danger of passing harsh judgment on the men of to-day for what is in a great measure the result of changed surroundings.

These seven years of quiet and steady work formed an excellent apprenticeship for the responsible positions which Munro was afterwards to hold, the experience gained during this period proving invaluable in all his later appointments. Space will not permit more than the bare mention of the first of these, important as was the post and arduous the work involved. This was the office of Commissioner for the district of Canara, on its cession to the British at the close of the third Mysore War. The district was a wild one, and the inhabitants most difficult to deal with, but eighteen months of the new Commissioner's rule saw order brought out of chaos and the foundation of that settlement laid which with some modifications exists in Canara to this day. But well though he performed his work and great though his satisfaction was at seeing the growing prosperity, Munro did not like the appointment. Only a sense of duty made him take it up, and as soon as he felt he could depart with honour he did so, being appointed to the most important but most trying charge of the districts just ceded to the British by the Nizam—an extensive stretch of country of over 26,000 square miles, including the present districts of Bollary, Uddapali, and Kurnool. Truly if the post of greatest difficulty is the post of greatest honour, then few men have been more honoured in South India than Munro. Twice already had he been called to serve in newly added districts, to tranquilize the country and establish a revenue settlement among peoples lately hostile, and now for the third time duties similar in their nature but much harder and even more dangerous in their performance were assigned to him. In the year 1800 he entered on his new appointment, and to estimate the value of his work we must look at the state of the district entrusted to his charge. It was a

district that had suffered grievously through repeated changes of owners. At one time the Mahrattas, at another Hyder Ali, at still another the Nizam, had been its sovereign lords, and every change in ownership had been marked by fresh exactions. But what troubled the country more than anything else was the existence of a class of 'free-booting lairds', as we may call them, who had prospered in the general adversity. These 'Poligars', as they were termed, were mostly prominent men of the district, who, when a troublous time came on in which their over-lord was hard pressed, refused to pay their rent and for a few years continued to refuse, until an idea of semi-independence gathered about them, which was recognised by the new conqueror of the province for practical purposes, and the upstart's position became assured. There were a number of these scattered throughout the Ceded Districts, each with his little body of irregular troops who levied their pay by the simple method of looting some unfortunate village. During the earlier years of his Commissionership, Colonel Munro (as he now was) found these his greatest difficulty, and with characteristic energy set himself to their removal. At the head of the Company's troops in the district was a brother Scot—General Dugald Campbell—and between the two the refractory Poligars were brought to reason—some agreeing to become decent citizens, and others, less amenable to reason, being driven across the borders. Peace having been gained, Colonel Munro prosecuted the work of settlement with great ardour and striking success. The ryotwar system was again adopted with certain local modifications, but it was not done without great opposition from many of those in power, who had been seized with an unreasoning admiration for the Bengal zemindar system. Fortunately the Governor of the day, Lord William Bentinck, was on Munro's side, and he was allowed to have his way. There can be little doubt that it was well the struggle so ended. The zemindar system was altogether foreign to South India—quite unknown in the Ceded Districts—whereas the ryotwar system, in an imperfect form, dated back for many centuries. This was a case where the wise conservatism of Munro, tempered as it was with a judicious liberalism, came into full play. One of his axioms throughout his whole administrative career was not needlessly to introduce new methods in dealing with the natives, but to adopt and modify the methods already existing and with which the people were familiar—always provided that such adoption and modification resulted in a method that was really workable and satisfactory. The same

habit of thought marked him in other spheres. Change for change's sake was a policy he could not endure, although when change was necessary he proved as thorough-going a reformer as radical heart could desire. One instance of this wise unwillingness to alter existing arrangements is seen in his treatment of subordinates, where also the kindly disposition of the man comes into view. Writing to one of his assistants a letter of advice, he touches on the matter of dismissing subordinate servants. "The common revenue peon," he says, "ought never to be dismissed without the fullest proof of misbehaviour; for though he is not strictly speaking a hereditary servant he is generally so—and this consideration renders him so trustworthy that I do not remember a single instance of any one of them who was a native of the country ever making away with money committed to his charge."

The seven years work in the Ceded Districts gave Munro a great reputation in the country and won for him a high place in the esteem of the Directors of the Company, but it did more. It rendered necessary a voyage to Europe. Twenty-eight years had passed since he landed at Madras a lad of eighteen, and now, a man of forty-six, he felt a strong longing for home—and yet eager though he was to revisit the scenes of his boyhood and see his much loved relatives he was not without the fear that home would be no longer home to him—a fear shared in and proved true by the great majority of Anglo-Indians. One cannot leave one's native land for a number of years, and returning, pick up the threads of life just where one cast them down. These are amongst the losses of a life on foreign soil which must be placed against the gains if we are to estimate aright the worth of such expatriation. But this notwithstanding, home has got a fascination that never quite dies out, and this fascination drew Colonel Munro away from the shores of India in the end of 1807, when a voyage of five months saw him landed in England on the 5th of April 1808.

Space will not permit of a description of his furlough days, interesting though these days were. Twenty-eight years had worked many changes both in men and manners, and some of the faces he had most longed to see had vanished from this earth for ever. His much loved mother had died when he was on his voyage home, and his father had become an enfeebled old man. Many others had been taken away and of his old friends few remained to welcome their returning comrade. The old scenes however were there unaltered, and in revisiting these and calling back to mind the

sports of his boyhood he found his greatest pleasure. Two events of his furlough time we must mention, and with these content ourselves, the one of a private nature and the other a public. The former was his marriage with a lady well suited to be his wife—Miss Jane Campbell of Craigie House, Ayrshire. The other, and public event, was his appearance before the House of Commons to give evidence regarding the state of India. The time was approaching when the charter of the Company had to be renewed, and before granting such renewal Parliament held a full enquiry into the existing condition of affairs. Retired Anglo-Indians were in demand as well as those on furlough, amongst whom was Colonel Munro. The fame of his administrative powers had reached England and his evidence was eagerly looked for. When given it impressed all who heard it, and the records of it, which are contained in the parliamentary archives, show that the high praise Colonel Munro received was amply merited. In no small measure was he the cause of sundry changes in the charter, while the clear-headed sagacity he displayed was instrumental in procuring for him a speedy call to a very arduous employment. His evidence on the judicial system then current in India convinced the Directors that reforms were urgently called for, and a commission to execute such being formed, at its head was placed Colonel Munro. Three years were allowed for the work, and in September, 1814, he in company with his wife returned to Madras to enter on his duties. These duties were not much to his liking, for they involved, as he very well knew when he accepted the appointment, great and far-reaching changes in the judicial department, which were sure to meet with strong opposition from those then in office. So it turned out, but opposition had only the effect of increasing Munro's energy. The conservatism which we have already seen strongly marked him in some of his previous actions, was a reasoned and therefore a reasonable conservatism. It had its limits. The antiquity of an institution was recognised by him as an argument for its continuance, if by certain modifications it could be brought into line with the needs of the day; but if no modifications could help much, then sentiment for the past gave way before consideration for the good of the present. Of the former spirit, his action in the ryotwar system is an example: of the latter his action regarding the judicial system then in vogue. According to that system, there was a total separation between the two departments of justice and revenue. The Collector's duties were restricted to the collection

of the revenue, while he was absolutely forbidden to pass judgment on the smallest land dispute. The police were placed under the control of the Judge, so that no irregularity brought to the notice of the Collector on his journeys through the district could be attended to by him. The village judges had been abolished, and the plan followed of putting as little in the power of native assistant judicial officers as possible. The consequence of all this was that there was an immense block in the legal business of every district. The Judge could not overtake all the matters that came before him, and endless delays were the consequence. The work of the commission was to rectify these abuses, and despite opposition it was done. The Collector was entrusted with the work of chief magistrate, and all cases connected with land disputes (often most trifling) came before him when on his tours and were settled on the spot. The police were placed under his control as likely to be more efficient than that of the Judge; and the Judge's duties were restricted to the trying of cases of a criminal character. In addition to these changes, other changes were made with a view to the quick decision of small disputes, the chief being the recognition of the village *panchayat* as a court of legal standing. Time which tries all has tried the work of the commission also, and the result has been a verdict almost wholly in favour of its work—entirely in favour of the chief radical change effected, viz., the transfer of the duties of magistrate from the Judge to the Collector.

But we must hasten on. Up to this time Munro's work had been mainly in the civil department, and ably as it had been discharged, he often cast longing thoughts to the tented field and the excitement of war, which he never ceased to regard as his rightful employment. The Mahratta war was to give him his desire, though on a more limited scale than he had hoped. Shortly before the war began, by the treaty of Poona the Peishwa had ceded to the British a district in the Southern Mahratta country, bordering on the Canara and Bellary districts. Over this new possession Munro was placed in civil and military command and in Dharwar he took up his quarters. Scarcely had he done so, and before he had taken over all the fortresses and villages from the agents of the Peishwa, the Mahratta war commenced and the Peishwa took the field against the British. Three brigades marched against him from different directions, and over one of these Munro was placed with the rank of brigadier-general. But it was one thing to be appointed and another thing to take up his appointment. The

brigade was at a great distance from his head-quarters and was acting in conjunction with the other two, so that its course could not well be altered. It was almost impossible for Munro to leave the district where he was and join his brigade, as the intervening country was in the enemy's hands; and even had the passage been possible it would not have been advisable to leave the newly gained territory to fall back into the hands of the enemy. So Munro decided to remain where he was and do the work that was nearest. Orders were accordingly sent to General Pritzler (who commanded the brigade under Munro) to continue advancing to Poona with a light brigade, and to send back a few heavy guns to aid in the reduction of the forts. Munro's position was not an easy one. A mere fraction of the district was in his hands, and so recently had it been taken over that there had been no time for the natives to get attached to British rule. Presumably they looked on the British as enemies and usurpers. Moreover, the Peishwa, on the breaking out of the war, had sent orders to his forces to re-occupy the ceded districts and as far as possible this had been done. General Munro's task was to establish himself in the part of the districts already in his possession, and to expel the enemy from the remainder.

For this work he had at his disposal the very meagre force of five companies of native infantry and two field pieces. Appeals to Madras for more men were in vain—the antagonism to Munro in his capacity of judicial commissioner bore evil fruit. No time was wasted however in vain regrets. With the force at his disposal Munro resolved to cross the Toombudra and carry the war into the enemy's country. To garrison the various towns he raised a force of armed peons from among the natives of the district—a marvellous performance which was made possible only through the great reputation that he had gained in previous years in Bellary and Canara, of which reports had come to the Mahratta country. This reputation stood him in good stead now, and his companies of peons set him free to carry on active measures with his sepoys. In these he was most successful. Badamy fell before him and when in addition to many smaller places Belgaum also yielded, the whole of the Peishwa's country south of the Kistna was in his hands. The junction with General Pritzler's force decided him to push on to greater achievements, and crossing the Beemah, he utterly routed the enemy at Sholapur, captured the town, and practically ended the campaign.

The campaign had been a short one, the force engaged but mea-

gre, and the country gained was not of very great extent, and yet in the estimation of those best able to judge—the military leaders of the day—General Munro's action had been such as to entitle him to a place among the foremost military leaders of his time. In ordinary histories of the war he is scarcely mentioned, but in the correspondence of the time he receives his due position. With quoting one of these testimonies we shall close this episode in his life. It occurs in a letter from Sir John Malcolm to Secretary Adams:—

"I send you a copy of a public letter from Tom Munro Sahib, written for the information of Sir Thos. Hislop. If this letter makes the same impression upon you that it did upon me we shall all recede as this extraordinary man comes forward. We use common vulgar means, and go on zealously and actively and courageously enough; but how different is his part in the drama. Insulated in an enemy's country, with no military means whatever (five disposable companies of sepoys were nothing) he forms the plan of subduing the country, expelling the army by which it is occupied, and collecting the revenues that are due to the enemy, through the means of the inhabitants themselves, aided and supported by a few irregular infantry whom he invites from the neighbouring provinces for that purpose. His plan, which is at once simple and great, is successful in a degree which a mind like his could alone have anticipated. The country comes into his hands by the most legitimate of all modes, the zealous and spirited efforts of the natives to place themselves under his rule, and to enjoy the benefits of a government which when administered by a man like him is one of the best in the world. Munro, they say, has been aided in his work by his local reputation—but that adds to his title to praise. . . . Confess, after reading the enclosed, that I have a right to exult in the eagerness with which I have pressed upon you the necessity of bringing forward this *Master Workman*."

At the end of the war Munro resolved to terminate his Indian career and spend the rest of his days in Europe, looking forward with special delight to the pleasures of continental travel. Accordingly he resigned all his offices and sailed for England arriving in the early part of 1819. But India had yet more to claim of him. He had only been a few weeks at home when he received the offer of the Governorship of Madras. The offer was a tempting one, but only after much consideration was it accepted. Had his own inclinations been consulted it is certain he would have declined the proposal and adhered to his original plan of ending his life in European scenes, but the pressure brought to bear on him was great. By the Government as well as by the Directors of the Company his acceptance of office was anxiously desired, so confident were they that his governorship would be of the greatest benefit to the people; and on these grounds Munro agreed to return once more to the land of his adoption. In 1820 he reached

Madras and took his seat as Governor of Fort St. George and its dependencies. Seldom has there been a Governor so able for the duties of that high office, for though others may have had as great natural ability and talent for ruling, few, if any, have entered on their work with such an experience of the country, its ways and needs, as had Sir Thomas Munro. Of that experience the country was now to feel the benefit. We cannot enter on his measures in detail—time will not permit, and a statement of his principles and aims will require to suffice for the present. His fixed idea was that India was to be governed for the good of the people, and he was wise enough to know that what was for the real good of the people was also for the real good of the Company whose servant he was. The prosperity of the one meant the prosperity of the other. In working out this problem, Sir Thomas Munro followed two lines—the one, *the increasing the efficiency of the Civil Service*; the other, *the improving the position and prospects of the natives*. His own experience had shown him the importance of having able men as Collectors, and he was correspondingly disturbed to find all the ablest of the civilians flocking into the judicial line, leaving the Collectorships to be filled by men of inferior ability. Money was at the root of this evil, as of many others, the pay of the two branches being very disproportionate; and naturally the branch with the higher emoluments (which was the judicial) attracted to itself the flower of the service. This evil was overcome by equalising the pay of the two branches and thus bringing the status of a Collector up to that of a Judge. Since this very desirable step was taken the trouble from that source has almost entirely ceased.

Another important change introduced with the object of increasing the efficiency of the service was that of causing the young civilians to spend their first few years in the Revenue Department—and this not so much for the purpose of giving them a knowledge of revenue matters as a knowledge of the natives themselves. To this point Munro attached the very greatest importance, as is seen in the strong words of one of his Minutes:—

"A knowledge of the natives is essential, and this knowledge is only to be acquired by an early and free intercourse with them, for which the revenue presents infinitely more facilities than any other line. It ought to be our aim to give to the younger servants the best opinion of the natives in order that they may be better qualified to govern them hereafter. We can never be qualified to govern men against whom we are prejudiced. If we entertain a prejudice at all it ought rather to be in their favour than against them. We ought to know their character, but especially the favourable side of it, for if

we know only the unfavourable, it will beget contempt and harshness on the one part and discontent on the other. The custom of appointing young men as soon as they leave college, to be registrars to zillah courts is calculated rather to produce than to obviate this evil for they there have little opportunity of seeing the natives except in court, and there they see the worst part of them and under the worst shapes."

These lines alone are enough to convince us that Munro well deserved the unbounded affection which he received from natives of all ranks, and the measures that he took to open up a career for them in the Government service only added to their devotion. But on these measures we cannot touch; nor indeed on any other of his gubernatorial actions. For seven years Munro continued to discharge the duties of Governor with most conspicuous efficiency, and it was with deep regret that the Directors accepted his resignation at the end of that period. But advancing age was telling on him, and he definitely resolved to bid India farewell. In March 1826 Lady Munro sailed for England, and in June 1827 her husband wrote her saying he was soon to be with her as his successor had been appointed. But it was not to be. Not on earth were these two to meet again. Prior to leaving India Sir Thomas wished to revisit once again his old province—the Ceded Districts—and proceeded from Madras on a short tour through the old scenes. Cholera had been prevalent in some of the villages, but so often had he been through a cholera epidemic, that he had no fears for himself. For a month he toured with impunity, but when in the Bellary District the dread scourge appeared in his camp. He himself was seized at Pattikonda on the 6th of July, and died the same day.

There is something infinitely sad in his passing away, when just on the eve of returning to his native land to spend the closing years of his life in the company of his family; but in a sense it was not unfitting that he who gave his life to India, in India should be laid to rest. To India he had been devoted throughout his life, and in his death he was not separated from her.

The grief occasioned by his death was intense, and reached to all classes of the community. Never indeed has the death of a Governor of Madras caused such widespread sorrow, for by all classes he was much esteemed. His regard for the interests of the natives had never caused him to shut his eyes to the rightful claims of the Europeans, and while winning the gratitude of the one class he had retained the respect and admiration of the other. And now that he was gone all united in doing something to perpetuate

his memory, chief among the memorials being the noble statue which overlooks the Island and preserves for future generations the features and the name of one of the greatest Governors the Southern Presidency has ever had.

Such was Sir Thomas Munro: such, briefly told, is the story of his life. In some respects the story is far from interesting: it may from one point of view be characterised as dull. If by interesting lives we mean only those lives that are full of moving incidents, of adventures by flood and field, of strange vicissitudes of fortune—then the life of Sir Thomas Munro is not interesting: and because it lacks these features it is not a life that will ever be much studied by the multitude. But interesting in a deeper and worthier sense it most assuredly is, and charged with greater benefit and instruction to the student than scores of lives more widely known. To those whose work it is to administer the affairs of the country Munro's life and above all his carefully composed Minutes on various Indian topics present a subject of study that should never be neglected, while to the youth setting out on life's journey, the story of this great man's progress conveys many a precious lesson. Few men commence their career with poorer prospects than Munro. An unknown and friendless cadet on thirty rupees a month—that was his beginning—a widely respected and deeply loved Governor of Madras—that was his end. And between the beginning and the end a long course of hard work, quietly and faithfully performed. In that steady devotion to his work lay the secret of his success. He gave *himself* to his work, and strove in hours and out of hours to fit himself for discharging his duties with thorough efficiency. The approbation of his superiors he never sought save in the most legitimate way, through work well done. To do his work well was ever his first object, and then success came as a matter of course—as it usually does come when a like plan is followed: not indeed to many in such conspicuous form as to Sir Thomas Munro—but in one form or another and generally in a form suited to the powers and capacities of the individual. In the case of Sir Thomas Munro these capacities were great—greater than those of the majority of men, and correspondingly great was his reward. But high though the outward honour was, and lofty the eminence attained, his best reward was not in these outward dignities. It lay in the consciousness that he had done his duty, and that in the doing of it he had been, under Providence, the means of adding much to the welfare and the happiness of his fellow men.

J. N. OGILVIE.

THE LAST WORDS OF RĀMĀNUJA.

A TRANSLATION.

WHEN Rāmānuja was about to die he gave these seventy-two sayings so that all might live. And as it is written in the *Guru Paramparā Prabhāvam*, to a true Vaishnava devotee there is no other mantra than the *dwayam**, there is nothing important save the *mithunam*†, there is no human pursuit save *keing-kariam*, there is no means of gaining heaven save by the love of the guru, and there is no greater obstacle to gaining heaven than giving offence to devotees. (*Prapanna Amertha*.)

Rāmānuja, having assembled Sri Vaishnavas from different places, taught them the essence of all Shastras in the following seventy-two maxims.

1. One should be equally devoted to the service of one's own guru and any (Bhagavata) devotee, i.e., all devotees are equal.
2. Believe the maxims given by the ancient gurus.
3. Be not always the slave of the five senses.
4. Be devoted to God and the Vaishnava Shastras.
5. Believe not non-Vaishnava Shastras.
6. When by the grace of the guru you have become a *gnāni*, yield not to your senses.
7. Consider all the pleasures of sense as equal.
8. Relinquish the desire for rubbing sandal paste on the body, for wearing flowers, and chewing betel leaves.
9. As you must constantly repeat the (thousand) names of God, so repeat the names of devotees, or hymns concerning them.
10. Believe that keeping company with and serving devotees are the chief means of gaining heaven; and obey their commands.
11. However learned a man may be, he must not neglect the service of God and the devotees. If from anger, disgust, or other causes he fail in this, he will be ruined.
12. Do not think the Vaishnava ceremonies to be mere trifles.
13. Consider such ceremonies as to be performed.
14. Do not speak disrespectfully (saying *ni*, &c.) to Sri Vaishnavas.
15. When you see a Sri Vaishnava, salute him, raising your hands and placing the palms together, i.e., do *namaskāra*.

* The *dwayam* mantra consists of the words *Om nā-mō Nārāyaṇāya*.

† A name for the *dwayam*.

16. When sitting or lying, do not stretch out your feet towards a guru or devotee.
17. When you retire to rest do not stretch out your feet in the direction of their homes.
18. When you waken in the morning, repeat, in order, the names of the gurus.
19. When Sri Vaishnavas or devotees are seated in the presence of the idol, repeat the *dwayam*, and prostrate yourselves before them, i.e., perform *namaskāra*, touching the ground with the eight members.
20. When devotees sing hymns in praise of God or any devotee, reverence them as may be practicable, not rising abruptly to depart.
21. When Vaishnava devotees visit your house, go to meet them; and convoy them when they depart. It is wrong not to do so.
22. If you follow another it must be in order to gain spiritual benefit. You must not cease to perform religious ceremonies; if you do, you will lose even the name of Vaishnava.
23. When you see the *gōpura* and the *vimāna* of Jaganathan (Vishnu), raise and clasp your hands, palm to palm.
24. Be not surprised at seeing the *gōpuras* and the *vimānas* of other gods.
25. Rejoice not on hearing concerning other gods.
26. Rejoice when Sri Vaishnavas sing hymns concerning God or the devotees, and do not hinder them.
27. Do not tread on the shadow of a Vaishnava idol.
28. Do not allow your shadow to fall on any Sri Vaishnava when you walk.
29. After touching a *samsāri**, do not touch a Sri Vaishnava.
30. When a poor Sri Vaishnava prostrates himself before you, it is wrong not to give heed to him.
31. When Sri Vaishnavas bow, saying, *Dāsōham*, 'I am a slave', it is wrong to disregard them.
32. When you discover in a Sri Vaishnava any defect in birth or behaviour, do not publish it. Make known only his good qualities.
33. Do not drink *sri pātha tīrttham*† in the presence of men void of divine wisdom.

* One connected with family life.

† The water in which the feet of devotees are washed.

34. Do not drink the *sri pātha tīrtham* of men who are ignorant of *Tatva Treya** and *Rahasiya Treya*†.

35. Drink daily the *sri pātha tīrtham* of divinely wise and good men.

36. Do not consider yourself a Bhāgavata.

37. When you touch men void of *gnāna* (wisdom), perform *sachēla snāna*, i.e., bathe, wearing the cloth worn when you touch them, and drink the *sri pātha tīrtham* of any Bhāgavata.

38. When you see Vaishnavas possessing *gnāna*, *bhakti*, *vairagya* (wisdom, piety, zeal), and other qualities, think of them as men free from *malam* (defilement), and give to them special homage.

39. When you behold such men, do not inquire as to their caste or *guna* (quality), but esteem them as worthy.

40. Do not drink even *bhagavat tīrtham* in the house of any one void of illumination.

41. Do not worship idols in the houses of such men.

42. In holy places sacred to Vishnu, you may eat and drink in the presence of irreligious men things offered to the idol.

43. Though it be a fast day, you may eat in the presence of idols the *prasātha* (rice or cake) given to you by Bhāgavatas.

44. Do not consider the *Bhagavat prasātha* which is supreme, as *uchishta* (mere remains, literally spittle), when given to you.

45. Do not praise yourself in the presence of Sri Vaishnavas.

46. Do not put another to shame in the presence of Sri Vaishnavas.

47. Neglect not even for a moment the service of Bhāgavatas and Mahātmās, for other business.

48. Think of your guru or *Āchāri* for at least one hour daily.

49. Read and repeat the *Tiru Vai Mori* of Nam Alwar, and the lives of other *Ācharyas* for at least one hour daily.

50. Do not associate with men who love their bodies.

51. Do not associate with men wearing the *nāma* and other Vaishnava symbols for purposes of deceit.

52. Do not associate with men who speak ill of others.

53. Associate with Sri Vaishnavas to obtain deliverance from sin acquired by contact with the worshippers of other gods.

54. Do not look upon men who speak evil of Bhāgavatas or *Ācharyas*.

* 'The Three Tatwas', an important Vaishnava work.

† 'The Three Mysteries', an important Vaishnava work.

55. Always associate with men who repeat the *dvayam*.

56. Do not associate with mantramongers. Associate always with devout men.

57. Associate with Maha Bhāgavatas who know *Rahasiya Treya* and *Tatva Treya*.

58. Do not converse with men who love money or lust. Converse always with Bhāgavatas.

59. If Sri Vaishnavas put you to shame, do them no harm in return, but be silent.

60. If you find Vaishnavas heavenly minded, do good to them.

61. A *prapanna* must not practice what is unsanctioned though temporarily profitable.

62. Do not eat food which has not been offered to God, nor wear sandal paste, or flowers, nor chew betel leaf.

63. Receive no money from men who are devoted to money and lust; and only receive money when it is voluntarily offered to you.

64. A *prapanna* must not eat evil-producing foods forbidden by the respective castes.

65. Do not offer to God any food simply because you like it.

66. Offer to Sriyapathi (Vishnu) all kinds of food enjoined by the Shastras.

67. Accept as holy, food, drink, sandal, flowers, and betel leaves which have been offered to God. Do not accept these things merely for personal enjoyment.

68. Consider as holy all duties enjoined by the Shastras and do them.

69. There is no greater ruin to the soul than to offend Bhāgavatas who know the three sacred mantras, and no greater heaven than to gain their love.

70. Nothing is more profitable than the worship of the great Bhāgavatas. Know that there is no greater soul ruin than by despising them.

71. The following will obtain eternal hell:—(1) Those who consider idols of Vishnu and devotees only as stone. (2) Those who consider their *ācharyas* and gurus as only men. (3) Those Vaishnavas who think of caste among Vaishnavas (distinguishing Sudra from Brahman), or (4) those who regard the *sri pātha tīrtham* as only water. (5) Those who regard the mantras as but sounds. (6) Those who regard Sarvēśwara as like other gods.

72. The worship of the devotees is more excellent than the worship of God. A wrong done to them is more sinful than if done

to God. The water in which the devotees' feet are washed (*sri pātha tīrttha*) is more holy than the Ganges, which is God's *sri pātha tīrttha*. Know this and feed the Bhāgavatas.

When he had taught the seventy maxims, his disciples wondered why he had been teaching such things. Rāmānuja, thinking he could no longer keep it secret, said to them, "On the fourth day from now, I go to join the feet of Periya Perumal." Hearing this, they were filled with grief, and he comforted them. Then they prostrated themselves before him, beseeching to continue to teach them until he should die. Accordingly he spoke the following

Ten Words.

1. *Asrapanna* must consider his fortune to be the will of God, therefore he should not grieve for any mishap. If he does, then his *atma samarpane*—soul surrender (to God)—becomes a falsehood.
2. Since the bodily sustenance of a *prapanna* is according to his *karma*, he must not grieve. If he does, he becomes an atheist.
3. Do not make your *karma* an artifice to gain a livelihood.
4. Regard all the actions done by you as holy.
5. Study *Sri Bashya* and make it known to men.
6. If unable to do this, read the holy books and teach disciples what they contain.
7. If unable to do this, do holy services in temples, such as cooking, preparing sandal paste, lighting the temple lamps, making garlands of flowers, sweeping and washing the temple floor with cowdung, and ornamenting it with rice flour, and other services.
8. If unable to do this, at any rate live in a hut at Yāthavādri which is very pleasing to me.
9. If unable to do this, study *dwaya* with its meanings.
10. Be filled with wisdom, piety, and zeal, and associate with Sri Vaishnava Mahātmās, be free from pride, and walk according to their commands. Excepting these, there are no other means of obtaining heaven.

G. MACKENZIE COBBAN.

DRAVIDIAN AND SANSKRIT INSCRIPTIONS.

V.

ONE of the well-known doctrines of the philosophy of history is that the physical features of a country influence to a large extent the development of its inhabitants and consequently its history.

India is a country of long rivers and high mountains. In prehistoric times the Aryan tribes that migrated to India first settled on the banks of the Indus and the Ganges, and during historical times the most striking physical features have, as a rule, been the centres of dynasties of kings. In Southern India the various tribes seem to have congregated along the banks of the best known rivers. A considerable portion of the upper course of the river Krishna and its tributaries was monopolized by the Western Chalukyas, and the lower course of the same river by their cousins, the Eastern Chalukyas. In spite of the reputed derivation of the Pālār from milk (pāl) one is almost tempted to derive the name of this river from the Pallavas. The Kāveri was pre-eminently the river of the Cholas and the Vaigai and the Tambraparni were the rivers of the Pāndyas; and similarly in the case of other dynasties. This fact is of great importance in historical research, as indicating where we must direct our energies if we wish to discover materials for the history of any dynasty. For the history of the Cholas we must look for materials along the lower course of the Kāveri, and especially in the districts of Trichinopoly and Tanjore, which monopolize, as it were, the virtues of that river and its branches. The temples in these districts, of which there are many hundreds, abound in inscriptions, which contain ample materials for working out the history of the dynasty. A great deal will be gained when all the inscriptions of the temples situated on the banks of the Kāveri alone are carefully studied. For the whereabouts of the inscriptions of the Chola country there is a further help in the *Periyapurāṇam* in which almost all the ancient places are mentioned. It may be laid down as a general rule that the places which are not mentioned in that work do not contain any old temples, and, consequently, are not of much importance to the epigraphist. Of course it must not be supposed that all the places mentioned in the *Periyapurāṇam* do contain old inscriptions, as some of the temples have since been rebuilt several times and their inscriptions buried in oblivion. Nannilam in the Tanjore District is one of the ancient places mentioned in the *Periyapurāṇam*. Sundāramūrti Nāyanār in one of his hymns refers to a temple at Nannilam built by Kochcheṅgaṇṇ (Koṇḍuvar-veṅgaliruttigar-Kochcheṅgaṇṇ-ṣey-koyinā-ḍiya Nannilattu-pperuṅgoyi-nayandavan). Tiruñāṇasambandar in one of his hymns refers to another temple built by the same king at Tiru-Ambar (Poru-punai=Ambar-Chchembiyar-Ṣeyyakaṇ=irai ṣeyda koyil ṣervare). Ko-Chchengaṭchora-Nāyanār (or Senganaṇ

in the *Tiruttonḍattogai** was one of the sixty-three devotees of Śiva. *Kaḷavari-nāṛpadu*, a short Tamil poem, the text of which has been published by Mr. V. Kanakasabhai Pillai in the *Indian Antiquary*, and which is professedly a historical work, describes the defeat of one of the Chera kings by Śoran-Śoṅganān. The large Leyden grant published in the *Archæological Survey of Southern India*, Vol. IV.; and the inscription of the Bāṇa king Hastimalla published in the *Salem Manual* by the Rev. T. Foulkes, mention the same king as one of the ancestors of Vijayālaya. It is thus established beyond all possible doubt that Ko-Chcheṅganān is a historical personage; and as he is reported to have built a temple at Nannilam, one would naturally expect to find some old inscriptions in the place. But the temple, which probably represents the one referred to in the *Tevāram*, is built mostly of bricks and must be quite a modern rebuilding of the original shrine. Tiruvāñjiyam is another village which is well-known, and which, from its antiquity, attested by the *Periyapurāṇam*, might be expected to contain some old inscriptions. Yet there is not a single historical record of any importance to be found on the walls of the temple, nor in Tirukkandīśvaram (Tirukkandīśvaram of the *Periyapurāṇam*) which is close to Nannilam.

Triṇḍi, or Tiruvaiyāru, is a village situated about seven miles from the town of Tanjore. The Pañchanadīśvara temple situated quite close to the northern bank of the Kāveri, abounds in inscriptions. As the result of a hurried visit to the place, Dr. Hultzsch has made the following remarks in one of his progress reports:—“The name Tiruvaiyāru, i.e., ‘the holy five rivers’, evidently refers to the five principal rivers of the delta. The town lies on the northern bank of the northernmost branch which retains the name of Kāveri. From the southern bank of the river it presents the appearance of a miniature Benares or Mathura. The most conspicuous objects are a bathing ghat and the Raja’s palace. The temple of Pañchanadīśvara, i.e., ‘the lord of the five rivers’, is situated at a short distance from the river. Round the *gurbhagṛiha* there are numerous inscriptions of Maḍirai-konḍa Ko-Parakesariyarman and one of Ko-Rājakesariyarman, and on the outside of the inner prakāra, one of Ko-Jat[āvar]man alias Tribhuvanachakravartin Sundara Pāṇḍya-deva and of [Tribhuvana]chakravartin Ko-Nerinaimai-konḍān.* Between the inner and outer prakāras there are two small shrines, called Uttara and Dakṣiṇa Kailāsa. The former bears several

* See the remarks on this name made on page 845 under Kuttalam.

inscriptions of Ko-Parakesariyarman, alias Uḍaiyār Rājendra Śora-deva and of Ko-Rājakesariyarman alias Rājārāja-deva.” A more leisurely visit, which I paid to the place some time ago, enabled me to study the inscriptions of the Uttara Kailāsa more closely. In many of them the shrine is called Olokamādevi-Īśvaramudaiya Mahā-devar, and reference is made in several of them to its having been built by Śattiviḍaṅgiyār, alias the illustrious Olokamādevi (for Lokamahādevi), the mother (*tandi* in one and *tandi* in the rest of the inscriptions) of a queen of Uḍaiyār Śrī Rājārāja-deva (Śrī-Rājārāja-deva-nambirāṭṭiyārtandi Śattiviḍaṅgiyār=āṇa Olokamā(forma) hādeviyār Vadaḱarai-Irājendrasimha-vaṇanāṭṭu Ppoygai-nāṭṭu-tteva-dāṇa=Tiruvaiyāruppāl eḍappitta Tirukkaraṭṭi Olokamādevi[vi]-Īśvaramudaiyār). Thus it is possible to ascertain the approximate date of the construction of the Uttara Kailāsa inasmuch as it was built by one of the mothers-in-law of the Chola king Rājārāja-deva, who ascended the throne in Śaka 927 (= A. D. 1004-5).* It is worthy of note that one of the queens of Rājārāja-deva was also called Lokamahādevi according to the Tanjore inscriptions, which state that she set up several images in the Rājārājēśvara temple and made grants to them. One of the inscriptions found on the walls of the Uttara Kailāsa is dated in the fourth year of the reign of Ko-Parakesariyarman, alias Śrī Rājendra-Śoradeva and refers to the mother-in-law of Rājārāja-deva in the following words:—Periya-devar Nambirāṭṭiyār tandi Śattiviḍaṅgiyār=āṇa Śrī Olokamahādeviyār. This inscription is important as it is dated in the fourth year and still contains no historical introduction, thus indicating that Rājendra Chola had not yet begun his career of conquests which are referred to in inscriptions of the fifth and following years. Grants made during his third year which are recorded at Tiruvallam, Tanjore, and other places, do not begin with the historical introduction. From the Tiruvaiyāru inscription it may be inferred that Rājendra did not make any conquests during a portion at least of the fourth year of his reign. Consequently his expeditions against Eḍatore (in Mysore), Banawasi (in the Bombay Presidency), Kollippākkai, Mannaikkadakkam, and Ceylon, which are first recorded in inscriptions of the fifth year, must have taken place in the latter portion of the fourth and in the fifth year of the king’s reign, i.e., according to Dr. Hultzsch’s calculation of

* See Dr. Hultzsch’s *South-Indian Inscriptions*, Vol. I. p. 169.

the date of Rājendra Chōla-deva's reign (see Progress Report in G. O., dated 11th March, 1890, No. 189, Public) in the Śaka years 959 and 960, or A. D. 1037 and 1038. An inscription dated during the twenty-seventh year of the reign of Rājarāja-deva mentions two names which occur in the large Leyden grant, viz., Adigarigal Kāñchivāyil=udaiyār and Naḍuvirukkai Kaḍalangudi Dāmodara Bhattar (*Archæological Survey of Southern India*, Vol. IV., pp. 209 and 216), the former of which is also mentioned in several inscriptions of the Tanjore temple. In most of the inscriptions of the Pañchanadīśvara temple Tiruvaiyāru is said to have belonged to Poygai-nāḍu, which formed part of Vaḍakarai Rājendrasimha-vaḷanāḍu. Vaḍakarai evidently refers to the situation of the nāḍu on the northern bank of the Kāveri. The reference to districts on the southern bank is not infrequent. Rājendrasimha was probably the name of one of the Chōla kings. In some inscriptions Tiruvaiyāru is described as a *devadāyam* of Poygai-nāḍu. One of the inscriptions of the big temple at Tanjore mentions the village of Kaṇḍarāditya-Chaturvedimaṅgalam in Poygai-nāḍu, which formed part of Rājendrasimha-vaḷanāḍu. This village is probably Kaṇḍarādityam in the Trichinopoly District, and may give us some idea of the extent of Rājendrasimha-vaḷanāḍu and the limits of Poygai-nāḍu.

