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REPORT

ON THE

PROCEEDINGS OF THE SECTION ON SANITARY IMPROVEMENT DURING THE SESSION OF 1859-60,

BY

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The 24th January, 1861.

IN appearing before you, this evening, Gentlemen, I need hardly tell you, that, as President of the Medical Section of the Society, it was for Dr. Mouat to have addressed you on the present occasion ; and were he at his post, I myself perhaps would have had little more to do than, in common with you, sit down to a rich repast. But ill-health having kept him away, the stewardship for the time has devolved on my humble self ; and, in discharging its functions, in place of one so able and experienced as Dr. Mouat, is it necessary for me to say—I stand in need of considerable indulgence on your part ?

The topics to be touched upon in this report, have for their object, more or less directly, the preservation of health,—a matter always of the greatest importance in itself, but growing still in urgency and interest with the progress of civilization and the arts. In the hunting and nomadic state, men necessarily dwell apart from one another, each requiring a considerable extent of ground as the sphere of his operations. Each may be said, therefore, to live in an atmosphere peculiarly his own, and local causes of disease can tell but on few at a time. But when the awakened spirit of commercial and manufacturing industry draws men by hundreds and thousands even under a common roof, and myriads and millions come to reside within the narrow precincts of busy cities and towns ; not only do the ordinary causes of disease attain a much higher degree of intensity by reason of operating on vast multitudes at once, but new and artificial ones are engendered,—bursting out, at times, in



fearful scourges to the human race. It is of the utmost consequence, therefore, that commercial and industrial prosperity should always go hand-in-hand with a well regulated system of sanitary reform; as, otherwise, not all the developed resources of the world could compensate for one foul epidemic, which, by contaminating the air and water, it might be the means of calling into being. Unhappily, however, the very idea of the *preventibility* of disease is one of modern origin. Men, in all ages, no doubt, whether by incantations and charms, or nostrums and pills, have tried to administer relief to the sick and diseased. But it is almost to our own times, that we have to look for any effectual step towards eradicating the very seeds of fevers and plagues. Nor is there aught in this to wonder at. The laws, which govern the course of vital phenomena, are among the most subtle and complex in the whole range of human enquiry. Each phenomenon of life, in fact, has to be traced to a complicated intersection of causes, which, besides being difficult to unravel in themselves, are liable to a thousand disturbing influences the least of which may materially interfere with the result. Hence all seems anomalous and without order. Causes being present, we apparently miss the effect; and effects are observed in the absence of any tangible or perceptible cause. In this seeming state of confusion, men naturally felt as if health and disease belonged to the chapter of accidents alone, and had recourse only to supernatural measures for averting evils which appeared to be so very capricious in their course. It was only by patient and laborious observation, therefore, and going, as it were, through a course of preparatory discipline in the rigidly inductive schools of astronomy and general physics, that the human mind was trained to trace, with any exactness, the tangled threads of the science of life. Indeed, even now, notwithstanding all the ingenuity brought to bear upon scientific investigations, and all the light derived from the progress of the collateral branches of knowledge, we but imperfectly understand the causes of disease. The more tangible ones, no doubt, have been brought under cognition; but others, more subtle, have hitherto eluded our means of analysis and research. But though our knowledge may not be perfect, it is not valueless on that account; and it will appear from the sequel to what extent it is in our power, at present, to avert the sufferings of disease, and the pangs of untimely death.

It is not intended here, however, to enter into a systematic discussion of the various conditions of health. The object which the Section I have the honor to represent this evening, has got in view, is entirely of a practical character. It is to



investigate into the dietary and habits generally of the people, as well as the sanitary state of towns and villages in different parts of the country ; to ascertain what the prevailing diseases in these several parts may be ; to trace, so far as possible, these diseases to errors of diet and modes of living, or the absence of good local sanitary arrangements ; and then to see what may be left in the shape of residual phenomena to be accounted for by the unavoidable effects of climate, or the other more occult agencies affecting and influencing human health. It will thus be found how much of the ailments and mortality among the people is owing to causes which it is in our own power to avert or remove, and how much owing to those which, in the present state of knowledge, are beyond human control. Manifest it is, however, that for the successful prosecution of an inquiry like this, an enormous amount of labour must be undergone, and materials patiently collected for years, before any general inferences can be ventured upon. The Society ought not to feel disappointed, therefore, if its Medical Section has no very brilliant results to lay before it this evening. It should rather consider it a hopeful sign, if, during the short period it has been in existence, the Section has, in the difficult undertaking it has proposed to itself, made a start, at least, in the right direction.

I have been at some pains myself to search for any previously recorded facts bearing on the inquiries in question ; but I cannot say with much success. The physicians who early visited the country on the advent of British power, confounded and amazed at the frightful ravages which fever, dysentery, and hepatitis were committing round them, scarcely knew how even to deal with maladies which presented to them such a new and uncouth aspect. In a state of anxious amazement, 'putrid bile' was laid hold of by them as the great mischief-maker in every case ; and their learning and ingenuity had full occupation in devising expedients for the expulsion of this noted culprit from the system. From the labours of these worthies, therefore, not much in the shape of instructive information can be derived. When sounder views of tropical pathology began to prevail, the discovery of appropriate methods of treatment naturally, in the first instance, absorbed the attention of medical men. And, hence, while during the earlier part of the present century, we meet with several important works on the nosology and treatment of tropical maladies, one devoted to the subject of tropical hygiene is scarcely to be found. But this is only another illustration of *curative*, taking the precedence of *preventive*, medicine. In the year 1822, however, the formation of the Medical and Physical Society of

Calcutta, through the exertions of Dr. Adam, gave a new and powerful impulse to the efforts of the profession; and questions relating to climatic influences, medical topographies of districts, and the origin and progress of epidemics, began, thenceforth, to excite increasing interest and attention. It is only to be regretted that the early dissolution of this learned body prevented it from developing its full measure of usefulness, and carrying out the inquiries which it had so auspiciously commenced.

Dispersed through the *Transactions* of the Society, still, (extending over a period of 18 years from 1825 to 1843) are to be found a great many papers presenting much that is valuable in reference to the inquiries now in hand. Among others there will be found a series of memoirs on the prevailing epidemics of the country, replete with interest not only to the student of medicine, but to every soul living and breathing on India's soil. Of these, therefore, interspersed with a little additional matter from other sources, I have prepared a slight analysis to be laid before the Society, as well with a view to convey some idea of the nature of the epidemics themselves, and of the circumstances under which they are noticed to have occurred, as to impress on the mind the extent of devastations, which, almost without intercession, they are committing in some part of the country or other.

In the very first volume of the *Transactions*, then, we meet with notices of an ephemeral fever, somewhat resembling the scarlatina, which prevailed epidemically during 1824-25. It is said to have broken out simultaneously at Rangoon and Guzerat,—covered a large portion of Eastern Bengal, extending even to the Presidency of Madras,—and reached Calcutta within a few days of its first appearance at Rangoon. It commenced about the end of May, attained its height in the course of a few days, continued unabated till about the middle of July, and then gradually declining seemed to pass away. After a few months' intermission, however, it broke out afresh at Berhampore, about the beginning of April next, visited Patna, Benares, Chunungur, and other stations along the coast of the river, and then raging for the two or three ensuing months, finally disappeared in September. In its course it spared neither condition, sex, nor age; and though unattended with any very great mortality, left those it had attacked in a state of extreme debility and prostration. The year of its occurrence is noted as being, notwithstanding the early setting in of the rains, singularly sultry and oppressive, and characterised by a peculiar hazy and loaded state of the atmosphere.

Singularly contrasted with the above is the epidemic next to



be noticed; and which, consisting of a severe bronchitic fever, raged over lower Bengal during the rains of 1828. Its ravages extended from Calcutta to Maldah, but were confined almost exclusively amongst children—chiefly those of European parents. Among them, however, it proved very fatal,—death often occurring even within 24 hours. Very few children are said to have escaped the attack.

The year following witnessed a bilious remittent fever which commenced at Hansee about the end of June, and assuming the epidemic form, spread in a northerly and easterly direction, over Sirhind, Delhi, Meerut, and other places. Its mortality like that of the fever of 1824-25, was small; but like it, it left the patients extremely exhausted and enfeebled, so as to make them linger through a protracted convalescence. The year, too, is noted as one in which unusual early rains were followed in the district of Meerut, at least, by an exceedingly hot and oppressive weather.

In 1832, Calcutta was visited by a severe form of small-pox, which breaking out in March, went on increasing in fatality until, having reached its acme in December, it gradually began to decline. Its ravages did not entirely cease, however, till the ensuing June. The number of men, women, and children carried off by it, has been estimated at near three thousand.

Concurrently with it, there also prevailed an epidemic fever in some of the Upper Provinces—Bareilly, Meerut, Indore, &c.; but fortunately this did not prove very fatal in its effects.

But scarcely had Calcutta time to breathe from the effects of the destructive epidemic to which it had been so long a prey, when a severe remittent fever began to show itself. It broke out first near Diamond Harbour at the end of May; and thence, through the intervening villages, made its appearance in Calcutta about the middle of July. It was the peculiar congestive remittent of Bengal, and proved very fatal in its course. This year (1833) again, the hot months, are said to have been unusually sultry and hot; and on the 22nd of May, a strong gale caused the river to overflow, and destroy cattle and cultivation for several miles upwards from the sea. To the other causes of disease, therefore, may, in this instance, be added the effects of famine.

The year 1836 is a memorable one in the history of Indian epidemics. It is the year of the famous Julia plague,—the most malignant pest that ever threatened to desolate the country. But though this be the year in which it first excited general attention, it may be traced so far back as 1815 in the province of Guzerat, and which the year before had suffered from a terrible famine. With the rains of 1819, it broke out again in the



northern part of Guzerat, and overspread the eastern districts of Ahmedabad. From this time no more is heard of it until the year under notice, when it burst forth anew at Marwar, in a village of the name of Pali,—bordering upon a low and swampy jheel, and covered with unclean bazars, and narrow, irregular, and filthy alleys. From Pali, the malady propagated itself, whether by contagion or not, (for on this point opinion seems to be divided) to other parts of Marwar, and continued its ravages for upwards of a year. The mortality was dreadful, being supposed to be not less than 75 per cent.

Simultaneously with the plague, during the earlier part of the year, there raged also a bilious remittent at Moradabad and the adjacent districts, and which, too, was attended with very fatal results. Unlike the Bengal epidemic, however, this cannot be traced to any manifest local cause, for few places in the country are 'more free from jungle, morasses, &c., than Moradabad.' But it is said to have been attended with a great scarcity of rain, there not being more than a third of the usual fall. Towards the close of the year, the disease again shewed itself at Bareilly, and produced considerable mortality among the inmates of the jail.

In 1837, small-pox again appeared in Calcutta, and both in the course it ran, and the fatality it produced, bore a close resemblance to the visitation of 1832.

The same year was marked likewise by a destructive remittent of the bilious type prevailing epidemically at Delhi and its neighbourhood. Some idea of the extreme fatality with which it was attended may be formed from the fact, that, in a village near Paniput, out of a population of 500 families, near 200 individuals died within six weeks, and in another 230 died within 27 days out of a population of little more than a thousand. The state of the villages which suffered with such terrible severity, is described as being extremely overcrowded and dirty, and the season, during which the malady prevailed, as being characterised by days exceedingly hot but followed by chilly nights. While the fever was raging all around, however, the troops of the division are reported to have continued in a perfectly good state of health.

Passing over some epidemics of a comparatively minor kind, and presenting nothing very peculiar in their history, we come next to the great *Muhamari* of Gurhwal. This pestilential distemper, closely allied to the plague, is said to have appeared first near Kedarnauth in 1823, and confined its ravages for some time only to a couple of pergunnahs—Nagpore and Budhan. Gradually, however, it spread over the surrounding pergunnahs, and breaking out with extreme virulence, during

the rains of 1849, in a place called Patti, committed fearful havoc in several of the villages of Gurhwal. It deserves here to be stated that the whole of this province also is noticed as being remarkable for poverty and filth;—the majority of the inhabitants living on bad and insufficient food, and obliged, from the severity of the cold, to forego all benefit of open air, and, for the sake of mutual warmth, remain crowded together in low and filthy hovels.

In 1849, Calcutta and the suburbs were also overrun by one of the most fatal small-pox visitations, with which the country has ever been afflicted. Another had occurred before in 1843. Both commenced in November;—differing in this respect, therefore, from the epidemics of 1832 and 1837, which had broken out with the return of the hot weather. But the fact most worthy of mention, in this place, is that in 1843, the health of the troops at Dum Dum and Barrackpore, and in 1849 that of the troops and other residents in the garrison of Fort William, continued to be in every way good and satisfactory, while the population was being decimated all around.

No notice as yet has been taken of that formidable pest—the cholera,—not because, during the period under review, it never shewed itself in an epidemic form, but because since 1817, when it broke out with a terrible severity in some of the Southern districts of Bengal, it has never been fairly absent from some part of the country or other. Let it not be supposed, however, that this was the year of its first appearance in India. Even in European works on the subject, it has been traced so far back as 1780, when it produced a most fearful mortality—destroying near 20,000 lives,—among the pilgrims at Harridwar. Earlier than this, however, (if we except, perhaps, some vague notice of its appearance at Madras a few years before), there is no account of it to be met with in any of them;—although mere suppositions are not wanting as to its having been in India from a long time past. Yet, that the malady has infested the country from the remotest period, seems evident from the minute and vivid description, which, under the name of the *Bishuchikā* (बिषुचिका) occurs of it in the *Shusrutum* (सूत्रतन्त्र), one of the oldest medical works of the Hindus, and compiled from the lectures of *Dhānīāntari* by his pupil *Shusruto*, the son of *Bissā Mittra*. In the following couplet (making allowance, perhaps, for a little transposition in the order of symptoms to suit the metre of verse,) who will not recognise a case of cholera even such as it occurs at the present day?

मूर्च्छातिसारौ वमथुः पिपासा शूलं भ्रमेद्वेष्टनं जम्बदाहः ।

वैवर्ण्यं कम्पौ हृदये रजश्च भवन्ति तस्यां शिरसश्च भेदः ॥



'Coma, excessive purging, vomiting, thirst, colic pains, wandering of mind, cramps, yawning, restlessness, discoloration of the surface, tremors, oppression of the chest, and headache, occur in it,'—i. e. the Bishuchiká. It appears, notwithstanding, that the disease, in its pestilential form, at least, either used to occur at long intervals from the first, or at any rate, was in a state of abeyance for a considerable number of years previously to 1817. For I have been assured by every old man with whom I have conversed on the subject, that during the earlier period of his life, he never witnessed cholera in the severe form in which it so commonly shews itself at present. Since the fatal year adverted to, however, it has not only repeatedly devastated every part of this vast peninsula, but passing through 'hot, cold, moist, and dry,' visited every creek and corner of the habitable world.

