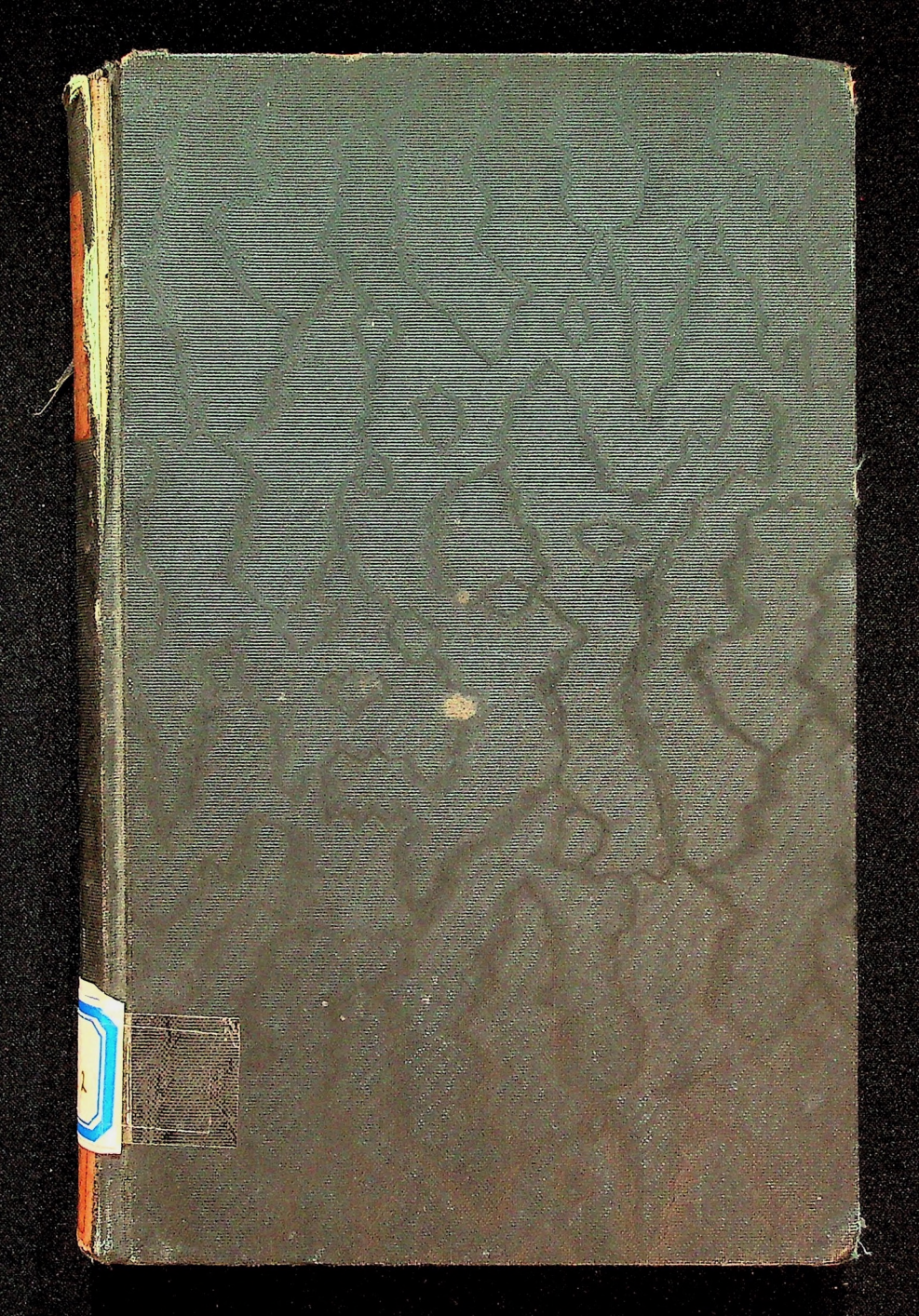


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ROYAL ASIATIC SOCIETY CHINA
SHANGHAI
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JOURNAL

OF

THE NORTH-CHINA BRANCH

OF THE

ROYAL ASIATIC SOCIETY.

外交部藏書
日本帝國大使館之印
1468

NEW SERIES.—NO. I. DECEMBER, 1864.

SHANGHAI:
PRINTED AT THE PRESBYTERIAN MISSION PRESS.
MDCCCLXV. 1865

REPRINTED BY "THE NATIONAL REVIEW" (CHINA)
MCMXIV 1914

BIBLIOGRAPHICAL NOTE.

This volume is a reprint of No. I of the New Series of Journals of the North-China Branch of the Royal Asiatic Society, being the issue for 1864. The peculiarities of orthography are reproduced except where such were obvious errors.

In the original volume the paging began at page 129 and ran consecutively to page 174, i.e., the end of Dr. Dicksen's "Narrative of a Trip through Hunan, from Canton to Hankow"; and on page 174 was the following note :—

> The preceding articles were contributed before the North-China Branch of the Society, as originally constituted, fell into decay. They were printed at the time, and were found awaiting publication by the Editorial Committee. They have accordingly been bound in the present volume, the paging being continued from the last issue of the Journal. The articles which succeed have been read since the re-formation of the local branch in March 1864, and have been paged as the commencement of a new series.

The paging of the remaining articles ran from 1 to 148. The present reprint is consecutively paged throughout.

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PREFACE.

THE volume of Transactions now presented to the public, will, we trust, prove the commencement of a new series. The North China Branch of the Royal Asiatic Society sustained so severe a shock in the death of its late President, the Rev. Doctor Bridgman, that there seemed just ground for fear that its vitality had been destroyed and that the promise which it at first gave was doomed never to be realised. The local branch has, however, been re-organised, and, in spite of many difficulties, meetings have been regularly held, and more than one valuable paper submitted for consideration. The result of these labors is now placed before the society and the general public, who will judge for themselves as to the progress which has been made. Having advanced so far, it is sincerely to be hoped that the local branch will not again fall into decay. We need not point out the many advantages likely to accrue from possessing a properly organised body of men ready individually and collectively to devote themselves to research into the records of the countries in the midst of which they are living. Many of the problems presented by the political, religious and philosophical systems of China and Japan will, it may reasonably be expected, be solved, while others which to the present members of the Society may prove obstinately insoluble, will be rendered more practicable for subsequent laborers in the same field. The working members of the North-China branch are, if not the pioneers, at least the advanced guard of the army which will ere long make a formidable and, no doubt, irresistible attack on the strongholds in which the learning of the far East has entrenched itself. To each individual in that attacking force it will at some future day be a just ground for self-gratulation that he lent his aid towards the demolition of those barriers which now alike oppose the spread of western civilisation, and the acquirement of knowledge with regard to the complicated systems of the East.



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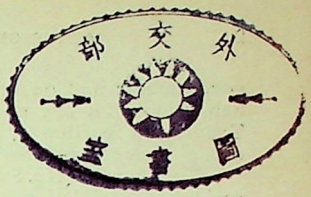
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JOURNAL

OF

THE NORTH-CHINA BRANCH

OF

THE ROYAL ASIATIC SOCIETY

ARTICLE I.

NOTES ON THE CITY OF YEDO, THE CAPITAL OF JAPAN.

By Rudolph Lindau, Esq.

The Capital of Japan, situated at the north of the great and beautiful bay of Yedo, has a circumference of 38 kilometres, and covers a surface of nearly 85 square kilometres.* The *O-gava*, or Great River, divides the city into two parts; the eastern part is called *Hondjo*; the western part bears more especially the name of Yedo.†

Hondjo has a circumference of 14 kilometres and covers a surface of 12 square kilometres. It is an island, the boundaries of which are: South, the bay of Yedo; West, the Ogava; North, a large canal; and East, a river running parallel with the Ogava. This island is traversed from north to south by four canals, and from east to west by three large and a great number of small canals. They cut each other at right angles, and divide Hondjo into eight principal districts.

The districts Nos. 1, 2, 3, and 4 contain in their northern part thirty and odd temples, all surrounded by extensive gardens. In their western part, along the banks of the Ogava, are several large store-houses, which belong to the

*One kilometre=1,093 yards. 1 mile=1.6 kilometre; accordingly the circumference of Yedo is 24 miles, and the surface covered by the city 36 square miles.

†See map of the City of Yedo at end of article.

government; and on the banks of the canals are found the habitations of a few merchants, workmen, and fishermen. The largest portion of these four districts, however, are occupied by the palaces of the daimios.

The districts No. 5 and No. 6 contain almost exclusively residences of daimios. Besides there are thirteen temples; among which the temple of *Yoiaka Lakan* (temple of the 500 images) is particularly venerated and deserves particular attention. It consists of two large old buildings which have suffered severely from earthquakes; a part of the idols belonging to Yoiaka Lakan have been removed into a store-house or depository built near at hand.

The district No. 7 contains about twenty temples, whose gardens and out-buildings cover nearly half of the whole district. Among these temples is that of *Hadsuma*, the Japanese "God of War." The rest of this district is occupied by governmental stores and warehouses with a few dwellings of citizens.

