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*January 1904.*

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*No man who hath tasted learning but will confess the many ways of profiting by those who, not contented with stale receipts, are able to manage and set forth new positions to the world; and, were they but as the dust and cinders of our feet, so long as in that notion they may yet serve to polish and brighten the armoury of truth, even for that respect they were not utterly to be cast away.—MILTON.*

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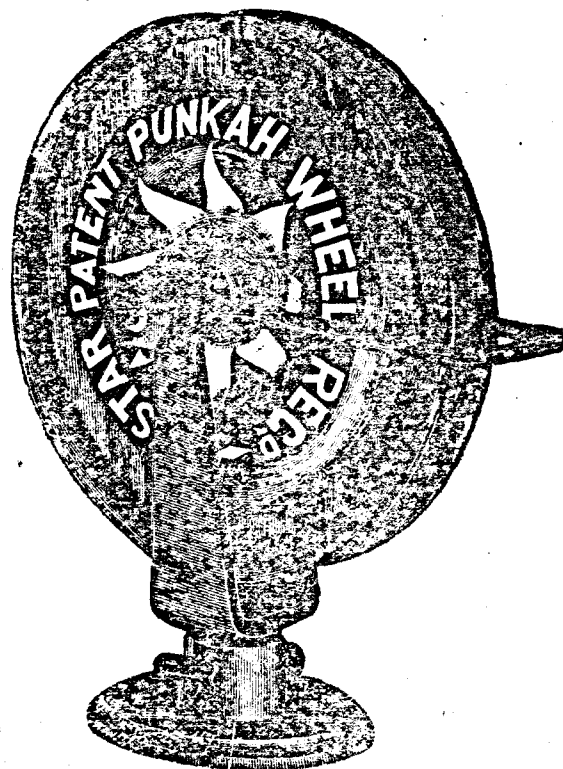
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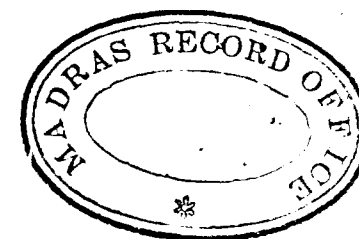
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THE  
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No. 235—JANUARY 1904.

Art. I.—CHANTS AND HYMNS OF THE CHURCH OF  
ARMENIA.

WITH EXAMPLES.

THE Church of Armenia possesses a very large collection of hymns and chants in her Hymnal, or *Sharakan*, and in her Church Service, or *Jama-Kirk*, literally, Hour-book (containing all the daily offices). These writings are very old, dating from the 4th century to about the 12th and the greater portion are ascribed to the Saints Isaac and Mesrope (390), their disciples and followers, and to Saint Nierses Full-of-Grace (1166), and to many other fathers of the Church whose names have not been so well preserved. The character of the writings contained in the Hymnal is generally a kind of poetical prose; there are several acrostical compositions in the Service Book, and, in both volumes, those of later date include a certain number of metrical compositions. The style abounds in anti-theetical images, and allusions to the Old Testament prophecies. The following extracts from the Hymns for Good Friday offer a fair example of the writings of these early Fathers on the Burial of our Lord:—

The Bestower of gifts on all is this day sought as a gift from Pilate, and He Who clothes Himself with light, as it were a garment, is pleased to be shrouded by Joseph.

The Giver of life to all is this day placed in a new-hewn grave, and the Treasure of immortality is sealed with the ring of the priests.

Christ, Who is the ever living One, this day is begged from Pilate as a corpse, and He Who was the covering of the nakedness of Adam, willed to be shrouded by Joseph.

The Sun of Righteousness, Christ, was this day placed in a dark pit, and the Ray of Glory from the Father was hidden under a stone in the midst of the earth.

The ever-watchful Creator of all this day slumbers amidst the dead ; the sleepless Watcher over Israel is guarded by soldiers.

From a Litany sung on Holy Thursday :—

O Great God and wonder-working Power, uncreate Essence, Who in mercy wast pleased to create all things out of nothing, we beseech Thee,

Hear, Lord, and have mercy.

O Thou, who hast stretched the skies as a tent over the waters, making the firmament a dwelling for Thine uncircumscribable God-head, and Who didst create all the wonders thereof to the praise of Thy Holy Name, we beseech Thee,

Hear, Lord, and have mercy.

Thou didst make the seraphim and the cherubim and the incorporeal beings of spiritual fiery nature to hymn Thee with trisagion chants, and with them wast pleased to accept from the earthborn glorification and praise of Thy omnipotent sovereignty ; we beseech Thee,

Hear, Lord, and have mercy.

Ineffable Dawn and Ray of the Unfathomable and Incomprehensible Father, Who didst become very Man, and Who didst, O Lover of mankind, come down for our salvation, we beseech Thee,

Hear, Lord, and have mercy.

Thou the Fulfilment of the laws and the prophets, Who didst come of Thine own free Will to the mystic upper Chamber, and, with ineffable humility, didst wash the feet of the Apostles, we beseech Thee,

Hear, Lord, and have mercy.

From a hymn sung on Lenten evenings :—

Father of Pity, in love look down,  
Upon us, Thy creatures, the works of Thy Hands.  
Around us, weaklings, encamp, O Lord,  
The angel-guard of Thine armed hosts.  
From danger protect and deliver our souls,  
And from him that walketh in darkness abroad ;  
So that we may, by night and by day,  
Thy glories unceasingly sing.

Son and Word of ineffable Birth,  
O Being Eternal and Uncreate,  
Who hast appointed the day for work,  
The darkness of night for rest.  
Such slumber grant to our mortal eyes,  
That, sleeping, we in spirit may wake ;  
So that we may, by night and by day,  
Thy glories unceasingly sing.

Lord and Master of reasoning Souls,  
Fount of Light and Dispenser of gifts,  
When closing the gates of our earthly frames,  
To the eyes of our souls, O grant Thou light.  
That during the night we may haste to Thee  
And, with the fire formed, offer Thee praise ;  
So that we may, by night and by day,  
Thy glories unceasingly sing.

O Being of Light without shadow or turning,  
Before Whose Presence we stand in prayer,  
Who didst appear at eventide,  
To the Eleven within closed doors.  
With Thomas do we cry to Thee,  
O Lord our God, we do confess Thee !  
Be with us, Lord, when falls the night,  
Descend amongst us, saluting our souls.

Assembled here do we beseech Thee,  
Send down to us Thy help, we pray.  
O Watcher over Israel,  
Be Thou the Guardian of our souls.  
O dwell with us, Bestower of Peace,  
So shall we slumber undisturbed ;  
When morning breaks to haste to Thee,  
To Father, Spirit, offering praise.

Apart from matters of ritual, the first thing that would strike a member of a Western, say of the Anglican, Church, on attending the daily services of the Armenian Church, would be the unusual amount of singing he would hear as compared with the services of his own Church. While, in an English Cathedral with an organ and full choir of men and boys, the daily offices of Matins and Evensong would include, respectively, the morning and evening Psalms, the Venite, Te Deum and Benedictus, the Magnificat and Nunc Dimittis, with an anthem at each service, the daily offices of an obscure Armenian Church with a staff of perhaps one or two singers, besides the clerk and the parish priest, present a very different aspect.

The service commences at dawn with the Lord's Prayer and three or four psalms, followed by five long chants and one or two short prayers. A separate office for departed souls must be read and chanted on days when the Eucharist is to be

celebrated, and this contains a special hymn of 15 to 18 verses. This forms but the prelude to the morning devotions. There follow the offices of the first hour, of the third, sixth, and ninth hours. Each office contains not only its own special hymn, but many others, long and short, some most complicated and difficult, some of 30 or 40 verses, others of only three. On Saints' days and fast-days others are added to the daily number. Nothing must be omitted, all must be faithfully gone through. Special daily hymns in addition are sung during Lent. On feast-days, Saints' days, Martyrs' days, there are separate and special hymns for each office. In convents and monasteries the canonical hours of course are observed, but in parish Churches the morning's devotions include all to the end of the office for the ninth hour, and the evening devotions include the remainder.

The service for the Celebration of the Holy Eucharist possesses again a set of hymns apart from the daily offices, and lasts about one hour and a half. The part taken audibly by the Celebrant in the service is very slight, and the service, with the exception of the reading of two Lessons and the Gospel, and the recitation of the Creed, is entirely composed of singing.

All hymns are sung according to eight ancient ecclesiastical modes. The Armenian names for these modes are alphabetical, as follows :—

|            |             |
|------------|-------------|
| 1 Aip-tsa  | 2 Aip-kien  |
| 3 Pien-tsa | 4 Pien-kien |
| 5 Kiem-tsa | 6 Kiem-kien |
| 7 Tha-tsa  | 8 Tha-kien  |

It will be seen that each word ends in *tsa*, or in *kien*. In Western Churches, the sides in antiphonal singing are distinguished as Cantoris and Decani.

In an Armenian Church the sides, with regard to the chanting, are distinguished by means of the names of the modes. The chancel is divided by pillars into three portions, the north and south choirs, and the central and largest portion which faces the altar. The daily offices are sung from the north and south choirs, antiphonally, and the reading takes

place in the central portion. Each day in the year has its own appointed mode, beginning with the first day of Lent. On this day all hymns belong to the first mode, on the second day, all to the second mode, and so on, in rotation.

In order, apparently, to preserve a perfect balance in the services, all the modes ending in *tsa*, which are the four primary modes, belong during one year to the north choir, and the four secondary modes ending in *kien*, to the south choir. In the following year, *vice versâ*, from the commencement of Lent. Certain hymns, the principal ones, must be commenced by the side on which falls the mode of the day, others again by the opposite side. Therefore the modes may be said to regulate the entire service.

The Armenian word for mode, *Tsain*, means Voice, to take the *musical* signification; for the other meaning, regulating the services, I can find no adequate translation. Each mode of voice has its own characteristics, which are embodied in a set of antiphons, or preludes, to the daily hymns. These antiphons, of which there are about seventy or eighty ordinary ones, besides the feast-day antiphons, form the first studies of choir singers who are taught orally, after the old method. For there is no written music to the hymns and chants sung in Armenian Churches where the chanting is conducted according to the ancient style. Certain old signs are placed over the words in the old hymn-books, but these signs, which are the same for all modes, show nothing beyond pointing out the syllables on which rest the characteristic beginnings and endings, and distinguishing features of the modes. The actual airs themselves must be acquired by word of mouth.

Some modes are very simple, others most complicated. There are in reality three ways of singing each mode. One may be called the ordinary and usual style. Another is a very short, quick way of singing the same air with most of the figures omitted, but with the general characteristics of endings and beginnings preserved. This is used for simple short ceremonies, and unimportant parts of long services. The third is again the same air sung in a long and elaborate manner abounding in variations and long notes, which is employed for feast-day

hymns, and is very difficult and complicated. For all forms of all modes the measure is the same, two-four time.

The examples shown here have been taken from a collection of melodies in a volume of Holy Week offices lately published, which were written down by me note by note, with a good deal of difficulty, from the singing of an Armenian priest, who had no knowledge whatever of music, as we understand the term, but who possessed a perfect knowledge of the numberless chants of his Church, in all their varied forms. As I have attempted to explain, the Hymnal of the Church is no guide to the airs, and he had no other, excepting his memory.

The first example belongs to the Fourth Mode, and is the first verse of an evening hymn, preceded by its antiphon.

Pages III and IV both belong to the Third Mode, page IV being the ordinary style, and page III a more elaborate example. Page III, on which no translation is given, belongs to a penitential service sung on Palm Sunday Evening. It is sung from behind the curtain of the veiled altar; the words, "Who are these that I should open unto them? For only the innocent may enter here," representing the reply of the angel at the gate of heaven to sinners begging for entrance at the Last Day.

Pages V and VI are a good example of the chromatic Fifth Mode, and consist of the antiphon and first verse of a hymn for Good Friday. Pages VII and VIII show an example of a metrical hymn, the mixed mode of which is difficult to determine.

Pages IX and X present a smooth and melodious example of the Seventh Mode, the principal characteristic of which is a modulation into the dominant, rather a rare feature.

The last example is a somewhat elaborate example of the Fourth Mode, and is particularly sweet and plaintive. Want of space forbids my giving a really elaborate example of the variations of feast-day hymns.

The translation of the whole hymn is given in nearly all the examples, but the music of the first verse or so is sufficient as an example of the style.

AMY APCAR.

## Art. 2.—INDO-ARYAN EXPANSION AND THE EARLY RELATIONS OF THE ARYAS WITH THE PRE-ARYANS.

THE Aryan conquest is the first great event of Indian history. Without a clear conception of its nature and character the complex problems of Indian history and ethnology cannot be properly grasped. The colonising and conquering activities of the Indo-Aryans, again, were not confined to India alone. Once settled within her borders, they sent out colonists to Central Asia, Indo-China, the Indian Archipelago, and Ceylon, who carried Hindu civilisation and culture to those distant lands. There is an organic unity between the history of India proper and of these countries, all of which I would collectively designate Greater India for convenience and lucidity. The story of Indo-Aryan expansion is one continuous tale that cannot be studied separately without prejudice to the scientific treatment of the subject. Over and above the consideration of principle, historical materials of a decidedly superior order for the study of the mutual history of India and Greater India preserved in Ceylon, Burma, Siam, Cambodia and Java, which throw a flood of fresh light on our very obscure past, demand the serious attention of all students of Indian history. In this paper I collect a few well-authenticated facts bearing upon the early Indo-Aryan expansion and the relations of the newcomers with the Pre-Aryans from the above standpoint. If these notes stimulate others with better opportunities and abilities to study the question and view it in this light my object will be gained.

In the early dawn of history we find the Aryas settled in the North-West corner of India from the banks of the Kubha or Kabul river to the valley of the Sarasvati, which stream was then a tributary of the Sutlej. Their original immigration into the Indian soil and their crossing of the Indus was clean forgotten. But the tradition of the Rigvedic age still remembered how the invaders penetrated into the Cis Sutlej plain and how the fields and plough-lands were won from the

Dāsyus. In a beautiful dialogue in the third Book of the Rigveda where Rishi Visvāmitra and the rivers Beas and Sutlej are the dramatis personæ, a very vivid picture is preserved of the Eastward Ho :

(Visvāmitra.)

"List quickly sisters to the bard who cometh to you from far away with car and waggon.

Bow lowly down, be easy to be traversed : stay, Rivers, with floods below our axles (9).

(The Rivers.)

"Yea, we will listen to thy words, O singer. With wain and car from far away thou comest.

Low, like a nursing mother, will I bend me, and yield me as a maiden to the lover (10).

(Visvāmitra.)

"Soon as the Bharatas have fared across thee, the warrior band, urged on and sped by Indra,

Then let your streams flow on in rapid motion. I crave your favour who deserve our worship (11).\*

The 'warrior band' of the Bharatas ultimately settled on the Sarasvati and her tributary, the Drishadvati. Two of their poets sing (III. 23) :

"Both Bharatas, Devasravas, Devavātā, have strongly rubbed to life effectual Agni.

O Agni, look thou forth with ample riches : be, everyday, bearer of food to feed us (2).

"He set thee in the earth's most lovely station, in Ita's place, in days of fair bright weather.

On man, on Apayā, Agni ! on the rivers Drishadvati, Sarasvati, shine richly (4)."

The Bharatas had for their neighbours the Purns who also lived on the two grassy banks of the Sarasvati. The latter long cherished the memory of the chief who conquered for them their new home. From the Rigveda we come to know at least four generations of the kings of the Purns, Purnkutsa, Trasadasyu, Trikshi, Kurusravana. Trasadasyu, or 'the terror of Dasyus', is the hero of the clan. The following verses preserve the legendary account of his birth (IV. 42) :

"Our father then were these, the seven Rishis, what time the son of Durgaha was captive.

\* This and all other extracts from the Rigveda are taken from Mr. Griffith's translation (Second Edition).

'For her (Purnkutsa's wife) they gained by sacrifice Trasadasyu, a demi-god, like Indra conquering foemen (8).

"The spouse of Purnkutsa gave oblations to you, O Indra-Varuna with homage.

Then into her ye gave King Trasadasyu, the demi-god, the slayer of the foemen (9)."

Tradition ascribed to the 'terror of the Dasyus' the conquest of the home of the Purn clan (IV. 38) :

"From you two (Heaven and Earth) came the gifts in days aforetime which Trasadasyu granted to the Purns.

Ye gave the winner of our fields and plough-lands, and the strong smiter who subdued the Dasyus (1)".

The legend of Trasadasyu brings us face to face with the Dasyus or Dāsas, the pre-Aryans of Northern India, who were the original occupants of the lands won by the Aryas ; and the most important questions that suggest themselves in their connection are, Who were they ? What was the nature of their relations with the invaders ? It is common to suppose that the tribes with whom the Arya invaders came into contact were savages who were either exterminated or enslaved, while a minority only escaped the fate by taking shelter in the hills. This theory originated in the belief prevailing among the historians of the last century that wherever the nations of Aryan speech were opposed by aborigines, slaughter and bondage became the order. The startling archæological discoveries at Mycenæ and Gnosso have proved its error as far as the Grecian world is concerned. The spade has not yet been extensively employed in unearthing the remains of India's past and Indian archæology has as yet not been able to recover any relic reaching back to the age of the Rigveda. But this ancient literary monument itself contains evidences to show that the common view rests on false premise.

Certain misconceptions regarding the literary character of the Rigvedic hymns lie at the background. On this point I can do no better than reproduce a passage from Professor Macdonell's excellent work, *Sanskrit Literature*, which embody the results of the latest researches by the Sanskritists of Europe "The Rigveda is not," writes the Professor, "a collection of primitive popular poetry, as it was apt to be described at an earlier period of Sanskrit studies. It is a body o

skillfully composed hymns, produced by a sacerdotal class and meant to accompany the Soma oblation and fire sacrifice of melted butter, which were offered according to a ritual by no means so simple as was at one time supposed, though undoubtedly much simpler than the elaborate system of the Brahmana period." The well-known method of imparting education orally, which survived down to our own time was already current among the Rigvedic Aryas. One Rishi, while describing the voice of the frogs, says (VII. 103):

"When one of these repeats the other's language, as he who learns the lesson of the teacher (5)."

Hymn-composing had already come to be regarded as an art. To cite only one among many instances, one poet sings (I. 140):

"May this our perfect prayer be dearer unto thee than an imperfect prayer although it please thee well (11)."

It is not, therefore, at all surprising that the poets of the Rigveda should use highly figurative language and lavishly indulge in personifications and allegories. But what contributes to the literary and poetic beauty of the hymns offers great difficulties to the student who turns to them for gathering historical and ethnological data. The hymns are addressed to the gods with the object of attaining earthly ends through superhuman agencies. Proper names, whether of tribes or individuals, are used ambiguously, and it is often difficult to ascertain whether they refer to human or superhuman beings, or are mere personifications of the phenomena of nature. This is particularly the case with words like *dasyu* and *dāsa*.

"The word *dasa* or its equivalent *dasyu*" writes Professor Macdonell, "is also used to designate atmospheric demons. Primarily signifying the dark aborigines of India contrasted with their fair Aryan conquerors, it frequently rises to mythological rank in the Rigveda as the line between what is historical and what is mythical is not clearly drawn."\* The same authority furnishes us with an excellent test for determining where they refer to aboriginal foes of the Aryas. "When Indra's aid is invoked against both Arya and Dasa foes or when he is spoken

\* Vedic Mythology, p. 157 (Crassburg, 1897; Bühler Encyclopædia of Indo-Aryan Research, III 1, A.).

of 'as discriminating between Aryas and Dasyus or, Dāsas, terrestrial foes are undoubtedly meant. This is probably also the case when Indra fights against the Dasyus in favour of the Aryas."

First, as to the locality occupied by the Dasyu folk referred to in the Rigveda, the hymns only introduce us to those who lived in the vicinity of regions where the hymns were composed. The climatic conditions of the different parts of the Punjab have enabled scholars to settle this question also. "The Punjab of the present day" says Professor Macdonell, "is a vast arid plain, from which, except in the north-west corner at Rawal Pindi, no mountains are visible, over which no monsoon storms break. Here there are no grand displays of the strife of the elements, but only gentle showers fall during the rainy season, while the phenomena of dawn are far more gorgeous than elsewhere in the north. There is, therefore, some probability in the contention of Professor Hopkins, that only the older hymns such as those to Vasuna and Ushas, were composed in the Punjab itself, while the rest arose in the sacred region near the Sarasvati, South of the modern Ambala, where all the conditions required by the Rigveda are found."\*

In two well-known hymns of the seventh Book which, when read together, give us a somewhat detailed account of a great battle fought on the Ravi between Sudas and the ten kings of the east, and wherein the earthly Dasyus are clearly referred to, the neighbourhood of the Sarasvati is indicated as their home. The first hymn (18) describes the actual military operations in a very obscure way. I reproduce below Mr. Griffith's version of the greater part of it:—

"What though the floods spread widely, Indra made them shallow and easy for Sudas to traverse.

He, worthy of our praises, caused the Simyu, foe of our hymn, to curse the river's fury (5).

"Eager for spoil was Turvasa Purodās, fain, to win wealth like the Matsyas urged by hunger.

The Bhrigus and the Druhyus quickly listened; friend rescued friend mid the two distant peoples (6).

"Together came the Pakthas, the Bhatanas, the Alivas, the Sivas the Vishānins.

\* Sanskrit Literature, p. 145.

- "Yet to the Tritsus came the Arya's comrade, through love of spoil and, heroes' war to lead them (7).  
 "Fools, in their folly fail to waste her waters, they parted inexhaustible Parushni.  
 "Lord of the earth, he with his might repressed them : still lay the herd and the affrighted herdsmen (8).  
 "As to their goal they sped to their destruction : they sought Parushni, e'en the swiftest returned not.  
 "Indra abandoned, to Sudas the manly, the swift flying foes, unmanly babblers (9).  
 "They went like Kine unherded from the pasture, each clinging to a friend as chance directed (10).  
 "The king who scattered one-and-twenty people of both Vaikama tribes through host of glory...(11).  
 "Thou, thunder-armed, overwhelmest in the waters famed ancient Kavasha and then the Druhyu (12).  
 "Indra at once with conquering might demolished all their strong places and their seven castles.  
 The goods of Anu's son he gave to Tritsu. May we in sacrifice conquer scornful Purn (13).  
 "The Anavas and Druhyus, seeking booty, have slept the sixty-hundred, yea, six thousand.  
 And six and sixty heroes...(14).  
 "These Tritsus under Indra's careful guidance came speeding like loosed waters rushing downward.  
 The foemen measuring exceeding closely, abandoned to Sudas all their provisions...(15).  
 "The hero's side who drank the dressed oblation, Indra's denier, far over earth he scattered . (16).  
 "Famuna and the Tritsus aided Indra. These he stripped Bheda base of all his treasures.  
 The Ajas and the Sigsus and the Yakshus brought in to him as tributes heads of horses (19).

The episode referred to seems to me to be, once upon a time four Arya tribes—the Turvasus, the Druhyus, the Purns, and the Anus—with the Simyus and five other allied tribes, most of whom were non-Aryans, marched upon and encamped on the Parushni (Ravi) under the supreme command of Purodās, the king of the Turvasus. The main object of the expedition seems to be to wreak vengeance upon the Tritsus whose pressure originally led them and other Aryan tribes to migrate eastward. The land of the Tritsus lay on the opposite bank of the river. Failing to discover any shallow where they could ford the river, the ten

Kings resolved upon deflecting the current of the Parushni by digging a canal up the stream, which proved abortive. In the meantime the Tritsus, who knew the river-bed better, crossed over and surprised the invaders, but were unable to dislodge them from the positions they had occupied. After hard fighting the invaders retreated, abandoning their supplies to the enemy. Out of their number six thousand and sixty-two lay dead on the field and many others were drowned in the Parushni. Sudas, the victorious chief of the Tritsus, then set out to plunder the towns and villages of the ten vanquished tribes, in course of which expedition he advanced as the Yumna where non-Aryan clans like the Ajas, the Sigrus, and the Yakshus tendered their submission and brought in tribute. Hymn 83, of the same book makes the composite character of the allied forces clearer.

"Looking to you and your alliance, O ye men, armed with broad axes they went forward, fain for spoil.

Ye smote and slew his Dāsa and his Aryan enemies, and helped Sudas with favour, Indra-Vamna (1)."

These verses, besides indicating the localities where the Rigvedic Dasyus dwelt, clearly shows that the Arya colonists in the valley of the Sarasvati at the time of the war were limited in numbers, and that they often made common cause with their non-Aryan neighbours. The relations of the invaders with the aborigines seem to have passed through three distinct stages of conflict, rapprochement and amalgamation.

The Arya invaders, as a matter of course, began by expelling a certain portion of the non-Aryan population from their homes and ploughlands. As the former were not numerous, their encroachments disturbed the pre-Aryan world only to a limited extent. Yet the relations of the two races must have been characterised by mutual suspicion and hatred at the outset. The pride of superior culture on the one hand, and the sense of wrong on the other, kept them apart. While the Dasyu meditated vengeance, the Arya tried completely to subjugate him. At this stage the Rishis sing :—

"Thou, thou alone, hast tamed the Dasyus ; singly thou hast subdued the people for the Arya (VI. 18-3)."

"Strengthen therewith the Arya's hate and Dasa's, and let the arms of Nahushas be mighty (VI. 22. 10)."

\* "Indra the terrible, tamer of every man, as Arya leads away the Dasa at his will (V. 34. 6)."

Some time after both sides must have found that racial animosities did not pay. The Aryan priests, always intent upon *dakshina* or sacrificial gift, went among the aborigines to preach the gospel of sacrificial ritualism. One Rishi, Vāsa Asvya, sings :

"A hundred (oxen) has the sage received, Dāsa Balbutha's and Taruksha's gifts.

These are thy people (VIII. 46. 32)".

The verse is addressed to Vayu. One Rishi of the house of Atri thus curses his close-fisted non-Aryan clients :

"Agni, may Atri overcome the Dasyus who bestow no gifts, subdue the man who give no food (V. 7-10)".

Arya chieftains, often engaged in internecine wars, sought the alliance of the non-Aryan chiefs, as we have seen in the case of the enemies of the Tritsus. The organisation of that coalition is only typical of what was happening every now and again on, perhaps, a smaller scale. Scholars assign a comparatively later age to Valakhilya hymns and the hymns of the tenth book on linguistic and other grounds. The following verses found in these parts of the Rigveda mark a decided improvement in the mutual relation of the two races.

"Good Lord of wealth is he to whom all Aryas, Dasas here belong (Val. 3-9)".

"All treasures have thou (Agni) won, of plains and mountains, and quelled the Dasa's and the Aryas, hatred (X. 69-6)".

The above extracts bring into relief the real nature of the Aryan conquest of the valleys of the Sutlej and the Sarasvati. It was rather a settlement of a few Arya clans in the midst of aborigines than conquest in the proper sense of the term. What enabled the new-comers to assert their supremacy over the mass of neighbouring pre-Aryans was their speech and their religion and not their bows and arrows alone. What position, then did the latter occupy beside the former when the racial conflict had ceased? Those who were captured in war became slaves. But did all the slaves that the Aryas owned come from the pre-Aryan race? In a very old *yajus* text a Rishi prays : "O Agni of unweakened strength . . . protect me from

bondage." \* It shows that enslaving of even a priest under certain circumstances was not uncommon in the Vedic age. Admitting that this text belongs to a later age than the hymns of the Rigveda, such an admission only adds to the force of the argument, for in a later age greater sanctity came to be attached to the person of the priest, and he had, therefore, less chance of being enslaved by the neighbouring powers. But the Rigvedic texts already cited prove beyond a shade of doubt that Arya chiefs and priests often accepted the alliance of their aboriginal neighbours on other terms than slavery.

Our next question is, whether there was fusion of blood on any large scale in that remote antiquity. Two causes, physical repulsion due to marked difference in colour and other physical features, and rigid caste rules usually arrest inter-marriage between different races. We should, therefore, inquire whether there was any such marked difference in the features of the two races as known from the Rigveda, and whether the social institutions of the Aryans offered any obstacle to racial fusion.

The common view that the Aryan invaders were white men is based upon a doubtful interpretation of a Vedic text. I reproduce Mr. Griffith's version of it :

"He (Indra), much invoked, hath slain Dasyus and Simyus, after his wont, and laid them low with arrows.

The mighty thunderer with his fair-complexioned friends won the land, the sunlight, and the waters (I-100-18)."