The town of Kumbhakonam is another place in the Tanjore District which is of great interest to the epigraphist inasmuch as it dates from a distant period. In his *Lists of Antiquities*, Vol. I., Mr. Sewell says of the place:—"There are sixteen temples here, twelve dedicated to Śiva and four to Viṣṇu. Almost all of them are well sculptured and one of the gopuras is very fine. In the temples of Nāgeśvara, Kumbheśvara, Vāṇāpureśvara, Chakrapāni, Sāraṅga-pāni, and Rāmaswāmi are inscriptions. The Nāgeśvara temple is so constructed that, on three days in each year, the sun, penetrating through the openings in the eastern gopura, falls on the lingam in the shrine. The town is one of the oldest in Southern India, and was at one time one of the chief cities of the Chōlas. Fragments of older temples are to be seen everywhere but none *in situ*." The place is mentioned in the *Periṇṇapurāṇam* though not with its present name. It is very often mentioned in Vijayanagara inscriptions as one of the sacred places where kings of that dynasty made various gifts. But here it is spelt Kumbhaghona, which is of course right. The short time at my disposal when I went to that town enabled me to study only some of the inscriptions of

the Nāgeśvara temple, which is reported to be one of the oldest. The oldest historical records to be found on its walls are dated during the reign of Parakesavarivarman, "who took the head of the Pāṇḍya." One of them belonging to the fourth year mentions Tañjāvūr-kūṛram and records the grant of a nandāvilakku by Avaniśikhāmaṇi who was related (it is not clear how) to Tañjāvūr-Ān[ai]merruñjinār. Another, dated during the fifth year of the same king, records the grant of some land by Tribhuvanasundarī, the wife of Paraya-paraiya-velam(?) of Tañjāvūr. The characters in which these grants are written and the frequency with which the pulli is used in one of them prove that they must belong to one of the early Chōla kings. As no other inscriptions of the same king have as yet been discovered it is not possible to identify him. The other names of kings which occur in the inscriptions of the Nāgeśvara temple are:—Madirai-koṇḍa-ko-Parakesavarivarman, Tribhuvanachakravartin Śrī Tribhuvanaviradeva, "who, having taken Madurai, Ceylon, Karuvūr, and the crowned head of the Pāṇḍya, was pleased to perform the coronation of victory and the coronation of heroes," and Tribhuvanachakravartin Rājarāja-deva. A comparatively modern inscription, dated Śaka 1402 expired, the Śādhārana year current, records a grant by a certain Kāñchīparavarādhiśvara Konarideva-mahārāja. The Śaka date and the cyclic year do not correspond, and it is not possible to say to what dynasty this individual belonged. If the Śaka year was 1412, the cyclic year would correspond. The walls of a small shrine to the south of the *garbhagriha* and called the Sūrya temple, are filled with inscriptions which are all covered with a thick layer of chunam. An inscription of the 35th year of the reign of Śrī Tribhuvanaviradeva records a grant to a shrine called Tiruppurambiyamuḍaiyār which a certain Śembiyan Pallavaraiyan, *alias* Ārivāṇ Tiruppurambiyamuḍaiyān, the lord of Velūr, had set up in "the eastern hall of the first prakāra of the temple of Tirukkirkottamuḍaiyār."

The etymology of the name of the town deserves to be considered. As the later Vijayanagara inscriptions prove, the proper spelling of the name is Kumbhaghonam, which means 'the spout of the water pot'. This derivation of the word is quite in accordance with the name of the place found in Tamil inscriptions as well as with that current in Tamil literature. In the *Periṇṇapurāṇam* and in the inscriptions which I have found, the place is called Kuḍamūkkū, which means 'the spout of the water pot'. The Rev. J. F. Leper

of Tranquebar has published in the *Indian Antiquary* an extract from the *Sthalapurāṇa* which contains the legend about the origin of the place. Here *Kumbha* is the pot which contained the elements of creation. Śiva broke the pot, and as the *amṛita* then issued from it, in a wandering crooked or tortuous manner—*koṇam*—the place obtained the name *Kumbhakonam*. The temple is called by the following names in the inscriptions:—*Tirukkīrkottattu Paramasvāmi*; *Tirukkīrkottattu Paramesvarar*; *Uḍaiyār Tirukkīrkottamudaiyār*; *Uḍaiyār Tirukkuḍamūkkudaiyār*; *Tirukkuḍamūkkunāyanār* *Madandaipāga-Nāyanār*; and *Tirukkīrkottattu-Mahādevar*.

The ancient geography of the town calls for a few remarks. In the older inscriptions *Kuḍamūkku* is said to have belonged to *Vaḍakaraī-Pāmbūr-nāḍu*, and in more recent ones to *Pāmbūr-nāḍu*, which formed part of *Uyyakkondār-valanāḍu*. From one of the Tanjore inscriptions we learn that *Uyyakkondār-valanāḍu* was situated between the rivers *Ariṣil* and *Kāveri*. *Vaḍakaraī* means 'the northern bank'. In several cases the expression has been found to refer to the northern bank of the *Kāveri*. In this particular case it cannot refer to the *Kāveri* as neither *Kumbhakonam* nor the temple in question is situated on the northern bank of that river. Perhaps it refers to the northern bank of some other river. In two of the oldest inscriptions of the temple *Kuḍamūkku* is called a *devadāna* and in a later one a *brahmadēya*.

Journeying about six miles due north of the South-Indian Railway station of Kuttalam close to Mayavaram over a road which does not speak very highly of local self government in that part of the country, one reaches a typical South-Indian village called *Pandanallūr*. The village is situated in the *Kumbhakonam taluk*, 15 miles north-east of the taluk headquarters. Mr. Sewell says of it:—"There is an old ruined fort here with two temples of Śiva and Viṣṇu also ruined." (*Lists of Antiquities*, Vol. I., p. 274.) The Śiva temple called *Paṇupatiṣvara* has been the subject of litigation for some time past and the authorities at whose request I made copies of all the inscriptions of their temple wished to base their claims on stone inscriptions. As I did not sufficiently comprehend the question at issue I am not sure if their object was fulfilled. The inscriptions that are found on the walls of the Śiva temple look comparatively modern, but are professedly copies of older records. One of them is dated during the reign of *Ko-Rājakesarivarman*. Another belonging to the reign of *Ko-Parakesarivarman*, *alias* *Tribhuvanachakravartin Śrī Vikrama-Chola-*

deva, contains the usual conventional description of the king's reign. The latter seems to record a copy of an inscription of the 11th year of a certain *Ko-Parakesarivarman*, the description of whose reign seems to have been carelessly copied from a part of the historical introduction found at the beginning of the great *Rājārāja-deva*'s inscriptions. A third inscription is dated in the 24th year of *Tribhuvanachakravartin Śrī Kulottunga-Śoradeva*, "who took *Madurai*, *Ceylon*, *Karuvūr* and the crowned head of the *Pāndya*," and a fourth in the thirty-ninth year of the reign of *Tribhuvanachakravartin Śrī-Tribhuvanaviradeva*, "who took *Madurai*, *Ceylon*, *Karuvūr* and the crowned head of the *Pāndya* and was pleased to perform the coronation of heroes and the coronation of victory." This last records a gift by a certain *Irāvaḷan*, who belonged to the *Vāraṇāśī-bhikṣhai-maḍam*. Another inscription containing a very long historical introduction is dated in the 6th year of *Ko-Parakesarivarman*, *alias* *Tribhuvanachakravartin Śrī [Rāja]rāja-deva*. Whoever he was this king was not the great *Rājārāja*, the builder of the Tanjore temple. The inscription contains an order of the king which begins with the name *Tribhuvanachakravartin Ko-neri(na)men-kondān* and refers to other shrines built within the *Paṇupatiṣvara* temple, *viz.*, *Vikrama-Choleśvaramudaiyār* and *Kulottunga-Choleśvaramudaiyār*. The edict sets forth that the *Śiva-Brāhmanas (pujari)* of the temple had misappropriated some of the gold which had been set apart for making jewels to the god, and records the order issued at the request of a certain *Śingalarāyar* to the effect that, for the crime of the embezzlement of temple funds, the *Śiva-Brāhmanas* and those belonging to their family should not enter the temple, nor any of the two shrines above referred to. This order would have deprived them of the means of subsistence and amounted practically to a sentence of banishment. It is just possible that this was the time when a considerable number of Brahmin residents left the village for good, and since then the number of Brahmin houses has been very small. An inscription, dated during the fifth year of *Ko-Rājakesarivarman*, *alias* *Tribhuvanachakravartin Śrī Rājādhirāja-deva*, which has no beginning and which is partly built in at the bottom, records the grant of some house-site in *Aragiya-Śorapuram*. The Viṣṇu temple at the village of *Pandanallūr* contains a comparatively modern inscription over which the temple authorities have wisely smeared *chunam* with the object of preserving it. In one of the inscriptions of the Śiva temple the village is called *Pandanallūr* and in others

Pandanainallūr. Tiruñāpasambandar in his *Tevāram* calls the place Pandananallūr. Local legends derive the name of the place from the ball (*pandu*) of Pārvatī, which is believed to have reached this village. Paśupatidevar occurs as the name of the temple in two inscriptions, Uḍaiyār Paśupatidevar in one, Uḍaiyār Paśupatiśvaramuḍaiyār in a second, while the word Uḍaiyār is omitted in a third. In Tiruñāpasambandar's *Tevāram* the temple is called Paśupatiyār. In inscriptions the village is described as having been situated in Viḷattūr-nāḍu, which formed part of Vaḍakarai (in two of them) Virudarājabhayankara-vaḷanāḍu. Virudarājabhayankara-Chaturvedimaṅgalam is mentioned in an inscription of the Tanjore temple dated during the thirty-fifth year of the reign of Kōnerimmai-kondān. One of the inscriptions of the Mahālingasvāmin temple at Tiruvidaimarudūr near Kumbhakonam refers to a village called Śattimaṅgalam in Innambar-nāḍu which formed part of Virudarājabhayankara-vaḷanāḍu. A Tanjore inscription dated during the reign of Rājārāja-deva mentions the village of Karuppūr in Innambar-nāḍu which formed part of Vaḍakarai-Rājendrasimha-vaḷanāḍu. Innambar is mentioned in Tiruñāpasambandar's *Tevāram*, while Innambūr is said to be the name of a village about seven miles from Kumbhakonam. According to the *Kalīngattupparaṇi*, a Tamil poem describing the conquest of the Kalinga country by Karuṇākara Pallava, Virudarājabhayankara (Canto X., verse 25) was one of the names of the then reigning king Kulottunga. The nāḍu was probably called after him.

The village close to the railway station of Kuttalam contains an old temple called Uttaravedīśvarasvāmin, the walls of which are covered with inscriptions, both ancient and modern. There are several of them belonging to the reigns of the Chōla kings Rājārāja-deva, Rājendra-Chōla-deva, and Rājendra-deva. An inscription of the twelfth year of Ko-Parakesarivarman, who, to judge from the characters employed in it, must have been one of the predecessors of Rājārāja-deva, opens with the following :—கோகேர் இன்மைகொண்டான். This is a name which occurs very often in inscriptions. It has been differently read by different epigraphists, and in comparatively modern inscriptions corrupted into Kōnerimmaikōṇḍa (in a Tiruvidaimarudūr inscription), Kōnerimēṇkōṇḍa, Kōnerimēḷkōṇḍa, and other forms. In ancient inscriptions the name is applied only to Chōla kings, but in later ones it is not confined to them. Many inscriptions have been found in which the name is applied to Pāṇḍya kings. In old inscriptions this title is used only

when the grant assumes the form of a letter which the king addresses to some of his officers or subjects or to some village *sabha*. In such cases the usual name of the king does not follow immediately after the title but has to be gathered from the body of the grant, or, as in two of the Tanjore inscriptions, the name does not appear at all. Whereas, in the later Chōla and Pāṇḍya inscriptions the usual name of the king follows immediately after the title (for instance Tribhuvana-chakravartin Kōnerimmai-kondān Sundara Pāṇḍya in one of the Madura inscriptions and Tribhuvanachakravartin Kōneri-Menkōṇḍa Kulottunga-Śora-deva in *South-Indian Inscriptions*, Vol. I., p. 136). This fact shows that the application of the name had also changed in later times. Certain coins which are not infrequently met with in the bazaars of Tanjore and Madura bear on one side the legend கோகேரி ராஜன். There is a village called Kōnerirājapuram in the Tanjore taluk, and Kōneri is quite a common name among the Telugu and Kanarese people. Though the name and its corruptions are quite familiar, no etymology has, as far as I know, yet been attempted. It is doubtful if the name Kōneri, which is common among the Telugu and Kanarese people, can be traced to the title of the ancient Chōla kings. The importance of the Kuttalam inscription lies in the fact that the manner in which this title is spelt in it throws some light on the derivation of the word, inasmuch it shows that the name has nothing to do with the mountain Neri in the Chōla country, after which the Chōla king used to be called Neriyān. It probably means 'the unequalled among kings' or 'a king who was unequalled'. Though this explanation of the name is by no means final yet it is a reasonable one and may be accepted until further discoveries disprove it. The *Periapurāṇam* mentions a place called Kurrālam in the Pāṇḍya country, which is probably the modern Courtallam in the Tinnevely District. The large Leyden grant mentions another Kurrālam (*Archæological Survey of Southern India*, Vol. IV., p. 215, textline 382f) the situation of which is described as follows :—Kshatriya-sikhāmani-vaḷanāṭṭup-Paṭṭanakkūrrattuk-Kurrālam. This Kurrālam belonged to the same kōṭṭam in which Negapatam is said to have been situated. Consequently it is not impossible that the Kurrālam of the Leyden grant has to be identified with the South-Indian Railway station, Kuttalam.

The town of Erode, whose present importance is due more to its being a railway junction than anything else, is not absolutely devoid of interest to the epigraphist. There are two temples,—the

one dedicated to Siva being called Ādrakapālēsvara. One of the most important inscriptions at this temple is dated in Śaka 1262 expired, the Vikrama year current. Mr. Sewell (*Lists of Antiquities*, Vol. I., p. 216) refers to it, but as there was an error somewhere in his copy he was unable to say anything more about it. The king during whose reign it is dated is described as follows :—Śrīmat-pratāpa-Chakravarti-Bhoja (for Pośala or Hoysala)-bhujabala (for bala) Vīra-Vallāla (or Ballāla)-deva. I do not think there is much doubt about this king having been a Hoysala. The name and the description leave almost no doubt on the subject. According to Mr. Fleet's *Kanarese Dynasties of the Bombay Presidency* the last chief of this family was Ballāla III., for whom he gives the date Śaka 1232, and remarks that the power of the Hoysalas came to an end in A. D. 1310 on their defeat by the Muhammadans. Mr. Fleet adds :—“Though the Muhammadan chronicle does not record the fate of Ballāla III., it would appear that, after his defeat and capture in A. D. 1310, he was liberated and continued for a short time longer the semblance of a reign at the former capital of Belāpura, and that after the events of 1327 A. D., in which Dvārasamudra was demolished, the then representative of the family retired to Tondanur, the modern Tonnur near Seringapatam, which continued to be the seat of an enfeebled power for about fifty years more.” The present inscription is dated in A. D. 1340 and would seem to show that though the power of the Hoysalas was broken, yet they retained some authority in the southern portion of their dominions as late as A. D. 1340. It records the grant of the village of Tindal to the Siva temple by the inhabitants (nāttavar) of Pūndurai-nādu. I was informed by one of the temple servants that Tindal-malai or pālayam is a village about three miles west of Erode on the road to Perundurai. A second inscription of the same temple begins with some Sanskrit which is so full of errors that it is hardly possible to ascertain the author's meaning. It is dated during the reign of Śrī Ko-Iravikodai. The date is so curiously expressed that I am not quite sure about the meaning of the expression and consequently transcribe it as it is from my note-book in the hope that others may be able with the help of similar ones to explain this better : Kōv=Iravikodaikkuttan balam nū āyiratt-āttaiḥku-ttiruveruttittu-chchellāninra yāṇḍu mel irupattirāṇḍā-vadu. Another inscription of the same temple begins as follows :—Kovirā (probably for rāśa, the śa having been omitted by mistake) keśariparmarāṇa Tribhuvanachchākṛava[r]ttigai Śrī-Iravikodai-

y=āṇaKokkalimukkarku-ttiruverutt=ittu-chchellāninra Tirunalliyāṇḍu nālāvadu. The first may be rendered as follows :—In the twenty-second (year) (which was current) after the year (during which) his strength (?) was made known by his signature in many hundred thousands of places. The second date may also be explained similarly but it is not clear what is meant by Tirunalliyāṇḍu nālāvadu. In a paper on the Tirunelli copper-plate grant of Bhāskara Ravivarman which he is publishing in the *Indian Antiquary* Dr. Hultzsch has, by a comparison of several inscriptions of the Pāṇḍya king Kuṣāsekbara with the several dates mentioned in the Tiruppuvanam grant, a transcript of which has been published in the *Archaeological Survey of Southern India*, Vol. IV., and the facsimile in the *Indian Antiquary*, come to the conclusion that, of the double dates which occur very often in inscriptions from the western coast, the first refers to the age of the king at his coronation and the second denotes the number of years that had elapsed after his accession to the throne. It is not impossible that a similar method of expressing the date is employed in these two inscriptions. A king's strength can be made known by his signature in many hundred thousands of places only if orders issued in his name are recognised and obeyed in all those places. The year in which a king's orders are obeyed would be that in which he is crowned king, or at least appointed heir-apparent. Of the two inscriptions of Erode above referred to, the first records the grant of the village of Andiyūr (reported to be in the Bhavani taluk) in Vaḍakarai-nādu to the Siva temple by the king Iravikodai, while the second contains a private agreement. The names which are found in the inscriptions to denote the Siva temple are the following :—Nāyanār Tondakarāyinar, Tondīśvaramudaiya Piḍārar, Aludaiyār Tondīśvaramudaiyār, and Tondīśvaramudaiya Mahādevar. Nayinār Tondīśvaramudaiya Tam[bi]rānār is used in one of the inscriptions found at the Viṣṇu temple to denote the former. Tondīśvara would mean ‘the lord of devotees’ (tondar). It is now clear that the name Ādrakapālēsvara now used for the temple does not proceed upon its old name but is only an attempt to connect the name of the place (Irōṇ, ‘the wet skull’) with that of the temple. The Viṣṇu temple at Erode, which is called Rāṅganāthaśvamin, contains two inscriptions, one of which is dated during the reign of Ko-Rājakesarivarman alias Tribhuvanachakravartin Śrī Vīra-Pāṇḍya-deva and the other belongs to the reign of a certain Vīra-Chikkarāya who is mentioned with all the titles usually

borne by the Vijayanagara kings. That Vira-Pandya-deva, who, to judge from the name must have been a Pandya king should have borne the surname Ko-Rajakesarivarman belonging to the dynasty of his rivals is very unusual, and has perhaps to be explained on the supposition that he was a Pandya king who ruled over the Chola dominions also. The second inscription contains the date Śaka 1449 expired, Pramā (for *mo*)dāta year current. Mr. Sewell mentions this date. But the Śaka date and the Brihaspati year do not correspond. Chikkarāya was a name common among the Mysore Odeyars, but I could find no such name in the published lists of these chiefs at so early a date as Śaka 1449. Very probably the inscription is a forgery, though forgeries among stone inscriptions are very uncommon. In both of these inscriptions the temple is called Pallikonda Perumāl.

The ancient geography of Erode calls for a few remarks. In most of the inscriptions it is said to have been situated in Kāñchittundam, which formed part of Pāndurai-nādu. In some of them this nādu is not mentioned, while in two comparatively recent ones Melkarai is added to Pāndurai. This epithet evidently indicates the situation of the nādu to the west of the Kāveri, the chief river in this part of the country. In Kāñchittundam 'tundam' denotes a sub-division.

V. VENKAYYA.

LITERARY NOTICES.

Sir Francis Drake. By Julian Corbett. English Men of Action. London and New York: Macmillan and Co., 1890.

MR. JULIAN CORBETT is already favourably known to us as the author of the volume on General Monk in this series, and as the writer of a novel, *For God and Gold*, which deals with the same period in the history of England as the work before us. He has given us here an attractive sketch of Elizabeth's "little pirate" who "sing'd the beard of the King of Spain."

The large element of romance in the career of Sir Francis Drake,—the boldness of the enterprises he engaged in, the cloud of mystery which hung over Central and Southern America and the Pacific Ocean, the untold wealth which was believed to lie hidden in these regions,—almost concealed from men's view the real person who made his name a terror to the Spaniards. High reasons of state for many years encour-

aged the mythical tendency; so that the truth about 'El Draque' could at last be reached only by the patient and plodding industry of the historian.

Perhaps Sir Francis Drake did more in his own way than any other single man to hinder the reaction against Reformation principles, which set in during the second half of the sixteenth century, from carrying all before it. He was himself a Puritan and the son of a Puritan, and his father had suffered for his convictions. It was a religious war that Drake waged against Philip of Spain,—religion of that Old Testament type which afterwards called to account Charles Stuart, "that man of blood." It seems strange to our modern conception of the Christian faith to see the cause of God advanced by such rude and coarse means, but it is difficult to imagine by what other means religious and civil liberty could have been secured.

In the days of 'Good Queen Bess' many, if not most, of the naval enterprises of England were little better than piratical excursions. A formal declaration of war was not regarded as necessary by Hawkins or Drake or Frobisher before engaging in an expedition which it was clearly understood would take plunder wherever it could find it, but specially a Spanish treasure-ship if such should cross its path. The noble Queen herself did not object to have an interest in an expedition of the kind, though of course her name did not appear on the list of shareholders. She was always reluctant to compromise herself.

"It seems strange conduct for a great Queen, but she had to encourage adventurous commerce, on which, in those days of a half established navy, England's maritime position depended.

The royal ships were merely a nucleus round which armed merchantmen gathered in time of war. It was as natural for the Queen to employ her ships in commerce while the realm was at peace, as it was for ship-owners to accept a charter-party from the admiralty at the outbreak of a war. The mercantile marine then formed what we should now call the naval reserve. The situation was perfectly understood and recognised by both Government and shipowners. Private cruisers were a necessity to every considerable owner. He kept them, as large firms now insure their own ships, and at a time when the diplomatic system was not yet established, a merchant who considered himself injured abroad had more faith in reprisals with his cruisers than in complaints to his Government.

"In such a state of things it is hardly to be wondered at that the line was not always very sharply defined between naval and commercial expeditions. . . . The Queen's name, of course, did not appear. It never did."

It was on an expedition of this character that Drake got his first sight of the West Indies. Of all the damage that at one time and another he wrought there and on the Spanish Main Mr. Corbett gives a full and glowing account,—his daring surprises, his hairbreadth escapes. Drake was the first Englishman to see the Pacific, and he, like 'stout

Cortez', gazed at it "silent, upon a peak in Darien." Our author tells the story well.

"On the fourth day after leaving the stronghold, the spot on which every thought was bent had been attained. It was at the summit of the range. High upwards rose a giant of the forest, and in its arms was a leafy bower. Drake first ascended, and sank awe-struck upon his knees. First of all Englishmen he was gazing on the Golden Sea. Before him spread the unmeasured mystery of the Pacific; at his back rolled the old Atlantic. His heart was overflowing—so Moses gazed upon the promised land—and like a good crusader he humbly besought Almighty God of His Goodness to give him life and leave to sail once in an English ship in that sea. So he descended and told them of his prayer; and before them all John Oxenham, his lieutenant, vowed that unless the Captain did beat him from his company, he would follow him, by God's Grace."

In the chapter entitled 'Waking the South Sea' we read how this prayer was fulfilled.

The story of the Spanish Armada is told at considerable length, but it is one of the good things that cannot be told too often. Had Drake got his way the Armada would never have entered the English Channel; but he knew that any sign of anxiety when the news came of its approach might prove disastrous. There was in the man, it is true, a deeply-rooted contempt for the seamanship of the Spaniards: but no one knew better than he when a little swagger and bluster would have a good effect on those around him. The admiral and captains of the fleet were playing bowls on Plymouth Hoe when news came that the enemy was off the Lizard. Howard wished to put to sea at once; not so Drake. "There's plenty of time" he said, "to finish the game, and to thrash the Spaniards too." That he played his part well on those July days of 1588, all the world knows.

Drake's last voyage to the West Indies in 1595 proved most unfortunate: but it was by the terror of his own name that he was now foiled, for it was he that had awakened the Indies from their dreamy security, so that every port had been converted into a fortress. Reluctant to confess failure he lingered till disease laid its hand upon him. On the 28th of January 1596 the sea-king died, and the day after, "in sight of the spot where his first victory had been celebrated, amidst a lament of trumpets and the thunder of cannon, the sea received her own again."

The waves became his winding-sheet; the waters were his tomb;
But for his fame, the ocean sea was not sufficient room.

It is a pity, we think, that this book is without a map: one of the West Indies at least would make the reading of the volume much more pleasant. We have a fault to find with Mr. Corbett too. He has some peculiarities of style not to be altogether commended which seem to spring from an undue desire for originality of expression. Thus on

page 112, in describing the relations between Elizabeth and Philip, he employs a figure which to say the least is of very questionable taste. Elsewhere also we observe that Mr. Corbett has a tendency to pass into vague figurative language, when a plain statement of fact would keep the narrative clear of ambiguity. At the same time, for the faults are not serious, we would commend both *Monk* and *Drake* by Mr. Corbett as presenting the general reader with vivid and interesting accounts of two men of action who were given to England to do special work at critical moments in her history.

Cambridge Sermons. By the late Joseph Barber Lightfoot, D.D., D.C.L., LL.D., Lord Bishop of Durham. London: Macmillan and Co., 1890.

It was, we think Archdeacon Farrar, who, in a critical article written after the death of Bishop Lightfoot, predicted that on the publication of his sermons Dr. Lightfoot would be placed in the very front rank of preachers. He had long occupied a leading, probably, the leading place among commentators, but comparatively little was known of him as a preacher, and the utterance of the Archdeacon was regarded by many as the offspring of a fervid imagination, or of an uncritical admiration natural in a eulogy. The volumes now being published by the Trustees of the Lightfoot Fund give an opportunity of gauging this estimate. The present volume consists of sermons preached in Trinity College Chapel at intervals from 1861 to 1875, and sermons preached before the University from 1868 to 1883. They may very fairly be taken as illustrative of Dr. Lightfoot at his best, the ripe fruit of his manhood; they were delivered, too, before an audience that would call out his best efforts. On both grounds we may fairly conclude that in the present volume if anywhere Archdeacon Farrar must find a justification for his sedmngly extravagant praise.

Impressions are ever untrustworthy at the best, and they are particularly so in judging of the relative merits of great preachers. Yet we cannot think that Dr. Lightfoot's sermons will ever take rank with Newman's, or with F. W. Robertson's, or even with those of Mozley, with whom he is perhaps more closely allied in general thought. That they stand on a high plane need not be stated. Dr. Lightfoot could do nothing without doing it well. But we fail to detect in them either the subtle literary or spiritual qualities, or the fervour and original thought that are characteristic of those preachers. They are manly utterances, full of rich and exact thought, but they strike out no new line which alone could have placed him parallel with these.

It will surprise no one familiar with his commentaries to learn that in his sermons Dr. Lightfoot is historically and critically exact. He

seeks to examine the text in its historical setting, and draws from it the lessons that naturally and properly belong to it. He never reads into a passage in the old Testament the theology of the Athanasian Creed. As an example we may refer to the second sermon in this volume, on the once sadly misinterpreted passage from Isaiah LXIII, the words of which, "I have trodden the winepress alone," were at one time generally referred directly to the crucifixion, although the imagery of the passage, the treading of the winepress, the garments drenched with the blood of the crushed grapeclusters, manifestly refer to the infliction, not the endurance, of punishment. Dr. Lightfoot treats the passage as a "prophetic announcement of Israel's triumph at the moment of Israel's deepest humiliation." When Israel was crushed by Babylon, Edom, true to the long-standing hereditary feud rejoiced. Israel might then, if ever, have looked for some change in the attitude of Edom. But

"Edom had now no tenderness, no compassion for Israel's sorrow. With a fiendish glee he looked on the catastrophe. The great Babylonian conqueror was delivering him from a dangerous neighbour—a troublesome brother it might be said, but what cared he for this? Who made him his brother's keeper? It was this heartless display of cruel satisfaction which called forth the bitter cry for vengeance from the exiles on the banks of the Euphrates."

The prophet raising his eyes sees approaching from the direction of Edom and of Bozrah the capital of Edom

"a sublime form, as of some mighty hero, advancing with majestic step, and clad in the scarlet robes of a victorious captain. Awed at the sight he asks, 'Who is this that cometh from Edom, with dyed garments from Bozrah?' A voice replies, 'I am He that speaketh in righteousness, mighty to save.' It is the just and upright judge, the terrible avenger, the powerful and saving ally, the triumphant king, the Lord Jehovah Himself."

The lesson of the text is this:—

"It is the lesson of dependence on God's help, in desertion and loneliness, against enemies the most powerful and sagacious, amid circumstances the most adverse, despite all the calculations of human foresight."

Dr. Lightfoot, though scholarly and exact, never loses touch with man. Probably the secret of his power lies here. Though he has little of the orator's rush of passion he touches men as closely, if more quietly, than many whose names stand high as pulpit orators. In reading his sermons we feel we are reading the utterances of a man who has himself sounded the depths. The subjects are various, and it is difficult to point out any particular line of thought that specially attracted him—unless perhaps a scriptural paradox. There he appears particularly at home; he is ever most in his element elucidating or expounding the paradoxical statements of the New Testament. The Trustees of the Lightfoot Fund

are doing a work of great value in giving these sermons to the world, for they form a real contribution to the homiletical literature of to-day.

Stories from the Bible. By A. J. Church, M.A. London: Macmillan and Co.

In *Stories from the Bible* the Rev. Alfred J. Church has undertaken the arduous task of telling the story of the leading Old Testament worthies. Where possible he follows the exact language of Scripture, and where that is not possible he imitates it with considerable success. On this account the style loses brightness, and though rhythmical is somewhat ponderous. Mr. Church has done with the Bible stories exactly what he had already done with the stories of Homer and Virgil,—retold them in the style of the original. The book is helpful, inasmuch as it connects in historic sequence incidents which are not connected in the fragmentary Old Testament records of Jewish history. The stories, moreover, are interpreted according to modern enlightenment, but without a hint of obscurity or difficulty.

Perhaps the chief wants in the book are fascination and unity. It is written "to help those who teach, and those who learn," but it maintains too severely the dry-as-dust style of the old-fashioned history class-book. It is a bare compendium of facts. But the facts are often unrelated, and their value in the development of the nation's history is not suggested. The *raison d'être* of the stories is left untold. Though the book does not profess to be anything but a story-book, still Bible stories consecutively told become a history.

The illustrations are after Julius Schnorr.

Physical and Political School Atlas. By J. G. Bartholomew, F.R.S.E., F.R.G.S. London and New York: Macmillan and Co., 1891.

In respect of the purpose for which this atlas has been designed and executed and of the information which it contains, it may be compared with *Longmans' New Atlas* published about two years ago. And if the comparison is made it will result, we venture to think, in favour of the latter work. The execution of the maps in the present atlas is in many respects finer than that of the maps in *Longmans' New Atlas*, and the amount of information contained in Mr. Bartholomew's work undoubtedly exceeds that given by Mr. Chisholm; but just for these reasons the latter atlas better realises the objects aimed at than does the former. In illustration of this we would refer to the maps showing the isotherms, range of temperature, barometric pressure, and prevailing winds, and to the map of Central Europe and the Mediterranean countries. In the first named maps it is difficult to follow the outlines of the countries, and in the map of Central and Southern Europe some parts are over-

loaded with details. There are many of the maps, however, to which this remark does not apply, and we can hardly imagine a map better adapted for use in schools than the map of Spain and Portugal. The use of colours to indicate political divisions is in some maps not very satisfactory. A person even partially colour blind would find some difficulty in assigning to their proper owners the various possessions of European countries in Africa and Oceania. The atlas is provided with a full general index, and there is at the beginning a very useful list which gives the root and meaning of some foreign words frequently found in geographical names as prefixes or affixes. To judge from the map of India the spelling of geographical names would appear to be far from consistent. In a space of not more than two square inches we find Haidarabad, Jaipur, Singareny, Karnul, Nellore, Anantapur, Cuddapah, Utakamund, Pudukattai, Tinneveli, Beypur, Chengalpat. In explanation of the principle of Mercator's projection it is said that "the plane of projection is the surface of an imaginary cylinder." The accompanying figure shows what the statement means, but surely a form of expression could be found which would be less incongruous than that which we have quoted.

UNDER the title of *Essays* Messrs. Addison and Co. have published a little volume of papers by the late Mr. S. V. Thomas, M.A., with an introduction by Mr. S. Sathianadhan, M.A., LL.B. With the exception of two the essays appeared originally in this magazine, and it is therefore unnecessary for us to review them at length. They are remarkable for the vigorousness of their thought and diction, and they display a precision in the use of the English language altogether exceptional among natives of India. For these reasons and because Mr. Thomas's attainments in literature were mainly the result of his own unaided exertions the essays deserve to be studied by educated men both of the native Christian community and of the native community generally. One or two of the papers are doubtless very unpalatable to a certain section of the community, but despite the fact that their author was a little too apt to use the keen edge of his instrument and despite the opinion, which we have heard expressed, that his criticism of such an institution as the National Congress was based too much on self-interest, time seems likely to show that his charges were at least based on an observation of actual facts. *Apropos* of a remark made in a review of these essays by a contemporary it may be well to state, what every reader of the essays will at once discover for himself, that Mr. Thomas was hardly less influenced by Milton and the English Bible than he was by Macaulay.

IN the sixth edition of Hall and Knight's *Elementary Algebra*, chapters have been added dealing respectively with exponential and loga-

arithmic series, interest and annuities, and miscellaneous equations. The work covers the course prescribed for F. A. students of the Madras University according to the recently revised curriculum, and will be found sufficient for the needs of the great majority of students. The few who show real taste and aptitude for the subject should be advised to obtain the more advanced work by the same authors or some other work of a similar nature.

The First to Cast a Stone: An Episode of Frontier Life and Society in India. By 'Nemo'. Madras: The Lawrence Asylum Press, 1891.

It cannot be said that there is much justification for the existence of this book. Its title shows more clearly than the titles of novels frequently do what its subject is, and that subject is not an attractive one. The author had however vowed that if ever he "should again rush into print" he would make this "painful domestic dilemma" of which he had heard while "stationed on one of our Indian frontiers" and on which "the pith or plot of the following pages is based," the theme of his pen. There was really no reason why 'Nemo' should have "again rushed into print" for certainly the book is not a work of art. The characters frequently speak in the most impossible and unnatural way, when they attempt anything better than ordinary messroom or afternoon tea-table talk. It might be thought that the bad grammar put into their mouths was due to an attempt to make them speak naturally, were it not that the author frequently sins against the Queen's English in those parts of his book which are not conversational. Examples might be quoted of misrelated participles, plural nouns with singular verbs, the use of 'laying' for 'lying' and the insertion of 'and' before 'which' where no 'and' is required, and many gems of expression might be culled from the pages of this work. It would be interesting to know, for example, how a man sits his horse like a centaur. The book in its tone is no doubt meant to be extremely moral if not evangelical, but it is a curious mixture and is such a work as we may fancy would be produced if Quila and A. L. O. E. were to set to work as collaborators to write an Anglo-Indian story. Anglo-Indian society may not be all that it ought to be, but we hear in other ways enough about "painful domestic dilemmas" to make us think it unnecessary that they should form the subject of Anglo-Indian novels even when served up with sermons and religious conversation.

NOTES AND EXTRACTS.

We have before us the Report on the Administration of the North-Western Provinces and Oudh for 1889-90. From it we learn that the year 1889 was not very favourable either to agriculture or to the health of the people. The early months of the year were characterised by a constant succession of cold weather disturbances, accompanied by heavy rain on the plains and large snowfall on the hills. The temperature rose rapidly in March, however, and continued above the average for the next two months. The hot weather was followed by an early monsoon, which gave excessive rain almost everywhere, but ceased sooner than usual, with the result that the meteorological conditions which usually obtain in October were established in September. During the latter months of the year the weather was perfectly fine and dry, and in December gave no indications of the usual Christmas rains. As a result of this somewhat unusual weather most of the crops suffered a good deal, though there was no conspicuous failure of any of them, except in one district, where relief works had to be started. In another district considerable damage was done by floods.

We have said that the year 1889 was not very favourable to health. The birth-rate for the year was the lowest on record since 1881, while the death-rate was considerably higher than that of the previous year. The increase in the death-rate is attributed to the prevalence of cholera and small-pox. It is worth noting that the mortality from small-pox was heaviest in Oudh, where vaccination has made least progress. Special efforts are, however, being made to further the spread of vaccination in this Province, and the number of vaccinations performed in 1889 showed a very substantial advance on the number for 1888. Pilgrims and coolies seem to have been largely responsible for the spread of cholera, though its continued existence as an epidemic was no doubt due to bad sanitation, more especially contamination and impurity of drinking water. Several large schemes for the supply of pure water were in progress during the year. Since the end of the year the water-works at Agra have been opened, and those at Allahabad are probably now almost completed. The Municipality of Benares decided to adopt a drainage and water-supply scheme, and the preliminary measures of survey and acquisition of the necessary land in connection with the water-works portion of the scheme were completed in the year under review. The Municipality of Cawnpore was requested to give increased attention to the subjects of drainage and water-supply, and expressed its willingness to incur a loan for such purposes. In the year under review a great expansion took place in the work of dispensaries, especially in the direction of affording medical aid to women. A Sanitary Board,

with purely consultative functions, was constituted, and rendered valuable assistance to the Government.

A noteworthy feature of the mortality statistics of these Provinces is the large and increasing number of deaths caused by snakes and wild animals. In 1889 no fewer than 6,445 people died from snake-bite. Compared with this the number killed by wild animals is very small, but seems to be increasing. Wolves and jackals would appear to be the most destructive wild animals, but tigers and leopards are responsible for a good many deaths, and the difficulty of killing these animals has been very much increased by the precautions taken to protect the large areas of reserved forests. The great majority of the deaths from snake-bites occur outside municipal limits, and the number of snakes killed every year affords no hope that this danger to human life is being lessened. The conditions in which the great mass of the agricultural population live are altogether unfavourable to immunity from snake-bite.

During the year under review prices remained fairly constant, and, except in the eastern districts, were on the whole lower than in 1888. It is remarked that with improved means of communication between all parts of the Provinces and other parts of India prices have tended to become steadier and higher than they used to be. In 1889 the total traffic between these Provinces and other Provinces, ports, and Native States, increased both in volume and in value. Of the trade with the four great seaports the great bulk is with Calcutta, the imports from thence being between five and six times larger than those from Bombay. The trade with Karachi is small, and showed a considerable decrease during the year. There was a large decrease in the export of wheat to Bombay and Calcutta, which was counterbalanced to a certain extent, however, by an increase in the export of other grains.