The district No. 8, besides many houses belonging to the government and to the daimios, contains one large temple and a good many dwellings of citizens.

The whole eastern part of Hondjo is covered with paddy fields, in the midst of which are thirteen temples and twenty-four palaces of daimios and a few dwellings of labourers.

Estimating the surface of Hondjo to be twelve square kilometres, we find that—

Paddy-fields cover	3	Kilometres,
Palaces of daimios cover	5	Kilometres,
Govt. buildings, Forts, etc., cover	1½	Kilometre,
Temples cover	1½	Kilometre,
Dwellings of Citizens cover ...	1	Kilometre.

Hondjo is connected with Yedo by four great wooden bridges of very simple but solid construction. They are called, commencing on the north, (1) Hadsuma-Bassi, (2) Liogoku-Bassi, (3) O-Bassi, and (4) Yetai-Bassi. The largest of these is O-Bassi, or Great Bridge, its length being 350 yards.

Hondjo is a very quiet part of the capital. One might compare it to the Faubourg St. Germain of Paris, if the whole of Yedo was not the rendezvous of the Japanese aristocracy.

The quay of Hondjo, on the banks of the Ogava, forms a large and beautiful street, and may be especially recommended to a traveller who has only a few days to spend in Yedo. In passing along the quay, he will see across the stream several fine temples and great buildings, which stand on the western bank of the Great River, and he may get at the same time a very good idea of the animated river-life

of the Ogava, whose waters are always covered with junks and boats of all descriptions.

YEDO PROPER is divided into three parts: (1) Siro, or the Castle; (2) Soto-Siro, or Outside of the Castle; and (3) Midzi, Town and Suburbs.

SIRO (Djiro) or the Imperial Castle has a circumference of eight kilometres, or nearly 5 miles, and covers a surface of 5.4 kilometres or 1.7 sq. ms. It contains the palace of the Tycoon and of his successor; the palaces of the three Gosankios of Japan (brothers of the Emperor), named Taïas, Simira, and Hitotsbas; the palaces of the members of the Council of State; and about twenty palaces of high daimios. There is no one public temple in the Siro, and not one habitation of a simple citizen. The space which contains the two imperial palaces is surrounded by high walls, and by several canals which the public is not allowed to pass.

There are eighteen public bridges in the Siro, and a multitude of private bridges, for almost every palace is surrounded by a moat and moreover communicates with the main road by several little bridges.

The two imperial palaces have not at all the character of grandeur and magnificence which several writers have attributed to them; I have not seen them myself, but take it from the authority of gentlemen who have seen them, that they exhibit that entire simplicity, both within and without, which distinguishes all Japanese buildings, except the temples.

The public walks round the castle are very agreeable and picturesque. They form large streets and roads and are perfect in their cleanness. The finest part of these walks is that on the banks of the principal canal. It is covered with thousands of aquatic birds, and surrounds the fine old walls of the two imperial palaces.

Outside of the Siro, or Castle, but so near to it that I may mention it here, and close to the palaces of the Gosankios, there is a hill, which every foreigner should visit for the purpose of getting an idea of the great extent of Yedo. The sight of this vast city, with its innumerable temples, its large white buildings and fine gardens, exhibits one of the most beautiful and interesting panoramas that can be imagined. It looks less like a city than a vast assemblage of parks and villas. In certain districts there may be seen regular streets, but by far the greatest part of the ground is covered with palaces and temples, surrounded by extensive gardens.

The large temples—and there is a great number of them—are generally very beautiful. As regards the palaces of the daimios, they are long buildings, of one single high

story, ordinarily whitewashed and look like good large warehouses, having absolutely nothing remarkable in their architecture. The large doors of these habitations are sometimes ornamented with good carvings; but usually they are made of plain wood, covered with small plates of copper, forming various designs, such as the proprietor's coat of arms. The interior of these palaces is—so far as I could learn—of great simplicity, and the beauty and fineness of the mats, carvings and paintings, are the only points of distinction between the houses of the princes and those of the simple citizens. There is no furniture in these houses, and their principal ornament is their cleanliness, which is said to be such as nothing can surpass.

THE SOTO SIRO has a circumference of nearly 16 kilometres, or 10 miles. It is separated from the Siro by the canal which surrounds the latter; from Hondjo by the Ogava; and from the rest of the city by a large canal, bearing the name of *Chori*. It is united to Siro by eighteen bridges; to Hondjo by the before-named bridges, viz: *Liogoku-Bassi*, *O-Bassi* and *Yetai-Bassi*; and to the rest of Yedo by thirty bridges. In the interior of Soto Siro there are about twenty more bridges, among which is the celebrated *Nipon-Bass* or Bridge of Japan. This bridge is considered as the centre of the Empire, inasmuch as all geographical distances are counted from it.

Of the twelve square kilometres, (5 square miles) which form the total area of Soto Siro, not less than 7 are occupied by daimio palaces. The fifteen temples which are to be found in this part of Yedo cover a surface of one square kilometre.

The remaining space of Soto Siro is very densely inhabited, and may be called the Mercantile Place of Yedo. This interesting district is situated on the east of the castle and has the form of a parallelogram. It is traversed in its whole length by the To-kai-do, (the main road of Japan,) and communicates by 15 bridges with the rest of Yedo. Of these, two are on the west, communicating with the Siro; five on the south; five on the east; and three on the north part of the city. The middle one of the three northern bridges is the *Nippon-Bass*.

The Mercantile Place contains five longitudinal, and twenty-two transverse streets, cutting each other at right angles, and forming seventy-eight districts, separated from one another by wooden gates, ordinarily kept open, but always guarded by a small police force, who at any moment can isolate any given part of it.

In this Mercantile Place and in the three adjacent precincts, north, east and south of it, there is not one daimio's

palace nor any large temple. It is in this part of Yedo that the principal commerce of the city is concentrated, and it is only in this part that regular streets are to be found. These streets are very animated, though the total absence of carriages makes them less noisy than the great arteries of western capitals. The aristocratic quarter and the environs of the temples are extremely quiet, having almost an air of desertion.

The To-kai-do, already mentioned, traverses the whole of Japan, from Nagasaki to Hakodadi. From Nagasaki to Yedo this road bears the name of *To-kai-do* (western road); in Yedo, it takes the name of O-to-ri, (grand street); and from the northern extemity of Yedo to Hakodadi it is called *Oskio-kaido* (northern road). The *Nippon-Bass*, situated on the O-to-ri, forms the limits of the To-kai-do and the Oskio-kai-do. This important road is through its whole extent—notwithstanding it passes through a great number of daimio principalities—the property of the Tycoon.

It is on the To-kai-do that one goes from Kanagawa to Kawasaki and from Kawasaki to Yedo, which circumstance explains the great animation one always finds on the road when proceeding from Kanagawa to Yedo.

Yokuhama is situated at about three miles distance from the To-kai-do. At the points where the To-kaido enters and leaves Yedo are situated the two places of capital execution.

Among the above-mentioned fifteen temples, to be found in Soto Siro, there is the temple of *Monzeki*, the greatest *Tera* of Yedo; and the temple of *Sanno*, one of the principal *Mias* of the capital. *Tera* is the name given to the Buddhist temples, and *Mia* designates the temples of the old primitive religion of Japan.

MIDZI, OR TOWN AND SUBURBS. This general name comprehends the whole of Yedo, exclusive of Siro and Soto Siro. It has a circumference of 38 kilometres (24 ms.), and covers a surface of nearly 69 s. kilometres (or 29 s. ms.) Deducting from this number the 12 square kilometres which belong to *Hondjo*, there is still to be described a surface of 57 s. kilometres (23.75 s.m.). For the easier understanding of this exterior of the metropolis, I have divided it into three parts, which may be called respectively, north, south and west, viewing them from the castle, as a standpoint. Hondjo, as will be remembered, lies to the eastward of the castle.

The part NORTH OF THE CASTLE covers a surface of about 26 square kilometres (11 s.ms.), and extends northward to the *Ogava*, across which, at this part of the capital, is the fifth great bridge of Yedo, called *Os-kio-kai-do O-bassi*, the Great bridge of the northern road.

This northern suburb is remarkable for the number and extent of the temples which are found there, and which cover a surface of not less than 8 square kilometres (3¼ s.ms.). The mausoleum of the Tycoons alone, surrounded by thirty-six temples, occupies a space of more than one square kilometre. Among the other temples of the northern suburb there must be mentioned those of *Quanon*, of *Amida*, of *Confucius*, and of *Kanda*, the tutelary deity of Yedo.

The temple of Quanon is one of the most beautiful, most venerated and most frequented of all the temples in Japan. Before one arrives at the long avenue which leads in a straight line to this temple, he passes through a large portico, the pillars of which are beautifully varnished with red. This varnish, though exposed to all the changes of the air for so many years, has lost nothing of its brilliancy. In the middle of the portico is suspended an enormous lantern, the largest, I think, which ever was made. The avenue leading to the temple is lined with shops, in which are exposed all sorts of articles, religious and profane, to be sold to the numberless pilgrims who every year visit the celebrated temple of Quanon. Amongst these articles, exposed to the sight of all, I must make mention of a great number of *Priapi* of all sizes: it is quite evident that the Japanese do not attach to the exposure in public of these objects any idea of immodesty.