According to Sayana, the commentator, 'white-complexioned friends' refer to the Maruts or storm gods, and the enumeration of sunlight with "land" and "waters" seems to indicate that both the parties to the conflict alluded to by the poet belong to the atmospheric world. But to make an idea of the complexion of the average Indo-Aryan of the Rigvedic age we have better materials than an isolated expression in an obscure verse. The original migration of the Aryas in the Indus Valley, as we have already seen, is beyond our vision. Their legends and traditions had not the faintest recollection of that event. This circumstance leads us to the inference that the immigrants were fully acclimatised when the earliest

\* Vajasaneya Sainhita, II, 20.

hymns of the Rigveda were composed on the banks of the Indus; and that the complexion of an average Arya of that period did not much differ from that of a modern Pathan or a Sikh of the Peshawar district in the Frontier Province. The physical repulsion owing to difference in colour on the part of the new-comer, therefore, could not have been as keen as that of a European towards a Negro.

Our evidences, on the other hand, relating to the colour and features of the Dasyus, are not conclusive. They are supposed to be a dark and flatnosed race. The clearest reference to the dark skin of the foes of the Aryas is found in the following text :

" Indra in battles help his Aryan worshipper, he who hath hundred helps at hand in every fray, in frays that win the right of heaven.

Plagueing the lawless he gave up to Man's seed the dusky skin ;  
Blazing, 'twere, he burns each covetous man away, he burns the tyrannous away (I. 130,8)"

The translation of the second line according to Sayana should be, "(Indra) subdued the riteless for the benefit of mankind, and flaying the dark skin of a demon called Krishna destroyed him." Here the scholiast's allusion to a particular demon seems to be forced, and the passage may well be taken to refer to the dark skin of certain riteless or lawless terrestrial foes. But as to the 'flat-nose' of the pre-Aryan our evidence is very doubtful. It is based upon the explanation of the Sanskrit compound *anasa* occurring in the following verse :—

" One car-wheel of the sun thou rolledst forward, and one thou settest free to move for Kutsa.

Thou slewest *noseless* Dasyus with thy weapon, and in their home o'erthrewst hostile speakers (V. 29.10)."

The translator, Mr. Griffith, writes in his note to this passage,—"*Noseless* : that is the flat-nosed barbarians, *a-nasah* ; or the word may be, as Sayana explains it *an-asah*, i.e., mouthless, voiceless, unintelligibly speaking." This latter explanation fits in with the context better.

But even if we admit that the average Arya was as white as the European and the average Dasyu as dusky and flat-nosed as the Negro, that does not necessarily preclude the

possibility of intermarriage between the two races. Physical repulsion did not arrest union between some of the proudest races of Europe and the Negroes. " South European races " observed Mr. Bryce in his Romanes Lecture (1902), " though disinclined to such unions, do not wholly eschew them. In the ancient world we hear little of any repugnance in the Roman Empire to the dark-skinned Africans, for the contemptuous references to Egyptians seem to spring from dislike rather to the character and religion than to the colour of that singular people. In modern times the Spanish settlers in the Antilles and South America, and the Portuguese in Brazil, as well as on the East and West coasts of Africa, have formed many unions with Negro women, as the Spaniards have done with the Malayan Tagals in the Philippines, and the Portuguese with the Hindus in Malabar. There is to-day a decided Negro strain in many of the whites of Cuba, and a still stronger one in the whites of Brazil."

The social code of the Aryas was plastic enough to allow of mixed marriages in that remote past. If the traditions and legends that gathered round the Vedic Rishis and kings in later ages have any foundation in fact, they prove that the rules of connubium were very elastic and irregular in the Vedic age. Gautama, the reputed author of the earliest of *Dharmasutras* or aphorisms on sacred law now extant, who legalises hypergamy between different castes, recognises the voluntary union of a maiden with her lover, the forcible abduction of a maiden, and even seduction, as lawful forms of marriages for the non-Brahman castes, and provides for the filiation of illegitimate offsprings and the offsprings of remarried women, remarks in the beginning of his work, " Transgression of the law and violence are observed (in the case) of (those) great (men) ; but both are without force (as precedents) on account of the weakness of the men of later ages (1.3)."

Negative evidences of the amalgamation of races are not wanting in the Rigveda itself. The Purusha hymn, wherein for the first time the origin of the four primitive castes is described, indirectly testifies that the racial boundary between the Aryas and the Dasyus was totally obliterated before the four social grades implied in the fourfold castes came to be clearly

differentiated. I shall reproduce all the verses of that well-known hymn (X.90) that relate to the creation of terrestrial beings :

"He formed the creatures of air and animals both wild and tame.

... ..  
From it were horses born, from it all cattle with two rows of teeth :  
From it were generated kine, from it the goats and sheep were born.  
When they divided the Purusha how many portions did they make ?  
What do they call his mouth, his arms ? What do they call his thighs  
and feet ?

The Brahman was his mouth, of both his arms was the Rajanya  
made.

His thighs became the Vaisya, from his feet the Sudra was produced."

Where were the *Dasyus* or *Dasas* when this hymn was composed ? Had they had any separate existence as earthly creatures, they would have found a separate mention in this inventory of created beings. To explain this omission we are bound to assume that the primitive *Dasyus* in the midst of whom the Arya immigrants had originally settled had been completely absorbed in the newly organised Hindu community, and that the poet was ignorant of the existence of other non-Hindu tribes who lived in remote countries. There is no clear evidence to prove that the Sudra caste was organised solely with non-Aryan elements. In primitive days the status of a Sudra was no better than that of a slave. Had the descendants of those *Dasyu* Kings who followed Turvasu Purodas against the Tritsus, or of men like Dasa Balbutha and Taruksha been also reduced to the same condition ? It is more than one can believe.

The relations of the Aryan invaders to the pre-Aryans varied in various countries. The above stages were successively passed through only in those places where the former migrated in considerable numbers and with their women. In other places where the immigrants formed only a handful of settlers, amalgamation with the original inhabitants began earlier. To avoid repetition, I shall not dwell upon the mutual relations of the races any more in detail, but confine myself, in the sequel, to describing the course of expansion only.

The Rigveda itself carries us to the eastern limits of modern Behar. In a hymn (30) of the fourth Book, where the

Vipās or Beas is also referred to, we meet with the following verses :

"So sapient Indra, lord of might, brought Turvasa and Yadu, those  
Who feared the flood, in safety o'er (17).  
"Arna and Chitrasatha, both Aryas, thou Indra slewest swift,  
On yonder side of Sarayu (18)."

The incident referred to is probably an expedition that the Yadus and the Turvasus conjointly led to the other side of the Sarayu against the Aryan chieftains named, both of whom fell fighting. But is this Sarayu to be identified with the Sarayu of Oudh ? The following text leaves no doubt about the point. A poet belonging to the famous clan of Visvamitra sings (III. 53):

"The Visvamitras have sung forth this prayer to Indra.

Thunder-armed :

So let him make us prosperous (13).

"Among the Kikatas what do they cattle ? They pour no milky  
draught, they heat no caldron.

Bring thou to us the wealth of Pramaganda ; give up to us,  
O Maghavan, the low-born (14)."

Kikata is equivalent to Magadha, and whether the people of Magadha or Bihar of the Rigvedic age were non-Aryans or Aryans who did not follow the Vedic rites, the reference is clear enough to show that the poet and his contemporaries knew the people intimately.

The well-known legend of Videgha Māthava in the Sātapatha Brāhmana (I. 4. 1. 10-19) is the only traditional evidence that we possess of the eastward progress of the Vedic culture. I shall reproduce Professor Julius Eggeling's translation :

"Now Mathava, the (king of) Videgha, carried Agni Vaisvānara in his mouth. The Rishi Gotama Rāhugana was his family priest. When addressed (by the latter), he made no answer to him, fearing lest Agni might fall from his mouth.

"He (the priest) began to invoke the latter with verses of the Rigveda.....

"Still he did not answer. (The priest continued) 'Thee, O butter-sprinkled one, we invoke !' (Rigveda V. 26. 2) ;' so much he uttered, when at the very mentioning of butter, Agni Vaisvānara flashed forth from the (king's) mouth : he was unable to hold him back : he issued from his mouth and fell down on this earth.

"Māthava, the Videgha, was at that time on the (river) Sarasvati. He (Agni) thence went burning along this earth towards the east; and Gotama Rāhugana and the Videgha Māthava followed after him as he was burning along. He burnt over (dried up) all these rivers. Now that (river) which is called 'Sadānira,' flows from the northern (Himālayan) mountain: that one he did not burn over. That one the Brahmans did not cross in former times, thinking, 'it had not been burnt over by Agni Vaisvānara.'

"Now-a-days, however, there are many Brahmans to the east of it. At that time it (the land of the Sadānira) was very uncultivated, very marshy, because it had not been tasted by Agni Vaisvānara.

"Now-a-days, however, it is very cultivated, for the Brahmans have caused (Agni) to taste it through sacrifices. Even in late summer that (river), as it were, rages along: so cold is it, not having been burnt over by Agni Vaisvānara.

"Māthava, the Videgha then said (to Agni), 'Where am I to abide?' 'To the east of this (river) be thy abode!' said he. Even now this (river) forms the boundary of the Kosalas and Vidahas; for these are the Māthavas (or descendants of Māthava)."

Twenty hymns of the first book of the Rigveda are attributed to Gotama, the Rāhugana, or son of Rahugana. In the context of some of these hymns the poet calls himself Gotama, and in one of them (78.5) invokes Agni in the name of the Rahuganas. The name of Videgha Māthava's priest, therefore, carries us back to the early Rigvedic age, and the reference to the *Kikatas* in a hymn of the third book leads us to infer that the legend of Videgha is perhaps based upon a genuine tradition relating to the early migration of the Videgha clan to a region which came to be known as Videha after the name of the clan.

The Rigveda carries us so far. The other Vedas carry us no further than Lower Bengal; and here also not by introducing us to human dwellers, but to the tiger. The prose treatises attached to the Vedas, known as Brāhmanas, do not add anything more to our geographical knowledge. But I believe too much is made of the reticence of these works. When the non-reference of any of these works to any Aryan colonies outside the Rigvedic limits is construed as implying their non-existence, the peculiar characteristics of the men of the age and of the materials that they have left for the reconstruction of their history are not always born in men. The Vedic civilisation was essentially materialistic, and the men

of the age were very active and optimistic. The Rishis are evidently anxious for the happiness of this life, and it is only rarely that they refer to death and contemplate the condition of life after death. But their only literary productions that have come down to us are hymns and sermons; for the Vedic Samhitās are collections of hymns, and the Brāhmanas, collections of sermons with hymns as texts, expounding the cult of sacrificial ritualism. Civilized nations of all ages have handed down such compositions to posterity. To realise with what great caution they should be used for secular history, we need only turn our eyes to the case of other nations whose historical compositions are based mainly upon independent sources and imagine what shape would those works assume if they were based upon hymns and sermons only. The reason why clear traditional evidence of the eastward or southward migrations of the Indo-Aryans has not been preserved in the Vedic literature is that the immigrants did not sweep down in conquering hordes with pomp and noise that might appeal to the imagination of poets and priests. These later migrations may be better described as infiltrations of Aryan elements. Pressed by their stronger neighbours in their north-western homes, successive bands of immigrants silently crept in and settled among older inhabitants who lived at a safe distance from their oppressors. But wherever they went and in however small numbers, they Aryanised all who came into contact with them.

That the silence of the *Brāhmanas* is not a conclusive evidence of the non-existence of any Aryan tribe or colony is clearly seen in connection with some of the important Rigvedic tribes. The powerful nation of the Tritsus is nowhere mentioned in the whole range of post-Vedic literature, while the Yadus, the Turvasus, the Druhyus, and the Anus find no mention in the *Brāhmanas*. Where were they? Had they come to be known under different names, or were they merged in other tribes? The change of name in one instance, that of the Krivis assuming the name of the Pāñchālas is noticed in the *Śatapatha Brāhmaṇa*; and evidences of the Purns' merging with the Bharatas and of their transformation into the Kurus are not wanting. The absence of any similar

evidence with regard to the Yadus and three other tribes indicates that no such change had been experienced by them within the knowledge of the authors of the Brahmanas. Had they then all perished in inter-tribal wars? The *Mahābhārata* and the *Purānas* preserve legends about the Yadus, the Yurvasus, the Druhyus, and the Anus which render any such assumption absurd. According to these works Yayāti, a pre-Vedic king, had five sons who bore the eponyms of the five famous Vedic tribes comprising the aforementioned four and the Purns. Through the curse of his father-in-law, Usanas, Yayāti became old and infirm before his time. Usanas had also given him the power of exchanging his infirmity with another man's youth. To transfer his infirmity and regain youth Yayāti successively applied to his four elder sons, Yadu, Druhyu, Purvasu, and Anu, all of whom refused to part with their youth. The youngest, Purn, consented, and was finally placed on the ancestral throne by his grateful father. Regarding the progeny of the disinherited sons of Yayāti the *Mahābhārata* \* says:—"The Yādavas are descended from Yadu, the Yavanas from Turvasu, the Bhojas from Druhyu, and the Mlechchhas from Anu." The epic make Gujarat the home of the Yādavas. According to Vishnu Purāna King Yayāti thus divided his kingdom among his sons: "To Turvasu he consigned the south-east districts of his kingdom; the west to Druhyu; the south to Yadu; and the north to Anu; to govern as viceroys under their younger brother Purn, whom he appointed supreme monarch of the earth." This account is repeated in many other Puranās with slight variations. They also contain short notices of the descendants of Turvasu, Druhyu, and Anu. Bali was thirteenth in descent from Anu. "Of his wife five sons, Anga, Banga, Kalinga, Suhma, and Pundra, were begotten by Dirghatamas; and their descendants, and the five countries they inhabited, were known by the same name." We may take these legends at their worth. But anyhow they deserve greater attention than they have hitherto received.

But when from the mother country we turn our eyes to trans-frontier Indo-Aryan colonies we are encouraged in our

\* Book I, Section 85.

researches by a great collection of materials of a superior order. Of these only the chronicles of Ceylon have as yet been used by writers on Indian history. One of the main reasons that have led scholars interested in Indian history to practically neglect this field is the difficulty of finding a connecting link between pre-Buddhist or pre-Asokian India, that is to say India before Asoka made Buddhism a state religion and sent out missionaries to preach the Law, and Hinduised communities in south-eastern Asia. Megasthenes has left on record that "the Indians stand almost alone among the nations in never having migrated from their own country." \* I shall, therefore, preface my notes on Indo-Aryan expansion beyond the frontiers of the great peninsula with a few suggestions relating to that missing link.

First among the conditions that favoured the settlement of the Brahmanist Indians among non-Hindu races in the remote past was that the former did not hold the latter in contempt, but, on the contrary, regarded them as their own kinsmen. The earliest evidence of this view occurs in connection with a remarkable episode narrated in the seventh Book of the Aitareya Brāhmana. Sunahsepha, a Brāhman boy of the Augirasa clan, was intended to be killed in a sacrifice where Rishi Visvāmitra was one of the officiating priests. The boy, when tied to the sacrificial post, addressed some hymns to the gods and thereby induced them to grant his life. Visvāmitra then adopted Sunahsepha as his own son and invested him with all the rights of primogeniture. Visvāmitra had hundred other own begotten sons. Among these the fifty elder ones were dissatisfied with their father on account of his partiality for Sunahsepha. "Against them he pronounced (this curse) 'let your progeny possess the furthest ends (of the country).' These numerous Dasyus—the Audhras, Pundras, Sabaras, Pulindas, Mutibas and many other frontier tribes, are the descendants of Visvāmitra." Longer lists of non-Brahmanist races are given in the *Mahābhārata* (Book VIII, sections 33 and 35) and *Manusmṛita* (X. 42-43) wherein they are classified

\* Quoted by Pliny, M'Crindle.

as Kshatriyas who "have become Sūdras from having no communication with the Brahmans."

The ancient Brāhmanists again were not lacking in missionary spirit. The Indian Buddhists received it as a heritage from the Brāhmans. In the Santi Parvan of the *Mahābhārata* (section 65) we come across the following remarkable dialogue:

Mandhatri asks: "The Yavanas, Kirātas, Gāndhāras, Chinas, Sābaras, Varvaras, Sākas, Tushāras, Kankas, Pahlavas, Audhras, Madras, Paundras, Pulindas, Ramathas, Kāmhojas, men sprung from Brāhmans, and from Kshatriyas, persons of the Vaisya and Sudra castes—how shall all these people of different countries practice duty, and what rules shall Kings like me prescribe for those who are living as Dasyus? Instruct me on these points for thou art the friend of our Kshatriya race."

Indra answers: "All the Dasyus should obey their parents, their spiritual directors, persons practicing the rules of the four orders and Kings. It is also their duties to perform the ceremonies ordained in the Vedas. They should sacrifice to the manes, construct wells, buildings for the distribution of water, and resting places for travellers, and should on proper occasion bestow gifts on Brahmans. They should practice innocence veracity, meekness, purity and in-offensiveness; should maintain their wives and families; and make just division of property. Gifts should be distributed at all sacrifices by those who desire to prosper. All the Dasyus should offer costly *Paka* oblations. Such duties as these, which have been ordained of old, ought to be preserved by all people." \*

Indra's speech is inspired by a genuine enthusiasm for Hinduising and civilising the barbarians. His interlocutor Māndhatri's name occurs frequently in the Rigveda. But the inclusion of Yavanas and Pahlavas, who are usually identified with Bactrian Greeks and Parthians respectively, in the list would to many indicate that this passage could not have been written before the third century B. C. The identification of Pahlavas or Pallavas with the Parthians is not beyond doubt. The word *Yavanas* is supposed to have been derived from the Greek word *Iavōnes* or Ionians. But, I believe, there is no clear evidence to show that this word travelled into India for the first time with the Macedonians. The Macedonians did not call themselves Ionians. Herodotus mentions India as one of the Satrapies of the Persian empire. The most trustworthy point

in Herodotus' account of India is his reference to the voyage of Seylax of Caryanda, a fellow-countryman of the Father of History, down the Indus. The Indians might have heard of the Ionians from Seylax and other Greek officials of the Persian king as well. The fame of the Ionians may have reached India even earlier. But whenever the Hindus may have come to know the Greek derivative of *Yavana*, the Brahmans of the Punjab, as we learn from the historians of Alexander the Great, were not in the least disposed to Hinduise the Greeks when Alexander conquered that province. Alexander had invited two Brahmans, Mandanis and Katanos, to pay a visit to him. The latter accepted the invitation and was induced to accompany the conqueror when he left India. Strabo writes, "He (Katanos) was ruled by passions and became a slave to the table of Alexander. He is on this account condemned by the Indians, but Mandanis is praised, because when the messengers from Alexander invited him to go to the son of Zeus with the promise of gifts if he complied, and threats of punishment if he refused, he did not go." According to other classical authors the Brahmas of Taxila openly abused Katanos before Alexander the Great.

The missionary zeal of the ancient Hindus was backed by a healthy spirit of commercial enterprise and even adventure. The most daring feat of navigation ever undertaken by the ancients is attributed to a body of Indian traders. "The same Nepos (Cornelius Nepos)," writes Pliny, "when speaking of the Northern circumnavigation, related that to Q. Metelluseder, the colleague of Afranius in the consulship, but then a proconsul in Gaul, a present was given by the king of the Snevi consisting of some Indians who, sailing from India for the purpose of commerce, had been driven by storms into Germany." This incident does not carry us further back than the first century B. C. But navigators who perform such feats do not spring up all of a sudden. The spirit of nautical enterprise must have been moving the Hindu world for centuries before these illfated traders undertook "northern circumnavigation" and were overtaken by storms near the German coast.

Naturally enough this spirit of adventure would be more manifest in the frontier provinces and provinces lying on the

\* Muir's translation. *Sanskrit Texts*, Vol. I.

sea coast than in the interior, and, therefore, caste rules in the former would, as a matter of course, continue plastic and accommodating much longer than in the latter region. Ancient works on sacred laws of the Hindus bear unanimous testimony to the latter fact by holding up to imitation the usages obtaining among the inhabitants of *Madhya-desa* or Middle country' extending from the Umbala districts in the Punjab to Allahabad in the United Provinces. In an authentic portion of a very ancient code, Bandhayana's *Dharmasutra* (1.2), we find the following classification of the outlying provinces :—

"The inhabitants of Avanti, of Anga, of Magadha, of Surashttra, of the Dekhan, of Upavrit, of Sind, and the Sanviras are of mixed origin (13).

"He who has visited the (countries of the) Arathas, Karaskaras, Pundras, Sanviras, Vangas, Kalingas, (or) Praunnas shall offer a Punastoma or a Sarvapristha ishti (14)."

"This and the following two Suetras," writes Professor Bühler in his note to Sutra 13, "are intended to show that the customs prevailing in the countries named have no authority and must not be followed." Behar, Malwa, the Maratha country, Kathiwar, and Sind fall under the first, and Bengal proper, the northern districts of the Madras Presidency, the coast of Surat, and the Punjab proper fall under the second group of Bandhayana. The provinces of the second group were most favourably situated to send out colonists and adventurers.

The early traditions of Greater India fully confirm what Bandhayana's classification of the Indian provinces leads us to expect.

Of the countries beyond India proper that were conquered and colonised by the Hindus, Upper Burma was perhaps the earliest to receive her conquerors. The *Maha Yazawin* or the Royal chronicle of Burma preserves the tradition of two different invasions. Abhi Raja, a Sakya prince, driven from his home by a king of Kosala whose anger the Sakyas had provoked by their refusal to give a daughter in marriage, led the first invasion and carved out a kingdom in the Upper Valley of the Irrawadi with Tagaung as capital. Thirty-two princes ruled at Tagaung after Abhi Raja until the last of them was deposed by a band of invaders from the east. Another

Sakya prince, Daza Yaza, is said to have entered Upper Burma at this crisis, which happened to fall during the last years of the life of Gautama Buddha, driven, like Abhi Raja, from the Sakya land by another king of Kosala. The most incredible part of the narrative is that seventeen generations of the rulers of the second dynasty are made to reign within the short space of sixty years. Colonel Burney gives a more reliable version of the tradition from a different source. He writes :—

"It is remarkable, that some of the names in the two lists of kings of Tagaung correspond. The Burmese chronicles give no details of the reign of any of these kings, excepting of the first two in each list, and of the last in the second. One old work, *Zabudipa kwon-gya*, takes notice only of the second list of sovereigns, and states that Daza-yaza retired from Central India, and came to Tagaung, about three hundred years before the appearance of Gaudama. As the last mentioned, or seventeenth king, Maha Yaza, is also stated to have ascended twenty years after Gaudama's death, this would allow a duration of about 18 or 20 years to the reign of each of the kings preceding." \*

A Hindu invasion of Burma in the tenth or ninth century B. C. is not inconceivable. But for the Sakyas of the legend we should substitute adventurers from Assam or Bengal. The fabrication of Sakya descent of the early conquerors is probably due to the solicitude of the later kings of Burma, all of whom traced their descent from Abhi Raja and Daza Yaza, to establish their kinship with the great founder of Buddhism.

Independent evidences of Indo-Aryan immigration into Burma before the introduction of Buddhism are not wanting. The language itself bears witness to it. "Sanskrit words had entered the language before this (i.e. the introduction of Pali books) without any connection with Buddhism. The names for the days of the week are derived from a Sanskrit source, though distorted at times beyond recognition. . . . So, too, the signs of the zodiac such as *priecha* Karakat, *prissa*, more nearly resemble Sanskrit.†" That the Burmans were Brahmanists

\* Journal of the Asiatic Society of Bengal, Vol. V., p. 164.

† Mr. H. L. St. Barbe in the J. A. S. B., Vol. XLVIII., Part I, p. 524.

before they turned Buddhists is borne out by the survival among them of "the strong desire to have obsequies performed by sors or daughters,"\* obviously a relic of Brahmanic funeral sacrifice. The Burmese tradition of a Manu as the author of the *Dhammathāt* or chief legal compilation, is, I believe, not without significance. According to the Burmans, the Burmese Manu, of course, is a native of Burma, who, from being a cowherd when a child, rose to the rank of a minister of King Maha Thambawa (B. C. 483), the founder of the Prome dynasty. There is very little resemblance between the laws of the Indian Manu and the *Dhammathat* of Burma. But the name of the mythical first lawgiver of India must have been introduced by the Hindu immigrants, and the transfer of Manu's birth-place to Burma is in keeping with the general usage of Indo-China and the Archipelago.

Lower Burma was conquered and colonised by adventurers from Kalinga. The older inhabitants of the lower valley of Irrawady were mere savages. "The first settlement from India among the savage tribes is, in Talaing tradition, said to have been made by two sons of King Titha or Tissa, who reigned in the country of Karanaka and the city of Thubinna. .... These sons of the king come to dwell as hermits in savage land; and according to a wild legend, as if to connect the aborigines with the later ruling race, bring up a child born of a dragon on the sea-shore, who, when grown up, builds the city of Thaton (Suvāna Bhūmi) and reigns as Siha Raja.†" This Siha Raja or Fhiha Raja is said to have died in 543 B. C., the year in which the Buddha attained *nirvana*.

The colonising genius of the Hindus achieved its greatest success in further east where the first immigrants very probably reached by sea. Indo-China is to the Indo-Aryans what the North American colonies are to the Anglo-Saxons of the mother-country. As the heart of every Englishman beats faster when New York or New England meets his eyes, the recognition of (New) Kamboja in Cambodia, (New) Campa in Annam, and (New) Ayodhya in Siam's former capital Aynthia, ought to rouse a similar sentiment in every Hindu. The

\* Mr. John Nisbet's "*Burma under British Rule—and Before*," Vol. II., p. 313.

† Sir Arthur Phayre's "*History of Burma*" (Tribner's O. S.) P. 27-28.

name Siam itself is a corruption of Sanskrit *Syāmāraśtra*, Ptolemy's *Samaradē*.\* According to Siamese tradition Brahman colonists had already settled themselves in the interior of the country before Gautama Buddha visited the land. An ancient Chinese historical work, *Ma Tuan-lin*, preserves a very curious tradition relating to the establishment of a later Brahman dynasty in Cambodia that may serve as a fine specimen of the old Hindu method of subjugating barbarians:

"Kanudinya, a Brahman from India, having been notified by an oracle that he was called to reign upon *Fu-nan* (Kamboja), proceeded south (from Eastern India) until he reached the country of *P'au-P'au*, whither a deputation from the people of *Fu-nan* came to meet him and proclaimed him King. This occurred in about A.D. 420-450."†

It was here, in Indo-China, that the Hindus erected the most stupendous monuments of their political and architectural genius. It is doubtful whether they ever succeeded in rearing up within the confines of India herself an empire so mighty and whose greatness was maintained with unabated vigour for so many centuries as the Empire of Cambodia. I reproduce the brief but vivid description of Angkor Wat, the greatest architectural memorial of the Cambodians, by the latest English writer on Siam:

"The comparatively few European travellers who have visited this temple all unite in declaring it the most colossally stupendous as well as one of the most architecturally beautiful structures they have ever beheld, so that while it rivals or eclipses the Egyptian pyramids in one respect, it hardly falls short of the highest Hellenic standard as regards artistic detail in the other. The huge building, which is between two and three miles in circumference, contains a multitude of courts, colonnades, and chambers. There are twelve superb staircases, the four in the middle having forty to fifty steps, each step a single slab, and over five thousand columns, while everywhere the stones are fitted together in a manner so perfect that the joinings are not easy to find. The walls and portals are covered with sculptures, the exterior of the temple being ornamented

\* Major G. E. Grini, "*Shan and Siam*" (*Asiatic Quarterly*) 1898, January-April page 148.