The report on education is in some respects very satisfactory. The income from fees showed an increase of more than 16 per cent. on the income of the previous year, and was nearly double the income derived from this source in 1885. Further, while the total expenditure on education in the year under review exceeded the total expenditure in 1885 by nearly two lakhs of rupees, the cost to public funds was less by over a lakh in 1889 than it was in 1885. University education has of late years made rapid progress in these Provinces. There has been a slight decline in the number of students attending the Oriental colleges, but a marked increase in the number attending the English colleges. What is more satisfactory, however, than the increase in the number of students, is the fact that the number of self-supporting students has risen even more rapidly. This is a clear proof that the expansion of higher English education is due to the spontaneous demand of the people themselves and is in no way stimulated by State subvention. The opening of the University of Allahabad has no doubt given an impetus to univer-

sity education. It is satisfactory to note that both the State and the aided institutions have participated in the advance that has been made. Coming to secondary education we find that while the number of pupils attending English schools has increased in recent years, the number attending vernacular schools shows a rapid and continuous decrease, and this though the fees payable at the vernacular schools are barely a tenth of the fees payable at the State English schools. The falling off in the number of pupils in the primary stages of instruction, which was noticed in the Report for 1888-89, did not cease in the year under review. Female education has not yet made much progress in these Provinces, and 1889 showed a very considerable decrease in the number of Muhammadan girls in the primary stage.

Under the head of Literature and the Press the Report makes some interesting remarks on the subjects discussed by the vernacular press. The National Congress of course attracted most attention, and some of the papers republished in full the speeches delivered at the Allahabad meeting. The articles on this subject seldom showed any literary ability or power to grapple with political questions, apart from personal considerations. Wholesale changes in the Government of the country were proposed. These were styled reforms and recommended as such, but no attempt was made to measure the consequences likely to flow from their adoption, and the difficulties to be overcome in introducing them were dismissed as hardly worthy of discussion. Dogged assertion generally took the place of argument, and the objections of opponents were set down as the outpourings of ignorant and selfish men.

Mr. Caine's crusade against the liquor traffic drew the attention of several papers to the alleged increase of drunkenness in India, for which the excise policy of the Government was held to be mainly responsible. This leads us to note, in conclusion, that in the year under review exhaustive inquiries were made into the excise administration of the Provinces, with the result that drunkenness as a vice and leading to crime does not exist in this part of India. The masses of the population never touch intoxicants in any shape or form, and the classes who resort to liquor or consume drugs would certainly secure these intoxicants in an illegal way if they were unable to obtain them legally. The avowed policy of the Government is to give reasonable facilities for the purchase of excised liquor at such a price as to raise the cost of licit liquor as high as possible, and thus to discourage illicit manufacture in every possible way. This is a policy which must evidently fail to satisfy those who hold that the Government ought not to tax liquor at all, but we are not aware that any practicable substitute for it has been proposed. The Government of the N. W. P. and Oudh have, however, in carrying out their excise policy, taken a step which must meet with general approval: they have resolved that before a liquor shop is opened in any locality

the feelings of the residents in the neighbourhood shall be ascertained and their wishes consulted.

It is difficult to understand why the Report on the Administration of the Madras Presidency during the year 1889-90, is so late in being issued. If we mistake not it has to be printed in time to permit of copies being forwarded to the Secretary of State before the end of December, and if this is so surely it would be possible to distribute the Report before the end of January instead of towards the middle of April. The volume, however, when it does appear is always interesting, and forms a most convenient summary of the almost countless reports issued during the previous six or eight months.

We turn first to the vital statistics. Here we find that the birth-rate for the year (exclusive of Europeans and Eurasians) amounted to 30.9 per mille—the highest on record—while the death-rate was 23.5, which is 2.0 per mille above the average for the last five years. This gives an excess of the birth-rate over the death-rate of 7.4 per mille. As regards sex, the births were in the ratio of 114.2 males to 100 females, and the deaths in the ratio of 107 males to 100 females. The death-rate amongst children is still extremely high, for 20.9 per cent. of the total mortality was of infants under one year of age, which gives a rate of 154.3 per mille of population. Between one and five years the rate was only 33.5 per mille. Part of this mortality is easily preventible, for when we turn to the return of deaths from small-pox we find that 61 per cent. of the whole occurred amongst children under twelve years of age, while more than 20 per cent. of the deaths were of infants under one year. The total death-rate from small-pox was 1.0 per mille, so that the deaths of children alone caused a death-rate from this cause of 0.61 per mille, which is more than ten times the whole death-rate from small-pox for the town of Madras reckoned on the average of the last six years. The vital statistics for each district in the Presidency are shown for the last three years in diagrams which also give the average of ten years. These diagrams offer much food for study, but at present we wish to notice only one or two points. The most startling diagram is that for Ganjam, in which the death-rate in 1889 rose to 73 in April and to 83 in May, and fell to 51 in June and to 22 in October and November. The birth-rate at the same time was low (falling to 14.8) but not so low as in February 1888 when it fell to 10.5. In the Vizagapatam diagram the most striking feature is the abnormally low death-rate in 1888 when it fell, in some months below 10, and was for ten months below 15. But the more one studies these diagrams the less is one inclined to accept them as giving anything like a true account of the vital statistics. Take, for instance, Nellore. The average birth-rate for September is given as 20.8, but for the three years 1887-88-89 the rates for that month are 36.8, 32.8 and 30.9 respectively,

and only once in the three years does the birth-rate fall to the average of the previous ten years. Again, in many cases the curves for the actual years though similar to each other are not in the least similar to the ten years curve, nor do these ten years curves show such distinct evidence of periodicity as might be expected. It is worth pointing out as regards the drawing of the curves, that it is a mistake to join the end of the ten years curve on to the beginning of the 1887 curve, while it is equally erroneous to make the rainfall curves discontinuous lines when there is no rainfall. In such cases the line should be drawn to the zero line. One other means of checking the accuracy of the statistics is to compare the ten years average with the results of the census. In Bellary the census showed an increase of 23.72 per cent., while the diagram shows an increase of only about 13 per cent.; for Salem the numbers are 22.7 and 41.2 for Tanjore 4.6 and 26. Of course these figures are not strictly comparable, since the periods covered are not exactly the same and since migration probably had considerable influence in modifying the population in the last of these districts. But even if due allowance be made for these causes it must be admitted that registration is still very defective, though there are signs that it is improving.

TURNING next to the statistics for trade we find evidence of satisfactory growth in all directions. The total value of the sea-borne trade of the Presidency amounted to 27 crores 16½ lakhs, an increase of nearly 202 lakhs over that of the previous year. This increase was made up of 110 lakhs under exports and 92 lakhs under imports. The exports of Indian produce and manufactures alone increased by over 91 lakhs, or 6.85 per cent. The articles in which there was an increase were raw cotton (86 lakhs), sugar (26 lakhs), seeds (22 lakhs), indigo (10 lakhs), grain and pulse (8 lakhs), and oils (1 lakh); while there was a decrease in coffee (35 lakhs), spices (15 lakhs), and hides and skins (11 lakhs). The net import of gold during the year was 12½ lakhs.

THE total outlay in irrigation works was nearly 60½ lakhs. The Godavari delta works, which have involved a total capital outlay of Rs. 127,19,245, gave a return of 12.72 per cent.; the Kistna delta scheme, which has cost up to date Rs. 94,96,842, gave a return of 12.28 per cent., the Pennar delta works gave a return of 6.80 per cent.; while the Kurnool Cuddapah Canal with a capital outlay of over 216 lakhs not only returned no interest but showed a deficit of Rs. 48,826. The Cauvery delta works gave the enormous return of 40.61 per cent. on the capital outlay. Seven and a half lakhs were spent during the year on the Periyar project and over three lakhs on the Rushikulya project. Six investigating parties were engaged on the tank restoration scheme in Godavari and Vizaga-

patam and twenty-one and a quarter lakhs have been sanctioned for expenditure in this work since the introduction of the scheme.

THE gross revenue of the Presidency for the year was 1,196 lakhs and the net revenue 195 lakhs. Land revenue collections yielded 494½ lakhs, salt 175½ lakhs, stamps 65 lakhs (the largest on record), abkari 108½ lakhs. Of the minor sources of revenue we need only mention the income-tax which yielded 16½ lakhs, and forests which yielded 15½ lakhs. The cost of collecting the revenue under these various heads is an interesting question. The following are the approximate figures:—Land 9½ per cent., salt 9½ per cent., stamps 2½ per cent., abkari 3½ per cent., income-tax 1 per cent., forests 67 per cent.

EMIGRATION is of comparatively small importance in most of the districts of Madras. Still the statistics are interesting. During 1889, 2,544 emigrants left for Mauritius and 2,215 for Natal. There was no emigration to the French colonies, but 1,653 emigrants returned from them. One disgraceful feature connected with this was the overcrowding of the return emigrants, which caused 23 deaths amongst the 308 who embarked from Guadeloupe, and 34 deaths during the voyage and 11 after reaching Pondicherry amongst the 879 who embarked from Martinique. The savings of the 1,301 adults who landed amounted to Rs. 46,620. As regards emigration to the Straits Settlements, for which the central dépôt is at Negapatam, 2,875 embarked under advances and 15,717 free passengers sailed from Madras, Karikal, Porto Novo, and Negapatam. The number who returned to Karikal from the Straits was 1,517. Emigration to Burmah was, as usual, confined to the districts of Ganjam, Vizagapatam, and Tanjore, and the number for the year was 34,303. The number emigrating to Ceylon from Madras, Tinnevely, and Vizagapatam was 93,219.

THE Report of the College Council for 1890 was read at a meeting held in the Hall of the College on the 10th of April. Among changes of the staff the Report has to notice the resignation of Mr. Patterson on account of ill health. At the time of his resignation Mr. Patterson was on special leave in England, whither he had gone in March 1890 as one of the two men chosen by the Wesleyan Methodist Missions in India to defend them against certain personal charges made in the *Methodist Times*. Mr. Patterson and his colleague Mr. W. H. Findlay completely cleared their brethren of the charges so recklessly brought against them, but at a heavy cost to the College. "For," to quote the words of the Report, "Mr. Patterson, weakened as he already was by long residence in the tropics, was so injured by excessive work at home that, on the expiry of his leave, and even after his passage had been taken, medical advice interposed to forbid his return." The Council records its sincere

sorrow at losing the help of one who has done so much for the College and its students, during his fourteen years of connection with them. Readers of the magazine who have at any time had the benefit of Mr. Patterson's teaching do not need to be told how well he served the College in his professorial capacity, but perhaps they do not all know how well qualified he was to take an active interest in the many details of the management of a large educational institution. The Council will miss his help in matters of this kind no less than they will miss his help in teaching. Old readers of this magazine will not have forgotten the splendid work he did in exposing the Blavatsky frauds—work for which he is far from getting the credit he deserves. Many people, both in the Old World and in the New, have been eager to learn something of the theosophical marvels from the earlier numbers of the magazine, but few, apparently, consider it their duty to give Mr. Patterson his meed of praise.

Mr. Patterson's friends in this country will be glad to learn that he has been called to the charge of an important congregation in Bristol, and will hope that his health will permit him to discharge the duties that will devolve upon him in his new sphere of labour. We feel sure that his interest in the College and in India will not cease because he has had to leave the country, and we have no doubt the Church, to which he belongs will give him many opportunities of making use of the wide experience which he has gained during his stay here.

There is another topic dealt within the Report which deserves the attention of all who are interested in education. In this connection we cannot do better than quote the words of the Report, only adding that we thoroughly agree with all that is said on the subject. Referring to the admission of pupils or students free or at reduced rates, the Report states that seldom in the College and never in the School has there been even an approach to that percentage of free, or partially free, scholars which the educational rules in force allow.

"Still, a little has always hitherto been done in this way. It has been found however—mainly in consequence of the indiscriminate distribution of free scholarships by some colleges—that there is danger of an utter degradation of education in this respect. It has become the fashion with an increasing proportion of the whole body of students—particularly with those who come from certain districts—to beg for what they call 'concessions' with regard to their fees. Some such students have been known to go the round of all the colleges, they could, to see where the largest 'concessions' would be made to them, and sometimes to do this with scarcely so much as a pretence of poverty. The evil has gone so far that, unless decided measures are resorted to, students and their guardians will come to fancy that colleges exist for the purpose of giving free, or all but free, education to every one who does them the honour to attend. In such circumstances, this College feels called upon to make a stand. It would willingly have continued to take

a really poor student now and again either free or at a reduced rate; and possibly, should public feeling become even as healthy as it used to be, it may, at some future period, return to its former practice. But when those concerned become so demoralized that gratuitous education is demanded as a right, the evil must be resolutely dealt with. If a system is utterly abused, it has to be abolished. It was accordingly resolved that no free or half free scholars whatever should be henceforward admitted into either School or College. Some free and some partly free scholars remained throughout the year under review. A few remain still. It is not intended to deprive these of the privilege they enjoy. They will be allowed gradually to disappear, but no others will be taken in their room. The change thus going on made the fees of last year larger by from Rs. 600 to Rs. 700 than they would otherwise have been; and, as the privileged few who remain drop gradually away, it may be expected that the fees will still increase, slightly but appreciably, without any increase of numbers. If other institutions would act similarly, this rapidly growing evil might be suppressed without injury to any one. Such institutions would find, as has been found here, that even the numbers on their rolls would not fall off; and, what is vastly more important, there would be no hardship in the long run to really poor students or their friends. There is no sufficient inducement for the establishment of scholarships open to competition, or for the exercise of private benevolence in other forms, so long as colleges educate for nothing any one who is likely to bring them credit or who begs with sufficient pertinacity. But if colleges withstand the temptation to swell their numbers by remitting or reducing the proper fee, private benevolence will soon furnish all the facilities that ought to be furnished for educating boys who are poor but promising, and a far healthier tone than exists at present may come to prevail in the community at large."

We will refer to two other points noticed in the Report, but only to mention them. The first is the foundation of two prizes by former students, and the second is that steps are being taken towards the preparation of a College Calendar.

At the meeting at which the Report was read the chair was taken by the Hon'ble Mr. Justice Shephard, who, after distributing the prizes, addressed the meeting. He touched upon the leading features of the Report, and specially called attention to the necessity for stamping out the practice referred to in the paragraph which we have quoted. He strongly deprecated indiscriminate almsgiving, as tending to demoralise the recipients and to withdraw many who have not the ability necessary to enable them to profit by a liberal education from pursuits for which they are fitted. At the same time he approved strongly of a system of scholarships which would enable poor boys of decided ability to carry their education to a higher stage than they could without such aid. He sought to impress upon the students the importance of carrying on the process of self-culture after their academic career had come to a close, and called attention to certain facts which indicate that as a rule the educated men of India have not yet realised their duty in this direction.

SOME time ago a number of ladies and gentlemen met at the invitation of Mr. H. B. Grigg, C.I.E., Director of Public Instruction, for the purpose of considering the advisability of establishing a School of Music in Madras. The result of the meeting was that a provisional committee was appointed to draw up a memorandum of articles of association setting forth the objects of the proposed institution. Several meetings were held by this committee, and a detailed scheme of the objects and working of an institution, to be called the Madras School of Music and to be incorporated under the Indian Companies' Act of 1882, was formulated and agreed upon. This scheme, having received the approval of his Excellency the Governor and the members of the Government, was circulated to the public, and a meeting was called for the purpose of formally inaugurating the School of Music. The meeting was held in the Banqueting Hall on Friday, the 24th of April, and was presided over by Mr. Justice Handley, who formed one of the provisional committee, and whose interest in music is well known to the public of Madras. The task of moving the principal resolution was assigned to the Rev. Dr. Miller, C.I.E., who spoke of the proposed institution chiefly in its relation to education.

We do not at present intend to enlarge on the benefits that the Madras School of Music is likely to confer on its members or on the work which lies before it in the development of musical education in this country. It has been a subject of comment and a cause of misgiving with some that the prospectus issued to the public contained no reference to native music, and Dr. Miller, in the course of his speech in the Banqueting Hall, made it clear that he would not give his support to the School if it was to take no cognisance of indigenous music. We think the fact that several native gentlemen have accepted office on the general committee is some guarantee that the School will give attention to the claims of native music. Something has already been done in this direction both by natives and by Europeans, and those who take an interest in the subject will derive much profit from the study of a paper on the principles of Hindu music, contributed to the *Madras Journal of Literature and Science for the Session 1887-88*, by Mons. E. Stradiot. The new School might take up systematically what has as yet been done sporadically by individual lovers of music, and obviously one of the first tasks to which it would have to set itself would be the collection of whatever is of permanent value in the music of the country. It would then be seen whether indigenous music is capable of development, and, if so, in what direction steps should be taken to develop it. It would be seen, for instance, how far certain features of Hindu music, which are very intolerable to Western ears, are mere excrescences due to the caprices of individual performers, and how far they are expressive of national characteristics. If it should be found that they could be removed without altering the

national character of the melodies wherein they are found, a most important step would be gained. For there is undoubtedly much in Hindu music that is worthy of preservation as the expression of shades and depths of feeling which the composers of other countries have seldom expressed. And if the music of India, much of which, as it seems to us, is unutterably sad, be truly expressive of the feelings of the people, the Madras School of Music ought to be proud to take its place among the many agencies now at work for the purpose of making the lives of the people fuller and happier.

THE Report of the Irish Presbyterian Mission in Gujarat and Kattia-war is as usual interesting and instructive. While there have been no large additions to the membership of any of the churches under the control of the Mission there have been several indications of a growth of spiritual life in some of them. Among these may be mentioned the fact that a number of the Christians of Surat have voluntarily formed themselves into a band for the purpose of preaching in the city and the surrounding villages. All the ordinary kinds of missionary work are carried on by the Irish Presbyterian Mission, and in spite of all that has recently been said on the subject of missionary policy, the missionaries have as yet seen no cause to give up any department of work to which they have put their hand. They are firm believers in the efficiency of education as a missionary agency, and in the year under review several new schools were opened.

Many of our readers will no doubt remember that the Mission suffered great annoyance some years ago owing to an irruption of the Salvation Army. The following incident, recorded by the missionary in charge of Anand, is anything but creditable to the officers entrusted with the conduct of the affairs of the Army in this country. The missionary referred to has been accustomed to visit the villages round Anand and the out-stations for evangelistic purposes, and except in the case of one village he has met with courteous and attentive audiences. This village was one in which according to reports widely circulated in this country, large accessions had shortly before been made to the ranks of the Salvation Army from among the Dheds population. The missionary and his native assistants began their usual preaching service in the square of the village, but as soon as the people began to collect, the village officials drove them away, with the result that the preachers found it useless to go on with the service. The village authorities were interviewed and asked for an explanation, and it transpired that there had been several passages of arms between them and the Salvation Army officers concerning the payment of a house tax by the Dheds. According to the village officials the Dheds had joined the Army solely for the purpose of evading this tax, and when the missionary party appeared in the

square, the officials thought they had come to repeat the tactics of the Salvation Army. The missionary afterwards visited the Dhed quarter and satisfied himself that the reports concerning the large number of conversions were quite misleading. When the Dheds discovered that it was impossible to evade the tax they quitted the Army with the unanimity with which they had entered it, and at the time of which we are speaking there was no Army officer to be found in the village.

There is one subject touched upon in the Report which possesses considerable interest at the present time. Four of the Mission stations have as adjuncts agricultural colonies, where converts can support themselves by honest labour. All these colonies are in a flourishing condition. They have proved of great value to the Mission and to those of its church members who have resided in them. But this good result has not been attained without wise direction, watchful care, and patient effort on the part of the missionaries entrusted with their establishment and administration. Experience has shown that while many who, from untoward circumstances, were in a state of poverty in their own villages, have improved the opportunities afforded them, others whose indigence resulted from want of thrift or energy have failed to flourish even when placed in favourable circumstances. The man who by his industry has been able to secure a position of respect among his non-Christian neighbours is the man most likely to thrive in an agricultural colony. It is well that the public should have this experience placed before it at a time when an appeal is being made for the establishment of colonies for India's 'submerged tenth'.

Though the Report of the London Mission, Salem, has nothing very striking to record, either in the way of great accessions to the Church or otherwise, it contains evidence that progress is being made. But like many another mission report it also contains evidence that the agency available is very inadequate for the work that needs to be done. A new department of work was, however, inaugurated in the year under review. Two bible-women, supported from funds specially raised by friends interested in the work, have begun to give instruction to the women of Salem; and so far they have found no difficulty in gaining access to the homes of the people. The native evangelist who has charge of the work in Salem town writes an account of his work which displays a great deal more thoughtfulness and insight than is usually to be found in the reports of native pastors and evangelists. He shows a really intelligent grasp of the principles upon which all true mission work must be based and of the difficulties which must be met in the application of these principles to the circumstances of India. On one point he expresses views which we do not quite understand. When he says that Christians, European and Native, must try as far as possible to put themselves in

touch with non-Christians if they wish to have any influence over them, he affirms what no one will be prepared to deny. But the case is different when he gives it as his opinion, as he certainly appears to do, that this is to be accomplished by means of the *via media* of Dr. Lunn, or by a change of garb, mode of living, and residence. This statement, we believe, has not been borne out either by the actual experience of missionaries or by the testimony of those who have ascertained the views of the people in the matter. The form in which the statement appears in the report under review is, however, somewhat indefinite, and it may be that the meaning of the writer is not exactly what we have taken it to be. We are glad to see that the Mission high school at Salem is in a very flourishing condition. The school is now manned throughout by Christian teachers. Physical education is well attended to, and a properly qualified teacher of gymnastics has just been appointed. Efforts are made to create in the pupils of the school what is much needed in this country—a desire for healthy private reading.

COLLEGE NOTES.

SOME months ago I promised to say something about the examinations of the year, when their results should have been all made public. I do not think, however, that very much needs to be said, beyond stating the facts so far as they bear upon the College. These facts are as well summed up as I could sum them up here in the Council's recently published Report. I shall accordingly quote the paragraphs in which the Council touches on this subject, especially as I find that the Editor is not quoting them in what he says about the Report and the meeting at which it was read. Some, but by no means all, of those for whom I write, will have perused the Report already. I shall add a few remarks on the results of some of the University Examinations. Here is what the Council has said about the whole matter.

"There was a fair amount of success at examinations; but in the results of those conducted by the University, there was less than is desirable of that steadiness which is more important in the interests of true education than great success. In some of the University examinations the number passing was very considerably greater, and in some very considerably smaller, than in other recent years; although the number of candidates at each examination was, except in one case, practically the same. Thus in the Language Branch of the B. A. Examination, 113 passed as against only 88 in the year before. In the various Optional Branches of the same examination taken together, 58 passed, against 52. In these last examinations, however, the very large number of the students who had passed in Language led to there

being an appreciable increase in the number of candidates, so that the 58 of the year under review really represents a smaller proportion of success than the 52 of the year before. At the First Examination in Arts, 88 were successful as against only 54 in the previous year, but in the Matriculation Examination only 42 as against 53 in the preceding year. This variation in results is much to be regretted. It directs far too much attention to mere passing, and leaves the impression that success at examinations is largely an affair of chance. It has thus a strong tendency to lessen or destroy that steady performance of duty and steady attention to the subject studied which are alone valuable for real training. Such variation in results undoubtedly points to a certain failure in the College to do all it aims at doing; but it is not admitted that either the College or its students are alone to blame. It should be borne in mind that the numbers given above refer to none but those who went up for examination directly from the College. A good many more, even of those who matriculated, and a very large number of those who passed the higher examinations, were indebted for their success, some entirely and others almost entirely, to the training they had received at this College.

As regards the honours of the University, the variation was also considerable. It is true that the Christian College Gold Medal, which may be fairly regarded as the highest honour of the University, was again won by one of the students of the College. So also was the Arni Gold Medal in Physics. These however were the only special honours obtained by students of the College this year. Last year the Report recorded that the great majority of the prizes and honours open to general competition had been awarded to those who had graduated from the College. Of this variation, however, it would be unreasonable to complain. It is only natural that students of exceptional ability should in one year be found in one College and in others in another.

It deserves mention that of the six young men who recently passed the examination for the M. A. Degree, three had graduated from the College in former years, and that one of these obtained the Norton prize. In the Higher Grade of the Cator Examination in Scripture, the first four out of the six prizes were gained by students of the third college class, while eight others obtained certificates of having passed the examination with distinction. In the Lower Grade of the same examination, the candidates from the school department obtained eleven certificates of merit."

It is very unfortunate, as the Council says, that there are such great and frequent changes in the results of our University Examinations. At the same time it ought to be remembered that the University of Madras is, so far as I have observed, much more steady in its results than the other Indian Universities, and also that the number passing the various examinations from the College is much more nearly uniform than in the case of most, if not of any, of the other affiliated institutions. This is some consolation, though but a poor one. For no person should be content with being simply *less bad* than his neighbours. Nothing should content any one except being as nearly in a right condition as it is possible for him to be. Whether his neighbours are worse or better than

himself, is a question on which it is not wise for any one to spend a large amount of thought. And when the numbers going up for examination are nearly the same from year to year, things are not at all in a right condition unless the numbers passing are, not of course exactly but pretty nearly, the same also.

It is an interesting question where the blame lies for the unsteadiness of results which, as the Council most justly says, is not only an evil in itself but the fruitful parent of other evils. If I were writing for students alone, I should probably speak only of the share which students have in bringing about this unsteadiness. And their share of the blame is very great. So long as the present bad kind of study prevails,—so long as so many students will not honestly try their best to master the subjects studied but simply 'prepare for examination',—examinees will remain very much at the mercy of examiners. A paper which panders to the evil habits of our students, which lays most weight on points which can be committed to memory from notes, or 'keys', or 'abstracts', in the few days before an examination, will add materially to the number of those who 'get through'. And a paper which deviates from the accustomed track, whether it deviate from it in a good direction or a bad one, will equally increase the number of those who fail.

But, while the faulty method of study which prevails is by far the most important cause of the variation of results, it would not be fair to lay the entire blame on students. As the Council quietly hints, others,—and among them the University and those through whom it works,—are certainly to blame both indirectly and directly. They contribute to the evil indirectly when they lay such stress as they are accustomed to lay on 'passing'. So long as those in authority over them talk as they do about passing examinations, and practically judge every institution by the number of 'passes' from it, it is vain to expect students to judge, to any great extent, by better standards. So long, it is only natural that they should aim at passing by what seem to them the readiest and directest methods, and that large numbers of them should, for that very reason, fail to pass. Thus others as well as students have some blame in this matter indirectly. But others than students are to blame directly also. The chief variations referred to in the Report from the number that ought to have passed, are the much too large number of those who passed the Language Branch of the B.A. Examination, and the much too small number of those who passed the Matriculation Examination. Those who know the facts of the case are well aware that the increase in the number of those who passed the First Examination in Arts is simply a return to something like the ordinary and the right proportion. This is not a proper place for criticising individual papers; but if it were, it would be easy to show that the papers set had a share by no means insignificant in producing the unfortunate results

in the B.A. and Matriculation Examinations. It is to be deeply regretted that our students are so dependent as they are upon the precise character of the papers set to them. If they thought less about passing and more about getting what they study really rooted in their minds, all questions, not outrageously unfair, would be pretty much the same to them. But, things being as they are, there is need of the greatest care that questions should never be such as to encourage mere reliance on memory on the one hand, and yet should never be unintelligible to an average candidate on the other. To put many questions which can be answered by the help of memory alone, obviously increases the evils from which all our education at present suffers. But to put questions in such a form that, at the stage which they have reached, no students except those whose brains are peculiarly agile will see what an examiner is driving at, or to put many questions on mere outlying and unimportant corners of a subject, has an equally powerful effect in making students think that straightforward steady work is of little use for passing, and thus encourages that evil method of study which every examiner as much as every teacher is bound to do his utmost to put an end to.

I thankfully admit that some progress is being made towards a proper style of examination; but it is a progress in which there are many interruptions, and every relapse into a bad style of examination makes other than students responsible in part,—directly as well as indirectly,—for those variations in results which are in every way so mischievous.

There is a good deal of activity in the way of building about the College at present. The work of erecting the new Biological classroom and laboratory which the Council in its Report announced its intention of providing, has fairly got begun. For the information of former students at a distance, I may say that the new erection will be on the roof of the Physical Science classroom, where alone it was found possible to place it with due regard to stability of foundation and at the same time to the necessity of securing proper light for microscopic work. The access will be from the north end of the upper corridor, between the History classroom and the room of the second college class. This entrance will not be so convenient as might be wished. Those who have been students within the last ten years know how that corridor is already overcrowded when classes are in the act of assembling or being dismissed. There are plans under consideration, however, by which something will be done towards lessening this inconvenience or removing it.

I hope that most of the trouble connected with this piece of work will be got over during the vacation. The new erection *ought to be* ready for use when the College reopens in July. Whether it will be so or not, is unfortunately another question.

I am also erecting a new building on the ground in front of the Fenn Hostel, of which the larger part will be for the benefit of the College. At present I shall refer to only a portion of my plan. I intend the new building to contain a hall for the accommodation of the various Societies. The hall will be just across the narrow street from the entrance to the College by the tower. It is meant to be so fitted up and furnished as to be exactly what a place for discussion ought to be, so that the Societies which meet there will feel far more at home, and will accordingly, I hope, be more vigorous, than when meeting in an ordinary classroom. But there are only six, or practically I suppose there are only five, evenings in a college week. Thus only five Societies can find accommodation in my hall, and these will have to arrange for holding their meetings on different evenings. This is a matter to which the Societies should soon begin to turn their thoughts. However, it will be several months yet before this piece of building can be finished.

WILLIAM MILLER

SCIENTIFIC AND LITERARY JOTTINGS.

PROFESSOR W. J. SOLLAS has recently described an ingenious but simple method of determining the specific gravity of small bodies such as a single Foraminifer or a scale from a butterfly's wing. A quantity of a heavy fluid such as cadmium-boro-tungstate or potassium-mercury-iodide solution is taken and diluted till its specific gravity is a little above the estimated specific gravity of the substance to be tested. It is then put into a narrow glass tube with two opposite flattened faces. The tube is about half filled with the fluid and then water is poured in above and the whole left for a few hours, when, owing to diffusion, it will be found that the specific gravity increases uniformly from above downwards. To determine the rate of variation small bodies of different, known specific gravities are dropped in and allowed to sink to the level where the liquid has the same specific gravity as the solid. The body to be tested is then dropped in and when it has come to rest its position is determined by means of a graduated mirror placed outside. From this the specific gravity is at once obtained.

The problem of the direct transformation of radiation in the form of light into electricity is one which is attractive from many points of view. Many experiments have been made on the subject and several methods are known by which light can be made to produce an electric current. Professor Minchin recently communicated to the Physical Society an account of the experiments which he has been carrying on for several

years on this subject and showed a number of extremely interesting results. Photo-electric cells can be prepared with many different substances, but the most effective were got by using selenium on aluminium. To prepare such a cell two small strips of aluminium are taken and one of these is coated with selenium and rendered sensitive by heating in the usual way. Each is then connected with a thin platinum wire and the two are immersed in a small glass cell containing a liquid. Several different liquids were tried with success but the best was found to be acetone. In such a cell, when exposed to light, the sensitive plate is strongly negative to the insensitive plate. A remarkable feature of this cell is that it is sensitive to light of all colours and that the maximum effect is produced in the yellow near the border of the green. Most other photo-electric cells are but slightly sensitive to any light except blue.

The number of hours of bright sunshine in Madras during April was 309 out of 371 hours during which the sun was above the horizon—a percentage of 83.3. This is about 2 per cent. less than last month, but is greater than the percentage for any other month since July. The average bright sunshine for April for the other recording stations in India is as follows:—Lahore 73 per cent., Dehra 55, Allahabad 81, Calcutta 76, and Jeypore 71.

The most interesting astronomical event for this month is the transit of Mercury across the sun's disc on the morning of the 10th instant. The first contact takes place at 5^h 18^m A.M., or 19^m before sunrise at Madras and the internal contact about 5 minutes later, so that by sunrise Mercury will be completely on the disc. Internal contact at egress takes place at 10^h 6^m 53^s and external contact at 10^h 11^m 48^s. The nearest approach of Mercury to the sun's centre is at 7^h 45^m. At that time the distance between the centres will be 12' 34", and since the sun's semi-diameter is 15' 22" it follows that Mercury will be only 3' 18" from the sun's limb. Mercury's diameter at the time of transit is 12". During transit Mercury will be seen as a round black spot on the sun and at sunrise it will probably be possible, if the horizon is free from clouds, to see this spot with opera glasses or a hand telescope without the use of coloured glasses. The simplest way to observe the transit with a telescope is to project the sun's image on a white paper screen held in front of the eye end. By this means it is easy to follow the whole transit without any risk of injuring the eye. Transits of Mercury are of no particular astronomical importance except as giving accurate determinations of the planet's place. During the present century transits of Mercury have occurred in May in 1832, 1845, and 1878, and in November in 1802, 1815, 1822, 1835, 1848, 1861, 1868, and 1881. The next will be on November 10th, 1894.

Amongst interesting astronomical phenomena during the month will be the total eclipse of the moon on May 23, 24. The following are the times for the principal phases:—

First contact with penumbra	23rd	8 ^h 58 ^m	P.M.
First contact with shadow	...	10 2	"
Beginning of total phase	...	11 11	"
Middle of eclipse	...	11 50	"
End of total phase	24th	0 30	A.M.
Last contact with shadow	...	1 38	"
Last contact with penumbra	...	2 43	"

The magnitude of the eclipse (moon's diameter = 1) is 1.299.

Though a total eclipse of the moon is not nearly so interesting as a total eclipse of the sun it is well worthy of observation. The amount of obscuration of the moon differs greatly in different eclipses. Sometimes the moon remains clearly visible, but of a dark coppery colour, all through the total phase. At other times the moon is quite lost to sight to the naked eye. In the total eclipse of 1884, at some stations, the moon was totally invisible to the naked eye, and I find in my own notes the following entry:—"Moon almost vanished during the total phase, only that part which was nearest to the light was visible to the naked eye. Telescope showed whole disc but very faint and hardly any colour."

The Jubilee of the Chemical Society was celebrated on February 24th. The Society was founded on February 23rd, 1841 by twenty-five gentlemen "interested in the prosecution of chemistry," of whom three were present and took part in the jubilee celebration. These were Sir W. Grove, Sir L. Playfair, and Mr. Heisch. The first President was Thomas Graham. The advances made in chemistry during the fifty years that have elapsed since the foundation of the Society formed the subject of the address by the President, Dr. W. J. Russell, and he certainly had a wide theme. Chemistry in its modern form is a new science (though it is true in a sense, as stated by Sir L. Playfair, that "Tubal Cain was a chemist because he was skilled in brass and iron"), for modern chemistry only began when chemists learned to weigh and to measure and had so perfected the balance that they could deal with small quantities with accuracy. At the dinner which followed the celebration, Lord Salisbury, who is an amateur chemist, described chemistry in a way that will hardly be admitted to be correct by workers in other branches of science. Amongst other merits he claimed for it that "more than any other science it is brought into close communion with pure, real fact." The chemist, he said, "can always be certain of his discoveries: all he has to do is to repeat the experiment, and there is no doubt of his discovery. But when a man discovers what happened fifty millions of years ago, it

is not easy to ascertain the exact accuracy of his discovery; and when he discovers all that is going on fifty billions of miles away from us, although there may be much probability in what he teaches, still its certainty is not the same in character with the certainty of the man who can go back to his laboratory and repeat the experiment which he has made." In other words the only side of chemistry which he recognises is that which deals with the actual chemical products which can be seen and handled.

THE Calcutta Microscopical Society suffers—like other Indian scientific societies which might be named—from a difficulty in getting people to attend its meetings. The few who do attend, however, seem usually to get something worth coming for. The recent numbers of the Bulletin contain notes of some interesting papers. Of these we may mention the paper read by Mr. Simmons on the 10th of March, and entitled, 'On the Occurrence in the Fresh-waters of Calcutta of a reticulated *Amoeba* probably identical with *Bionyx vagans*, Leidy, from the fresh waters of North America'.

It is often convenient to be able to change inches into centimetres or centimetres into inches mentally. The usual rough approximation is that 10 centimetres = 4 inches, but this involves an error of nearly 1 part in 60. Prof. Oliver J. Lodge, however, points out that the simple ratio of 33 to 13 is correct to one part in 1,700—an approximation amply sufficient for all ordinary purposes.

A FREQUENT complaint made against landscape photographs is that they dwarf hills or make things look a long way off. Mr. A. Mallock, writing in *Nature*, says that for most photographs this is true and that the explanation is a very simple one depending on the laws of perspective. His explanation is that if a picture be drawn in true perspective for a certain vanishing point then if the eye be at the distance of this point from the picture it will appear of its proper proportions, but if the eye be farther away objects will be reduced in apparent size in the ratio of the true distance to the wrong distance. In the case of a picture the true distance is the focal length of the lens, the wrong distance is the distance of the picture from the eye, which is usually considerably greater. The way to correct the error is to magnify the picture till the right distance to view it from becomes the convenient distance.

DR. PETER BRAIDWOOD, whose father's name must always occupy a place of honour in the annals of Madras missions, has recently been devoting much attention to the subject of hospital ships. This is a portion of a more extensive scheme for a Naval Ambulance Association for

the treatment of the sick and wounded at sea, corresponding to the St. John's Ambulance Association for the treatment of the sick and wounded on shore. With this end in view he has prepared and exhibited models of suitably fitted ships of different types so arranged as to secure economy of space, labour, and time. He claims for these ships that they would serve either as—(a) Ambulance ships, of any size, but in motion; (b) Isolation ships, at anchor, or in motion, for infectious cases; (c) Stationary ships anchored off unhealthy coasts; (d) Convalescent ships, moored near large towns, receiving patients from them and then going off for a longer or shorter cruise.

When not needed for hospital purposes the ships might be used as transports. The arrangements proposed certainly seem to be well devised for the purposes in view.

C. M. S.

MESSRS MACMILLAN AND Co. have now completed their cheap edition of the works of Charles Kingsley. The whole now consists of twenty-nine volumes, at the price of 3s. 6d. each, whereas previously the twenty-eight volumes of the collected works could only be obtained at 6s. each. The extra volume is the one most recently published, *All Saints Day and other Sermons*. There is for the million a re-issue of the sixpenny edition. The very extraordinary sale which the cheapest edition has had is the best evidence possible of the existence of a widespread desire for a cheap, genuinely healthy literature.