The temple of Quanon is elevated about 20 feet from the ground. A grand flight of steps gives access to the interior. The arrangement of this, like that of almost all other Buddhist temples I have seen in Japan, resembles very much that of the interior of Catholic Churches. There is first a chief altar at the extreme end of the temple, with side chapels at its right and left; there is also a great number of wooden images, which with the "glory" round their heads, are often entirely like the images of Catholic saints. As a trifling point of resemblance, I many mention moreover that at the door of the temple is seated a man selling rosaries and holy pictures. In the side chapel, at the left of the chief altar, may be seen a well-sketched picture, representing some of the prostitutes of Yedo, who have been celebrated for their beauty. The interior of the temple is not very large, and has not the character of perfect cleanness, for which most of the public buildings in Japan are remarkable. Doubtless the reason for this is that the temple of Quanon is always filled with people, who arrive there during the whole year, from all parts of the empire. At the right of the temple there is a fine old Pagoda, and near this Pagoda two colossal stone statues. At the left are nicely arranged pleasure gardens with tea-houses

and shops, where curiosities and rare plants and birds are sold.

The buildings which are called the *Temple of Confucius* form the University of Yedo. Foreigners have not yet obtained permission to visit it.

The temple of *Kanda* is remarkable for its vast out-buildings, and its elevated position on a hill, from which a good view of Yedo may be got.

A great part of the remaining 18 square kilometres (7.5 s. miles), forming the district which I have called "North of the Castle" is covered by paddy fields, in the midst of which rise picturesquely-situated houses. There are also extensive pleasure gardens, such as *Askia-yama*, and neat little villages, which are to Yedo what St. Cloud is to Paris. Among these villages the most remarkable for the beauty of its situation is one called *O-dzi*. Every foreigner, coming to Yedo, ought to visit it, but he will not expect to find there those artificial landscapes which surround the capitals of the west. He will see nothing but a fresh little valley, compassed by a small limpid stream on the banks of which reigns a peaceful tranquillity.

Near *Odzi* is a little temple which has been erected by Hieas, the father of the reigning dynasty, and which is now consecrated to this Emperor under the name of *Gangen Sama Tera*. The Tycoons go there sometimes to pay homage to the memory of their great ancestor; near this temple they have a villa, a part of which can be vistited by foreigners.

I estimate the surface covered by paddy fields and pleasure gardens at 11 square kilometres (4.6 sq. miles). Out of the remaining 7 square kilometres (2.08 square miles) 5 may be allotted to daimio palaces; among these are the palaces of the great daimios of *Mito*, *Ovari* and *Kanga*.

The dwellings of citizens, situated in the district "North of the Castle," cover scarcely more than 2 square kilometres (less than a square mile,) and even from this comparatively small space must be deducted the grounds on which stand the great theatre of Yedo, and *Yosivara*.

Yosivara, or the court of public women in Yedo, forms a regular parellelogram of 1¼ kilometre circumference, ·8 sq. mile. It contains four longitudinal and three transverse streets, cutting each other at right angles, and is exclusively inhabited by prostitutes and their servants. Foreigners are not allowed to visit this part of the city. It is said to contain 5,000 public women: this number may be considered small, in view of Japanese customs and of the large population of Yedo; but it must be remembered that Yosivara does not contain all the females who in Yedo are devoted to prostitution. There are in several parts of the capital, but

principally in the south suburb, called Sinagawa, a great number of the so-called "houses-of-rest," *ho-ta-go-ga*, which are full of public women. Yosivara is surrounded by walls and a large ditch. It has only one entrance, which is guarded by a strong police force.

The part WEST OF THE CASTLE contains 50 temples, covering 4 square kilometres, 1.17 sq. miles, and a great number of daimio palaces, occupying about 5 sq. kilometres, 2.08 sq. miles. Among these palaces is the great palace of the prince of Ovari, and the palace of the prince of Kiusiu, the first daimio of Japan. The reigning Tycoon belongs to the family of Kiusiu. In the Western district is also the palace of the *Go-tairo*—the lately murdered regent of Japan.

The dwellings of citizens in this district do not occupy more than one half of a square kilometre, and paddy fields extend over two and half.

The part on the SOUTH OF THE CASTLE, with an average surface of 19 square kilometres, contains about sixty temples, covering 5 square kilometres. The most remarkable among them is the *Tera of Meguro*.

In this part of Yedo there is the old Tycoon Mausoleum surrounded by several temples; there are also an abandoned palace of the Tycoons, the cemetery of the chief priests of Yedo, and the three temples which the Japanese government has given as residences to the Representatives of the Foreign Treaty Powers. The English Legation is most conveniently placed in the temple *Todendsi*, situated on the To-kai-do quite near the bay, and at the south-eastern entrance of Yedo. The French Consul-General stays at *Sakai-dsi*, about ½ mile distant from *Toden-dsi*. This temple is situated on a hill, and has a most remarkable view over a part of the city and bay of Yedo. The American Legation, *Dsen-fu-dsi*, is situated more in the interior of the city than either the English or French. It is at a distance of about 1½ mile from Sakai-dsi and 2 miles from Toden-dsi.

The palaces of daimios to be found at the South of the Castle cover about 3 square kilometres. Among these is the palace of the prince of *Satsuma*, reported to be the finest in Yedo. There is only a small number of citizens' habitations in the southern part of the capital (say 1 square kilometre), but a great surface (say 11 square kilometres) is covered by paddy fields.

RECAPITULATION AND POPULATION. I have not succeeded in learning the exact number of the inhabitants of Yedo; and I believe that there does not exist any accurate official census. The reason of this deficiency is that the population of Yedo has the characteristic of being chiefly compos-

ed of transient residents. One may form however an idea of the amount of the total population by examining the real extent of Yedo.

The capital of Japan covers a surface of 85 square kilometres, 36 square miles, distributed in the following manner:—

	Paddy Field.	*Temples.*	*Palaces.*	*Residences.*	*Total.*
Honjo, ...	3	1½	6½*	1	12
Siro, ...	0	0	4	0	4
Soto Siro, ...	0	1	7	4	12
N. of Castle, ...	11	8	5	2	26
W. of Castle, .	2½	4	5	½	12
S. of Castle, ...	10	5	3	1	19
	26½	19½	30½	8½	85

Though these figures are not mathematically exact, yet they are as near an approximation to the truth as can well be obtained. They show at once that the city of Yedo is much less considerable than it seems at first view. By deducting from the total of 85 square kilometres the 46 square kilometres, covered with paddy fields and temples, there are left not more than 39 square kilometres (16.25 sq.-miles) for residences. It must be undertood that there are a few houses in the middle of the paddy fields and that there is a large number of fields to be found in the temples; but notwithstanding it is beyond question that Yedo contains a much smaller number of inhabitants than would be found in any occidental city of equal extent.

I calculate that there are 200,000 priests in Yedo. This number is less considerable than is generally supposed; but it must be remembered that the 20 square kilometres covered by temples contain very extensive gardens and that the dwelling houses occupy a very small portion of the above mentioned surface.

Considering the 30½ square kilometres (12.3 square miles) allotted to daimio palaces and to the imperial and governmental buildings, we arrive at the following conclusions. The laws of Japan prescribe that one half of the daimios must always be personally present at Yedo. There are eighteen great daimios and 342 smaller ones. I am told that the great daimios often take from 6,000 to 10,000 followers with them. By allowing the maximum of 10,000 followers to each of the nine great daimios, who must be present at the capital, we thus find 90,000 followers always residing in the capital.

* The palaces cover only five kilometres, and one and a half more is occupied by fortifications.

The number of the followers of the small daimios varies from a few hundreds to a few thousands. Altogether we may accept 2,000 as a very fair average number for the retinue of each of the 171 small daimios residing at Yedo. We thus find 342,000 followers.

Besides these men there are the imperial functionaries to be also mentioned here. Their number may amount to 050,000.

It must be remembered that even the absent daimios have always more or less of their subjects present at Yedo. We need not take them into our estimate, however, for the numbers of followers, which we have allotted to the resident daimios, are very liberal.

The number of merchants and other non-official inhabitants of Yedo is known; and it amounted, in 1857, to 572,848.

And lastly we must take into the account the floating population, composed of pilgrims, visitors and other travellers, who congregate in Yedo. Their number may be about 200,000.

Recapitulating, we now find that the population of Yedo is composed of the following elements:—

Followers of the great daimios, ...	90,000
Followers of the small daimios, ...	342,000
Imperial officials, ...	150,000
Priests, ...	200,000
Residents, ...	572,848
Floating population, ...	200,000
	1,554,848

Yedo, as viewed from the bay, is certainly a very beautiful city. Situated on undulating ground, and covered with fine old trees, it spreads out under a sky which has well been compared to the sky of Naples. The many large temples with their great roofs, surmounted by gilded globes, and covered with metalled plates, produce a beautiful effect. The pagodas, the large daimio palaces, the long line of well-constructed quays, the fortifications, kept in perfect good order—all these together present an imposing *coup-d'œil*.