† Quoted by Grini, A. Q. 1902, January-April, page 133.

with bas reliefs of scenes from Ramayana, the great Sanskrit epic poem, with vast processions of warriors, horses and chariots, and animals of all sorts, both real and mythical. Augkor Wat was certainly commenced as a Brahmanic temple, but before its completion Buddhism had become the religion of the land, and so it is that we find here, as in the temple of Borobaddor in Java, artistic representations of the duties of both the religions."\*

The grandeur and beauty of Borobaddor, to which no higher praise can be given than that it is the Augkor Wat of the Archipelago, attract us thither. Sumatra and Java probably received their Hindu invaders in the same epoch in which Indo-China was conquered. In ancient days both these islands were known by the common name of Java.† A Sanskrit inscription of Pager-Ruying, in Menang Karban in Sumatra, records :

"The Prince Adityadharma is the Deva of the First Java land (*prathama Java-bhū*) May he be great ! Written in the year of Saka, 578 (A. D. 656). May it be great !" ‡

The earliest reference to Java is found in a passage of the *Ramayan* first brought to notice by Professor Keru. "Search carefully, *Javadvipa*" runs the passage, "adorned by seven kingdoms, the gold and silver island, rich in mines of gold. Beyond *Javadvipa* is the mountain called Sisiga, whose top touches the sky, and which is visited by gods and demons iv. xl. 30)."§

There is great difference of opinion between the Sanskritists and the Pali scholars relating to the age of the epic of Valmiki, the former holding it to be a pre-Buddhist work, and the latter post-Buddhist. But whatever the age of Ramayana, the extract shows that the existence of an island called Java, a name which was given to it by colonists of Indo-Aryan speech was well known in Oudh at the time of its composition,

\* Mr. J. G. D. Campbell's "*Siam in the XXth Century*," p. 66-67.

† For many of the references relating to Java and other countries I am indebted to the kindness of Mr. J. Macfarlane, the erudite Librarian of the Imperial Library, Calcutta. Though out of place here, I cannot help giving expression to my feeling of gratitude for the great boon that our illustrious Viceroy has conferred upon the Calcutta public, and through them upon the Indian public, by founding the Imperial Library.

‡ Quoted in Yule and Burnell's "*Hobson Jobson*."

and therefore the island must have been colonised a considerable period before. If we compare Valmiki's description of Ranka, to whom or to whose later editors and interpolators any other name of Ceylon was unknown, with that of Java, it becomes clear that the poet knew the latter island better. His description substantially agreed with what was known relating to Java in the West as recorded by the geographer Ptolemy.

"*Jabadin*, which means the Island of Barley, most fruitful the island is said to be, and also to produce much gold ; also the metropolis is said to have the name Argyrē (Silver), and to stand at the western end of the island."

So strong was the Brahmanic element in ancient Java that Buddhism had made very little impression upon the islanders down to the beginning of the fifth century A. D. Fā-Hien (A. D. 414) writes ;

"After proceeding in this way for rather more than ninety days, they arrived at a country called Java-dvipa, where various forms of error and Brahmanism are flourishing, while Buddhism in it is not worth speaking of."\*

The chronicles of Ceylon preserve a fairly reliable dated account of the first colonisation of that island by the Indo-Aryans. Prince Vijaya, a scion of the ruling house of Banga or Bengal, landed in the island in B. C. 543 with 700 followers, at a spot to which he gave the name of *Tamraparni*. The main outline of this tradition has found acceptance among the students of Ceylonese history since the days of Turnour, the discoverer and translator of *Mahavanisa*. But in a recent work, "*Buddhist India*," Professor Rhys Davids, the greatest living authority on the sacred literature of Ceylon, has thrown grave doubts on the most essential points of the tradition. The Buddhist canonical works give a stock list of sixteen great countries. Bengal and Ceylon find no mention in this list. Commenting on this omission Professor Rhys Davids writes :

"Another point on which this geographical evidence throws light is the date of the colonisation of Ceylon. That cannot have taken place in any considerable degree before the Nikayas were composed. We know it had become a well established fact at the time of Asoka. It must have happened,

\* James Legge's Translation.

therefore, between these two dates ; and no doubt nearer to the earlier of the two. The Ceylon chronicles, therefore, in dating the first colony in the very year of Buddha's death (a wrong synchronism which is the cause of much confusion in their earlier chronology) must be in error."

The Nikayas profess to preserve the dialogues of the Buddha in the year of whose Nirvana, Vijaya landed in Ceylon. After the demise of the great teacher when his disciples first met in council and chanted his dialogues to fix them in memory, the colonists had perhaps made very little progress in bringing the aborigines of the island under subjection. The rumours of their conquest must have taken a long time to reach the early centres of Buddhism. The later editors of the Nikayas, presumably very pious monks, were not the men to care much about any geographical novelty brought to their notice ; and that the colonisation did not take place 'in any considerable degree before the Nikayas were composed' is quite clear from the chronicles themselves.

The reticence of the Nikayas relating to *Banga* is of greater moment. It may well lead one to suppose that no Indo-Aryan colony had up to the sixth century B. C. been founded in that province. But on this point the evidence of the chronicles is simply irresistible. Both the chronicles now extant, *Dipavansa* and *Mahavansa*, are the works of pious Buddhists whose primary object was to compile the history of the Buddhist Church. Everyone familiar with the sacred literature of the Buddhist knows how deep is the veneration of the followers of that creed for the middle country (Ganges Valley) of Northern India. The author of the introduction to the *Jatakar*, whose work is the standard authority on the Buddha's career in Ceylon, writes about the middle country :—

"In this country are born the Buddhas, the Private Buddhas, the Chief Disciples, the Eighty Great Disciples, the Universal Monarch, and other eminent ones, magnates of the warrior caste, of the Brahman caste, and the wealthy householders."\*

Over and above this partiality for the middle country inherent in a Buddhist was the temptation of tracing the ancestry of the ruling dynasty from some one of the Saky Chiefs to which the chroniclers of Burma succumbed. If,

\* H. C. Warren, 'Buddhism in Translations', p. 41.

in spite of these considerations, the historians of Ceylon insisted upon pointing to *Banga* as the cradle of the ancestors of the princes and people of the island they must have had their reasons for so doing.

Tibet also received her first king from India through Central Asia. The relics of a kingdom in Central Asia founded by colonists from the Punjab have been only lately (in 1901) unearthed by Mr. M. A. Stein from the 'Sand-Buried ruins of Khotan.\*' While speaking of the decipherment of many Kharosthi documents discovered by him, Mr. Stein says :

"But whatever revelations of interesting detail may be in store for us, one important historical fact already stands out clearly. The use of an Indian language in the vast majority of the documents, when considered together with their secular character, strikingly confirms the old local tradition recorded by Hiuen Tsiang and also in old Tibetan texts, but hitherto scarcely credited, that the territory of Khotan was conquered and colonised about two centuries before our era by Indian immigrants from Takshasila, the Taxila of the Greeks, in the extreme North-West of the Punjab. It is certainly a significant fact that within India the Kharostha script used in our tablets was peculiar to the region of which Taxila was the historical centre. Neither the language nor the script presented by our documents can satisfactorily be accounted for by the spread of Buddhism alone, seeing that the latter, so far as our available evidence goes, brought to Central Asia only the use of Sanskrit as the ecclesiastical language, and writing in Brahmi characters."

The local tradition, as recorded by Hiuen Tsiang, does not amount to much, and we shall wait with eager expectation the publication of the contents of the precious records discovered by Mr. Stein.

RAMA PRASAD CHANDA.

\* "Sand-Buried Ruins of Khotan" (London, 1903), p. 403.

## Art. III.—REGINALD HEBER.

A LADY who had heard Reginald Heber recite his prize poem "Palestine" at the Sheldonian Theatre, wrote some verses in commemoration of the occasion which seem to have suggested to the Rev. J. Drummond Burn the familiar hymn about the child Samuel.\* As we read the story of Heber's boyhood it is certainly natural to recall to memory the picture of the little Levite who heard God speaking to him so plainly. And the simple directness of a holy childhood was Heber's to the end of his earthly days: in weariness and weakness he had ever about him the brightness of the angels of the little ones whose faces always behold the Father in heaven. The future bishop was born on 21st April, 1783, at Malpas, where his father, a descendant of an old Yorkshire family, was "co-rector." Educated at two small country schools, he matriculated at Brasenose College in the autumn term of 1800. Four years later he was elected a Fellow of All Souls. In the examinations he had been surpassed by others, yet his brilliance in the oratory and poetry of Greece had secured for him a reputation which could neither be increased or decreased by the tests by which men of ordinary abilities are usually estimated.

There is perhaps no incident in Heber's life which so clearly reveals his genius and goodness as the occasion of his prize poem "Palestine." In the spring of the year 1803, the boy read his poem to some friends at his breakfast-table. In their number was Sir Walter Scott, who, by way of suggestion, pointed out that in his description of the building of the temple Heber

"Hush'd was the busy hum; nor voice nor sound  
Through the vast concourse, mark'd the moment near;  
A deep and holy silence breath'd around,  
And mute attention fix'd the list'ning ear."

"When from the rostrum burst the hallowed strain  
And Heber kindling with poetic fire,  
Stood 'mid the gazing and expectant train,  
And woke to eloquence his sacred lyre."  
etc., etc.

These verses close with the sentimental myth that the joy of the occasion caused the sudden death of Heber's father.

had made no mention of the striking circumstance that no tools were employed in the construction. Heber retired for a few minutes, and then came forward with those lines:—

"No hammer fell, no ponderous axes rung,  
Like some tall palm the mystic fabric sprung  
Majestic silence!"

On the morning of the public recitation of the poem at the Sheldonian, Heber noticed that two young ladies of Jewish extraction were among his audience. Fearing that some of his lines might give them pain, at the risk of spoiling his performance, he attempted to alter the passage in delivery, but unfortunately his prompter called him to book. The effect of the recitation was unparalleled; but from the plaudits of the crowded theatre, even from the embrace of his happy parents, Heber hurried away to hide himself. Martyn, when he became Senior Wrangler, wrote, "I obtained my highest wishes, but was surprised to find that I had grasped at a shadow." That was not Heber's feeling. "His mother, impatient at his strange absence, went to look for her son, and found him in his room on his knees, giving thanks to God, not so much for the talents which had on that day, raised him to honour, but that those talents had enabled him to bestow unmixed happiness on his parents." These incidents betray the character of Reginald Heber. His life is a fine illustration in actual life of a sermon preached by Aubrey Moore "through gentleness to greatness."

We must resist a strong temptation to break into the subject of Heber's continental tour. In these present times of rapid travelling if we see much in a short time, it is so often at the cost of intelligent observation. Heber's account of his journey through Russia, like Bishop James' account of a journey, made six years later after the stirring events of Napoleon's campaign, may serve to remind us that, if to-day we move quickly through the world, we are not always so much at pains to be well informed as were the men who, because they travelled slowly, had time to understand their experiences.

But, if we are bound to pass over the events of Heber's early life with a rapid pen, it is necessary to form some estimate of the future Bishop's intellectual character and theological position. Reginald Heber was not a scholar to be compared

with either Middleton or W. H. Mill. An old school-fellow of his speaking of Heber as a boy writes: "For the critical sciences, or for critical knowledge, Reginald had no taste. When asked the date of a particular event, he could seldom give it, but he always knew who were alive at the time of its occurrence, by whose agency it was brought about, and what were the important consequences that resulted from it. In like manner the structure of the ancient languages was to him as a matter of secondary importance, which he attended to only as far as he was obliged by his school lessons and exercises. The sense of the author was eagerly grasped at by him, but the mere scaffolding of learning he only esteemed as the means of arriving at that sense."

Heber's Edition of the Works of Jeremy Taylor, a divine whom in so many ways he resembled, remains the best evidence of his mastery of English theology. His independence in judgment is illustrated by his estimate of Waterland as "a scholar so shallow and a guide, in many respects, so dangerous."\*

Like Jeremy Taylor, Heber held what might be called "advanced" views, but, also like his master, he was extremely diffident in applying these views to the actual state of the Christian world. "The German Lutheran clergy," he wrote in 1812, "are as absolutely without episcopal ordination; and therefore, in view of an episcopal Church, as merely laymen as the dissenting teachers in our own country." Yet he would not, for all that, blame the great Missionary Societies who had employed Lutheran clergy as Missionaries. He held that "the Church of England, forbids, without exception, all lay-baptism," but he was not prepared to maintain, as not a few eighteenth century Divines had contended, that lay-baptism was of necessity invalid. In point of fact, Heber held the typical position of the Caroline Divines. He believed and maintained the doctrine of

\* *The Life of Reginald Heber.* By his Widow. Vol. II. p. 384. The context, may seem remarkable to modern eyes: "I know of no clergyman, except the Wesleys, who have refused the Eucharist to persons, who having been baptized in a dissenting communion have afterwards come over to the Church; and your correspondent may recollect that their practice in this particular was condemned by Gibson, Bishop of London, and by Archbishop Potter."

apostolic succession in the ministry, but he was not disposed to commit himself to negations in regard to ministries which had originated apart from the succession. When Bishop of Calcutta it fell to him to ordain some who had already been admitted to the Lutheran pastorate, but he was not prepared to accept the consequences which some might deduce from his action. His position can hardly be maintained, for certainly the English Ordination Service is far too unequivocal to be used as if it might apply *sub-conditione*, and if Heber's view has the approval of certain Anglo-Catholic Divines previous to the *débâcle* of the Church under the Commonwealth, it is not in accord with their riper experiences, and their mature judgment. Like his master, Jeremy Taylor, Heber's Churchmanship was somewhat academic and paradoxical, and it was both his weakness and his strength that he could be quoted with no small amount of confidence on either side of a dispute which, when he arrived in Bengal, was debated with increasing vehemence. It is most probable that Mill on the one side and Corrie on the other, both believed that their new Bishop shared their particular views, and that each sincerely regarded the other as a thorn in his Bishop's side.

Heber returned from his continental tour in September, 1806, after rather more than an absence of fifteen months from England. In 1807 he was ordained, and shortly afterwards was instituted by his brother to the family living of Hodnet in Shropshire. Writing to his friend, John Thornton, he says: "I was beginning to perplex myself with several useless doubts which had once almost frightened me from taking Priest's Orders. The more I read of the Scriptures, the more I am convinced that John Calvin and his master St. Augustine were miserable theologians; but I hope I am not deceiving myself in the idea that I may still conscientiously subscribe to the Articles, which may well, *I think*, admit of an Arminian interpretation. I hope I am not wrong. I had no doubts of this sort when I took Deacon's Orders." At Hodnet, the young vicar found a general disregard of Sunday and a considerable amount of drunkenness, and, he at once set himself to bind down the inn-keepers to a promise not to sell drink

on Sundays. His congregations were fairly large, but he found that Methodism had commenced to act as a hostile force.

In April, 1809, Heber married Amelia, the youngest daughter of the Very Rev. W. D. Shipley, Dean of St. Asaph, and grand-daughter of Jonathan Shipley, Bishop of St. Asaph.

During his residence at Hodnet, Heber was the author of many ecclesiastical and literary undertakings. In the years 1811 and 1812, he contributed to the *Christian Observer* a series of hymns "appropriate to the Sundays and principal holidays of the year, connected in some degree with the particular Collects and Gospels and designed to be sung between the Nicene Creed and the Sermon." He had been much repelled by the hymn-books popularised by the Methodists, and his criticism of these products anticipates a good deal that has been recently said and written in regard to the interpolation of "subjective hymns" in public worship. Of his series of hymns, he claims in a prefatory notice: "no fulsome or indecorous language has been knowingly adopted; no erotic addresses to Him whom no unclean lips can approach; no allegory, ill-understood and worse applied. It is not enough in his opinion, to object to such expressions that they are fanatical; they are positively profane. When our Saviour was on earth, and in great humility conversant with mankind, when He sat at the table, and washed the feet, and healed the diseases of His creatures; yet did not His disciples give Him any more familiar name than 'Master' or 'Lord.' And now, at the right-hand of His Father's Majesty shall we address Him with ditties of embraces and passion, or in language which it would be disgraceful in an earthly sovereign to endure?" The poet who could write such hymns as *Holy, Holy, Holy, From Greenland's Icy Mountains, Head of the Church triumphant, The Son of God goes forth to war, and Brightest and best*, had a right to criticise. The Archbishop of Canterbury and the Bishop of London, however, declined to authorise Heber's substitute for the dissenting books which were making Church-folk more and more discontented with the stilted

products of Tate and Bradby. In 1820, Heber applied for an authorization of his book, and, failing to obtain it, his hymns remained unpublished until after his death. Like Keble at a later date, Heber himself "felt some High Church scruples" in regard to the use of privately compiled hymn-books.\*

In 1815 Heber delivered his Bampton Lectures on "the Person and Office of the Christian Comforter." A review of Madame de Stael's *De L'Allemagne* which had been contributed by him to the *Quarterly Review*, drew from that great lady a kind letter of acknowledgment.

Heber's school friend and companion on the continental tour, John Thornton, had become Treasurer of the C. M. S. Although Heber had at first joined the Bible Society in preference to the S. P. C. K., his riper Church views led him to join the S. P. G. rather than the C. M. S., yet his friendship for the last named Society, however, was both deep and energetic. In 1818 he had discussed with John Thornton a scheme for the amalgamation of the C. M. S. with the venerable S. P. G. Having consulted the opinion of a clerical meeting at Shrewsbury, on 12th October, 1818, Heber submitted to Bishop Ryder of Gloucester a formal scheme for the proposed union. As apparently nothing came of the proposal, there can be no point in reproducing here the terms suggested.†

At the close of the year Heber's personal friend, the Right Hon'ble C. W. W. Wynn sounded Heber as to his views in regard to the See of Calcutta vacated by Dr. Middleton's death. It was felt that Heber was so likely to be offered an English bishopric,‡ that the offer of Calcutta could not be made to him as a direct proposal.

\* See Overton: *The English Church in the Nineteenth Century*, pp. 131—3 Taylor's *Life of Bishop Heber*, p. 90.

† Heber's letter will be found in His Life by his Widow. Vol. 1, pp. 492-498. Cf. Stock: *Hist. C. M. S.* Vol. 1, p. 151.

‡ He had already been Bampton Lecturer, a prebendary of St. Asaph, and Reader at Lincoln's Inn.

\* It was, therefore, intimated that the See would be given to him if he were willing to accept it, but that in any case his advice would receive attention. After a consultation with the doctors, and having once declined, Heber declared his willingness to accept the See. The king's entire approbation of the appointment was at once announced.

To familiarise himself with the duties of his office, Heber spent much of the remaining time before departure, in studying "poor Bishop Middleton's" letters to the Board of Control, the S. P. C. K. and to private friends. On 1st June he was consecrated at Lambeth. On the 13th in replying to the valedictory address of the S. P. C. K., he described himself as "the chief Missionary of the Society in the East." On the 23rd he with his family set sail on the Company's ship *Grenville*, bound for "the land of disappointment, sorrow and death."

The selection of Reginald Heber to fill the See of Calcutta had not been regarded with complete satisfaction by the friends of Dr. Middleton. His light literary accomplishments, the ease of his movements in county society, and his shallowness as a professed scholar have been severally commented on by Archdeacon Churton in his *Life of Joshua Watson*. The disappointment became greater when it was found that Heber in his primary charge had said not a word about Bishop's College "upon which Middleton had rested his claims to a grateful recollection of present and future times, and upon which all the hopes of associated church men are built for the Christianization of India." Corrie in Bengal, however, was enthusiastic about the appointment.

As soon as it was known that the *Grenville* had reached Saugor, Corrie, Mill, and the Registrar of the Diocese (W. Abbott) went down the river on the Government yacht to meet

their new Bishop on 6th October a little below Diamond Harbour. Four days later, the yacht being unable to stem the force of the river, the party transferred themselves to rowing-boats, and after nearly nine miles of rowing, landed among some tall bamboos and walked until at last they found the carriages which had been sent to wait for them. Passing through the park-like residences of Garden Reach, they drove over Tolly's Nullah across the Calcutta Maidan to Fort William, where the former house of the Governors-General (now a Soldiers' "Outram" Institute), had been prepared as the Bishop's temporary residence. Among the clergy assembled to welcome the Bishop was Parsons, who had taken part in the Serampore Synod and who was now Chaplain of St. John's, Calcutta. He was an old school-fellow of Heber's at Whitchurch—"some years older than myself, whom I recollect when I was quite an urchin." This may explain how it was that Parsons was able to induce the Bishop to appoint Corrie rather than Dr. Parish to the vacant Archdeaconry. The day after his arrival, Heber was presented to the Governor-General, and in the evening was duly installed at his Cathedral. The next day being Sunday, he preached his first sermon in Calcutta, and, on the Monday, he appointed Corrie to the Archdeaconry.

Heber's most recent biographer, Dr. George Smith, has followed Kaye in a quite unhistorical view of Bishop Middleton's character and policy, and consequently, having depicted Middleton as a narrow-minded ecclesiastic whose troubles were "more than half created or magnified by his own temper," he places Heber in a pleasant light as one for whose liberal, kindly spirit there could be no difficulty in the way of getting on well with everyone. Dr. Smith, in fact, attempts to do for Heber what he has achieved for Martyn—to make the glory of the hero seem all the brighter by setting his figure against an artificially darkened background. Dr. Smith speaks of Middleton as having "left a legacy of personal controversies" to his successor. The sentence is most unjust because the personal controversies which Heber found on his arrival had arisen, not out of any act for which his predecessor could be held responsible, but from ancient differences between High

\* By the depreciation of the value of the sicca rupee, the salary of the Bishop of Calcutta had fallen from £5,000 *per annum* to £4,250. Heber, however, was granted a residence which had been refused to his predecessor. Archbishop Benson was offered the See of Calcutta in a similar indirect manner when he was head master of Wellington.

and Low Churchmen. In point of fact, when the time came for the genial Heber to lay down his rule, the actual state of the controversy was very much more embittered than it ever was in Middleton's day.

We do not in any way wish to belittle Heber's personal contribution to the building up of the Church of India: it is because Heber was so great that we feel that his reputation will acquire no true added lustre by an unhistorical depreciation of the character and acts of his predecessor. To Heber fell the enormous advantage of having had a predecessor. He had studied Middleton's correspondence, and before leaving India he had been able to obviate difficulties which he himself might have had to encounter had they not been so clearly indicated by Middleton himself. In Heber's correspondence there is not one word to show that he regarded those difficulties as anything else but genuine. Then, again, Heber came out to India, backed up by forces which to no small extent owed their being to Middleton's long continuous pleading with the Church at home. Heber enjoyed a popularity which only genius can attract, and there was a distinct tendency to grant to him as Reginald Heber things which would have been denied to him as Bishop of Calcutta. In this way, he had a distinct advantage over Middleton, and we may regard him with increased reverence in that he bravely refused to accept concessions made on the score of merely personal consideration. It will, moreover, be seen that the reason why Heber was able in a short time to accomplish so much was because his predecessor before his death had brought so many problems just within reach of solution.\*

Of the problems alluded to, the first we may take into consideration is the relation of the missionaries to the Bishop. This problem, as we have seen, had been brought close to settlement before Bishop Middleton's death, but between the

\* It must, however, be admitted that neither Heber nor James entirely approved of the pretentious scale on which the buildings of the College were commenced. Middleton had indeed been led on by the discovery that there was national enthusiasm for the College, to grander plans than he had at first contemplated, and he also seems to have in some respects been misguided by the expert advice of the builder, both as to the nature of the site and the requirements of the building.

Bishop and the Local Committee of the C. M. S. there was still some difference as to the extent to which missionaries might undertake work amongst European Christians at places where a chaplain either had been or should be provided. Heber, before leaving home, had procured an opinion from the King's Advocate to the effect that "all clergymen of the Church of England employed in any ministry within the Diocese of Calcutta are subject to the Bishop's authority." At a meeting of the C. M. S. Association, held on 2nd December, a resolution was proposed "that every missionary of the Society should on his arrival at Bengal wait on the Bishop for his license." Curiously enough, the missionaries themselves were all unanimously in favour of the resolution, but they were not allowed to vote. The opposition, came from lay members, and a single chaplain, who quite unnecessarily were under the apprehension "that a Bishop might refuse his license, and break up the Society." The fact that the resolution was lost is surely a proof, if one be needed, that Bishop Middleton's difficulties had not been, as his critics would have it, self-caused. Heber, however, succeeded in getting the resolution accepted as a by-law of the Committee, and with the opinion of Counsel to support him, he really hardly required so much as this. Writing to Mill, after the Meeting, he said: "Notwithstanding the foolish things which were said yesterday I have continued in my situation as President; and I expect to derive great benefit to the Church from the attendance of yourself and men like you. It is, after all, an object not to be abandoned hastily,—to retain a numerous and wealthy and most active body of men, in the avowed allegiance of the Church, and at a distance from the ready embrace of the dissenters. It is something, much more, to attach such a body in spirit as well as in name, to our forms and discipline; and it was a source of much encouragement to me yesterday that all the missionaries present, and all the other clergy, except one, were among our active and anxious supporters."

Another of Bishop Middleton's difficulties had been the legal obstacles in the way of the ordination of Native Christians in the territories of the H. E. I. Company. An Act (5 and 6 George

IV. c. 71. 1824-5) was passed which removed what had been, not a mere obstacle created by Middleton's pedantry but, a positive defect in the Bishop's legal capacities which the ever watchful secular authorities kept in view. In 1824, Heber ordained Christian David, a native catechist and a pupil of Schwartz, who had been sent from Ceylon to make his studies at Bishop's College. On November, 1823, he ordained to the diaconate Abdul Maseeh, the convert of Henry Martyn, whom Brown had baptised on Whit-Sunday 1811.\*

Another difficulty lay in the application of the law in regard to the consecration of Churches to India. Bishop Middleton's practice had been challenged by the Government of India, and some difficult correspondence ensued in the course of which the Government consented to the proposal that in cases where the ground or buildings had been provided by the state a trust-deed should be executed by the Government. The Advocate-General of Bengal, after some delay, pronounced that such deeds were not necessary, and that a written declaration on the part of the Government deposited with the Bishop's Chancellor or Registrar would meet all possible requirements. On 14th December, 1821, the Government communicated this opinion to Bishop Middleton, and requested him to be contented with a simple declaration of their intention. Such was still the state of affairs when Middleton died. Heber on his arrival found two Churches ready for consecration, St. Stephens', Dum-Dum, and St. James', in Bow Bazaar, Calcutta. He therefore applied for the declaration of intention which had been promised to his predecessor. The document granted in reply is of very considerable importance in relation to questions

\*As Abdul Maseeh's was the first ordination by an English Bishop of a native of India, it may be worth while to recall some facts about his life. He was born at Delhi and his original name was Shekh Salih. First a school-master, then a munshi, then an officer in the Company's service, then in the pay of the Nawab of Lucknow, and then a trooper under two native chiefs, Abdul at last reached Cawnpore where he came into contact with Henry Martyn, and helped to copy Persian MSS. for Sabat. Given to bind Martyn's translation of the New Testament he read its contents and was convinced of their truth. He accompanied Corrie to Agra, and was the first C. M. S. agent in India. His Journals appeared in England in the new *Missionary Register* and evoked no small enthusiasm. He died in 1827, His Missionary work was carried on for a time under the Chaplain of Agra—Dr. Farish.

which have repeatedly been raised since Heber's day,\* and we will therefore cite it in full :—

"Government Department, Ecclesiastical,

"To the Rt. Rev. the Lord Bishop of Calcutta.

"MY LORD.

"1. I have the honour to acknowledge the receipt of your Lordship's letter."

"2. The Government entirely concur in your Lordship's opinion with regard to the propriety of the Churches of Dum-Dum and St. James' being consecrated, and it is the wish of the Governor-General in Council that the solemnity in question should take place at such time as may suit your Lordship's convenience. I am at the same time directed to intimate to your Lordship that it is the intention of Government to preserve the sacred edifices referred to from desecration of all kinds, and to dedicate them to the exclusive service of the Church of England.

I have the honour to be, with great regard,

My Lord,

Your obedient humble servant,

C. LUSHINGTON,

Secretary to the Government.

COUNCIL CHAMBER,  
20th October, 1823.

Bishop Middleton has been blamed on the score of the cultivation of a spirit of excessive precaution, but the necessity of moving slowly is illustrated by the policy of his successor, who has never been similarly censured. In the letter to W. H. Mill, already cited, Heber speaks of "the peculiar circumstances of India, the novelty of episcopal authority in these countries, and the suspicion arising from an ignorance of its real nature, with which every claim made by that authority is regarded." "With all such," he continues, "it seems to be my business to proceed calmly; from all such to bear as much as I am justified in doing, till by a patient discharge of more popular duties, I can obtain a patient hearing for my unpopular claim, and prove, as I verily believe I shall be able to do, how much these claims have been misunderstood and misrepresented." Heber also felt constrained to adopt a certain amount of caution in respect to

\* These documents show how false is the statement recently put forward that the Garrison Churches were built by the Government for all protestant denominations. Heber received similar assurances before he performed the other acts of consecration mentioned in this article. The documents are given in an article which appeared in the (English) *Church Quarterly Review* for January 1900.

the advocacy of direct missionary propaganda. He thus discouraged the proposal to publish Christian David's sermon—the first preached after his Ordination—at the Old Mission Church.