The foregoing sketch, slight and imperfect as it is, will serve at least to shew how ripe the country has at all times been to be mowed down by epidemic pests; and how ill it becomes us all to remain supine while liable at every instant to such dreadful visitations. But, it will be asked, perhaps, what is to be done? Are we not as much in the dark still as ever in regard to the specific causes by which pestilences are generated and produced? Has not the subtle effluvium which deals destruction over the land, defied hitherto all the resources of chemical analysis? How then, is it possible to avert or remove what we have not been even so much as able to detect? How, in fact, can we be otherwise than helpless where all being involved in darkness, our senses avail us naught? But though we may be ignorant at present of the precise nature of epidemic poisons, and of the manner in which their development and propagation are favoured or otherwise by a host of atmospheric relations and peculiarities, connected with climate and season, the falls of rain and the course of winds,—and various meteorological vicissitudes, thermotic, hygrometric, and electrical;—we know still for certain something at least. Even the most virulent epidemics, we find, while sweeping off a part of the population of a place, leave the other part more or less untouched. Indeed, it is a common saying that epidemics die out for want of further materials to feed upon. Now, this want of further materials cannot, and happily does not, mean the want of more men, women, and children; for there is always a goodly number who escape. It must mean, therefore, the want of more men, women, and children, prepared or predisposed in a certain way for the poison of the epidemic to take effect upon. And hence the question becomes important—in what this preparation or predisposition consists? In its higher and more strictly scientific



bearings, however, a question like this, it is evident, must necessarily involve some intricate physiological discussions, into which it would be quite out of place to enter here. It may be briefly stated, therefore, as the result of the most modern researches on the subject, that the state of the system which renders it the most readily susceptible to any prevailing distemper, is that in which there is an excess of effete matter present in the blood. This effete matter, in fact, has the effect of inducing more or less of a putrescent state, i. e. a state approaching by some degrees to the one which supervenes on the occurrence of death,—and by which, as a consequence, the general vitality of the system being depressed, its power of resisting the morbid influences around, is likewise reduced. Now, the excess in question may result either from the predominance of the wasting over the reparative process, or the imperfect elimination of the products of ordinary disintegration from obstruction in the channels of exit; or it may be owing to the introduction direct of morbid materials into the system from without;—conditions of which one and all may be readily shewn to be powerfully abetted and promoted by defective nutriment and impure air. And, accordingly, the unhallowed potency of these, as fosterers of pestilential maladies, has been a matter even of ordinary observation and remark. Yet, inasmuch as pestilences have been witnessed at times where wretchedness, over-crowding, and reeking dirt were not to be seen, and on the other hand, have not raged incessantly where these abound; any sort of causal relation between the two has been questioned, of late, even in some respectable quarters. But as to the first part of the objection, it only needs to be remarked that the efficacy of other influences, besides, in producing the predisposition in question, is by no means denied; and the latter may be disposed off, at once, by observing that though the effete combustible might be present, yet, in the absence of the epidemic spark, no explosion will occur. Full weight, too, may be allowed to the power, which, within certain limits, is undoubtedly possessed by the animal economy of adapting itself to the environment in which it is placed, and of rejecting noxious and deleterious substances when brought in contact with any of its absorbing surfaces. Nevertheless, that a most prominent place is due to insufficient nutrition and putrid exhalations in the list of causes favouring the spread of epidemic distempers, may be shewn, even independently of physiological reasoning, by the whole history of pestilential devastations. Thus the ravages of the Egyptian plague, forming one of the darkest chapters in the annals of human mortality,—will be found to be concurrent in that country (though unknown in times of old) with emana-



tions from inhumed organic remains through a loose and porous soil; and, in Europe, with the pent-up effluvia of ill-ventilated habitations, and narrow and crowded streets. In India, as noticed already, the malady was ushered in by a famine at Guzerat, and thereafter broke out in districts of which poverty, filth, and over-crowding, were the most prominent features. And even in regard to that most intractable of pests—the cholera, and to all appearance the most capricious in its course; when crossing the Western bounds of Asia, it began to shew its terrible face at Moscow, its increased fatality in 'low, moist, thickly inhabited, and dirty places,' did not escape the notice of Dr. Reimann, the director of medical police at Petersburg. And though many years have since elapsed, during which the disease has traversed the rest of Europe, and overspread the entire continent of America, the experience of a host of other observers on both sides of the Atlantic has tended only to corroborate more and more the truth of Dr. Reimann's remark. But evidence of a different and even more convincing kind is also at hand. It will be remembered that in the years 1837, 1843, and 1849, a singular immunity was enjoyed in the midst of a dreadful pestilence by the troops severally at Delhi, Barrackpore, and Fort William. But how came this to be the case? How came the troops, on these occasions, in fact, to be fenced as within a magic circle which even such subtly-insinuating foes as fever and small-pox were not able to pass? How, but by the strict enforcement of cleanliness and regular habits, by free ventilation and wholesome diet, and precautionary attention on the part of their medical officers? Why then, by a more extended application of the selfsame measures, may not a like circle be drawn round a wider area, aye, even the whole country itself?

In the foregoing observations, it has been my object to shew that, by excluding the operation of bad and unwholesome food, and of the various known sources of atmospheric contamination, it is in our power, in a considerable degree at least, to remove one of the concurrent causes of epidemic visitations. The subtle virus may impregnate the air, but falling upon good and healthy blood, it will be innocuous and lead to no terrific results. But the truth is that, in regard to fever, which, next only to cholera perhaps, is the greatest scourge of the country, we can do even more. For though the peculiar effluvia, to which our periodic fevers are due, has not as yet been detected and produced before us, corked up in a bottle, like some gas; some of the most material agents concerned in its elaboration have been pretty correctly ascertained. These are no other than rank vegetation and swampy soil. And although

occasional examples of febrile epidemics, in their absence, might puzzle; their intimate connection with climatic fevers like those of India, is attested not only by numerous instances of circumstantial coincidence in time, place, and degree,—a striking illustration of which is furnished by the epidemic remittent of 1833,—the fever breaking out within a few days of the river overflowing its banks, its inroads confined at first, within the range of the inundation, but extending gradually upwards as the marshy exhalations spread with the prevailing wind of the season :—but the results, it may almost be said, of direct experimentation both of a negative and positive kind. An instance of either may be adduced. Talking of the village of Cardington, Mr. Bayne (in his life of Howard) observes : “ Its situation was low and marshy ; the inhabitants were unhealthy ; ague, that haunts the fen and cowers under the mantle of the mist, especially abounded ; altogether the little English village had the discontented, uneasy look of a sickly child.” But turn to this same village a few years after, when, having become the abode of the great philanthropist, ‘ year by year, the number of damp, unwholesome cottages grew less,’ and ‘ new and different cottages’ sprang up in their stead ; and you shall see “ strong-limbed, sunny-faced children frolicking round the doors,” and that “ the mist and ague were driven back.” I have chosen this from among a multitude of cases, some of them even bearing more strongly on the question at issue, because it occurs only incidentally in the course of a narrative altogether literary in its character, and the author of which had no sort of theory in view to maintain ; and also, because it shows not only how much may be done in the way of extirpating the seeds of disease, but how much may be done even by the exertions of a single warm-hearted, generous man. On the other hand, may be cited the well known instance of Kurnul, a station previously healthy, but which, in consequence of its drainage being interfered with by the excavation of canals on the western bank of the Jumna, and the damp produced thereby,—became such a regular hot-bed of fevers, that it was found necessary to abandon it as a military cantonment. Surely, proofs like these, must tell on the mind with a convincing effect ; and armed with them, one may already begin to fancy, as if, prostrate at the feet of science, lies the foe, that in sheer wantonness, as it were, had been massacring indiscriminately the young, the lovely, and the old.

But there is a gulf between *the possible* and *the accomplished* which unfortunately, in this country, almost seems to be an impassable one. For when we ask ourselves the question—to what account has our knowledge of the preventible causes of disease



been turned in India, or what steps by virtue thereof have been taken to arrest the progress or mitigate the violence of epidemic devastations?—the answer returned as by a loud reverberation from every part of the country must be—almost none whatever. The matter even does not appear to have ever engaged the serious and continued attention either of the community or the State. In 1835, at the suggestion of Mr. Martin, a requisition was sent round by the Medical Board, for topographical reports of districts from medical officers in different parts of the country; but the results were such as to call forth expressions of regret even from the Governor-General himself. The appeal, in fact, met with a most sorry and feeble response; and a very few returns only were received. Among these, however, Mr. Martin's paper on Calcutta, Dr. Mackinnon's on Tirhoot, Dr. Macgregor's on Loodhiana, and Mr. Maclean's on Mairwarah, were deemed to be sufficiently interesting and valuable to be given to the public. But whether, with the solitary exception of the first, certainly a very instructive performance in its way,—any of the others has ever been 'wedded to immortal type,' is more than I am able to say. Neither am I aware of any fresh and more effectual step having since been taken, with a view to the systematic study of the endemic sources of disease in different parts of the country. Attention has only been roused at intervals, when hovering over, the angel of death was shaking his fatal dart, and striking all classes of people with consternation and panic. But to what has this hitherto led? To the appointment, perhaps, of a commission first, and thereafter the publication of a report. Reports on epidemics, written on the spur of the moment, however, pursuant to some official order, and in the absence of correct information, relative to several antecedent and concomitant phenomena, duly observed and recorded in time and place, are unavoidably wanting in some most essential points. However interesting in themselves in a general way, and valuable the practical precepts they may contain, they necessarily ignore, or only vaguely speak about, the meteorological relations of the particular epidemic under notice, the precise combination of circumstances under which it broke out at first, its course and rate of progress, and the like; and hence do not always form very important contributions to the philosophy of epidemic disease. By the time too, the pestilence has subsided, all interest on the subject faded away, and men went on—both rulers and ruled—as if nothing had been the matter a little before.

On the publication of Mr. Martin's report already adverted to, a Committee, at the recommendation of the Governors of the Native Hospital, was appointed to consider the best means of

effectuating the practical suggestions it contained. The Committee sat for 18 months; and great hopes were entertained at the time as to the salutary results of their labours on the sanitary state of the town. But since the topographical features of Calcutta, as described by Mr. Martin, a quarter of a century ago, are no other than what they are at the present day, and the nuisances and sources of unhealthiness are still the same; it is rather difficult to determine as to what practical steps have, up to this time, been taken in furtherance of the objects for which the Committee sat and deliberated so long. Indeed, if any change is perceptible at all, it is in a much worse state of the roads and drains though taxes for municipal purposes have since been heavily increased. This much for the metropolis then: and next as to the country at large, surely the history of its sanitary improvement is not likely to detain us long. A few Acts slumbering in the columns of the *Calcutta Gazette*, and without proper machineries to carry them into effect, may, in fact, be said to comprise it all, and make up its beginning, its middle, and its end.

The paucity of information bearing on questions of Tropical hygiene and disease, led the Section, now under representation, to commence its labours by collecting, in the first instance, a sufficiently numerous body of facts relative to—

(1st.) Laws of mortality or Vital Statistics of the different parts of the country.

(2nd.) The dietary of the different classes of the people, and the diseases to which they are respectively liable.

(3rd.) Sanitary state of houses and villages.—And with this view the following queries were circulated among the Sub-assistant Surgeons, and other intelligent native officers, who, from the education they have received, and the position they occupy in society, might be expected to interest themselves, and aid in inquiries of the kind,—in different parts of the country.

1. State the probable number of families residing in any of the villages in your division.

2. What is the average number residing in each house; and what are the ordinary dimensions of a village house?

3. What are the numbers and respective ages of the individuals belonging to each family, to such ones, at least, as you may have access for information in?

4. State the instances of greatest longevity that you have known in your district.

5. State the respective ages of any number of persons dying to your knowledge within a given period.



6. Among what class of persons is the mortality greatest? If amongst children, at what ages—before or after teething?

7. What are the principal articles of food consumed severally by the different classes of the people?

8. What is the ordinary rate of wages in the district in which you reside, and does it enable the labourer to procure a sufficiency of good and wholesome food?

9. At what hours are the meals taken? and what is the average weight of food consumed at each meal?

10. To what processes of preparation (cooking) are they subjected?

11. Are the people in the habit of eating any articles of food raw?

12. What fruits do they consume? Are they ripe or unripe?

13. What are the prevailing diseases of the district? and which of them occur as epidemic visitations?

14. Are all classes subject to these diseases alike; or how otherwise?

15. State in particular any observed effect of habits and occupations in predisposing different classes to different diseases.

16. What narcotics do they smoke? And what are the ordinary ingredients of a *chillum*?

17. What is the usual mode of dressing prevalent among the different classes of the people? and are they in the habit of anointing their bodies with oil?

18. What variations are made in clothing as depending on the changes of seasons?

19. As regards the want of proper clothing among the poorer classes; is it to be attributed entirely to necessity, or how otherwise?

20. Are females in the habit of wearing shoes?

21. At what seasons are bowel complaints most rife?

22. What may be the difference in the ratio of mortality from different diseases amongst those who do and those who do not adopt the English plan of treatment?

23. What may be the state of villages within your division in respect of drainage?

24. Are they subject to inundations? and during the rains is there always a sufficiency of moisture to produce surface exhalations?

25. Have they any swamps or jungles?

26. What arrangements are made for the conservancy of the villages?

27. What is in general the state of the tanks to be met with in them?



28. Have these tanks generally numbers of trees planted round them ?

29. How are the houses situated relatively to the tanks ?

30. Are the houses at sufficient distances from one another, and furnished with windows, &c. to admit of proper ventilation ; or how otherwise ?

31. What means are taken to ventilate the houses of all classes of the population ?

32. Describe generally the mode of building houses.

In reply to the above, communications from eight have already been received ; and there is no reason to doubt that many more, though prevented, by the manifest difficulty of procuring much of the information required, from returning answers so early as could be wished, have the subject fully in mind, and will not fail to forward the necessary replies as early as practicable in course of the ensuing year. Even if any external incentive could be thought to be wanting in such a case, surely the hopes of honorable publicity which the Society is prepared to give to their labours, might be expected to furnish one.

The Returns received are from

- (1.) Dr. Bholanath Bose, Medical Officer, Furreedpore.
- (2.) Baboo Mritoonjoy Bose, Sub-assistant Surgeon, Umritshur.
- (3.) Baboo Aunodachunder Kastogri, ditto, Akyab.
- (4.) Baboo Tarukchunder Lahoory, ditto, Moorshedabad.
- (5.) Mr. A. P. Minas, ditto, Sirsa.
- (6.) Baboo Denobundoo Dutt, ditto, Cuttack.
- (7.) Baboo Ramkenoo Dutt, ditto, Chittagong.
- (8.) Coomar Hurrendro Krishna, Deputy Magistrate, Cutwa.

Some of these are certainly excellent in their way, and are indicative of much industry and research ; and all contain facts and information well deserving to be put on record. I proceed, accordingly, to lay before the Society, a brief analysis of their contents.

The subjoined tabular statement, then, will shew the number of families residing in some of the villages in different parts of the country, together with the average number of individuals residing in each house, the proportion between children and adults in a family, and the mean age of each of the persons belonging to it.



Return No.	District.	Village.	No. of families in a village.	No. of persons in each house.	Proportion of adults to children.	Mean age.
1	Furreed-pore,	Goolchanmut,	249	4.38	2.23 to 1	28.3
2	Umritshur,	Kutobinga,	600	5.	"	25.2
"	"	Old Arracan,	1,323	3.16	2.25 to 1	27
3	Akyab,	Caladyne,	516	3.		
"	"	Akyab,	4,241	3.377		
4	Moorshedabad,	Ruttenpore,	158	3.13	2.46 to 1	28.5
"	"	Ferwain,	441	1.75	"	15.35
"	"	Mungallah,	1,110	3.96	"	
5	Sirsa,	Nezadullah,	910	3.61	"	
"	"	Wuzeerpore,	150	2.31	"	
"	"	Sirsa,	"	4.49	"	14.14
6	Cuttack,	"	"	"	"	
7	Chittagong,	Anoorah,	426	3	"	"
8	Cutwa,	"	"	"	"	"

It deserves here to be stated that the statistics of the village of Ruttenpore as regards the number of inhabitants, and their respective ages, being given in full in Return No. 4, the results obtained from it are deserving of greater reliance being placed on them than those from any of the others. Dr. Bose's Return (No. 1) gives the ages of the members of 10 different families consisting in all of 42 individuals. The results obtained from the others, as resting on data of a more limited character, should be received with due reservation.

The following table exhibits the ratio which among 495 individuals composing the 158 families at Ruttenpore, those of different ages bear to one another.

Under 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	above 80
45	62	118	103	49	38	52	15	13	0

Several instances of great longevity have been cited in the Returns. The number and respective ages will be found in the table below.



Return No.	80 to 90	90 to 100	Above 100	Total.
1	4	1	5	10
2	0	0	1	1
3	1	1	1	3
4	12	1	1	14
5	0	0	1	1
6	0	0	2	2

Most of these persons are said to be living still. The others are only recently dead. Coomar Hurrendro Krishna (Return No. 8) mentions, besides, though in an indefinite manner, some instances of men from 80 to 90 still living in his division. Cases of long life would thus appear to be by no means rare in this part of the world. To serve as a standard of comparison, when further information on this head will have come to hand, I may mention here that from 1838 to 1844, there died in England, at the age of 100 and upwards, 788 persons or about 112½ per year. Of these 256 were males and 532 females.

The number of cases adduced in the Returns with regard to comparative mortality at different periods of life is too few to warrant any reliable inferences being deduced from them. Such as they are, however, they have been arranged in a tabulated form below, and may help to arrive at some sort of approximation, at least, as to the period of life in which death is most frequent and common.

Return No.	Under 10	10 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	Total.
1	9	4	6	2	2	3	1	1	28
4	2	18	36	25	16	9	3	0	109
5	3	14	22	19	12	16	7	0	93
6	0	2	4	2	7	1	1	0	17
Total	14	38	68	48	37	29	12	1	247



No data have been furnished to determine, even approximately, the question of different degrees of mortality among different classes of people. With reference to children, however, Dr. Bose's Return contains the rather singular statement that the mortality among them, though great enough in itself, is much less than among adults; and that, previously to dentition, it is by no means so great among native, as among European, children. The Sub-assistant Surgeons of Sirsa and Cuttack would also seem to bear out the statement in some degree; for the former observes that 'children seldom die during dentition—death amongst them is generally after teething,'—and the latter that 'he is not aware of any great number of deaths amongst children.' Turning to the Reports of the English Registrar General, on the other hand, it will be found that a full third of the entire number of deaths is during the first two years of life, and nearly half before ten. Should Dr. Bose's statement be substantiated, therefore, by the results of a sufficiently extended observation, it would certainly form an important link in the great chain of vital statistics; and to what, in that case, is the excessive mortality amongst European children to be attributed? Is it to be accounted for by the effects of climate, or the more artificial way of bringing them up? The results of experience in other parts of the country, however, appear to tend the other way. Babu Taruk Chunder Lahoori, writing from Moorshedabad, observes that, in his opinion, the mortality is greatest among children both before and after teething; and a similar remark occurs likewise in the Return from Umritsur with regard to Cashmerian children. Amongst Burmese children, the greatest number of deaths (according to the Sub-assistant Surgeon of Akyab) occurs from the 7th to the 20th day.