On arriving in the city itself, however, one is rather disappointed. The temples disappear behind the trees with which they are surrounded; the palaces resemble scarcely anything better than large fire-proof warehouses; and the dwellings of the merchants and other citizens, though extremely clean, are small and look rather poor. There are no handsome shops, no grand establishments, no triumphal arches, no statues, no monuments; in short, nothing of what constitutes generally the beauty of our occidental capitals.

The streets and quarters belonging to the daimios are almost deserted; the Mercantile Place, though in it there is great animation, looks neither rich nor handsome; and altogether there is not one street in Yedo which could in the least recall such streets as, at home, we expect to find in the capital of a great and powerful empire.

When riding through the daimios' quarter, one might easily fancy himself in a great and wealthy village, or outside the park of some rich proprietor; and in passing through the mercantile districts, he might believe himself in a manufacturing city, crowded with a poor population.

I will not in the least suggest that Yedo is ugly; but it certainly does not deseve the reputation for splendour and magnificence, which has been given to it by some writers.

The persons who are seen in the streets do not contribute to give any higher idea of Yedo's splendour. These are principally *yakonins* (officials), walking alone or escorting in groups of from 4 to 100, a governor, vice-governor or other official. When the *yakonin* is in his court dress, with bare and well-shaved head, he is a military and well-looking man; but when in his ordinary costume, his exterior is neither very agreeable nor respectable. His two large swords, which look very well when one sees that the bearer is a soldier, give him the air of a bandit when there is no reason for his wearing them. He looks the more so, when he covers his head and face, as he often does, with a large handkerchief, so that there is nothing of his face to be seen, except his eyes. Besides Yedo has, like most other capitals, a large number of bad characters, who having nothing to occupy them are almost always in the streets. A certain class of these men are called *lonings;* they are sons of good families and have on that account the right to wear the two swords. A great deal of all the trouble which occurs in Yedo, is attributed to them.

The finest sight one can have in the streets of Yedo is that of a daimio's cortege. The prince is always in a large and fine chair, called *norimon*, and is surrounded by the insignia of sovereignty, its sword-bearers, led horses and following multitude of soldiers, with other retainers carrying arms, baggage, provisions, etc.

Priests do not walk much outside their temples. The costume of the citizens is very simple and uniform, and not at all rich. There are no vehicles in Yedo, at least not used for carrying persons. Horsemen are also very scarce, though from time to time one may encounter a *yakonin* on horseback. What abounds in the streets of Yedo are the children, who, having nothing to fear from horses or carriages, seem to pass their lives out of doors. Their great

amusement is to play at flying kites, which, in favourable weather, literally cover the whole city.

The streets in Yedo are generally large and well kept. The environs are very picturesque and offer a great variety of pleasant walks or rides. Foreigners cannot do better than to spend their leisure hours in rambling over the country. The finest scenery is at the northern and western sides of the city, where the country is surrounded by beautiful hills with the distant view of the grand mountains of Hankoni, beyond which rises the solitary summit of Fuzi-yama.

NOTES EXPLANATORY OF THE MAP OF YEDO.

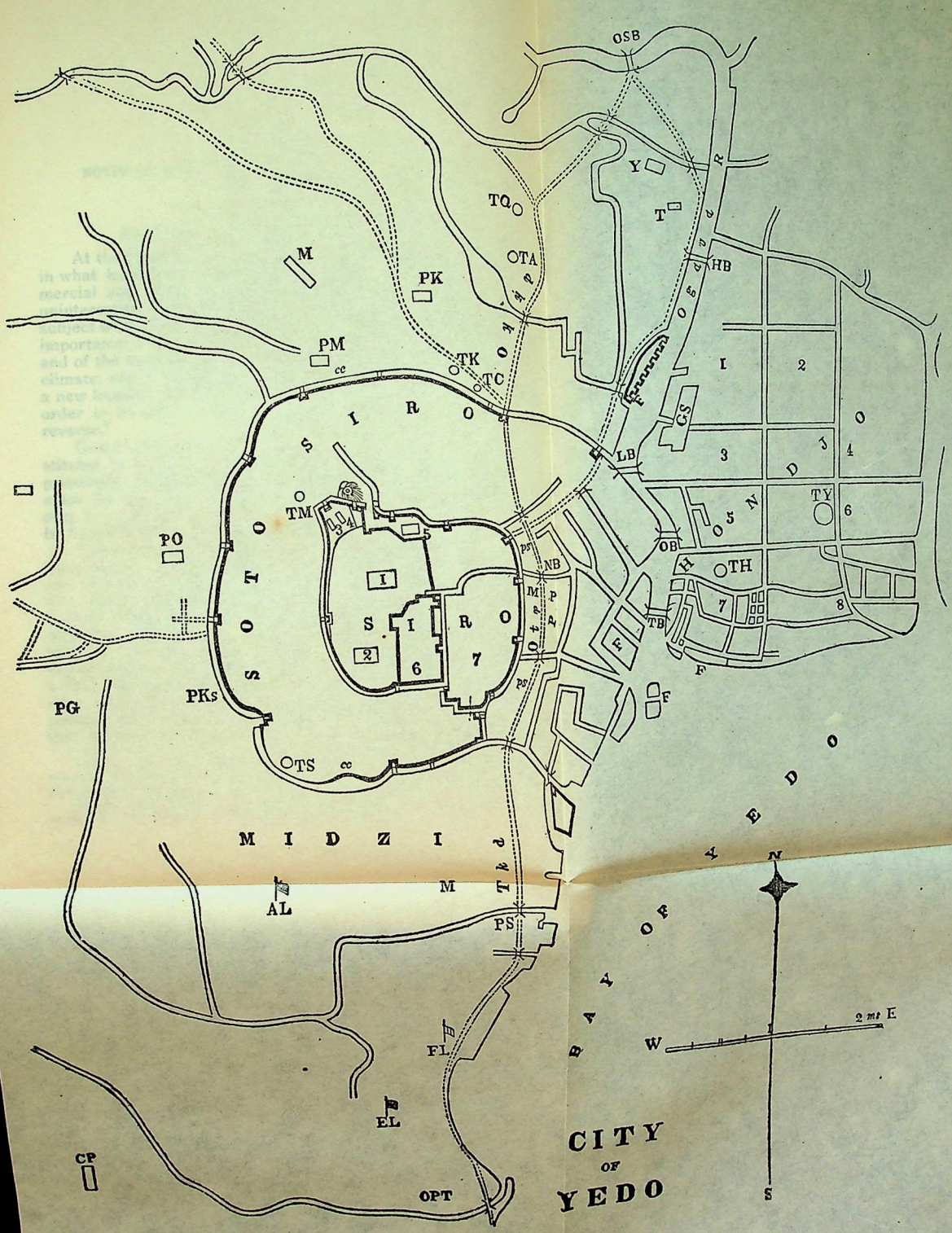
By the Editorial Committee.

The accompanying map of the City of Yedo has been prepared, in part, by the author of the foregoing Essay, and, in part, by Mr. Blackney, of H.M.S. *Actæon*. An original draft, furnished by Dr. Lindau, was of such dimensions as to require recasting, and the Editorial Committee gladly accepted Mr. Blackney's offer to reduce it to the size in which it here appears.

The *Bay of Yedo*, the *Ogava River*, the numerous *Canals*, and the *Scale of miles* attached to the Fleur-de-lïs, are all exhibited with sufficient clearness, though much less conspicuous than on the large Japanese maps.

ABBREVIATIONS.

F.	Fortifications.
	ROADS.
T k d	To-kai-do
O t r	O-to-ri
Os k d	Oskio-kai-do.
	BRIDGES.
N B	Nippon Bass.
Y B	Yetai Bassi.
O B	O Bassi
L B	Liogoku Bassi.
H B	Hadsuma Bassi.
O S B	Oskio Kaido O Bassi.
	HONJO.
G S	Government Stores.
T Y	Temple of Yoiaka Lakan.
T H	Temple of Hadsuma.
	SIRO.
1	Place of Tycoon.
2	Palace of the Heir.
3	Palace of Gosankio Taias.
4	Palace of Gosankio Simira.
5	Palace of Gosankio Hototsbas.
6	Council of State.
7	Palaces of Great Daimios.
	SOTO SIRO.
C C	Chori or Canal.
T S	Temple of Sanno.
T M	Temple of Monzeki.
M P	Mercantile Place.
P s	Its precincts.
*	A Hill.
	MIDZI.
Y	Yosivara.
T	Theatre.
T Q	Temple of Quanon.
T A	Temple of Amida.
T C	Temple of Confucius.
T K	Temple of Kanda.
M.	Mausoleum of the Tycoons.
P K	Palace of the Prince of Kanga.
P M	Palace of the Prince of Mito.
P O	Palace of the Prince of Ovari.
P G	Palace of the Prince of Gotairo.
P S K	Palace of the Prince of Kiusiu.
P S	Palace of the Prince of Satsuma.
O P T	Old Palace of Tycoons.
C P	Chief Priest's Cemetery.
	FOREIGN LEGATIONS.
E L	English Legation.
F L	French Legation.
A L	American Legation.