MR. ROBERT BUCHANAN has written a new poem, *The Outcast*, which will be published at an early date by Messrs. Chatto and Windus. The text will be illustrated with about a dozen full-page engravings in addition to vignettes, and is divided into four portions named, respectively, 'The First Christmas Eve', 'Madonna', 'The First Haven', and an 'Interlude'. Mr. Buchanan's poetry, if not of the highest rank, is popular, and certainly abundant. A volume published some six years ago containing his collected poems extends to over 530 pages. Mr. Buchanan also appears in a new character as editor of a critical magazine about to be issued under the title of *The Modern Review*, which has for its motto *Quis custodiet ipsos custodes?*

THE *Academy* states that whatever may be the ultimate consequences of the new American law of copyright, the first effect will be to produce a stagnation in the English publishing trade during the next few months. It is announced that the promised edition of Mr. Ruskin's poems will be held back till the law comes into operation, and it is probable that Mrs. Sutherland Orr's *Life of Browning* will be delayed

with the same object. May and June are expected to be bad months for the trade.

Messrs Percival and Co. have just published a *Short History of Greek Philosophy* for students and general readers, by Dr. John Marshall, rector of the Royal High School, Edinburgh. Its main purpose is to give an account of Greek philosophy which, within strict limits of brevity, shall be at once authentic and interesting—authentic, as being based on the original works themselves, interesting as presenting to the ordinary reader the great thoughts of the greatest men of antiquity, on problems of permanent significance and value, in language freed from technicality and abstruseness.

Another life of Mrs. Carlyle has been written by Mrs. Alexander Ireland. It embodies many letters printed after the publication of Mr. Froude's *Letters and Memorials*, and several hitherto unpublished. It is very unlikely that anything yet unpublished will materially modify the impression produced by her already well known correspondence.

RECENT PERIODICAL LITERATURE.

The *Contemporary Review* for April opens with a long article on 'The Savoy Dynasty, the Pope, and the Republic', by 'A Continental Statesman'. The article betrays very considerable acquaintance with the drift of European politics, more particularly with the politics of Italy, and consists of a forcible criticism of the action of the House of Savoy. It is in the main an attack on the German alliance, the king by this treaty "having subordinated all the interests of Italy to those of the Hohenzollerns." After this "monstrous" treaty nothing that could be done was left undone to goad the French to desperation. Incidents were worked up and devices were resorted to to irritate them. Then war had to be prepared for, and in a few months the Italian exchequer was empty, commerce lost the support of France, and the working classes were reduced to starvation.

"The present policy in Italy, whether with armed peace or war, must inevitably

engender revolution which can have no issue but in a republic. This solution would be the only complete one, because it would settle both the religious and the political questions.

The Papacy can never be reconciled with the monarchy. This is more than proved by the events of every day; the peaceable cohabitation of two sovereigns in the same capital, in which one of them lives in a palace torn from the other, is no longer possible. Their several pretensions to sovereign honours and prerogatives must be a never ending source of conflict. It would be otherwise with a Republic. There is not a soul at the Vatican, from the right thinking Pope to the least enlightened of the Monsignori, who seriously believes in the possibility of restoring the temporal power, such as it existed in past centuries. All are intent upon finding a new formula, and the greater number see it in the Republic. A Federal Republic, which would by degrees take in the whole of the Latin world, could not be afraid of the spiritual power of the Pope in the same degree as the Italian monarchy. Likewise the Sovereign Pontiff could not see any ob-

jection to enjoying throughout a Republican Latin confederation prerogatives analogous to those secured to him by the Italian law of guarantees. On this condition alone can the question of the civil and the religious powers, so long insoluble, be solved."

Dr. R. W. Dale appears in a new capacity in sketching the life of Constance Naden, who died at the early age of thirty-one about a year and a half ago. Miss Naden is little known. Though many have heard her name few have read her poetry, and Dr. Dale has done good service in calling attention to it. His closing words are:—

"She died too soon. She achieved much; she promised more; had she lived twenty years longer, I believe that she would have taken a great and enduring place in English literature. Even among the few verses which she wrote there are some, I think, which for several generations at least, will retain their freshness and their charm."

Mr. Edmund Gosse contributes a somewhat indefinite but hopeful article on the 'Influence of Democracy on Literature'. The highest examples of the noblest class of literature have scarcely been affected at all, Browning alone excepted. The most popular poet of the democracy, Tennyson, has not been touched by its influence. The millions have listened to him, as they have done in science to Darwin, but neither Tennyson nor Darwin has made the smallest concession to the judgment of the masses. There is little fear, therefore, that the summits of literature will be submerged by democracy. Even the literature that lies below the summits has not been affected materially in point of quality, though the same cannot be said as regards quantity.

"I have just taken up a volume of humour, the production of a 'funny man' of the moment, and I see on its title page the statement that it is in its one hundred and nineteenth edition. Of this book 119,000 copies have been brought out during a space of time equal to that in which Matthew Arnold sold probably about 119 copies of *Friendship's Garland*. In the face of these facts it is

not possible to say that, though it may buy well, the democracy buys wisely."

Mr. Gosse comes to the conclusion that there is much to cheer and encourage, though there is something that may cause apprehension.

Professor Momerie contributes 'Theology at King's College', an article which will undoubtedly create some interest since it deals with personalities, but which, we imagine, will not promote Prof. Momerie's own interests. It is really an attack on Dr. Wace, though nominally it is a protest for freedom of thought. Many will sympathise with Prof. Momerie's position, who will feel that in this article he has made a mistake. Had he shown a different spirit in the discussion, he would have attracted those whose respect he has already won by his writings. The article consists of a record of the proceedings, by which the Chair of Logic and Metaphysics in King's College was removed from the department of Theology, and confined to the General Literature and Science Departments of the College. This was done because of Mr. Momerie's heresy, lest the theological students should be injured by his teaching. Though we cannot but feel that Mr. Momerie has made a mistake, we are quite at one with him in regarding the action of the Council as foolish in the extreme. It amounts to this. They are prepared to allow the ordinary student to be contaminated by Mr. Momerie's teaching, but the theological student is a hot-house plant whose intellectual opinions must be carefully nurtured. How in the future can the latter prove a trustworthy or sympathetic guide in the world of thought?

M. Camille Flammarion writes on 'The Last Days of the Earth', and gives a fanciful picture of the dying out of the race—the falling asleep of the last pair on the surface of the earth. It ends thus:—

"He (Omegar's dog) called his master and mistress, licked their face and hands and covered them with his body to warm them. But they did not awake.

And the snow continued to fall in a fine powder on to the entire surface of the earth.

2. And the earth continued to turn on its axis night and day, and to float through the immensity of space.

"And the sun continued to shine, but with a reddish and barren light. But long afterwards it became entirely extinguished, and the dark terrestrial cemetery continued to revolve in the night around the enormous invisible black ball.

"And the stars continued to scintillate in the immensity of the heavens.

"And the infinite universe continued to exist with its billions of suns and its billions of living or extinct planets.

"And in all the world peopled with the joys of life, love continued to bloom beneath the smiling glance of the Eternal."

Other articles are 'A Basis of Positive Morality', by P. G. Hamerton; 'Sofa Revisited', by the Right Hon. G. Shaw Lefevre, M.P.; 'National Pensions', by W. Moore Ede; 'The Protection of Wild Birds' Eggs', by T. Digby Pigott, C.B.; 'Anglo-American Copyright', by Sir Frederick Pollock, Bart.; 'The Colonisation Report', by Arnold White; and 'Canada and the States—a Barbed Wire Fence', by Erastus Wiman.

THE Hon. J. W. Fortescue socks in the *Nineteenth Century* to turn up to view 'The Seamy Side of Australia', as a contrast to the picture offered by 'the ordinary globe-trotter' and the 'travelling politician or Imperial federationist'. It is an ungracious task, but it is well that some one should volunteer to bear the opprobrium which the speaker of unpleasant truths is bound to incur. What the writer calls special attention to is the enormous debt of the Australian colonies, their aggregate liabilities in 1888 amounting to close on one hundred and twenty-four million pounds sterling. He admits that the resources of the country far outweigh her debts; but he points to the fact that these resources are not being developed owing to the exclusion of all Chinese immigrants. Australia is meantime "bound hand and foot" to England by public and private debt, a debt which will never be repaid if the labour supply continues to be restricted by a protectionist policy. The danger is lest some day, when the irritation be-

tween the mother-country and her children in the southern seas becomes intense, the cry may be raised: "Why should the colonists be the slaves of the British capitalist?"—and repudiation of the debt be the result. As this, however, is a remote contingency, Mr. Fortescue's counsel meanwhile is for England to "meet the threat of 'cutting the painter' (which the colonists are too ready to resort to) with a quiet assent, and intimate that, as an essential preliminary, an expert financier, with a staff of skilled assistants, will start at once to report on the financial condition of the colonies on behalf of the colonial bond holders."

Prince Kropotkin carries his investigations regarding mutual aid, which he regards as a most important factor in evolution, into a new region this month. He dwells upon the assistance afforded to each other by members of such savage tribes as the Bushmen, the Hottentots, the Papuas, the Eskimos, and others. He says:—

"Wherever we go we find the same sociable manners, the same spirit of solidarity. And when we endeavour to penetrate into the darkness of past ages, we find the same tribal life, the same associations of men, however primitive, for mutual support. Therefore, Darwin was quite right when he saw in man's social qualities the chief factor for his further evolution, and Darwin's vulgarisers are entirely wrong when they maintain the contrary."

'A Stone Book' is the title Miss Bradley gives to her article describing the newly completed north front of Westminster Abbey, which is rich in sculptured figures. Mr. A. P. Laurie endeavours to vindicate the railway men and the New Unionism in opposition to Sir Herbert Maxwell, whose article on the Scottish Strike we thought extremely moderate and self-restrained. 'Is it to be Civil War?' is the question asked by Mr. Laurie. We trust no such national disaster is imminent; the idea is too absurd; but certainly the Railway Directors and their employees, both, must show a little more regard for the convenience of the

public, and the one a little less care for dividends and the other for rights and privileges. Surely some *modus vivendi* can be devised for labour and capital, that the industrial greatness of Britain may be secured.

Mr. Frederic W. H. Myers is somewhat disappointing in his article on 'Science and a Future Life', but, we admit, that is owing to the expectations we had formed. He points to the decadence of the belief in a future life, due to the progress of science and the advance of materialistic speculation; but enters a protest against the assumption that the impossibility of a future life has been demonstrated. He says:—

"The argument (of materialistic science) is, necessarily, a purely negative one; it rests on the absence of positive testimony to any mental energy with which some cerebral change is not directly concomitant. The negative presumption will, therefore, be shaken if accepted notions as to man's personality are shown to be gravely defective, while it will be at once overthrown if positive evidence to man's survival of bodily death can in any way be acquired."

Mr. Myers makes a strong appeal for a scientific investigation of the facts of 'unconscious mental modifications', and thinks that much more may yet be made of mesmerism, telepathy, and the theory of 'brain-waves'. The paper contains a very apt and fresh application of the familiar illustration of the caterpillar and the image.

The Duke of Argyll has a word to say on Mr. Huxley's reference to him in his article last month. The reference was offensive, and this is how his Grace characterises it: "Like certain combatants of the Celestial Empire (Mr. Huxley) throws a malodorous missile at his opponent and retires." He then recounts the whole story about Dr. John Murray's refutation of Darwin's theory of the formation of coral reefs and the attempt made to suppress it. Mr. Gladstone has a brief letter in reply also to Mr. Huxley. The latter, it seems, claimed to distinguish between the actions of Christ and those ascribed to him by the Evangelists, and Mr. Gladstone

had been taken to account for not preserving the distinction. Mr. Gladstone expresses his regret in these words:—

"I sincerely regretted the fault I had committed, and I regret it all the more when I perceive how broadly he draws on his own behalf the distinction between an attack upon our Saviour in Himself, and an attack upon the narrative conveyed to us by the three Evangelists; and how laudably desirous he is not to compromise in any point that respect and veneration, the strength and sincerity of which on his part I gladly acknowledge."

UNLIKE those monthlies which open their pages to writers of all shades of opinion, and become the arena where Professor Huxley and Mr. Gladstone or any other pair of gladiators may disport themselves, the *Westminster Review* pursues the even tenor of its way and consistently preaches the doctrines of the old philosophical radicalism. The current number is a very typical one. The articles are distinctly aggressive and yet heavy, and in spite of the tone of superiority that runs through them, they cannot be said to contain anything very new or fresh. 'The Rearguard of the Christian Army', by Mr. Geoffrey Mortimer, to which the first place is given, is an attack upon those members and sections of the Christian Church which refuse to move a step beyond the positions which were reached in the middle of the seventeenth century. Mr. Mortimer's article is largely made up of quotations from the writings of men of the most extreme school of religious thought, and while it is impossible to agree or sympathise with much that he says on the subject, one cannot but regret that those who arrogate to themselves the epithet 'evangelical' should so often by their utterances justify the hard things that have been said of them. 'Woman and Negro Suffrage', by Ellen Battelle Dietrick, is an answer to Alice Bodington's article on the 'Importance of Race' which appeared in the October number of this Review. The authoress denounces the proposal to disenfranchise the negro citizens of the great republic, and asserts that

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if instead of this being done the franchise were bestowed on all women in the country, black and white alike, the negro question and all other difficult problems would be solved.

The third article is also by a lady, being the continuation of Emily Glode Ellis's attack on 'The Fetish of Charity.' The main contention in this article is that the magnificent charities and the appalling amount of pauperism in Great Britain are no less closely connected than cause and effect. There is much truth in the writer's remark that it is not the most deserving but the most importunate

who receive charity. The unfortunate thing is that most people know this and yet go on giving to the importunate.

The independent section contains an article by Mr. D. M. Stevenson in praise of General Booth and his scheme. In addition to the articles mentioned and the usual reviews of contemporary literature this *Westminster* contains articles on 'Marriage Institutions', by William Schooling, F. R. A. S.; 'A Zoologist among the Idealists', by Mr. Edward Chamier; and 'Ibsen's *Brand*', by the Rev. R. A. Armstrong, B.A.

CORRESPONDENCE.

THE CHRISTIAN CONCEPTION OF GOD'S DEALINGS WITH MANKIND.

DEAR SIR,

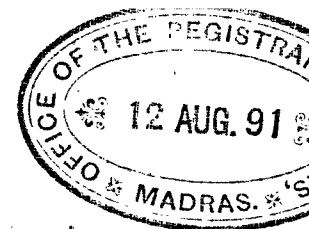
MAY a plain man who understands nothing about "synthetical and antithetical stand-points," heartily thank Dr. Miller for his latest utterances on the 'Christian Conception of God's Dealings with Mankind'? They have largely cleared away heavy clouds that were caused by his lectures: clouds doubtless due to the difficulty and impossibility pointed out by himself of perfectly translating our thoughts into words.

It may to some minds be interesting to speculate about those who have never heard the gospel message. That they will not be judged for not believing is very clear, for, "How can they believe except they hear?" asks the apostle. But after all, this is only speculation. The case is surely very different, when we come to those, who, hearing, have rejected. Here the great Judge Himself clearly gives us His view of the matter. "This is the condemnation," said the Lord Christ to Nicodemus, "that light is come into the world, and men love darkness rather than light because their deeds were evil." Knowingly to reject Christ, then, is to love darkness, and willingly to choose the evil in preference to the good. Whereas he that accepts Him, believes, loves, obeys,

is baptized. When the Lord has clearly said, "He that believeth and is baptized shall be saved," surely Mr. Painter would never dare to proclaim to all that salvation is given to him that believeth not and is baptized, nor would Mr. Cobban dare to promise salvation to him that believeth and is not baptized (willfully refuses baptism).

In conclusion I must express my great surprise at Mr. Cobban's challenge to Mr. Painter (who, by the way, is now in England) to quote half a dozen instances of baptism following belief except in the case of Jews and proselytes. Let him carefully read Acts x., where St. Peter finds many that were come together (v. 27) in Cornelius' house, evidently Gentiles from the sermon and history, and how the Holy Ghost fell on "all that heard the words" (v. 44), and consequently these many were baptized (v. 48). I cannot say with Mr. Painter that the 'many' amounted to hundreds; but they were nearer that number than Mr. Cobban's half dozen. Then in Corinth, where the Jews would not hear the Gospel (Acts xviii.), and Paul turned to the Gentiles, does not 1 Cor. i. naturally lead us to suppose that though Paul baptized only a few, many were baptized? It is not Mr. Painter that has "paid scant attention to facts."

HENRY SCHAFFTER.



THE MADRAS CHRISTIAN COLLEGE MAGAZINE.

JUNE, 1891.

PRIESTHOOD.

THE so-called periods of geology are, when viewed in isolation, at once terrible and inexplicable. All is struggle and confusion in which neither plan nor purpose can be discerned. It is the same with history. If we take a period by itself and study its customs, institutions, and laws, we are filled with a strange doubt and perplexity. Injustice and oppression triumph, kings and priests and nobles work their will, the poor suffer and die, for the most part in silence: society appears a mere chaos of cunning and cruelty. It is not really so. A wider range of vision and a glance that penetrates beneath the surface of things, reveal in the midst of all that seems inexplicable, a divine idea slowly but surely realizing itself, and that not in spite of, but by means of the confusion and strife, the wrong and injustice, which perplex us so sadly. In history as in geology to isolate a phenomenon is to put an end to all possibility of recognizing its significance. If we wish to understand the origin of any custom or institution, or the reason of its existence, we must study it in relation to its environment, and not only in relation to its immediate environment, but with reference also to the general development of the society in which it has occurred. We shall thus escape from many of the difficulties, which are so apt to perplex those who seek to find a meaning in the history of the past, and although much may still remain inexplicable, most of what seemed at first sight, purely reactionary and utterly unreasonable, will be found to have had a reason for its existence and to have been a necessary element in the development of a higher social life. Humanity, like nature, lies in the hand of God, to be shaped and fashioned, according to the good pleasure of His will; and could we but look deep enough, we should find that there never yet has

existed an institution altogether meaningless, or one which has not, by its success or by its failure, contributed at least to some extent to the progress of the human race.

The priest holds a commanding position in the world's history. The past contains no more terrible, no more impressive figure. He stands, a man above men, claiming to mediate between man and God—to be the one way of approach to God, the one channel through which the Divine grace comes to men. In his presence, kings and chiefs sink into comparative insignificance; their sway is partial, it does not reach beyond the limits of the outward circumstances of life; his is complete, he binds men soul and body, claiming to hold within his hand their destinies, not for time only, but for eternity. His is an absolute authority, for against his decision there is no appeal: mind, heart and conscience, crouch like whipped hounds at his feet. It is hard to see a reason for the existence of such an institution, still harder to see how it could have in any way contributed to the progress of humanity. The priest seems, like those terrible monsters which geology reveals to us, a being purely negative in his functions, a mere shadow cast upon human life. If the history of religion were nothing more than a history of the priest there would be some justification for the opinion that religion is but the feverish dream of men crazed by the misery of their lot, for the history of the priest reveals little else than pride, arrogance and unrestrained ambition on the one side, ignorance, superstition and voluntary self-abasement on the other. Progress has always been in spite of the priest, and where social and religious life have reached a high state of development, this is as a rule the result of a struggle in which the power and pretensions of the priesthood have been repressed, and the priest compelled to give place to the man.

But this is not the whole truth. If the sacerdotal idea were due to no other cause than the pride and presumption of a certain class of men, it would be impossible to account for its almost universal prevalence and its persistence through almost every stage of social development. No wholly irrational idea has ever had a wide spread and well-nigh permanent influence over the minds of men. Priesthood has prevailed in almost every age, and persisted through almost every stage of culture, because it is founded not on an unconscious delusion, still less on conscious deceit, but on one of the great basal facts of human experience. Like sacrifice it has its origin in man's sense of sin and consciousness of alienation from God. Man feels his need of God, and yet shrinks from his presence. He

sees, though it may be but dimly, that only by the divine favour can it be well with him, but he cannot escape the conviction, that by his sin he has brought upon himself the righteous anger of God and become unworthy to receive any blessing at His hand. He seeks by prayers, by offerings, by self inflicted pains to appease offended Deity, and regain the position he has lost, but in spite of all his efforts, he becomes, as experience matures, more and more crushed with a sense of his own worthlessness, and inability to bridge over the great gulf that lies between himself, the finite and sinful, and the infinite God. His prayers, his offerings, his austerities, all these have in them an element of defect, which destroys their efficacy, for all are the acts of one, who however much in earnest, is a sinner, guilty in the sight of God. It is this conviction of his own inherent worthlessness, that leads man to feel his need of a mediator. Conscious of the fruitlessness of his own individual efforts, he seeks to find some one fit to act as his representative, and perform in a worthy manner those acts which he considers likely to win the Divine favour.

In the earlier stages of religious development priestly functions were associated not with a distinct priestly class, but with those who might be regarded as naturally representative of the various sections into which society is divided—the father, the chief, and the king. This arrangement has in most cases been comparatively short-lived, for even in the ruder forms of society, we find a tendency towards the separation of secular and religious functions, and the creation of a priestly class. This is what might be expected. Once assume—a most amazing assumption—that a man can acquire an official standing which, apart from any personal merit, qualifies him for the fit performance of religious duties, and the inevitable result is the institution of a class or caste, the members of which are supposed to possess absolute authority in religious matters, and to stand as mediators between man and God. The history of India shows, better probably than the history of any other country, the natural results of the institution of such a class. Priestcraft never devised a system better fit to minister to the pride and insolence of the priest, and encourage him in making the most absurdly extravagant claims, than that which, after passing through various phases, became finally and firmly established in India some centuries before the commencement of the Christian era. We have but to look into Manu's Dharmasastra to see how sacerdotalism, when allowed a full and natural development, condemns a

people to a degrading spiritual bondage and places the priest in a position in which he can gratify his worst passions, and ignore even the most ordinary requirements of morality. He who at first held a delegated authority and performed delegated duties, forgets and in time denies, his relationship to other men, and finally forms such an exaggerated conception of his own powers, that he does not shrink from blasphemously asserting his lordship over gods as well as men. Humanity revolts against such claims, and strives, through too often feebly and spasmodically, to free itself from a thralldom so degrading.

Even in India priestly assumption was not left unchallenged. In the 5th, or 6th, century before Christ, there arose a great and widespread revolutionary movement, which aimed at an overthrow of the supremacy of the priests, and the destruction of the caste system, which was their chief bulwark against popular discontent. Buddha gave voice to the sentiments of thousands, when he declared war against the priests and proclaimed, in opposition to their teaching, that all men are brothers. His teaching appealed so forcibly to men groaning under the intolerable yoke of the Brahmins, that, in spite of its many and serious defects, it spread with amazing rapidity, and gained such a hold upon the masses of the people, that within a century and a half, it became the acknowledged creed of at least half of the population of India. Success so brilliant would seem to augur swift and certain victory, but, strange to say, it proved the precursor of disastrous defeat. Men cannot be satisfied by negations, and Buddhism, like most revolutionary movements, was much stronger on the negative than on the positive side. As a protest against the pride and oppression of the priests, it found an echo in the hearts of the people and rapidly won their adhesion: as a theory of existence, a religion to strengthen men in the struggle of life and prepare them for the approach of death, it proved a dismal failure. In these days when an emasculated Buddhism, as pretentious as it is hollow, is being put forth as a final solution of the problem of existence, it is well to recall for a moment the history of Buddhism in India. We need no other proof of the inadequacy of a system which fails to take account of man's sense of alienation from God and his desire for a mediator. The priest may be proud, insolent and rapacious, a tyrant rather than a teacher, but he knows human nature, and can laugh at all such attempts to overthrow his authority. He can only be set aside by being superseded. Men may protest until their lips are weary, but their protests are useless

unless they can devise some method by which a guilty conscience can be set at rest by assurance of the divine forgiveness.

When we turn from Hinduism to Judaism we find fresh proof of the truth of this statement. Judea like India was overshadowed by the priest. The priesthood was born simultaneously with the nation. It had its origin in those wonderful forty years of wilderness wanderings, during which a number of servile tribes became welded into a great nation. One tribe was set apart for the performance of priestly functions. Its members, thus separated from their fellows, were considered representatives of the nation as a whole, and were authorized to offer sacrifices for their brethren and assure those who were penitent of the divine forgiveness. The duties and privileges of this priestly class were carefully defined, and every precaution was taken to prevent its members, from abusing their power, but in spite of this sacerdotalism took much the same course in Judea as in other lands, and the priest became at length a hindrance rather than a help to the religious life of the nation. The prophets, who appeared as the exponents of the spiritual as opposed to the ceremonial, while admitting the necessity of the sacerdotal system, denounced in the strongest language the assumption of the priests, and protested against the notion that official sanctity could take the place of personal holiness. They saw clearly that the sacerdotal and sacrificial system, however valuable as an aid to devotion, was not, and could not be, an ultimate solution of the problem of human guilt, but they were unable to find anything to take its place and were obliged to content themselves with a protest against the tyranny of outward form, and an assertion of the absolute necessity of a pure and righteous life. Their teaching, though it created and fostered the idea of purely spiritual religion, was by no means subversive of sacerdotalism, and did not in any way diminish the authority of the priests, who were never more powerful than in the period following the last great outburst of prophecy, three hundred years before the birth of Christ.

When Christ came, he adopted a position which called forth the most determined opposition of the Jewish priesthood. He did not directly assail the priests, except when he condemned their misuse of power, he simply ignored them, and setting aside the forms and ceremonies to which they attached so much importance, urged upon men the supreme importance of repentance and faith. Jesus did not overlook the fact of man's guilt, or treat his sense of alienation from God as a mere delusion to be dispelled by the light of a higher

By Christ's perfect realization of the priestly ideal, and final satisfaction of all man's needs, He has made human mediation, not only unnecessary but unreasonable, for He has broken down the barrier between man and God, and in Him we stand free and erect, face to face with our Heavenly Father.

Sacerdotalism is entirely opposed to the spirit of Christianity. Its existence in the Christian church involves not only a surrender of the privileges won by the death of our Lord, but a direct usurpation of His authority and an insult to His person. If it were not that history shows how very slow men are to realize the significance of a new truth, and bring their thoughts into harmony with it, we should be at a loss to understand, how the idea of an official priestly class could possibly have survived among professed Christians. The New Testament does not contain a single passage which might even be supposed to warrant so flagrant a departure from the teaching of Christ. The apostles, to whom was entrusted the task of moulding the infant life of the church in accordance with the ideas of their divine master, have in their published letters, dealt very fully with the nature of the church and the duties of her members, but not one of them, even by a word, so much as suggests the notion that any particular class of persons in the church, had an exclusive right to be called priests. Although they give somewhat minute directions for the guidance of the various office-bearers in the church, they never speak of such office-bearers as priests, or attribute to them a single priestly function. This refusal to give the slightest countenance to sacerdotalism is the more remarkable, when we remember that the apostles, like all other Jews, must have been accustomed to consider priestly mediation absolutely essential to the service of God, and yet it is only what was to be expected from men who had grasped the meaning of the life of Jesus and were inspired by His spirit. Jesus absolutely ignored social distinctions, even those which seem to many essential to the existence of society, and taught very clearly and emphatically that all men, however much their outward circumstances may differ, are brothers, equal in the sight of God. He made no provision for a recognition of ranks and degrees in the society which he founded, but offered to all His followers equal rights and equal privileges: nay more, knowing that even His disciples would not be wholly free from the influence of pride and envy, He expressly forbids them to acknowledge such distinctions, warns them, against surrendering their rights, by recognizing

any man or class of men as their spiritual superiors. "Be ye not called Rabbi," He says, "for one is your master, even Christ, and all ye are brethren." No section of the Christian church can lay claim to privileges denied to their brethren for all true believers, all, that is to say, who by faith are united to Christ, are by virtue of their union with Him, sharers in the privileges which he enjoys. Because they share in the divine life of their Lord and Master, a name, never applied to a particular class in the church, is applied to the whole body of believers. "They are called 'kings and priests', 'a holy priesthood,' and 'a royal priesthood', and this not in a vague indefinite manner, but so as to make it clear that all true followers of Christ are in the same sense, sharers in the priestly dignity of their master. There are few doctrines which need to be more strongly emphasised than this of the priesthood of believers. We are all too much inclined to perform our religious duties by deputy. We take it for granted that there are two ideals, one for the secular many, the other for the religious few, and persuade ourselves that by securing the vicarious services of those who are officially religious, we can discharge our duty to God, even though our whole life be spent in consistent self-seeking. There could be no greater error than this. It is a shirking of responsibility, a base surrender of privileges. All Christians are God-appointed priests, and as such are called to enjoy the privileges and perform the duties once associated with the members of a priestly class.

To speak first of the privileges enjoyed by believers as priests—all believers have, we are taught, the right of direct communication with God their Heavenly Father, not only at stated times and in connection with certain established institutions, but at all times and in all circumstances. We need no official to carry our petitions to our Father or to introduce us to His presence, for "in Him we have boldness and access with confidence through faith in Him." Because we have the right of access to God, we are free from all authority in spiritual things. Christ did not commit His truth into the hands of an official class, to be granted or withheld at pleasure, but placed it within the reach of the humblest of His followers. All believers have the right of private judgment and can, though in themselves ignorant of much, attain to spiritual truth by the help of the Divine spirit which is freely given to all who sincerely desire it. The followers of Christ can truly say "We are in bondage to no man," for they are free in thought as in action, and have to give answer to their master alone. None can deprive

us of this glorious heritage, it cannot possibly be lost except by our own voluntary act of surrender. One thing however must be noted. This freedom, with the peace and joy which flow from it, can only be enjoyed by those who accept the responsibility which accompanies it. If we wish to enjoy the privileges, we must perform the duties of the Christian priesthood. Priesthood implies consecration. The priest is emphatically a man set apart to the service of God. Under the old systems, this fact was expressed by a multitude of initiatory rites. These have lost their significance, and in many cases ceased to exist, but the truth they embodied is unchangeable. We must break the bonds of custom and convention, we must reject the authority of the world and renounce its pleasures, if we wish to enjoy the life of freedom to which Christ has called us. And this is not all: we must surrender what is dearer to us than all else, our self-will, and become in all things subject to the will of God. "Whosoever he be of you" Jesus says, "that forsaketh not all that that he hath cannot be my disciple," and "whosoever will save his life, shall lose it: but whosoever shall lose his life for my sake, the same shall save it." "I beseech you, therefore, brethren, by the mercies of God," said Paul, "that ye present your bodies a living sacrifice, holy and acceptable unto God, which is your reasonable service." This is the one and only sacrifice which we can offer to God. Since Jesus gave Himself for men, all other sacrifices have lost their value. Those who seek to revive them, mock instead of honouring God. Consecration has its natural outcome in a life of self-sacrifice. If we are true followers of Christ suffering will come to us independently of our own will, as the direct and necessary consequence of our union with Him. He was a man of sorrows and bore upon His heart the burden of a whole world's sin and woe and if we love Him, we cannot but drink of the cup of which He drank, and be baptised with the baptism with which He was baptised. In proportion as we understand His teaching, and sympathise with His aims, we experience the "fellowship of His sufferings," and bear as He did a burden of sorrow and sin.

But this passive endurance is not all that is required of the Christian priest. Self-sacrifice must find expression in active effort for the good of our fellowmen. The fact that we are required to sacrifice ourselves for our fellowmen distinguishes Christian self-sacrifice from asceticism and ceremonialism, the two methods by which sacerdotalism usually seeks to give expression to its piety. Unfortunately many people are still unable to recognize this dis-

tinguishment. They think that prayers, and fasts, and what are called religious observances are the grand essentials of the Christian life, the surest means of winning the divine approbation. This idea has done more to debase the moral and spiritual life of Christendom than any or all of the doctrinal errors which have agitated the church. It is diametrically opposed to the teaching and practice of our Lord. He was neither an ascetic nor a ceremonialist but lived a simple, natural life, making Himself the servant of all, and shrinking from no exertion however arduous by which he might help or heal, even the lowliest of the men and women among whom He lived. "He left us an example that we might follow in His steps," and if we wish to love and serve Him, we must live as He lived. The day of fasts and ceremonies and all their profitless accompaniments, is gone by, and with the life of our Lord before our eyes, and His "Bear ye one another's burdens," ringing in our ears, we can no longer deceive ourselves into supposing that God will accept such pitiful pretexts in place of the service to which He has called us. We are meant to carry on the work which our Master commenced, or perhaps we should rather say, to be co-workers with our Master in the work in which He is engaged. He means us to be helpers and saviours of men, to feed the hungry, to clothe the naked, to teach the ignorant, to uplift the fallen, to seek and to save those who are lost. The Christian priest must be patient and humble, he must think much of others and little of himself, he must be ready to sacrifice himself for others in the little as well as in the great things of life. As one who was a true philosopher and good Christian says "whatsoever unpleasant, hard and vile work is anywhere, from the which labour, loathsomeness and desperation doth fray others, all that he takes upon himself willing and gladly."

Why is this ideal so seldom realized? How is that the world is still in bondage to the old forms and false, fruitless, conventional ideas of life? The chief cause is the sloth, indolence and selfishness of those who profess to be followers of Christ. Christians have forgotten the teaching of their Master, and have not only condoned the injustice and inequality which prevail in society, but have, in opposition to His plainest commands, renounced their liberty and given themselves up to the bondage of ceremonies and institutions. We are still far, very far from the ideal of Christ, but, in spite of all obstacles, we are moving towards it. It could not be expected that an ideal society should spring forth, in the twinkling of an eye, as Athene sprang full-armed from the head of Zeus. God

works by no hasty methods, but rather like some wise sculptor, who, stroke by stroke, hews the rough block of stone into some form divine. He works slowly, but very surely, accomplishing His plans even by means of the very circumstances which seem most opposed to their fulfilment. To those who can grasp the meaning of this age, it is plain that many of the old false notions which have so long been a burden upon the soul, the ideas born of social and religious inequality, are fast disappearing, and that men are beginning to rise to a realization of the privileges won for them by their brother Christ. Times of reaction may come, but if we believe in a living present Christ, we cannot doubt, that His grand ideal brotherhood will one day be realized on earth, when all men freed from their self imposed bondage shall enter by His grace into the glorious liberty of the children of God.

W. HOWARD CAMPBELL.

TEN YEARS OF LITIGATION.

A case of disputed succession in the bishopric of a Christian church running the gauntlet of a series of law-courts* in which most of the judges were non-Christian, is a phenomenon of considerable historical, as well as legal, interest. The leading parties in the case were Mar Dionysius Joseph, plaintiff or plaintiff-respondent, and Mar Athanasius Thomas, defendant or defendant-appellant. On the death of Mar Athanasius Matthew, the latter had quietly entered on the office of metran, discharging all the duties thereof and managing, along with two others, the trust-property for the benefit of the Syrian community. To oust Mar Athanasius Thomas from the position which he had thus acquired, and to secure the recognition of his own episcopal dignity and the management of the trust-property were the objects Mar Dionysius Joseph had in view. His plea was that he had been duly consecrated metran of

* The Courts, the periods during which this case was on their respective files, and the names of the judges are here mentioned:—1. The Zilla Court of Alleppy, or Court of First Instance, 1870-84: Mr. Justice Lafrenais, and Mr. Justice Krishna Menon. 2. The High Court of Travancore, or Court of First Appeal, 1884-86: Mr. Justice Narayana Pillay, and Mr. Justice Ariyanayagam Pillay. 3. The Royal Court of Travancore, or Court of Final Appeal, 1886-89: The Chief Justice, Mr. Justice Ormsby, and Mr. Justice Sitarama Iyer. The names of the Christian judges are printed in italics. The second of these three was a Roman Catholic.

Malankarai by the Jacobite Patriarch of Antioch in 1865; that he had been appointed president of the Syrian Association Committee; that he had been accepted by the Syrian community; and that, although during the life-time of Mar Athanasius Matthew he had been unable, owing to circumstances over which he had no control, to assert his rights and enter on his office, he was entitled at least on the death of that prelate to have his position recognised and to receive facilities for accession to office. The contention on behalf of Mar Athanasius Thomas was that he had been, in accordance with use and wont, consecrated by his brother in 1868 with the approbation of the Syrian community; that, when his brother died in 1877, he had, in accordance with the terms of his will, entered on the management of the trust-property; and that he had discharged the duties of the office of metran for nearly two years before the institution of this suit. Judgment in each court was given in favour of the plaintiff, with this modification however that, in the Court of Final Appeal, the English judge dissented from the finding of the two Hindu judges, and decided in favour of the defendant.*

In the course of these ten anxious years, many strange things came about. One of the most interesting, though most irrelevant items in the proceedings was a series of issues involving questions of heresy. Though there was no reference to heresy in the plaint, though no supplementary plaint was put in, and though no motion was made to amend the plaint, still some crude issues on the subject were irregularly imported into the record. The only judge that thought them worthy of discussion on the merits was Mr. Justice Ariyanayagam Pillay. He discussed them with that amount of learning which Pope dubbed a dangerous thing, and with that sort of zeal which St. Paul attributed to many of his kindred. He found it proved that invocation of saints, adoration of the Virgin, and prayers for the dead, had been deliberately omitted by the late Mar Athanasius Matthew from certain service-books of the Syrian Church, and that these omissions were approved of by the defendant. But he did not enquire how the said doctrines had got into the Syrian service-books, or whether there existed any standard of Syrian doctrine similar to the Thirty-nine Articles, or the Westminster Con-

* This article is mainly a review of the judgments of (1) Mr. Justice Ormsby, and (2) The Chief Justice and Mr. Justice Sitarama Iyer—printed at the Keraladayam Press, Trivandrum, 1890.

fession of Faith, by which to test whether the said omissions were or were not a return to ancient Syrian orthodoxy. He was probably not aware that the doctrines in question were all foisted on the Syrians by their Roman Catholic oppressors at the Synod of Diamper in 1599; he would probably have refused to admit that the Syrians acquired the right to eliminate all Roman elements from their creed when they threw off the Roman yoke at the Coonen Cross in 1653; and he would probably have denied that the Syrian Church, which was no more beholden to the Patriarch of Antioch for a system of doctrine than to the Archbishop of Canterbury, had the right to make from time to time in a regular manner such changes in its creed as its own wisdom might dictate, irrespective of foreign intervention. He therefore concluded that a person with the defendant's views could not only not be a bishop, but he could not even be a member of the Syrian Church. It followed of course that the defendant and his adherents were not Syrians at all, and so were disqualified for making any claim to the plaint property. This decision, or rather fragment of a decision, was, however, unanimously set at naught by the Royal Court, and the issues on Articles of Faith rejected as irrelevant. But Mr. Justice Arianayagom Pillay's eloquence probably prejudiced the defendant in the same way as a dog's interests are damaged when one gives him a bad name.