As regards the dietary of the people, it varies somewhat according as they are Hindus or Mahomedans, rich or poor, and as the part of the country they inhabit. In Bengal and Orissa, rice, dall, fish, ghee, milk, and vegetables, form the principal articles of food; but the lower orders, unable mostly to afford milk or ghee, are obliged to content themselves almost solely with rice, seasoned, perhaps, with some coarse kind of dall or fish, or greens. In the Upper Provinces, ground-wheat, in a great measure, takes the place of rice, and fish does not appear to be in very general use. The poorer classes, however, who cannot afford wheat, are obliged to feed on grains of a very inferior kind. In Sirsa and the districts around, *Bajrah* (*Holcus Spicata*), and *Mote* (*Phaseolus Mar* or *Radiatus*) are said to form their principal pabulum of support. The Cashmerians, according to the Sub-assistant Surgeon of Umritsur, are in

the habit of living more on rice and vegetables than wheat and dall. The Mahomedans everywhere are in the habit of using some meat in addition to the articles enumerated above.

A very remarkable bill of fare, however, has been returned by the Sub-assistant Surgeon of Akyab as being in vogue among the Mugs. Elephants, horses, buffaloes, cows, stags, alligators, crocodiles, hogs, hares, monkeys, tortoises, snakes of all sorts, mice, frogs, birds of every kind, fishes without exception, lizards, crickets, maggots, &c. &c., all these and more enter into it and contribute to diversify the items. It is not without reason, therefore, that a Mug says of himself, that wherever and in whatever circumstances he may be placed, he is never in danger of being starved.

The hours of meals appear to vary very considerably according to habit and occupation. Among the labouring classes the principal meal is generally taken at midday, and another a little after sunset. Some also take a third meal in the morning, consisting of *Panta Bhat*, or rice boiled on the preceding day and kept in a wetted state. The upper classes take the first meal commonly between 9 and 10 A. M., and another about the same hour at night, with some sweetmeats by way of tiffin during the middle of the day. In some of the Upper Provinces, while the Mahomedans allow themselves two meals a day, the Hindus are very often satisfied with one, consisting of *chuppatties* and *dall*. The quantity of solid food consumed at each meal varies from 8 to 12 chuttacks or from a pound to a pound and half in weight.

The processes to which the food of the natives is subjected by way of cooking, are, for the most part, of a very simple character. Rice and dall are boiled—the latter with the addition of a little ghee or oil, and salt; and flour, rolled over into slices of various thickness, is baked and then rubbed over with ghee. Fishes and vegetables are sometimes fried, and sometimes dressed into curries,—among the poor with the addition of some oil, turmeric, and chilly, and among the rich, of aromatics and ghee. Acidulous substances too are occasionally mixed up with them. There are also some of what may be called 'made dishes,' such as *polow* and others; but they are far from being in general or ordinary use, unless it be among some of the richer Mahomedans. They are prepared and served up mostly on occasions of festivity and entertainment.

The articles of food consumed raw are mostly the fruits. The chief ones in Bengal are mangoes, plums, guavas, cocoanuts, palm, bael, apples of various kinds, dates, blackberries, rose-berries, pomegranates, liches, oranges, musk and water-melons, jacks, plantains, cucumbers, &c. &c. The first five are



eaten both ripe and unripe, the others generally in a ripe state. Jacks, plantains, and melons, may also be taken unripe, but then commonly dressed in the form of a curry. The albumen of the cocoa and palm is relished much, and made into various kinds of cakes with sugar. Some of the greens are also eaten raw, chiefly by the lower classes,—such as turnips, radishes, sweet potatoes, &c. In Sirsa, the cultivating classes are said to eat *Bajrah* raw, and the Bowreas or gipsies and the Bhutties, meat and fish only in a semi-roasted state. The fruits indigenous, and in most common use, in that part of the country, besides wild plums, oranges, and melons, are *kukree* (green cucumbers,) pingoo (wild capers,) and pilloo (wild currants,) though in the gardens of the rich, a number of other fruits, such as mangoes, guavas, peaches, apples, grapes, pomegranates, &c., are likewise cultivated at present. In Umritshur, a very few fruits, except plums, cucumbers, and oranges, are said to be found. The large variety of wild fruits, both ripe and unripe, alleged to be consumed by the Mugs, would seem to form a suitable dessert after the very diversified course of dinner to which they have been treated already.

The wages of ordinary labour do not appear to be uniform all over the country. The rates in the districts from which communications have been received, are given below.

Furreedpore,	4 to 5 Rs. per month.
Umritshur,	2 as. per day.
Akyab,	7 to 10 Rs. per month.
Moorshedabad,	2 as. per day.
Sirsa,	3 Rs. per month.
Cuttack,	2-8 to 2-12 ditto.
Chittagong,	5 Rs. ditto.
Cutwa,	4 Rs. ditto.

Relatively to the current food of the country, these rates, in the Returns from Furreedpore, Sirsa, Akyab, and Cuttack, are said to be sufficient for the labourer's want; but not so in the other returns. In that from Chittagong, however, Dr. Beatson, the Civil Surgeon of the place, has recorded his dissent from the Sub-assistant Surgeon in a marginal note in the Return, and believes the rates to be enough. It is impossible to decide the question in a general way, until further and more precise information on the subject has come to hand.

Here for a moment let us pause, and see if the bill of fare from which the inhabitants of this country, the Hindus among them, at least, have to choose, be sufficiently generous in itself for the requirements of the human system. Rice and wheat are the great staples—the former in Bengal and Orissa, and the



latter in the Upper Provinces. As between these, the teachings of chemical analysis aside, the superior muscular make and physical strength of the Up-countryman living on wheat, as compared with the Bengali or the Oorya depending mainly on rice, will bespeak at once the higher nutrient powers of the first. But whether even this by itself can be said to be enough, or rather the best suited to the nature of man? My own impression is that it cannot. For even if it could be supposed for a moment that the *stamen vitæ* derived from wheat would impart the same degree of innate vigour to the frame, as that derived from animal food; there can be no question as to an article obtained from the vegetable kingdom being, in consequence of its carbonaceous nature, more difficult of assimilation than meat, and hence requiring a greater amount of nervous energy to be spent upon the digestive process. This, of course, would leave less of it at the disposal of other organs and parts. And does not this furnish a clue to the explanation of many of the defects in the national character of the Hindus?—the general prevalence among them of a phlegmatic temperament, and their natural disrelish for all sorts of active exertions and pursuits? Nor let it be supposed a humiliation for the mind to be deemed in any way as dependent on the quality of food and drink. Without proper alimentation, and the consequent flow of a sufficient amount of nervous energy, no organ can sustain itself in a state of high functional activity for any length of time; and to this rule, no exception appears to have been made in favour of the brain. Indeed, it is the deficiency of this energy alone, which renders rest and inactivity, both physical and mental, which would almost be agonising to an European, a luxury to a native.

The narcotics commonly used for purposes of smoking, are tobacco, churus, gunja, and opium. Of these, tobacco is almost in universal use, the others being resorted to by certain classes only,—generally men of low and degraded habits. When used in the form of a *chillum*, it is mixed up with molasses, sometimes a little lime or *sajee matee*, and, among the rich, some other ingredients of a flavouring kind. The Ooryas and Mugs smoke it in the form of segars;—the latter generally mixing it up with a certain other kind of leaf, called by the natives the *baul patta*, and appearing from a specimen, forwarded by Babu Aunoda Chander Kastogri, to belong to the *Combretum Costatum*—a gigantic climber common to the East. It is said to impart an aromatic odour to the smoke. The Seiks are not in the habit of smoking; they use *bhang* instead. It is worthy of mention in this place, that in Bengal the habit of smoking does not prevail among women of the higher ranks;



but matters appear to be otherwise in Orissa and the Upper Provinces.

The ordinary every-day dress of the natives, during summer, consists, for the most part, of a single sheet of cloth from 8 to 10 cubits in length and 2 to $2\frac{1}{2}$ in breadth, fastened round the waist by a knot, and a portion suspended in folds or plaits from the forepart of the abdomen a little above the navel. In females, this part is taken round, and serves to envelope the upper part of the person. Loose trousers are also in use among the Mahomedans, and some of the up-country people; but, generally speaking, the upper part of the body in the male sex is left exposed. Among the lower classes, a mere piece of rag, carried round the waist, is often all the clothing worn during the hot and rainy seasons. In the Upper Provinces, however, among the Punjabese and Cashmerians, in particular, the females adopt a much better style of dressing than their sisters of Bengal. Instead of a single sheet for a wrapper, they use, for purposes of apparel, various prepared garments made to suit the different parts of the body. They are also in the habit of wearing shoes, the use of which tyrant custom has interdicted among the women of Bengal; so that those of the first ranks among them are obliged to go barefooted even in damp and cold. During the cold season, shawls, broadcloth, flannel, &c. are worn by the well-to-do, while the poorer classes have recourse to blankets, thick linen, or cotton quilts. The very poor, however, have seldom more than some tattered pieces of rag stitched together for winter clothing. But even the rich, however well clad in the upper parts of the body, are commonly in the habit of leaving the legs bare and exposed. Stockings and trousers though coming into use, as yet, in this part of the country at least, form parts only of the official dress, and are seldom worn at home. Among the Mahomedan gentry, however, they appear to be in more common and habitual use. The Mugs, besides dressing quite as sparingly as people here, are in the habit of going without shoes. It is, in fact, considered a mark of disgrace among them to put them on.

The want of proper clothing among the poor has, in the majority of Returns, been ascribed to necessity alone; but in some, habit is also referred to as not without its due share of effect. That the latter opinion is not altogether unfounded, appears from the fact that those in the employ of European gentlemen, are generally found to be well and decently dressed, whilst their fellows, earning as much or even more by some different calling, satisfy themselves simply with their primitive style of dress.



The practice of anointing the body with oil, so commonly prevalent in Bengal, does not appear to be in general vogue in the provinces higher up. The Ooryas, however, delight in pounded turmeric and mustard oil mixed up together.

In none of the districts under notice,—(with the single exception of the subdivision of Cutwa, in some of the villages of which Act No. XX. of 1856 is said to have been enforced, and *pukka* drains constructed in the town); does anything like a proper system of drainage appear to exist, or any conservancy arrangements to be in force. Whatever in the shape of conservancy there is, is entirely in the hands of the villagers themselves, and consists simply in finding some sort of passage for the rains. It appears, too, from the Returns from Furreedpore, Chittagong, Moorshedabad, and Cuttack, that those parts of the country are liable to periodic inundations during the rains; and that when the waters subside, an abundance of moisture is left behind to produce surface exhalations. The districts abound, besides, with jungles and swamps. Cutwa, though seldom subject to inundations and free from jungles, is not without marshes and swamps. In the districts of Sirsa and Umritshur, the villages are said to be commonly erected on elevated grounds, and as a rule, to be exempt from inundations. Umritshur, moreover, is alleged to contain no swamps and but little in the shape of jungles. But not so Sirsa; which, besides being studded with marshes and jheels, has a jungle of several miles in extent along the banks of the Ghugger and Budda streams. Here in some of the lowlands, too, notwithstanding the sandy nature of the soil, sufficient moisture is left after the rains to produce exhalations from the surface. The territory round Akyab is reported to be thickly covered with jungles and marshes, and subject to frequent inundations besides.

As to the state of village tanks, they are, generally speaking, but little taken care of, and are liable to a hundred sources of pollution, such as from ablutions, cleansing of utensils, droppings of various kinds, the growth of weeds and aqueous plants, and the like. Nevertheless, many of the larger ones among them (as stated in the returns from Cutwa and Moorshedabad) are found to contain good and transparent water. That in the smaller ones, however, is mostly turbid and unwholesome. Several of these, too, dry up during the hot months of the year, and give rise to marshy exhalations. This is particularly the case in the district of Sirsa, and where, in consequence, the tanks have all to be annually cleansed and repaired. In Umritshur, a few tanks are alleged to exist in the town alone; in the villages, wells are the only source for



the supply of water. The Mugs, though otherwise an exceedingly dirty people, are said to be very particular about the water they drink, and carefully to guard their tanks from the usual sources of pollution alluded to. Weeds, however, are suffered to grow and vegetable matter to decompose in them.

Except in Umritshur, where vegetation is scanty, the tanks in the other districts are alleged to be most commonly surrounded with trees.

The houses in a village are very variously situated in regard to the tanks,—some being in their immediate neighbourhood, and others at a considerable distance from them. The more substantial villagers, however, in Bengal at least, have always one or more tanks adjoining their residence.

In the Returns from Moorshedabad and Furreedpore, village houses are said to be situated at sufficient distances from one another to admit of free ventilation, if proper measures were adopted for the purpose. But the fact is that it is little cared for; and a single aperture, serving for passage in and out, is often all the opening left for the admission of light and air. In the rest of the Returns the houses are alleged, besides, to be more closely huddled together than is consistent with the free circulation of air.

The average dimensions of a village house in the districts under notice are—

Districts.	Dimensions in feet.		
	Length.	Breadth.	Height.
Furreedpore, ...	20	8	0
Umritshur, ...	12	5	7
Moorshedabad, ...	24	12	13
Sirsa, ...	8	8	8
Cuttack, ...	21	9	0
Chittagong, ...	24	15	9

The diseases prevailing severally in the districts, from which Returns have been received, are as follow :—

Furreedpore.—Ague, diarrhoea, dysentery, spleen, rheumatism, and catarrhal affections.



Umritshur.—Fever—chiefly intermittent, cutaneous affections, dyspepsia, consumption, rheumatism, dropsy, and urinary calculi.

Akyab.—Fever, rheumatism, disorders of the bowels, colic, and venereal affections.

Moorshedabad.—Fever, measles, diarrhœa, dysentery, rheumatism, affections of the liver and spleen, asthma, bronchitis, ophthalmia, leprosy and other cutaneous affections, and venereal complaints.

Sirsa.—Fever, bowel-complaints, affections of the chest, scurvy, dracunculus—leading to anchyloses and contractions of the joints, cutaneous diseases, ophthalmia, nyctalopia, and impotence.

Cuttack.—Fever, colic, dyspepsia, dropsy, elephantiasis, leprosy, syphilis, and insanity.

Chittagong.—Intermittent fever and spleen, secondary pneumonia and cerebral affections—after fever.

Cutwa.—Fever, dysentery, diarrhœa, and gonorrhœa.

Cholera and small-pox are common to all the places, and occur very often in the epidemic form. Fever also is numbered among the epidemics of Furreedpore, Moorshedabad, and Cutwa. In Sirsa severe visitations of any kind are said to be uncommon and rare.

Bowel-complaints are stated to be most rife in Akyab from March to June, when edible fruits are most abundant, and which are voraciously devoured by the natives whether ripe or green; in Sirsa and Umritsur, towards the end of summer; in Cutwa, Furreedpore, and Chittagong, during midsummer and the rains; but in Moorshedabad, during autumn and winter.

Several instances have been adduced of the effects of habit and profession in producing a greater liability to disease in some classes than in others. A striking one, in particular, occurs in the Return from Umritshur. Of the two classes—the Punjabese and the Cashmerians,—there, the latter besides faring worse as to diet, are compelled by the nature of their occupation as shawl-weavers, to remain confined from morning to evening, with only an hour's interval during the middle of the day, in small and crowded rooms; and the result shows itself (as stated by Babu Mritoonjoy Bose) in their being, far more frequently than the others, the victims of pulmonary consumption. The effects of insufficient nutrition and dirty habits, also manifest themselves in their children by a kind of gangrenous ulcer often breaking out in the face towards the close of the rains,—but which is seldom to be met with in the children of other classes. The beneficial effects of open air, on the other hand, are illustrated by the marked exemption, which, in the Return from



Furreedpore, the agricultural classes are alleged to shew from the prevailing diseases of the district, as compared with people of sedentary and in-door occupations. Of the diseases commonly met with at Sirsa, dracunculus is stated to be peculiar to the cultivating classes alone, and is ascribed by Mr. Minas to their drinking the stagnant water of the tanks. Cutaneous affections are most common among the tanners, and are owing to their not cleaning themselves properly after work when water in the tanks is scarce; and nyctalopia occurs most frequently among the Baugri jauts, but disappears always on some generous diet being allowed. Among the Ooryas, leprosy and elephantiasis have been associated by Babu Denobundoo Dutt, with their habits of eating *panta bhat* and drinking dirty water from the wells, for the higher classes who can afford to be more particular as to food and drink, are seldom seen to be affected with them; and insanity, in most cases, he says, "is brought on by hard smoking of gunja." The pernicious effects of this latter habit have been pointed out also by Babu Taruk Chunder Lahorry, of Moorshedabad, by illustrative cases of asthma and mania which he has clearly traced to it. In Chittagong, Dr. Beatson, in another marginal note in the Sub-assistant Surgeon's replies, notices the appearance of the endemic diseases of the district (ague and spleen) most commonly among those who, by the situation of their dwellings, are the most exposed to marshy exhalations; and the results of insufficient food and clothing are indicated generally by the fact, referred to in several of the Returns, of the poor being more obnoxious to the prevailing distempers of the place than those more comfortably off.