We have seen that Heber's first residence in Calcutta was the Government House in Fort William. The Fort was then, as it was indeed in the early days of Lord Roberts many years later, dependent on the adjutant birds for its cleanliness—a thoroughly unhealthy place. The Company had forgotten that they had promised the Bishop a house in Calcutta, but in November [27th], 1823, the local Government permitted Heber to rent, at their charge, a house at 5 or 600 rupees a month. With this house allowance to his credit, the Bishop for a time rented a house at Titaghur belonging to the well-known botanist, Dr. Wallich. At this spot he was, of course, a close neighbour to the Governor-General at his country residence at Barrackpore, and in the January of 1824 Heber made the acquaintance of the great trio of Baptist Missionary pioneers—Carey, Marshman, and Ward—at their famous station of Serampore on the opposite side of the Hughli. Here, too, on a return journey from his Cathedral city Heber was appalled by the sight of the glowing embers of a funeral pile on which a *suttee* had but an hour or so ago taken place. Dr. Marshman, on the occasion when he dined with the Bishop at Titaghur, in speaking of the *suttee*, said “that these horrors are of more frequent occurrence within the few last years than when he first knew Bengal; an increase which he attributes to the increasing luxury of the higher and middling classes, and to their extensive imitation of European habits, which make many families needy, and anxious to get rid, by any means, of the necessity of supporting their mothers, or the widows of their relations.” In the following April, the Bishop witnessed the *charak* or swinging festival on the Calcutta *maidan*.

Not the least of the ecclesiastical perplexities which beset Heber in the early months of his episcopate was afforded by the resistance of the Senior Chaplain at Bombay to the arrangement by which the Archdeacon was privileged to preach on certain occasions at the Presidency Church. The topic, however, only needs to be mentioned here because it illustrates the difficulty

presented to the early occupants of the See of applying English experience and law to problems of Church discipline in India. After five months of incessant duggery at Calcutta and Titaghur, Heber inaugurated his Primary Visitation by a charge delivered at St. John's at six o'clock in the morning of Ascension Day, May 27, 1824.

It was now Heber's duty to visit first those parts of British India which had not as yet been visited by an English bishop. War was at this time imminent in Burma, and the Bishop therefore declined to avail himself of the services of a doctor which he felt would be severely needed by the troops in the campaign. On June 15th he left for Dacca, the former capital of Bengal, once famous for its muslins, and to-day an important educational centre at which the Oxford Mission is developing slowly but surely a great enterprise on behalf of Christianity. The Bishop went on board a sixteen-oared pinnace, attended by two boats for servants and for cooking, and proceeded up (to-day we should go down) the river. Dacca was not reached till July the 4th, where his Chaplain, the Rev. Martin Stow, died in his arms. At Dacca, the Bishop writes, “A Baptist missionary has established a circle of twenty-six day schools, containing more than 1,000 boys, who all read the New Testament daily as their task, without any objections being made; and had the Church of England Societies a missionary at present to spare, he might in a month double the number.” Eighteen days were spent at Dacca, and then the Bishop proceeded to Bhagalpur, the first mofussil missionary station of the S. P. G. in India, already consecrated by the noble life of a Civil Servant, Augustus Cleveland, and soon to be hallowed as the death-place of one of the earliest S. P. G. missionaries in Bengal—Thomas Christian. At Bhagalpur Archdeacon Corrie joined the episcopal fleet.

From Bhagalpur the episcopal party proceeded to Monghyr and thence to Patna—the Pataliputra of Asoka. From Patna the Bishop visited the lines at Dinapore where he found the spiritual state of affairs in a sad condition. The Orders requiring the men to attend Church every Sunday were disregarded and the planters in the neighbourhood “seemed utterly

without religion of any kind." Bad as things had been, they had been aggravated "by exceeding bad conduct of the late chaplain." The room used for a church was small and inconvenient, without an altar, lights, punkahs or shades for the windows. On 25th August Heber departed on his pinnace under a salute of artillery. The course of the tour now led him through two places for ever memorable in the history of British India—Chupra, the scene of Eyre Coote's victory over Law; and Buxar, the scene of the battle which secured our rule in Bengal—to Ghazipur and Benares, the sacred city of Hinduism. The Bishop was received with great cordiality by the Brahmans, who never having heard tell of a "Bishop of Calcutta," and yet knowing that it was unlikely that their visitor being an Englishman should be the Pope of Rome, conjectured that he must be the only other great pontiff of whom they had heard, the "Papi Roum," *i.e.*, the Patriarch of Constantinople. Covered with garlands Heber quaintly says that he felt "more like a sacrifice than a priest." During his stay at Benares, the Bishop wrote in his Journal: "The custom of street-preaching, of which the Baptist and other dissenting missionaries in Bengal are very fond, has never been resorted to by those employed by the Church Missionary Society, and never shall be as long as I have any influence over them. I plainly see it is not necessary, and I see no less plainly that though it may be safe among the timid Bengalees, it would be very likely to produce mischief here. All which the missionaries do is to teach schools, to read prayers, and preach in their Churches, and to visit the houses of such persons as wish for information on religious subjects."

On 10th September the Bishop left Benares for a short visit to the striking rock fortress of Chunar, where he heard from Messrs. Greenwood and Bowley accounts of their work for the C. M. S. and confirmed nearly 100 persons, 57 of whom were natives—mainly soldiers' wives and children. On the Sunday, 12th September, four clergymen and two catechists assisted the Bishop at the morning service, and about 130 persons received the Blessed Sacrament of whom nearly 70 were native converts. Ten days were spent at Allahabad, a place which, although it

did not enjoy the services of a chaplain, yet presented twenty candidates for Confirmation.

At last on the 30th of September the caravan was ready for starting—"twenty-four camels, eight carts drawn by bullocks, twenty-four horse-servants, including those of the Archdeacon and Mr. Lushington, ten ponies, forty bearers and coolies of different descriptions, twelve tent-pitchers, and a guard of twenty sepoy under a native officer." "The whimsical caravan," the Bishop writes, "filed off in state before me; my servants, all armed with spears, to which many of them had added, at their own cost, sabres of the longest growth, looked, on their little ponies, like something between Cossacks and Sheriff's javelin men; my new Turkoman horse, still in the costume of his country, with his long squirrel-like tail painted red, and his main plaited in love knots, looked as if he were going to eat fire; while Mr. Lushington's horses, two very pretty Arabs, with their tails docked, and their saddles English ("ungiri") fashion, might have attracted notice in Hyde Park: the Archdeacon's buggy and horse had every appearance of issuing from the back gate of a College in Cambridge on a Sunday morning; and lastly came mounted some *gens d'armes* and a sword and buckler men on foot, looking exactly the advanced guard of a Tartar Army." Marching with difficulty through a flooded country, the caravan after ten days reached Cawnpore.

At Cawnpore there was still no church for the parade services, and the riding school of which Martyn had so strenuously complained was still in use as a church on Sundays. After a Confirmation, the Bishop left Cawnpore on Monday afternoon, 18th October. The unsettled state of affairs in the kingdom of Oude necessitated an increase in the number of the Bishop's armed retinue. On 21st October, the episcopal party mounted on three elephants abreast, entered Lucknow, but were soon compelled to fall into single file in order to pass through its narrow and squalid lanes. Some little difficulty was caused by the fact that this visit to Lucknow had been the result of a sudden thought on Heber's part, and consequently no prior notice had been given by Lord

Amherst to the ceremonious court of "the Asylum of the world." The Bishop's visit to Lucknow was prolonged in order to enable him to perform the marriage service for the Resident, Mr. Ricketts, a very excellent churchman, who, in the absence of a chaplain, was in the habit of reading Divine Service each Sunday at the Residency. The impression formed by the Bishop was that it was not as yet expedient to send a missionary to Lucknow, but a school master "furnished by our Society with a stock of sermons" might very well be placed there. It is needless to say, that the Roman Catholic Church had not been quite so shy, and that in Lucknow there was already a small Roman Catholic chapel served by a Franciscan priest.

The farewell to Lucknow was a sad one, for Mr. Lushington had to be left behind dangerously ill. On Monday, the 1st of November, the Bishop, now to be unattended by any European companion, parted from the Corries "much agitated and their little girls in tears": he himself was indeed more depressed in spirits than he cared to let his friends know. After recovering from an attack of fever, he was laid up with "Calcutta and Lucknow influenza," Heber traversed the district from Lucknow to Bareilly, then in an unsettled state of government, and as he passed through the principal stations he found no traces of Christian organisation to provide for the spiritual needs of his widely scattered fellow-countrymen. On 28th November, the Bishop administered the first Eucharist at the famous hill station of Almora.

Not till the 18th December did Heber meet again with a fellow minister, and then it was Mr. Fisher—the fine Chaplain-Missionary of Meerut. The following day the first church at Meerut, of historical memory in the great Mutiny, was consecrated. "The congregation," writes Heber, "was very numerous and attentive, and the appearance of everything highly honourable both to the Chaplain and the military officers of this important station. I had the gratification of hearing my own hymns 'Brightest and Best' and that for St. Stephen's day, sung better than I ever heard them in a Church before. It is a remarkable thing that one of the earliest, the largest, handsomest Churches in India, as well as

one of the best organs, should be found in so remote a situation, and in sight of the Himalaya mountains." At Meerut the Bishop met the famous native corporal who had been dismissed by the Government from his regiment for the sole ground of his conversion to Christianity. On Christmas Day two hundred persons received the Blessed Sacrament at Meerut.

Delhi was reached on 29th December, and on the last day of 1824 the Bishop was presented to the Moghul Emperor. Agra was reached on 12th January. Here the Bishop met at breakfast Corrie's celebrated convert, Abdul Masseeh. The interest of Heber's *Journal* as he passed through many far-famed cities would tempt the writer to far beyond the limits of his subject, and he must, therefore, summarily refer the reader to the *Journal*, which after long years of great popularity is perhaps to-day falling into undeserved neglect. From Agra the Bishop passed to Jeypore, Ajmere, Neemuch, and Baroda. Nussereabad, visited in February, was an important military post, but without either church or chaplain, and Heber had to use his powers of persuasion to secure the use of the fine ball-room for his Sunday service. At Baroda he found a Church—"a small but convenient and elegant Gothic building accommodating about 400 persons extremely well." On 18th March, the Archdeacon of Bombay, Dr. Barnes, whom Heber had known at Oxford, and who had postponed his resignation until he could meet the Bishop, joined the caravan. Easter was spent at the walled city of Kaira where the Bishop had consecrated "a large and solid but clumsy" Church. On the 13th April Surat, the while one chief factory of the East India Company, was reached. On the 17th, the Bishop consecrated the Church recently erected, and the famous burying ground with its vast ruinous tombs of the Company's servants, among which the largest and most striking is that of the noble Sir George Oxinden. The same day as the Consecration, Heber embarked for Bombay, where, on the 26th April, he met once more his wife and eldest daughter.

The Visitation on the 28th April was attended by the Archdeacon, six chaplains, and one missionary. On the 5th May the foundation stone of a Free School on the same plan

of that of Calcutta was laid. Meetings were held to strengthen the cause of the great Church societies, and Heber's programme at Bombay reminds us that we have at last come to the time when a Bishop's acts in India were ceasing to be isolated events, but parts of a regular routine.

Heber's strength had been much taxed by the arduous of his tour. "You will find me a good deal aged," he wrote to prepare his wife: "the march from Neemuch, and the 'iron clime' of Guzerat have done me more wrong than all my previous wanderings." The rest at Bombay and reunion with those about whom he had been most anxious, however, soon restored his strength and buoyancy.

Once more we must resist the temptation to follow the Bishop on his expedition to the caves of Elephanta, the Western Ghats, and the Governor's beautiful country retreat at Parel. In visiting Poona, for the purpose of consecrating the Church, the Bishop in his palanquin was exposed on two successive nights to the rains of the Dekan, and the result of this and further exposure on the return journey to Bombay was a recurrence of his fever. It is sad to record that the misconduct of a Bombay Chaplain compelled Heber at this time to experience the troubles which Middleton had experienced in the matter of the holding a consistory court.

Heber's visitation at Bombay marks a very distinct step in the growth of the Church in Western India. No less than five Churches had been built, thanks to Bishop Middleton, since that prelate's last visitation, and in addition to these two other buildings were sufficiently far advanced for Heber to be able to license them for purposes of Divine worship. Bombay was at this time but a poor and humble sister to the presidencies of Bengal and Madras, yet from the Bombay Presidency the Bishop now secured some £1,800 for the Missionary College at Calcutta. And from Bombay, Heber took away with him a learned priest to act as his domestic chaplain, Dean Vaughan's immediate predecessor as master of the Temple—the Rev. T. Robinson.

The Bishop had intended in his visitation to include a tour through either Central India, as yet unvisited episcopally, or the country occupied by the ancient Syrian Church of Malabar.

But his presence was now urgently needed at Calcutta: so on the 15th August the episcopal party, now accompanied by Mr. Robinson as Bishop's Chaplain, went on board the *Discovery*, and ten days later arrived at the harbour of Galle, in the Island of Ceylon. Heber spent a very busy month in travelling through the island, and it is interesting to notice that he, as his predecessor had done, formed a highly sanguine opinion as to the future of Christian missions in Ceylon. "I really think," he writes, "that there are better hopes of an abundant and early harvest of Christianity here, while at the same time, there are more objects connected with its dissemination and establishment which call for the immediate and almost continued attention of a Bishop, than are to be found in all India besides." The *Calcutta Church Missionary Society's Report* describes with enthusiasm the event of the visitation. "The native Christians," it states, "have for the first time been brought into close connection with our episcopal head: for it was his practice in every station to administer the Sacred Elements to them, and pronounce the Blessing in their own language, thus teaching them to regard him as their chief pastor, and winning them in all other respects by most affectionate, conciliating, and impressive addresses." At Ceylon, beside his ordinary pastoral work, the Bishop appointed Mr. Glennie as successor to Twisleton in the Archdeaconry, and founded a local Branch of the S. P. G. On the feast of St. Michael and All Angels, the Bishop again set to sea, and Calcutta was reached on the 21st October 1825.

On his return to Calcutta, Heber entered into the house, No. 5, Russell Street, which, despite repeated reports from the ecclesiastical authorities as to its dubious conditions of safety, remained the Bishop's Palace until in 1849 Bishop Wilson, in the tenth year of his episcopate, acquired the present Palace in Chowringhee by a transaction which well supports the saying of one of the Governors-General that the Bishop of Calcutta was the acutest man of business he had ever met with in India.\*

\* For a few months in 1824 Heber occupied No. 5, Middleton Place (Row) the former residence of Sir E. Impey. A most interesting historical note on the Calcutta residences of the Bishops has been compiled for H. E. the Viceroy by the well known historian Dr. C. Wilson.

The College, despite the sanguine expectations of its Principal, had been making but slow progress. At the end of 1822 Mill had set another three months' limit to the time still necessary for the completion of the work. Heber on his arrival, however, found "it a mere shell of elegant architecture, but without offices of any kind, in the midst of a wilderness of high grass, creeping shrubs, and stagnant pools, which were supposed, in Calcutta, to hold out a very dismal prospect to the health of all who might become its inhabitants". The architect, Captain Hutchinson, was busily employed on Government work elsewhere. Owing to errors in the building the sums which had been intended for the drainage had been expended on the building, and there was now a considerable debt on the undertaking. At Xmas time, 1823, Professor Alt and his young wife took up their residence in the still uncompleted buildings. In 1824 the College had already sent out an ordained Missionary—the Ceylon Priest in Bishop Middleton's days Christian David, and the S. P. G., which, had not a single European clergyman in its Indian Missions, had now three in Bengal—Morton, Christian and Tweedle. To these three was assigned the work of supervising the schools established by the S.P.C.K. at Howrah, Tollygunge and Cossipore.

On his return to Calcutta, the Bishop at once took up the affairs of the College, for the support of which, both at Bombay and Ceylon, he had pleaded with no little success. To forward this aim he now founded a branch committee of the S. P. G. at Calcutta. By the end of 1825 the College had three resident scholars—W. Addison Godfrey, C. Garstin, the son of a Colonial chaplain in Ceylon and himself a future Bengal chaplain, and Charles Driberg, the son of an officer of H. M.'s Cingalese regiment. A curious comment on the ancient alarms raised by Anglo-Indians at the introduction of missions to the heathen is afforded by the fact that at this time an influential Hindu gentleman came forward and offered an annual subscription of Rs. 400 per annum to the College.

The Ordination held on 31st December must have been one of the most impressive events of Heber's episcopate. On that day Abdool Masseeh received the Priesthood and John

Adlington, a pupil and almost an adopted son of Corrie, the deaconate. Corrie himself was the preacher. A good deal of the service was in Hindustani, the Bishop taking his part without difficulty. "It was an awful and touching moment," writes one who was present, "when the *Veni Creator* was sung by the congregation, the Bishop reading the verses from the altar surrounded by twenty of his clergy kneeling in their surplices. All seemed to feel the beautiful devotion of this heavenly hymn, and to join with one heart in the sublime invocation of the ever Blessed Spirit. Who can doubt that such prayers were answered? Father Abraham was present with his vicar during the whole service. He embraced the Bishop at the door of the vestry, and attended him to his carriage, where he and Ter Jacob embraced me and expressed their pleasure at thus joining with us, and their sense of the honour with which they had been received."\*

At Bombay the Bishop had received tidings that the Dutch settlement at Chinsurah, some 25 miles above Calcutta on the opposite river bank, had been ceded to the East India Company, and that the quaint little State church of the Dutch Governors was now at the disposal of the Church of England. So early in 1826, Heber sailed to Chinsurah, and stationed there Mr. Morton as the first head of an S. P. G. Mission—now alas long years since abandoned. Here the Bishop was attacked by a fever, which in his widow's belief was connected with now not distant event at Trichinopoly. As soon as his recovery was effected he sailed (February 1826) in the *Bussora Merchant* for Madras, not, however, before he had welcomed to Calcutta two new professors for the College and Mr. F. de Mello, the printer.

On 28th February the ship anchored in the Madras roads. The travellers went ashore in an "accommodation boat," which the Bishop laughingly described as "the gig of Noah's Ark." Next day, a Sunday, Heber preached at St. George's a sermon pathetically full of intimations of his own earthly end, from the text Phil. i. 25: "To die is gain." With no small emotion he visited the venerable S. P. C. K. missionary, Dr. Rottler, and

\* Robinson: *Last Days of Bishop Heber*, pp. 68, 69.

listened to his catechism of the little ones. At Vepery "he was particularly struck with the good taste which, by placing the pulpit and reading desk on each side of the aisle, gave from every part of the church a full uninterrupted view of the recess of the altar, which is well raised and of excellent proportions. It is his wish that in every church the Altar should be the first and chief object, and that it should be rather more elevated than the rest." The question of the retention of caste distinctions, permitted by Schwartz, was brought before the Bishop's notice, but he wisely deferred any expression of opinion until he should have collected sufficient information for a mature judgment after the completion of his visitation of Southern India. At the Confirmation on 8th March no less than 479 candidates were presented. From Madras, the military station at Poonamallee was visited, where there was a small church already consecrated by Middleton. Here the Bishop ordered the removal of an enormous pulpit which completely hid the Altar from view. At Madras the Bishop and his chaplain paid a state visit in their robes to thank Lady Munro for her kind patronage of the Vepery schools. The meeting of the two great men, Heber and the venerable Sir Thomas Row, was a remarkable and pathetic occasion. The Visitation at St. George's on the 10th was attended by no less than fourteen clergy—a sure sign of the Church's growth. On the 13th, the episcopal party left Madras to travel along the route followed by Middleton some ten years before.

Pondicherry, Cuddalore and Chillumbrum, were visited, and, on 25th March, Heber was received at Tanjore by the patriarch of the Lutheran Mission—Kohlhoff. At the altar, in part of which lie the remains of Schwartz, Heber celebrated his last Easter Eucharist. At Tanjore, the Bishop exchanged state visits, as his predecessor had done, with the Rajah, for whose welfare he wrote some touching prayers preserved in the biography edited by Mrs. Heber.

Trichinopoly was reached on the 1st of April. On the 3rd, the Bishop commenced the day at the Tamil Service, where he confirmed eleven Tamil candidates and pronounced the

Blessing in Tamil. He then visited the English and native schools and the Mission House, and in Kohlhoff's presence addressed the natives who had gathered round the steps leading to his house. On entering, before taking off his robes, he went in to visit his chaplain, Mr. Robinson, who had been too ill to leave his bed that day. "He stood talking by my bedside for half an hour with more than usual animation on the subject of the Mission. . . . . He said he had been so much interested in all he had seen, that it broke his heart to witness the poverty of the congregation, which needed much the constant care of a vigorous and active missionary. After some particular arrangements for the morning, he left me, in order to undress and bathe. He sat a few minutes absorbed in thought, before he went to the bath, which is a separate building, a few yards from the house, and filled from a spring, considerably beyond his depth. He had used it on the two preceding mornings, and enjoyed it exceedingly. His servant, alarmed at his staying beyond his usual time, and hearing no sound, opened the door, and saw the body apparently lifeless below the surface of the water. He ran immediately to my room and gave the alarm with a bitter cry that his master was dead. On reaching the bath I plunged in, and assisted a bearer, who was already there, to lift the body from the water, and Mr. Doran and I carried it in our arms to the nearest room. Every possible means were instantly used, but in vain: the Garrison and Superintending Surgeons, who arrived almost immediately, continued their attempts at resuscitation for a considerable time, but all hope was gone, and the blessed Spirit was already before the throne of God. They give it as their decided opinion that his death was caused by apoplexy; there had probably been a predisposition to it which the shock of the cold water had suddenly brought on.

"All were plunged in grief. The venerable and excellent Mr. Kohlhoff visited me, and his almost passionate burst of sorrow was deeply affecting. He threw himself in my arms weeping aloud. 'We have lost our dear Father! We have lost our second Schwartz who loved our Mission and laboured for it.

He had all the energy and benevolence of Schwartz, and greater condescension. Why has God bereaved us thus? It was long before the good man's grief could be moderated: I cannot wonder at its violence and I dare not blame it. His hopes had been raised to their height by the labours of unwearied love which he witnessed at Tanjore."

Heber's mortal remains rest on the north side of the altar of St. John's Church, Tanjore where but twelve hours before his death he had blessed the people in his Master's name.

WALTER K. FIRMINER, M.A.

#### Art. IV.—THE PRE-MALAYAN.

MALAYA is singularly destitute of historic monuments. A rock inscription in an archaic variety of the Devanagari script has been discovered in Province Wellesley and one or two other relics elsewhere. Otherwise, of the purely native period of the Peninsula, Hindu or Mohamedan, we have no record, written or monumental, save the "Sejarah Malayu," a work compiled long after the advent of Europeans, and other ingenious but not very reliable chronicles. The oldest historic buildings are those of the Portuguese invaders.

But if we turn to the jungles we have living examples of ancient periods of human history perhaps not to be matched elsewhere. The aborigines of the Malay Peninsula go by many names and belong to several different stocks.

In Selangor and Johor are the Jakuns who have nearly lost the last vestiges of their ancestral speech, and, but for their non-acceptance of Islam, might be Malays. In Pahang the Sakai along the Klau river speak only Malay, and retain but a faint soupçon of the guttural brogue that enables one to recognize aborigines within earshot, even if dressed like Malays and speaking Malay.

There are in Selangor and on the Rompin river in Pahang fair-skinned Sakai, who, probably, on investigation, will prove considerably differentiated in speech, and perhaps in blood from the aborigines on the upper reaches of the Pahang river. These latter call themselves Senoi and are straight-haired and brown-skinned like the Malays, but speak a language crackling with gutturals, words ending in kn or tn for choice. Close to Malay Settlements this speech is sadly corrupted with loan words, which obey the phonetic laws of the native tongue, the Malay word "Kampong" (village), for instance, becoming "Kampokn." Behind these in the extreme Ulu Tenom and Ulu Kelantan are the Tembi, speaking an allied dialect, but with many different roots and, according to Malay testimony, much harder to acquire. They somewhat resemble

Tamils, being black with lean wiry limbs, frizzled hair and a general appearance of suppleness. An aged Sembi with a heavy grey beard (a rare thing among Malays) had an air of majesty that would have sat well on Cato the elder. But the youths grinned all over at the spectacle of a white man trying to write down the torrent of vocables they alleged to be the words of their language, and would not utter one word at a time, as the Senoi would. Those I have seen were perfectly free from the hideous skin diseases which so disfigure most of the Senoi.

Again on the Kechau river there are light-skinned aborigines who are called by the Malays "kutu tanah" (bugs of the earth) because they wander about grubbing up roots and sleep hutless, wherever night finds them.

Finally, in the mountains near the middle reaches of the Perak and Pahang rivers are a race who were probably the very earliest human inhabitants of Malaya. In Perak men call them Semang, in Pahang, Pangan. They are black, small and ugly and rarely meet with mankind, against whom they defend themselves with the poisoned darts of the "Sumpitan" or bamboo blowpipe. Like the "kutu tanah" they build no shelter against the elements, at the most cutting a few palm-fronds to close the space between two roots of a big tree so that they can curl themselves up in a measure of security behind them. They wander about grubbing up insects and roots and shooting birds and small animals with their blowpipes.

All these pagan tribes are contemptuously referred to as "Sakai" (slaves) by the Malays, or, if they wish to please them, as "orang bukit" (hillmen), "orang darat" (landward men), "orang benua" (inlanders), or "orang raiat" (subjects). Yet it is probable that they are the original owners of the Peninsula, and the ancestors of the Malays themselves. The objection that, whereas the Malay tongue and the Malay race are found all over the Archipelago, the Sakais only exist in the Peninsula, and therein speak several mutually unintelligible languages, is not a fatal one. It is not claimed that the Malays ever spoke any of the *existing* Sakai dialects, merely that out of a group of archaic Sakai dialects, one, the

Malay, spoken by these Sakai nearest the trade emporiums, developed and spread, in the same manner as, out of a group of Scandinavian dialects, English has spread throughout the globe while Icelandic, Danish, Swedish and Frisian are confined to the North-West of Europe.

Many of the Malays think that they were originally a Jakun tribe civilized by Hindu invaders. The physical appearance of the Malays and Senoi is identical, bar the wild restless glance of the Senoi, a result of centuries of oppression. According to well-founded traditions it is scarcely two centuries since the states of Negri Sembilan were formed by an admixture of Sumatran Malays and Sakai.

According to local tradition ten generations ago the site of the village of Budu, the largest and prettiest village in Ulu Pahang, was a Settlement of Sakai cultivating hill padi under a king named Raja Kuali from father to son. Malay pioneers saw that it was a good land, abounding in rich swamps and fruit orchards, and accordingly a band set out to advance the frontier of civilization. But the misguided savages, like savages in other parts of the world, failed to recognize the right of acquisition inherent in superior races, and resisted fiercely with bows and arrows and sumpitans.

But kris and spear proved irresistible and the broken remnants were driven into the mountains, and the Malays settled down and made padi swamps and planted cocoanut groves.

Furthermore, there is a village in the neck between the Lipis and Jelai rivers near their junction, where the cocoanut trees are in their first generation and have but recently begun to bear. If this is a normal incident of the diffusion of the Malays, it is obvious that three hundred years ago there were as few Malays along the main stream of the Pahang as there now are along its tributaries.

It is evident by native tradition, by present day superstition, by the vocabulary of the language, that the Malays passed through a Hindu period of some duration before they accepted Islam. But as to who the Hindu invaders were, there has been great difference of opinion. Some have suggested Telugus, others Guzeratis, but I think it has now been pretty well proved

by Mr. Blagden in an able paper read before the Straits branch of the Royal Asiatic Society that the old rulers of Malaya belonged to one or other branch of the Mon-Anam family. Mr. Blagden has collated Talaing and Kambojan words with those of various Sakai dialects and shown striking resemblances. Moreover, all over the Peninsula there are old workings called by the Malays "lombong Siam" (Siamese mines). Now it is a historic fact that Siam never reached the sea till the fourteenth or fifteenth century, whereas Pegu and Kamboja were of old great and powerful empires.