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ARTICLE II.

NOTES ON SOME OF THE PHYSICAL CAUSES WHICH MODIFY CLIMATE.

By James Henderson, M. D.

Read before the Society, 21st May, 1861.

At the present time, when many people are considering in what localities it will be best to seek residences for commercial and other purposes in China, it will be neither uninteresting nor unprofitable to make a few remarks on a subject which is confessedly one of the greatest interest and importance. Two cities, even in the same degree of latitude and of the same elevation, may be diametrically opposite in climate; and it is highly desirable that every one, who visits a new locality, should know "*what ought to be observed,*" in order to be able to pronounce that locality healthy or the reverse.*

Great differences of opinion prevail as to what constitutes a good or a bad climate; and this, I think, is principally owing to neglect of the above rule, but partly to a too limited view of so vast a subject, and perhaps partly, also, to individual experience, since the same climate will be found to kill one man while it cures another.

One man, for example, has no other idea of climate than that of a locality situated on a certain degree between the equator and the poles. Another confines his attention to a certain degree of elevation above the level of the sea. A third declares that climate is influenced only by local elevation and latitude. A fourth, to make up his opinion, asks for nothing more than a well-arranged table of thermometric, hygrometric, and barometric degrees; while a fifth declares that Hankow *is* very unhealthy, *because* the river overflows its banks, and the streets of the city are covered with water. Now, with all deference, I must say that all these views are much too limited for a subject so

* Malte Brun says, "Physical climate comprehends the degree of heat and cold, the drought and humidity, and the salubrity which occur in any given region of the earth."

Hooper says, "Climate is the prevailing constitution of the atmosphere, relative to heat, wind, and moisture, peculiar to any region."

comprehensive, and which is based on principles in physical science so subtle and refined as that of climate. I believe it is impossible to take a too comprehensive view of physical climate, and the influence which it exerts on individuals of different constitution and temperament. Many have the idea that man's body can resist the injurious effects of climate better than that of any other animal, except perhaps the swine's. I am convinced that this is an error, if all things are taken into account. Dr. James Johnson, whose experience was great in this matter, says: "It is evident that nature does not operate more powerfully in counteracting the ill-effects of climate on man than on any other animal; it follows that we should not implicitly confide, as too many do, in the spontaneous efforts of the constitution, but on the contrary call into its aid those artificial means of prevention and amelioration which reason may dictate and experience confirm; in short, that we should study well the climate and mould our obsequious frames to the nature of the skies under which we sojourn."

Great variety of climate must be found in different localities in a portion of the earth's surface so very large as that of Northern China. A distinguished authority in England, writing on the climate of Devonshire and Cornwall, observes that these counties not only possess a climate different from any other part of England, but the different parts of these counties differ widely from each other. How much more will the climate vary over a space which embraces about one-fifteenth part of the whole habitable globe? Surely a subject which so powerfully influences man's health, and consequently his happiness, demands all the attention and the most careful investigation which we can possibly give to it.

I shall state, very briefly, what I consider some of the principal physical causes which modify climate; I do so advisedly, having carefully considered the subject, and I believe there will be found, in China, little short of all the varieties of climate suitable for invalids of every class, with different diseases, and different stages of the same disease, that are known in Europe, provided the localities here are carefully selected.

It is easy to lay down certain principles, founded perhaps partly on experience, and partly on theoretic grounds, and by the aid of these, we may in a general way determine the nature of a climate and its peculiar influences on different individuals. But it is not so easy to determine accurately, without much investigation, because of the nice shades of influence which are capable of modifying in a surprising degree the instruments with which we make our

observations. Besides the major influences, which no careful observer will overlook—such as direct sunlight, warm exposure, reflected and radiated heat, currents of wind, rain, etc.,—there are ever varying conditions, which, unless carefully watched, will produce marked differences and modifications on the instruments we use; for instance, two thermometers, placed within five hundred yards of each other may show a difference of 6 or 8 degrees of heat for several days together, simply because one is near the surface of the earth or in a sheltered situation, while the other is elevated and exposed to currents of wind or rain. Now, under such circumstances, if one instrument only is employed, a very inaccurate idea may be formed of the locality, and this shows the necessity of multiplying observations, and of carefully watching all modifying influences.*

The principal particulars which ought to be observed in forming an estimate of physical climate are these, namely:—

Temperature; Humidity; Geological Nature of the Soil; Drainage and Cultivation; Proximity of Sea and Rivers; General and local Elevation; Position of Mountains; Prevalent Winds; General and local Aspects; Trees and Vegetation.

Besides these, if we wish to arrive at anything like accuracy, many other points must be observed, as perpendicular pressure of the atmosphere, electricity, the purity and transparency of the air, the quality of the water, the ozone, the moral condition of the people, their degree of intelligence, appearance, etc., whether or no there be many aged people among them, what diseases prevail in the locality, and especially what is the type of the diseases. I shall only very briefly touch on each of these points.

1. TEMPERATURE. What ought especially to be observed here, are the sudden changes and range of temperature during the different months of the year. In Shanghai, for example, the temperature is tolerably uniform during the months of July and August, while in some other months the changes are sudden and the thermometric range is large. Thus this year, in the month of March, it ranged during the day, from 41 to 70 degrees: during the night, from 32 to 53

* Erroneous notions are apt to be formed of certain places for want of proper investigation. The rate of mortality among the English troops at Hongkong presents a striking example of this. In the years 1842 and 1843 the deaths were from 19 to 22 per cent., or from 190 to 220 per 1,000. In 1845, when better accommodations had been provided, the mortality was only 8½ per cent., or 85 per 1,000; and subsequently, when "model barracks" had been erected, the number of deaths did not exceed 2½ per cent. or 25 per 1,000;—clearly showing that the climate of Hongkong had nothing to do with the appalling amount of mortality.

degrees. In April, during the day, it ranged from 54 to 76 degrees,—one day it rose to 84 degrees, but suddenly fell to 63 degrees; during the night, it ranged from 46 to 64 degrees.

The temperature of a locality will be much influenced, also, by the action of the sun upon the atmosphere, for it by no means follows that the *feeling* of heat is the same in two places, because thermometric degrees are the same. In some localities the thermometer will be 4 or 5 degrees more during the day than in the evening, and yet the evening is the only time that the heat is felt to be oppressive; this is owing to the free radiation and increased humidity which take place immediately after sunset, for at this time the atmosphere approaches nearer to the point of saturation, and consequently, much relief and comfort will be afforded by closing the doors and windows just before sunset, before the relaxing damp air shall have entered.

2. Humidity. The most accurate method of measuring the amount of moisture in the atmosphere, is by marking the difference between the temperature of the air and the temperature at which dew is deposited. Thus, when both are widely different, the climate is dry; and when both are nearly the same the climate is moist. *Caeteris paribus*, the amount of watery vapour in the atmosphere increases as we approach the equator; it is much influenced by circumstances which retard evaporation, and also by the fall of rain.

Instruments made with a view to ascertain the amount of moisture in the air seem only to measure the degree of evaporation. We may get a good general idea of the amount of moisture in the air by its action upon inorganic bodies; as, where there is much moisture, iron and steel become oxidised very rapidly; and common salt speedily dissolves when exposed to the air. So it is also with organic bodies; boots and shoes become mouldy; glue and paste soon lose their tenacious qualities; furniture falls to pieces, and wall paper is soon destroyed, whilst fermentation and putrefaction take place rapidly. The quantity of rain which falls should also be noted every month and day, since in some latitudes as much rain will fall in three days, as will fall in others in a whole year, though more or less may fall every month.

3. Geological Nature of the Soil. This largely influences the qualities both of air and water, and modifies climate in a remarkable degree. For example, light coloured soils, like this in Shanghai, during the summer months reflect a large amount of heat, while dark soils radiate and absorb heat. Clay and chalky soils are cool, as they long resist the solar rays; while ferruginous and carboniferous soils are heated rapidly, and also cool rapidly. Soils containing much

salt impart to the atmosphere a feeling of freshness and coolness.