A remarkable illustration of the power of habit operating in a different way—occurs in the Akyab Return. According to Babu Annoda Chunder, the Sub-assistant Surgeon of the place, the Mugs, though living in the midst of marshes, and notoriously dirty in their habits, are found to enjoy a remarkably good health upon the whole; and severely and fatally as the fever of Arracan tells on foreigners, it assumes generally a mild form when the natives are the subjects of attack. Facts of the kind are certainly most interesting in their way; and though commonly slurred over with a vague reference to the effects of acclimatization and habit, may possibly, if subjected to a minuter kind of investigation than hitherto they seem to have been, result in some discovery of practical importance.

Here I close my analysis of the Returns. It would certainly be quite premature to attempt any generalization, at present, with only such scanty materials at hand. Returns from other parts of the country must be waited for, and information on



points not embraced by the queries circulated already procured, before we can arrive at a right understanding of the various abnormal influences at work in different parts of the country. In regard to epidemics, in particular, regular meteorological registers, kept at diverse places and stations, and by the help of which, the observations of healthy and unhealthy years, and contemporaneous observations in different parts of the country, may be variously compared with one another;—are indispensable for the purpose of elucidating their laws. Nevertheless, with the limited data even now in hand, it is not difficult to catch some glimpses, at least, of the connection between many of the prevailing diseases of the country and their source in the habits of the people, or the environment in which they suffer themselves to live. Several instances of this have been already adverted to, as pointed out by the gentlemen from whom communications have been received; and to whom—by the way—the best thanks of the Society are due for the hearty manner in which they have responded to its call. Others, besides, will readily suggest themselves. Catarrhal affections, which occur mostly at the setting in of cold, may, without doubt, be traced, in the great majority of cases, to exposure and want of proper clothing; and bowel-complaints, to the habit of eating green and indigestible fruits, or the absence of requisite protection against sudden vicissitudes of temperature during the rains. Fever and spleen may be linked at once with ill-ventilated houses and swamps and putrid tanks; and a vast amount of miscellaneous evils, in the shape of venereal, rheumatic, and cutaneous affections,—may be ascribed even to the degraded morals of the people, conducing in so very large a scale, whether directly or through the laws of hereditary transmission, to undermine the system by infection with the venereal taint. What a field then is opened here for the alleviation of human suffering and woe! What a field for the exercise of humanity, for every enlightened and generous man! And yet in idle complacency we sit with folded hands, while millions of fellow beings, whom it were possible to rescue by proper attention to the laws of private and public hygiene, are crouching under the weight of disease, or being dragged into their graves by the ghastly spectre of death. Money, alas! is the great bugbear in the way—of both the community and the state. But when will the truth be imprinted on the public mind, that true economy lies in preserving the health and lives of the people—the real source of all national wealth? In a case like the present, too, enlightened and rational self-interest must point the same way in which humanity tends. For in spite of all that one can do for himself,—by neglecting



even some distant village, there will be left a nidus for the generation of some subtle virus which—wafted on the wings of air,—may cross his stately lawns and break through his iron bars, and,—penetrating his lofty saloons,—there lay him or those dearer to him than himself, prostrate with its fatal sting. Thus, indeed, it was that the poison of cholera was wafted from these shores to every part of the world. In right earnest, then, let the state and community, both, take up—what hitherto they have almost entirely neglected, much to their own cost, too,—the sanitary improvement of the country. Yes, surrounded by the ghastly brood of death, the country herself calls on her intellectual conscripts to unite into a mighty corps, and put into requisition the great armoury of science, to repel the terrible foe. At her bidding let one and all arise, and with brain and purse wage eternal war against enemies that are constantly decimating society, by carrying off alike the young and the old : so that death, at last, may have his own “in course of nature” alone,—life yielding to him by slow degrees—according to the immutable decrees of fate.



REPORT
OF THE
SOCIOLOGICAL SECTION,
BY THE
REV. J. LONG.

Thursday, April 26th, 1861.

The science of *Sociology* to promote whose objects we are met this evening, is one of modern origin, in fact so modern that there are many educated persons who know not what the word means. It is not then economical, ethical, legal or political science, though it borders on all these—it is not on the one hand the Socialism of Fourier and Robert Owen, which regards material comfort attained through man's industry as the highest end or *paramartha*, thus ignoring a future life and sinking humanity into the mire of materialism;—nor is it on the other hand *Political Economy*, which relates principally to the production and distribution of wealth;—nor is it *Statistics*;—nor is it merely *Ethics*, which refers to man's welfare as a moral being. *Sociology* is distinct from Politics or the science of government, though its enquiries form the basis of all good government, as the Commissions on various subjects of social enquiry in England and Lord Shaftesbury's labours shew.

Sociology pre-eminently aims at what Pope recommends: "The proper study of mankind is man;"—by it we gain the real or esoteric history of a people, of the *masses*, and not of what history chiefly dwells on, Priests, Kings and Warriors, their controversies, battles and intrigues—as is specially the case with the modern history of India. Sir J. Macintosh referring to the value of works which illustrate national character observes,—“Manner is the constant and insensible transpiration of character; in the thousand nameless acts which compose manner, the mind betrays its habitual bent.”

The English in England, so pre-eminent for their efforts to relieve the poor and helpless in foreign lands, have had their attention gradually directed to various social evils in their own land, and one way to remedy them was found, to make investiga-



tion into their nature and extent,—hence the origin of the *Social Science Association*, which enrolls more than 2000 members, some of whom are *Ladies*, who have written papers and organized *Ladies' Associations* to co-operate with its objects. Lord Brougham, Lord J. Russel, and the Earl of Shaftesbury have given opening addresses at the yearly meetings. France has entered with zest into the subject, and even in Russia the working of the Association has been watched with great interest, while full accounts of the proceedings of the sections have been given most fully even in the St. Petersburg journals.

The field in this country is very wide, and while it is rather difficult, on account of sociology bordering so closely on other branches of moral science, to give a precise definition of the word, it will be best explained perhaps by pointing out the scope of its objects in this country. Sociology teaches one lesson which is much needed every where, and is not without its use even in England—that a people's prosperity mainly depends *on themselves*: the Government may *aid*, but the impulsive movement for its success must arise from the people. Well has a great statesman, Monsieur Guizot, characterized as a “gross delusion the belief in the sovereign power of political machinery:” to this many of the social evils of France are attributable. The French thought they could first reform society without reforming themselves, thus illustrating Sir J. Macintosh's remark “Constitutions cannot be made, they must grow.” Paper constitutions won't do: there must be a root in the social condition of the people. Lord Shaftesbury in his addresses at the Social Science Meeting observes that this as one of the good effects of social science, “It is no small success to have taught the people to see that to cry out, A law a law, on all occasions of an evil felt, or an evil detected, is to check private individual and combined exertion, and to keep men from the wholesome conviction, that in many matters they must be a law unto themselves. Anything that will detach men from the pursuit of ‘splendid phantoms’ must be of great value.”

The study of Sociology then is of special importance to educated natives, as tending to draw their attention to what lies at the basis of all good government—the social condition of the people: Utopia may be fine as a theory, but what is it in practice? The study of Sociology will also tend to remedy a great defect in this country—the *awful chasm which exists between the educated and uneducated native*: it will do in this department what natural history does in another, bring different classes together on common ground, and so lessen prejudice. We have heard many Europeans declare that the sports of the field



were the first things that impressed them favourably towards natives, as thereby they came in contact with the common people and learned to know their good qualities and social condition. Depend on this, if the educated class will ignore the masses, the masses will not ignore them, but will be a drag and a chain on them. The educated native must not imitate the philosopher who being disturbed in his study, by the servant informing him that part of his house was on fire replied, "Tell your mistress: you know I don't attend to household concerns."

One of the reasons why so little in the way of writing has hitherto been contributed to sociology by educated natives and others, may have been the system of education that has prevailed and is prevailing, which cultivates memory to the exclusion of almost every other faculty and particularly the necessary one of observation, while in schools the study of natural history in the upper classes and of object lessons in the lower is too generally ignored, hence the young man comes from College looking too often on the objects around him "with a brute unconscious gaze." Without the practice of close observation little progress can be made in sociology, which is to be prosecuted not from books but from personal observation of men and things.—As no man will gain much knowledge of plants in a jungle without a Botanical eye, so neither will much progress be made in the knowledge of the various ramifications of society, unless the attention be directed to them by preparatory studies: this neither Mathematics nor History, excellent though they be in themselves, can effect. The learned education of former days has led the Hindu mind to study the quiddities of Metaphysics, rather than external objects, which were held in contempt, they applied to scholastic Metaphysics and not to Mental Philosophy on the Baconian method of induction.

The time is very favorable for sociological investigations as an *Educated Class* of natives is rapidly rising, qualified not only to investigate, but also to write the results of their investigations.

Railways opening out will enable persons hitherto pent up within the Marhatta Ditch, to travel in the Mofussil. The East India Railway gives them the opportunity to proceed cheaply and quickly to the districts of Birbhum, Murshedabad, Burdwan, Hugly, Purnea, Malda, Rungpur, hitherto almost *terra incognita*—the Mutla Railway will soon afford them facilities for visiting neighbourhoods once the seat of a flourishing civilisation; the Eastern Bengal Railway will bring Rajshahi, Pubna, Nuddea close to view. All those districts contain abundance of matter for enquiry relating to the rural population and the social relics of former dynasties—particularly the Musalman.—Danvers in his



Railway Report has well remarked on this subject, that, as one result of the Rail in India, "the facilities for personal intercourse, and the spread of intelligence afforded thereby will not fail to improve the social condition of the country."

As *debating societies* among Hindus and Englishmen are rapidly springing up, it would be well to have their aims of a more *practical* nature, directed to points whose consideration would have a useful effect on the mind, I must confess I have been often pained in attending some of those meetings, and I have gone to many, to hear read, an essay merely an abridgement of a book, or perhaps some semi-political paper, only calculated to excite a discontented spirit. What a field for discussion and essays would sociology open, and one hitherto so little gleaned.

Natives can do this. Europeans cannot penetrate into the *Antapur*, or unravel the intricate web of native society; in various cases where they have attempted to write about it, it was in the spirit of the Marquis de Custine, who, after a few months' residence in Russia, wrote several works about every thing in it, —boasting "that he saw nothing but guessed every thing." European travellers in India have consequently from the *andāj* (guess) nature of their data, made most glaring mistakes. Even Ward in that useful and laboured work on "The Manners of the Hindus," though he bestowed 20 years on the researches and took native guidance, often confounds *examples* with *exceptions*. It is no cause for surprise then, if Europeans travelling through the country with the speed of a Cossack, seeing only a few cities and anglicised natives, should make great blunders. What La Place said of astronomy is applicable to social science, "We have principles and science in abundance, give us more *facts*." An American writer, to shew the difficulty of foreigners understanding natives easily, mentions he was 25 years in Scotland and fancied he understood the Scotch, then he came to England and supposed he should soon understand the English—but after 25 years in England also, he began to think he understood neither the Scotch nor the English!

In submitting this annual Report of the Sociological Section of the Bethune Society, I have to state that being quite a new subject in this country, much time was spent in *mapping out the field of action*, for though various men were found willing to work, they wanted to have the sphere pointed out, hence at one of the early meetings of the Section held in December 1859, the following was stated.

"To the student in sociology, India offers a vast and inexhaustible field of investigation and research, and the natives themselves are in the most favourable position to furnish correct information on the social system of the Hindus, as foreigners



have little opportunity of acquainting themselves with the internal workings of native society. At an early meeting of this section it was considered desirable that each of the members should propose a subject or subjects for investigation, and that a selection be made from them for the contribution of papers by the members. It was further recommended to the members to prosecute the study of sociology as lately raised to a science, and also of French and German writings on India, in order to enable them to bring the light thus obtained to bear upon the topics selected for the papers."

The subjects proposed in the Section this year have been as follows.

1. *Menn's Scheme of Hindu Society*, how far its principles harmonize with the laws of nature, and are compatible with the progress and the well-being of the community.
2. *The existing organization of Hindu Society in Bengal* with reference to the 36 hereditary castes or *Barnas*, of which it is composed.
3. The modifying influence of *Mahomedan and English conquests* on Hindu Society.
4. How far natural causes have operated to overturn the *Scheme of Menn*?
5. The influence of *Buddhism* on the condition of Hindu Society?
6. *The social influences* of the existing Educational Institutions of Bengal.
7. What ultimate influence are *Railways* likely to exercise on Hindu Society?
8. The state of Hindu Society in *Orissa*, compared with that in Bengal.
9. A critical analysis of Mr. Ward's work on the Hindus, as respects their social condition, together with a sketch of the improvements that have taken place in the social condition of the natives within the last 50 years.
10. A History of Old *Hindu families* in Calcutta.
11. Under what circumstances is the adoption by the natives of *foreign manners and dress* desirable, and to what extent has it been carried?
12. The nature and extent of accommodation in *native houses* and to what degree susceptible of improvement?
13. The topics of *conversation* in general in Hindu Society of the present day, as contrasted with that of former times.

Essays have been sent in to this Section on the following subjects:—

1. *Topics of Conversation in Hindu Society*.

This paper, the production of an acute observer, treats of the various subjects of conversation among the different classes of natives,—and is to be specially commended, because the writer is not a copyer of books but has drawn fresh from observation.

2. *Social influences of the Educational Institutions of Bengal*.

Written by our worthy Secretary, and chiefly from his own observation, he points out education in its effects on an expiring state of society—education begun at 5 years of age,—schools introduce better clothes, cleanliness, a demand for various manufactured things, promote order,—are against caste, bring the



various classes of society together,—the pupils become in after life socially elevated—the Medical College,—schools for agriculture,—moral training,—Bengalis not a mere race of talkers—paid lecturers needed,—debating societies short-lived, notices of those existing 23 years ago, and of the Phrenological Society and Society for the Acquisition of Useful Knowledge.

3. *The Marriage System of the Bengalis.*

The author treats of—the origin of the sexes and of marriage according to the Shastras—the marrying a brother's widow—plurality of husbands—eight ancient forms of marriage—kulin marriages.—Marriage ceremonies,—marriages among different castes.

The essay evinces a considerable amount of research in books.

4. *An account of the Sunderbunds.*

Relates more to the land tenure than to the people.

5. *Criticisms on Ward on the Hindus.*

Treats of mistakes made by Mr. Ward on the social condition of the natives. This shews considerable investigation, it came in too late to be noticed in our appendix, but it will receive due attention next year.

I now submit a *series of questions and subjects for essays* on the various branches of sociology. One of the main reasons that led me to frame these questions and subjects on sociology was not merely the novelty of the subject, but the utter uselessness of asking natives or even Europeans a question in the form, "Tell me all you know about it :"—the result is you either get information you may possess already, or information on points you do not require ;—you must *aim point blank*, if you wish for a result ; you must make grooves or channels for thought. It was the conviction of this necessity that led the Calcutta School Book Society, the Royal Asiatic Society, and other bodies to begin their operations, by framing a series of questions and desiderata.

These questions I constructed from notes I had taken in reading or from observations made in the Mofussil at various periods or from points suggested by natives. I have spared no pains in searching for suggestive enquiries in the Bengali, Sanskrit, French, and German languages.

With respect to obtaining answers to many of these questions, your President Dr. Duff and myself have had some unfortunate experience sixteen years ago on another topic, when we issued a series of questions on education, and received very few answers ; but I believe times are improved, in the *Medical Section* of this Society, a considerable number of replies have been obtained, and I have been told by many natives, they will answer the questions when they ask for *definite* and *precise* information.



Messrs. Smith and Woodrow have assured me that in their department of education, they will co-operate by giving some of these questions to intelligent masters, and by making them exercises for *Essays in Schools*. Our President and others have promised similar co-operation. They may form subjects also for *Essays in Debating Societies*,—and I trust that a volume may be compiled from the answers to those questions, and from the *Essays* which may be of value to Europeans both in India and Europe as giving information drawn from *original* sources.

I.

ABORIGINES.

The *Dhangars* and other hill tribes who do such important though dirty work in the drainage of Calcutta are deserving notice, as to their habitations, religion, customs, language. Sir J. Malcolm's *Essay on the Bhills*—Hodgson's valuable papers on the Aboriginal tribes, &c., will suggest various kindred enquiries regarding them. This subject must not be despised as a mean one; such men as Dr. Prichard, Hodgson &c. &c. devoted much labour to it, and Sir G. Grey, when Governor of New Zealand, learned the language of the Aboriginies and has since published a most interesting work on "the Poetry of the New Zealanders;" he lived among them for a time, and has recorded all their legends, traditions, &c. Who would have thought that the Maoris living in the *ultima Thule* of Civilization speak a language in which there are many words derived from Sanskrit—as little as that the Santals, British subjects, whom you see occasionally in Calcutta, and who can be easily visited now by rail, speak a language, having strong affinities with the language of the Tartars of Central Asia, Russian subjects. The Hindu books in poetical legends describe those aborigines as monkeys, so Megasthenes writes of Indians one-eyed, without noses, wrapped up in their ears, (*hastikarnas*), even Marco Polo and Ptolemy believed that men with tails had a real existence. I understand that among the *Dhangars* of Calcutta, much mortality prevails, owing to the wretched diet they use—they live in leaf houses on the banks of the Eastern Canal.