When in a lucky or unlucky day the king of Malaka became Sultan in obedience to a vision from heaven, the gulf became very wide between the civilized seafolk, now of the chosen religion, and the rude inlanders, now kafirs (infidels), whom it was an innocent pastime, if not a positive duty to kill, plunder and carry away captive. Being unorganized and inexpert in stockade warfare, the tribes became clans and the clans scattered families. For those within reach of the Malays it became a choice between the civilization of the helot and the fugitive independence of the wild beast. In the heart of the Peninsula, where they used to kill small bands of intruders, the Senoi plant millet and build village houses and have the elements of social existence.

A charming old village headman told me that in his youth he and other young sparks used to make a night attack on a Sakai Settlement, killing the men and carrying off the young women to sell as slaves to Sumatran immigrants. As soon as the Sakai males were aroused the raiders would beat a precipitate retreat, for they durst not face the little poisoned darts, a touch from which drops a man rigid in less than two minutes. To gloze the matter over to their consciences, they called it warfare not kidnapping.

Since the inauguration of the British Residential system, raids on the Sakai and the holding of the Sakai slaves have ceased and they have in various degrees advanced in prosperity and civilization. But the most civilized have still a furtive eye and are ready to bolt into the jungle on slight provocation. For the most part they acquire the luxuries of civilization, that

is to say tobacco, salt, matches, axeheads, and woodknives by collecting rotans for Malay traders or by rearing poultry and goats, but in some parts they are better off than the Malays themselves. In Negri Sembilan they dress in silk and own herds of buffaloes, but prefer to stow away valuables in a log in the jungle rather than in a box in the house, perhaps not unwisely. In the Bra, a deep sluggish river full of crocodiles, and on that account avoided by Malay settlers, they actually have planted cocoanut groves and dwelt in the vicinity till they come into bearing, but of working padi swamps, the hall-mark of reclamation from nomadry, I have heard of but one instance. That was in an upland vale in Ulu Pahang, and the year happened to be a dry one, and they hadn't the heart to make a second attempt.

As yet very little has been done by the British administration with the direct object of benefitting and uplifting the aborigines, yet they are potentially, man for man, as valuable assets in the national wealth as the Malays, perhaps more so, since, if fostered, with their habit of living in hilltops, they will gradually fill up the vast tracts between the rivers, whereas a Malay will not dwell away from the banks of a large river or the edge of a padi swamp. And, if civilization be an aggregate of moral and æsthetic rather than of material possessions, they are not wholly uncivilized. Where little touched by Malay influence both sexes wear a loincloth and are highly moral. Nearer Malay centres they wear clothes, use guns, eat rice, and are generally decadent but, on the whole, preserve a somewhat higher moral standard than their Mohamedan neighbours. The children are fully as intelligent as Malay children. Their expression is pleasant and their figures graceful. They are skilled physicians. They clear mountain tops like white men just to enjoy the view. And perhaps they are "Aryan brethren," for an old Sakai pointed out to me the resemblance between "mem," the Senoi word for breast, and "Tuan mem" (corrupted from madam) the Malay appellation of an Englishwoman.

F. EMERIC.

### Art. V.—A QUARTER OF A CENTURY OF LAND REVENUE ADMINISTRATION IN MADRAS.

THE crucial test of the success or otherwise of the administration of Land Revenue in India is the recovery of a Province which has been afflicted with a bad famine from its effects. If that administration is based on sound principles, the recovery will, as a consequence of the natural endeavours of the *rayat* to reinstate himself in his former position of ease and such comfort as the lot of the Indian agriculturist allows him to enjoy, be comparatively rapid. If the system under which he pays his rent is harsh,—if, under the idea that he can quickly make up in a good or moderate year the losses he has incurred in the famine of personal property and land, the payment of arrears is strictly exacted from him, he will work on, for work he must in order to live, with, as it were, a millstone of debt round his neck, and in nine cases out of ten has no other employment to fall back upon, but he will probably fall lower and lower, and, losing his position as a landholder, become a labourer for daily wages. It is accordingly proposed to put together in the present article statistics bearing on the point gathered entirely from official sources, to see how the Madras Presidency as a whole comes out of the trial from the time of the great famine of 1876-1877, a period of a quarter of a century, and, if possible, to learn from this lessons useful for guidance in the future. The sources of information referred to are the annual Settlement Reports, the Statistical Atlas, published in 1895, which takes the place of a Presidency Gazetteer, and the papers relating to one of the most modern resettlements of a small typical District, from which may be ascertained the general principles underlying those settlements. The term of 25 years taken is sufficiently long to cause the elimination of effects brought about by accidental circumstances and thus give a fair view of the administration as a whole.

The Madras Presidency contains 22 Districts or Collectorates situated under very varying circumstances, subjected to the influence of both the south-west and north-east monsoons or periodical rainy seasons, and in one part stretched over the whole breadth of the Continent of India near its southern extremity, thus affording almost every example of tropical climate and productions. In one way the fact of being subject to the influence of both monsoons is of a certain advantage, for the deficiency that may occur from that from the south-west is often made up by a fresh supply of rain from the north-east, which comes later in the year, but there are some parts of the country to which the influence of the latter hardly extends. These border on the western range of hills, against which the vapours driven up by the south-west wind strike and precipitate themselves as rain, and then frequently pass over a large tract of country without imparting any moisture to it. In this tract, accordingly, which may be called the Deccan Collectorates, the liability of crops to failure is more common than in the rest of the Presidency, and the gaining of a living by agriculture is consequently very precarious. In order to illustrate this and the opening remarks of this article, let us take the cases of the two Collectorates of Kurnool and Bellary, two of those that were most severely hit by the famine of 1876-77. The area of holdings in the former was 1,212,013 acres and the assessment Rs. 13,04,585, or a little over Re. 1-1 the acre, inclusive of wet and dry lands. In that year remissions for waste land and without crops were granted to the extent of Rs. 5,11,483. The Statistical Atlas only supplies information of the state of cultivation up to 1890-91, but in those fifteen years (inclusive) the area of dry land in ryots' holdings had not recovered itself within about 40,000 acres. In Bellary the area under holdings in the former year, *viz.*, 1,478,298, came in 1890-91 to 1,459,260, that is to say, had not quite risen to its former level, notwithstanding that in 1876-77 remissions of Rs. 9,01,971 were given out of an assessment of Rs. 13,19,655. As a matter of fact it was in Kurnool not till about 1893-94 that the full level of former years was reached, and in Bellary perhaps a year earlier. In the meanwhile what had been the state of affairs with regard to collections and re-

missions of revenue? In Kurnool the remissions for waste and withered crops were as follows :—

| YEAR.     | REMISSIONS. |          | COLLECTIONS. |             |
|-----------|-------------|----------|--------------|-------------|
|           | Arrears.    | Current. | Arrears.     | Current.    |
|           | Rs.         | Rs.      | Rs.          | Rs.         |
| 1893-94   | ... 791     | .....    | 46,601       | 15,72,693   |
| 1894-95   | ... 1,555   | .....    | 8,230        | 19,33,059   |
| 1895-96   | ... 158     | .....    | 2,358        | 19,15,118   |
| 1896-97   | ... 377     | .....    | 2,523        | 11,60,360   |
| 1897-98   | ... ..      | .....    | 3,27,138     | 18,45,026   |
| 1898-99   | ... 368     | .....    | 51,600       | 18,48,674   |
| 1899-1900 | ... 1,029   | .....    | 24,322       | 12,31,802   |
|           |             |          | <hr/>        | <hr/>       |
|           |             |          | 4,12,772     | 1,15,08,732 |

In Bellary they were for the same years :—

|           | Rs.       | Rs.   | Rs.      | Rs.       |
|-----------|-----------|-------|----------|-----------|
| 1893-94   | ... 4,877 | ..... | 77,322   | 16,19,241 |
| 1894-95   | ... 2,647 | ..... | 38,522   | 18,62,751 |
| 1895-96   | ... 2,082 | ..... | 27,309   | 19,10,921 |
| 1896-97   | ... 2,228 | ..... | 1,947    | 7,20,075  |
| 1897-98   | ... 677   | ..... | 4,25,129 | 19,15,139 |
| 1898-99   | ... 2,865 | ..... | 33,827   | 19,00,028 |
| 1899-1900 | ... 2,670 | 25    | 46,140   | 18,94,401 |
|           |           |       | <hr/>    | <hr/>     |
|           |           |       | 5,34,352 | 83,40,564 |

Thus in the one case Rs. 4,12,772, and in the other Rs. 5,34,352 have been collected over and above the ordinary annual demands in the course of seven years. How have these collections been made? Leaving alone the notices of demand, which numbered 380,024 in the two Collectorates, ostensibly merely formal notices, but in reality giving the village authorities power to keep the whole of the *rayats* on the tenterhooks of suspense as to whether they are not the

mere preludes to attachment and sale of property, the account stands as follows :—

| Year.     | No. of Defaulters. | Personal property sold. | Real property sold. | Of the latter bought in by Govt. | Sold to others. |
|-----------|--------------------|-------------------------|---------------------|----------------------------------|-----------------|
|           |                    |                         | Bellary.            |                                  |                 |
|           |                    | Rs.                     | Acres               | Acres                            | Acres           |
| 1893-94   | 895                | ... 1,339               | 11,367              | ... 5,412                        | 5,955           |
| 1894-95   | 444                | ... 1,975               | 1,359               | ... 1,312                        | 1,359           |
|           |                    |                         | 1,312               |                                  |                 |
|           |                    |                         | 2,671               |                                  |                 |
| 1895-96   | 442                | ... 845                 | 2,270               | ... 2,270                        | 3,130           |
|           |                    |                         | 3,130               |                                  |                 |
|           |                    |                         | 5,400               |                                  |                 |
| 1896-97   | 167                | ... 282                 | 1,851               | ... 813                          | 1,038           |
| 1897-98   | 264                | ... 2,720               | 1,440               | ... 477                          | 903             |
| 1898-99   | 584                | ... 8,044               | 6,615               | ... 2,921                        | 3,694           |
|           | 504                |                         |                     |                                  |                 |
|           | 1,088              |                         |                     |                                  |                 |
| 1899-1900 | 709                | 11,195                  | 12,403              | ... 3,105                        | 9,298           |
|           | 881                |                         |                     |                                  |                 |
|           | 1,590              |                         |                     |                                  |                 |
| Total     | 4,830              | 26,403                  | 41,747              | 16,310                           | 25,437          |

Thus in the course of seven years there have been 4,830 defaulters in two Collectorates alone. These have had goods and moveable chattels sold of the realized value of Rs. 26,403, worth probably three times as much in addition to their proprietary right in 41,747 acres of land, of which as much as 16,310 have had to be bought in at a nominal price by the revenue authorities on the part of Government because no one was found to bid for them at auction. These lands may or may not be lands that have been taken up as a mere speculation, as Madras men

are in the habit of urging when the fact is pointed out to them, but any land to bring it into cultivation at all requires the expenditure of a certain amount of capital and labour, and it is not to be supposed that the holders of it would deliberately throw this away if the land were fairly assessed and showed any prospect of giving a fair return at the rate of assessment placed upon it.

The two Collectorates mentioned are not the only ones in which this state of affairs exists. Those of Chingleput, South Arcot, and Tinnevely in the course of the last 25 years have had their occupied area of holdings diminished by about  $3\frac{1}{2}$  lakhs of rupees. In the annual Settlement Reports there are given returns of the area of land transferred from other heads or taken up, as well as of what has been given up or transferred to other heads. Taking a single year, the last available at present, we find that in the following Districts, which are merely given as a sample of all, the following changes took place:—

|                | Thrown up. |          | Taken up. |          | More taken up. |        | Less.  |
|----------------|------------|----------|-----------|----------|----------------|--------|--------|
|                | Acres      | Assesst. | Acres     | Assesst. | Acres          | Acres  |        |
| Ganjam ...     | 6,459      | 13,154   | 8,679     | 16,300   | 2,220          | .....  |        |
| Vizagapatam... | 3,713      | 10,905   | 5,122     | 16,105   | 1,409          | .....  |        |
| Godavari ...   | 40,045     | 73,157   | 80,023    | 5,69,733 | 39,978         | .....  |        |
| Kistna ...     | 94,472     | 2,22,145 | 86,481    | 4,42,264 | .....          | 7,991  |        |
| Nellore ...    | 39,179     | 56,945   | 25,113    | 37,243   | .....          | 14,066 |        |
| Cuddapah ...   | 40,198     | 36,790   | 26,913    | 27,135   | .....          | 13,285 |        |
|                |            |          |           |          |                | 43,607 | 35,342 |

Thus, although in the first three there were 43,607 acres taken up in excess there were 35,342 less in the other three. In these six Districts in the years 1899-1900 there were 4,799 defaulters, whose personal property, of the estimated value of Rs. 46,318, realized at auction only Rs. 6,566, and of whose real estate of 11,889 acres, assessed at Rs. 18,117—7,131 acres, assessed at Rs. 12,032, were bought in for Government for Rs. 698, an average of a little over 1 anna 1 pie per acre, although the average assessment was Re. 1 annas 9 pies 10. When such have been the losses to the *rayats* from forced sales in only

six Collectorates in a single year, those in the whole of the twenty-two for the 25 years since the famine of 1876-77 must have been simply appalling. From one of the statements contained in the annual report it appears that in the entire Presidency in the year in question (1899-1900) 18,466 acres assessed at Rs. 23,665, were sold for the realization of arrears.

This gives but little idea of the trouble the *rayats* have been put to in the matter. Out of 6,134,242 demand notices that have been issued 406,246 resulted in notices of distraint or attachment and 248,895 in notices of sale of property. The details of actual sales and realizations in six of the Collectorates are given above. It is quite evident from these figures that the average holdings of the people are so small that an ordinary *rayat* cannot hope to get his livelihood out of his own. There were 22,224,414 acres in holdings, for which the revenue demand was Rs. 45,203,924, or an average of just over two rupees an acre and inclusive of waste charged for and water assessment. The actual average area of holdings and that lying unoccupied, though arable and assessed, is not ascertainable from the annual reports, but the periodically published Statistical Abstract gives it at over 12 millions of acres.

When such is the case, when, as shown above, there is in some places an actual decrease from the area under cultivation of 25 years ago,—when there has been levied in the course of seven years a sum of about  $9\frac{1}{2}$  lakhs of rupees in addition to current revenue demands in two Collectorates alone,—when in 1899-1900 there was sold in order to collect the revenue in six Districts personal property that realized at auction under Rs. 6,500 (though valued at over Rs. 46,000) in addition to 7,131 acres assessed at Rs. 12,032, bought, in for Government, for want of bidders, at nominal prices and in the whole Presidency about 18,500 acres, and very large areas are annually relinquished and taken up, it is evident that the cause of this great fluctuation, as if the people set no store by their hereditary property in the soil, which in other parts of India is looked upon as so valuable, must be sought for in some circumstances lying deeper than the ordinary

fluctuation in the rainfall, for they occur in good as well as bad seasons. There can be little doubt that it is traceable to the uneven assessment of lands based on the system of classification of soils laid down under the Madras rules handed down from the time of Sir Thomas Munro. The land being distributed among various natural orders of soil, the alluvial, the permanently improved, the Regar (commonly called the black cotton), the ferruginous, and the arenaceous, these are severally subdivided into classes and sorts, to each of which is assigned, as the result of numerous crop experiments, a certain theoretical amount of produce in grain, calculated in terms of standard crops usually grown in that particular soil as that which the several sorts should as a rule produce. For instance, in certain Talukahs or subdivisions of the Masulipatam portion of the Kistna District, the report of the re-settlement of which is now referred to, black paddy (an inferior variety of rice), and *cholam* (millet) in equal proportions were taken as the standard crops in villages of the first and second groups for all soils with the exception of the lowest sort of black sand, and the arenaceous, for which *black paddy* alone was taken as the standard. In villages of the third group *cholam* was the standard crop for alluvial lands and the highest sort of permanently improved lands, and *cumber* for arenaceous soils. For all other soils in third group villages *cholam* and *cumber* were taken in equal proportions. For wet lands in the upland tract white paddy was the standard. Now, taking into consideration the great variety of crop grown in every sort of land, in the first place, it is an entire fallacy to suppose that a fair average can be deduced from any two or three dominant crops to represent equitably the value of all the crops concerned. In the next place, even if a fair average produce of grain could by any possibility be relied upon to give a reasonable valuation of other crops such as cotton or oilseed, or the value of sugarcane could be estimated in terms of white paddy or rice, the prices of the two could only be compared when reduced to the common standard of money, and the prices of agricultural produce would have to be ascertained from hundreds of markets at different seasons of the year varying

greatly under an infinity of circumstances, to average which fairly would be beyond the power of the most experienced Settlement Officer. To carry out this system fairly is, in our opinion, an impossibility. Fairly or unfairly, however, it has been carried out, soils have been classified accordingly, and there can be very little doubt, if the statistics also go to prove anything, that the resulting money assessment on the land is uneven. In favour of the system it is held by Madras men that a *rayat* is in the favourable position of knowing what the assessment of his land will be as soon as its class and sort have been fixed. This appears to us to be exactly the position in which he ought not to be placed, for what is easier than for him to bribe the classes to record his land as of a low order in order to lower its assessment. The unevenness of the assessment which leads to the constant abandonment of old and taking up of new land may with confidence be traced to this, and it is acknowledged in various Settlement Reports that such inequality has not unfrequently had to be remedied, if remedied it could be, by altering the classes of villages themselves. As the amounts fixed on each class and sort of soil, however much it may be said to be based on a few crop experiments, can only be so by guess, the relative values of the crops in the infinitely different varieties of soil to be found everywhere can also only be a matter of guess work, and of very unfair guess work, for under such a system a man who goes to the trouble and expense of manuring his land is put precisely on the same footing as one who sows his field and leaves the rest to nature, thus taxing capital and labour in the former case and not the soil according to its intrinsic qualities. Turning to the money rates imposed on lands in pursuance of the system of classification of soils described, one looks in vain to the abovementioned Masulipatam Report for any real explanation of the reason for adopting them. It is said (paragraph 19) that they were separately calculated for the different classes of villages in the Delta and upland and a comparison is then instituted between two sets of rates proposed by the permanent and the officiating Directors. The former's rates were considered too high by the latter as in several cases exceeding the maximum limit of 30 per cent. of the gross

produce laid down by the Government; notwithstanding this, however, the rates proposed by the former were adopted by the Madras Government, as recommended by the Revenue Board, for the simple reason that they did not see sufficient cause for altering the original classification of the villages and it would be sufficient to adapt the Officiating Director's rates to that original classification. This is a method that saves a great deal of trouble to the higher authorities, but the method is eminently unsatisfactory to those who desire to ascertain the true causes of things and probably accounts for the failure in the administration of the Land Revenue system in the Presidency proved by the figures given above.

In paragraph 20 of the Report it is admitted that there were 222,400 acres of assessed culturable land waste in the four Talukahs comprised in the Masulipatam division, and 240,000 acres unsurveyed and unclassified in addition. The reason given for this omission is that the land would not be required for agricultural purposes for some years to come. In permitting this has the idea ever occurred to the Madras Government that probably when it is time to abolish the whole of the Survey and Settlement Department owing to their other work being completed it will have to be reorganized in order to finish the work now left undone through economical motives? In the annual Settlement Reports, that is, what is called the *Jamabandi* in other parts of India, no statements are given with regard to waste arable and unarable land, but the area of such land in only a small subdivision of four Talukahs goes far to show the existence in the whole Presidency of more than 12 million acres of the former still available for extension of tillage.

With regard to the grouping of villages for assessment purposes of the Masulipatam division no reason whatever is given, it is proposed to classify them into three groups, of which those on the Kollair Lake are put into the third and lowest because access to them is difficult, especially in the rainy season and mosquitoes make residence there uncomfortable and trying. Whether distance from markets for the disposal of surplus produce or variation in climate, the only reasons for discriminating between various groups that ought to

be allowed for in grouping, have been taken into account with regard to the other groups or not is nowhere stated. If there are no clear reasons to be assigned in Settlement Reports for the pitch of assessment proposed or for the modification of that pitch according to the varying circumstances of differently situated groups of villages it really comes to this that Settlement Officers may do exactly as they please and the trouble of making long reports full of irrelevant matter such as that on the re-settlement of Masulipatam might be saved altogether.

The unsatisfactory method of making allowance for the cost of cartage, merchant's profits, and the expenses of cultivation is exemplified in paragraph 58 and the following paragraphs. Because the Tehsildar of Bezwada, one of the four Talukahs included in the Report, states that the total cost of conveying a putti of rice of 1,000 seers from villages three miles from a canal to the chief markets is 12 annas 6 pies, and that of boat hire on the canal is 8 annas, villages the cost of cartage from which to the canal bank is 4 annas 6 pies are put in the same category with others the cost to which is only 1 anna 6 pies or one-third as much, and a general allowance is made of what is supposed to be 15 per cent. on the average value of the grain, thus giving some villages far more than enough and others not so favourably situated probably not enough. This all results from the practice of assuming averages of figures which in themselves vary largely.

Enough has now been said of the unreliable nature of the data on which the Madras assessments of land to the revenue are based, and their unreliability has been demonstrated by the actual results of the system of administration adopted. How has this state of affairs arisen, and is there any remedy for it? It has arisen from the slavish and unreasoning adherence of the Madras authorities to the crude and antiquated ideas prevalent in the time of Sir Thomas Munro, when but little experience had been gained of the country and the proper methods of management of its land revenue, and this notwithstanding that in the neighbouring Presidency of Bombay, also mostly under *rayatvari* tenure (where the State deals directly with individual holders of land), an entirely different system of classification of land for revenue

purposes had been adopted and succeeded, so that with rare exceptions the whole of the arable land was under occupation and comparatively no waste land was left, in fact everywhere, except in the Province of Sind, in which other causes than improper assessment were at work. Under that system no attempt is made to ascertain the outturn of particular fields, so that there is no necessity to estimate the average prices of produce in order to arrive at the assessment proper for various soils to which an arbitrary rent-produce is assigned or any of the other particulars noted in the case of Madras. The best dry crop soil in a District is found by enquiry and classed at 16 annas, the soil of every field (and, let it be noted, of waste land as well as cultivated) is compared with this, and according to its visible ingredients of more or less sand, stones, salt, etc., is lowered to 15 or fewer annas until what is absolutely unarable at 2 annas is reached, so as to present in a graduated scale the comparative natural fertility of all the soils to be found. It is thus ready for a money assessment, the maximum rate of which is decided on general considerations of the value of agricultural produce past, present and estimated future, after consideration of the effect of previous administration on the condition of the people as shown by increase or decrease of area under cultivation, the difficulty or ease with which the revenue has been realised, and all other circumstances, such as proximity of markets, good or bad means of communication, agricultural skill of the *rayats*, facilities for irrigation, climate, and all particulars bearing on the question of what rent the people are able to pay with ease and have a surplus over with which they can maintain themselves in comfort. The maximum rate for the best soil being thus fixed, those on the inferior soils will fall into the lower rates according to their lower natural fertility, and the several villages that contain them can be classified according to the comparative certainty or otherwise of their production and the facilities and otherwise for the marketing of their produce. The rates being thus calculated on the area, the general effect upon the revenue of the State can be ascertained to within a narrow limit. All these points being fairly set before the Government, the latter are able

with some confidence to issue the necessary orders. Distance from and proximity to markets as well as variation in climate are allowed for in the grouping of villages, so as to put all classes of *rayats* as far as possible on an equal footing. Absolute perfection, of course, cannot be attained to in such matters, but this is at all events preferable to the futile attempt to estimate the actual produce of fields and its money value described in Madras.

There are defects in the system of surveying the land in that Presidency, such as that of not ascertaining the area of unarable land in each demarcated field, and others with regard to boundary marks, which, considering the length to which this article has already run, it would be unadvisable to enter upon here, but they may be glanced at to show how necessary a thorough overhauling of the Madras Survey and Settlement system is. When 40,000 to 50,000 individuals every year have property sold for the collection of the land revenue, and the India Office, knowing this, refuse to take any steps towards a remedy, it is time that the public should be informed of the actual state of affairs. We do not speak without warrant in this matter, for Lord George Hamilton in the last Session of Parliament distinctly declared in answer to a question by Mr. Weir that no interference with the Madras system of revenue administration would be permitted. Every other channel through which reform would be possible being thus closed, there is no other method of endeavouring to bring it about than that of the instrumentality of the public press.

A. ROGERS,

*Late Bombay C.S., and many years  
Settlement Officer.*

# Art. VI.—THE PRECESSION, CLIMATIC & DECLINATION CYCLES, THEIR INFLUENCE IN THE FORMATION OF POLAR ICE AND THE EXISTENCE OF NATIONS.

MANY years ago I read in a United States scientific magazine that the climatic conditions of the earth are so constituted that when the present North Polar ice cap has reached its maximum size, the curve of the earth in the latitude of London will be from one quarter to three-quarters of a mile higher than it now is; that is, that England, Northern Europe, Asia, and America will be engulfed in the sea to that depth. This article had so great an effect upon me as to lead me to make this subject the study of my life.

The first writer who gave a reasonable explanation of the way that ice accumulates at the poles was the late Dr. Croll. But so dominated was he by the immense number of years demanded by geologists of the past generation, that his two books were written to show that only two glacial epochs have occurred in geological time, *viz.*, one 250,000, and one 850,000 years ago, and he denied the possibility of the formation of an ice cap at the North Pole every Precessional Cycle of 26,000 years. Sir Robert Ball also in his convincing little brochure *The Cause of an Ice Age* restricted himself to the lines of Croll's argument. So lame a conclusion never commended itself to my judgment, and my patience was rewarded a few years ago by the publication of a United States geological text-book which showed that the most recent glacial epoch came to an end only 7,000 years ago. As however Croll's theory is correct so far as it goes, I in this paper give it full prominence. It only remains for me to say that this subject has got far beyond the lines of Croll's theory. It now gives a reasonable explanation of the chronology of the Hindu scriptures, and shows that by its means the whole science of physical and political geography, the rise, fall and migration of nations, can be properly understood. Except where I quote my authors, the statements and opinions are my own.

Croll's theory is that there are now eight excess summer days in the Northern Hemisphere and eight excess winter days in the Southern Hemisphere; that the tropical heat at the equator is the cause of the trade winds of the Atlantic, which thus blow the great body of heated sea-water called the Gulf Stream into the Gulf of Mexico. The above preponderance of summer days gives the trade wind a northerly set, which blows the Gulf Stream directly into the shores of England and Northern France, past which the warm stream flows on until it impinges upon the north of Norway up to Archangel and beyond, where, becoming chilled by the Polar ice, it returns as a cold stream past Iceland and the East and West coasts of the island continent of Greenland and, flowing past frozen Labrador, becomes lost on the island of Newfoundland, where it causes the perpetual fogs so dangerous to navigation.

Croll's theory as extended by me to its legitimate conclusion suggests that within a certain distance of time, measured by the Precession Cycle of the equinoxes, there will be eight excess winter days in the Northern, and eight excess summer days in the Southern Hemisphere, that this climatic change will deflect the warm Gulf Stream from the Northern to the Southern Hemisphere, the Southern ice cap now 2,800 miles in diameter will melt and be transferred to an ice cap of possibly greater size at the North Pole, that the release of the Southern ice and its corresponding piling up at the North Pole will cause the sea to leave the South and be attracted to the new ice cap at the North, causing the South Sea Islands, with Australia, New Zealand and Patagonia, to form a new continent, a reappearance of what Theosophists would say was the "Lemuria" of ancient days.

Since Croll wrote his two epoch-making books, *Climate and Time* and *Climate and Cosmology*, the literature of this subject has become extensive. It will, however, suffice to mention two of such books. Dr. Wallace in his *Island Life* thinks that Croll has exaggerated the climatic influence of the doubled eight days so far as the North Pole is concerned, though he admits the correctness of the theory as explaining the existing condition of things in the Southern Hemisphere and at the South Pole. On the other hand, Sir Robert Ball, the late Astronomer

Royal of Ireland, in his *Cause of an Ice Age*, admits the correctness of Croll's theory and gives a new mathematical formula showing how the excess winter days will largely favour the accumulation of ice which, once formed, will not be able to melt during the following summer.

In considering this subject we must not flatter ourselves that, because the equal measure of summer and winter days will not be reached for nearly 5,000 years, therefore the subject has no immediate concern for us. The whole of the Northern shores of the Northern Hemisphere are already in the full swing of the rising sea, which will not cease its ravages until Northern Europe is engulfed, and Holland, Denmark, Northern Russia, Siberia, England, and the Northern shores of Germany and France successively pass beneath the ocean.