4. Drainage and Cultivation. An unhealthy and dangerous locality may be improved to an almost incredible extent by artificial means. This has often been proved in nearly all parts of the world. Sir James R. Martin, in his excellent work on the "Influence of Tropical Climates," observes:—"In Calcutta, through the hitherto gradual improvements in its ill-chosen site, intermittent fever has become, for many years past, a mild and infrequent disease comparatively. This simple fact strongly illustrates the beneficial influences resulting from local sanitary improvement, while it constitutes a powerful inducement, to the government and the public of the city in question, to proceed in the same course of amelioration which has already secured to its inhabitants so great an exemption from disease." In another place, writing of Calcutta, he says:—"Strangers will read with surprise, that I do not think I saw above a dozen cases of ague in a year on the average; and these occurred in persons who went into the neighbouring jungles, on hog hunting and other such excursions." We do read this with surprise, and delight too, especially when we place this side by side with Dr. Clark's records of Calcutta in 1770, when an epidemic of ague "*with a cold stage of twelve hours*" occurred, which carried off 80,000 natives and 1,500 Europeans. Captain Hamilton also states that, in Calcutta, out of 1,200 British inhabitants, 460 burials took place between August 1723 and January of the following year. Many other examples might be given to prove the same great and important truth; and nowhere may the good results of sanitary improvement be seen more strikingly than in England, where malignant ague, sweating sickness, dysentery, incurable scurvy, plague, etc., have nearly all disappeared. I believe that much, very much, of the improvement of health, and the greatly reduced rate of mortality at home and abroad, are owing to the great advancement of medical science during the present century, and to the flood of light which has been thrown on physiology, pathology, the causes and consequently the cure of disease. No one however can doubt that diseases are now prevented, and their type changed and modified, by sanitary measures. Public health is, and ever will be, improved and preserved by proper drainage, cultivation, cleanly habits, and a well-regulated political and social state. I was told the other day, by a merchant who has long been resident in Shanghai, that in this "model settlement", during the last ten or twelve years, public health has been improved in a surprising degree, and he rightly ascribed this change to sanitary

improvements; this single fact should certainly excite this community to still higher efforts to excel in all sanitary measures.*

5. Proximity of Sea and Rivers. Maritime climates are more uniform than those remote from the sea. In hot countries the neighbourhood of the sea is much more cool and pleasant than districts inland. Where the country is flat and intersected with rivers, the tides and the influence of the sea may be felt from 100 to 200 miles inland, especially at the change of the monsoons; and generally, wherever the influence of the sea extends, there the climate will be more or less equable, soft and humid.

Both in India and in China, much mischief has been ascribed to overflowing sluggish rivers and the action of the sun upon them; the best informed, however, and those who have given most attention to these matters, look upon rivers with a far more friendly eye. There is nothing to be feared from a river when it moves at the rate of from two to five miles an hour; and few rivers, even in the dry season, move less than two miles an hour; while in the rainy season, and when inundations are passing off, the current will run from six to ten miles an hour. There is nothing to fear from an overflowing river, except at the time when the water is passing off, and when the ground is uneven and very loose, for it is then that any noxious exhalations are apt to be concentrated, more especially if any trees or wood have been long soaking in the water and are left to dry in the sun. Under these circumstances, it is of great importance to have a close line of umbrageous trees by the side of the river, or along the water mark. The drying up of rain, river or sea water, is much less hurtful than the drying process when the water is brackish.

6. General and Local Elevation. For every hundred yards of altitude above the level of the sea temperature is diminished one degree, which is caused by the rarefaction which air acquires in its enlarged capacity. Consequently if we rear a structure 3,000 feet high, we may enjoy a temperature 10 degrees below that on the

* May not the evident change and amelioration which have taken place in the climate of Europe be largely owing to cultivation and drainage? Caesar says, that "the vine could not be cultivated in Gaul on account of its winter cold;" and the reindeer, now found only in the zone of Lapland, was then an inhabitant of the Pyrenees. In the reign of Augustus, the Tiber, the Rhine and the Danube were frozen over two or three months every winter, which now never happens. One cause of this, however, may be astronomical, namely on account of the apogee position of the earth's orbit being in the northern hemisphere during the summer part of the year, or between the spring and autumnal equinoxes; thus the summer half the year is now, according to astronomers, *seven days* longer than the winter half. Hence also the northern hemisphere is relatively hotter than the southern.

surface of the earth; and it is certain that we should also get above all malarious influences, as it has been ascertained that yellow fever, and plague, marsh remittent and intermittent, never ascend beyond a certain altitude, while the limit of yellow fever and plague is very low indeed.

7. Position of Mountains. Mountains attract the watery vapours which are carried about by winds, and clouds and fogs are formed by these vapours becoming condensed. In some districts, these clouds and fogs are turned aside or stopped in their courses by a mountain or by chains of mountains; and currents of wind are also produced by them, while frequent showers of rain may be expected in their neighbourhood.

8. Prevalent Winds. The variations of the wind depend upon the equilibrium of the air, and nothing is more pernicious than a stagnant atmosphere, especially in a locality where noxious effluvia and concentrated malaria constantly emanate from the earth's surface. Even quadrupeds, insects, and plants are greatly influenced by prevailing winds. Winds, coming from off mountains, continents and large tracts of land, are always colder and sharper than off the sea; monsoons always change soon after the equinoxes, and always blow towards the hemisphere where the sun is: so that in many places, the wind will come from off the land one half the year and from the sea the other, unless it is influenced by highlands, or diverted by chains of mountains. In whatever region of country the influence of the sun is most felt, thither the wind will direct its course, because there the solar heat has dissipated and dilated the atmosphere.

9. General and Local Aspects. The climate of a locality is much inflenced by the relative exposure of the soil to the sun. The general aspect of the country may be the reverse of its local aspect. As a general rule, in the northern hemisphere, north-east aspects are cold, and south-west or south-south-west aspects are warmest.

10. Trees and Vegetation. Trees tend much to reduce temperature; they also powerfully attract marsh malaria, so that if trees are placed between a marsh and a residence its inmates will be secured against the marshy exhalations. Moreover, it has been proved that a locality covered with trees emits one-third more vapour than one covered with water, and all vegetation according to its density will have the same effect. There is no better way of improving a locality where the trees and brushwood are too dense or close than by clearing most of these away, only leaving, at certain distances from each other, long belts and clumps which will contribute much both to health and beauty.

With regard to *atmospheric pressure*, other circumstances being equal, the relative quantity of oxygen in a given space is considerably greater at a pressure of 31 than at 28 inches; and hence it will be readily understood why, in thick, humid weather, people experience a certain amount of lassitude and languor, and not the buoyancy of feeling peculiar to clear dry states of the atmosphere. It is also worthy of notice, and shows that the variations of atmospheric pressure greatly influence man, that paralytic and apoplectic cases are most frequent during rapid changes of the barometer, especially when its level is suddenly depressed; and minor affections of the head, such as shooting pains, vertigo, oppression, etc., are also more frequent.

I cannot but think that a climate is considerably modified by different states of *electric tension*, although some authorities assert the contrary. We know, that electric equilibrium is considerably altered by change of temperature, that every chemical action produces electric change, and that decomposition of surface water and all evaporation do the same. Even the spray of a waterfall sensibly alters the balance of the electrometer placed near it. The rising and falling of the tides, as well as the amount of moisture in the air, cause the amount of electricity to fluctuate. The amount of atmospheric electricity is greatest for a few hours after sunset, and least before sunrise and sunset. Marshes produce effects upon the animal economy very analogous to those produced by the galvanic pile; and this injurious action is increased by certain proportions of water, especially if the water holds in solution any organic substances. The drying up of a marsh is very similar, in many respects, to a galvanic pile deprived of humidity.

A peculiar and special action is produced on the nervous system by the electric machine, very similar to that produced after exposure to a marshy atmosphere, where malaria exists. Here is a most interesting field for investigation.*

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* I am strongly inclined to believe that electricity in a modified state is the agent which influences and regulates to a great extent the various secretions of the body through the sympathetic or organic system of nerves; and hence the various proportions of the amount of electricity in the atmosphere, in certain localities at different seasons of the year, have a considerable influence on the health of the animal economy, more especially on persons whose nervous system has been rendered susceptible by often repeated changes; as those who have been several years in a warm or hot climate always suffer more or less on removing to a colder one; and even those long exposed to the Shanghai climate suffer in the early part of summer until the warm weather sets in; this feeling I think, is greatly owing to the low electric condition of the cold atmosphere, or the small amount present being in a negative condition, the body is deprived of its positive electricity and a feeling of listless irritability and sinking is the result. The same also takes place at the close of the hot seasons, when the body is less able to resist the existing causes of disease.

If we attach an animal to the opposite pole of a galvanic battery, and thus deprive it of its positive electricity it will soon pine away and die; and I think there can be little doubt that, if the human body is exposed to an atmosphere with a negative electricity, it will very soon be deprived of its power of resisting the many causes of disease which surround it. I am also convinced that human health is much influenced by the ever varying states and degrees of the earth's magnetism to which it is always exposed.

Here is the place to offer a few words on the production of malaria and the laws by which it is regulated. Although we can determine, with the greatest accuracy, the various constituents of the atmosphere, and by the nicest shades of chemical analysis ascertain the relative proportions of each permanent gas, and also certain subtle substances found only occasionally and under certain circumstances, as ozone, iodine, free chlorine, nitric acid, etc.; yet hitherto no chemical analysis has detected a single trace of *marsh malaria*; still, when we consider the great advances which are constantly being made in chemical science, we need not despair of this being done. In such an investigation, however, perhaps as much may be expected from the miscroscope, as from chemical analysis.