1. The mode of living and food of the *Dhangars*, and other aborigines in Calcutta, and in their native place?

2. Ditto of the hill men who go as *coolies* to the *Mauritius* and West Indies.

Their social position and relation to *Zemindars* on their return, how far do they acquire habits of thought and independence, a knowledge of improved means of cultivation, a taste for a higher order of amusements, and a greater pride of personal appearance?

3. Are the *Dhangars* subject to much disease in Calcutta, from entering drains &c.?



4. Do the Dhangars' wives and families accompany them to Calcutta? What connexion do they keep up with their native villages?

5. The ceremonies observed by the Sonthals, Dangars, &c. at births, marriages, funerals? What mode have they of settling their disputes? how far do they believe in witchcraft, omens?

II.

AGRICULTURE.

How desirable it would be in this country to see the zemindar, like the English country gentleman, attending agricultural shows—joining with his tenants in the sports of the field, administering justice on the bench, sympathising with his rayats in their difficulties—having, from an agricultural education, that scientific knowledge of rural husbandry which would interest him in the country, and thus enable him to be independent of the false information of the gomasta.

1. How far is the charge true that the *Bengal ryot* is *lazy*—if so, is it owing to his not having a proper incentive to industry, or to his natural disposition?

2. In what cases have many *ryots* risen to be *peasant proprietors*; what effect would such a class have on cultivation as compared with large capitalists? Would the results be similar to those in France where peasant proprietorship fosters economy, a respect for property, forethought and industry?

3. How far are *zemindars*, *absentees*?—the causes? remedies?

4. To what extent is a taste for *gardening* spreading among zemindars, and educated natives—how could it be more extensively promoted as a morning amusement for natives in offices? instances of any natives who have devoted much time and money to gardening?

5. To what extent could *public gardens** be established in native towns?

6. How far would the introduction of the study of *agricultural chemistry* and of *the elements of Botany* in a popular form in Anglo-Vernacular schools tend to lessen that gulph which now exists between the educated classes and the rural population?

7. The practicability of *evening classes* for teaching the ryots to read.†

8. How far are the ryots becoming more aware of "the great world beyond their market town?"

9. *Poverty* among the ryots, how pre-disposing to disease? to cheating?

10. Would an *encumbered estate commission*, which has worked so well in Ireland, be suited for India?

11. Is there a strong desire for the possession of land among *ryots*, so as to lead to habits of prudence and economy?

12. Are there many remains of old *Jaghires* in Bengal?

* In the N. W. P. in 1852 10,000 Rupees were spent by Government in endowing public gardens. "The author of *Seir Mutakherim*" remarked last century "a garden, an orchard—being time out of mind as free to all the world all over India as is a well or a tank, nothing amazes and disgusts the Hindustanees more when they come to Calcutta than to find so many seats and gardens all shut up."

† I have met with a case near Baraset of an evening school attended solely by ryots. In England one per cent. of the rural population attend such schools. In France 12 per cent.



13. Is the minute *sub-division of land* according to Hindu law carried out much? what are its effects?
14. The proportion of *landholders* to the rest of the population?
15. To what extent do the ryots purchase things not *produced* in their own district?
16. Any cases of poor *ryots* who have risen to be zemindars or to a good social position?
17. Many *sub-tenures* amounting to ten?
18. Do many of the rural population *emigrate to towns*? the effects on morals and competition?
19. To what extent are the *zemindars* of Bengal rotting in idleness? its causes and remedies?
20. Are the ryots as attached to their *native villages* as formerly?
21. Has the *naib* as much influence as formerly over the zemindar?
22. Are *zemindars* as *litigious* as formerly?
23. Are the peasantry of Bengal, though *unlettered*, not ignorant? Give examples, illustrations.
24. Signs of *agricultural improvement* within the last twenty years as contrasted with manufacturing improvement?
25. How far is there a growth of a feeling of *independence* among ryots? its causes?
26. Are *Middlemen* on the increase? the evils inflicted by them in rack-renting, &c. &c.

III.

ASTROLOGY AND WITCHCRAFT.

Human nature in India, as in Europe, wishes to pry into the future, whether the fingers, the chattering of crows, or the stars are to be guides; in India the feeling against witches even lately was as strong as in England two centuries ago, thus in Mhow between 1800 and 1823, 2,500 witches were put to death.*

1. *Charmers for snake bites*, their numbers, pay, and how far really successful? the influence of music over snakes?
2. Are reputed *Expellers of Bhuts* or *Devils* many, their influence?
3. Various kinds of *mantras* such as the *panch mantra*, &c. &c.?
4. *Witches*, their localities, emoluments, number, how detected, any put to death last century in Bengal, the various kinds of witchcraft?
5. Divination by the hand; its various kinds, books on, is the practice general?
6. *Auguries*, by what birds? how taken; what is the reliance placed on them now?
7. *Mesmerism* or *Jhārdn Mantra*, to what extent known to the old Hindus—how practised now and by whom?
8. *Sleight of hand* tricks, the number and emoluments of its professors—instances of common tricks practised in Bengal?
9. Belief in *Fairies*, *Apparitions*, illustrations of its extent and influence? much on the decline?
10. *Gypsies* or *Nathis*, their numbers, morals, way of making a living? is their influence great? language, religion; ceremonies at marriages, births, funerals.
11. Casting the *evil eye* and other *incantations*.

* See Asiatic Annual Register, 1801. Asiatic Journal 1823, on trials for witchcraft among Hindus.



12. *Treasure finders*,—*thief detectors*, their numbers, profits? Ditto of *Fortune tellers*, *astrologers*.

13. *Dreams*, various kinds of? who interpret them, their profits? analysis of vernacular books that treat of them?

14. *Omens*, *Charms*, and signs of futurity, various kinds in use?

IV.

BEGGARS AND VAGRANTS.

The beggar class are not unworthy of consideration—in England they are the subject of various books—who does not remember Burns's poem on the Jolly Beggars, or some of the exquisite traits about them in Goldsmith's and Crabbe's Poems?

1. The proportion of beggars from *choice* or from *necessity*, or on *religious* grounds?

2. The extent of beggars' *beats*?—more beggars in town or country? their profits—their amusements?

3. Are beggars much addicted to *thieving* or other crimes? Do many beggars feign *blindness*, *dumbness*, *lameness* or practise other impositions?

4. *Fakirs* or *Sanyasis*—their habits, *beat*, profits, impositions,—which are worse, Hindu or Musulman fakirs? why do they call themselves *Padris*?

5. Mendicant *musicians*—their number, profits, skill, social position? Ditto of vagrant tradesmen.

6. Is not the present indiscriminate *charity* to *beggars* the mother of idleness?

7. Where do beggars find shelter in the *rains*, in *illness*?

8. Are *Hindus* or *Musulmans* kinder to beggars?

9. Why do most of the mendicant orders choose *Ram* for their patron?

10. Do many beggars flock to towns—the causes—how far is the want of peasant proprietorship a cause of beggary?

V.

CALCUTTA.

Calcutta the "city of palaces and pigsties" requires a separate Sociological niche for itself,—yet how little is really known of this *colluvies* of nations! *Purnea* furnishes *syces*,—*Orissa*, bearers,—*Behar*, *Durwans*,—*Central India*, *Opium* merchants,—*Kabul*, horses and fruit-sellers,—*Chittagong*, boatmen;—while those semi-Asiatics, the *Greeks*, supply leading merchants.

In prosecuting enquiries on the various classes of population, the trades and handicrafts in Calcutta and in the large towns of Bengal, I would point out as a model a paper on that subject in relation to *Bareilly*, published in the *Royal Asiatic Society's Transactions*, 1826, Vol. I. pp. 467-484 showing the progress in civilization, and illustrating, in reference to dress, amusements, food and houses, the peculiar usages, habits and wants of the people.

1. The proportion of the *adult population* born in Calcutta?*
2. The grouping of the Calcutta population into classes inhabiting different localities according to *occupation, social grade, birth place* or *fellow countrymen*?
3. *Jews*,† their numbers, wealth and social position in Calcutta? what impression do they make on Hindus? their language, how far Indianised?‡
4. *Parsis* in Calcutta, their numbers, social status—are their prejudices decaying—their *Panchayats*,—observance of New-Year's day, and of the birth day of Zoroaster,—ceremonies in honor of the dead.—Commercial enterprise,—charities,—language,—literature,—caste disputes; when did they first come to Calcutta; the condition of their females,—liturgies,—how far do they conform to Hindu practices?
5. *Armenians*,§ ditto, their decrease; any connection kept up with Armenia; their colloquial language?
6. *Greeks* ditto, how far do they adopt English habits and customs—their habits as contrasted with English merchants; any connection kept up with Russia or Greece?
7. *Mixed classes*, many such, as *Piralis &c. &c.*
8. *Young Bengal*; how far he really differs from his countrymen—how far is it mere varnish; are his peculiarities on the increase or decrease: are there many out of Calcutta? The period when young Bengalism arose?
9. *Chinese*|| in Calcutta; how far do they retain their country's mode of living? their morals, localities, numbers, language used, employments?
10. *Seiks*; are there many in Calcutta,—are many able to read the *Granth*; their occupation?
11. *Moguls* in Calcutta, their numbers; social position,—many directly of Persian or Tartar origin?
12. *Feringhees*, who so called, origin of the word?
13. *Musulmans* in Calcutta; are they very stationary or rising in social importance; their social morality as contrasted with that of the Hindus; are coffee shops common among them; ditto gambling; the number of Arabic, Persian schools among them,—their feelings towards Hindus? many Hajis or Saids among them? Do they read the *Kulma* on Friday in the mosques?
14. *East Indians*.¶ Not a fusion of the European and Asiatic as the English were of the Norman and Saxon—effect of intermarriage among themselves; are they dying out?
15. *Sanskrit Toles*. Are there more than 100: the highest emoluments in them as contrasted with former days?
16. *Jains*, their numbers and social position in Calcutta?
17. *Afghans* in Calcutta, their language, number,—do they assert their Jewish descent?
18. *Merchant princes* of Calcutta; is the name still applicable?
19. *Portuguese*; their number,** are they increasing;—their influence; the language used,—are any of pure origin: are their priests improving—the effect of their example on Hindus?
20. Accounts of the following *classes* their numbers, profits, social position,—bird sellers, glass-blowers, firework-makers, dyers, shell-workers, smiths, cattle doctors, yogis, weavers, divers, butchers, fowlers, bookbinders, druggists, bakers,

* Half the adult population of London is born in the Provinces.

† There were in Calcutta 307 Jews in 1837.

‡ Alexandrian Jews were hellenised.

§ 636 Armenians in Calcutta in 1837.

|| 362 in 1837.

¶ 4,746 in 1837.

** 3,181 in 1837.



gardeners, dhobis, confectioners, barbers, mehturs, shoemakers, carpenters, masons?

21. The origin of the names of the *Calcutta streets*, notices of the individuals, or of the circumstances or particular trades that gave them those names.

22. The various cries made in the streets by sellers?

23. Describe the social condition of the following classes, street sellers, street buyers, street finders, street performers, artists, showmen, street artisans or working pedlars, street laborers.

VI.

CEREMONIES, RITES.

1. *Shraddhas*, the ceremonies and expense connected with them now, as contrasted with former times, and in the various castes? Describe the various ceremonies as observed by different castes?

2. The chief *gram Devatas* in Bengal; the origin of their worship, the mode of conducting it. Are there more than 100?

3. Do *Hindus* or *Musulmans* expend more on their ceremonies?

4. The profits, numbers of those who *burn the dead*.*

5. Is the practice of *shaking hands* increasing much? Ditto of other English customs?

6. On *investiture of the Poita*, is it a practice to keep a piece of iron as a charm against *bhuts* (ghosts); is the party confined for 11 days?

7. Are *compulsory pujas* much practised, such as throwing an image at night at a rich man's door that he may be compelled to perform a *puja*?

8. Describe the worship of *Sitola*, *Nag Manasa*, *Ulaiva Devi*; the *Shasti*, *Dheki*, *Govardan*, and *Ganesh Pujas*, the origin, extent, expenses, by what classes conducted, the temples, festivals connected with?

9. *Agni Puja* and *Surjea Puja*, to what extent celebrated in former times; with what pomp and expense?

10. The various prayers and gesticulations connected with the *ahnik*, how far observed, and by what classes now?

11. Parrots how trained to repeat *Radha Krishna*?

12. How far are the following practised now generally observed and by what classes? First morning prayer to the Guru? the *Gangástak*; 24 *Mudrás*; *prandýam*? *Gumukhi*, *Gayatrijap*, *Artipancha pradip*, *Panchagni*, *Das sunskár*,—marks of caste or sects in the forehead,—women worshipping the *dheki* to cure the scurvy and itch.

13. *Fasting*, how far observed now compared with former days; the *Ekadasi* how kept, and by whom?

14. *Funerals*, expense of; ceremonies at; period of mourning, in different castes; women accompany the corpse how far; four modes of disposing of a corpse. Ceremonies observed now compared with those of former days?

15. Are *lamps* often sent floating down a stream as an omen?

16. Are thorns often put under the feet of a woman who dies pregnant?

17. Is there much observance now of *Das Snán*, *Das Dán*?

18. Describe the ceremonies and among what classes is the worship of books, birds, stones, fish practised?

19. *Jogi's* suspension of breath, the postures, &c. &c. how far kept up now, and by what training?

20. In the *Holi festival*, are there less obscene words and figures than formerly? Is a castor oil tree planted as a kind of maypole?

21. Is the *Navami* generally practised i. e. placing the first fruits of grain in harvest at the door?

* (*Rama Murda Farash* died twenty-five years ago worth five or six lacs which he gained by burning the dead at Nimtollah.)



22. *Chagda*, the reason of its being a city of refuge for outcasts, the numbers that resort to it? other similar places in Bengal.

23. Was burning a leper alive much practised formerly? Burying alive ditto?

24. *Human sacrifices* were formerly offered up at Kshir near Burdwan, at Yogadyea, at Kerilatta near Moorsshedabad, to Kali at Brahmanitola near Nadaya, to Manasa, at Chitpore, Kalighat,—any instances handed down by tradition?

25. How was the *charak* celebrated formerly? instances during it of the tongue being pierced with a bayonet—snake's tail put through?

26. *Birth ceremonies*; such as Jal karan or giving honey at first seeing a son: naming child 12 days after birth; bringing him out at 3 months' old; feeding him at 6 months' old, shaving the head at 3 years' old—how far practised and by different castes?

27. In *marriages* are the *laganpatrika*, tying the garments of parties together, much used? how do marriage ceremonies differ according to caste, rank, &c.?

VII.

CLASSES.

1. The *Upper classes*, though having good diet, food and clothes, have few children.

2. Causes tending to create a *middle class* in Bengal?

3. Any possibility of *approximating* the Hindus and *East Indians*, in closer mutual sympathy—was the aversion less in former days than now?

4. The *Portuguese* in Calcutta—how many of European origin, their peculiar customs and mode of life? their influence over natives? their morals and energy as contrasted with those of natives?

5. The use of a native *landed aristocracy* as a shield against the despotism of a ruler or of a multitude?

6. Are there many *black Brahmans*; are they of Hindu origin?

7. *Duration of life* among the upper and lower classes of Hindus, and the professional classes particularly, as showing the effect of temperance, mental occupation and bodily exercise?

8. Are old men very garrulous? are there many old men in Bengal?

9. Caste how far on the decline, its causes? are the *varna sankara* or mixed castes on the increase? illustrations of the lower castes rising in the social scale, the causes? are the rules for expulsion from caste strictly observed?

VIII.

COMMERCE.

The commercial classes in India have always occupied a conspicuous place, even in Menu's time they had the purse strings, and have been the least subject to priestly influence; hence the great sects of Jains in Rajputana and Central India, the Oswals of Behar, and Vaishnabs of Bengal have most converts among the traders, among whom are Marwari merchants and Ghosains. It was similarly the case in France among the Huguenots, and in the middle ages among the Belgians and Italians, while the municipalities were buffers in the middle ages against feudal oppression.



1. Why do *Buniyas* in Behar rank with *Vaisyas*? their education and social position in Bengal—many of them sureties—many foreigners among them—profits?

2. *Mohajans*, how far their exactions extend—are they less now than formerly, their numbers, do many rise to a high position in native society?