Croll's theory was first propounded by Alphonse Adh  mar, a French astronomer, who about a hundred years ago showed in his *R  volutions de la Mer*, that the maximum period of about eight summer days in the Northern Hemisphere occurred A.D. 1248. Anyone with two good almanacks can ascertain that the number of excess summer days is now seven and a half and a fraction, and that this excess is slowly diminishing year by year. The counting is made between the equinoxes. The opponents of Croll's theory say that the effect of sixteen days' variation in the cycle can be but small upon the average temperature of England, of say 60  F. They forget that the variation has to be based upon the specific heat or rather coldness of stellar space, which is minus 461  F., and which added to 60   amounts to 521  F. specific heat. A very small percentage of this temperature would amount to 10  F., which deducted from the present average temperature would make England and Northern Europe almost uninhabitable. Her seaports in winter would be frozen up.

This slight diminution of half a summer day has already so reduced the temperature of the North Polar sea as to compel navigators to give up all hope of finding a North-West Passage. A real Polar ice cap has covered the whole of the Greenland continent of the area of 380,000 square miles, equal to a separate ice cap of 700 miles diameter. Recent atlases show the North Pole surrounded by a paleocrystic sea of the further

area of 930,000 square miles, equal to a total ice cap of nearly 1,300 miles diameter. The *Encyclop  dia Britannica* states that the sea level of the Greenland shores has in the past century risen fifteen feet, the missionary settlements having been rebuilt inland.

My long residence of forty years in India convinces me that India is steadily getting colder. The cold winter winds extend later into the spring than formerly. My frequent visits to England have also satisfied me that snowstorms and blizzards are of longer duration and greater severity than in my boyhood, and the summers are shorter.

The *Story of Lost England*, recently published, tells in a vivid way how the banking up of the sea caused by the attraction of the Greenland ice cap is only too surely hastening the destruction of Old England, and of the other countries above mentioned. Old Brighton, an island a mile out to sea, disappeared A.D. 1700. Old Hull No. 1, an island at the mouth of the Humber, was overwhelmed A.D. 1350. Hull No. 2 and the peninsula on which it was built was washed away A.D. 1530. Old Cromer was engulfed in 1825, old Harwich in 1830. Dozens of other old English seaports are mentioned by the author, the whole of which have disappeared since A.D. 1250.

Holland being the delta of the Rhine, and not much above sea level, has suffered cruelly from the ravages of the sea. The author states that in addition to the great historical inundations, every seven years there is an inroad of the sea which permanently washes away some portions of its shores. Heligoland is now only one-fifth of its area in recent historic times, and is being rapidly washed still further away since it was purchased by the German Government from England. The author makes no reference to Croll's or any other theory, he only gives the events and their dates. Generally the conditions of the problem will be met by the statement that at the present time the mean sea level in the latitude of London does not rise faster than one foot every thirty years.

I have mentioned the Atlantic Gulf Stream; there is a corresponding one in the Pacific, also a warm stream in the South Seas which has made an enormous gap in one side of the Southern ice cap.

Greenland is the Northern ice cap. Nordenskiöld and Nansen have separately crossed its narrow southern warmer portion, and the former has reached an altitude of 12,000 feet. Its northern portion is wider, colder, and therefore higher, for the height of glaciers varies as the reduced temperature, the lower the temperature the greater the height of the ice cap. As the glaciers continue their advance towards the North Pole, the time will come when they will no longer float but will slowly fill up solid the whole sea-bed from Hudson's Bay to Siberia.

As the sea level rises, the shores of Siberia will be engulfed, and the course of the Gulf Stream will change, one portion of it flowing across Holland and Denmark up the Baltic across Northern Russia into Siberia, the remaining portion flowing as now. The North Polar ice cap will then be surrounded by warm seas flowing from the equator, as is now the case with the South Polar sea. A glance at the North Polar map will show that the northern shores of Hudson's Bay and Siberia form almost a true circle of 2,800 miles diameter, the size of the Southern ice cap. The nearness of the warm seas will cause constant storms, which will fall as snow on the new ice cap, rapidly increasing its mass and attractive force.

Sir Robert Ball, in his *Cause of an Ice Age*, shows that the length of the Precession Cycle, *i.e.*, the time taken up by our North Pole in tracing a conical path in the heavens, is about 26,000 years. The path of the axis of our earth is the projected surface of the cone, while the apparent path of our North Pole in the heavens is the circular base of that cone. He also shows that, deducting the velocity of the orbit of the earth in the opposite direction round the sun (not the velocity of the earth but of the earth's orbit) the length of the climatic cycle of the ice caps is reduced to about 21,000 years. This is the sum total of the information obtainable from astronomical sources. Sir Robert Ball is the only astronomer who gives the additional information about the 21,000 years' cycle.

The length of the Precession Cycle is calculated by astronomers as if the sun's declination were an unvarying quantity, *viz.*, that now observed. This declination is about  $23\frac{1}{2}^{\circ}$ , say for simplicity of calculation  $24^{\circ}$ . This makes the radius of the base of the Polar cone  $24^{\circ}$ . But it is admitted

by astronomers that, at the time of Ptolemy 2,000 years ago, the sun's declination was  $34'$  of a degree more than now. In those days stellar observations were made by astrolabes, brass rods with upright wires revolving on a circular brass plane about six feet in diameter. These gave correct results to one minute of a degree. Sir John Herschell gives the maximum variation of the declination to be about  $3^{\circ}$ . This would increase the radius of the conical circle to  $25\frac{1}{2}^{\circ}$ . But though astronomers admit that the declination of the sun does vary as above stated, they ignore this variation in making their precession calculations.

Here comes in Major-General Drayson, who calls himself a mathematical astronomer, in contradistinction to our observational astronomers. He was for many years on the Ordnance Surveys of India and England, and was Professor of Surveying at the Royal Military Academy, Woolwich. He has published quite a number of books on this subject, of which I have two, *viz.*, *Thirty Thousand Years of the Earth's Past History* and *Untrodden Ground in Astronomy and Geology Read by the Second Rotation of the Earth*. He says that the variation in declination is not  $3^{\circ}$  as stated by Sir John Herschell but is really  $12^{\circ}$ , *i.e.*, that the radius of the Polar conical circle in the heavens is not  $24$  but  $30^{\circ}$ , that this additional  $6^{\circ}$  gives the centre of the second rotation of the conical circle, and that when this conical revolution reaches its furthest limit, it makes the sun's declination  $12^{\circ}$  greater than it now is.

As a master in spherical trigonometry he gives the calculation showing that, by adding the above  $6^{\circ}$ , the single recorded observation of Ptolemy agrees with the many modern observations of the past hundred years, and that by this addition he has been able to eliminate what are called the "proper motions" of many of the stars, to ascertain that these motions are due mostly to the revolution of Greenwich on the spherical surface of the earth, round the second motion centre, and thus to ascertain that, in greater part, the stars are really fixed and not moving across the heavens. He gives many calculations to establish this point proving his results by observations taken from the *Nautical Almanack* correct to a small fraction of a second. He then shows that the sun's declination

varies  $12^\circ$  in the whole Precession Cycle, that it reaches its minimum of approximately  $24^\circ$  about 400 years hence, that its maximum is  $36^\circ$ , and that the total period of the Precession Cycle due to the increased radius of the cone is 31,680 years, not 26,000 as stated by the astronomers.

Here comes in the remarkable deduction made by Drayson, *viz.*, that this increased declination of  $36^\circ$  will in about 16,000 years bring the North Tropical zone up to the latitude of Gibraltar, and the North Arctic zone down to the latitude of Manchester, and that these will then give the alternate summer and winter climates of each year. Hence during the summer a tropical climate and tropical vegetation will prevail over the largely extended Arctic and Antarctic regions of  $72^\circ$  diameter in all the outer latitudes not covered by glaciers, while, for the remaining six months, much of these large areas will be plunged into Polar darkness, uninhabitable by man, and as man could never travel the long distances necessary to escape these sudden and severe winter conditions, the whole of these Northern and Southern regions will be given over to primeval chaos, immense forests, and such swift-footed wild animals as can flee year by year before winter sets in.

No grander geological generalisation has ever been made than this. From it can be deduced the explanation of the discovery of the coal-fields of tropical drift-wood found round the shores of Greenland, the tropical mammoth and mastodon skeletons found in the prairies of N. America, and the same animals covered with fresh flesh embedded in the glacial ice of the Siberian islands and mainland. Both series of facts were doubtless caused by the partial or complete break-up of the last previous Southern ice cap. It follows that in those days man will have to confine his existence to the equatorial belt of the earth, and that the present temperate zone will become in great part uninhabitable or non-existent.

Drayson seems to have no knowledge of Croll's theory; he nowhere makes reference to it. I will now show how remarkably the two theories fit into each other and make one consistent whole. Drayson shows that the Precession Cycle is 31,680 years long. Sir Robert Ball shows that, when the proper deduction is made for the revolution of the earth's orbit

round the sun, his 26,000 years Precession Cycle becomes reduced to a Climatic Cycle of 21,000 years. I find, therefore that with the Precession Cycle of the increased length of 31,680 years, the corresponding Climatic Cycle is within a near fraction of 24,000 years long.

This last figure is sufficiently remarkable to call for extended notice, for it is the length of the "*Kalpa*" plus "*pralaya*" of the Hindu scriptures. I am aware that the length of this cycle as given in *The Theosophical Glossary* and in *The Secret Doctrine* is 8,640,000 years, and that a Maha-Kalpa-Pralaya contains 1,000 of these cycles, *i.e.*, 8,640,000,000 years. These figures have always been to me a stumbling-block, and doubtless to many other Western students. Eastern pandits, on the other hand, find delight in these impossible figures, and will listen to no argument tending to prove their incorrectness. But the figures go to pieces on the slightest examination. They are nowhere to be found in the *Vishnu Purana*. A series of multiples are there given in poetical stanzas, which when calculated out in Western fashion make 8,640,000 *divine days* and 8,640,000,000 *divine days*. The commentators have wrongfully presumed to alter the plain meaning of the text by calling a *divine day* a *year*. If then these figures are taken in their natural sense as days of twenty-four hours, and are divided by 360 days, the first figure becomes 24,000 years, the length of the Climatic Cycle which I have deduced from Drayson's Precession Cycle; none thousand of these become a Maha-Kalpa-Pralaya of 24,000,000 years, which is of sufficient length in time to satisfy the most exacting geologist. It is sufficient if we call the divine day-years a "*blind*," intended to draw off criticism until the time was ready for a wise and simple explanation.

No intelligent interpretation has ever been given of the four Yugas or Ages of the Kalpa-Pralaya. I will now show that they are climatic. The year A.D. 1248, I have above shown, contained the greatest length of summer days in the Northern Hemisphere, and was therefore, other things being equal, the hottest year; 400 years hence, in A.D. 2300, will be the year of the shortest declination of the sun. Thus the two cycles are at their maximum of heat within the period of about 1,000 years. This conjunction shows that the period in which we now live has been

divinely ordained to give the largest area and longest period of heat to the North Temperate zone and the smallest area to the Arctic zone in order that Western civilisation may have a long extension of life for its needful development. We may then take it that for 1,000 years to come, though nothing, can prevent the enlargement of the North Polar ice cap, and the consequent raising of the sea level between Holland, England and Greenland that up to A.D. 2900 the sun's declination will be much the same as it now is, *viz.*, 24°, after which it will begin rapidly to increase, enlarging the Arctic and Tropical zones, and reducing the area of the Temperate zones in the manner above described.

Let us now go to the East. We see that these two conditions now concentrate the warmth into all tropical countries bordering on the Red Sea, the Persian Gulf, the Indian Ocean, the Bay of Bengal, the South China Sea and the Gulf of Mexico. The North Tropical region is confined to 24° of North latitude. This has been its condition for the past 2,000 years, and will continue for a further 1,000 years. To be exact, let us assume that the first Kali Yuga cycle of 1,200 years came to an end A.D. 1248. The cycle of Kali heat thus began A.D. 48. The second Kali Yuga cycle began A.D. 1248, and will continue for another 1,200 years, ending A.D. 2448, *i.e.*, 545 years hence.

Let anyone who wishes to experience the heat of India stay at Benares for a whole year. In the winter time the air is at freezing point every night, and so cold during the day that it is a pleasure to sit in the sun clad in a thick English overcoat. But after March the climate suddenly changes, so that 105° and 95°F. are the ordinary day and night temperatures. Why? Because the snow on the sub-Himalayan slopes, 200 miles distant north, has by that time melted, and you feel the heat in all its rigour. It has been mercifully ordained by Providence that India projects like a triangle into the Tropical zone, that its base is in the eternal snows, and its two sides are immersed in the comparatively cool sea, otherwise the country generally, like that of Rajputana, Sind and Baluchistan, would be a waterless desert, as is the Sahara, Arabia and central Persia.

Let us change our *venue* to the India of the Satya Yuga, the Age of Truth or Righteousness. The temperature is at present the specific heat of minus 461° F. ; plus 80°, the average heat of India, total 541°F. : the summer heat, which is now concentrated over 24° of latitude, will then be diffused over 36°, *i.e.*, each place will then receive only two-thirds of the heat now experienced. The sun's winter declination will then extend for the average of India (say in the latitude of Bombay), to 55° S. Wheat now grows only north of 23° N. latitude, and as a winter crop. It will then grow freely all over India, and as a summer crop. No one has at hand the meteorological data upon which the calculation could be made, but it is easily conceivable that the climate of India will then be no hotter than Italy now is, and that the lowered temperature will give such abundant rain as to make physical labour a pleasure reaping abundant profit, instead of as now a pain and sorrow, as much as possible to be avoided. The surplus heat will increase that of the lower Temperate regions, and also of the new Polar cap in the summer, causing the moisture from the seas to fall almost continuously on the ice as snow.

The lengths of the four Yugas are in the proportion of 1, 2, 3, and 4, so that the Satya is four times the length of the Kali Yuga. The explanation of this may be that in the total period of 2,400 years the temperature in the Tropics will have become so materially reduced as to make work in the sun bearable for the remaining period of 21,600 years. If this theory is correct, it follows that the ancient Greeks could have had no personal knowledge of a Golden Age. What they had was tradition from the then North Tropical zone, from their common ancestors, the Fathers of the Greeks, Persians and Indo-Aryans. It also follows that this Golden Age can belong to Tropical countries only, and is contemporary with a period of intense winter cold and misery alternating with Tropical summers in Temperate zones the inhabitants of which will have to flee for warmth and food to the countries bordering on the Mediterranean, Black, Caspian and Aral Seas, which will then form one stretch of sea, to which probably the Dead Sea and the Valley of the Jordan will be added.

As the Climatic Cycle of the Puranas has its Kalpa and Pralaya every alternate 12,000 years, beginning the quarter cycle previous to A.D. 1248, so the Declination Cycle will intensify or modify the Climatic Cycle every 16,000 years, beginning with A.D. 2300. Three Declination Cycles will thus nearly coincide with four Climatic or Yuga Cycles and their conjunctions and oppositions will cause an infinite variety of climates in the ages to come.

The United States geologists state that the last previous glacial age came to an end 7,000 years ago. They base their calculations upon the known rate of recession of the Niagara and Missouri rivers since their Ordnance Surveys were begun, and the distance of these recessions from the last glacial markings. That date is coincident with Noah's Flood, which occurred on the break-up of the Northern ice cap about B.C. 5100. This flood was of course universal over the Northern Hemisphere. But the physical features of the earth confined its effects practically to the countries bordering on the Aral, Caspian and Black Seas. When it debouched into the Mediterranean its force was spent, except for a local flooding of the Delta of Egypt. If the next flood bursts at the same period in the cycle, which by no means follows, it will come 5,000 years hence at the break-up of the Southern ice cap. But there may be many partial previous floods.

The last Northern ice cap reached its maximum B.C. 10752. At that date the Declination Cycle had only reached 3,000 years from its maximum, so that the sun's declination would then be about  $35^{\circ}$ , and the ice cap would be very large. Hence the reason why, in the youth of the world, the fertile countries and great empires were grouped round the Caspian and the richly inundated lands of the lower Tigris and Euphrates, as also in America round the Gulf of Mexico.

The Climatic Cycle has two periods of 12,000 years each. The warmth or coldness of these periods varies according to the angle of the sun's declination. (1) Our present climate we know. In A.D. 1248 there was no large ice cap on Greenland. A genial climate then prevailed in Greenland, Iceland and Labrador, which permitted the growth of corn crops. The period of

maximum heat forms the junction of the two Indian Kali Yugas. The Kalpa ranges a quarter cycle on either side of this maximum. (2) With eight additional summer days in the North, and the sun's declination at  $36^{\circ}$ , the Arctic zone would come down to Manchester, there would be a permanent ice cap of moderate size, a tropical summer climate in those Polar countries not covered by ice, but these would be uninhabitable by man. This climate would in N. Tropical regions form the Golden Age of moderate warmth in summer and sharp cold in winter and would be in the Indian Kalpa. (3) Our present climate reversed, *i.e.*, with eight fewer summer and eight more winter days in the North Hemisphere, with the sun's declination as now, would cause the formation of a large ice cap at the North Pole, but, owing to the proximity of central Asia, Europe and America, not as large as the present Southern ice cap. This period would form the Kali Yuga portion of the Pralaya of India, the period of so-called rest, in which, notwithstanding, climatic conditions would favour vigorous existence in North Tropical and North Temperate regions. (4) Our present climate reversed, *i.e.*, with eight fewer summer and eight more winter days in the North Hemisphere, but with the sun's declination increased to  $36^{\circ}$ , bringing the North Polar zone down to Manchester, would cause the formation of a very large ice cap at the North Pole, possibly larger than the existing South ice cap. The sea level would be raised so high as to compel migration to the new Lemurian continent. This period would for India form the Satya Yuga portion of the Pralaya, when all creation is in the North Hemisphere supposed to be sleeping its long sleep under the sea.

The Precession Cycle of 24,000 years can therefore be legitimately used in ascertaining with reasonable precision the time occupied in the formation of the Pleistocene and other recent geological systems. These are known to be made up in many places of glacial drift intercalated with marine deposits.

Why is it that no past records of man are obtainable before the present Climatic Cycle? Not because man was not then living, but because from the considerations already advanced, no country has had a continuous existence of more than 6,000

years. If in the Tropical zone, it failed to adapt itself to the ever-varying climatic conditions, and had to make way for younger and more vigorous races. If in the Temperate zone, it was over-whelmed by glacier, or sea, or both. Even in Egypt the present Delta has remained flooded for thousands of years, new deltas have formed, and new races of kings have arisen to govern in the Nubian hills to the South. For with the exception of the rare Noah's Flood, the climatic changes have been so gradual as not to be noticeable from one generation to another. The only everlasting records are the Assyrian burnt clay tables, and they only so long as they remain buried under the mounds, and the inside surfaces of the Egyptian Pyramids. The hieroglyphics will remain intact in Egypt only so long as no rain falls, but before the quarter cycle ends the climate of Egypt will change, the air will no longer remain dry, but there may be a rainfall as heavy as in Palestine. And where rain falls, all masonry will crumble to dust. The shock to the fibres of the stone caused by the blow of the metal chisel is the first step towards its eventual destruction. All records in cities will in time be covered by glacier, or sea, or earth mounds or blown sand. Nothing can remain permanent in this world everything is subject to change.

In conclusion may I, without offence, make a brief reference to the date of Shri Krishna. "He was killed by a stray arrow at Somnath on the south-west cape of Kathiawad, 5,000 years ago, at the commencement of the Kali Yuga. In 427,000 years more the Kali Yuga will come to an end." The total of these two periods is 432,000, which divided by 360 days makes 1,200 years, the real length of the first Kali Yuga. This first Yuga is thus stated to have ended 3,800 years ago, and the second Kali Yuga 2,600 years ago, which is incorrect. The date of Shri Krishna's death is doubtless correct, but the tacking on to it of the Kali Yuga is a device of priestcraft, done to increase the wonderment of devotees.

Since the above was in type, I have read Mr. B. G. Tilak's new Book *The Arctic Home in the Vedas*. This book adduces so many proofs drawn from the Vedas that the original home of the Aryan Race was situated in the Arctic Circle, that

It is worthwhile to see how far the theory I have above developed will fit in with Mr. Tilak's facts.

I therefore readily withdraw the statements I have made in the earlier part of this paper that, in those days life in the Arctic Regions was impossible for civilized man.

As Mr. Tilak states, the six months of darkness was only experienced at the North Pole, and this darkness was greatly relieved by the "Aurora Borealis," which continuously flashed its radiant glories during bright clear weather. Then also the moon was above the Polar horizon for half her monthly revolution, diminishing to a small period of time at the Arctic Circle. The stars were brighter there than elsewhere on the earth's surface. The prolonged dawn and sundown also, as he says, greatly reduced the period of otherwise total darkness.

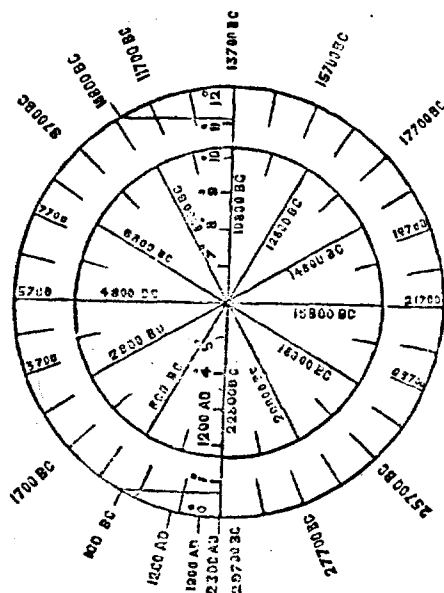
Mr. Tilak has many references to, and quotations from, the Great Bharata, which of course is not Vedic, as illustrating the tradition of the Arctic home, which remained after the Aryans had arrived in India.

There is one passage, Chapter VIII, Verses 24 and 25, in the Bhagvat Gita, one of the books of the Great Bharata, which has not been referred to by Mr. Tilak, and which will help to an understanding of the tradition of the Arctic home.

The late Mr. Justice Telang, in his translation and commentary, acknowledges that he and the commentators generally do not know what the above passage means, especially the words "fire and smoke." Sir Edwin Arnold in his Song Celestial, and Mr. Davies in his translation in Trubner's Series omit it altogether as an interpolation, for the same reason. But if *Agni*, fire, conflagration, is translated "Aurora Borealis," and *dhuma*, smoke, vapour, is translated "mist" or "snowy fog," the passage becomes luminous in illustration of Mr. Tilak's theory.

First, let us consider our present climate reversed, *i. e.*, with eight fewer summer days and eight more winter days in the Northern Hemisphere, and with the sun's declination increased to 36°, being the fourth cyclical condition just previously described. This condition is exhibited in the accompanying

diagram, in which for convenience only complete centuries of years are shown.



The outer circle shows the Declination Cycle, in which the minimum declination is  $24^\circ + 0 = 24^\circ$  which takes place 400 years hence, while that of half a degree larger took place in 100 B.C. The declination of  $24^\circ +$  a little more than  $11^\circ = 35^\circ$  and a fraction took place 10800 B.C., which added to 1200 A.D. makes half the complete climatic cycle of  $10,800 + 1,200 = 12,000$  years. This climatic cycle is shown in the inner circle. Thus in the year 10800 B.C. the sun was nearly at its maximum declination of  $36^\circ$ . This declination of  $35^\circ$  brought the Arctic Circle down to  $55^\circ$  north latitude which was that of the north Coast of Ireland, of Newcastle, in England, the south boundary of Denmark, *i.e.*, the north boundary of Schleswig Holstein, the South Coast of the Baltic, Königsberg, in Prussia, and Moscow, in Russia. St. Petersburg being in N. Latitude  $60^\circ$  would be  $5^\circ$  within the Arctic Circle. In Asia one half of Turkestan and the whole of Siberia along the line of the new railway across Lake Baikal up to the foot of the Northern slopes of the Great Altai Range

would be also within the circle. In Canada, British Columbia, Manitoba and Winnipeg would be just outside the circle, while nearly the whole of Hudson's Bay and Labrador would be within it.

The sun would then be  $11^\circ$  higher in the heavens during the summer months than now, *i.e.*, at the North Pole the declination would at midsummer be  $35^\circ$ , while at the limit of the Arctic Circle it would be  $70^\circ$ . As during the prolonged Arctic summer the sun would remain above the horizon for a period varying from one day at the circle to six months at the pole, it is easy to conceive that during this long period over a so largely increased area the heat would be intense, its measure being the amount of heat abstracted from the present tropical zone by the more rapid transit of the sun over each tropical degree than is the case now.

But we have now to consider how this Arctic heat would be modified by the varying number of the total summer and winter days in the year. At present there are eight more summer than winter days in the Northern Hemisphere, being a climatic excess of sixteen warm days as compared with the reversed conditions which obtained 12,000 years ago, when there were eight fewer summer than winter days. This difference as already stated in this paper would largely favour the accumulation of winter ice, which, once formed, would not be able to melt during the succeeding summer.

Mr. Tilak is wrong in his assumption that the climate of the long winters would be genial, just the reverse, for the reason that at the winter solstice the sun would then be vertical over the 35th degree of South Latitude, instead of the 24th degree as now, *i.e.*, that much further removed from the Northern Hemisphere. The sun of course would travel over the  $70^\circ$  in the same time as now taken in travelling  $48^\circ$ . Mr. Tilak's dawn of one or two months would be extremely cold, quite as cold as that of mid-winter, for south winds would be impossible during this period, and the north winds would blow direct from the ice cap. But the sun-down of one or two months would be genial, the sun being near the horizon, and the south winds persistent during autumn. The south wind would continue until the chimney of tropical heat

had all escaped into the upper atmosphere. Thus the extreme cold would not be prolonged beyond four months, up to the time of the re-appearance of the sun.

The increasing accumulation of ice at the North Pole and in the glaciers of mountain ranges all over the Northern Hemisphere would, by direct attraction, raise the sea level in this Hemisphere, a process which, as already stated, is going on in England and elsewhere, and which will be suddenly and permanently intensified when the North Polar ice sea becomes anchored to the bottom of the ocean, and so becomes a true glacier. These conditions will be reversed in the Southern hemisphere, where the tropical heat caused by the sun's increased declination assisted by the climatic excess of sixteen excess tropical days as compared with present conditions of sixteen excess cold days of low declination conditions, will rapidly melt the Southern Ice Cap, the water of which will gravitate northwards, the sea level will fall and uncover the South Sea Islands, making them, where the water is shallow, into new continents. The new conditions will at first overwhelm only the lands near the Arctic Circle, now uninhabitable. Such as the Tundras, the vast plains of Northern Siberia, always frozen, even in summer. The remaining lands as the cycle progresses, becoming tropical in character, wheat will in due time grow all over the Arctic lands not covered by ice, and during the severe winters the layer of snow will protect grass and forest lands from killing frosts. Thus as wheat would grow all over the Arctic Circle on the bottom lands not covered by glaciers, man would by industry store up sufficient grain for himself for twelve months, and hay and straw for his cattle for six months until the new sun, rising above the horizon, melted the snow and quickened the grass into new life. The tropical climate enabling trees to grow everywhere up to the verge of the glaciers, pine forests would be abundant, and the wood fires in the houses would give light as well as warmth in the wood-built huts, as also the extremely acrid pyroligneous acid smoke, which appears to cause no injury to the eyes of those accustomed to it.

Those meteorological conditions prevailed in the Northern Arctic zone 12,000 years ago. Then commenced a double change. The continual reduction in the sun's declination

tended to remove the tropical conditions in the Arctic Zone, while the increased number of summer days and reduction of winter days tended to introduce temperate conditions into the Temperate Zone. Thus in the year 4800 B.C. had arrived the period when the number of summer and winter days all over the world was equal, and the sun's declination had become reduced to  $24^{\circ} + 5^{\circ} = 29^{\circ}$ . In the year 5700 B.C. the sun's declination was  $24^{\circ} + 6^{\circ} = 30^{\circ}$ . It is a notable fact, established I think by Sir Robert Ball, that polar ice cap conditions can only continue when the ice cap is surrounded by water, so that the sun may have full effect in causing the storm clouds evaporated from the warm ocean to fall when chilled as snow. Hence the more tropical the heat, the larger will be the ice cap, always provided that there are prolonged winter conditions for its consolidation. But when the reduction in the sun's declination tends to lessen the tropical heat, less snow will fall, which will not be in sufficient quantity to make good the loss caused by the continual flowing down of the ice. This new condition of things will be accelerated by the fewer number of winter days and the greater number of summer days, so that about the year 4800 B.C. the equinox of the cycle, the new conditions would commence to work with the greatest intensity.