All previously organized matter, in a certain stage or mode of decomposition, is largely concerned in the evolution of malaria, especially under a certain temperature and within certain limits; also various kinds and various degrees of this poison will be evolved: one form will produce plague; another, yellow fever; a third, low continued fever; a fourth, remittent; a fifth, intermittent; and these too in all their various types and degrees of intensity. Moreover, the soil of a locality has much to do in this production of malaria. Contrary to general belief, certain sandy soils produce fevers of a more aggravated nature than the swamp. This is proved in a very striking manner in the Alentejo and Algarve of Portugal, regions which are never free from fever, and yet the soil is almost entirely composed of sand. In India the most fatal and intractable forms of fever have occurred in localities where the soil was ferruginous, and amongst hills principally composed of granite, but containing also mica, felspar, quartz, and *highly magnetic disintegrating ferruginous hornblende*, and this last in very large quantity.

Beds and banks of rivers containing ferruginous clay and red sandstone are said to be much infested with malaria. Soils though black may contain much iron mixed with decomposing organic matter. Yet in order to render ferruginous and sandy soils thus dangerous, I believe that a certain high degree of solar heat, humidity, etc., are necess-

ary in certain localities. It also prevails in a greater or less degree in deep rich alluvial soil, with much vegetable mould. The action of the sun upon all stagnant moisture near the level of the sea seems to favour the production of malaria, and yet it appears that a certain degree of heat is only capable of producing it when combined with a certain amount of moisture, since a very dry season may render a marsh or swamp quite harmless, and it is always much less dangerous to traverse a marsh during the day than at night. Excess of moisture also checks its development, as in very wet seasons marshes are less unhealthy. Malaria has never been known to be developed in ships in latitudes north of 48 degrees. Water also seems to absorb or destroy it, as is evinced by the fact that people living on the bank of a river or lake, 1,000 yards wide, and opposite a marshy swamp, or on board a ship at 1,000 yards from an infected shore, will escape with impunity.

It seems heavier than air, for people who occupy ground floors are oftener affected than those who live in upper apartments. Good fires in a house seem to destroy its power. Trees attract it powerfully, so that to sit or sleep under a tree in a marshy district, is to meet it in all its concentrated intensity. Peat bogs, however swampy, are not malarious, being free from decomposition and effluvia of every hurtful kind.

I need scarcely say that the constitution of some individuals has greater power to resist the injurious influences of the various forms of malaria than that of others. Much also depends on the habits of an individual, the degree of health and vigour enjoyed. A healthy man may be quite free from ague until he gets a cold; or becomes debilitated; or exposes himself to malarious influence at night, or early in the morning, with an empty stomach; in all which conditions an ague may commence, modified however according to individual peculiarity.

For example, four people being exposed to cold, one gets bronchitis; another, sore throat; the third, a diarrhoea; whilst the fourth escapes entirely: all four were equally exposed to the same cold; three were predisposed to disease, though each in a different way; but the fourth was not, and therefore the exciting cause produced no effect. And so it is, in short, with all other diseases.

During the decomposing process of water in a marsh, little or no oxygen can be detected, although it is found in its usual proportion in the neighbourhood of the marsh. And as oxygen is emitted in considerable quantities from all other surface waters, and during its emission ozone is formed, it follows in theory, as it is found in fact, that no

ozone is formed in or over a marsh. In surface water, free from decomposition and abounding with infusoria, a rich supply of pure oxygen is emitted; say two cubic inches of oxygen for every square foot of surface water; and as there is a larger amount of watery vapour in the atmosphere in summer than in winter, equal volumes of air will contain less oxygen in summer than in winter; and as ozone, whose presence for some time has been and is still considered so essential in order to constitute a healthy atmosphere, is increased or diminished in *quantity* according to the relative amount of oxygen, the health of a locality might be ascertained in this respect by testing the atmosphere for ozone. The latest investigations declare ozone to be a teroxide of hydrogen, and its chemical formula would be HO_3. Some have named it electrified oxygen. It is produced in the atmosphere by electric discharges. It may also be produced by the action of phosphorus on the surface of water.

Paper impregnated with starch and iodide of potassium makes a good ozonometer, being rendered *blue* by ozone, faint or deep according to the amount in the atmosphere. The air of no locality can be considered unwholesome which contains ozone. Various gases, especially those spontaneously developed, prevent the formation of ozone, or destroy it when formed; and all these gases are also injurious to man, and the other higher animals; such as carburetted, sulphuretted, and phosphoretted hydrogen, with similar emanations. It cannot be detected in the atmosphere during the prevalence of epidemics, such as cholera, low fevers, ague, etc. In Shanghai, except when the wind is from the west or north-west, traces of it can always be found; but when the weather is warm and the air approaches the point of saturation, scarcely a trace can be discovered. During the months of July and August, 1860, I failed to detect it, except immediately after a thunderstorm when the air was purified and tolerably cool. It is always present in the atmosphere at sea, and in seaport towns when the wind is off the sea.

In a country like China,—larger than the whole of Europe and necessarily containing almost every variety of climate, though that of each locality is comparatively very little known—probably one of the best methods of obtaining a knowledge of the climate of each different locality would be to institute a series of comparisons. By this method the climate of any one given locality in China might be compared with that of well-known localities in Europe, which are found to be decidedly beneficial to different classes of invalids, and to the same invalids in incipient or advanced stages of the same disease.

For example, the climate of Shanghai might, in many respects, be compared to that of the south-west of France, which is humid, soft, and relaxing; and were drainage, cultivation, and sanitary science equally attended to in both places, the analogy would no doubt be much closer. The south-west coast of England also is of the same character, soft and humid, though differing much in degree. Pulmonary diseases, dry irritating coughs, gastric dyspepsia, certain kinds of headache, etc., will be benefited by this sort of climate; while to persons of relaxed habits of body, with languid circulation, deficiency of nervous tone and energy, especially with debility of the digestive organs, and a tendency to irritation or disease of the mucous membranes, such a climate will prove decidedly unfavourable.

From the little I have heard of Chefu, its climate, with certain modifications, might be compared in many respects to that on the south coast of England, which is bracing, dry and elastic, especially in Brighton and Undercliff. Debilitated habits of body and deficiency of nervous tone and energy will be benefited by such a climate. Perhaps a closer analogy might be found between Chefu and New York. Chefu promises well to be the best *sanatorium* in the north of China; and were foreign houses erected, and means of amusement provided for invalids, and for those who want change or bracing air for a few weeks, Chefu would prove an excellent resort, and almost an antidote to the relaxing moist climate of Shanghai.

In some respects the climate of Tientsin might be compared to that of the Crimea. The range of temperature is great and very sudden in both, with intense frost in winter and great heat in summer. In many particulars, however, the analogy will cease, as in one the soil is alluvial and the neighbourhood flat, whilst in the other it is rocky and mountainous. The climate of Tientsin will be much deteriorated by the never-ceasing annoyance of those so-called showers of sand, which foreigners declare intolerable, but who have as yet thrown very little light on its origin or nature.

At present I do not know any locality in China whose climate could be compared with that of Naples, which is exciting, exhilarating and warm; perhaps that of Nagasaki might approach nearer to it than any other which we know as yet; but we want much more information in regard to the climate in all the various localities of both China and Japan.

Amoy on some accounts might be compared to Malta, though considerably hotter. I fear there is no climate to be found either in China or Japan which can be compared to that of Madeira, or the Azores. With its cool summers and mild winters, together with its equable temperature through-

out the whole year, the climate of Madeira is declared by the highest authorities to be the finest in the northern hemisphere.

It seems not at all unlikely that the climate of Hankow will, in many respects, be found to resemble that of Rome, which is mild, soft, and, owing to its singular stillness of atmosphere, is rather oppressive and relaxing; yet, Sir James Clark considers it one of the finest climates in Italy. Such a climate, however, should be avoided by persons of a melancholic or nervous temperament, also by those predisposed to apoplexy and paralytic affections.

It has often been observed that in localities where ague prevails, cases of consumption are exceedingly rare. Now it seems to me that ague and phthisis are essentially antagonistic; and I cannot conceive any man who has an intimate knowledge of the various organs involved in these diseases, with their different functions, coming to any other conclusion in theory; and facts, I believe, will abundantly prove the correctness of this theory. In and around Shanghai, for example, where ague in a modified form is very common, from the middle of April 1860 till the end of July 1861, among upwards of 28,000 cases which came under my own observation, only ten were of pulmonary phthisis; and even of these ten only seven were well marked, while there were more than 1,400 cases of intermittent fever. Tubercle is common, but is almost entirely confined to the abdominal organs.