3. The *native merchant princes* of Calcutta,—their rise and social influence.

4. To what extent has the *decay* in ancient Indian articles been compensated by new sources of trade?

5. Indigo,* the accounts of it in Hindu books, also of tobacco, sugar, cotton.

6. The influences of *foreign trade* on the dress, food, habits, opinions, of Bengalis?

7. How far are merchants likely to form a quasi *aristocracy*?

8. The effect of *commercial legislature* on commercial morality in this country as shown in the Small Cause and Insolvent Courts?

9. *Merchants*, how far liable to the charge of ostentation, avarice, vulgarity? how far do they rise into a higher grade, their conduct in it?

10. *Shroffs*, their number, emoluments, social position?

11. Causes of the decreasing social intercourse between European and natives—remedies.

IX.

CONVERSATION AND SOCIAL INTERCOURSE.

Conversation, or the “feast of reason and the flow of soul,” is popular with the Bengali even more than with the European.

1. The subjects of conversation 20 years ago as contrasted with the present.

2. The subjects of conversation common to the *educated and uneducated* classes.

3. *Jesters* how far employed, their numbers and emoluments—is jesting much used? illustrations of it?

4. Are *Riddles* much used?—a collection of them a desideratum.

5. The favorite *times* for conversation; how different from the English?

6. Do any classes converse on subjects not relating to their *daily life and occupations*.

7. *Vaishnabs' or Saktas'* conversation—how they differ in subject and moral tone?

8. Is there much *discussion* in Hindoo society—on what topics? is it angry at times?

9. The effect on conversation of the absence of *Female society*?

10. Topics in the *zenana*, among educated, uneducated? among country or town people?

11. Among what classes are *Ghost stories* most common,—mention twelve specimens of the different kinds.

X.

CRIMINAL, OR DANGEROUS, CLASSES.

All honor to Howard, Mrs. Fry and others, who gave their time to this subject, and to the talent in India that has been enlisted on criminal statistics, but the feeling many

* In the *Pancha Tantra* a work 12 centuries old at least, we have an account of a jackal who tumbled into an Indigo vat.

have on entering a jail is—a large amount of public money and official skill has been employed very properly in jail administration; but what is done to *prevent* prisoners entering jail?—The rural population are consigned to 60,000 Guru Mahasays to teach them stealing and obscenity—is it surprising that they matriculate in the jail and receive their degree in the arts of thieving at the gallows or at Singapore—the ryot out of jail feels that were he a criminal, he would have better food, lodging and clothes than he has as an honest man—hence the name he gives it, “our father-in-law’s house.”

1. How can a system of *education* be extended adapted to the circumstances of those who form the raw materials of the dangerous and criminal classes? the effect of teaching prisoners agriculture.

2. How far is *poverty* the parent of crime in Bengal? Do. *oppression*? Do. the *Guru Mahashay* system?

3. *Jails*, how far objects of terror and shame to natives? in what districts is the name “our father-in-law’s house” given to the jail? are re-committals frequent or no? Are *Reformatories* for juvenile criminals desirable?

4. Is the *thannah* looked upon as a school where old offenders teach young ones crime?

5. Receivers of *stolen goods*; any approximate estimate of their number and profits?

6. Has the *punishment of death* much effect in lessening capital offences?

7. The proportion that can *read and write* intelligibly in the different jails?†

8. Is *infanticide* common among the poor?‡ Ditto *incest*.

9. Is perjury or forgery on the increase?

10. River Thagi common? Ditto professional *poisoners*? Ditto *Fortune*?

11. The influence of *age* and *sex* on crime?

12. Crime in different districts, and in various castes particularly as relates to Hindus and Muhammadans, how it differs in number, variety?

13. Is there more crime in *town* or in the country?

14. The *deaf and dumb*, many; how do they support themselves?

15. Juvenile delinquents; their number, offences?

16. Has the autobiography of a thief ever been written?

17. Is Wilson’s remark correct “In the great towns of India, the profligacy bears no comparison to that of London or Paris?”

XI.

DEBATING SOCIETIES.

Debating Societies or Literary Clubs have sprang up in shoals both in Calcutta and the Mofussil within the last twelve

* In the report of popular education in Liverpool, read by the Rev. J. Howson at the Social Science Conference, 1858, it is stated: “The system is working upwards, it has a tendency to aid in educating children, whose parents are really in the receipt of a very good income, while it leaves behind large numbers of those who are in the utmost poverty and great danger of falling into criminal habits.”

† In Liverpool it was ascertained lately that out of 19,336 persons apprehended in nine months, only 3 per cent. could read or write well enough for any available purpose.

‡ It is so in the manufacturing districts of England, and among the Rajpoots.



years; they are nuclei for educated young men, and are congenial to the oriental habit, which loves *dals*: we need a kind, however, like the Young Men's Associations of England, in which not only are lectures delivered or essays read, but night classes are formed for improvement in literature and science.

1. The number and duration of *Debating Societies* in Calcutta during the last twenty years, the subjects discussed and social status of the members.

2. Ditto ditto ditto in the Mofussil.

3. In what respects are they improving as to the *choice of subjects* and the mode of conducting the meetings?

4. What *social influence* do they exercise in the family or on others?

5. A history of the *Dharma Sabha*, its leaders, quarrels?

6. Of the *Brahma Sabha*, ditto ditto?

7. Account of any other meetings among Hindus?

XII.

DISEASES.

1. The social and moral causes of *insanity* among natives? Among what castes more cases?

2. Are *Albinos* numerous?

3. What nervous diseases are regarded as being from a *bhut*, requiring mantras?

4. *Nakra*—*Inoculation* for small pox—*Leprosy*, mode of treatment in ancient and modern times; how they differ? are lepers treated kindly?

5. *Hindu Physicians*, their remedies for *eye diseases*?

6. Are diseases from *dissipation* among Young Bengal on the increase?

7. What diseases indicate the *social condition* of a people, such as those of the eye, brain?

8. *Hospitals*, by what castes most attended. Brahmins, Khaistas, Muslims—from what localities?

9. The relative *mortality and vitality* of each sex, and of the leading castes in Bengal.

10. Is the *duration of life* in inverse ratio to fecundity?

11. The influence of *employments* on health in Bengal, how shewn?

12. Various remedies for *snake bites*?

13. *Native medicines* in what estimation held by educated natives?

14. Is mortality in *parturition* on the increase?

XIII.

DOCTORS—A REMEDY FOR THE EVIL.

The *kabiraj* or indigenous doctor is so inwrought into the structure of native society and has been the cause of such an enormous number of legalised homicides that he is well deserving of consideration. The Bengali class of the Medical College is, as it gradually develops, lessening this evil; but still it is a fearful one. Dr. Wise has written ably on this class and on Hindu medicine.

1. *Kabirajes*: whether are Hindus or Musliman ones more numerous or more skilful—their castes, their pay now and in former days?



2. *Inoculators*, more Hindus or Musulmans—the incantations used—their invocations of *Sitola*—their fees—caste, mode of treatment.

3. *Vaidyas*, their chief localities in Bengal, the proportion that can read Sanskrit, their pay and social position—an account of the *Atai Vaidyas*, *Dehatu Vaidyas*, *Chasi Vaidyas*, *Haturya Vaidyas*.

4. *Midwives*, *Cuppers*, *Leech sellers*, their skill, pay, numbers.

5. English educated doctors, is their social position and pay increasing?

6. Ditto Bengali educated.

XIV.

DOMESTIC.

Home has well been styled the “seed vessel of society, where the next generation must germinate.”

1. Is *hospitality* as much practised now as formerly? and with as rigid a regard to caste?

2. The mutual influences of *home* on educated natives as respects wives and daughters?

3. The family tie very strong among Hindus—illustrate by examples.

XV.

DRAMAS, JATTRAS.

The Sanskrit Drama as translated by Dr. Wilson, presents a rich harvest of information as to the social condition of the Indian aristocracy, females and Pandits eighteen centuries ago. In the *Sarada tilaka* of the 12th century, we have sketches of the various classes of females, and of the Jogis, Buddhists, snake-catchers, Pandits; the *Mriganlekhā* treats of the kings of Kalinga and Assam—as the *Ramayan* does of society 2,500 years ago. Nor have the last ten years been barren in the department of dramatic Vernacular Literature—as the many Bengali dramas on the subjects of “Kulinism,” “Widow re-marriage,” &c. show.

1. Account of the *bhairs* or professional jesters.

2. A list of the various *jātras*, their authors, subjects, influence.

3. Ditto *Rāsas*.

4. An analysis of the Vernacular dramas written the last twenty years.

XVI.

DRESS.

A suitable dress for females, decent, yet national, is a desideratum, some Hindu females have adopted the English dress, but they look exactly like Portuguese Ayahs, or the black dolls that hang in London over pawn-brokers' shops,—why should this be?—the *sāri*, it is true, is not sufficient, but in Behar we find the petticoat (*lohangā*) and boddice (*kurta*) has been introduced from the west of India, and more than one-fourth of



the Behar women have adopted it, some of the Rajput women in Behar use long-drawers like the Musulman ladies.

The males are better off as to dress, but in their disuse of the turban, substituting for it a cap, they benefit only the eye doctors, as furnishing them with more patients, and spectacle makers, as the eyes having no shade like what the turban gives, become weak; such has been the case in Egypt, since the Turkish Fez has been introduced.

1. Is the *Musulman* dress superior in any points to the Hindu?
2. Was the *needle* totally unknown to the Hindus? is there any Hindu word to express sewing with it.*
3. Do any Hindus now object to garments made by a *Moslem needle*?
5. Were there any *tailors* in ancient times among the Hindus?
5. Do Hindu *females* wash their linen often—is *soap* coming into use among them?
6. Will a Hindu drink water out of a girl's hands, unless she is first *tattooed* on the arms and breast?
7. Would the wearing of *beards* be useful for Hindus?
8. Should Hindus take off their *shoes* in an European house, or their turbans on entering a place of worship?

XVII.

DRINKING HABITS.

In Menu's days liquors were allowed, and ancient Hindu history gives many a curious revelation on this point.

1. Are drinking habits more prevalent among the *Hindus* or among *Musulmans*? how 30 years ago compared with the present time?
2. Are Hindus quarrelsome in their cups?
3. Is smoking *Ganja*, *Charus*, or *Opium* more destructive;—which is more common? Do Hindu females *smoke* much? When was *smoking* introduced? Ditto *snuffing*.
4. How far is the increase of drinking owing to *domestic discomfort*?
5. How far do crimes, attended with violence, arise from *intoxication*, how far insanity?
6. The effect of *intemperance* in producing pauperism?
7. Connection between increased *abkari shops* and crime?
8. Is *drinking brandy* a frequent practice with Young Bengal?

XVIII.

EDUCATION, IN ITS SOCIAL BEARING.

The bearing of the School system in its social influence is an important subject, thus the competitive system which treats boys as race horses, trains them not for general use, but to run for particular prizes, promoting cramming, and mere book-knowledge; another serious evil is whether it will not lead to the neglect of the mass of the boys in a school, as the Masters,

* *Sui* properly means passing the shuttle in the act of weaving.



by attending to a few well, will draw more praise than by a regard to the merits of the mass.

There is a tendency like the man in the fable, who cried out nothing like leather, to regard education as the Panacea against all evils. Lord Brougham describes such persons as being like those who would trust to the effects of diet and regimen when the plague is raging. The masses are the basis of the social pyramid, without their being secure, the apex has no stability; brute force and the black cap are at best but temporary expedients. There is great truth in what Dr. Arnold remarked, "Education is wanted to improve the physical condition of the people: and yet *their physical condition must be improved, before they can be susceptible of education.*"

1. How far are improved *habits* of cleanliness, order, punctuality, truthfulness, an improved standard of dress and living, a development of character promoted by Anglo-Vernacular Schools?

2. Ditto by *Guru Mahashay* Schools?

3. The action of Anglo-Vernacular and *Guru Mahashay* Schools on the *family circle*?

4. Any social evils arising from the training adopted for native girls in *Mission female schools*? The remedy.

5. How far are the following remarks, made in England, applicable to this country?

"There is a practical standard in the minds of the people, beyond which the education of the masses cannot be carried. If Government raise the standard, people diminish the time of children's attendance."

6. The social importance of teaching in all schools, the doctrines of *political economy* on labour, capital, wages, interchange, money,—as also agricultural chemistry.

7. Mental ignorance, how far productive of *moral depravity*?

8. How far do *social discomforts* fret and enfeeble the masses, and render them unfit for higher thoughts?

9. Is *intemperance* greater in proportion among the educated or uneducated classes?

10. How far is the following statement, made by an educated native, correct?

"Natives educated in the *Government Colleges*, do not often fulfil the hope inspired by their academic career, they do not follow up their studies, they unlearn what they have learnt, sink in the mass with all the enervating environments of Indian life—the hookah and the zenana did their sure work."

11. The social condition of the masses renders a *grant-in-aid system* as inapplicable, as would be a voluntary system at the time of plague and pestilence?

12. How far does school education mould the social institutions of the country and how far is it moulded by them?

13. The social importance of schools of *Industrial art*?

14. Ditto ditto Agricultural schools?

15. The *tolas* (or Sanskrit Colleges)—the social causes leading to their decline. Any improvement in the subjects taught, or the mode of teaching. What great teachers are there now?

* Dr. Mouat's returns show that out of 73,000 criminals in the Bengal and Behar jails last year, 93 per cent. are utterly ignorant of reading and writing.



16. The probable reflex influence of requiring a knowledge of *reading and writing* from all classes, as a qualification for office?

17. The probable influence of the *university examinations* in giving a preponderance to cramming and memory work, and the neglect of the power of observation.

18. Is it desirable that up to 6 years of age *girls* should be taught with boys.*

19. How far are the *Guru Mahashays*, as a class, guilty of the charges of teaching their pupils theft, lying, and of inflicting severe punishments? What has been the occupation of their fathers generally?

20. A list of Vernacular authors and able teachers produced by the Calcutta Sanskrit Colleges? Ditto by the Nudiya?

XIX.

FEMALES.

1. How far are the following remarks on Hindu females correct in different localities "Ministers to the capricious sensuality of their arrogant lords, the feeling of *natural affection* is comparatively weak—held under the jealousy of restraint, become callous to all finer sensibilities?" "Cases of *crim. con.* very seldom occur in respectable Hindu families." "The life of a Hindu *widow* is wretched in the highest degree."

2. To what extent can *natch girls* read? their influence as compared with former days?

3. Do Hindu females often hear religious or other *books read* to them?†

4. Mention female *authors* of past and present times.

5. Is the practice of females blackening their teeth and eyes, of Moslem origin?

6. Are the *angia, kurti, pyjama*s much in use?

7. At what age are females considered old *women*—what is their influence and conduct then?

8. Are Musulman females less luxurious and *extravagant* than Hindu ones?

9. What are the *recreations* of females—Is kite flying such?

10. Are Hindu and Musulman females fond of *embroidering* and of *flowers*?

11. Are *quarrels* numerous among females, are they very jealous?

12. Do females become really *old* at thirty?

13. What is the knowledge females acquire *independent of books*?

14. How far do females win and retain their *husband's affections*?

15. What is the average time men remain *widowers*?

16. How far practically is a system of austerities carried out with regard to *widows*? what means of support have they generally?

17. If a woman washes off *paint* from her forehead, is it considered a sign of her wishing her husband's death?

18. What has been the working of the act for the remarriage of Hindu widows—what are the probabilities of its working the remarriage of *respectable* widows?

* In Kabul the custom is for boys and girls from 5 to 12 years of age to attend the same school.

† In Kabul many of the females are better acquainted with religious books than the males.



XX.

FESTIVALS.

Festivals for religious or commemorative purposes have always exercised great influence on social life, whether we look to the national games and assemblages of ancient Greeks, to the middle ages in Europe or even to recent times in England and France. Who can forget Washington Irving's vivid picture of Christmas and merry England in the olden time? But among the Hindus they have been pre-eminently influential as being interwoven so closely into the religion of this country. All the mighty minds of India in former days saw what a great effect they produce on all classes: hence Vaishnabs and Saktas alike, though differing in other points widely, have agreed in patronising them.

1. The *classes of society* that do not attend festivals now, but did once—why have they discontinued?
2. The influence of festivals on the *family relation* particularly on women and children?
3. Any change and improvements in the mode of *conducting* festivals?
4. How far are festivals become more occasions of *trade* or *amusement* than formerly?
5. What festivals have become more *popular* than others; the causes?
6. How far is the observance of festivals on the *decline*?
7. Is there much *sale* of Bengali books or of European articles at festivals?
8. Are festivals good times for holding *religious discussions*, such as are practised by Missionaries?
9. The influence of festivals in bringing the male and female *sexes* more together.
10. The various customs, ceremonies, connected with the first day of *new year*?
11. How far festivals such as the *Holi* contribute to *idleness* and dissipation?
12. Any observance like April fool or the Maypole in the *Holi*?
13. Mention *Obsolete festivals*, and new ones, such as the *Jagadatri*?
14. *Barwari puja*, how far observed now, and by whom; its origin? Ditto the *Nag panchami* in Bengal.
15. An accurate description of the Hindu fasts and of the festivals? of their origin, the significance of their peculiar ceremonies, how observed by different castes?
16. Ditto of the Musulman.
17. *Sunday*, how spent by different classes of natives?
18. On *Makar Sankranti til* seeds eaten after dinner? the sun the only deity worshipped why?
19. Is *Holi* a kind of All fools' day?
20. Describe the following practices on *Gadi padva*, *nim* leaves chewed, *puja* paid to an Almanac—on the *Ram Nabami*, on a recitation of *Ramayana*? *Narajal Purnima*, cocoanuts thrown into the sea. On *Dewdli puja* to books.
21. What festivals observed only by particular castes or by women only?