But the great issue in the case was whether the plaintiff was the lawfully appointed metropolitan of Malankarai and whether he was as such entitled to recover possession of the properties specified in the plaint.* Both parties agreed in their respective pleadings that to constitute a duly appointed metropolitan of the Syrian church two conditions must be fulfilled, viz., (1) proper consecration, and (2) acceptance or acknowledgment by the people.

I.

With reference to the requisite consecration, both parties agreed that it must be performed by a bishop belonging to a church holding the apostolic succession by imposition of hands. But plaintiff-respondent affirmed and defendant-appellant denied that such conse-

* The properties consisted of (a) certain lands, the seminary, the church, and other buildings, valued at 72,700 fanams. (b) Funded moneys, articles of furniture, and other moveable property, valued at 313,132½ fanams. (c) Mitres, crosses, staves, jewels, with vestments and other paraphernalia belonging to the Syrian metran as such, the whole valued at 9,300 fanams. The total value of the contested property was therefore 425,432½ fanams, or about Rs. 59,710.

cration must be either by the Jacobite Patriarch of Antioch or by some bishop duly authorised by that Patriarch to make the consecration. No issue could be more distinct, but the disposal of it involves a somewhat elaborate investigation; for no authoritative canons of the church or books of procedure were produced by either side to show what was the state of the law within the Syrian Church, the fact being that the Syrians of Malankarai never possessed any code of laws, or, if they did, the code must have been lost.* The only course remaining therefore was to find out the Syrian 'use and wont' in affairs ecclesiastical by referring to such works on the history of the Syrian Church as were available, and by calling such witnesses as could speak to the past practice of the church. In both these lines of research the courts were particularly unfortunate. The quasi-historical works that were filed are most unsatisfactory productions, three-fourths of them moreover having been written after the controversy that led to this litigation was begun†; and most of the witnesses‡ were

* It was maintained in evidence by the defendant-appellant that a Syriac manuscript existed in the time of Mar Athanasius Matthew, which had unfortunately been stolen. It was said to contain "the history of the meeting of the Fathers of Malankarai to draw up canons." It was also described as having been "written and left behind by the primitive metrans of Malankarai," the writing having been "kept up by metrans after metrans from time to time." From what metran's time it began, or at what metran's time it ended, witness could not affirm. But "looking at those papers, they appeared to be 1,500 or 1,400 years old. Those of the least age would be between 40 and 50 years old." Well may we ask incredulously, Is the defendant-appellant also among the experts? Nevertheless the Chief Justice and Mr. Justice Sitarama Iyer, who disbelieved the story of the theft, believed the assertion that some of the papers (?) were 1,500 years old. They were willing even to add to their great age; for they obligingly inform us that "the existence of a manuscript history of the Malankarai Syrian Church almost from the second or third century in the seminary in the possession of the appellant, and its antiquity, and authenticity admit of no doubt. That such a record will satisfactorily and conclusively solve the question now under consideration equally admits of no doubt."!! *Credat Judex.*

† The work on which the plaintiff most relied and which seems to have been mainly followed by the two learned Hindu judges in the Royal Court, though considered inadmissible by Dr. Ormsby, was a *History of the Syrian Christians*, published in 1869 by Ittaop. It is written in Malayalam and has never been translated. It follows the lines of all the local traditions.

‡ "It may be objected that all this evidence is open to suspicion as the testimony of partisans. The objection is not without foundation. It may be said that all, or almost all, the evidence in this case is open to like objection. Indeed, having critically examined it, I entertain no doubt that a very great part of the oral evidence adduced on both sides is altogether worthless."—Ormsby, pp. 95, 96.

either so ignorant or so prejudiced that their testimony was worthless.

Both parties strongly, though of course erroneously (and, be it added, quite harmlessly, so far as the interests of this particular case are concerned) maintained that the church of Malabar was founded by St. Thomas, the Apostle, in the first Christian century, so that it was at the first an independent local church. But how long it remained independent of foreign control, neither party could make out exactly to its own satisfaction, though both agreed that it did in course of time become dependent on a foreign church. The Chief Justice and Mr. Justice Sitarama Iyer, the two Hindu judges in the Royal Court, seem to think there is reason to believe that from a very early date indeed the Indian Syrian Church became subject to the Church of Antioch, and that this relation to Antioch was quite firmly established by the date of the first General Council at Nicæa (325). These two judges describe the Council in a manner which must be pronounced at least uncommon. With the help of Ittoop, they find that "the Council of Nice among other matters relating to the revival and establishment of Christianity, revision of the Scriptures (!), and framing a code of faith and rituals, &c., settled the jurisdiction of the several ecclesiastical heads who were charged with the due carrying out of the acts of the Council." In other words, the Patriarchs of Rome, Constantinople, Alexandria, Antioch, and Jerusalem (such is the order in the text of the judgment) were appointed, the fifth or last of these being subordinated to Antioch. After this, one would be prepared for a good deal. But it is really too much to be asked to believe that the following is one of the decrees or acts of the Council. "*It was also laid down, that the Catholicos appointed at Tigris (Baghdad) to manage the affairs of the Eastern churches subject to Antioch was common (sic) and could exercise all the functions of Patriarchs.*" Whether this is a correct quotation from any collection of the acts of the fathers of Nicæa, is to my mind extremely doubtful*; but, waiving that point and assuming the substantial correctness of the alleged quotation, two or three remarks are demanded. In the first place, the two Hindu judges, who accept this fragment from Ittoop, do not seem to be aware, that the sentence, which after their example I have printed in italics, belongs to a set of forged decrees of Nicæa. In collections containing both the genuine and the

* Cf. NEALE'S *Patriarchate of Antioch*, p. 119.

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spurious decrees of Nicæa, this particular decree appears sometimes as thirty-third and sometimes as thirty-eighth; but it is well known that there were only twenty genuine decrees*, and that the remainder, seventy or eighty in number, were collected from the Synods of the Greek Church; though, judging from the equal reverence with which the whole code is received by all the eastern communions, it was probably finished before the schism of the Nestorians and Monophysites. Further, the title of Patriarch was not admitted into regular ecclesiastical usage at the date of the Council of Nicæa, or for more than a hundred years afterwards; and, as for the insertion of Baghdad, which we probably owe to the ingenuity of Ittoop, the city did not exist till about four centuries after the Council. In the second place, though it is true that John, who appended his signature to the acts of the Council of Nicæa, and described himself as bishop (or metropolitan) of Persia and Great India, was at that time subject to the Archbishop or Catholicos of Seleucia (not Baghdad), the latter being himself subject to the Patriarch of Antioch; and, though it is clear that the Indian Christians under John were *à fortiori* under the Patriarch of Antioch, yet it is not perceived by the two learned Hindu judges that the Indian Christians subject to the jurisdiction of Antioch in 325 A.D., were living under Sassanian government, and that their India was, not Malabar, but India, west of the Indus. The Church of Malabar did not then exist. In the third place, although the Catholicos of Seleucia was, at the date of the spurious Nicene decrees, subject to the Patriarch of Antioch, he did not always remain so. Before the end of the fifth century, that is in the year 498, the churches under the Catholicos, having by that time become Nestorian, met in Synod at Seleucia, and proclaimed themselves independent of Antioch, and gave to their chief the splendid title of the Patriarch of Babylon. This happened before the Church of Malabar came into existence; and the Church of Malabar was founded by the Patriarch of Babylon, who was Nestorian in doctrine and independent of the see of Antioch. It has pleased the two Hindu judges in the Royal Court of Travancore to ignore altogether the relations subsisting between the patriarchate of Antioch and that of Babylon; and they never realised that the latter is, or rather was, the true mother church of Malankarai. It is almost needless, therefore, to

* See Hefele, who gives the complete text of the twenty; and see Gibbon's note, chapter xlvii.

follow the reasonings of these two judicial authorities any further about the external or foreign relations of the see of Malankarai during the middle ages. Yet one or two remarks may not be altogether superfluous. In the first place, they represent that Thomas of Cana "made the power of the Patriarch of Antioch supreme in Malankarai about twenty years after the Council of Nicæa", although as matter of fact there was at the date in question no church in Malabar at all. Thomas of Cana came at a much later date and was probably a Nestorian and had nothing whatever to do with the Patriarch of Antioch. But however this may be, the whole story of Thomas of Cana "is far too shadowy and unsubstantial to be made the foundation of a legal judgment." Nor do we get from these judges any satisfactory appraisalment of the invaluable evidence of Cosmas, whose testimony is the first piece of historical illumination that helps to break up the darkness in which the origin of the Syrian Church of Malabar is otherwise involved; and who, himself a Nestorian, was on friendly terms with the metropolitan of Persia, and was able to define to the world the exact relationship of the see of Malankarai to the patriarchate of Babylon. Nothing can be more unsatisfactory than the flagrant misreading of the history by these Hindu judges, who refuse to see the historical bond that connected the Church of Malankarai with the Babylonian patriarchate, and who grasp at little straws thrown about first by Dr. Day and afterwards by Mr. Howard, neither of whom condescends to inform the public where these worthless straws were picked up. The fact is that, though we have not much reference to the Syrian Church of Malabar in the literature or among the monuments of the middle ages, yet every authentic reference goes to connect it with the Church of Persia, which was Nestorian and subject to the Patriarch of Babylon—every authentic reference from Cosmas of the sixth century to Vasco da Gama, the Indicopleustes of the sixteenth century.

Mr. Justice Ormsby by consulting, in accordance with the Evidence Act, works of general interest on the subject, not produced in the atmosphere that begat the particular controversy on which he was called to adjudicate, protected himself from the delusions which obfuscated the minds of his two Hindu colleagues. He declined to have his hands tied by the cords woven by Iitoop and his congeners; and so with a free hand he cut his way clean through the meshes in which the facts had been entangled. He saw, what every one who keeps his eyes open to all the facts of the case

must see, that there have been three distinct periods in the history of the Syrian church, viz., the Nestorian period, from c. 500 to 1599; the Roman period, from 1599 to 1653; and, after twelve years' interregnum of complete exemption from foreign interference, the Jacobite period, from 1665 to the present day.

Now, we have already seen that it was only from the second half of the seventeenth century that the Church of Malankarai began to have any, even a nominal, connection with the Jacobites. We have seen moreover that, during the first two hundred years of this connection, only one metran was consecrated by the Patriarch's own hands and that this did not take place until the last decade of the said period of two centuries; while, in the course of the other nineteen decades only one metran, who had first been consecrated by his predecessor, received re-consecration at the hands of a foreign bishop, believed, on documentary evidence, to have been delegated by the Jacobite Patriarch of Antioch. It cannot be maintained surely in the face of these facts that anything more than the barest and most nominal connection had been established between Malankarai and Maron until the present generation. During those two hundred years the bishops of Malabar were as a rule consecrated each by his predecessor, those consecrated by foreign bishops, professing to be delegates from the Patriarch, being few in number and entirely exceptional. It seems clear therefore that precedents of two centuries of bishop-making should be sufficient to attest the use and wont of the diocese and therefore to show that Mar Athanasius Thomas was consecrated in an orderly and valid manner,* and it is not for an interloper, like the Patriarch of Antioch, to come in at the request of a few Adullamites and by a combination of high-handedness, worldly wisdom, and bigotry to upset the precedents of two centuries and to subject the people to a foreign yoke that is fitted to repress all spiritual progress in Malankarai.

II.

The second condition to be fulfilled by a metran of Malankarai was his acceptance by the people. This was admitted by both

* The 15th issue in the Court of First Instance runs:—"Is the first defendant a duly consecrated bishop or not?" Mr. Justice Krishna Menon replies:—"The first defendant was undoubtedly consecrated by the late Athanasius and Kurilos of Anjoor, and his consecration may be held to be valid to a certain extent"; and, after defining this extent, the learned judge concluded, "but the validity of the first defendant's consecration need not be decided in this case." Why?

parties at the bar and adopted as a test by the bench in trying the case. But it is not pretended by any one that this is a law of the church, and it is absolutely destitute of precedent in the church's history. From time immemorial down to an early date in the present century, the office of metran of Malankarai was hereditary in the Pakalowmattam family; so that, while this particular family furnished metrans for the see, there was no occasion for the people to express their acceptance; and as a matter of fact such acceptance was never asked or given. On the other hand, when the Pakalowmattam family became extinct and the office of metran ceased to be hereditary, a new device was introduced by the Resident. He arranged that the person nominated and consecrated by the preceding bishop should be proclaimed by a royal proclamation, which enjoined on all the people the duty of obedience to the new metran according to the custom of the see. This practice continued down to Mar Athanasius Matthew, who was the last of the royally proclaimed metrans. So long as the practice of issuing royal proclamations lasted, the idea of a formal expression of acceptance by the people is nothing short of ludicrous. In fact it was the abolition (1876) of the practice of making proclamations in favour of particular bishops that seems to have suggested the application of this idea of popular acceptance. The Chief Justice and Mr. Justice Sitarama Iyer say that "this contention of the parties (i.e., about acceptance) seems to us to be a new idea and is due, probably, to a precaution on their part to prevent foreigners sent by the Patriarch from assuming the management of the temporalities of the church, without the consent and against the wishes of the community. . . . It was only after the proclamation, under which the Sirkar disclaimed all connection with the appointment and removal of Syrian metropolitans and explained the effect of its proclamation in favour of any particular metropolitan (was issued in 1876), that acknowledgment by the people was thought of as the best and safest substitute to adopt. . . . The first case under that system", they add, "happens to be the present." What could more clearly prove that, for this condition of acceptance by the people, there is absolutely no precedent? It forms no part of the law or the past practice of the church. Whether it was invented by "the parties" or not, it is a mere phrase and does not amount to a formulated proposition; and, when it came to be expanded and applied to details, neither the judges on the one hand were agreed among themselves, nor the parties on the other hand. In fact the two Hindu judges, who

formed the majority in the Royal Court, so expanded the phrase and so defined acceptance, as to its nature and effects, that their ruling will probably be quoted hereafter as a precedent, and will acquire all the force of law. Several points, as will appear in further discussion, were practically enacted, but the main point is that it is acceptance by the people that admits a duly consecrated metran to the enjoyment or control of the temporalities of the see. Due consecration qualifies for the exercise of spiritual functions, popular acceptance admits to the management of church-property: that is the present ruling.

It does seem strange that the courts should have adopted, as an essential condition of the validity of an appointment to the bishopric of Malankarai, what had never, until the institution of this particular suit, been heard of as a condition for such appointment. The function of courts of law is to interpret and apply the law to particular cases, not to make it. The courts of Travancore are not, however, the only law-courts in the world which have, especially in ecclesiastical cases, framed decisions on the basis of judge-made law.

But we have next to consider the use made of this piece of judge-made law in its application to the circumstances of the present case. It appears that the courts below regarded the question of acceptance by the people as having been settled at the meeting at Mulanthuruthu (June 1876). This announcement, it must be admitted, is surprising; for, in the record of the proceedings of that assembly, there is not a syllable from beginning to end about the acceptance of Mar Dionysius Joseph as metropolitan; and, as a matter of fact, the name of that person occurs only once in the record, and that in an altogether different connection. It appears, however, that the mere fact of his having been called metropolitan in the record is what is relied on as binding the individuals that signed it. And that might pass. But before this could be held to bind the whole church or community to such acceptance, it would be necessary to prove that the meeting was *bonâ fide* a representative meeting, that the persons who signed did so not as individuals but as duly accredited representatives of churches. In this lies the *crux* of the whole of this section of the discussion. On the proof or disproof of this point depends the decision that must be given on the particular form of question now in hand. Fortunately it is a question which admits of fairly direct treatment.

"The meeting was convoked," says Mr. Justice Ormsby, "in part at least by printed summonses, addressed, it would appear, to

various churches Now it is a general rule applicable alike to public companies, associations, clubs—and surely no less to religious bodies—that, when the shareholders in such company or the members of such association or body are to be summoned to transact important business, it should be previously and clearly notified to them what that business is. If the object of the meeting at Mulanthuruthu was to elect a metran, or to confirm the appointment of a metran already consecrated by the Patriarch, we might reasonably expect that such matter would be explicitly stated. But not a reference is made to the subject. The parishioners are exhorted to choose certain persons to speak before the synod putting them in possession of their views 'so that the matters that may be resolved upon may be accepted by you.' No hint is given as to what these matters are, except that they are 'the spiritual affairs of our church in general.' There is indeed a reference to 'disputes and schisms,' but as to what disputes or what schisms, no indication is vouchsafed us."

Of the issue and service of the notice of meeting on all the churches, there was no formal evidence whatever. "All that the evidence on record proves, supposing for a moment that it is beyond suspicion, is that some sort of order, or command, or message was sent down to some of the churches. But even in the case of these churches, there is absolutely no evidence or next to none, that these 'notices' were duly promulgated in the various parishes, or that one parishioner in fifty knew anything about them." The record of the proceedings of the synod at Mulanthuruthu, professes to be signed by the representatives of 102 churches, but there were at least 175 in the diocese, so that some seventy three churches were not even professedly represented, and there is no proof on record that notice of the meeting was served on the parishioners of these seventy-three churches.

On the other side it is said that "to expect, in a matter like this proof of service of notices as we have in civil suits in courts, is to expect an impossibility. It could not be expected that the notice with the acknowledgment of service would be forthcoming. How then, was the fact to be proved otherwise? It must be only by the evidence of witnesses who had service of notices on them, and who saw notices served on others." Perhaps, but it must be remembered that we are here dealing with what professes to be regular synod, summoned under the direct authority of the Patriarch. Are we to suppose that, whatever may be said about the in-

perience or incapacity of the Syrians in the use of methods of precision, both the Patriarch and his numerous understrappers were incompetent to convene a synod and to conduct its business in such a manner that every item of the proceedings from beginning to end should be capable of verification? Why were printed notices used at all if not for evidential purposes? The meeting might have been summoned by tuck of drum.

Again 'deeds of consent' are mentioned; that is, commissions which should give express authority to those who held them to act within specified limits on behalf of those who granted them. They were avowedly documents granted by congregations to delegates who should have authority to attend the synod of Mulanthuruthu to deliberate and vote at its sittings on behalf of the said congregations. We may pass by the preliminary difficulty of framing 'deeds of consent' on 'notices' so vague. But whether they were properly framed or not, no copy was produced in court; and no verification of their contents was possible. They are said to have been collected and put into a box, and carried off to Mardin by the Patriarch; and, wherever the fault may lie, nothing effectual was done during the long years of the trial to fetch them back from Mardin and subject them to the scrutiny of the courts. If they could have helped the plaintiff's case, ways and means of fetching them back would have been found; for the plaintiff's case was the Patriarch's. But not a single copy ever fell under the eye of the judges. In these circumstances how can it be maintained that the meeting at Mulanthuruthu was a representative meeting?

But we shall be told that some thirty witnesses "swear to having seen deeds of consent given by the people to the representatives that attended the meeting. These deeds of consent contained, *it is said*,* authority to the representatives to agree to the resolutions of the meeting on behalf of the people. The witnesses also swear to their signatures in the record. * * * * It would be, under the circumstances, unreasonable to decline to hear the evidence of the witnesses who were brought to swear to the production of deeds of consent by the representatives. That is legal evidence of the fact that such deeds were given *though not to their contents*.* All that we want here is that the men that attended the meeting were representatives. Even without the deeds of consent, if the men were competent to represent the community by their position in

* The Italics are mine.

that community it would quite answer the purpose." Does not this last sentence mark an extreme position; does it not betray a consciousness of the weakness of the reasoning that immediately precedes it?

At all events, all that has been said seems to me to leave untouched the conclusion arrived at by Mr. Justice Ormsby, *viz.*, that "without proof that (1) the persons whose names are appended to the record of the proceedings of the meeting at Mulanthuruthu did really sign, and (2) that they were duly authorised to sign, that record becomes absolutely worthless; and without the record of that meeting's proceedings, there is no sufficient evidence to prove plaintiff's acceptance by the community" in the sense in which the lower courts held it proved or in any other sense.

Mark, nevertheless, how this doubtful document is further pressed into the service of the plaintiff's cause, to prove affirmatively his acceptance by the people. The Chief Justice and Mr. Justice Sitarāma Iyer contend that the question to be answered is, On which side are the majority of the Syrians to be ranked? They find that in addition to the 102 churches represented at the so-called Synod of Mulanthuruthu, there are nine more churches admitted by the appella. contain only adherents of the respondent. "So, adding these nine to 102, we have clearly 111 churches wholly recognizing the respondent as their metropolitan." But this reasoning is vitiated by the fallacious assumption, that the men who signed for the churches at Mulanthuruthu were *bona fide* representatives of those churches, duly authorised by the churches which they professed to represent. Of this there has been no sufficient proof. In the High Court the same vitiating element appears in the same connection. Mr. Justice Narayana Pillay says of twenty-seven churches each represented by a single individual, that such representation "would be absolutely worthless, if the individual who has signed did so for him alone. But the plaintiff's case is that these individuals as also the others who signed for the different churches had written authority from the parishioners of their respective churches to represent them at the meeting." No doubt this is the plaintiff's case, but has he legally proved his case? The fact is that the meeting at Mulanthuruthu was a mere caucus and not a proper synod at all; and the record of its proceedings, even supposing it to be genuine, cannot prove a majority on the side of the plaintiff at that date. It is tolerably certain that now Mar Dionysius Joseph has a majority on his side. It would be strange

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if the repeated decisions in his favour over such a long period of years did not tend to annex to the successful metran a larger following. But whether he had at the institution of the suit in 1879 a majority on his side is improbable in the extreme.

The two Hindu judges of the Royal Court, however, possess marvellous resource. They maintain that the plaintiff had a majority in his favour ten years before the date of the institution of the suit. They seem to have had some misgivings after all about the validity of the proof of plaintiff's acceptance derived from the record of the Mulanthuruthu meeting, and therefore they change their ground. They explain that it is a mistake to suppose that Mar Dionysius Joseph was accepted for the first time as metropolitan at Mulanthuruthu. This, they would have us believe, was not the case at all. He was so recognized long before this meeting, and what this meeting did was to ratify the acceptance made long previously. This is a complete change of front. But let that pass. When did the community first acknowledge Mar Dionysius Joseph as metropolitan? The answer is that it was done as early as 1869; and the sole proof of this surprising discovery is to be found in the veracious utterances of Dionysius himself when he addressed his memorial to the government of Madras. He then informed His Excellency in Council that "all the Syrian Christians have acknowledged, and do acknowledge him" as metropolitan and, again in the same document, that "he has the solemn consciousness that almost all the Syrian Christians, as a matter of conscience, lean towards him as their present legally constituted superior and metropolitan." Special pleading of this kind made by a man in his own interest is actually treated as proof of the alleged fact, however inconsistently put even in the document itself.

But the statements made by the plaintiff under this head were not and could not be true. However discontented the Syrian Christians might have been with Mar Athanasius Matthew in 1869, (and there is no evidence that they were discontented), they would not have dared to express it in any tangible form. They were by the royal proclamation liable to the pains and penalties by which the Sirkar enforces its orders. They were required to obey Mar Athanasius according to the custom of the see; and there is every reason to believe that they were at the date in question perfectly loyal to their metran. At all events, the self-interested pleadings of an ecclesiastic in his own suit can hardly be seriously treated as proof of disputed facts.

It humbly appears to me, therefore, with all deference to the distinguished and learned persons who have adjudicated otherwise, that the plaintiff failed in both divisions of the great issue to prove his case. Nevertheless Mar Dionysius Joseph sits to-day on the episcopal throne of Malankarai. *Regat in pace.* But one cannot help wondering what the future of the ancient church is to be. Will her divisions multiply, or will she attain unity and strength and independence? Oh that the people would take the matter into their own hands, as they have an undoubted right to do, and manage their own church affairs without foreign intervention. Did they not throw off the authority of His Holiness of Rome at the Coonen Cross in 1653? and why should they tolerate the usurped authority of a remote Patriarch who has no intelligent sympathy with them and little or no interest in the country beyond draining off money annually in the form of Rasisa, for which he gives nothing in return?

Hereditary bondsmen! know ye not,

Who would be free, themselves must strike the blow?

Humanly speaking, the hope of the church is in her young men. Many of them, having been stimulated to take advantage of the higher education and the more intelligent worship of the Protestant churches in their neighbourhood, have found their way to Madras to study in the Christian College, the Medical College, and the College of Engineering for the higher degrees of the University. Let the minds of these young men be saturated with biblical truth and spiritual ideas, let their hearts be possessed with intelligent faith, and it will soon be found that the old Syrian bottles will not hold the new wine. Their new spiritual life will demand a higher nourishment than the earthen vessels of the Jacobites can supply. Their character as seen and felt in their daily work, their family life, and their personal intercourse with their people will gradually tell on the community and effect more rapidly, it may be, than we think, a reformation in Malankarai.

But there is one grand danger to which the Syrian Church and her friends must not shut their eyes. The predicted danger may or may not be the best thing that could happen, but at all events it should be clearly perceived and definitely reckoned with. There is no reason to fear that this church will relapse into heathenism, or otherwise vanish from history as the sister church on the Coromande Coast did; but, with a strong Protestant mission on the one side and a strong Roman Catholic mission on the other, it must be difficult for the Syrian Christians to hold their ground apart. These strong

churches will doubtless receive from time to time into their respective communions individual members from the Syrian Church; and if so, if the weaker thus give way to the stronger, if the Syrian Church be absorbed by the more vigorous organizations around her, history will interpret her fate as the penalty of intellectual stagnation and lack of faith, and posterity will probably recognize in her doom the voice which said to another church: "therefore your house is left unto you desolate." Still the eye of hope would fain penetrate further into the vista of the future, and discern the time when the deplorable sectarian differences which characterise our western Christianity, and which have got a foothold to no small extent in India, shall be superseded by a finer and fuller growth of Christian doctrine and spiritual life, and when the Indian church, reconciling all her sects in a common faith and a common purity, shall hold the unity of the spirit in the bond of peace, and shall in the most comprehensive sense be one. When such a time comes, when there shall be one strong Indian church, the absorption of any particular sect, however venerable, will be abundantly compensated by the ampler life and the larger hope of success in winning the whole of India to Christ, and in contributing the most effective share to the complete spiritual conquest of Asia.

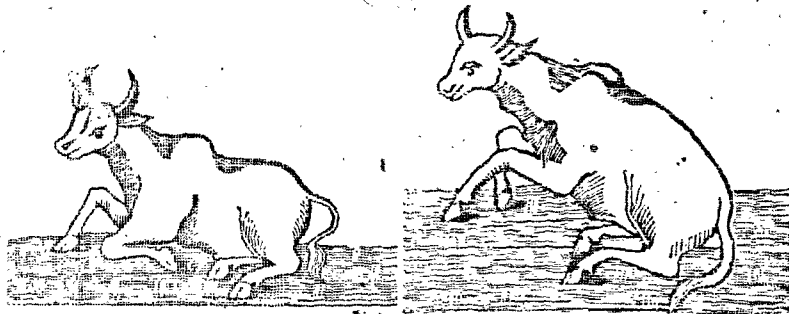
GEORGE MILNE RAE.

THE YUGAS:

A QUESTION OF HINDU CHRONOLOGY AND HISTORY.

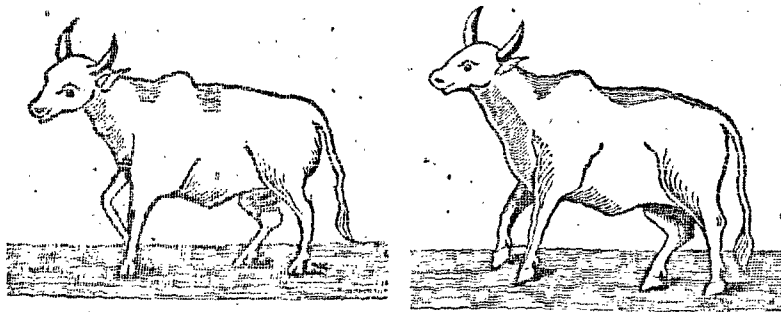
BUT is there any historical significance about the four Indian Yugas? The word *Yuga* is nearly as old as the Sanskrit language itself, and the proper names of the four Yugas are at least as old as the Vedic literature in which they are found. The Vedic calendar, as given in the *Védānga Jyótisha*, makes no reference to the now current long Yugas, *Manwantaras*, and *Kalpas*. Certain periods of time marked by certain special national, social, and religious characteristics of the Hindu people seem to have been for long believed in in India; and these having been taken up by later Indian astronomy and adopted by the *Purāṇas*, acquired a definiteness and popularity which they do not appear to have originally possessed. In the *Āitaréya Brāhmaṇa* we meet with the well known story of Hariśchandra and Śunāsépā. Hariśchandra, though he had a hundred wives, had no son; and on the advice of Nārada

this king prayed to Varuna to bless him with a son, and vowed that he would sacrifice the son to Varuna himself in case he should get one. Rôhita was then born to Harischandra. But Harischandra on various pretexts indefinitely postponed the fulfilment of his vow. Rôhita came to the age of discretion, and understanding the perilous nature of his situation, ran away to the forest. Varuna naturally got angry, and Harischandra was made to suffer from some abdominal disease. The son Rôhita, hearing of this, wanted to go back to the father, but was prevented from doing so by Indra, who appeared to him in the form of a man and dissuaded him from giving up his wandering life. Six times the son tried to go back, and on all six occasions Indra prevented him. When, after wandering for more than four years, Rôhita, for the fifth time, attempted to go back, Indra is said to have addressed him thus (*Aitaréya Brâhmaṇa*, VII.-15):—"A Brahman told me: *Kali* is lying, *Dvâpara* is slowly shaking up, *Trétâ* is standing, and *Krita* is in full motion—wander on, wander on." (कलिश्चयानो भवति संजिहानस्तु द्वापरः । उत्तिष्ठन् खेता भवति कृतं संपद्यते चरन्.)



कलिवृषः Kali-bull, or
Kali-virtue

द्वापरवृषः Dvâpara-bull, or
Dvâpara-virtue



त्रेतावृषः Trétâ-bull, or
Trétâ-virtue

कृतवृषः Krita-bull, or
Krita-virtue

He then wanders on for the fifth and the sixth years, and at last succeeds in buying Sunassépâ as a substitute for himself in his father's forthcoming sacrifice to Varuna. Here, in this context, we have "the earliest known" mention of the current names of the four *Yugas*. This passage has been variously interpreted, and it appears to me that we have here the myth concerning the Bull of Dharma so frequently related in the *Purâṇas* and the *Mahâbhârata* (*M. Bh.*, III.-190-9). According to the *Amarakôṣa*, it can be shown that the Sanskrit word *Vṛisha* (वृष) means both bull and virtue (*Dharma*). It is a fact well known to all students of mythology, that words which have more than one meaning, have very often given rise to many myths in the history of nations. A bull, when lying down, appears to be using one of its feet so as to press against the earth; when it tries to get up, two of its feet are seen to be applied to the earth; sometimes, when standing without motion, the animal may be seen to rest on only three of its feet; and, when walking and moving from place to place, it of course uses all four feet. When it is roaming about, it is decidedly in a more vigorous attitude than when it is merely standing; when it is standing, it is in a more vigorous attitude than when it is just trying to get up; and when trying to get up, it is certainly in a more active posture than when lying down. The passage from the *Aitaréya Brâhmaṇa* quoted above clearly takes it for granted that there has been a gradual decay and deterioration of national virtue from the *Krita* to the *Kali* age; and it seems to me that Rôhita was made to understand that, as *Krita* is in full motion and is the best *Yuga*, he too must wander on. In the *Taittirîya Brâhmaṇa* (I.-5-11) also we find *Kṛitya* and *Kali* used in almost exactly the same sense. While treating of the number of *Stômas* (eulogistic verses) to be used in the *Jyôtiṣhlôma* sacrifices, it is said: "That in which there are four *Stômas* is *Krita*, then that in which there are five is *Kali*; therefore there must be only four *Stômas*." (ये वै चत्वारस्तोमाः कर्तव्ये अथ ये षड्विंशस्तोमास्तुष्टोमः) Here also the idea that *Krita* is desirable, and *Kali* undesirable, is quite explicitly expressed. To compare anything to *Kali* is obviously to condemn it, while to compare it to *Krita* is to praise it. In the *Taittirîya Brâhmaṇa* (III.-4-16) the names of all the four *Yugas* also occur. In a long passage detailing the various kinds of human victims to be sacrificed to various gods and deities, we find the following:— "(Sacrifice) the gambler to the King of the Dice; the keeper of the

gambling house, to the *Krita*; the judge who is to make out the flaws and decide the quarrels in connection with the game, to the *Trétā*; the person who, sitting outside the circle of gamblers, looks on with interest and is attentive to the game, to *Dwāpara*; and the man who, even when there is no gambling going on, stays on like a pillar in the gambling house, to the *Kali*; and the *Charakā-chārya*, to Sin." (अक्षराजाय कितवम् कृताय सभाविनम् त्रेताया आदिनव-दर्शम् द्वापराय बहिस्तदम् कल्येसभास्थानम् दुष्कृताय चरकाचार्यम्) In an exactly similar connection, with a few slight alterations, the names of the *Yugas* occur in both the *Mādhyandina* (XXX.-18) and the *Kāṇva* (XXXIV.-18) recensions of the *Vājasaneyā-Samhitā*. It has been suggested, and there is a great deal of probability in the view, that, in these last passages, the current names of the four *Yugas* are intended to denote dice, *Krita* indicating the one with four marks, *Trétā* the one with three, *Dwāpara* the one with two, and *Kali*, the one with only a single mark.

The original derivative meaning of these words does not seem to have any connection with gambling and dice. There is a whole hymn in the *Rigvéda* (X.-34) by Kavasha Ailūsha, in which the allurements and evils of gambling are exceedingly well depicted; but these words do not occur therein. The ruinous and demoralising nature of this pastime, which appears to have been rather common in ancient India, must have been well understood at the time: and perhaps with the intention of taking vengeance on the priests, elders, and other pious wellwishers of society, who, like the *Rishi* Kavasha very properly tried to check the growing prevalence of this mischievous trade of gambling, the gambler might have, naturally enough in his own turn, declared the dots on the dice to be nothing other than the footprints of *Dharma* (virtue). Thus perhaps the names of the *Yugas* also became the names of dice; but nobody can be dogmatic about it. My present object is simply to point out that these words could not have, at first, belonged, by right, to the gamblers' vocabulary. Dr. Martin Haug thus explains the passage quoted above from the *Āitaréya Brāhmaṇa*:—"Sāyana does not give any explanation of this important passage where the names of the *Yugas* are mentioned for the first time. These four names are, as is well known from other sources, names of dice used at gambling. The meaning of this *gāthā* is: There is every success to be hoped; for the unluckiest die, the *Kali*, is lying; two others are slowly moving and half fallen, but the luckiest, th

Krita, is in full motion. The position of dice here given is indicative of a fair chance of winning the game." Professor Weber is said to have criticised this interpretation. That it is far fetched and unsuited to the context is enough to show its faulty nature; and I have no doubt that in the *Āitaréya-Brāhmaṇa* the words in question are not used in what is decidedly their secondary significance.

Fortunately, it seems to be possible to a certain extent to make out the probable early period when the idea and the names of the *Yugas* became current among the Hindu people. The earliest mention of the names of the four *Yugas* is, as pointed out already, in the *Āitaréya Brāhmaṇa* (VII.-15). Here these names certainly do not refer to dice, and are most probably used in their original significance. In the *Purusha-médha* (human sacrifice) hymn, as given in the two current recensions of the *Samhitā* of the *White Yajurveda*, and in the *Brāhmaṇa* of the *Black Yajurveda*, they almost certainly refer to dice. Elsewhere in this *Brāhmaṇa* (I.-5-11), *Krita* and *Kali* have been shown to be used in a different significance. In the two recensions of the *White Yajurveda*, the word *āskanda* (आस्कन्द) is used in place of *Kali*; and both *āskanda* and *Kali* mean, according to the *Amarakōśa*, battle or fight. Taking all things into consideration, we may fairly come to the conclusion that the secondary significance of the names *Krita*, *Trétā*, *Dwāpara*, and *Kali* became popularly current most probably in the interval between the periods of composition of the *Āitaréya Brāhmaṇa* and the *Vājasaneyā Samhitā*. There is in both these works fairly satisfactory internal evidence to enable us to ascertain when they were composed. The author of the *Āitaréya Brāhmaṇa*, while illustrating the efficacy of the *Mahābhishéka* (महोद्भिषेक) ceremony in making kings glorious and powerful, mentions (VIII.-2-1) that Tura, the grandson of Kavasha, performed it for Janamējaya the son of Parīkshit, in consequence of which Janamējaya conquered the earth all round and performed the holy horse sacrifice. In the passages which follow, a number of other personages, some of whom appear to be mythical while others are obviously historical, are also said to have undergone the same ceremony with the help of their respective priests. Among the historical personages mentioned in this connection, Janamējaya appears to be about the latest according to all probability. Though Dr. Haug is of opinion that, on the whole, the *Āitaréya Brāhmaṇa* may well be the work of a single author, there are, I believe, some critics who suppose some of the

last books of the *Brāhmaṇa* to be a later addition. Whichever of these views we adopt, it follows, as a matter of course, that the portion of the *Brāhmaṇa* wherein the now familiar names of the four *Yugas* occur, cannot be earlier than the time of Janaméjaya nor, perhaps, very much later.