During this period the reverse conditions would prevail in the Southern hemisphere, and cause the accumulation there of a new ice cap, which would attract the sea from the North to the South hemisphere and cause the floating portion on the edge of the slowly melting Northern ice cap to hang in unstable equilibrium above its proper centre of flotation in the sea. This condition of things is necessary before a world flood can take place. The ice cap, with its over hanging circumference can thus be called a girder, the overhanging portion of which is the cantilever of the girder, e.g., the Tay Bridge. Referring to Molesworth's pocket-book of Engineering formula, "Strength of rectangular beams, one end fixed the other loaded"  $W = K \cdot B \cdot D^2 \div L$ , I have ascertained that the strength of artificial ice  $K$ , in the centre of a beam 12 inches long the ends being supported = 10lbs., and a fraction per square inch. Highly compressed polar ice has probably greater strength. Here then we have a simple engineering problem in which the

moment of fracture, the weight of that portion of the height of the glacier above its proper centre of flotation becomes greater than the moment of resistance, which is one-fourth of 10 lbs per square inch multiplied by the square of the whole depth of the glacier in inches, divided by the length in feet up to the centre of gravity of the overhang. As an ordinary thickness from top to bottom of a southern glacier is 1,000 feet or 12,000 inches, the square of this depth is 144,000,000 square inches. Ordinary icebergs, *e.g.*, from the Greenland glacier, being limited in width, are broken away during storms and by the North current before any difference in flotation has had time to establish itself. But postulate an ice face 3,000 miles long on the Siberian Shore, and a difference in level of flotation of 100 feet or more, and you have all the conditions of a problem which may devastate a continent. That glaciers do so fracture we have on record in, I think, Ross' voyage along the Southern ice cap, in which he mentions that during the frequent storms the glaciers were heard to break away with terrible noise comparable only to the loudest thunder-claps. These are fractured, without causing mischief, by a storm wave, because the Southern flowing glacier has had time to accommodate its slope to the slight fall in the sea level now in progress.

But in 4800 B.C. the Southern ice cap was increasing in size, and by attraction rapidly reducing the sea level in the Northern hemisphere. Thus, though ordinarily, the frequent storms will break away the glacier before it can cause mischief by falling, a time may come at or about that period when, after a series of years of cessation from severer storms, the overhanging glacier may break away along a large portion or the whole of the circumference of the polar ice cap, the storm wave and flood thus set in motion rushing away between the mountain ranges from Northern Europe and Siberia, and concentrated in a narrow area into an enormous bore along the Black Sea and the Bosphorus, overwhelming the civilized world of Asia Minor.

After the flood, or even without a flood by the continual breaking away and reduction in area of the ice cap, the sea level being permanently reduced, semi-tropical conditions still prevailing, with a declination of  $24 + 5^{\circ} = 29^{\circ}$ , the fall in

the sea level would throw many thousands of additional square miles into cultivation, and thus make it possible for the population to increase. But in the course of centuries the reduction in the sun's declination would make civilized life impossible in the Arctic and North temperate zones. The failure of the crops and pastures would cause those in the Arctic lands to press upon those in the temperate zone. Then the Arvan of the Vedas irrupted into India and Persia. Later on the Gauls irrupted into Galatia in Asia Minor and into Europe, the Scythians into Kathiavad in India, the Franks into Germany, the Visigoths into Spain, the Lombards into Italy and the Huns into Hungary. Still later we have the irruptions of the Moguls into India, the Manchus into China, the Tartars into Russia and the Turks into Asia Minor and Europe. All these Asiatic races were driven by the stress of climatic conditions to abandon their homes in the North and flee Southward. Now that the cycle of fewer summer days in the North is beginning to tell, the temperate zone is feeling its effects. The Northern hemisphere will continue to get steadily colder from this cause, until, more than 3,000 years hence, the sun's declination becomes one degree greater than now, and so will begin to infuse a little of the Indian tropical warmth into Temperate and Arctic regions.

Thus the climatic question has always been a Political question, the irruption of nomadic Asiatic races into the South of Asia and into Europe. Europe has learned how to stem the advance and throw back the irruption of these races. Really their advance has been stopped because none are left. Their country from want of rain has become a desert of sand. Were rain to fall in plenty, Central Persia, Tartary and the desert of Gobi would again become fertile and blossom as the rose. The present climatic question is that the populous countries of Northern Europe will have to face the necessity of migrating Southward. So long as the Gulf Stream makes their wheat, oats and rye grow they will stay where they are, but outside the limits of its genial warmth, where their corn will no longer ripen, or the rainfall is so deficient that famines are over frequent, migrate they must. So long as sufficient fertile land is available in the South, well and good; but where there is a



In 1842 I left England, and traversed France, Switzerland, and Italy to Rome. There were no Railways then, and our journey was performed across the Alps and Apennines in a post-chaise, with reliefs of horses at certain stages, and we rested at night in such miserable hotels as would not be tolerated now. From Rome I made my way to Naples, went up Mount Vesuvius by the old-fashioned paths, and on the 6th of January, 1843, embarked in a steamship for Malta and Alexandria, on my first visit to India. The Overland Passage had commenced a few years previously. My plan was to catch the first steamer, that had ever gone from Suez to Calcutta. However, it was delayed in its passage round the Cape of Good Hope from England to Suez, and I had to wait a month at Cairo, which I much enjoyed, visited the Pyramids, etc., and traversed the Desert to Suez on the back of a donkey; the journey occupied two days and two nights, and the accommodation was bad enough. At Suez I found the Calcutta steamer ready, and passed down the Red Sea to Aden, Ceylon, Madras, and reached my destination in safety and comfort on March 23rd, 1843.

I stayed in Calcutta from that date to 1st May 1844, for the purpose of advancing my knowledge of the Indian Languages, and then proceeded to the Northern Provinces to the station of Ambala, passing along the bed of the River Jumna: my conveyance for the whole distance was a palanquin with eight bearers, and occupied seven weeks. In the same year I visited Simla, and other Hill Stations in the Himalaya, and traversed the whole Region between the Rivers Satlaj and Jumna in my Winter-tour. The year 1845 was closed by the Satlaj Campaign, and the Battles of Ferozshahr and Mudki. It was a new and unexpected feature in my life, to hear the sound of artillery and musketry and to hear the cannon roaring in my vicinity, and see the plain sprinkled with dead soldiers. In the year 1846 I was present at the great battle of Sobraon on the River Satlaj, and crossed with the victorious Army which captured Lahór, the Capital of the Panjáb.

I closed the year in my quiet District of Hoshyarpúr, between the Rivers Satlaj and Beas, at the foot of the range of the Himalaya: there I spent, almost entirely alone, three happy years, 1846, 1847, 1848. In 1849 I was transferred to my old

District, Ambala, and then started on a trip to visit every District in the newly conquered Panjáb Province, while in 1850 I proceeded on a tour all round the far-famed Valley of Kashmir, after which I dropped down the whole length of India in a sailing-boat on the River Indus and its affluents, embarked in a steamer at Kurrachi, and reached Bombay in January, 1851. I embarked by boat on board a steamer for Suez, and travelled by land to Cairo and Alexandria, whence in an Austrian steamer I made my way to Trieste, and thence by coach to Vienna, Dresden, Cologne, Antwerp, to Dover, London, and my home at Windsor, which I reached on my 31st birthday, after an absence from England of seven years duration, and nearly entirely alone the best part of that period amidst my subjects in India, whom I dearly loved, and whom I taught to love and obey me by enforcing our Panjáb maxim:

"The iron hand in the velvet glove."

"Suaviter in modo, fortiter in re."

In 1851 I visited my own people and family homes in England, besides making my first excursion to Paris. Then on January 3rd, 1852, I started across France to Marseilles, by steamer to Genoa, and by coach to Milan and Venice; crossed over to Trieste, and went on board the steamer to Corfu, circumnavigated the Peninsula of the Morea, and landed at Athens, thence by steamer to Smyrna in Asia Minor, crossing the Archipelago, passing under the Coast of Troy, through the Dardanelles into Constantinople; after a week's visit retraced my steps to the Archipelago, and steamed along the Coast of Asia Minor to the Island of Cyprus, and landed at Beyrut. My first tour in Palestine lasted from February 17th to April 5th, and included the whole country. As was my practice then, I hired horses and a guide, and travelled quite alone, living among the Natives, putting up in the houses of the humbler classes, and using the Arabic Language. The tour was most delightful, and included Balbek, Damascus, and the Dead Sea. By a singular chance I entered Jerusalem on my birthday. Arriving at Alexandria I spent Holy Week in quarantine. On my release I pushed up the Nile to Cairo, paid a second visit to the Great Pyramid, and proceeded to Suez in the newly established horse-vans, embarked on board

a steamer, and reached Bombay on the 6th of May. From Bombay I took the mail-cart to Agra, in the North-West Provinces of India, passing through Rajputana, and thence by carriage-dawk down the valley of the Ganges to Benares, which I reached on June 24th, and settled down to my official work. There I resided till October 8th, 1852, when I migrated to my new District at Banda in Bundelcund, where I lived three solitary years with the people. I left Banda, to which place I was deeply attached, and made my way in a country cart in a slanting line through Central India to Bombay, where I arrived on March 16th, 1855, and at once embarked on a steamer for Suez, which I reached on April 3rd, crossed the Desert in light carts, reached Alexandria, embarked on board a steamer for Trieste, and made my way home to London on the 21st April, 1855, where I resided till December 21st, 1857.

During my three years furlough in England I paid visits in several English Counties, and in August, 1856, set out on a tour in Holland, Germany, Switzerland, and Italy, visiting Rome for the second time, returning to England on November 15th after a most enjoyable time. The news of the Indian Mutiny on May 10th, 1857, burst upon us, and all my plans for the future were altered by receipt of an official order to return at once to India. My home at Banda had been burnt to the ground, and all my property stored in the house had been plundered by the Rebels. I started on December 22nd from England on my third journey to India, travelling *via* Dresden and Vienna to Trieste, embarking there for Alexandria, across the Desert to Suez, and by steamer round the Island of Ceylon to Calcutta, which I reached on January 28th, 1858, and fell again into harness. I made an excursion to Jessore in Lower Bengal, and left Calcutta by dawk-carriage for Benares, reaching Allahabad on March 4th. Here I witnessed the ceremony of the first Railway being opened in North India to Cawnpore; and being summoned by my old Master, John Lawrence, to Lahór, to fill the vacant post of Commissioner, I took the hazardous course of plunging in my dawk-carriage through the Districts in rebellion from Cawnpore to Agra, and thence to Dehli: it was a fearful risk, but I

accomplished it, and arrived at Delhi on April 16th, and pushed on to Lahór, which I reached in safety on April 22nd, 1858, having been about four months on this voyage.

I remained the whole of the years 1858-63 as Commissioner, or Chief Executive Officer of the five Districts of the Lahór and Amritsar Province. In the Summer months I used to proceed up to the Himalaya Mountains to the Hill Station of Dalhousie, where I spent about three months. In the Winter I spent some months at Lahór, and during the rest of the time moved my camp about my five Districts, and disposing of local business with my District subordinates. In my former appointment I was only in charge of a District, and my tour was in a narrower orbit, but my duties then went more in detail, and I lived in closer touch with the Native inhabitants, but it was a delightful life, and the aspect of the country beautiful. The mode of travelling was called Camp Life, and my tent moved daily from town to town, being carried by camels, while I rode on horse-back, or elephant-back, and the area traversed was very large.

In 1864 I again returned to England, travelling from Lahór by dawk-carriage, and Railroad, for the means of locomotion had improved. At Calcutta I embarked for England by steamer to Suez, across the Desert in light vans down the Nile to Alexandria, and by steamer to Southampton, which I reached on April 3rd, 1864. On September 21st of the same year I travelled back to India, across France to Marseilles, to Alexandria, Suez, round the Island of Ceylon, to Calcutta, which I reached on October 29th, 1864: here I remained as a Member of the Legislative Council of India till April 24th, 1865. I thought that my term of service in India, and my journeys backwards and forwards, were finished, but the Lord had allotted a fifth journey to, and a fifth return from, that Country.

Yielding to the advice of friends in India, and the tempting offer of high appointments, I was persuaded again to return to India, and complete the short time remaining of the term of service entitling to a pension. On February 24th, 1866, I started from Dover, Paris, and Marseilles, and thence by the old route so frequently traversed, and reached Calcutta on 31st March.

A high official post awaited me at Allahabad, in my old home, of the North-West Provinces, as Financial Commissioner, and I had during my short occupation of the office some charming tours over the beautiful districts, an entirely new region to me. On the 10th of August my final blow fell on me, and I hurried to Calcutta and embarked for Southampton, which I reached on January 17th, 1868. I had completed my service in India, but not fulfilled the required number of years of residence, and I suffered accordingly.

After two years cessation from Travel or Tour I resumed the pleasure in 1870, and visited Worcestershire and Wales, which were quite new countries to me, and I had to accustom myself to a totally different environment from that to which I had been used in India, and to a certain extent in Foreign European Countries. It was expedient that I should make myself geographically acquainted with my own native land, of which I was very ignorant, and so in 1871 and 1872 I visited different countries, notably Cornwall, including Land's End, and the Scilly Islands, and in 1873, 1874, 1875, I made a complete tour of Scotland as far as John o' Groat's House, and Ireland in every part. But in 1875 the time had come for crossing the seas, and in April I paid a visit for a few weeks to Paris, and in August and September I attended my first International Oriental Congress on the Continent, and proceeded to St. Petersburg, through Denmark, Sweden, and Finland. I returned through Poland, Germany, and the Netherlands. This woke up all my slumbering taste for Foreign Travel, and settled my fate for the next fifteen years.

It must be understood that my tours on the Continent were not the mere carrying out of the Route Plan of a Cook's party, by which a cluster of strangers were conveyed, in a really admirable way, from Capital to Capital, and Country to Country, until the area laid down is traversed, and the money paid is exhausted. My chief tours were for some specific object, such as a Congress, Geographical, Oriental or Literary, where the Scholars of Europe in some particular branch assembled, friendships were formed, information interchanged, and wonderful pleasure derived. In 1887 I made a tour through Switzerland, Tyrol, Austria, Hungary, and Germany.

In 1878 the Oriental Congress was held at Florence, and I attended it, passing through Paris and North Italy, returning by Venice and Turin. It occupied forty-seven days.

In 1879 I made a tour through Italy to Florence, Rome, and Naples. In 1880 I made a tour through the Kingdom of Spain and Portugal, visiting all the places of note: it occupied forty days. In 1881 I traversed Italy to Rome, Naples, and across the Apennines to Brindisi, where I embarked, circumnavigated the Morea, and landed at Athens. Thirty years had elapsed since my last visit, but I returned to the well-known objects of interest with the same undying love. Jerusalem, Rome, and Athens stand in my interest above all other cities of the world.

In October, 1882, I paid my long-desired visit to North Africa, on the Coast of the Mediterranean. From Marseilles I took steamer to Algiers, proceeded by land to Constantine and Biseria in the Desert, took steamer to Tunis, visited Carthage and the Island of Sicily, made a tour of the interior, went up Mount Etna, thence by Naples and Rome worked my way Northward through Italy, and Germany to England.

In October, 1883, I visited the cities of Holland, and travelled by railway to Odessa, where I embarked for Sebastopol and Batum on the Black Sea, at which place I took train to Tiflis in Trans-Caucasia to Baku on the Caspian Sea, returned by train to Batum, and took steamer along the shores of the Black Sea through the Hellespont to Constantinople, thence *via* Varna, Bucharest, Buda-Pesth, to Vienna and home.

On June 11th, 1884, I started for Norway *via* Flushing, Hamburg, and Kiel, landed at Copenhagen, thence to Christiania, saw the Midnight Sun at North Cape and Tromsø, and worked my way back to Stockholm and took steamer to Hull.

On January 12th, 1885, I left England and proceeded to Brindisi, took steamer for Alexandria, ascended the Nile to Cairo, and made an excursion up the Nile to Assouan and Luxor. On my return I struck the Suez Canal and embarked by sea for Jaffa in Palestine, on the 24th reached Jerusalem for my second visit, after an interval of thirty-two years. I was a member of one of Cook's Tourist Parties in Syria, and had very pleasant companions, and we travelled in great comfort. From

Jerusalem we descended to Jericho and the Dead Sea, thence to Nablous, Nazareth, Tiberias, and Damascus : there I left the Cook's party and took the coach across Lebanon to Beyrut, where I embarked for Jaffa in Palestine, and Alexandria, and found my way back to Brindisi by train. This tour lasted three months, from January 12th to April 8th, and was most delightful.

In 1886 I made a comparatively short tour to Germany, Austria, and Paris.

In 1887 my steps were directed through France to Barcelona in Spain, Cordoba, and Granada : thence to Gibraltar, and by steamer to Tangier in North Africa ; thence back to Gibraltar, and by steamer across the Mediterranean Sea to Genoa in Italy ; thence to Pisa, Rome, and Naples, climbed up Mount Vesuvius for the third time in my life (1842, 1879, and 1887) ; returned home by Florence.

In 1888 left England *via* Germany, travelling by train to Moscow, thence to St. Petersburg, Poland, and Hungary, and Belgrade on the Danube, thence to Trieste, calling on a friend at Gratz ; crossed over to Venice, and pushed over the Brenna Pass through the Tyrol to Basle on the Rhine, and to England.

In 1889 I left Hull on a tour to Sweden and beyond, and to attend the International Oriental Congress. I reached Stockholm on September 1st, and at the conclusion proceeded by steamer to St. Petersburg and Germany on the road home. One of my party fell seriously ill at Ratisbon, and this suggested to me, that my time for Tours was over : we reached England on October 21st after a tour of eight weeks.

In 1890 my last Tour took place. The Geographical Congress was held at Berne on August 9th, and I had to take part in it, and on my road back I visited Treves to see the Holy Coat, which was exhibited to view this Summer after an interval of many years. I was glad to get home safe, and having completed my 70th year thought it well to make Treves

“ longæ finis chartæque viæqæ,”

for I had unmistakable hints, that this kind of thing could not go on with impunity. In 1892 I visited Dublin for a gathering, and never crossed the sea again, fifty years having elapsed

between my first and last voyage. A warning voice to me came :

“ All your other journeys past,

“ Gird thee, and make ready fast

“ For your longest and your last.”

ARCHBISHOP TRENCH.

Many thoughts rise in my mind, when I ponder over the experiences of my Wanderings by Sea and Land : how pleasant, how profitable they have been, how much knowledge I acquired from them, and how fortunate I have been. I never once was seriously ill, no accident ever occurred to my conveyance. It is difficult to enumerate the different kinds of conveyances of which I made use. The shoulders of men in my palanquin half a century ago, the howdah of the elephant, the saddle of the camel, the horse and the mule ; the country bullock-waggon, the mailcart, the dawk-carriage, the native river-boat, and sea-steamers, the stage-coach, the railway carriage.

It marks the epoch, that on no one occasion was I driven to make a voyage by sea in a sailing-vessel ; their time was up before mine began, and I left off travelling too soon to make use of a balloon, which I should have greatly liked, if opportunity had offered.

The number of Languages, in which I held exchange of ideas with the people is considerable. In some it was a work of labour, and at best a very indifferent performance ; in others, like some of the Languages of Europe, and my own dear Persian and Urdu in India, it was as complete as could be wished.

I never missed a train, nor a steamship. I never lost any luggage. I never experienced incivility, or rudeness. In Indian Provinces where I was an absolute Authority, I never abused my power, nor gave way to threats, or any acts of offence. I generally got what I wanted by the use of gentle words. Hundreds of times I have spent the night in my solitary tent, or on the roadside, or in a native house alone amidst Natives, and have never experienced rudeness, nor has the idea of danger entered in my mind. In Europe I have

experienced similar courtesy, and nowhere more than in Russia, on the Baltic, or the Caspian, or the Black Sea. Imputed rudeness often arises from the arrogant bearing of the English or American traveller.

Oh, the number of sweet friendships formed from the chance contact of two previously total strangers in the stage-carriage, the boat, the train, or the resting-place at night ! Oh, the amount of information gathered in a *tête à tête* in a crowded vehicle, man with man, forgetting for the time being difference of Religion and Nationality, exchanging views and taking pot luck on the common ground of Humanity !

As regards my tours, I always thought out my route beforehand, studied it geographically, and the country historically, before I started upon it, and thus I was prepared to appreciate what I saw, and inform myself on the points on which I desired information. The tours of some are haphazard flights along a route fixed by somebody else, stopping at great cities with no power of communication with the residents : in fact, a tour is often only a change of scene and air and a variation of the relief supplied to others by shooting on a Scotch moor. My plan was to keep a careful journal day by day, and write an Essay for some Periodical at the close, which was in due course reprinted with the rest of my Writings, which did not rise to the level of an ordinary sized book, in one of the seven series of my Linguistic and Oriental Essays.

Πόλλων ἀνθρώπων ἶδεν ἄστρα καὶ νόον ἔγνω.

There are two kinds of travel : one is typified by the Pilot of a steamer, or the conductor of a train : they beat all in number of mileage, but of the people they know nothing. "The proper study of mankind is Man," and how enlarged an idea of the capacity of the Human Race, Travel, and the study of History of the past years, suggest : List of remarkable spots where I have stood ; list of remarkable men whom I have seen, or with memorials of whom I have come into contact ; immortal panoramas which I have contemplated ; the various stages of Civilization which I have come upon, such as the entirely naked African, and partially naked Indian, male and female ; the variation of Colour, Speech, and Customs.

In the course of my Travels my eyes have rested upon objects, to have seen which is worth any expenditure of money or personal fatigue. I enumerate them : they speak for themselves. I do not envy the intellectual position of the person who would not care to see such objects of interest.

I HAVE STOOD AT DIFFERENT TIMES ON

1. The Capital of Rome.
  2. The Parthenon, and Mount Pantelicus, at Athens.
  3. Mount Zion, and Mount of Olives, at Jerusalem.
  4. Mount Lebanon, Mount Etna, Mount Vesuvius.
  5. The Summit of three Pyramids of Gizeh.
  6. The Himalaya Pass leading into Kashmir.
  7. The Taj Mehal at Agra.
  8. The great Temple at Banaras.
  9. The Kutub Minar at Delhi.
  10. The foot of the Khyber Pass.
  11. The Holy Tank at Amritsar.
  12. The North Cape at Midnight on Midsummer Night.
  13. The Mosque at Sidi Okba in an Oasis in the Great Sahara.
  14. The Island of Phylæ, looking down the Cataract of the Nile.
  15. Lake of Tiberias and Mount Carmel.
  16. Spot on the River Beas, which Alexander the Great reached in India, on his course down the Indus to the Sea.
  17. Statue of Memnon in Upper Egypt.
- And many others.

ROBERT NEEDHAM CUST, LL.D.

## Art. VIII.—ACROSS THE PELOPONNESUS.

## VI.—TIRYNS.

WE pass the night at Argos after our day at Mycenae, and see no reason to be dissatisfied, though Argos has not Murray's official recommendation as a halting place. Next day we go on to Corinth; but we must first see Tiryns. Tiryns is only four miles south-west of Argos, and the branch line to Nauplia runs past its walls. So in a few minutes we step out of the early morning train on to a tiny platform in full view of the fortress. There is no station properly speaking at Tiryns, but trains pause to drop and take up visitors, when required. Five minutes takes us to the low shelving rock of "wall-bound Tiryns," and for a moment one is tempted to be disappointed:—this flat rock, undistinguished in height and extent, hardly suggests the site of a formidable stronghold, the acropolis of a powerful capital! But the first massive remnant of wall we come under, however, dissipates any such doubts. It is stupendous. A walk round the face of the rock brings us fairly under the spell and reduces the mind to an almost bewildered admiration of the resources that could have built a wall like that. As mere masonry this wall produces a much more overpowering impression than the walls of Mycenae. The scale is altogether gigantic—the hugeness of the single stones, the enormous thickness, the formidable height! The entire circuit stands unbreached. Something is lost indeed of the towering height, believed to have been originally sixty-five feet, but otherwise the walls of Tiryns present as firm and solid a front as when first they were laboriously reared stone upon stone. Genuine Cyclopean work this, mighty blocks, irregular in shape, but cunningly adjusted so as to form a continuous and even surface. Pausanias' remark that "not even the smallest could be as much as moved by a pair of mules," conveys but a feeble impression of the size of the larger blocks; none are less than three tons in weight, some are as much as thirteen (Diehl, page 51). The wall is nowhere less than twenty-three feet

in thickness and in one part of the highest keep as much as fifty-seven. How were these mighty walls welded together and who put the great stones in their places? These are questions which inevitably force themselves on the mind, as one completes the circuit of the rock, but questions to which not all the lore of all the archæologist can afford a satisfactory answer. Here is the wall and here is the citadel of Tiryns, its palace, its gates, its galleries and bastions, its elaborate defences, its skilful system of military engineering, but we know not the name of a single prince who reigned there,\* nor a single fact of its authentic history, save that it shared in the overthrow which left Mycenae desolate.

The grandest piece of wall is on the east side to the left of the great gate, where the chariot-road entered the lower fort and swept up by the left round to the courtyard of the palace at the extremity of the rock facing south. The whole of the space enclosed is only a little more than three hundred yards by one hundred and the shape is that of an irregular ellipse pointed at the two extremities. There is a great difference in level from north to south, making a division within the walls into an upper and lower citadel (or even three divisions, if with Diehl we recognize a middle level also between the two). The greatest height is at the southern end, and on this was built the palace and the innermost stronghold of the lords of Tiryns. This upper level occupied by the palace comprises about a third of the whole area.

The palace at Tiryns is larger and much better defined than the palace at Mycenae, but time and labour are required to work out the details with comprehension. Given time and zeal and an imagination not too sceptical, all the divisions of the Homeric mansion may be worked out fairly satisfactorily. The Aule, or courtyard, it must be noted, faces south towards Nauplia: the road sweeps up from the east and enters from the left, through the Propylaea. This is the basis of reconstruction. The divisions and partitions, however, have eminently the character of a Chinese puzzle to the inexperienced eye. One identification is easy and interesting—the royal bath-room. It

\* It is true, of course, that the building of the walls is associated with the name of Proetus and that Hercules was called Tirynthius, but this is scarcely historical.

is a small room on the west side facing the postern, recognisable by the great slab of grey stone (said to weigh 20 tons) which forms the floor. One caution as to all this will not be out of place, considering the scope and range of the superlatives which the enthusiasm of archæologists lavishes on Tiryns and its palace—and very naturally. It must be borne in mind that, after all, the scale of the palace and of the whole fortified area is extremely moderate. The *wall* is immense, one cannot well exaggerate the size of the stones and the massiveness of the structure. But all Tiryns, *i. e.*, the citadel which the walls enclose, would be amply garrisoned by five hundred men, and a complement of a thousand all told would have been a somewhat tight fit. The Tower of London occupies an area at least as great—much more does the Fort of such places as Delhi or Agra. As to the palace its largest apartment would compare but poorly with the hall of a mediæval castle: there is not a room that is forty feet in length and many of the rooms are little more than cupboards. Therefore such phrases as “vast halls?” “splendid palaces,” “vast courtyards and spacious halls,” “princely dwellings,” which even so well balanced a writer as Diehl uses, require to be discounted. So also do unguarded allusions to the splendour and power and riches of the dynasty that reigned at Tiryns. After full allowance is made for the resources required to turn the rock of Tiryns into the formidable fortress we still see to-day, and admitting the probability that a larger fortified city sheltered under the citadel, it must be acknowledged that the kingdom of Tiryns can after all have been but a petty principality. There is not room for more in all Argolis. Interest and significance and historical importance are happily not measured by mere size. Even Agamemnon, granting the historic certainty of the Trojan war, was but the head of a confederacy of chieftains commanding incomparably less fighting power than English Edgar—and the mere wealth and power and luxury of the princes of Mycenæ and Tiryns were comparative and relative only, probably insignificant compared with Athens in her glory; still more so, if measured by the standard of later times, Roman or modern. We are dealing always with a simple and primitive state of society, in many respects rude

and barbaric, though judging by the picture Homer has drawn for us, combining with this simplicity a refinement of manners that has in some respects never been surpassed. We may lawfully doubt, then, whether we should really have been dazzled like Telemachus at Sparta by the mere wealth and luxury of the palace of Mycenæ or Tiryns. But this truth detracts not in the least from the overmastering interest of the remains left on the storied rocks at either end of the plain of Argos. Moreover two facts about Tiryns remain perennially wonderful and cannot be too highly conceived of—the astounding solidity of the walls, and the extreme antiquity of the age to which they belong.