XXI.

FISHERMEN AND BOATMEN.

1. What *boats* in the river are not of a build of indigenous origin ?
2. The *castes* that almost exclusively furnish boatmen,—why chiefly from Chittagong or Furridpore ?
3. The *morals* of boatmen when separated from their families ?
4. In what respects are *boatmen* equal to sailors ?
5. The peculiarities of the boatmen's *language*; is it the same as the Musulman-Bengali; a collection of the songs they sing when rowing ?
6. Why few *Hindus* are boatmen ?
7. The number of *boatmen* in Calcutta, are they on the increase or decrease; the causes ?
8. English *sailors* how victimised on landing by natives in punch-houses and by crimps ?
9. The various classes of *fishermen*, their profits now and formerly ?

XXII.

FOOD.

The nature of food has much to do with bodily and mental vigour, although different nations in this point have their respective tastes; a Frenchman will eat a rat or a frog or a horse with a *gout*, that will make an Englishman almost vomit. The Englishman in like manner dislikes the oceans of ghi and quantities of high seasoning that enter into a Bengali's cuisine, while on the other hand the Bengali shudders at a calf being an object of mastication.

1. The different kinds of *curries*, their use, expense of preparation, and how far their high seasoning is conducive to health ?
2. How does the *diet of Hindus* save from certain diseases, but promote others ?
3. The effect of a *vegetable diet* on certain mental qualities such as courage ?
4. *Tea* drinking, how far is it becoming popular ?
5. Why is a *fish diet* confined to Bengal not used by up-country Brahmans ?
6. Is *adulteration* of food common; illustrations with its evils ?
7. Illustrate the following statement "the fare on which a Sonthal, a Cole and a Garrow will thrive is utterly unsuited to the Bengali, the Assamese, and the Mugh."

XXIII.

HOUSES.

The dwellings of the poor and working classes have occupied much of the attention of philanthropists in England, they ought to do so here, for, as to floors, walls, windows, they are closely connected with questions of health and decency.

1. How far are the present *native houses* built so as to conduce to indecency, vice, quarrels, drunkenness, filth, ventilation?*
2. Is the *boitakhana* of Hindu origin †
3. How far is the use of *chairs* preferable to the *Asan*?
4. How can the following defects in tiled houses be remedied: exposure to wind and rain, cold in winter, hot in summer?
5. *Mud huts*, means to secure them against snake holes?
6. Is the building of *suburban houses* for workmen in large towns desirable?
7. Is the northern side of a house invariably the *Thakur khana*?

XXIV.

KERANIS.

The Kerani system is so much the child of the English trade and Government, that it demands special attention. One thing is clear, that as certain as English education has been limited as respects caste to Brahmans and Khaistas almost exclusively, so have the chief occupations of its alumni been those of keranis or copyists—an effectual way to turn an educated youth into a mere machine, and to render him simply an imitator or a *copyer*—as he is a *copyist*. Happily the introduction of iron copying machines will reduce in various cases the demand for machines of flesh. It is true in the N. W. P. from Katamandu to Mhow the Bengali is the Englishman's right hand—in what?—as a machine for copying, as a sort of looking glass to reflect his views without having any views of his own. I trust this taint on the Bengali may soon cease. A writer on Indian history remarks on the kerani in his work “The eye seemed to communicate directly with the hand: there was no intervention of the brain. The intelligence of the well tutored boy was seldom carried into the practicalities of actual life.”

1. The total number of *keranis* employed in the different offices in Calcutta; the average amount of their salaries?
2. The occupation of *keranis' leisure hours*; how far does the business of their offices afford material for conversation in their leisure hours?
3. Do *keranis* keep up *reading habits*—if not, why?
4. Does not their knowledge of *English* acquired at School decline owing to the want of practice, just as an Englishman's knowledge of French would away from France?

* I allude here to an evil felt in England as highly demoralising, viz. a single sleeping room for parties of different sexes and relations. The Santals, semi-civilized though they be, are in this respect ahead of Bengalis; boys and girls arrived at the age of puberty, have to sleep separate, away from their parents in a particular part of the village.

† Buchanan Hamilton states Vol. II. p. 697, “Its name is Moslem and that a place of receiving company was introduced, when the example or command of these haughty conquerors rendered it necessary to secrete the women; this practice is not common in the south of India where the manners of the Hindus are less altered; the sofa made of wood, the carpets, and quilts seem to have been introduced by the Muhammadans.” See (*Kirat Arjuna*).



5. How far do *keranis* read the new class of books in *Bengali literature*?
6. Are *keranis* chiefly of the *khaista* caste?
7. *Banians*, their past and present influence over Europeans; their profits?

XXV.

LANGUAGE.

1. What is the source of that part of the *Bengali language* which is not of Sanskrit origin? has it, like the languages of South India, an affinity with the Tartarian dialects spoken in Central Asia?*
2. The *dialects in Bengal* how far mere divergencies of pronunciation and spelling, similar to the English and Italian dialects—their extent and causes are they on the increase or decrease?
3. How far is *Urdu* declining in Bengal, as a colloquial and written language—the causes?
4. What influence is likely to be produced on the *Bengali language* by increased intercourse with Central India and the North West?
5. What language is likely to supplant the *Santal*, is it the Bengali, Hindi or Urdu? Ditto as regards the Asamese?
6. What effect on the structure of Bengali is likely to be produced by *English* educated natives?
7. What *idioms* in Bengali are most striking in contrast with those of the English and Urdu languages?
8. The language used at *Gour*, had it a closer affinity to Hindi than to Bengali?
9. What old *Bengali MSS.* exist among private families?†
10. Is the *Musulman-Bengali* used chiefly by persons who cannot read or write the Bengali, increasing as a dialect?
11. The influence of *Persian* in Bengal past and present?
12. The *boundaries* of the Bengali language in the Midnapur district bordering on Uriya and in the Birbhūm on Hindi.
13. The Bengali language as in its progress illustrating the varying features of *national character*, habits, pursuits, social and mental development.‡
14. Are the educated Bengalis so different from Italians, Poles or Hungarians,—as to have no *patriotic feeling* in favour of their language?
15. Words in Bengali having affinities with any Tartar or *Aboriginal* language?
16. Illustrations of the language of *Flowers* as used by Musulmans and Hindus?
17. A list of those *Bengali words* not derived from Sanskrit or Persian—their probable origin?
18. Names of places, persons or things in Bengali throwing any light on the origin and affinities of the *Bengali race*?
19. *Cant language* used by particular classes, as the Thugs did in the Agra Presidency.

* Caldwell's Dravidian grammar affords many valuable hints.

† Research in other quarters ought to encourage it here, thus we find that the Pushtu until lately considered a colloquial dialect had MS. as early as 1417, A. D., as Captain Raverly shows.

‡ Language has well been called a map of the manners and science of the people who speak it, thus the term for a widow *Vidhava* showed that all widows were not burnt, so *patî*, a lord, the term for husband.



XXVI.

LAW AND SOCIAL STATE.

The laws of a people have a very important bearing on their social development; hence jurisprudence has well been defined, "the law of humanity in society." The subject of jurisprudence from its bearings on Sociology was taken up at the Liverpool meeting of the Social Science Association.

1. How far is the new *Penal Code*, as contrasted with the Regulations, likely to affect the social condition of the people and mould their character; and how far is the social condition of the people likely to modify the working of this Code?

2. How far has the *Punchayat* system tended to raise the character of the people—would the English Jury system be more efficient in this respect?

3. The *Income Tax*, its probable bearings on the physical, social, and moral condition of the people?

4. Menu's laws how far ditto.

5. The probable effect of making *English* the language of the Court in increasing the social gulph between the English Judge and the masses? and in leaving the judge and the people at the mercy of the interpreter?

7. The effect on society of the Hindu law of *intestate property*.

8. Which is more favorable to the creation of a middle class and the elevation of the masses, a *zemindary*, a *village* or a *ryotwary* system?

9. How would a law of *primogeniture* act in this country?

10. Ditto a law like the French law of *equal sub-division*?

11. In what respects is the social condition of the people different now from what it was in the *Vedic* time—in Menu's—in Ram's time—in Kalidas's time—in the Musulman time?

12. How far has law in India been the offspring, how far the parent of *public opinion*?

13. The working of the *Small Cause Court* of Calcutta as effects its checking or increasing a love for litigation and promoting a regard to truth in dealings?

14. How far have native Educational *endowments* made the Pandits indolent by making them independent of their Scholars?

15. The value of village *Municipal institutions* in preparing a people for self-government?

16. The importance of *lawyers in India* having a training not only in law books, but also in the social condition of the people?

XXVII.

MARRIAGES.

1. Illustrations of the effects of *early marriage* physically, mentally, socially?

2. The causes and consequences of the *expense* of marriage ceremonies?

3. How far do *marriage ceremonies* vary according to caste, social position, &c.

4. What practices in the *marriage ceremonies* as to length, expense, rites, ought to be discountenanced, what to be continued?

5. Does *early marriage* in India tend to check vice?

6. Is there a marriage in practice among the Hindus corresponding to the *Muhammadian nikka*?



7. How far do marriages take place at a later period among *educated natives*—the effects?

8. Are *Ghataks* many, their fees,—any ghatak registries extant from Bulal Sen's time or three centuries ago?

9. The *expense* of marriage among the various castes or classes; are they on the increase or the decrease?

XXVIII.

MISCELLANEOUS.

1. The different modes of *calculating time* used in Bengal, such as by sand, water, the sun, the stars?

2. Is the *Panchayat* much practised now? was it ever in Bengal as much a part of the village system as in Central India?

3. The practicability and advantage of *Mofussil savings and loan Banks* for the middle classes in the Mofussil, to promote provident habits and to rescue them from the Mahajans?*

4. Is the *cycle theory* for nations of weakness, vigour, maturity, decay, inapplicable to India?

5. The *emigration* to the Mauritius and W. Indies in its effects on the social condition of the emigrants and their families; on the parties themselves on their return—are many remittances from emigrants made to their families?

6. To what type of the *European character* are the Bengalis likely to approximate—to the English or German, French or Italian?

7. Are not merely *English institutions* as little adapted for India as they would be to France?

8. *Oriental writing letters*, their various ornaments, superscriptions and envelopes?

9. Have cases been known in modern times of the punishment being enforced to cut off a Hindu's *tika* (top knot), put lime on one side of his face and ink on the other side, and lead him about on an ass?

10. *Names*, any change desirable in *Hindu names*; the various modes of giving them? are all expressive? are they ever *changed*? how many *names* are there of men and of women?

11. *Salutations*, any change in the form of, in operation?

12. Are *large towns* in Bengal more favourable to morals than the country?

13. *Bazars*, their profits to the proprietors, changes in them within the last 20 years.

14. Are many new *Hindu temples* being built, where and at what cost?

15. *Spitting*, why practised so much by Hindus?

16. The history of the rise of the *old families* in Calcutta.†

17. What are the subjects of the *Bengali national pride*?

18. Various forms of *oaths* among different castes; which are considered specially binding?

19. Are dwarfs numerous?

20. *Bankrupts* were formerly compelled to sit bare-headed before a blazing lamp, how long since was that practised?

* In Birmingham in 1856, 84,000 accounts were opened for one penny and upwards; £4,500 being paid in. Through Dr. Chalmers' influence penny banks were established: fifty years ago. Dr. Duncan established in Scotland Savings Banks for deposits of a shilling and upwards, and thirty-two millions sterling have been deposited by 1,340,000 contributors.

† When I was in England 14 years ago, the late Professor Wilson directed my attention to this subject as one of great interest; but only a native can write on it.



21. Why do Hindus *count* by 4? does it relate to time, such as 4 weeks, 12 hours?

22. To what extent is the *rise of prices* leading, among ryots and the working classes, to independence of feeling and action, to a desire for education and to increased domestic comfort?

23. Is *dasturi* in vogue in the same proportion among natives as among Europeans—was it in vogue in the Mogul time and at different rates according to occupation?

24. *Fixed prices* for articles, is it in any department of Hindu trade?

25. Is there much *competition* among Hindus? Is the cheap and nasty system much practised?

26. Does population increase more in *town* or in the country?

27. *Longevity*, how it varies in different districts—in *various employments*?

28. Have variety of *soils* in Bengal any influence on the character of the people, thus low and marshy coasts are said to give a sordid, degraded class?

29. How far is there real tenderness to *animals* in Bengal? Any place of refuge for lost or starving ones, or old ones?

30. Is *suicide* common in Bengal, among what classes, the kind, causes; is it on the increase?

31. Different kinds of ordeal now among the Hindus: the balance, fire, water, poison, chewing rice, boiling oil, red hot iron?*

32. Twelve instances of English misunderstanding of native practices, ditto of natives mistaking English.

33. When did the fashion begin of calling the natives *niggers*?

34. Refute the statement that natives have neither a word for gratitude in their language nor a sense of it towards Europeans.

35. The advisability of introducing fountains and Turkish baths?

XXIX.

MUSULMANS.

Nor should this class of men who live *among* the Hindus, but are not of them be overlooked—the Musulmans now even in Europe are objects of much interest to various nations, and in Europe in the middle ages they left undying memorials of their knowledge and progress in the arts and social life. The Musulmans in Bengal read Bengali.

1. In what localities are these Musulmans in Bengal of *Patan* or *Mogul* descent? in what districts have Hindus become proselytes to Muhammadanism—how far by conviction, how far by compulsion or from other causes?

2. To what extent do the Musulmans differ in their social life, hospitality, kindness to the poor, amusements, *manners and customs*, from the Hindus? do they practise polygamy or sensuality to a greater extent?

3. The number, education, emoluments and influence of *Kajis* and *Mul-las* in various localities?

4. To what extent have the *Musulmans* in Bengal and *Bengalis* mutually adopted each other's religious and social practices?†

* The trial by ordeal has been handed down in India from ancient times; it was prevalent in Europe in the middle ages.—See *Asiatic Researches*, Vol. I.

† In Purnea, Hindus contribute to the expense of the Mohurram; while caste has throughout Bengal obtained a complete ascendancy over the Moslems.



5. How far has the residence and influence of Musulmans affected Hindu superstitions, as also indecent and cruel practices?
6. Is not the following Hindu practice of Musulman origin—writing with the pen instead of the style? give other instances.
7. How far has the strictness of Hindu caste and the easy terms on which Musulmans received converts, contributed to Moslem proselytism?
8. Is Muhammadanism on the increase; how has it gained so many converts from the *ryot* class?
9. Are the following sects of *Fakirs* in lower Bengal, Benawas, Takyahdars, Jalalis, Madari?
10. Murids—many? their conduct?
11. Ditto Hajis or pilgrims; many go to Mecca from Bengal? by what route? do women often proceed? the effect on them when they return?
12. What line of trade, profession or art, are Musulmans taking to?
13. What are the descendants of the Moslem gentry doing; do they apply to trade or to Government employ; their influence?
14. The number and endowments of *Pirithans*; *Durgahs*, many offerings made.
15. How far is *Sufeyism* spreading, and among what classes? secret meetings among them: much ascetism,—their text books—has the *Vedantis* system influenced it?
16. How far are the *Ferazis* an offshoot of the Wahabees, are they spreading beyond Furrdepore, are their influence and numbers on the increase?
17. Is the *Ramzan* observed as strictly now as formerly; if not, in what particulars?
18. Do the *Ferazis* practice widow re-marriage; what Musulman ceremonies do they reject—is any connection kept up by them with Arabia?
19. The difference between Hindu and Musulman funerals, birth days, marriages, as to the number of ceremonies, expense?
20. How far was the persecution, by Musulmans in former days of Hindus in conferring office and landed property on converts only—as regards evidence in Courts—bringing children up for proselytism?
21. Are *Saids* numerous in Bengal; what estimation are they held in?
22. Musulman burial grounds, describe the various monuments erected, the state in which they are kept?
23. Is the marriage ceremony of sitting in state—carrying and applying turmeric—measuring for wedding garments kept up?
24. *Kodali marna* at the Mohurram, *Kadami rasal*; *Mui Mobarak* where exhibited?
25. Is the singing by *Dervishes* much practised?
26. Any practical checks to frequent divorce?
27. Circumcision, the ceremonies and expense attending it in different classes?
28. Musket fired at birth of a male child?
29. Hindus or Musulmans, which greater believers in witches, ghosts?
30. The numbers, profits and social position of the Arab seamen and Moguls who come to Calcutta for trade?
31. Anecdotes or MSS. illustrating the past, present social condition of the Musulman in Calcutta, Dacca, Hughly, Murshedabad, Pandua?
32. Drinking habits on the increase.
33. Are women more secluded among Musulmans or Hindus?
34. Is the attachment of the Musulmans to their religion declining in proportion to the political decay of the Moslem circulation and profits of, by whom used?
35. Is the hatred between *Shiaks* and *Sunees* lessening?