In seeking to determine the age of the *Vājasaneyā Samhitā* and the *Taittirīya Brāhmaṇa*, it is necessary to consider the nature of these works. The *Taittirīya Samhitā* and the *Vājasaneyā Samhitā* are two different recensions of the *Yajurveda*; and it is well known that the *Rigveda*, the *Yajurveda*, and the *Sāmaveda* were all separately collected and arranged chiefly with reference to the performance of sacrifices, the *Rigveda* belonging to the *Hótri* (होत्र) priests, the *Sāmaveda* to the *Udgátri* (उद्गात्र) priests, and the *Yajurveda* to the *Adhvaryu* (अध्वर्यू) priests. The *Atharvaveda* claims to be the *Veda* of the *Brahma* priests, although it is not known to have ever been used in the performance of Vedic sacrifices, and appears not to have been recognised for a long time as one of the sacred *Védas*. Each of these four sets of priests have definite functions to perform in the sacrifices in which they officiate. "The chief part, or, as the *Brāhmaṇas* say, the body of the sacrifice, had to be performed by the *Adhvaryu* priests. The preparing of the sacrificial ground, the adjustment of the vessels, the procuring of the animals and other sacrificial oblations, the lighting of the fire, the killing of the animal, in short, all that requires manual labour was (and is even now) the province of the *Adhvaryu* priests." Therefore the oldest *Samhitā* of the *Adhvaryu* priests is not, like the *Samhitās* of the *Rigveda* and the *Sāmaveda*, "a collection of hymns, but rather a complete description of the sacrifice as performed by the *Adhvaryus*, interspersed with such verses and formulas as had to be muttered by the officiating priests." A Vedic commentator, Dwiveda-ganga, by name, says that the *Vājasaneyā Samhitā* is known as the *White Yajurveda* because of its being pure and made up of *Mantras* (hymns) unmingled with *Brāhmaṇa*; and according to him the *Taittirīya Samhitā* is known as the *Black Yajurveda*, because it treats of the functions of the *Hótri* priests in one place and of the *Adhvaryu* priests in another, and being thus unmethodical confuses the mind and makes it muddy. "The *Black Yajus* is, in fact, a motley undigested jumble of different pieces." But the *Vājasaneyā Samhitā* is a pure and separate collection of the "verses and formulas" to be used by the *Adhvaryu* priests; and the *Vājasaneyā-*

Adhvaryu priests have the rules, the directions, and the detailed description of the sacrifices embodied in a distinct sacred work of theirs, known as the *Satapatha Brāhmaṇa*. Between the *Taittirīya Samhitā* and the *Taittirīya Brāhmaṇa* there is only a nominal distinction—a distinction without a difference, for the *Brāhmaṇa* is, "in reality, a mere supplement and continuation" of the *Samhitā*. The methodised *Vājasaneyā Samhitā* and *Satapatha Brāhmaṇa* are naturally later than the unmethodical *Taittirīya Samhitā*. Tradition also points in the same way, for the arrangement of the *Vājasaneyā Samhitā* and some portions, at least of the *Satapatha Brāhmaṇa* is attributed to Yājñavalkya, one of the pupils of Vaiśampāyana, who was himself a disciple of Vyāsa Pārāśarya, the original methodiser and arranger of the *Samhitās* of the *Védas*, the *Taittirīya Samhitā* being one of them. It is in the *Purusha-mēdha* hymn of the *Vājasaneyā Samhitā* that we find the names of the four *Yugas*; and in the same passage we have it stated that *Charakāchārya* (चरकाचार्य) is to be offered as a victim in sacrifice to *Sin*.

The words *Dushkritayā Charakāchāryam* (दुष्कृतया चरकाचार्यम्) also occur in the *Purusha-mēdha* hymn as given in the *Taittirīya Brāhmaṇa*. Sāyana explains *Charakāchārya* as the teacher of the art of dancing on the tip of a bamboo, although the bamboo-dancer is elsewhere in the same hymn referred to as *Vamśa-nartin* (वंशनतिन्).

However, Mahādhara (महोदर) in his commentary on the *Vājasaneyā Samhitā*, interprets *Charakāchārya* as the teacher of the *Charakas*. Who then are the *Charakas*? Professor Weber thinks that the word generally denotes a travelling scholar. The *Charaṇavyūha* (चरणव्यूह) says that among the *Charakas* or recensions of the *Yajurveda* there are twelve varieties that go by the name of *Charakas* (तत्रचरकानाम द्वादश भेदा भवन्ति). Professor Max Müller has pointed out that the name "*Charaka*" is used in one of the *Khilas* of the *Vājasaneyā Samhitā* as a term of reproach." It is also said that hostile expressions as against the *Charaka-Adhvaryus*, are to be met with here and there in the *Satapatha Brāhmaṇa*. Such expressions must have been "evidently dictated by a feeling of animosity against the ancient schools of the *Adhvaryus*, whose sacred texts we possess in the *Taittirīya Veda*, and from whom Yājñavalkya succeeded in order to become the founder of the new *Charaka* of the *Vājasaneyins*." The account relating to this subject in the *Fishyū Purāṇa* (III.5) leads also pretty nearly

to the same conclusion. Curiously enough, prejudice is so tenacious in India that, notwithstanding the deservedly high honour which every learned Brahman is led perforce to pay to the name and memory of the great Yājñavalkya, even now among the Brahmanas, the followers of the *Taittirīya-śākhā* and those of the *Vājasaneyā-śākhā* hate each other with an intolerable hatred, regard each other as impure, and absolutely refuse to associate with each other. *Charakāchārya* must therefore mean the teacher of the *Charaka-Adhvaryus*. The *Purusha-mēdha* hymn adopted by the *Taittirīyas* who are one of the twelve varieties of the *Charakas*, and embodied in the *Taittirīya Brāhmaṇa*, also says that *Charakāchārya* is to be offered as a victim to Sin,—and I have therefore no doubt that the *Taittirīya Brāhmaṇa* is considerably later than the *Vājasaneyā Samhitā*.

Professor Weber thinks that both the Black and the White *Yajur-vēdas* may be shown from internal evidence to have assumed their present shape about the time of the war of the *Mahābhārata*. Tradition and history, as recorded in the *Purāṇas*, also give similar indications; for, Vyāsa Pārśarya, the arranger of the *Vēdas*, is known to have been a contemporary of that great Indian war, and both Viśampāyana and Yājñavalkya must have lived immediately after it, as they were contemporaries of Janamejaya Pārīkshita. It has unfortunately become too much the fashion among certain oriental scholars to discard the dates and events traditionally handed down in our *Purāṇas*, as being altogether unfounded and imaginary. In this they are far from displaying that impartial and scientific spirit in which all true enquiry should be conducted. It has been already mentioned that genealogies of kings form an essential part of the *Purāṇas*, and Wilson was quoted to show that these genealogies were "probably preserved with some care," and that the *Sūtas* must have been at once "the eulogists and chroniclers" of ancient Indian royal courts. These genealogies of the various dynasties of kings given in the *Purāṇas* afford data enough to enable us to determine the probable time when the war of the *Mahābhārata* took place. It is stated in the *Vishnu Purāṇa* (IV.-24-104) that the time which elapsed from the birth of Parīkshit to the coronation of Nanda was 1,015 years. The *Matsya Purāṇa* gives 1,050 years as the interval of time between these two events; and the *Bhāgavata* (XII.-2-26) makes it 1,115 years. Mahāpadma and his sons, the well known nine Nandas, are said (*Vishnu Purāṇa* IV.-24) to have reigned for one hundred

years; and the famous Maurya Chandragupta is recognised on all hands to have been their successor. Professor Max Müller in his *Ancient Sanskrit Literature* fixes the date of Chandragupta at about 315 B.C., and very appropriately calls it the sheet-anchor of Indian chronology. Thus it appears that the birth of Parīkshit must have taken place at about the middle of the 15th century before the Christian era; and Parīkshit was born very soon after the *Mahābhārata* war. A list of the dynasties and kings that ruled in Magadha, the kingdom wherein Chandragupta reigned, is given also in the *Vishnu Purāṇa* (IV.-23 and 24), and a close study of it also points to about the middle part of the 15th century before the Christian era as the probable time of the occurrence of this greatest of our ancient Indian wars. In the *Vishnu Purāṇa* (IV.-19) it is stated that one of the earliest of the famous Magadha kings was a Brihadratha, the son of Uparichara, also known as Vasu; and also that a line of thirty kings made up of Brihadratha and his descendants reigned in Magadha for one thousand years. However, the *Vāyu Purāṇa* and the *Matsya Purāṇa* state that thirty-two Brihadratha kings ruled in Magadha for a thousand years. Of these Jarāsandha may easily be recognised as having been a contemporary of the *Pāṇḍavas*, and his son Sahadeva as a contemporary of Parīkshit. The *Vishnu Purāṇa* makes Jarāsandha an extra son of Brihadratha, and the *Bhāgavata* makes him Brihadratha's son by another wife. There is clearly some mistake here, and Jarāsandha should, in all probability, appear in the *Vishnu Purāṇa* as the seventh in descent from Brihadratha. As a matter of fact in the *Agni Purāṇa* and the *Vāyu Purāṇa* he is actually said to have been so, and the *Matsya Purāṇa* makes him even the eighth in descent. The last of the Brihadrathas was succeeded by another dynasty of five Pradyōta kings who are said to have reigned in all (according to Professor Wilson's translation of the *Vishnu Purāṇa*) for 138 years. These Pradyōta kings were succeeded by a dynasty of ten Śaśunāga kings who, in their turn reigned for a period of 362 years. Then came the Mahāpadma Nanda, who is said to have begun to reign in Magadha 1,015 years, or according to the *Bhāgavata* 1,115 years, after the birth of Parīkshit. Thus forty-seven kings, from Brihadratha onwards, are stated to have ruled over Magadha for a period of 1,500 years, which gives to each an average reign of about 32 years. Judging from this period of rule, these kings would appear to have been generally longlived; and, under the circumstances, it is not im-

possible, it is even probable, that the first nine or ten of the Bārhadratha kings ruled over Magadha for about 450 years, or according to the *Bhāgavata* for a little over 350 years. If we allow 100 years for the reign of the Nandas, and take Chandragupta's date as 315 B.C., we again arrive at the middle of the 15th century before Christ as the probable time when the war of the *Mahābhārata* was fought.

The *Vishṇu Purāṇa* (IV.-24) and the *Bhāgavata* (I.-15-36 and I.-18-6) mention that the *Kaliyuga* commenced immediately after the death of Krishna. The *Mahābhārata* gives us to understand that the *Kaliyuga* commenced about the time of the great war described in that epic. So early an astronomer as Garga is said to have stated that the commencement of the *Kaliyuga* was coincident with the *Mahābhārata* war. Krishna died, as may be made out from the *Mahābhārata* and the *Purāṇas*, some thirty years after the close of this great Kuru-Panchāla war. Vyāsa is said to have arranged the *Vēdas* in the *Dvāpara* age (V.P.-III.-3 and 4), and he was alive during this war; and his father Parāśara was the earliest astronomer of any reputation in India. In the list of the *Nakshatras* given in the *Taittirīya Samhitā* (IV.-4-10-1), we find that the constellation of the *Krittikās* stands first; and "the *Krittikās* occupy the first place in all the ancient lists of the *Nakshatras*." Even now for sacrificial purposes, the *Krittikās*, presided over by Agni, are considered to be the first of the twenty-seven *Nakshatras*. The mythical story of the birth of Kumāra, the War-God, evidently refers to the vernal equinox occurring when the sun enters the *Krittikā* constellation. It is impossible to say how old this story is, though there are reasons for believing that it must be a very old one. I have heard it said that there are mythical stories current in Sanskrit literature, which refer to a time when the vernal equinox took place with the sun in the *Mṛigaśīrsha* (मृगशीर्ष = Orion) constellation. May not the name of *Mṛigaśīrsha* as *Āgrahayāni*, that is, perhaps, the beginner of the year, become apt and intelligible in this way? Our ancients were very early familiar with the then position of the equinoctial colures, for the *Sattras* which, as pointed out by Dr. Haug, presuppose a knowledge of it "were already at the time of the *Brahmanas* an old institution." The word *Krittikā* itself is derived from a root *krit*, which means to cut; and the constellation has most probably been so named because of its then situation at one of the two points where the equator and the ecliptic cut each other. Bentley's interpretation of the *Viśākhā*

Nakshatra as the 'bisected constellation', because of the other equinoctial colure coinciding with its middle point, must not be lightly passed over. The importance of the etymological significance of names belonging to an age of myths and allegories cannot be over-estimated. According to Bentley's calculation, as given by Professor Max Müller, (Preface, *Rigveda*, Vol. V.—xxx.) the above position of the equinoctial colures must have occurred at the time corresponding to B. C. 1426, and, if we use Archdeacon Pratt's value for the mean annual precession, we arrive at B. C. 1428. The *Nakshatras* are mythically supposed to be the daughters of Dakṣha, and they are said to have been given in marriage to the moon. The planets Mercury, Venus, Mars, and Jupiter are called *Rōhinīya* (रोहिणीय), *Māghabhū* (माघभू), *Āshādhābhava* (आषाढाभव), and *Pūrvaphalgunībhava* (पूर्वफल्गुनीभव); and hence it is naturally supposed that the moon and these planets must have been at one time in conjunction in the respective constellations referred to above. These four planets are thus taken to be the sons of the specified daughters of Dakṣha through the moon as their husband. Bentley has calculated and ascertained the time when these conjunctions must have taken place, and Mr. Hind has verified the calculation for Professor Max Müller. Both have arrived at B. C. 1424. These conjunctions must certainly have been striking celestial phenomena when they actually did occur; and not even the most indifferent observer of the heavens could have missed noticing them. Hence it is difficult to understand why there should be any doubt as to the genuinely ancient nature of Indian astronomical myths, notwithstanding the readily verifiable astronomical data contained in them. Considering the peculiar nature of the ancient method of transmission in India, from generation to generation, of historical traditions, mythical stories, and old religious and national literature, surely there is nothing strange in the fact that certain very old myths have been found for the first time embodied in some decidedly modern works. In the *Vishṇu Purāṇa* (IV.-24) the constellation of the *Saptarishis* (Great Bear) is said to move from one *Nakshatra* to another in the course of 100 years. "At the birth of Parikshit it was in *Maghā*, and the *Kaliyuga*, consisting of 1,200 divine years, then commenced." "When the seven *Rishis* are in *Pūrvāshādhā*, then Nanda will begin to reign; and thenceforward the influence of the *Kali* will augment." This statement is also to be found in the *Bhāgavata*. According to

Colebrooke, Lalla, and the *Brahma-Siddhānta* of Śākalya refer to the motion of the *Saptarshis*. This imaginary motion is thus explained:—"The two stars (Pulaha and Kratu) must rise or be visible before the rest; and whichever asterism is in a line south from the middle of those stars is that with which the seven stars are united; and so they continue for 100 years." It is said to have been the opinion of Bentley that "the notion originated in a contrivance of the astronomers to shew the quantity of the procession of the equinoxes." "This was," according to him, "by assuming an imaginary line, or great circle, passing through the poles of the ecliptic, and the beginning of the fixed *Maghā*, which circle was supposed to cut some of the stars in the Great Bear. . . . The seven stars in the Great Bear being called the *Rishis*, the circle so assumed was called the line of the *Rishis*; and, being invariably fixed to the beginning of the lunar asterism *Maghā*, the procession, would be noted by stating the degree, &c. of any movable lunar mansion cut by that fixed line or circle, as an index." It makes up ten asterisms from *Maghā* to *Purnāshadhā*; and we have thus a thousand years from Parikshit to Nanda Mahāpadma. Allowing 100 years for the period of rule of the Nandas, and taking B. C. 315 as Chandragupta's date, we arrive at the latter part of the 15th century before Christ, as the time when the great *Mahābhārata* war took place.

Thus the results of a close examination of the various sources of evidence at our disposal all lead to the conclusion that the war of the *Mahābhārata* must have been fought about the middle of the 15th century before Christ; and for reasons already specified the idea of the four *Yugas* must have come into existence about that time. Let us try to make out what their names mean. *Kṛita* means 'deed'; *Trétā*, a 'collection of threes'; *Dvāpara*, 'doubt'; and *Kali*, 'strife'. In Purāṇic and other allied works we find an explanation offered of the names of the first two of these *Yugas*. In fact, with the exception of the name *Trétā*, these names are easily intelligible; and almost everybody can, in some way or other, understand what is meant by the age of deeds, the age of doubt, and the age of strife. The *Mahābhārata* (III.5) has it that in the *Kṛita* age everything that had to be done was done as a matter of course, and nothing that had to be done ever remained undone in that best of ages. It is clearly presumed here that the *Kṛita* age was one of the very highest moral excellence, the age, in fact, in which virtue freely walked on all fours. The *Mahābhārata* also says (III.5): "Then in the *Trétā* age sacrifices commence, and virtue

and duties become varied." The *Mundakopaniṣad* says: "This is indeed true—the (sacrificial and other) duties, which the wise (poets) saw in the *Mantras* (Hymns), have been variously developed and spread in the *Trétā*." The *Matsya Purāṇa* says: "The commencement of the sacrifice took place in the beginning of the *Trétā Yuga*." From the *Bhāgavata* also we may learn (IX.14-43) that, before the *Trétā* age, the sacrificial fire was one, the *Vēdas* were one, the castes were one, and the Deity was also the only one *Nārāyaṇa*. However much we may disagree with the last part of this statement, it is clear that the *Trétāyuga* appears to have been all along understood as the age in which sacrifices flourished and the power of the priests predominated. The one sacrificial fire of the *Kṛita* age became the three fires of the *Trétā* age—the *Dākṣiṇyāgni* (दाक्षिण्याग्नि), the *Āśvapatyāgni* (आश्वपत्याग्नि), and the *Āhavanīyāgni* (आहवनीयाग्नि), the three together being even now known as *Trétāgni*; the one *Vēda* of the *Kṛita* age became the three *Vēdas* of the *Trétā* age—the *Rigvēda* belonging to the *Hōtri* priests, the *Yajurvēda* to the *Adhvaryu* priests, and the *Sāmavēda* to the *Udgātri* priests; the only one caste of the invading and conquering Aryans of the *Kṛita* age became split up into the three castes of the *Trétā* age—the priestly *Brāhman*, the ruling military *Kṣatriya*, the common plebeian *Vaiśya*. The name *Vīśas* or *Vaiśyas* which originally indicated the mass of the Aryan people, now became the name of a single caste. Lastly in this *Trétā* age, even the gods worshipped in earlier days seem to have undergone a threefold classification, as the gods of the earth, the gods of the air, and the gods of the sky, the earth, the air, and the sky being the three formal divisions of the visible world (भूर्भुवःस्वः). Hence there can no longer be any doubt as to the appropriateness of the name *Trétā* being applied to such an age. It was in the *Dvāpara* age that *Vyāsa* arranged the *Vēdas*; and truly enough Professor Max Müller has said, "Nations like individuals become conservative when they cease to trust implicitly in themselves, and have learnt from experience that they are not better than their fathers." Moreover, during certain stages of the development of doubt, dissent, and nonconformity in the history of any nation, we usually observe an exalted state of conservatism in some quarters of society; and it is to this exalted state of conservatism that we owe the collection and arrangement of the *Vēdas*. That the great *Mahābhārata* war completely disorganised the political and social condition of India is a fact which even he

who runs may read. That war gave a severe blow to the even progress of national development in India; and for more than three thousand years now, poor India has been the unhappy scene of many selfish and sinful strifes. The period of the early Aryan invasion and conquest of India was the *Kritayuga*, the heroic age of deeds. When the Aryan people had fairly settled in India, this heroic age was followed by the age of priestcraft, in which religion, society, and politics were all built upon slender and strikingly artificial foundations. This was the *Trétáyuga*. Then came naturally the age in which men began to question the justice and soundness of the old order of things in their religion and society; and they must then have been sorely perplexed by doubts and difficulties of all sorts. We have actual proofs that they were so perplexed. This was then the *Dvāparayuga*. Lastly came the age of rebellion and strife for personal liberty and social and religious emancipation, the age in which it is intended that men and women ought not to recognise any authority except that of truth and justice, based, as far as is possible and natural, on knowledge and the principle of equality. Nevertheless, might is even now right with many; but it must be said to the credit and glory of human nature that, in many parts of the world, India not excepted, true and good men have laboured, and are still labouring, hard to bring about the realisation of the grand and noble ideal of this last age of free unhampered competition, the *Kaliyuga*.

M. RANGACHARIYAR.

MALABAR.

MUCH learning and ingenuity have been spent in the search for a proper derivation of the word Malabar. Cosmas Indicopleustes (A.D. 522-547), an Egyptian merchant, who in the course of traffic made some voyages to India, mentions the name of *Malé* a port on the western coast, which he says was most frequented on account of its extensive trade in pepper; and Dr. Robertson in his *Historical Disquisition Concerning Ancient India* considers that the coast derived its name from this town; while Fra Paolino da san Bartolomeo says* that the country was known by the name of *Malaradu* and *Malangara*, and from the latter has been formed by various

* Voyages to the East Indies.

contortions the word Malabar. He further assures us that the opinion of Father Raulin, who contends that Malabar is of Arabia extraction, being compounded of *Male* and *Barr*, has no foundation. Both Ibn Batuta and Kazwini write it *al-Malibar*, while Édrisi and Abulfeda have *al-Manibar**; and like variations occur among the old European travellers also. The country so called corresponds to the Kerala of the Brahmans, which in its widest sense extended from Lat. 15° to Cape Comorin. This too seems to be the extension which Abulfeda gives to Malabar, namely from *Hunavar* to *Kumhari*. Rashiddin includes *Sindábūr*, i.e., Goa, while Ibn Batuta says that its length is a journey of two months along the shore from *Sindábūr* to *Kaulam*.† But at a later date a point between *Mt. Ely* and Mangalore on the north and *Kaulam* (Quilon) on the south, were the usual limits assigned to Malabar. General Cunningham‡ identifies Malabar with the *Mo-lo-kin-cha* (*Malakuta* or *Malayakuta*) of the Chinese traveller Hwen Thsang (A.D. 629-645).§ At present the term is limited to signify that part of the country which is under the Malabar Collector's charge. The Arab navigators as well as the early travellers of other nationalities, who frequented the coast, called it *Malibār*,|| (Al Biruni) *Manibār*, *Mulibār*, *Mūnibār*, *Mālibār*. The early European travellers were also not slow to adopt their own way of writing the word, and we have from them the following curious forms *Melibbar*, (Marco Polo A.D. 1293), *Minibar*, *Milibar*, *Minubar*, *Melibaria*, *Malabria*.

Mr. C. P. Brown, in the Journal of the Royal Asiatic Society of Great Britain and Ireland, vol. 3, says, that the Arabs and Africans, who first visited the west coast of India, came *Mu-abbar* "from beyond" the sea. He conjectures that the name Malabar might be the product of a slight change or variation, perhaps unconsciously made, in transcribing the original name in the Syrian character. He then goes on to say that the eastern shore of India also was visited by men "from over the sea" and the name Malabar has also been wrongly applied to the eastern coast.

* Yule's 'Marco Polo', vol. 2, page 326.

† Logan's Manual of the Malabar District, vol. 1, page 288.

‡ Ancient Geography of India, vol. 1, page 350.

§ Julien's Translation III, 121.

|| This form of the name has to be distinguished from *Ma'abar*, which name Al Biruni assigns to the country extending from Kaulam (evidently south Quilon or Kollam) to the country of Silawar 300 parasangs along the shore. Logan, vol. 1, page 280, footnote.

It may here be remarked that this mistake has led some to believe that Malabar fell a prey to the Mahomedan irruption from the north under Malik Kafur (A. D. 1310). The name applied at this time by Marco Polo (A. D. 1293) and Ibn Batuta (A. D. 1342-1347) to the eastern portion of the peninsula—namely Ma'abar—probably gave rise to this idea.*

"The name underwent a further change" continues Mr. Brown. The Tamils in those lands could not pronounce the *ain* or the letter *b*, and *Muabar* was softened into *Mapilla*, the name borne by the descendants of Africans, who are now called *Mapillas*. This derivation is, to say the least, curious. How the word underwent the last transformation is not evident. No slight change either by way of verbal transformation or mispronunciation can possibly distort *Muabar* into *Mapilla*. The term *Mapilla* is indifferently used to denote both Christians and Mahomedans, though its signification is more strictly limited to Mahomedans in the northern parts. According to Mr. Logan the word *Mapilla* is a contraction of *Mahā* (great) and *pillu* (child), honorary title, as among Nairs† in Travancore. He adds that it was probably a title of honor conferred on the early Mahomedan immigrants, or possibly on the still earlier Christian immigrants, who are also down to the present day called *Mapillas*. The Mahomedans are usually called *Jonaka* or *Chonaka Mapillas* to distinguish them from the Christian *Mapillas*, who are called *Nassrani Mapilla*. *Jonaka* or *Chonaka* is believed to stand for *Yavanaka* = Ionian-Greek. We may remember that the early Greeks had carried on commerce with Malabar through Egypt. In the *Payyanloorput*, or earliest Malayali poem, some of the sailors are called *Chonavar*.‡ The *Mapillas* are the descendants of the early Arab traders who formed fugitive alliances with *Tier* or *Chogan* women; and, according to Dr. Day, the children never appear to have been claimed by the fathers. He further adds that "in fact the very word *Moplah* is said to have been derived from mother, *Ma*, and child, *pillu*, showing to whose care the offspring fell."§

* Logan, page 288.

† That the term *pillay* was used as an honorary title not only by Nairs but even by Brahmans appears from an old copper-plate document referred to by Shungoony Menon in his History of Travancore, page 36, wherein occurs the following passage. "Narayana Pillay son of Gopala Pillay, Brahman of Sreevasta Gotham (line) professing the Yajur Veda and residing in the old village or Brahman hamlet built by Cheran Perumal Rajah was entrusted with the management of the Sathram."

‡ Logan, page 191.

§ Day's Land of the Perumals, page 366.

The term seems to have carried with it a sense of degradation; for Dr. Day says in a footnote that "it is not used by those of that sect, who call themselves Mussalmien or Mahomedans." This is in a way supported by Duncan who says that a *Kazi* derived the name from *Ma*=mother and *pillu*=a puppy, as a term of reproach. A more reasonable derivation of the terms is given by Maclean in the Asiatic Researches, vol. 3, page 38. He says that the word came from *Maha*, or *Muhai*, *Mocha*, and *pillu* a child. He therefore translates it into "children or natives of *Muhai* or *Mocha*."

However that may be, the word Malabar has no connexion whatever with the term *Mapilla*, or with the Arabs and Africans who are said to have first visited the coast. The indigenous word used to denote the country is *Malayalam*, which some divide into *Mala*=hills, *ala*=waves, meaning perhaps the country of the hills and waves; while others derive the word from *Mar-i*=rain.* Mr. Logan thinks that the word Malabar is probably, in part at least, of foreign origin; the first two syllables are almost certainly the ordinary Dravidian word *Mala* (=hill, mountain, and *bar* is probably the Arabic *barr* (=continent), or the Persian *bār* (=country)† The native name for the country is suggestive enough. It is *Mala*+*alam*=*Malayalam*. *Mala* means mountain and *alam* means depth, land at the foot, declivity or valley, Malabar being precisely the Piedmont of the Italians. *Malaḍaram* is another term signifying the same thing, and the transition from *Malavar* (*am* being but the terminal half letter) to *Malabar* is less open to objection than the transition from *Muabar* or *Monembar* or *Malangara* to *Malabar*. Under the rule of grammar *Bucayorabhēda* the letters *ba* and *va* are interchangeable, and the Natives themselves might have used the words *Malabar* and *Malavar* indifferently. Hence foreigners incoming to the country may reasonably be expected to call it by the name by which the natives themselves called it, if not exactly in its original form, still with some modification or verbal variation.

K. P. PADMANABHA MENON.

* Sewell's South Indian Antiquities, vol. 2, page 110.

† Logan, vol. 1, page 1.

LITERARY NOTICES.

The Marquess of Dalhousie. By Sir William Wilson Hunter, K.C.S.I. Rulers of India. Clarendon Press, Oxford, 1890.

THIS was the first volume of the 'Rulers of India' series to appear, and deserved earlier notice in these pages than we have been able to give it. The book has been well received both here and in England, and we think that it well merits the reception it has met with. The author is no novice in literature, and his wide knowledge of Indian affairs, quickened as it is by the enthusiasm of a deeply sympathetic temperament, qualifies him in the highest degree not only to deal with such a subject as the one he here takes in hand, but to be the general editor of the whole series. "The leading idea in these volumes is to present a series of historical retrospects rather than of personal biographies. Each little book takes some conspicuous epoch in the making of India, and, under the name of its principal personage, sets forth the problems which he had to encounter, the work which he achieved, and the influences which he left behind." These words indicate with sufficient clearness the purpose and the scope of the series, while the sub-title of this volume, 'The Final Development of the Company's Rule', shows the plan on which epochs have been defined.

Sir William Hunter is to be specially congratulated on the skill with which he has laid out his subject. He first in a brief chapter states his 'argument', then sketches the life of Lord Dalhousie; and in the remaining ten chapters presents an account of the various achievements of his administration,—his annexations, the opening up of the country by means of railways and telegraphs, his establishing of the half anna post, and his system of education. Two chapters are devoted to the conquest and consolidation of the Punjab, which are balanced by two of nearly the same length on the annexation of Hindu States, while to the conquest of Lower Burma and the annexation of Oudh two more are assigned. It will be seen from this that the principle of historical proportion has been strictly observed throughout.

Disputes of old standing are here revived, but indeed the work could not have been written without some reference to them:—for example, the relations between John and Henry Lawrence and their relations to the Governor-General, the treatment of Sir Charles Napier when he came out to supersede Lord Gough as Commander-in-Chief, and the extent to which Dalhousie's policy is to be blamed for the outbreak of the Mutiny.

Sir William Hunter does not escape the temptation to which all sanguine, enthusiastic writers are exposed. He uses expressions which will mislead no one in India, but which are bound to be misunderstood

by the British public. We find these sentences in his first chapter. "He inaugurated the great revolution which has converted the agricultural India of antiquity into the manufacturing and mercantile India of our day." And—"His policy of internal consolidation seems destined to produce even more important consequences. That consolidation appeared at the time to be a unification of the Indian territories; it is slowly disclosing itself also as a unification of the Indian races." With reference to the first quotation, we think the author is far from being justified in speaking of the 'revolution' as if it were a *fait accompli*, and as for 'the unification of the Indian races', we admit that certain necessary preliminaries have been made, but is the work itself so much as begun?

A Student's History of England from the Earliest Times to 1885. By Samuel Rawson Gardiner, Fellow of All Souls' College, Oxford, &c. Vol. II., 1509-1689. London: Longmans, Green, and Co.: 1891.

It is only a few months since the first volume of Professor Gardiner's Student's History of England was published and already the second volume has made its appearance. Those who are interested in the teaching of history must be grateful for the fact that there has been no undue delay in the publication of this most useful work, for any one who has tested practically the value of the first volume must confess that it is thoroughly deserving of the high praise with which its appearance was universally greeted.

To this new volume higher praise can indeed hardly be given than to say that it is quite worthy of its predecessor. It is perhaps even more valuable as at least half of its space is devoted to that period which Professor Gardiner has made specially his own. A specialist need not of course necessarily be the best fitted for a work of this kind. There is always a danger when a specialist is dealing with a subject of a general nature, of which his own department forms only a division, that he may give undue prominence to the part which specially interests him and so spoil the proportions of the book. In history for example he may be so impressed with the value of his researches that he cannot refrain from loading that part of the history which deals with his special period with a multitude of details, which, though valuable in their own way, are quite out of place in a history intended for general use. Professor Gardiner has resisted this temptation in his treatment of the history of the 17th century, while his special knowledge has enabled him to present in a vivid manner its salient features, and to explain the real import and the underlying causes of the events of that critical time.

In our review of the first volume we indicated sufficiently what the plan of this student's history is. The present volume, which opens with the accession of Henry VIII., and carries the history on to the year 1689,

is divided into three parts—The Renaissance and the Reformation 1509-1603; The Puritan Revolution 1603-1660; The Political Revolution 1660-1689. It thus deals with some of the most important periods and several of the most difficult or at all events most hotly debated questions in English history. Mary Queen of Scots and Elizabeth, Charles I. and Cromwell, Pym and Strafford, are names that even yet arouse all the animosity of partisanship, and it is still possible to find persons who, though sane and fair enough when dealing with present day matters do not ever wish to be impartial when they get among the ghosts of the controversies of the 16th and 17th centuries. If there is one quality, however, for which Professor Gardiner is specially noted it is his fairness. Under his treatment historical characters become men and women who were influenced by motives similar to those which influence men and women still, and are not mere incarnations of the cardinal virtues and of the severest deadly sins. Cromwell of course has justice done to him, and he stands out a very different figure from the coarse canting hypocritical brewer of the caricatures of his opponents. He has, however, of late years been treated with fairness, and, since the time of Macaulay, the difficulty has rather been to get people to see any good in the supporters of Charles. Professor Gardiner however is quite ready to point out the good qualities of Strafford and the unconstitutional and ill advised actions of Parliament. He has even a good word for Laud, who was really a conscientious and able if unsympathetic and narrow man, and who would have made a very good head of an Oxford College, though quite unfit to control the policy of a nation.

Professor Gardiner's impartiality and judicial fairness make of special value the short paragraphs in which he occasionally points out the real meaning of historical events, or shows what the question at issue in some great controversy actually was, or sums up the constitutional progress of some important period. In illustration of this we may quote the paragraph in which he deals with the great constitutional dispute of 1629, when Charles I. resolved to govern without a parliament, and personal government seemed to have gained the victory.

"The constitutional system of the Tudor monarchy had practically broken down. The nation had, in the sixteenth century, entered upon a struggle for national independence. Henry VIII. and Elizabeth had headed it in that struggle, and the House of Commons had but represented the nation in accepting Henry VIII. and Elizabeth as supreme rulers. The House of Commons now refused to admit that Charles was its supreme ruler, because he could neither head the nation, nor understand either its wants or its true needs. Yet the House had not as yet shown its capacity for taking his place. It had criticised his methods of Government effectively, but had displayed its own intolerance and disregard for individual liberty. Yet, till it could learn to respect individual liberty, it would not be likely to gain the sovereignty at which it aimed. A king becomes powerful when men want a

strong government to put down enemies abroad or petty tyrants at home. A Parliament becomes powerful when men want to discuss political questions, and political discussion cannot thrive when voices disagreeable to the majority are silenced. The House of Commons had thought more of opposing the king than of laying a wide basis for its own power, and now it was, for a time at least silenced."

It is unnecessary to point out how different this kind of writing is from that of the ordinary histories provided for the use of students.

This volume also is well supplied with illustrations, though not in such profusion as the first volume. From the latter a knowledge of the development of architecture in England might be gained from the study of the illustrations. In this volume pictures of buildings are much less common, but there are many engravings of authentic portraits of prominent historical characters which are no less interesting though perhaps not so attractive. Professor Gardiner has been fortunate enough to get access to many private picture galleries—in two cases the originals are at Windsor Castle—and thus we have here many portraits that are not generally known.

The third and concluding volume is to bring the History of England down to 1885. The period with which it will deal is in some ways the most difficult to treat satisfactorily and its publication will be awaited with interest by all who are acquainted with the volumes that have already appeared.

Some recent Telugu Books.

I. *Commentary on the New Testament*, Vol. IV. The thanks of the Telugu Christian public are due to Mr. Padfield and his coadjutors for the speed with which this last volume of the *Telugu Commentary* has been produced.

The work is on the whole excellently done. A few matters, however, still require careful attention. These may be grouped as follows. *Grammar and Construction*:—అవతారమున వరపు, p. 7-1, a transferred idiom; వారి, తమ, used as co-ordinates, 4-1; ప్రతిమలు మంచిదేలు 6-2; తెలిసేను, తెలియును, as co-ordinates, 122-2; సంగతులు సవరణ, 9-2; ఈ సమాధానము విడిచిపెట్టటం a wrong use in spite of the sanction of the Telugu Bible; and many such passages. *Mistakes*:—సమయము, 3-2; న omitted, 115-1; య for యే, 121-2; సమయము certainly wrong in form: should be సమయము if used at all; ప్రతిపక్షము, 122-17, &c. *Questionable Sanskrit phrases*, as అక్షరతా; వాత వాత; సమయము. *Misuse of words*, as ప్రాత in ప్రాత్యక్షి, 7-1; అంశము for సంగతి; యాద (a word manufactured) for యాదులు; తెది for తెలుసు; మూర్తి 1-2; దీక్షదర్శిలు for prophet, now that we have a fuller idea of the prophetic office; and especially వివేకము, 5-2. వివేకము here is

the rendering of ἡ διδωσα which is, in this passage, the discursive reason. *ἡ διδωσα* is intelligible but. *ἡ διδωσα* is a contradiction for the reason that *ἡ διδωσα* answers to a meaning of *ἡ διδωσα* not required here. Our Telugu Bible is to blame for this, not Mr. Padfield.

It is a pity that the translator did not depart from his text in the introduction to Hebrews. The Pauline authorship of this book, the one contended for, has but little authority. There is a mistake also in the introduction to James. He is said to have died in 62. This is certainly too early.