One of the most interesting incidents of the visit to Tiryns is the exploration of the famous galleries, built literally in the solid breadth of the wall, with the chambers and bastions connected with them. These galleries are not after all very extensive, but there are several of them, and their structure is in the highest degree remarkable.

Does not the form prove manifestly to our eyes that the Greeks of prehistoric times had discovered the secret of the arch? Freeman remarks with his usual incisiveness “The helpless devisers of theories about the origin of the arch, and especially of the pointed arch, may profitably learn that the arch has been striven after in endless places—that it has been successfully striven after in many places—that the pointed arch simply as a constructive form is as old as the round and most likely older.” (Studies of Travel, page 89).

This is a true saying, yet the latest authorities seem to pronounce against the claim of the galleries at Tiryns to be really early examples of the arch. “The result is that from within, the roofs of these galleries look like real vaults of pointed arches, whereas they are really not vaults at all—but, these galleries cannot be regarded as real arches because, generally speaking, there is no lateral thrust.” That is to say, they have the form without involving the *principle*, of the arch. They are formed of slanting surfaces that merely lean towards each other, and are arches only accidentally, as it were. Leake hits very aptly the middle view on this question.

"But in truth" he says (Peloponnesiaea, page 119), "it seems impossible for any people, however uninstructed, to make much progress in architecture, employing stone for their materials, without a knowledge of the arch, which originated in the observation that two stones might be made to lean against each other so as to admit a passage between them and to bear a weight above them. The addition of an intermediate or keystone formed the arch." These galleries, then, are not strictly arches, but they represent the architectural structure that led to the arch.

Lastly to complete our pleasures, we may sit on some fragment of stone and enjoy the view—a lovely view on this lovely morning. Looking south the blue waters of the Gulf of Nauplia stretch dreamily away into the distance, a perfect sea-piece set with shapely islands. Nauplia lies close below with its picturesque fortification and shipping. Between us and the town is a very graceful grove of cypresses. Eastward extends the mountain chain of Arachnaeon, its topmost ridges white with snow. The snow gleams on the lofty summits to the north-west, deep in the mainland, back behind the marshalled crests and ridges of Arcadia. Nearer to the left, as one looks north, lies Argos with its castle lifted boldly above the plain; while on the skirts of the bordering hills on the right our more practised eyes can now make out the rocky summit that was Mycenae with Charvati at its base.

Too soon the train for Argos calls us away. Our compartment is full of officers from the garrison at Nauplia, no less courteous than the rest of their countrymen, because they are men of war. Then another railway journey not less alive with interest and memorable for ever than those that have gone before—a shifting scene of absorbing wonder for the delighted eye. Who can adequately describe a day's journey in any part of Greece, when every mile of the way has its insistent appeal to our senses, every mountain and valley and open plain its cluster of associations for the imagination, often closely woven with some historic name and peculiarly its own; but if not that, at least because it is part of Greece and typical of land and people. Surely a wonderful three hours, from half past ten to half past one, and yet the brain has

taken impressions of wonder and beauty that will be a memory and a glory for the rest of our days.

So it was with the journey from Andritsaesa, so it will be with the walk to Phyle, or the march to Marathon and back. Surely the feet of the dreaming scholar ache with eagerness to be up and on the way; surely the spirit strains to draw in through the senses the palpable impressions of that land of a thousand stories supremely significant in the history of mankind, that source of inspiration yet more profoundly significant in the unfolding of the individual soul. We long to be up and away and voyaging to Greece, mind and body must be restless until that pilgrimage is accomplished and the longing appeased. So once we felt; so now we feel in the hour of fulfilment, in the midst of fruition richer than our dreams. If these rhapsodies seem foolish to you, O reader, yet believe they inadequately express the deep satisfaction actually experienced in wandering for a few wonderful days in the superb natural scenery of Hellas and by the sites of her fallen cities, amid the splendid relics of her former greatness.

Moreover, if we do not perversely and ignorantly narrow our sympathies, interwoven with the many-hued threads of classical interest there may be traced others splendid with romantic glamour that belong almost to our own age and time. History has nowhere more heroic pages to show than the story of the struggle by which the Greeks regained their independence and became once more a free nation. Like much else in history that struggle has its darker side; but the foulest stains of its blackest episodes cannot, after all, dim the lustre of the pure heroism that was called forth in many a simple peasant who paid to the utmost the sacrifice of devotion to a righteous cause. Viewed impartially, Missolonghi "*caret nisi vate sacro*"—was not a whit less heroic than Thermopylae—Kanaris a truer patriot and a braver man than Themistocles.

We leave the plains of Argos by the low long winding pass of Dervenaki. Here it was in 1822 that the host of the Seraskier Dramali, who had advanced by the Sultan's

command too rashly to the relief of Nauplia, was in its retreat, on failure of co-operation by the Turkish fleet—miserably cut up and almost annihilated.\*

As soon as we are clear of the Pass we sight Acro—Corinth, a magnificent isolated rock nearly 2,000 feet high, the most imposing acropolis that any Greek city ever possessed.

A little further we catch a glimpse of the blue of the Saronic Gulf and at last, close by the town itself, the deeper blue of the Gulf of Corinth.

H. R. JAMES.

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\* The Pass and destruction of the Turkish Army are vividly described in Mr. A. C. Benson's story "The Capsina."

## CRITICAL NOTICES.

LIST OF PICTURES IN GOVERNMENT HOUSE, MADRAS. Printed by the Superintendent, Government Press, Madras. 1903.

THE superlative excellence of its general get-up is the first idea that will occur to whoever takes up this sumptuous volume. For this, Mr. R. Hill, the Superintendent of the Madras Government Press, is to be congratulated. The book which is 8" x 10" in size and 1¼" thick, in crimson and gold morocco cover, is a triumph of binding, paper and typography of which any first-class London publisher might be proud. There is nothing in the book to show whether, either as an *edition de luxe*, or in plainer form, it is available for sale to the public; but presumably it has merely been printed for a limited circulation under the orders of the present Governor of Madras, Lord Ampthill, G.C.I.E. The author of the book is Lieutenant-Colonel H. D. Love, R.E., the Principal of the Madras Civil Engineering College, who is to be congratulated on the success which has attended his efforts to get together so much useful and interesting information from the very meagre materials which, according to the author's "Introduction," appeared at first to be available. Colonel Love found himself confronted by a lot of pictures, old and new, *voilà tout*; no records, no traditions, no painters' names, or very few of them; but with a Sherlock Holmes-like ingenuity, he has succeeded, out of these unpromising materials, in producing a readable and interesting volume that will be eagerly sought for by all interested in the early history of British rule in India.

The number of pictures dealt with is 43, of which 24 hang on the walls of the Madras Banqueting Hall, 14 in Government House, and 5 are prints in Government House. The Government House referred to is the one in Madras itself, close to the Banqueting Hall, and not the house at Guindy. Of the 43 pictures, Colonel Love has reproduced 20, in the form

of most excellent photogravures on thick Indian paper; the reproductions are by Walker Cockwell and Co. from local photographs. To the finding of titles, artists, dates, and histories for the 43 practically derelict pictures Colonel Love evidently devoted much industry and research, and in his labour he received assistance from a number of ladies and gentlemen, of whom he gives a list, and whose aid he acknowledges. He also gives a list of some 80 or 90 books consulted in the course of his investigations. Next comes a list containing 87 separate names of the actual and provincial Governors of Fort St. George, from the days of Mr. Francis Day, who founded the Fort in the year 1639, to those of Lord Amphill, the present Governor. Out of the 87 separate names, 63 were those of regular—not provincial—Governors, and the average time during which each of them actually held office was just four years. Most of the interregnums were for quite short periods of from one to six months, but prior to 150 years ago seven or eight of them lasted for more or less a year, the longest being the 35 months in 1746 to 1749 during which the Fort was in the hands of the French—a period in which the British settlement was administered from Fort St. David.

Before passing on to a descriptive list of the pictures, Colonel Love devotes several interesting chapters to the history and description of the buildings of their domicile, to the Nawabs of the Carnatic and the Arcot Princes, to the history of the collection, to the names of the artists, and other kindred matters of artistic and historical interest, covering a period going back to Ptolemy's, of Alexandria, reference to the Arcot palace of his days as *ἀρκατοῦ βασιλείον*. To the student, and to the dilettante reader of history, and especially of the history dealt with by Orme, Mrs. Penny and the historians of the Wellesley campaigns, these chapters will be of high interest.

Anything like a detailed notice of the part of Colonel Love's book which deals with the pictures themselves would occupy more space than we can devote to such a purpose. It must suffice briefly to refer to such pictures as the following:—No. 1, Stringer Laurence walking with Mahommed Ali Khan, Nawab Walijah of the Carnatic on the island of Srirangam near Trichinopoly, with French soldiers in the distance filing out from the

gate of the Srirangam Temple for surrender to some English horse drawn up outside: No. 26, the installation of Nawab Gulam Mahommed Ghaus Khan in the Durbar Hall of the Nawab's palace at Chepauk by Lord Elphinstone in 1842: and No. 31, the portrait of Major-General the Hon'ble Sir Arthur Wellesley, wearing, *inter alia* a *languti*! and standing alongside of a weird giraffe necked, prize-ox-rumped quadruped, presumed to be his war horse. Amongst the portraits Lord Clive too is to be found, and many others of lesser interest. But to all Colonel Love gives a full measure of careful and artistic description of *technique*, attitude, background, etc., and such historic and other references as are certain to interest the reader.

His Excellency Lord Amphill is to be congratulated on having found so good an editor and compiler, and it may be hoped that similar good work may be done for the pictures in Government House, Calcutta. Doubtless Mr. Havell, in co-operation perhaps with Mr. Forest in London, would be equal to the task.

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PROGRESS OF INDIA, JAPAN AND CHINA IN THE CENTURY. *Nineteenth Century Series*, by Sir Richard Temple (pp. 510. W. & R. Chambers, Edinburgh. Price 5s.)

THIS work, as the preface suggests, summarises the progress of half the human race for a century. The contrast between the old-world stagnation depicted in the chapters describing the opening years of the century, and the bustle of to-day is, of course, most marked in the East, though the opening of the twentieth century has naturally produced many essays on similar contrasts in the Western world. Only as late as 1840, for instance, did sailing ships begin to feel the competition of the steamers which have now practically relegated them to history. "The importance of sailing ships was first lessened soon after 1840 by the P. and O. Company, which has played a memorable part in the economic history of India, and which carried by the Overland route, through Egypt and the Red Sea, all the mails and the treasure, most of the passengers, and some among the most portable and valuable articles of trade. Still, however, the mass of the trade, consisting of cheap and bulky articles, continued to

pass by the sailing vessels round the Cape of Good Hope. The produce of India sent to Britain was the main portion of the trade. The return traffic of British manufactures sent to India was not in those days so developed as it has now become. Consequently the sailing vessels generally arrived at Indian ports freighted with rubble, chiefly from Norway, which rubble was used for macadamising Calcutta roads! Sir Richard Temple rightly points out that the construction of steamers fit to ply to India by the old Cape line is an immense addition to the resources of Britain in view of war closing the Mediterranean route. The writer rightly points out the beneficent influence, politically considered, of medical charities in India. He points out the wonderful faithfulness with which Indian Roman Catholic Christians withstood all the temptations to secession to heathenism which must have followed the fall of the Portuguese power. He recalls the first appointment of an Anglican Bishop in 1813, and the declaration of the Bishop of Calcutta as Metropolitan in 1833. This chapter on religious progress is a fine example of blended enthusiasm and toleration: that on "the sad and sacred subject of Roman Catholic Christianity in Japan" being especially interesting.

"It may be admitted that the Jesuits did unduly endeavour to adapt their teaching of the one true faith to the prejudices of their Japanese hearers, and did but too often assimilate the externals of their services to the insignia of the native religion, thus making in their zeal for conversion some compromise or sacrifice of Christian principle. But here their error ceased. They must have inculcated with undying forcefulness much of what is most striking, touching, elevating and inspiring in Christianity. Otherwise their Japanese martyrs and heroes, of both sexes, of all ages and classes, could never have endured as they did to the hardest of ends. Every worldly motive, love of fatherland and of fellow-countrymen, every political advantage, personal safety for selves and families, impelled them towards a broad and easy road. They chose the short and rugged path leading to physical agony and to execution, with a constancy and fortitude that showed how love of Faith can be as strong as death, and how jealousy

for the truth can be as bitter as the grave. A monument ought to be raised in the memories of European Christendom to their Japanese fellow-Christians who suffered and perished in the early part of the seventeenth century."

**LADY ROSE'S DAUGHTER** by Mrs. Humphry Ward. (pp. 454. Macmillan's Colonial Library.)

THIS latest of Mrs. Humphry Ward's novels is like most other psychological novels interesting as a psychological study, the author's own mind being the unconscious subject. It is a woman's novel—the impossibly good and wearisome hero Jacob Delafield could only have been imagined by a woman—and it is the novel of that person abhorrent to Ruskin—the theological woman. The theology is different from that in her earlier books: it shows the influence that Catholicism has even on those who do not accept it. The hero in "Helsbeck" was a stern Catholic (repudiated as non-typical by Catholic reviewers) the heroine, Lady Rose's daughter, in spite of her revolt for received opinions in both the religious and the moral spheres cannot escape the bias given by her convent education. Mrs. Humphry Ward's own revolt from the quiet paths of "moderate" Anglicanism began in "Robert Elsmere." It is accentuated in "Lady Rose's Daughter," in the scene where Julie is contemplating the step which leads to moral ruin. Her eye was vaguely caught by the little family pictures and texts which hung by the mirror. . . . . a clergyman, with an austere but gentle face, a face nourished on the *Christian Year*.

And above and below them, two or three cardboard texts carefully illuminated by Lady Mary Leicester herself:—"Thou, Lord, knowest my down-sitting and my uprising." "Wash me and I shall be whiter than snow." "Fear not, little flock. It is your Father's good pleasure to give you the Kingdom." Julie observed these fragments absently at first, then with repulsion. This Anglican pietism so well fed, so narrowly sheltered, which measured the universe with its foot-rule seemed to her *quasi*-Catholic eye merely fatuous and hypocritical. It is not by such forces, she thought, that the true world of men and women is governed. As she turned away she noticed two little Catholic pictures such as she had been

accustomed in her convent days to carry in her books of devotion carefully propped up beneath the texts.

The women's characters are sketched with a knowledge and imagination that contrast with the delineation of the men. How Julie could have been prepared to risk all for a Walkworth is as incomprehensible as how she could have married and been satisfied with a Jacob. It is the same with all women's works. Dinah is far more loveable than Adam Bede, although George Eliot's men are more like the men drawn by male writers, but Miss Yonge's, Charlotte Brontë's, and Jane Austen's heroines are natural, their heroes mere automata to utter the sentiments women admire. Only in George Eliot is there a Maggie capable of loving a very imperfect Tom. The world is full of imperfect Toms and it is as well for them that women can be found to love them though they cannot be found to draw them lovingly in fiction. Meredith and Lord Lackington's minor characters show that Mrs. Humphry Ward can draw a natural character in a man where the heroine is not to fall in love with him. Walkworth's repentance shows he had genuine stuff in him, as does his death—and men would say he was always capable of far more than Jacob. In Jacob the average man recognizes with a shudder the "good" boy of nursery primers and school prizes. Incidentally Jacob is interesting, as denoting the stage which Mrs. Humphry Ward's socialism has reached. He is the ideal wealthy landowner who treats his tenants fairly—the ideal, be it said, without offence, of the Middle Ages and of the Church Catechism. Is it that personal success and the pecuniary rewards of a popular author have converted Mrs. Humphry Ward? "Helsbeck" dealt with the country gentleman, "Eleanor" with the English resident on the Continent, "Lady Rose's Daughter" introduces us familiarly to Peers and Duchesses, more natural and refined than Ouida's, but still distinctly "high society, real society." Has her introduction by her literary success to these circles made the author a convert to Things as They Are? Mayfair is a brighter neighbourhood than Gower Street. University settlements and the working classes are absent except as adorning Jacob's character. "It is easy to be contented on £1,000 a year."

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Pictures of Indian Life. 1881.  
Poems of many years and places. First Series. 1887.  
Summer Holidays of an Eton Boy. 1887.  
The Sorrows of an Anglo-Indian Life. 1889.  
Notes on Missionary subjects. 1889.  
Bible Languages. 1890.  
Clouds on the Horizon, or the various forms of Religious Error. 1890.  
Bible Translations. 1890.  
Essay on the Methods of Evangelization of the World. 1894.  
Five Essays on Religious Conceptions. 1898.

*The above books are all out of print.*

*Copies of those below may be had of*

Messrs. LUZAC & CO., 48, Great Russell Street, W.C.,  
or of Messrs. S. AUSTIN & SONS, Hertford.

- Modern Languages of Africa. 2 Vols. in one. 1883. Without the Maps. Paper covers, 8s.  
Linguistic and Oriental Essays. Series II. 1887. Cloth, 7s. 6d.  
Linguistic and Oriental Essays. Series III. 1891. Cloth, 7s. 6d.  
Linguistic and Oriental Essays. Series IV. 1895. Cloth, 7s. 6d.  
Linguistic and Oriental Essays. Series V. 2 Vols. 1898. Cloth, 15s.  
Linguistic and Oriental Essays. Series VI. 1901. Cloth, 7s. 6d.  
The Roman Catholic Shrines of Lourdes, Zaragossa, Loretto, etc. 1885 and 1892. Cloth, 2s. 6d.  
Africa Rediviva, or Missionary occupation of Africa. 1891. (FRENCH AND ENGLISH). Cloth, 5s.  
Addresses on Bible Diffusion. 1892. Cloth, 4s. 6d.  
Common Features which appear in all the Religions of the World before Anno domini. 1895. Cloth, 5s.  
The Gospel-Message. 1896. Paper, 5s.; Cloth, 6s.  
Poems of many years and places. 2nd Series. 1897. Cloth, 3s. 6d.

ԱՅՍՈՐ ՀՆԻ ՀՐԱԿԵՐՊԻԱՆ

· AISOR UNTH HRAKIERPIAN.

ANTIPHON. *I lifted up mine eyes to the mountains, from whence shall come my help.*

This day with the hosts of the flame-like, the aged offered blessings with branches, and the children with palms; Hosanna to Him that cometh in the Name of the LORD.

He on Whom the seraphim could not gaze with sheltered faces, sat on the unriden colt, praised by the children; Hosanna to Him that cometh in the Name of the LORD.

This day, with the aged and the children, do we also praise Thy advent as a new King to Jerusalem: Hosanna to Him that cometh in the Name of the LORD.

Blessed is He that cometh in the Name of the LORD, blessed art Thou Who shalt come again.

ԲԿ. ♩ = 78. MODE 4.

Հայր. Համհարձի. . . զաչս իմ ի ի - ըրին -

Mode. Hampar-tsi. . . zachsim i lie - rin -

ս, ուստի ե-կես-ցէ ինձ օղ - նու-թիւ - ն

s us-thi iekies - tsä ins ok - nu - thi - n.

Վիմագրատուն եւ տպարան Բրէյտկոպֆ եւ Հերպէլ:

## II

Այսօր ընդ հրակիր բաժանդատուցն օրհնա-բանէ



Ai-sor ūnth hrakier pian thasutn orh-na-pa-nä - i - n

ծերքն ու-տով - - ք և տղայքն ար - մա - - -



tsierkn wos-thov - - k iev thgrai kn ar - ma - - -

- - - լե-նեօք. ով - սան - - - նա



- - - vie - niok ov - san - - - na

օրհ - նեալ . ե - - կեալ ի յա - - նուն Տիարն.



orh - nial . ie - - kial i ra - - nun Thiar'n.

## III

## ՈՎ ԵՆ ՍՈՒԿԱ

OV IEN SUOKA.

Ի ներքուստ ասիցէ:

And from inside he shall say.

Ով են = 56 - 60.



Ov ien suo - - - ka, zi pa -



- - tsi - ts zi ais thur - - n Thiar -



- n a iev ar - - thark mü - tha -



- - nie - - n ūnth . sa .

IV

# ՇՆՈՐՀԵԱ ՄԵԶ ՏԵՐ

SHNORHIA MIEZ TER.

Grant us, LORD, vigilance with the wise virgins, and make bright the lanterns of our souls.

With shuddering do we fear to hear from Thee, O LORD, the answer, Verily I say unto you, I know you not.

When Thou shalt come in the glory of Thy FATHER, to judge the whole world, grant to us to stand on thy right hand,

That the door of mercy of the heavenly Bridegroom may be opened unto us, and that we may enter the nuptial abode with the wise virgins,

That we may be ready to meet the Bridegroom, and that we may enter the nuptial abode, and be not kept out with the foolish virgins,

That the lanterns of our souls may remain bright, and that we may be numbered amongst the united guests in the feast of the heavenly Bridegroom.

ԲԶ: ♩ = 80.

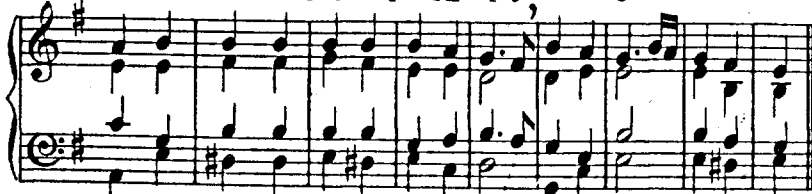
MODE 3.

I. Շնորհեա մեզ տէր արթնութիւն ընդ իմաստուն կուսանացն



I. Shnorhiamiez Ter arthnuthiun ūnth i mas-thun ku-sanatsn

և զհո-զւոց մե-րոց լապտերս պայ-ծա-ռա ցո . . .



iev zhuerkuerts mieruots lapthierūs pai - tsa-ra - tsuo .

V

# ԶՔԵԶ ՕՐՀՆԵՄՔ

ZKIEZ ORHNIEMK.

Thee do we bless, Everlasting King, Immortal GOD of our fathers. He Whom created nature could not contain as GOD, is by death enclosed within the new hewn grave, thus creating of me a new man: Thee do we praise, O GOD of our fathers.

He Who was an unsealed writing is sealed by a ring, preserving us in safety by our faith in the Trinity: Thee do we praise, O GOD of our fathers.

*Sung in the morning only*

[O all ye works of the LORD, bless ye the LORD, praise Him and magnify Him in the highest for ever. O ye heavens, bless ye the LORD, praise Him and magnify Him in the highest for ever. Glory.]

Bless CHRIST the King, Who is honoured with awe by the invisible hosts, and magnify Him in the highest for ever. [Now and ever.]

Bless ye the unconquerable King, the Treasure of immortality, Who is guarded by the soldiers.

ՀԱՐՑ ԳԶ: ♩ = 72.

HYMN OF THE FATHERS. MODE 5.

[FOR THE MORNING. Antiphon. Bless the LORD GOD of our fathers, and praise His Name for ever.]



-լ փա-ռա -ւո-րեալ ա-նուն քո յա-ւի-տեան:

-l pha-ra - vo - rial a - nun kuo ha-vi - thian.

Կողմն: Զքեղ օրհ - նեմը, Թաղա-ւոր յա -ւի-տե - նից.

Side. Zkierz orh - niemük tha-ka - vor ha - vi-thie - nits

ան-մահ Աստը-ւած հար - ցըն մե-րո - ց:

an - mah Astä - vats har - tsün mie-ruo - ts.

# ՔՐԻՍՏՈՍ ՓԱՌԱՅ

## CHRISTHUOS P'HARATS.

CHRIST the KING of glory, fulfilling the law, comes this day to be presented, on the fortieth day, to the town of Jerusalem, to the aged Simeon. His coming was proclaimed and His entry was awe some. The aged man was crying out in the temple what Isaiah had joie told, awake, arise, come forth, O Jerusalem, and with great joy arouse thy children to meet thy SAVIOUR.

(Other verses of the same kind.)

♩ = 66.

1. Քրիստոս - փա-ռա - ց Թաղա -ւոր - ն.
2. յե-րու - սա-ղէ - մ քաղա - քի - ն.
3. Տարփո - ղե-լո - վ ծե-րու - նի - ն.
4. Զարթի - ր զարթի - ր զուզար - թի - ր
5. Մեծա - պայ-ծա - ո ցն-ծու - թեա - մր
6. Աստուա - ծա-յի - ն հրա-մա - նաւ - ն.
7. Ի ղիւր - կա -ւեա - լ Սի-մէ - ո - վն,
8. Արդար - ձա-կեա - ար-ձա - կեա .

1. այ - սօր . ե - կեա - լ յըն-ծա - յումն.
2. առ Սի - մէ - ո - վն ծե - րու - նին.
3. Հայ-նէր . Ի մէ - ջ տա-ճա - րին.
4. Ե - րու - սա-ղէ - մ զուզար - թիւր,
5. Փրկ - չի - ն ե - կեա - լ ընդ յա - ռաջ:
6. Կայր ծե - րա-ցեա - լն Սի - մէ - ուն.
7. ԿԱստուա - ծ - որ-դի - ն իւ - ա - սէր.
8. ծերս Ի . մե-ղա - ց կա-պա - նաջ:

1. Կա-տա - - րե-լո - վ նա զօ - րէն  
2. Բար-բառ . . ե-ղև . . զա-լս - տեան  
3. զոր մար - - զա-րէ - ն Ե - սա - յի . .  
4. ու-րա - - խու-թեա - մբ ցն - ծու - թեա -  
5. Տա-ճա - - րա-պետ - ն Քրիս - տո -  
6. ոչ տե - - սա-նէ - ր նա ըզ - մա -  
7. արդ ար - - ձա-կեա . . ար - ձա - կեա . .  
8. Արդ ար - - ձա-կեա . . ար - ձա - կեա . .

1. -ս. քա - ռաւ - նօ - րեայ զա-լը - ս-տեամբն  
2. -ն է ա - հա - գին ո - րո - տ - ման  
3. . յա - ռա - ջա - գոյն գու - շա - - կեայ  
4. -մբ գման-կու - նը - ս քոյ դու զար - - թո  
5. -ս այ - սօր ե - կեալ 'ի տա - - ճարն  
6. -հ մի - նչ տես - ցէ նա զօ - - ծեալն  
7. . ծերս 'ի . կա - պից ար - ձա - - կեա  
8. . ծերս 'ի . կա - պից օ - րի - - նայ

## Ի ՅԱՐՈՒԹԵԱՆ

## I HARUTHIAN.

On the day of resurrection, at the coming of the Saviour, the children spread their garments and praised with ceaseless voices, saying, Blessed is He that cometh in the Name of the LORD.

As offerings they brought branches of trees, strewing them in the way of the SON of GOD, and praised with ceaseless voices, saying, Blessed is He that cometh in the Name of the LORD.

The aged poured forth blessings, and the children glorified Him, and praised with ceaseless voices, saying, Blessed is He that cometh in the Name of the LORD.

Դ2:

♩ = 78.

MODE 7.

I. Զայց Ի յարու-թեա - - ն յառուր գալ ըստեան Փրկչին

I. Mode I haru - thia - - n ha-vur ka-lus-thian Phürk-chin

tha-ra-tsa-nä in mangunkn üz - han-thietsiev antha-thar

X



tsai-niv orh-nä - in orh-nial ie-kial an - vamp Thiar'n.



II. Side. Wost's i-tsa - ruo - - ts pie-rial ma-thu-tsa-nä -



in Astvats vor-thuin ar cha-na-par-havn iev an-tha-thar



tsai-niv orh-nä - in orh-nial ie - kial an - vamp Thiar'n.

XI

## ՈՒՐԱԽ ԼԵՐ

## URAKH LIER.

Rejoice, holy church, at the advent of the Holy Only Begotten;  
be glad and rejoice together with all the saints.

ԲԿ. ♩ = 56-60. *con molto espressione* MODE 4.



Mode. U-rakh. lier - - - ie-kie - - - ghie-tsi.



surp i ka - - lüsthian . . . surp. . Mi-ats - -



nin, u-rakh . lier iev . . tsün-za . . . hanthiets a -

XII

- - - մի-նայ - ն սրբ - - բողբ: (Երես Կրկնա.)

*p* *dim. rit.*

- - - մի-նայ . սր - բողբ. (Sung thrice.)