36. Musulman ceremonies at birth, circumcision, puberty, betrothal, marriages, funerals, exorcism, a description as practised now by different classes and formerly ?

37. Is the strict regard to omens in travelling as great now as formerly ?

XXX.

THE NATIVE PRESS.

This power, though young at present, is gradually rising to a giant's strength ; and even Young Bengal is coming round to acknowledge it to be a power, if not for himself, at least for his wife and daughters, who, not requiring to be copyists, do not need to work up a certain amount of China Bazar English. The publication of half a million copies of Bengali works in Calcutta annually for sale, cannot be without its effect, but what is very desirable to procure is, manuscript literature, such as ballads, family traditions. Of what value, in an historical point of view are the ballads of Chand to the Rajputs ?

1. The circulation and profits of the following works : *Almanacs, Panchalis* or popular songs, tales.

2. Past and present *patrons* of native literature ?

3. The use of *Vernacular Libraries* in making known new publications and creating a taste for reading ?

4. A list of the various *libraries* for natives established in the Mofussil, their origin, success or failure and the causes : the classes using them, the kind of books most popular ?

5. A sketch of the history of native *editors*, past and present, of the former *Editors* of the *Bhaskar, Chandrika, Purna Chandroday, Prabhakar newspapers* ?

6. The native press, how far an index of the *social, moral* and intellectual condition of the people ? what light does it throw on it ?

7. The recent *copyright* law, in its action on native authorship ?

8. *Ballads*, are there many ? any very old ? how far illustrative of customs, history, morals ?*

9. The *book trade*, its profits, mode of selling, canvassing, advertising ?

10. *Pictures* of the gods and goddesses ?†

11. *Female book hawkers*, the number, what books do they sell ?

12. The working of the Act against *obscene publications* ?

13. The practicability of procuring a volume of *Anecdotes of Bengali social life* as drawn from their literature ?

14. It has been affirmed that last century the Bengalis had no *moral books*, how far was that true ?

* Ballad literature is not to be despised as an index of a popular mind, as Sir W. Scott has shown with regard to the Scotch, and Bp. Percy with respect to the English ballads. A Queen of Denmark, ten centuries ago, had the Danish Ballads published, they have been lately translated into English ; and are chiefly written by women ; treating of history, legends. The Guzerat Vernacular Society in its reports for 1849, states that one of its great objects was the collecting and copying ancient MS. ballads and tales.

† It is calculated there may be two hundred shops for the sale of these ; the Pawa caste were the chief purveyors, now Brahmans, and Khaistas come.



XXXI.

PANDITS.

Pandits once occupied more important positions in social life than they do now. Many anecdotes are still afloat of the wonderful acquisition in Sanskrit lore made by the Tarkalankars and others of former days, of the lengthened period of their grammatical studies, and their profound acquaintance with the Nyaya shastra. I have spent much time among pandits both in Calcutta and the Mofussil; and every where I have found their influence and emoluments on the decay; the endowments they formerly had, have been in many cases alienated, these enabled them to maintain pupils, according to the Hindu rule that the master is to support the scholar. English education also has called for a more practical and paying knowledge than Sanskrit, though the latter is of the utmost value for philological and antiquarian purposes.

Raja Krishna Chundra Roy of Nuddea was the Mæcenas of Pandits last century and bestowed on them an immense amount of land. Adams in his reports on education has given us much information on the position of Pandits in 1835 so has Buchanan Hamilton with regard to those of Behar. Though pandit learning is on the wane, still it is to be wished that Sanskrit studies were placed in this country on a proper basis—as a key to the North Indian Vernaculars—as a capital training in Philology, and as a means of throwing a flood of light on the origin of nations—how striking the fact that the highlanders of Scotland and the Brahmans of Benares use radically the same language!

1. *Pandits*—illustrations of their abstruse studies, deep knowledge as well as extensive reading on subjects now little studied?

2. The emoluments, fees, and endowments of *lots*, and their influence over the pupils in various localities?

3. The various causes that have led to the decline of the emoluments, influence and studies of Pandits?

4. Are or were *Mithila brahmans* numerous and influential in Bengal?

5. Whether do Pandits or Purohits or Gurus gain more emoluments, or have greater influence?

XXXII.

PROVERBS.

Bengali Proverbs present a rich field in illustrating the social condition of the people, many suggestions on this subject may be found in Trench's admirable work on the Proverbs.



1. The *origin* of Bengali Proverbs, how many are modern, how many from the Sanskrit?
2. The *extent* to which they are used, which are local?
3. Their contrast and similarity with Hindi and Urdu?
4. Their resemblance to European Proverbs?
5. Proverbs illustrating moral feeling, the social condition of the people.

XXXIII.

READERS.

In oriental countries where the masses cannot read, it is very common for the people to assemble to hear one read a book to them, and explain its more difficult passages. Every reader of the Arabian Nights, is acquainted with this. Among the Bengali there are *Kathaks*.

1. The *Kathaks*; their number, mode of being trained, emoluments and chief localities; are they on the increase or decrease?
2. How far could the system be adopted of employing men like *Kathaks* to read interesting works?
3. Vernacular *lectures* on popular subjects illustrated with diagrams, pictures, the desirableness and practicability of having them?

XXXIV.

RECREATION—MUSIC.

Music, since the days of Orpheus, as well as before, has exercised a mighty spell on the popular mind, we know the famous saying, "Give me the making the ballads of a nation, and I will give you the making its laws." Sir W. Jones has written well on Hindu music, and has vindicated its claims very justly, though Europeans and Asiatics will never agree on this point.

There is a Bengali work on this; but I have met very few pandits that could explain it.

1. The *popular songs* in use, their description, number and influence?
2. An account of the most popular *ballad writers*?
3. Any *English music* likely to be popular in this country?
4. Any men corresponding with the *Bhats* of Rajputana or the wandering minstrels of Europe in the middle ages?*
5. The numbers, profits of *musicians* who play for hire, their different classes?
6. Are *athletic exercises* as much practised now as formerly?
7. How far do Bengalis *sleep* more than Englishmen?†

* In Behar zillah those *Bhats* rank next to the military tribes, amount to 380 families, most of which have endowments in land.

† I mention this, as the Bengalis sit up late.



8. What *English games* or athletic exercises might be naturalised in Bengal?

9. The advantage of having a *half holiday* on Saturday?

10. *Field sports* as fowling, fishing, riding, pigeon fancying, kite flying, how far practised?

11. *Gambling*, various kinds of, numbers of gamblers in Calcutta, gains; gambling houses?

12. The mode of spending the *evenings* among educated natives? much *discussion* on politics or religion?

13. Are *feats of skill*, as balancing a row of water-pots on the head, dancing on poles, balancing, tumbling, rope-dancing, sleight of hand, common?

14. Native *musical instruments*, the various ones, by what classes used? the ones most popular?

15. *Analysis of Bengali books* on music?

16. *Cock fighting*, bulbul fighting, ram fighting, how far practised?

17. The *Hinda* notation of music, any music on *European notation*; any counterpoint, describe the various *rāgas*; any harp?

18. *Listening to tales* and riddles of an evening, how far practised?

19. Various modes of *swimming* practised, can any women swim?

XXXV.

SECTS.

Without questions of sociology trenching on theology, there is a wide field in considering the social influence of the various sects of Hindus. Professor Wilson has almost exhausted the theological part of the question in his elaborate work the "Sects of the Hindus," but there is much to fill up in the social part.

1. How far are the *Vaishnabs* ahead of other sects as to elevating the people or women, or in proselyting? have they made any proselytes among Muhammadans; their ceremonies for the initiation of converts?

2. The extent of the *Guru's* power and emoluments now? do they travel far, the greatest number of disciples any have: their visits, instruction, morals, the various kinds of Upadesh they whisper into the ear?

3. The duties, influence and punishments of the *Dalpati*?

4. Is this remark of Wilson correct? "In Bengal the *Lingum* worship has no hold on the people's affections, it is not interwoven with their amusements, nor must it be imagined that it offers any stimulus to impure passions." Lecture I. 22.

5. The *Saktas*, their mystical diagrams, rites and gesticulations?

6. *Lingamites*, are their priests Jangams, are any Sudras?

7. Was *Sati* practised more among Saktas or Vaishnabs?

8. Who practised the worship of Olā Bibi (the goddess of cholera), when did it begin and in what districts is it observed? Ditto ditto of Shitola, of the Karta Bhojas, of Dakin Ray, of Gazi?

9. What sects originating in the Upper Provinces have followers in Bengal, and what Bengali sects have followers in the Upper Provinces?

10. Is the Tantric system spreading, its social influence?

11. The three leading divisions of Hindu monks? how far do they observe caste?



XXXVI.

SERVANTS.

1. Do natives keep the same *number of servants* as Europeans in a corresponding rank of life—how do their pay, treatment, work, differ in the service of Europeans, East Indians, Hindus and Musulmans?
2. The state of *slaves* in former days; their price and treatment?*
3. The causes that *servants in Calcutta* are said to be inferior to what they used to be—is it that those who govern ill are served ill?
4. How far is the practice of exchanging *certificates* of character carried?
5. *Chuddars*, their numbers and pay in former days? when have their numbers become less?
6. Anecdotes, illustrative of the number, treatment and cost of *slaves* in Bengal in former times.
7. How far are the rules of *caste* among servants really such, how far are they an invention for their own ease and profit? (In Madras, the land of real caste, one servant does the work of many.)
8. *Ayals*, their castes, emoluments, morals?
9. The moral and social effect of so many servants being separated from their wives and families? is it like the Scotch booth system?

XXXVII.

TRAVELLING.

Though pilgrimages may have conduced to encourage the Hindus, to a love of adventure and to season them to hardship yet there is among Bengalis a strong clinging to their native place and their *bhāilok*, and yet Bengalis are found, like Jews, every where in India, but with better effect now than what Hamilton records "of the Calcutta Babus sent to Dinagepore, which is invaded by strangers from Calcutta, most of them rapacious as kites, and eager to accumulate fortunes, in order to be able to retire to their native country." We trust that one of the effects of the railroad will be to lead a different kind of Bengalis to visit Behar, viz., the educated native who wishes to see the remains of the former greatness of his country, as seen in the Buddhist ruins of Behar, the Hindu monuments of Benares, the Moslem grandeur of Agra and Delhi, the beauteous scenery in the valley of the Soane and the Jain buildings of Rajputana, with the wide Champaign of Rewa—we hope this Indian *grand tour* may be considered necessary to crown a book education.†

1. Do the Bengalis travel more than *Behar* men? is their love to it on the increase?
2. Do *pilgrimages in Bengal* contribute more to a travelling spirit than in the Agra Presidency?

* Slavery was once very prevalent in Bengal, and especially in Behar; the Musulmans there are forbidden by their religion to purchase a freeman, they in order to give a sop to their conscience, call it taking a lease of a man for ninety years.

† From Katamandu to Indore, the Bengali Babu is the copying machine in offices; in Benares alone there are about 7000 Bengalis settled.



3. Is much *correspondence* kept up between Bengalis located in the Agra Presidency and their friends in Bengal?

4. How far is the desire of letter writing and *cheap postage* leading in the lower classes to a desire for writing, reading?

5. Different kinds of *lodging houses* for travellers, their various prices—accommodation—are they over crowded together in one room—do scenes of vice or robbery often occur?

6. *Railways*, their effects on third class travellers, in lessening caste prejudices—enlarging the powers of observation—promoting family comfort—how far are women availing themselves of them?

7. *News*, various native modes of procuring?

8. *Planting trees* by road sides, how far practised in ancient and modern times, in Bengal?

9. The causes leading to natives emigrating to the Mauritius and other parts?

XXXVIII.

VEHICLES.

This should not be below our notice. In London there is a Society for improving the condition of cabmen—while the Bishop of London has not thought it beneath him to preach in the open air to this class.

1. The various changes in shape the *palankeen* has undergone.*

2. How far is it feasible to introduce into lower Bengal the use of the *ekka*, which is both cheap and expeditious?

3. *Palki bearers*, in Calcutta—their numbers, mode of life, localities, whence they come,—many from Behar, character, profits? *Ghari wallas* do. do.†

4. *Syces* in Calcutta do. do.—were not syces formerly more swift of foot.‡

5. The origin of the shape of the present *kiranchis*. Is it taken from old English coaches?

XXXIX.

WORKING CLASSES.

In England, much interest has been taken in the working classes, as the great pillars of the social system.

My own experience leads me to the conviction, that in the *present* state of things, the working classes afford a fine field for education and social improvement, as their improved social condition, particularly in the rise of wages and wants, leads them to a stronger desire for education and its accompaniments; to them a knowledge of reading and writing and arithmetic is rendered by their daily occupations a matter of necessity.

* Last century they were arched.

† In Berlin, the cab drivers, while waiting for a fare, are to be often seen reading.

‡ The author of *Seir Mutakherim* writes they make nothing of following and preceding Englishmen on a full gallop, common servants have been seen who would run down a hare.



ty; except a little colloquial English in some cases, what these men need is not a smattering of book English, but a sound vernacular education, which will embrace the elements of mathematics and manufacturing skill, on the plan of the commercial schools in England, from which a smattering of Latin has been excluded. So it was found in the Agra Presidency when Mr. Thomason formed his scheme of vernacular education, so it will be found here as in England. How many eminent men have risen from this class, such as Stephenson, Hugh Muller: an encouragement to others; as in the French army, every soldier is said to carry the baton of field marshal in his knapsack. In Jehanabad a century ago a Musulman tailor founded a sect composed of Musulmans and Hindus, who respect the Koran and Shastras, this tailor composed 18 sacred books in Hindi, and his followers now amount to 20,000. *Kabir*, sprung from a weaver family, was the founder of one of the greatest sects in north India, while among the village gods worshipped in Behar are those who were boatmen, domes, oilmen. Drew, the great metaphysician, studied the sciences while cobbling—Dr. Carey was a cobbler. Many of the weavers of England have been great readers and even mathematicians, Chandra Gupta's maternal grandfather was a barber.

The London Working Men's College established in 1854, has 270 students in Mathematics, Drawing, French, Natural History. There are other Colleges in Manchester, Halifax. Carpenters, shoe-makers, weavers, tailors, porters belong to them. When will Bengal have hers?—the working men now can scarcely read. When is India to have the literature of labour—like that of Burns the bard and ploughman—Clare the peasant poet—Hogg the shepherd poet—Cooper the shoemaker poet—Miller the stone mason geologist? Hood's literature of labour, and the achievements of mind among the cottages, or "mind among the spindles" suggest many reflections on this.

1. *Weavers*, their numbers, profits, social position, localities, do many read; have many risen in the world?
2. *Tailors*, are all Musulmans?
3. *Shoemakers*, do any become rich, is the prejudice against them declining?
4. *Potters*, why inferior to those of former days?
5. *Dyers*, different kinds and nature of dyes?
6. *Masons and Stone cutters*, are they chiefly immigrants?
7. *Smiths*, the profits and social position of various classes, as copper-smith, tinsmith, blacksmith, goldsmith.
8. *Confectioners*, any poisonous matter, as in England, used in their coloring?
9. *Bookbinders*, any Hindus, if not, why?
10. *Shopkeepers*, why such readers among them, what class in society do they come from?



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11. *Idol makers*, their localities, profits?
12. *Firework makers*. Do.
13. *Pansaries*, or *Grocers*. Do.
14. Instances of *Revolutions* in trade in this country from change of employment like that in Europe among weavers, manuscript copiers, coach proprietors?
15. Instances among the working classes of men who have risen to wealth or social distinction, or who have educated their sons well?
16. Is the *Shilpa Shastra* in use among any priests?*
17. Do any of the *working classes* meet for combination to keep up wages, as ryots have with respect to Indigo?
18. The *middleman system*, its evils?
19. *Strikes*, among what classes, and why?

Among the most thriving trades, is that of keepers of tatties, who profit as much by this dirty work as English undertakers do by their other division of it. I have heard of some of those men near Dharrumtollah bazar who earn between two and three hundred rupees monthly. In the Congress General of Hygiene in France, 1852, one resolution passed was, "That the instruction of the young in the labouring classes ought to comprise all which relates to the cleanliness of their person and of their dwellings, to the benefits resulting from good ventilation and the evils arising from humidity." There is on the Continent the Association International de Bienfaisaisance, whose main objects are to bring into relationship all interested in the condition of the working classes, reformatory institutions and popular education.

* It is so among certain stone masons in Behar zillah.

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