II. *History of the Church to the Nicene Council.*—This is a most useful contribution to Telugu literature. It is to be regretted that the book was put through the press so hastily. The slips are many and the want of attention to details evident. As an instance the transliteration of Greek and Latin names may be adduced. Hardly a name of a person or place is spelt twice the same way. Rome is spelt in two ways; Romans in two; Constans in three; Constantine in four; Eusebius in five. This careless spelling extends to even common Telugu words. We have *ἡ διδωσα* and *ἡ διδωσα* on the same page. The book teems with examples of this want of care. A few important mistakes occur in the matter also. Plato is said to have died about the year of his birth (426). The schools of Greek Philosophy are put, Epicurus first, Plato last, Zeno in the middle, the Eclectics at the end; and they are called *ἡ διδωσα*. The sketch of these schools is so meagre as to be of almost no value. The origin of the Septuagint is accounted for in two ways in different parts of the book; one being the discredited old story of Ptolemy and the Seventy. We also read of "the date when the Apocrypha was written" as if it had been all written at one time; and are told that "it is clear that the Apocrypha was not written in Hebrew," which is contrary to the facts of the case in regard to parts of the collection. The translations of the valuable passages from Tacitus and Pliny are a great acquisition to our stock of apologetic material. It is a pity that their value is somewhat reduced by want of care in rendering. In the passage from Tacitus two of the translations at least have no foundation in the text of the *Annals*, and at the end the omission of *non* and *sed* in *sacrilium minus* destroys the meaning. In the passage from Pliny *quia cives Romani* is explained which is ridiculous in a letter to Trajan; *et inuigini tue*; *quam, propter hoc, iusseram cum*, etc. are omitted; *quidem* and *nounemo* are both rendered by *ἡ διδωσα* which misleads; several other such slips occur, but worst of all is the rendering of "*ex dualis arcillis, que ministree dicebantur*" by *ἡ διδωσα*. The school at Alexandria is spoken of as *ἡ διδωσα* which it was not. Perhaps *ἡ διδωσα* is meant. *ἡ διδωσα* as a generic term for all heretics might be omitted. At page *ἡ διδωσα* is used as the equivalent of the dualism of the Manichees and

Gnostics. As a Sanskrit philosophical term it is not so used, it always corresponds to the dualism of spirit and matter as eternal substances. At the end of the book the *Filioque* controversy is touched upon and the expression is transliterated, but no hint of the meaning of the expression is given. Mistakes in spelling are numerous, and the work of the press is badly done. It is to be hoped that a future edition may be issued with corrections at an early date. The type, printing, and paper are all defective. It is much to be regretted that books so valuable and so much needed should not be produced at a good press.

III. *Exposition of the Thirty-nine Articles.*—In this book the area of the discussion is confined largely to the first six centuries. The ground taken up also is so extensive that only the most meagre information can be given. The general usefulness of the book is thereby much curtailed. Much want of care is observable in the preparation of the matter. There are several doubtful expressions and constructions and some impossible Sanskrit combinations, as *ἡ διδωσα*. The terminology adopted needs revision, e.g., *ἡ διδωσα* for Pantheists and Armenian for Arminian. Plato is introduced twice and each time in an utterly wrong connection. Some of the statements are open to question, as that on Hades, for instance, or Purgatory. The exposition of Calvinism is hardly correct. A careful revision will make the book useful for the purpose for which it was written.

IV. *The Book of Common Prayer: Its History and Contents.*—This book is more carefully got up than the preceding and is free from all glaring faults. On some points fuller information is desirable, e.g., as to the origin of the Litany, and the difference between the Psalms in the Bible and in the English Prayer Book. In a future edition it would be well if the names of men like Parker and Laud were not qualified by *ἡ διδωσα*. We do not speak of the Archbishop of Canterbury as Mr. Benson.

Scott's Lay of the Last Minstrel, Cantos IV.-VI.; with Introduction and Notes. By G. H. Stuart, M.A., and E. H. Elliot, B.A., Professors of English, Presidency College, Madras. London: Macmillan & Co.

In March of last year we noticed the publication of Mr. Stuart's edition of the first three cantos of the *Lay*, and strongly recommended it. We very much regret that we are unable to extend to this volume a similarly cordial welcome. The reason will become immediately apparent when we state that while to forty-four pages of text in the first volume there were but forty-six pages of notes, here we have eighty-six pages of notes to fifty-five of text. The increased proportion of notes to text is due mainly to the fact that the principle laid down by

Mr. Stuart, when he began the work, has been departed from. In a prefatory note he said:—"I have as a rule not given the meanings of ordinary words, unless I had something else to say about them." The prefatory note is ominously absent from this volume. We give a specimen of the annotations to be found here within the compass of a single page.

Gorget. *Armour for the throat.* Bootless. *Useless, of no avail.* Shrive. *Absolved.* Smooth his path. *Make smooth his way, that is, prepare him to pass from this world to heaven.* Dyed with red. *Stained or reddened with the blood of the combatants.* The shouts on high. *Loud shouts, shouts that rose into the air, that reached the sky.* The crucifix. *A cross with the figure of Christ nailed to it.* His faltering penitence. *His confession spoken faintly or inarticulately.* Props him. *Supports his head.* Ghostly comfort. *Spiritual consolation.*

It does not make this sort of thing any the less objectionable, that occasionally etymological notes and parallel passages are added, nor is it any excuse that such notes as those we have quoted are well done. Indeed the better such notes are done the worse they are for all the purposes of education. With this book in his hand the young student will never require to think what the text may mean, nor ever need to consult a dictionary, and such a result is assuredly not one that can be regarded as desirable.

The error which appeared in the notes on the earlier cantos as to who was Regent of Scotland, at the time when the incidents dealt with in the *Lay* are supposed to have occurred, is here put right without any acknowledgment of inconsistency.

The Expansion of England. Two Courses of Lectures, by J. R. Seeley M.A. Regius Professor of Modern History in the University of Cambridge, &c., &c. London: Macmillan and Co.: 1890.

We are glad to see that Messrs. Macmillan and Co. have added Professor Seeley's valuable lectures on *The Expansion of England* to their Colonial Library. It is an able and most suggestive book and should be of special interest to those for whose benefit the Colonial Library has been established. It is unnecessary to say much about a work so well known, but it may be well to mention that it is an attempt to inquire into the causes, to trace the process, and to consider some of the results of the expansion of Britain into a great world-state during the eighteenth and nineteenth centuries. Of late years Greater Britain has attracted much more attention than it formerly did, and much nonsense has been written and spoken about it. Professor Seeley belongs neither to the bombastic nor to the pessimistic school. He objects to the exaggerated language sometimes employed about our colonial empire, but, on the other hand, he is strongly opposed to the idea that the colonies should separate

themselves from the mother country as soon as they are strong enough to stand by themselves.

The first of the two courses of lectures of which the book consists deals with the colonial empire; the second course is devoted to India, and is eminently fitted to give to English readers a more correct idea of the nature of "Our Indian Empire" than they commonly possess. Professor Seeley sees nothing miraculous or unaccountable in the so-called conquest of India by England. He shows that what really took place was that a body of foreign merchants placed themselves at the head of troops raised in India, and by this means gradually brought the whole of the peninsula under their dominion, and he points out that the true nature of this "conquest" would have been seen if the foreign merchants had been Parsees and not British. In dealing with the question as to the benefits mutually conferred by India and Great Britain on one another he is by no means optimistic, but he rightly considers that no greater experiment has ever been tried on the globe, and holds strongly that the experiment must go forward, and that we could not leave it unfinished if we would.

The Indian Letter Writer, by H. H. Anderson, B.A, late Rector, St. James's School. Calcutta: Thacker, Spink, and Co.: 1891. (Thacker's School Series.)

THERE is perhaps no better test of a man's thorough knowledge of a language than his power to write a letter which is at once idiomatic and correct in form. Nowhere more than in a letter can one see whether delicate shades of meaning are perceived, and whether the writer really feels the true meaning of the expressions he is using. It is not uncommon to find students who break down when they come to write a letter, though they could produce an essay written in very good English. The cause of this is no doubt partly carelessness, but partly it is want of practice and ignorance of the correct forms, and this useful little book has as its aim to give some general hints about letter writing and to supply students with models for their imitation.

The introductory remarks are exceedingly good and the mistakes pointed out are blunders very frequently perpetrated in this Presidency also. How many people, for example, write "you will be good enough to", or "I will thank you to", in happy ignorance of the fact that they are not asking a favour from, but are issuing an order to the person to whom they are writing, and are perhaps ensuring the refusal of their request. We are glad to see that Mr. Anderson remarks with emphasis that "you must NEVER write (or say) *The Rev. Smith*", and that he discourages the use of *Honoured Sir*. It would be well if Europeans as well as natives of India were to lay this to heart. Though the book does not, of course, profess to teach English composition the following advice

might be remembered with advantage by students when they are writing other things besides letters.

"The student should remember that there is nothing more difficult than to use the idioms of a foreign language properly; and it is far better to employ ordinary and simple phrases than to introduce idioms or proverbial expressions. The author's experience is that in nine cases out of ten, the idiom so introduced has a shade of meaning which renders its use, in the context of the letter, incorrect or absurd. It should be remembered, too, that a florid style ought to be avoided, and that sentences should be kept short, concise, and clear."

The model letters of a formal nature will no doubt be found useful and even the miscellaneous letters, which are of a more natural and less stilted nature than such specimen letters usually are, will be of use to those who do not attempt to copy them slavishly, but simply regard them as indicating the kind of thing they ought to produce.

NOTES AND EXTRACTS.

THE Report on Public Instruction in the Madras Presidency for 1889-90 is on the whole a very interesting document. With the exception of a few paragraphs the Report was written by Dr. Duncan, who acted as Director of Public Instruction during the absence of Mr. Grigg in Travancore.

The advance of education which was so noticeable in 1888-89 continued during the year under review. It is pointed out that this advance is probably largely due to the fact of the Department having received returns from a larger number of indigenous schools, but even when allowance is made for this fact statistics indicate the great spread of education in recent years. They also show that the quality of instruction has even more than kept pace with the increase of pupils. Several causes are mentioned as having co-operated to bring about these results. There is first the continued prosperity of the Presidency, and there is a growing desire for western knowledge and culture. And as consequence there has been a growing interest evinced by local board municipal councils, and private associations in the spread of elementary instruction, and a larger amount of sustained and intelligent effort put forth by them and by individual members of the community. The Missionary societies, too, have shown no sign of relaxation in their educational efforts and every branch of education has been taken up by them with zeal and success. The increase in the number and the improvement in the organisation of inspecting officers have doubtless contributed

much, as the Report suggests, to the steady and rapid advance of the past ten years.

The educational results of the year as tested by the University and other public examinations were by no means satisfactory. There was a slight decrease in the number of candidates who presented themselves for the various examinations of the University, while the percentage of passes showed a very considerable decrease. The most disastrous results were those of the First Examination in Arts, in which the percentage of passes was only 17.8. As most of our readers are aware the fatal subject was mathematics. In this connection Mr. Grigg takes occasion to refer to a growing opinion that of late there has been considerable deterioration in the teaching of mathematics. He himself is inclined to attribute the deterioration, at least in the F. A. classes, to the largeness of the classes in some of the colleges and to the absence of good mathematical teachers in the smaller colleges. We are not prepared to say that the deterioration is not to some extent due to the causes here indicated, but we know that they will not explain the results of the examination to which we are now referring. Mr. Grigg also states that several managers of colleges protested against one of the mathematical papers. We do not think the nature of the papers can be assigned as the cause of the disastrous results of the examination. We know one principal of a college who having in mind the difficulty of one of the mathematical papers in the previous examination, remarked that "if the candidates fail this time they will have themselves to blame." The papers may still be seen in the University Calendar, and we believe that an impartial examination of them by a competent judge will not disclose the cause of the unusually bad results which attended the examination. Wherever the cause is to be sought for there is one thing that cannot be gainsaid, and that is that the work done in the examination by the majority of the candidates was deplorably bad. We are therefore of opinion that the failure of such a large number was thoroughly deserved, and we have some ground for thinking that the result on the whole has done good.

There was another feature of the F. A. Examination of 1889 to which the Report rightly calls attention. As compared with the previous year there was a large increase in the number of private students that appeared for the examination. We are ready to believe that this increase was to some extent *bona fide*, but it is no doubt true, as Mr. Grigg seems to fear, that there is a growing tendency among heads of colleges to compel those pupils who they think are not likely to pass the examination to enter their names as private students, as well as to prevent students, not on the rolls of the college when applying from entering their names as students of such colleges.

In noticing the last Report we called attention to the fact that the

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Director went somewhat out of his way in condemning the Matriculation Examination of the University and in holding up the newly instituted Upper Secondary Examination as a panacea for all the evils from which high school education had hitherto suffered. The remarks on the Matriculation Examination contained in the Report before us are interesting as showing that the Report has been written by two men who hold somewhat different opinions on this subject. In one place it is said that the recent deterioration of secondary education has by some been attributed to the working of the Middle School Examination. This is not the opinion of the writer, for he continues:—

"I have already given a decided opinion that the chief cause of the deterioration has been the Matriculation Examination. The evil of poor tests may be minimised if the actual mode of examining is good, but as regards this examination I cannot but think that the methods of testing knowledge did nothing to remedy the defect of the scheme. This certainly has not been the case with the Middle School Examination. The presentation of boys at an early age, for a great public written test, success or failure in which is of great and material moment to a lad, may affect injuriously the soundness of training, but I believe that the tests of that examination, especially in language, are sound in principle, and that, speaking generally, the methods of applying those tests have been good likewise. I have tested classes in schools in which the pupils preparing for this examination and those that had recently passed it were manifestly superior as regards their knowledge of English idioms and construction to lads in the Matriculation class. Here no doubt the character of the Matriculation Examination had had its baneful influence."

With regard to these remarks we would express the opinion that they partake too much of the nature of mere assertion; and if the statement contained in the concluding sentences is meant to be anything more than an assertion that some pupils who are preparing for or who have passed the Middle School Examination have a better knowledge of English idioms and construction than some pupils in Matriculation classes it deserves to be more severely characterised. We should mention that the statement contained in the first sentence of the above quotation has to be taken subject to the following qualification:—"After all, examinations, however bad, are of less moment than bad teaching, bad organisation, excessive classes, and poor methods. These evils are the chief causes. Probably, but then what of the chief cause already indicated?"

We now quote a few sentences concerning the Matriculation Examination from another part of the Report.

"The imperfections of the Matriculation Examination have been much dwelt upon of late and have been animadverted on by Government. In my opinion these imperfections are not the result of any inherent defect in the examination itself, or in the scheme of studies which leads up to it; but they are the consequences of the withdrawal of Government or Department

control from high schools, while its place has not been taken by any authoritative body. If the University determine, as I hope it will, to co-operate with the Department by adopting the same rules of recognition, and by admitting to the Matriculation Examination only those candidates who have been educated at recognised high schools, an improvement in the standard and morale of upper secondary education will, I venture to think, soon become apparent."

We ask our readers to place these remarks beside those which we have previously quoted. We think it worth while considering whether the deterioration to which reference is made is not largely due to the rapid expansion of high school education in the circumstances prevailing in this country, and an indication that methods and means which were sufficient in the infancy of education are no longer so.

In connection with the subject of zenana education the Report has some very timely remarks. In the present circumstances of India, it is admitted, a means of carrying on the work of the school after a girl has retired into the comparative seclusion of domestic life is needed as much for conserving what has been learned as for the sake of adding to it. The best way of securing both these ends would of course be such a change in the social customs of the people as would allow of girls remaining at school several years longer. And, the Report goes on to say, not only would this be the best means, but native society is sure to discover sooner or later that it is the only way in which education can ever make an impression on the female portion of the community at all proportionate to that which it has already made on the other sex. Further,

"the sooner this discovery is made and acted on the better. For no one, however sanguine he may be, can maintain that zenana or home education classes, or any practicable extension of this agency, can effectually cope with the widespread ignorance and lack of culture that prevail. At the best these home education classes are temporary makeshifts, not permanent parts of the educational machinery which is transforming Hindu and Muhammadan society. I should like to see this aspect of the matter brought constantly and prominently forward on every occasion on which the general interests of female education are being discussed in public. Hindu and Muhammadan parents must be brought to face the vital issues that are bound up with this question. If native society, in full view of all the circumstances, deliberately resolves to allow itself to fall behind in the march of progress, there is not another word to be said. But if it desires to take its place among the foremost peoples of the earth—to be a progressive instead of a stagnating or decaying society—it must gird up its loins and resolve at whatever cost to emancipate its women from the thralldom of ignorance. A society composed of educated men and uneducated women can never be a progressive society. Home education classes are good as far as they go, and if parents can afford and are willing to pay for the luxury of educating their girls at home, it is right that they should have an opportunity of doing so. But it is merely to play with a momentous question for the leaders of native society to assume

that, in patronising these classes, they are doing a great deal to remove one of the greatest blots on their social system. It must be apparent to all of them that no practicable extension of the home education system can have more than an infinitesimal effect in removing the mass of illiteracy and ignorance which is stifling the very life of society."

Dr. Duncan thus indicates what in his opinion should be the relation of the state towards zemana education:—

"I am far from thinking that it would be expedient entirely to withdraw departmental aid from this educational agency. But the conviction has for some time been growing in my mind that, unless the utmost caution is taken, increased facilities for opening these classes and liberal grants in aid of them may have an effect the very opposite of that intended,—may retard the general spread of female education while advancing it slightly within a very limited sphere. Only those girls who have reached the age when rigid custom ordains that they shall not any longer attend school should be admitted to the home classes. A little judicious pressure brought to bear on parents who are at all desirous to see their daughters educated would here and there have the effect of inducing them to break through the barriers of custom and keep their girls at school some years longer. If parents find that the educational authorities are just as ready to arrange for their girls being educated at home by a semi-private governess as they are to provide for having them taught in school, they will doubtless choose the former. It is expedient and right that this Department, in administering the expenditure of public funds, should make concessions to the customs of the people; but it is to be expected that the more enlightened members of the community will set the example of a readiness to meet the Department half-way, and to remove little by little the barriers which custom has set up in the path of female education. The education of one's children involves a sacrifice—a sacrifice of money, it may be of customary opinions, of cherished prejudices, of time-honoured sentiments. If parents are really desirous to educate their daughters, they will be prepared to make the necessary sacrifices. If they are indifferent in the matter I am not very sanguine as to the amount of good that will be done by home education classes."

In these quotations we have presented one side of a very important question—an aspect of the question which deserves the earnest consideration of all concerned.

There are many other things in the Report to which, had space permitted, we should have liked to refer. We must content ourselves, however, with noting, in conclusion, our approval of the remarks on the evils caused by the system of free scholarships in vogue.

THE Report of the Madras Mission of the Free Church of Scotland contains a good deal that is of more than ordinary interest. It is now fifty years since the education of caste girls was first begun by the Scottish Mission in Madras, and it is therefore fitting that the Report should give a brief account of the history of the various girls' schools

under the management of the Mission. It is well, when some people begin to have misgivings concerning the ultimate effects of some of the efforts that are being made for the amelioration of the women of India, that we should look back and take note of the difficulties which beset the paths of the pioneers of education among caste girls. The retrospect will on the whole be reassuring. The actual advance made is perhaps small when compared with what has yet to be accomplished, but we doubt not that those who saw the day of small things, could they but see what is to-day, would be astonished at the progress that has been made. The difficulties which have to be overcome in connection with female education at the present time are many and serious, but they are not chiefly the difficulties which had to be overcome fifty years ago. The amount of fees collected in most girls' schools for instance, is not even yet very large, but it is steadily increasing, and the very fact that girls pay fees at all is a proof that substantial progress has been made.

The following words, which occur in the Report in connection with the means adopted by the pioneers of female education for the purpose of gaining a footing in the community, are deserving of consideration:—

"The education of the young men, which first in the hands of the missionaries had really attained a high standard and effected a perceptible influence on character, had been making its way with wonderful rapidity and thoroughness for some years. The young men who had themselves been in daily contact with the missionaries through all the stages of their own course, knew exactly their aims and plans and capabilities, and they were, as a rule, favourably disposed to the extension of similar privileges to their sisters. At all events, it was the educated young men, the men educated by the missionaries themselves, who in this novel but all-important enterprise, proved to be their right-hand and overcame difficulties which could be overcome only from within. This fact shows not only how the different parts of our work hang together and form a unity, but how all parts of it are mutually helpful."

The young men of to-day have as much power to advance the cause of female education as the young men of these days had, and it is to be hoped that they will not forget their great responsibility in the matter.

It is worthy of note that the year 1890, besides being the jubilee of the education of caste girls, was also the jubilee of two of the high schools managed by the Mission.

There is one other point in the Report to which we will refer. In connection with the work carried on in and around Chingleput it is said:—

"There are many lines in which our agency needs improving, but no want is more keenly felt than that of a properly equipped school for the training of Christian teachers and preachers. At present the Bible-teaching in the Chingleput group of schools is almost wholly in the hands of the catechists. These men are of course thoroughly competent to give Scripture instruction, but as they are so much away from their stations each month there are gaps

in the Scripture lesson which it is very undesirable to have. With the exception of the two poor schools there is only one other school in which there is a Christian Bible teacher on the staff. This year the Bible programme in use in the Walajabad group of schools has been introduced and one at least of the catechists has complained that it is impossible for him to work the boys up to its very moderate standard. Further, the burden of training catechists and preachers has hitherto been laid on the shoulders of the missionary, but, after all has been admitted as to the advantage of the arrangement, it must be condemned as being far from satisfactory, except for students in the last year or so of their course when some insight into practical mission work is highly advantageous. We seem to have reached that stage in our history where we cannot depend on the chance supply which other missions furnish in the way of agents and where a well equipped school is essential to our meeting the growing demands of every new year."

We thoroughly agree with the writer of these remarks, and we hope they will lead to something practical. The proper training of teachers and preachers is one of the most important departments of the work of every Mission, and we fear that in most Missions in India it has not hitherto received the amount of attention which it deserves and needs.

We should have been glad if it had been possible to pass over the death of Madame Blavatsky with a bare mention of the fact, but the action taken by her friends renders this impossible, for they have taken advantage of the occasion to make it appear that theosophy is still flourishing, and that they have forgotten the complete exposure of the methods by which Madame Blavatsky performed the "phenomena" which were the real basis of the Society. Of course we shall be told again, as we have been told before, that theosophy is entirely independent of such phenomena, but everybody knows that without them the Society would never have gained the position that it did, and that the palmy days of the new cult ended with the exposure made in this magazine in September 1884. It does not really make any difference whether theosophy is or is not dependent on occult phenomena; what does matter is that the foundress and leader of the society was conclusively proved, not only to have deceived her admirers by a long continued series of tricks and frauds, but also to have privately held up these dupes to the scorn which they richly deserved, and which a clever woman like Madame Blavatsky could not but feel for them. It is not in the least necessary to enter again into the details of the exposure, for any one can read them in our pages, or in the still fuller account given by Mr. Hodgson in the *Proceedings of the Society for Psychical Research, Part IX*. If the Theosophical Society is wise it will forget as quickly as possible its early connection with Koot Hoomi and the Mahatmas, and try to carry out those parts of its programme which aim at the true good of India.

THE Census Commissioner for Travancore, Mr. V. Nagam Aiyar, has communicated the general results of the census, with commendable promptitude, in a letter, dated 23rd April, and published as a *Travancore Government Gazette Supplement* on May 2nd. There were some special difficulties in connection with the census of Travancore which called for special arrangements. For one thing nearly 80 per cent. of the houses are situated within enclosures bounded by strong mud or masonry walls. In the case of the well-to-do classes the enclosures may cover 4 or 5 acres of ground, and the outer door being shut after nightfall it would have been impossible for the enumerators to make a satisfactory night census. It was accordingly agreed, on the suggestion of the Commissioner, that the census should be taken at daylight on February 27th, except in the case of "chatrams, ambalams, ootuparabs, inns, matams, dāk bungalows, hotels, shops, cutcherries, encampments, pagodas, churches, school-houses, cart-stands, backwater stations, &c.," in which it was taken on the night of the 26th. With this exception the method of procedure was similar to that adopted for the rest of India and the schedules used were also the same. The State was divided into 12,668 blocks each having its own enumerator for the final census. The census of the British cantonment at Quilon was taken by the officer commanding, and the chief engineer at the Periyar works took the census of the camps at Periyar and Thekadi. The following are the chief results of the present as compared with the last census.

Year.	Houses.	Males.	Females.	Total.
1891	545,213	1,289,012	1,266,062	2,555,074
1881	524,950	1,197,134	1,204,024	2,401,158
Increase.	20,263	91,878	62,038	153,916
Percentage increase.	3.85	7.67	5.15	6.41

Thus, in every 1,000 of the population there are 504 males to 496 females. The most curious feature about these returns is that while the population is nearly equally divided between the two sexes the increase in the number of males is 7.67 per cent. while the increase in the number of females is only 5.15 per cent. We do not venture to assert that this indicates errors in either the present, or the previous census, but if it does not it opens a very interesting question as to the possible influence of the peculiar marriage customs prevalent in parts of the country on the proportions of the sexes. This is the first census in which any attempt has been made to distinguish between town and country, for the town boundaries have only recently been laid down. Trevandrum has a population of 27,661, Alleppey, 22,768, Quilon, 12,836, and Nagercoil, 11,187. The other towns are all under 10,000. The area of Travancore

core is 379 per square mile against 248 for the whole of the Madras Presidency.

Mr. Goschen's Budget speech is this year of interest to others besides the British tax payer, for in it has been announced the intention of the Government to introduce free elementary education into England. A few months ago in noticing an article by Mr. J. T. Macnamara in *Macmillan's Magazine* we pointed out that this important educational question would soon come up for discussion, and that the opinion was steadily growing that as elementary education is compulsory it ought also to be gratuitous. Nothing can show more clearly the growth of what is called state socialism than the fact that a policy which a few years ago was vigorously opposed by a radical like the late Mr. Fawcett has been adopted by a Conservative Government.

The principle was conceded two years ago in connection with Scotland, and it was practically only a question of time when free education would be introduced into England, if the experiment made in Scotland proved successful. It may be assumed that Government has found that the new system works in a satisfactory manner, seeing that it now proposes to extend it to England. That the measure will be popular there can be little doubt, for the proposal to use the endowments of the church for providing free elementary education was considered in many parts of the country as a most attractive element in the disestablishment programme. Whether it will be altogether beneficial is quite a different matter. People generally value a thing more when they have to pay something for it, and it is quite possible that attendance may be less regular and lessons less carefully prepared because the parents will not now feel that their money is being wasted by irregularity and carelessness. The great argument in favour of free education appears to be that those classes for whose benefit the compulsory clause exists, and who would not of their own accord send their children to school, are the very classes on which the fees press most heavily, and it is hoped that by removing every obstacle in the way of the attendance of their children greater regularity may be secured.

Some of the effects of the introduction of free education into Scotland were perhaps not quite expected by the Education Department. The infant department of the public schools became crowded while the highest classes grew smaller. The explanation of these two facts is obvious. Now that all fees were abolished in the junior classes parents found that they were able to have their smaller children effectively looked after, at no expense to themselves, while they occupied themselves with their daily duties. On the other hand fees were retained in the non-compulsory standards with a most instructive result. It might have been expected that parents would be willing to spend some of the money

saved by the abolition of fees in the junior classes upon the education of their elder children, and that the numbers in the higher non-compulsory classes would be increased. So far was this from being the case, however, that these classes actually became smaller than formerly. It was evidently felt to be harder to pay anything when less had to be paid. Unless the present system is altered there can be little doubt that as time goes on these classes will become still smaller, for once people are accustomed to free education it will be considered a hardship to have to begin to pay fees at all, and specially so for children who have reached an age at which they might be earning wages.

Unless special provision is made the introduction of free education necessarily proves very disastrous to schools which are carried on by private individuals, or in which higher fees are charged than are levied in the public schools. In Scotland this was not a very great difficulty, as in that country almost all the schools in which elementary education is given are under the direct management of the school boards. In England however where so much of the elementary education is given in denominational schools the difficulty is a very real one, and the Bill in which the Government proposals are to be embodied will be awaited with much interest.

In the interesting Rectorial address recently delivered to the students of St. Andrews University, Lord Dufferin took occasion to discuss the present methods of teaching Latin and Greek. He asked why it is that a slip of a girl, of ten or twelve, can be taught to read a French or German book without difficulty, while boys go on from eight to twenty-two, pounding away at Latin and Greek without being able in nine cases out of ten to do more than blunder through a passage of some author they had previously got up.

"My belief is," he continued, "that our whole method of teaching the dead languages should be changed, that we begin altogether at the wrong end, and that this initial mistake is never retrieved. I myself was introduced to the Latin grammar when I was six years old, and to the Greek grammar a couple of years later; and when I left Oxford, after fourteen years of uninterrupted application at these two tongues, the most that I could do was to translate with some sort of decency a few Greek plays, some books of Herodotus, a little of Cicero, and some Virgil and Horace, that had already been carefully conned. Later in life, I reflected with shame on the paucity of any classical acquirements, and I set myself down to learn Greek in the same way as I would set about learning a modern language. The result was that, although I had only spare moments of time to give to the business, I soon found myself able to take up any ordinary Greek poet or prose-writer, and read what was written as easily as I could French, always, of course, excepting a corrupt Chorus or some of the more difficult authors. Well, I believe boys ought to be taught in the same way—that is to say, they

should begin with the vocabulary long before they are bothered with the grammar, that the acquisition of whatever tongue they take up should be rendered interesting, and that the names of Virgil, Homer, Horace, Cicero and Herodotus should not be allowed to stink in their nostrils for the rest of their lives by being made the vehicles through which the grammar is drummed into them.

The same subject is dealt with in an article in *Macmillan's Magazine* by Mr. P. A. Wright-Henderson, who maintains that the average school-boy is worse educated than his sister, and that the fault of this lies not in the master, nor in the pupil, nor in the subject but in the method. "I am aware," he says, "that there are considerable differences in the method of teaching languages in different schools; but I believe that it is essentially the same in all or in most—the method from the abstract to the concrete, which begins, if not exclusively, at least mainly, with grammar, and postpones any reasonably extensive reading of Greek or Latin, French or German authors, till the pupil has learnt not merely the necessary elements of grammar, the common forms in accidence, and the simple rules in syntax, but exceptions, anomalies, monstrosities of accidence, subtleties of syntax, without end, useless and unintelligible except to an advanced scholar. This excessive grammatical drill is said to give the pupil that "sound grounding" in languages without which his knowledge would be "slovenly." Alas! it is a grounding on which a superstructure is seldom raised."

While Lord Dufferin and Mr. Wright-Henderson are thus at one in the opinion that the method of teaching languages, and especially Latin and Greek, is very faulty, curiously enough the conclusions which they draw as to the bearing of this fact upon an important question in which they are both much interested are very different. Perhaps the most burning question in the English educational world at the present day is whether Greek shall be allowed to continue to occupy its position as a subject which must necessarily be studied by all who wish to take a university degree in Arts. Lord Dufferin holds very strongly that Greek ought to be a compulsory subject, and believes that if the method of teaching it which he recommends were adopted the enmity of those who would exclude it from the university curriculum would be disarmed. Mr. Wright-Henderson on the other hand thinks that the opponents of "pas Greek" are the best friends of classical education, and would make Greek compulsory neither for university students nor for school-boys who intend to go on to the universities. In Scotland the matter will soon come up for settlement practically, as one of the duties of the Universities' Commission which is now sitting is to decide what changes are to be made in the present Arts curriculum.

The German Missionary societies appear to be alive to the responsibilities laid upon them through the recent acquisition by Germany of large territories in East Africa. The Moravian Mission Board is sending out five and the Berlin Evangelical Society four missionaries to work in the neighbourhood of Lake Nyasa. These missionaries will thus be brought into comparatively close connexion with those of the Livingstonia Mission who have so long been doing good work in what is now British Central Africa, and it is satisfactory to learn from the *Free Church Monthly* that arrangements have been made with the German societies as to the territories which are to form the sphere of their work. This was specially necessary as one of the stations of the Livingstonia Mission has been by recent treaties included in German territory, in spite of the representations of the Free Church of Scotland.

An instructive little paper upon *Educational Progress among Native Christians* has been issued by the Madras Native Christian Association containing a summary of the Report on Public Instruction for the Madras Presidency for 1889-90 so far as it deals with the Native Christian Community. The facts stated in it are very encouraging in the main. During the year under review the number of Native Christian pupils increased from 40,235 to 44,225. Taking the Presidency as a whole we find that 23 per cent. of boys and 3 per cent. of girls of school-going age are attending school while in the case of Native Christians the percentages are 61 and 28 respectively. As might be expected the Native Christian community continues, as Government says, "to set an example to the other native communities in regard to the education of women." The percentage of Native Christian girls attending school is, as has already been seen, higher than the percentage of non-Christian boys. Of 178 pupils in the High School departments of schools 47 were Native Christians, the others with five exceptions being Europeans or Eurasians. In the Middle-School departments the Native Christians outnumber all the other classes put together. It would indeed be a good thing for India if other classes were stirred up to emulate their Christian fellow countrymen in this matter.

While the Native Christians form only one fortieth of the total population more than 8 per cent. of the students attending college and of the graduates of the University are Native Christians. Referring to the results of the University examinations the Director of Public Instruction says:—"I have frequently drawn attention to the educational progress of the Native Christian community. There can be no question if this community pursues, with steadiness, the present policy of its teachers that with the immense advantages it possesses in the way of educational institutions, in the course of a generation, it will have secured a pre-

ponderating position in all the great professions and possibly, too, in the industrial enterprise of the country—in the latter because no section of the community has entered on the new departure in education with greater earnestness than the Native Christians.”

Others besides those immediately connected with educational work are beginning to realise the position which the attention paid to education is likely to give the Native Christian community. This paper ends with an extract from the *Hindu* in which the advance being made by the Native Christian community owing to the absence of caste restrictions and the progress of education is pointed out, and more recently, since the publication of this paper, the *Madras Mail* has had an article on the same subject. The information conveyed in this paper and these articles should help to clear away much of the ignorance and prejudice which exists in the minds of both Hindus and Europeans with reference to the position of the Native Christian community.

PEOPLE are now accustomed to expect to hear something striking when the Emperor of Germany speaks, for he has more than once startled Europe by his utterances. His most recent speech cannot be said to have any international importance, except in so far as it shows the character of the speaker, but it is a somewhat strange one to come from the lips of the chief representative of law and order in Germany. It was delivered recently in Bonn, at a gathering of Corps students, and consisted of a panegyric of the duelling system which still prevails at German Universities, and which has been kept alive mainly through the instrumentality of the Corps and similar societies. The duels generally are no doubt not of a very serious nature, though they imply a considerable amount of endurance of pain and sometimes end fatally, but to most people who are not Germans they appear to be a somewhat absurd and rather disgusting relic of mediævalism. They are regarded in this light by some of the Professors, and they are discountenanced officially by the University authorities. Consequently when they are held the time and place are kept secret, though in some Universities the secret is a very open one, and a watch is set to give notice of the approach of the guardians of the peace, for students who are caught while taking part in a duel are liable to certain pains and penalties. It is certainly a curious phenomenon to find the Emperor thus encouraging the students to continue a custom which the University authorities are endeavouring to put down, and it is to be feared that his ill-advised remarks to the enthusiastic Corps students of Bonn may have the effect of making the Professors connive, even more than they do at present, at this breach of the University statutes, and will thus assist in perpetuating a pseudo-chivalrous custom which has already lived too long.

COLLEGE NOTES.

IMMEDIATELY before the vacation, Mr. Morren and Dr. Henderson, left Madras, for their native land. They have both taken furlough for the first time,—the former after six-and-a-half, the latter after five-and-a-half, years of service. Dr. and Mrs. Henderson sailed by the *Clan Macpherson* on the 10th, and Mr. and Mrs. Morren by the *Manora* on the 13th, of May. Both professors are expected to return and resume their ordinary work at the commencement of the second term of 1892.

On a former occasion, in these notes, I spoke of how this constant going on furlough is an unavoidable, though inconvenient, element in the conditions under which the work of European professors is carried on; and of how, on that account, little notice ought to be taken of it when it occurs in the regular course of things. I must not contravene my own principles by enlarging on the matter here. It is enough to say that all who are at present connected with the college, whether as teachers or as students, and I may safely add all former students who maintain their interest in the doings of their Alma Mater, sincerely hope that our friends may enjoy their well earned change and rest, and may return at the expiration of their leave with a renewed stock of health and vigour.

Mr. Reynolds, a graduate of Cambridge, will supply Dr. Henderson's place during the coming year and is expected to reach Madras about the beginning of next month. It is hoped that Dr. Henderson and Mr. Reynolds may be able to meet and to consult in London before the latter starts for India. For the carrying on of Mr. Morren's work suitable provision has been made; though, in this case, it has not been considered necessary to bring an acting professor from beyond the seas. Mathematics, in spite of the common and perhaps too well grounded complaint of its decadence among us, is a study more firmly rooted among our own graduates than Biology can be held to be as yet.

I am glad that, to some extent, the students of the college have acted on the views I have expressed as to the propriety of letting professors go away quietly when they go merely for a short breathing-space, and of reserving anything in the nature of a public demonstration for occasions when a departure is likely to be a final one. Addresses were indeed given and handsome presents made both to Mr. Morren and to Dr. Henderson; but this was done by their own classes separately and without any attempt to assemble the professors and students in a body or to invite the attendance of representatives of the general public. It is certainly a step in the right direction. But I think it would be still better if, on such occasions, there were nothing beyond a hearty good-bye and the expression of a hope for the safe and speedy return of the departing friend.

Most assuredly, this is not because I think little of those feelings of affection which prompt the gifts and addresses which have been so habitually made to our professors when they go on furlough. Nor is it that I underestimate the good that may be done by letting such feelings find their legitimate and full expression on suitable occasions. Everything that helps to make the relation between student and professor personal rather than official, is, in my opinion, a thing of real and great value. But in this, as in all things, there is danger.

"lest one good custom should corrupt the world."

When the European professorial staff is so large that one or more go on furlough every year and that, as is the case at present, there may be three at home at the same time, there is danger lest this custom of demonstrative leave-taking lose its rightful significance and sink into a lifeless thing of course. There is danger also lest, by too frequent repetition, it lose the emphasis which it ought to have when one who is felt to have exerted a powerful and a good influence is about to cease from his service without the prospect of resuming it.

At the same time, this is a matter with regard to which I have no wish to force my own ideas upon students. It is one of the comparatively few points in which I recognize that they and not their instructors ought to be the final judges of what they are to do. I am heartily glad that the feelings exist which result in more or less demonstrative leave-taking, even while I hold that the arguments against are stronger than the arguments in favour of the particular form in which these feelings have been accustomed to find expression.

WILLIAM MILLER.

SHEVAROY HILLS, 1st June 1891.

SCIENTIFIC AND LITERARY JOTTINGS.

THE transit of Mercury referred to in our last number was observed in Madras under tolerably favourable conditions. The early morning was somewhat cloudy, but later on it became clear, and during the last hour the clouds did little harm. The air, however, was far from steady as was shown by vigorous "boiling" of the sun's limb. When the sun rose Mercury was already on its disc, and showed as a round black spot much darker than the sunspots which were visible at the same time. Through the kindness of Mr. Pogson, I was enabled to watch the progress of the transit through the Lerebours and Secretan equatorial of the Madras Observatory, and the following notes refer chiefly to what was able to see with that instrument which has an aperture of $6\frac{1}{4}$ inches

The first points to which attention was directed were the central white spot and the halo which have been recorded on previous occasions. The white spot was distinctly seen by both Mr. Pogson and myself, and to both of us it appeared to be absolutely central. The appearance was exactly such as one can produce by placing a small opaque disc in a beam of diverging rays, and it is hard to believe that the cause is not the same—that is that the white spot is due to diffraction of rays round the edge of the planet. No trace of a halo could be observed at any time during the transit. The observations of the times of contact at egress were made with difficulty, on account of the unsteadiness of the air which caused vigorous undulation of the limbs of both the sun and Mercury. The last internal contact was probably determined much more accurately than the last external contact. Both contacts were recorded considerably before the times calculated from the general reduction formulae given in the *Nautical Almanac*. The difference in the case of the last internal contact was $1^m 51^s$ and in the case of the last external contact $2^m 20^s$. The Calcutta observations also gave a difference in the same direction of about $1\frac{1}{4}$ minutes. There was no sign of any ligament or "black-drop", but just before the last internal contact the part of the planet still on the sun's disc appeared like a black triangular notch which seemed to disappear and reappear repeatedly before Mercury was clear of the sun.

THE International Congress of Astronomers which has just concluded its meeting in Paris has cleared the way for the actual commencement of the photographic chart of the heavens. We have already referred to the great divergence of opinion that existed regarding the formation of an actual catalogue of stars from the photographic plates, and this gave rise to some very warm discussions, but the final resolutions were adopted unanimously. The intention is to obtain two sets of plates of the whole heavens, the one containing all stars down to the eleventh magnitude, from which a catalogue shall be prepared giving the stellar co-ordinates, the other to contain all stars down to the fourteenth magnitude to form the chart. The former series will require a much shorter exposure than the latter, and some of the members of the Congress were strongly of opinion that the catalogue plates should first be obtained, leaving the chart plates for future work when it might be hoped that improved photographic methods would render it possible to do the work in shorter time. Another party held equally strongly that both the series should be gone on with at the same time so as to save loss of time in the adjustment of the telescopes. Finally the following resolution was carried:—

"The work undertaken by the Congress of 1887, comprises two series of negatives made with different exposures: the permanent committee, whilst

recommending to observers to urge forward, with the greatest possible diligence, the execution of the negatives of the second category (negatives destined for the construction of a catalogue) is of opinion that they ought also to profit by the greatest possible number of fine nights to take negatives of long exposure for the first series (those of the chart)."

Another very important question decided by the Congress was the method of determining what stars were to be included up to the "fourteenth magnitude". The plan adopted seems to promise uniformity in this respect amongst different observers.

The results of Dr. Meldrum's work from 1848 to 1885, on the cyclones of the South Indian Ocean has just been published by the Meteorological Council in the form of an atlas of cyclone tracks. No cyclones are recorded for the months of August and September, and the frequency for the other months varies from 1 in 18 years for July, to 5 in 3 years for February, and March. Dr. Meldrum's work will be of the greatest value to all meteorologists interested in the behaviour of cyclones.

The total eclipse of the moon on May 23-24, did not exhibit any very remarkable features. After totality began the western part of the disc was very much brighter than the rest, but the whole disc was visible and showed the usual coppery colour. About midnight the brightest part was a narrow strip on the N edge of the disc and the rest of the moon was only faintly visible to the naked eye. On the whole the eclipse may be said to have been of the normal type.

MR. WIMSHURST, whose influence electrical machine is so favourably known, has recently brought out a new form which he calls an alternating current influence machine. It is thus described in *Nature*:—

"This machine consists of a varnished glass disc, with or without metallic sectors, mounted on an axis and rotating within a square wooden frame fixed in the plane of the disc. The frame carries four square glass plates, each of which has one corner cut away so as to clear the boss of the disc. These plates are placed one at each corner of the frame, alternately on the two sides, and the disc revolves between them. There are thus two plates one on one side of the disc situated at opposite ends of a diagonal of the frame, and two on the other side of the disc, at opposite ends of the other diagonal. Tin-foil sectors fixed on the outer sides of the plates act as inductors, and wire brushes connected with them touch the disc about 90° behind the centre of the inductors."

From this machine sparks are easily obtained, but it is impossible to charge a Leyden jar. Upon testing it with an electroscope it was found that the electricity produced was alternately positive and negative—the alternations taking place about every three-quarters of a revolution.

In an article in *Nature* on "The Paradox of the Sun-spot Cycle in Meteorology," Mr. H. F. Blanford, returns to the question of the connection between weather cycles and sun-spot cycles. As regards temperature variations, he shows that in India, except in the two anomalous years 1879 and 1887, the mean air temperature has followed with remarkable regularity the course of the sun-spot variation; the maximum temperature occurring in 1878, the year of sun-spot minimum, and the minimum temperature occurring in 1884, in which spots were almost as numerous as in 1883, the year of the sun-spot maximum. The amount of variation for the cycle is only about 1°F, but since the average is deduced from observations at a large number of stations there seems to be no good reason for refusing to accept it. When the rainfall statistics for India as a whole are examined, no sign of a distinct cyclical variation is to be found, but, as is well known, Mr. Pogson long ago pointed out that the rainfall of Madras exhibited a most striking 11-years cycle. Mr. Blanford now admits that the statistics for the Carnatic for the last 22 years show a most marked cyclical variation, but he does not seem to be quite happy over it since he holds that it is quite disproportionate to the temperature oscillation. This objection does not seem to be a valid one, since a time of maximum sun-spots is a time of maximum rainfall but of minimum temperature, and the temperature on the earth's surface will be affected by the amount of rainfall. In what direction the effect will be felt is not quite clear, but it is at least possible that it may tend to decrease the temperature variation.

The number of hours of bright sunshine in Madras during May, was 255 out of the 393 hours during which the sun was above the horizon, or only 65½ per cent. of the possible amount. This is the smallest percentage since November. The corresponding average percentages for the other recording stations are, Lahore 69, Dehra 51, Allahabad 73, Calcutta 66, and Jeypore 70. There were two days—the 22nd and 23rd—on which there was no sunshine, and three other days on which there was less than 4 hours of sunshine. The rainfall for the month amounted to 0.49 inches, which was due to a slight cyclonic disturbance which moved up the Bay nearly parallel to the coast. Fairly heavy rain fell in most of the southern districts. In Madras the rainfall from March 1st to May 28th was 4 inches above the average, and in Negapatam, for the same period, it was three-quarters of an inch above the average, but in Salem it was 4.86 inches and in Trichinopoly 3.37 inches below the average. On the West Coast, for the same period, we find Mangalore 5.09 and Calicut 3.08 inches below the average, while Cochin was 2 inches above the average. As regards the S. W. monsoon the reports are, as usual, somewhat contradictory. Ceylon has had very heavy rain with a S. W. wind (rain-fall since March 1st 31.6 inches) and the storm to which we have already

referred was looked upon in the south as the "bursting of the monsoon." By the end of the month, however, the monsoon winds, which form the monsoon proper, were felt only in the Bay of Bengal and not on the West Coast or in the Indian Ocean. The weather over most of India is in a state of disturbance and there is evidence that in all probability the monsoon will not be so long delayed as was at one time feared.

The Royal Society Soirée, on May 6th, seems to have been of considerable interest though none of the exhibits were altogether new. Amongst the most novel were Lippmann's colour photographs of the spectrum, in which the colours are produced by direct photographic action and are perfectly permanent, and Mr. Shelford Bidwell's selenium lamplighters, which we described in a previous number. He showed also an adaptation of the same principle in a selenium alarm for calling attention to the accidental extinction of a ship's light or railway signal lamp. In this case, however, we fancy the desired result could be obtained with much less delicate apparatus by making use of the *heat*, instead of the *light*, of the lamp.

The following abstract of a table prepared by Mr. E. G. Ravenstein for the *Statesman's Year Book* may prove of interest.

	Area.	Population.	Inhab. to a Square Mile.
British Guinea ...	375,370	22,632,600	60
British South Africa ...	988,520	3,794,000	4
British East Africa ...	1,097,367	13,015,000	12
Mauritius, &c. ...	1,179	395,000	335
British Africa (total) ...	2,462,436	39,836,600	16
French Africa ...	2,783,950	22,013,000	8
Portuguese Africa ...	909,824	5,518,000	6
Spanish Africa ...	246,757	444,000	2
German Africa ...	831,000	5,110,000	6
Italian Africa ...	315,100	5,370,000	17
Congo State ...	827,000	15,000,000	18
Boer Republics ...	163,400	810,000	5
Liberia ...	37,000	1,050,000	29
Egypt and Tripoli ...	836,000	7,980,000	10
Unappropriated ...	2,021,583	23,865,400	12
Great Lakes ...	80,350	...	...
Total Africa ...	11,514,400	127,000,000	11

Dr. Buchan, has recently communicated to the Royal Society of Edin-

burgh a very important paper on the relation of high winds to barometric pressure. The data were obtained from the simultaneous observations made at the top of Ben Nevis, which is fully exposed to the wind, and at the Fort William observatory, which is well sheltered. The observations on the Ben are made according to Beaufort's scale where 0 is a calm and 12 the greatest hurricane likely to occur. The values of the various numbers in miles per hour have been determined by Mr. Omond by comparison with a modified Robinson's anemometer. The general result of Mr. Buchan's investigation is, that after reducing both barometer readings to the same standard, in calm weather, the Ben Nevis barometer is only one-thousandth of an inch below the Fort William barometer. The difference increases as the wind rises, so that for force 4 the difference is 14-thousandths, for force 7 it is 50-thousandths, for force 9 fully one tenth of an inch, and for force 11 it is 1½ tenths. This lowering of the barometer with high winds, though suspected before, is proved now for the first time.

C. M. S.

A NEW Weekly has been started in Scotland entitled, *The Modern Church: A Journal of Scottish Religious Life*. Its aim is "to be a medium for the expression of the common inter-denominational religious life of Scotland." Its spirit may be gathered from the following significant words:—"To get the good of the past we must not be slaves of the past. We must renounce belief in finality in thought and conduct. We must seek from the fathers and theological doctors inspiration, not law." We heartily welcome this new journal, and sincerely hope that it may live to become a power for genuine good. If it lacks somewhat the sparkle that seems an essential of modern journalism, it contains excellent writing, and shows no trace of padding. A striking feature that deserves special mention is that even the small spaces at the foot of the columns, which are in most journals filled up with anything that is suitable in point of quantity, are in the present case devoted to gems taken from the finest of our writers—George Eliot, Emerson, Landor, and Victor Hugo. Amongst other things *The Modern Church* wishes to be a means whereby missionaries and the Church at home may be kept in touch with one another, and the managers promise to place at their disposal space for the "free discussion of all the vital interests of their work."

SIR EDWIN ARNOLD does not seem to have increased or even maintained his reputation by his recently published work—*The Light of the World*. *The Athenæum* critic, if severe, seems just, if we judge by the quotations from the poem. In this poem Sir Edwin is dealing with a subject,

every line of which is familiar to thousands of readers, and flashing Oriental imagery will not here prove a substitute for genuine thought and feeling. He is frequently infelicitous, but it will be difficult to surpass the following, which is a paraphrastic line to describe a purple robe:—

“A paludamentum-laticlave.”

THE popularity of Mr. Hall Caine's recent novel, *The Bondman*, is evidenced by a sale of 15,000 copies in less than a year, three of the editions being in the expensive library form.

THE next volume of the Rulers of India series is *Lord Hardinge*, written by his son, the present Viscount. This is the first Life of Lord Hardinge that has been written.

MESSRS. HUTCHINSON AND CO. have published the first instalment of a large work, *The Poets and Poetry of the Nineteenth Century*. Vols. I. and VI. are now published. The critical articles in Vol. I. devoted chiefly to the Georgian poets, are written mainly by the editor, Mr. Alfred Miles. Vols. II., III., IV., and V. are not yet ready, but will deal with the later Georgian poets, and with Tennyson, Browning, Rossetti, Dr. Keble, W. Bell Scott, and others. Vol. VI. treats of Mr. William Morris, Mr. Swinburne, Mr. Robert Buchanan, Mr. Austin Dobson, Mr. Alfred Austin, &c.; and critical articles on these are written by a number of the leading literary critics of the day. The aim of the work is to be an anthology of unusual magnitude and of perfect accuracy, so that literary men may refer to it as fearlessly as though they were referring to original texts. Later volumes will deal with the later Victorian poets.

DR. EDWIN A. ABBOT has just published a new book dealing with Cardinal Newman's Essay on Ecclesiastical Miracles. Its title is *Philomythus: An Antidote against Credulity*.

A book which is expected to be of considerable interest is about to be published entitled, *Forty Years in a Moorland Parish*. It is from the pen of the Rev. Dr. Atkinson, and will deal with the archaeology, the folklore, and the anecdotes current among the people of his parish.

MR. CHAS. P. JOHNSON publishes in the *Athenæum* ‘Reading a poem,’—a lost tale by W. M. Thackeray. It appeared originally in 1841 in the pages of the *Britannia*, a weekly paper long since dead. The sketch is thoroughly characteristic of the author and though not of any remarkable value, certainly deserves resurrection more than most of the fragments and letters recently published as memorials of the great novelist.

THE craze for hunting out unpublished scraps from the writings of the literary celebrities of the recent past has of late become acute, and may well fill the celebrities of to-day with fear and dismay. Nothing, however trivial and insignificant, however hurriedly or thoughtlessly written, seems too unimportant to give to the world, provided only it has under it the name of William Makepeace Thackeray or Thomas de Quincey. It may be presumed that even these distinguished authors had their moments of relaxation when they wrote without fear of the public and without revision for the press, and did not anticipate that scribblers of a future generation would seek a reflected glory by dragging from obscurity into the light hurried notes written in the ordinary course of daily correspondence. The tale referred to above happily does not come under this category. It was published by Thackeray himself, and though it will not add anything to his fame, it will be of interest to lovers of his writings.

EVEN the *Athenæum* thinks the fact of sufficient importance to be noted in a paragraph, that in a book about to be published by a ‘Retired Publisher's Assistant’ we are promised some account of De Quincey's ‘modes of forwarding copy to *Tait*.’

LORD RANDOLPH CHURCHILL's letters from South Africa, which will appear first in the *Daily Graphic*, are to be published afterwards in book form by Messrs. Sampson, Low and Co.

RECENT PERIODICAL LITERATURE.

THE *Contemporary Review* devotes its opening pages to an interesting article by Sir James Kitson, Bart., President of the British Iron and Steel Institute. It consists of notes on the visit of the British Iron and Steel Institute to the United States in 1890,—the first visit paid by the Institute to America. Last Autumn a large number interested in manufactures crossed the Atlantic to receive the hospitality of the New World. The deputation consisted of the President, the council and 295 members of the Institute, together with several members of the Institute of Civil Engineers, and 112 members of the Verein Deutscher Eisenhüttenleute. Sir James can hardly find words to express his sense of the splendid hospitality of their hosts, and in truth every possible kindness seems to have been shown to the party.

At New York Edison's laboratories and workshops attracted most attention. Edison was then engaged in extensive experiments for the selection of magnetic ores of iron. He hoped to make commercially valuable ores containing in the bulk as little as ten per cent. of iron.

A feature that struck the visitors first at the Baldwin Locomotive works of Jones Parry and Co. in Philadelphia, the biggest locomotive works in the world, was that the American skilled artisan puts forth more physical effort and produces more work in a given time than the English workman. This was confirmed as they went on. Their productive power is greater, their working hours are longer, and their remuneration is greater.

“I met one of my old workmen at Mr. Carnegie's works in Pittsburg.

and he endorsed my opinion. Speaking from his own practical experience 'I am quite a different man here' he said, 'from what I was in the old country; I don't know why it is so; whether it is that I live in a stimulating atmosphere, or whether it is the example set me; but I know that I have got the go in me here. I can do more work; I feel that I have it in me; but I also feel and know that it won't last. I shall be done in ten years.'

Sir James Kitson found that in the South there is a strong feeling in favour of free trade. "They are confident that, with their abundant resources and the cheapness of production, they can hold their own with all competitors without the aid of protective duties."

Summing up, he concludes that the leading characteristic of the Americans is their readiness to adopt improvements and scientific methods in the processes of manufacture. The inventions that have brought the manufacture of iron and steel to its present state are mainly of English origin. But with their surprising gift of receptivity and peculiar faculty for adaptation they have taken a leading place. They have, too, an advantage in the high standard of education and particularly of technical education. But he concludes, there is no fear but that, on equal terms, the English iron and steel makers will continue to hold their position with the keenest competitors.

Mrs. Bishop (Miss Isabella Bird) in an article entitled 'The Shadow of the Kurd' makes out a strong case for the Christians in Asiatic Turkey. She gives a large number of instances, gathered from personal knowledge gained in a visit of the lawless oppressions of the Kurds.

The Irish question, which we are never long allowed to forget, is the subject of an article by Sir C. Gavan Duffy, in which he appeals to Mr. Gladstone for a more explicit declaration on the Irish question. He accuses Mr. Parnell of a successful career of misstatement till at length a feeling is spread abroad in Ireland that Mr. Gladstone's scheme is a mere

mockery. The chief points on which Sir Gavan demands definite information are these:—Are there to be two houses of Legislature in the Irish Parliament, or only one? How are adequate securities to be given for the Protestant minority, if there is only one chamber? What is to be the number of members in the Irish Parliament? What is to be the fiscal relation of Ireland to the rest of the empire?

Mr. Grant Allen in 'Democracy and Diamonds' gives utterance to one or two paradoxes, which may afford food for thought. 'America will be the last country on earth to accept democracy.' 'No true liberal would even own a diamond.' 'I think a really moral man would always for such purposes (tea pots, sugar bowls) prefer electro-plate to silver.' 'There is a good deal of truth in Mr. Grant Allen's contentions, but it would have been much nearer the truth had he headed his article 'Socialism and Diamonds.'

Dr. Sanday writes a laudatory review of Dr. Hatch's recent lectures on 'Greek Influence on Christianity.' He regards it as probably the greatest contribution yet made to a true understanding of the first three centuries.

Mr. L. Wolffsohn gives a short, interesting account of 'Italian Secret Societies,' showing to what extent they still exist. 'Wit in the Pulpit' is mainly a dishing up of old pulpit stories by the Rev. H. R. Haweis, and is an appeal for pulpit freedom. Mr. Taylor Innes contributes an article on 'A World-wide Democratic Church,' and points out that the growing unity among Presbyterians proves two things:—(1) that a union of the free churches throughout the world is practicable at some early date, and (2) that such a union, instead of impairing their freedom, may be made a means rather of advancing or establishing it."

In the *Nineteenth Century* one naturally turns first to the two articles that promise to tell us something about the East, 'Kaiser-i-Hind and Hindoostani' by Rafiuddin Ahmad, and 'The Enormous Antiquity of the

East' by Professor Max Müller. The first is written in a quiet style and contains many sensible remarks. The writer insists upon the necessity of Anglo-Indians acquainting themselves with 'the language and the literature of a country, they are called upon by Providence to govern,' if England desires to have a permanent interest in India. He points to the example of the Queen-Empress, who has attained considerable proficiency in Hindoostani. This article is, however, mainly a sequel to that written by Lady Dufferin, a month or two ago, and seeks to present a fair picture of the condition of the Muhammadan Zenana women. The writer welcomes the attempts that are being made to diffuse Western culture among Purdah ladies, but hopes that their European sisters may also take advantage of their opportunities and learn something of oriental literature, and seek the precious gems that lie hidden behind the Purdah. He does not deny that "since the downfall of the Moghul Empire thick clouds of ignorance have gathered round the Zenana," and that the talents, capacity and energy of the Muhammadan women now for the most part lie dormant. Max Müller's article is popular, yet learned and philosophical. We have often thought that the rhetorical reference to India as 'this ancient and historic land' was a phrase that demanded analysis, not because the expression is untrue but because it may be misunderstood. The authentic materials of early Indian history are meagre in the extreme, and the great orientalist says so here in so many words:—

"I should say that the authentic history of India does not begin before the third century B. C. We have at that time the inscriptions of the famous King Asoka, the grandson of Chandragupta, the Sandrokyptos of Greek historians."

This it will be admitted is modern compared with what Assyria and Egypt, or even Greece has preserved for us. The historic remains of China have not yet been sufficiently investigated to permit us to make a safe general assertion regarding them. What makes India an ancient land is not authentic history, but construc-

tive. When it is remembered that the religion of Asoka was Buddhism and that Buddhism was a revolt against Brahminism, it is at once clear that such changes require centuries. Similarly with reference to the language of the earliest Vedic hymns. It exhibits features so old that the philologist comes into collision with the geologist and demands that the limits of man's presence on the earth be extended beyond the end of the glacial period. It is, however, not in mere antiquity that Professor Max Müller finds the attraction of oriental studies.

"Oriental scholarship must no longer rely on the old saying that distance lends enchantment to the scene. Mere distance, mere antiquity, mere strangeness, will not secure to it a lasting hold on our affections."

"Unless the scholar has a heart, and unless he can discover something in the ancient world that appeals to our hearts, his labour will be in vain. The world will pass by, after a cursory glance at our mummies, and will take its lantern, if possibly it may find a man somewhere else."

"Discover what is truly human, not only what is old, in India, Persia, Arabia, in Babylon and Nineveh, in Egypt—aye, and in China also—and oriental studies will not only become popular—that may be worth very little—but they will become helpful to the attainment of man's highest aim on earth, which is to study man, to know man, and, with all his weaknesses and follies, to learn to love man."

Appropos of antiquity, Dr. Charles Waldstein discusses the question, 'Is it Aristotle's Tomb?' Dr. Waldstein himself, in the course of his excavations at Eretria, discovered the tomb, which it is believed may prove to be actually that of the great Stagyrice. If the identification be established beyond question, this discovery coming so close upon the finding of the 'Constitutions' will be one of the most extraordinary coincidences in the history of archaeology. The circumstantial evidence is undoubtedly very strong; but Dr. Waldstein is cautious and his article, like his letter in the *Academy*, is intended to keep the question open and to warn against a hasty decision.

Two articles more or less medical are 'Resuscitation by Oxygen' by Lieut.-Col. Henry Elsdale, and 'The Realm of the Microbe' by Mrs. Priestley. Colonel Elsdale speaks from experience. He saved the life of a man who had been poisoned by coal-gas by administering to him a dose of oxygen. The remedy, Colonel Elsdale believes, might be employed with good effect in cases of drowning, or of suffocation by choke-damp, or in hospitals when respiration has ceased through the influence of anaesthetics. He is fully alive to the danger of explosion attendant upon compressed oxygen, but believes the danger may by due care be reduced to an inappreciable minimum.

Mrs. Priestley, tells the story of Pasteur's discoveries, and of those that have since been made in the same direction, in a way so graphic that her article reads like a romance. Certainly here truth is stranger than fiction. The article enters a plea for the establishing of an Institute of Preventive Medicine in Britain.

'The Warfare of the Future' is an article written by Mr. Archibald Forbes, the well-known war-correspondent, in a dashing-hussar style; but it is full of interesting matter. He compares present or contemporary warfare with that of the time before the introduction of rifled firearms. "Roughly speaking, the first five-and-a-half decades of the century were smooth-bore decades; the three-and-a-half later decades have been rifled decades, of which about two-and-a-half decades constitute the breech-loading period." He adds:—"It is a strange and bewildering fact that the wars of the smooth-bore era were, for the most part, shorter, sharper and more decisive." Mr. Forbes is not content merely to make this assertion; he proceeds to prove it by reference to the Peninsular War, Napoleon's campaigns, the Austro-Prussian, Franco-German, and Russo-Turkish wars. One specimen of his proof we may give:—

It took the Germans in 1870 a month and-a-half to get from the frontier to outside Paris; just in the same time, although certainly not with so severe fighting by the way, but nearly twice as

long a march, Napoleon moved from the Rhine to inside Vienna. From the active commencement to the cessation of hostilities the Franco-German War, lasted six-and-a-half months; reckoning from the crossing of the Rhine to the evening of Austerlitz, Napoleon subjugated Austria in two and a quarter months."

Even the 'Seven Weeks War,' a feat of which the Prussians are so proud, he shows was surpassed by Napoleon in 1806 in the campaign which gave him the victory of Jena and possession of Berlin.

As to the future, it is thought by many "that a great revolution will be made in warfare by the magazine rifle with its increased range, the machine-gun, and the quick-firing field artillery, which will speedily be introduced into every service." In Mr. Forbes' opinion the change will practically amount to this, that the army that acts on the defensive is bound always to have the best of it, and that anything of the nature of invasion must be futile. Meanwhile, Europe is an armed camp; and it is a problem "whether the final outcome will be universal, national bankruptcy or the millenium." What a spectacle for angels, to watch the human race seeking out many inventions, with marvellous skill and ingenuity, whereby it may destroy itself! And this is the end of the development,—'universal national bankruptcy',—which in other words is just the destruction of our boasted material civilisation,—or a forced millenium with 'the nations snarling at each other's heels', yet afraid to break the leash!

Mrs. B. Lynn Linton deals with the Clitheroe case in her article on 'The Judicial shock to Marriage.' The English marriage law stands in need of amendment, and the improvement must come in the form of a closer approximation to the Scots law. The 'Noticeable Books' that are commended this month are, 'Esther Pentreath', a Cornish tale by J. H. Pearce; volumes seven and eight of Locky's *History of England in the Eighteenth Century*; *Unrodden Ground in Astronomy and Geology* by Major-General Drayson; Gebhart's *History of the Renaissance in Italy*;

RECENT PERIODICAL LITERATURE.

Animal Life and Intelligence by Prof. C. Lloyd Morgan; and *Philomythus* by Dr. Abbot.

There is considerable variety in the contents of the *Fortnightly*, which is apparently anxious to attain distinction in that way, if not by means of any contribution of first-rate interest and importance. The editor shows a readiness to mitigate dullness by printing short stories or sketches of psychological interest by masters of the craft. The well-known novelist Mr. Thomas Hardy re-appears in this number with one of his pictures of peasant life. It is very good, being freer than usual, indeed quite free, from a certain unsympathetic harshness or cynicism which disfigures much of his work. Mr. Frederick Wedmore conjures up a romance round the person of "A Chemist in the Suburbs."

The number opens with a review by Mr. Swinburne of the recently published journal of Sir Walter Scott, which for the first time has enabled the world to know all about that great genius and great man. "As a final illustration and attestation of a character almost incomparably lovable, admirable and noble, it is a gift altogether beyond price." The journal covers Scott's last sorrowful years, and serves greatly to modify Lockhart's sombre account. "Nothing is here for tears." Scott appears in his journal "if not a greater or a better, an even stronger and happier man than we knew."

Mr. T. J. S. Keltie contributes an article on South African problems, which cannot be said to be informing while it is meant to be reassuring. The gist of it is that with such a loyal Imperialist as Mr. Cecil Rhodes, strong in the confidence alike of English and Dutch, at the head of affairs in South Africa, British interests are safe in his and in Lord Salisbury's hands. Miss Mathilde Blind furnishes "Personal Recollections of Mazzini," in the spirit of hero-worship. "E. B. Lavin" is once more to the front with an account of the working of the censure of the press in Russia.

The most interesting literary contribution is a strongly depreciatory

critique on Ibsen's dramatic works by Mr. Oswald Crawford.

"*Hedda Gabler* is undoubtedly the strongest piece of dramatic work that Ibsen has yet done; but, as usual, the plot, the motives, the characters, and situations are taken not from life, but from the author's dreams of what life might be if all his presumed theories of it were sound. If, indeed, the majority of the actors in a human comedy were discarded in body or in mind, the few virtuous men and women weak and tiresome, fools, and all the energetic people full of purposeless duplicity and meanness or cruelty, then *Hedda Gabler* would be a representative drama of human life."

Mr. Meredith's novel is concluded.

The *New Review* this month contains several interesting articles, but perhaps the most valuable is one Mr. James Bryce the well-known M.P. for Aberdeen, upon 'The Legal and Constitutional Aspects of the Lynching at New Orleans.' A somewhat strange state of matters was revealed in New Orleans a few months ago. A prominent official who had been energetic in attempting to suppress the secret societies which are the bane of Italy and have been brought over to America by Italian immigrants was murdered. About a dozen Italians were suspected of the crime and were tried for it. An acquittal was however procured, through the influence, it was said, of the pernicious secret societies. The citizens of New Orleans, however, were determined that the crime should not go unpunished, seized the suspected persons and executed them. Those who took part in the lynching were the most prominent people in the city of New Orleans and the sympathies of their fellow citizens were entirely with them, so much so indeed that it has been found impossible to punish them for their illegal proceedings. Most of those who were lynched were citizens of the United States, but some of them had not yet become so, and consequently were still Italian subjects, and it is in connexion with them that the international negotiations which have been going on for sometime have taken place. Mr. Bryce

does not deal with the history of the case but with the interesting legal and constitutional questions that have emerged or are likely to emerge in connexion with it, and he is specially fitted to deal with these, not only from his great historical and legal knowledge, but also from his special acquaintance with the constitution and the condition of the United States.

The first question discussed is what is the liability of one state to another in respect of injuries inflicted in its territory upon the subjects of that other? The admitted principle is "that every civilized State is bound to secure to the subjects or citizens of another friendly State the same measure of personal liberty, personal security, and protection to property as it affords to its own subjects." Special disabilities may be imposed upon aliens, but as regards protection for person and property, the foreigner is bound to receive the same treatment as the native. Sometimes these rights are secured by special treaties, and this is so in the case of Italy and the United States. The question is complicated, however, by the fact that "the Constitution of

the United States leaves with the states of the Union the right to make, and the right to administer the ordinary civil and criminal laws" and that "preservation of order, the trial and punishment of crime belong to each State within its territorial limits." If therefore the state of Louisiana refuses to take any action in the way of offering redress for the injury done to Italian subjects the Federal Government can do nothing, just as it could do nothing if the injured parties had been members of the State of Pennsylvania. Italy naturally says to the Federal Government, we have nothing to do with your internal arrangements, we wish redress for the wrong done to our subjects; while the Federal Government replies—Owing to our constitution we can do nothing for you. If the Federal Government were willing to try to exercise its authority over the state of Louisiana, we should soon see a serious constitutional conflict, but there is little probability of this taking place, for the Democratic party, which has all along been the champion of State rights, has a large majority in the House of Representatives.

CORRESPONDENCE.

REV. MESSRS. COBBAN AND PAINTER.

SIR,

With reference to the controversy between Mr. Cobban and Mr. Painter, I beg to be permitted to make a few remarks. I should, in the first place, be thankful to Mr. Cobban for his noble earnestness to exhibit the Christian faith in all its grandeur and symmetry. At the same time, I regret to say that it seems to me that he is either wanting in clearness or is minimising the truth of the Christian Revelation.

It is true that Mr. Painter and many others are of opinion that the relation between Christianity and all other systems of religion is one of

direct hostility and that all faiths but Christianity are the delusions of the Evil One and have nothing to do with God. It is certainly absurd to suppose that all non-Christians are doomed to hell, however virtuous they may be, yet there are even Christians who fancy that non-Christians could not possibly be virtuous and that they are incapable of lofty moral aspirations.

What then, it may be asked, is the distinctive function of Christianity? It begins where other systems have left off. Judaism, Brahmoism, Hinduism, at their best, could go only up to a certain point and no farther, and at this point Christ begins. Christ distinguishes between the moral and the spiritual side of religion. All reli-

gious from the beginning up to the Advent of Christ have taught only moral excellence with belief in God. It was reserved for Christ to raise men to spiritual excellence which is possible only to a believer who holds communion with Christ; for Christ is the only medium through which God gives His Spirit to man. This is no arbitrary arrangement; for, the Spirit of God being of a substance different from that of man, must necessarily pass through a medium which is at once Divine and Human.

St John the Baptist was greater than any other prophet, and still the humblest Christian in virtue of his spiritual experience is greater than he. Cornelius was a model of moral excellence. Prayer and almsgiving marked his character, and yet he had to rise to a still higher life and higher experience, possible only through Christ, and it is this higher life, and higher experience that constitute heaven or the Kingdom of God or salvation in the Christian sense of the words; and these that are below that standard are said to be near the Kingdom of God whether they be Moses, David, and Elijah, or Socrates, Plato, and Aristotle, or Buddha, Pottanathu Pillai and Thayumanavar.

The most virtuous of non-Christians whether they be Jews or Gentiles, before or after the time of Christ, are but near the Kingdom of God but not in the Kingdom of God. They are qualified to receive the Divine Life, which alone constitutes salvation, and which is possible only by faith in Christ, and communion with Christ, the only medium of Divine Life to men. Hence Christian Missionaries are bound to say uncompromisingly "That there is none other name under heaven given among men whereby we must be saved." So that, if a Hindoo or a Jew or any other man be virtuous but be no believer in Christ he is not saved yet. This fundamental doctrine of Christianity that faith in Christ alone saves men, Mr. Cobban shrinks from boldly and clearly affirming.

There is another error that he falls into. He commits himself to the following strange statement—"Ex-

cepting the jailor, the New Testament does not show that Gentiles who embraced Christianity were generally baptized."

If the Jews, the Samaritans, and the first Gentile convert believed and were baptized, and if the command of the Lord be that His Apostles and Disciples should baptize all nations, is it not reasonable to infer that the Gentiles who believed in Christ were also baptized as a matter of course? If there were any doubt it is for Mr. Cobban not to show that there is no mention of baptism in certain cases but to prove (if proof be possible) that in many cases baptism did not actually follow belief at all.

The third error of Mr. Cobban is his bold criticism of Sir Monier Williams, a renowned scholar and an eminent saint. Mr. Cobban thinks that the following statement of Sir Monier Williams is wrong—"non-Christian Bibles are all developments in the wrong direction. They all begin with a few flashes of light and end in utter darkness."

I regret to say that in condemning this well balanced judgment of the great scholar and saint, Mr. Cobban falls into many and serious errors. He sweepingly pronounces it to be wrong. What are the Scriptures of the Hindoos? What are the sacred writings which all or at least the majority of the Hindoos consider sacred? Is it not the Vedas, the Upanishads, the Puranas, the Law of Manu, and the systems of philosophy? Now the saintly scholar does not deny any truth to the Hindu sacred writings. I suppose Mr. Cobban has read Monier Williams' work called 'Indian Wisdom.' The important truth which he enunciates is that the Hindoo systems of faith "end in utter darkness." Now does Mr. Cobban venture to contradict this well-known characteristic feature of all Hinduism? What is the ultimate goal of all systems of Hindoo faith? Is it not absorption in an impersonal force? Is not the loss of all conscious individuality, the end and aim of the religion and philosophy of this country? Even the Vishnavite philosophy, although it speaks of the Universal soul as distinct from the

Individual soul, but not teach consci-
ous personal union with God.

Even the high Sitandhies whose works Mr. Cobban speaks so highly of, have no definite goal, loss of individuality. If this is not "ending in utter darkness" what does it end in? The words of Sir Monier Williams that "non-Christian Bibles are all developments in the wrong direction," are literally true. For "what is the very basis of all forms of Hinduism? It is the law of Karma and the theory of Re-births. What is it that permeates the whole system? it is the doctrine of births. And what is the consequence? It is the destruction of the distinction between right and wrong. Christianity says, 'avoid wrong and do right.' But every system of Hinduism says 'avoid both good and evildeeds; and then alone you will escape birth,' and what is the final end? it is the destruction of individuality; so that the system is rotten from beginning to end. The truth which God gave to the Hindus has been corrupted by their vain philosophy and by their morbid love of speculation. And yet Mr. Cobban chooses to call the true verdict of the great Monier Williams 'an error'!

Further Mr. Cobban is carried away by the high moral aspirations and sentiments which fill the works of such men as Thayumunavar, Pattanathan Pillai, Appar, Santharar, and Manikavasagar. No Christian of any intelligence would speak a word in disparagement of these great men. But yet should not Mr. Cobban say to every one of them 'and yet thou lackest one thing.' Is not the experience of a Christian saint, the experience also of such Sitandhies plus something more. And it is this something more which Indian Missionaries should preach to men like such Sitandhies, and without which no one could be said to be saved. And yet Mr. Cobban seems to think that the works of Sitandhies contain *saving truths*.

In fact Mr. Painter and Mr. Cobban strike off to opposite extremes. Mr. Painter seems to think, that non-Christians, however virtuous, could not be saved, but are doomed

to hell, and Mr. Cobban fancies that every religion contains 'saving truths' and that it is possible for non-Christian sages to have a degree of piety equal to that of Christian saints.

It is a plain fact that Christ is the Saviour of all men, that He is the light that enlighteneth every man that cometh into the world, that it is unreasonable and unscriptural to doom to hell all non-Christians. At the same time it is equally true that there is no salvation except by faith in Christ; that Divine Life, which alone constitutes salvation can not be communicated to any individual soul without faith in Christ; that the experience of the greatest gentile sage or the greatest Jewish prophet is inferior to the highest spiritual and supernatural experience of the Christian saint. The experience of simple virtue is great, the experience of virtue plus devotion to God is greater, the experience of virtue, plus devotion to God, plus devotion to God in Christ is greatest and highest.

The life and experience of the greatest sage or prophet falls far short of the life of the Christian saint in all its comprehensiveness and completeness and of the experience of the same in all moments of life and in all states of mind.

It is quite possible that some Christians should have attained only to the state of such sages and prophets and not have risen yet to the life and experience of the Christian saint.

"He that hath the Son hath life."

Let me conclude the letter with two remarks.

(1) *Saving* faith in Christ is possible only after the Incarnation, the passion, and the Glorification of our Blessed Lord.

(2) We are not in a position even to speculate on the method which the Saviour of the World may or may not have employed in admitting to the knowledge of, and faith in, Himself, great and virtuous men that have lived in different parts of the world prior to His Holy Incarnation.

ISAAC DANIEL.

ST. PETER'S COLLEGE,

TANJORE.

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MAY 1922

தமிழ்நாடு ஆவணக்காப்பக நூலகம்,
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