During the sudden changes of temperature, which at certain seasons occur in Shanghai, bronchial catarrh is exceedingly common; and in elderly people passes into a chronic state; and in almost every respect simulates consumption, and will pass for this disease, unless the chest is carefully examined, when the disease is found entirely confined to the bronchial tubes, the lungs being perfectly sound. The climate of Shanghai is essentially humid; and, during the hot months of July and August, the atmosphere approaches close to and often reaches the point of saturation; the air is much rarified, and contains less oxygen in a given bulk, than when it is cold and dry, while respiration is shallow and more slowly performed. Thus the blood is less perfectly oxydized and contains too little oxygen to stimulate the heart, blood vessels and nerves, and the individual is predisposed to low types and forms of disease of a periodic character; less oxygen is also inhaled and less carbonic acid is exhaled during the moist heat. Indeed, when it is very hot the lungs perform their functions so imperfectly that other organs have to adapt themselves to new duties, in order to relieve the body of accumulating carbonic acid; the liver,

especially, adapts itself for this work, and pours out bile in large quantity. In the hot season, when perspiration is profuse, the liver is also much stimulated by blood which has been to an unusual extent deprived of water, while the kidneys are affected in the same manner by a large amount of saline impregnation. The functions of the skin too are exceedingly active; and, during the two or three months of a Shanghai summer, instead of *thirty* ounces of fluid being exhaled in twenty-four hours, which is the average in Europe, the average amount of fluid that passes off through the skin is from *seventy-five* to *eighty* ounces. Thus an excessive flow of fluids and blood takes place towards the surface of the body, and its temperature, which has a constant tendency to rise, is kept down and modified by constant evaporation and chemical changes going on in the skin;—for perspiration is essentially a *cooling process*. When, however, this flow is excessive and long continued, the nervous system becomes exhausted, the heart and muscles lose their tone, the circulation is languid and the organs of nutrition are almost paralysed; it is then that a moderate use of alcoholic liquors will prove as beneficial as they are injurious in the early part of the hot season, when the body is vigorous.

During the hot months also, the hygrometric state of the atmosphere is such, on certain days after heavy rains in Shanghai, that instead of watery vapour being exhaled from the lungs at the rate of one ounce per hour, as in tolerably dry states of the atmosphere, I am strongly inclined to believe that pulmonary exhalation is all but arrested, and the function of the lungs is reversed, having assumed for a time the function of absorption; fluid passes off by the skin in two ways, namely, by evaporation, which is essentially a physical process, and also in the form of perspiration, a vital process of transudation; now, when the air is saturated with fluid and its temperature equal to that of the body, the vital process of transudation only will be carried on, the physical process of insensible evaporation having for a time ceased; the above conditions however are not common, and can only take place when the temperature of the air is equal to that of the body and saturated with vapour. Under any circumstances, however, free evaporation from the body will be impeded, or modified, according to the amount of moisture in the air, and so will the feeling of langour and oppression be greater or less according to the state of the atmosphere, whether it is still or in free motion; and hence the advantage and utility of *punkas*, and through draughts, as these change rapidly the particles of hot moist air, which retard evaporation, if left to remain in contact with the skin; true, the system under these circumstances will relieve itself greatly

by the process of free perspiration, but this requires more or less effort which might be avoided by making the surrounding air circulate freely by artificial means; prickly heat *(lichen tropicus)* will also be prevented, and altogether the system will suffer less from exhaustion, by the perspiration being kept within bounds.

During the cold months in Shanghai, which are more numerous than the hot, the air still continues moist, and often approaches and reaches the point of saturation, and the effect upon the body is very similar to that of dry air at a high temperature, except that here great demands are made on the body by the very active exhalation taking place from the lungs, vital heat being abstracted every moment in order to raise the temperature of the cold moist air inhaled to that of the body. The cold damp condition of the air also favours cutaneous evaporation, but the vital action of transudation is checked, and if perspiration is induced by vigorous exercise etc., it is apt to remain on the surface, causing chills and deranging the balance of circulation. In the climate of Shanghai the state of the body with its circulating fluids is in the cold months entirely opposite to what it is in the hot; but as changes are only injurious when sudden and great, with proper care and attention during transition, no harm need be feared.

Early in September the nights become cool, the range of temperature increases, the usual flow of blood to the surface of the body is checked during the chilly evenings, and all the fluids are driven back upon the internal organs, especially upon the liver, spleen and bowels, which in their comparatively enfeebled state are unable to bear the pressure thus suddenly put upon them, and the balance of circulation being deranged, intermittent fever or sudden diarrhoea results according to the predisposition of the individual. But with a tolerably good constitution; temperance in all things; strictly avoiding the cheap Chinese fruit, which may be seen in such profusion in all the streets, everywhere looking so tempting to the parched palate; and also taking care to provide against the chilly evenings and the changes of temperature, which supervene suddenly during the autumn; with *these* precautions, there is no reason for any one to fear the climate of Shanghai.

In closing this article, I may remark that the climate of Shanghai, or rather that of the *foreign settlement*,—may be improved to almost any extent by artificial means, if judiciously adopted and vigorously carried into operation. Ways and means are not wanting by which this may become one of the best and most attractive places of residence east of the Mediterranean. Already much has been done; some

of its houses, one might almost call them palaces, have been built on the best principles for health, elegance, and accommodation; but its system of drainage is very incomplete and not well regulated. If this matter be not attended to, and if the Chinese, already so numerous, with their extraordinary notion of sanitary measures, still be allowed to build all manner of houses in such close proximity all round about and among our residences, both the health and the comfort of the foreign community must suffer; and ere long, instead of the desired improvements, we shall have to witness deterioration, with nuisances and diseases hitherto unknown in this settlement. Surely, it ought not so to be; and there will be no excuse for it, if the case be allowed to reach such an unseemly condition. There is no necessity for encroachments, such as have been made here of late. There is ample space, westward and northward, beyond our precincts, for all building purposes. But the danger is, and it is imminent, that the introduction of the proper sanatory measures will be delayed too long, and only come when it will be too late to secure all the desired improvements.

ARTICLE III.

NARRATIVE OF AN OVERLAND TRIP, THROUGH HUNAN, FROM CANTON TO HANKOW.

By Dr. W. Dickson.

Read before the Society, 20th August 1861.

NOTE. The Editorial Committee, in presenting this Narrative to the public, regret that it is not in their power to accompany it with a map of the country visited by Dr. Dickson and his fellow travellers, R. F. Thorburn, Esq., and the Rev. Messrs. Beach and Bonney. In the absence of a map, a few figures and geographical details may be acceptable to the general reader. Both the names of places and the figures are taken from the surveys made by the Jesuits, as given by Du Halde, Biot, and others; and all these localities may be seen on the Imperial maps, such as are found in, or accompanying, the Ta Tsing Whui Tien.

廣州府	Kwang-chau fu,	Lat. N.	23°	08′	09″.	Long. E.	112°	57′ 01″
清遠縣	Tsing-yuen hien,	Lat. N.	23	44	24	Long. E.	112	41 50
英德縣	Ying-teh hien,	Lat. N.	24	11	32	Long. E.	112	55 00
韶州府	Shau-chau fu,	Lat. N.	24	55	00	Long. E.	113	08 30
樂昌縣	Loh-chang hien,	Lat. N.	25	15	00	Long. E.	112	48 00
宜章縣	I-chang hien,	Lat. N.	25	27	00	Long. E.	112	38 00
郴州	Chin chau,	Lat. N.	25	47	00	Long. E.	112	48 00
永興縣	Yung-hing hien,	Lat. N.	26	04	48	Long. E.	112	44 51
來陽縣	Lai-yang hien,	Lat. N.	26	29	48	Long. E.	112	40 48
衡州府	Hang-chau fu,	Lat. N.	26	55	12	Long. E.	112	23 00
衡山縣	Hang-shan hien,	Lat. N.	27	14	24	Long. E.	112	37 50
湘潭縣	Siang-tan hien,	Lat. N.	27	52	30	Long. E.	112	41 52
長沙府	Chang-shah fu,	Lat. N.	28	12	00	Long. E.	112	46 57
湘陰縣	Siang-yin hien,	Lat. N.	28	42	00	Long. E.	112	38 00
岳州府	Yoh-chau fu,	Lat. N.	29	24	00	Long. E.	112	54 52

These figures may not be all correct; indeed we are quite sure that there are slight errors in some of them; but, as our authorities differ, it is not in our power to ascertain exactly what these errors are, and of course we are not able at present to make the desired corrections. However, as the cities here named are all situated on the western route, its position is tolerably well indicated by these figures, showing the latitude and longitude of each place. Taking the Tungting lake as a *centre*, (and it is not very far from the centre of China Proper), and thence drawing *radii* to the sea all round from Canton to the mouth of the Yangtsze, there will thus be presented to us a quarter of a circle nearly, say a *quadrant*, comprised between the *periphery*, the coast line, and the extreme radius on the one side, running nearly due south, and that on the other side, running nearly due east,—there being a difference of *longitude* less than three miles between Yohchau (at the mouth of the Tungting lake) and Canton, and a difference of *latitude* less than two degrees between Yohchau and the mouth of the Yangtsze.

With this outline figure fixed in mind, we now invite the reader's attention to the Narrative, only further remarking that the trip from Canton to Hankow, a distance of *eleven hundred miles*, more or less, occupied only *forty days*, from April 11th, when the gentlemen took their departure from the "City of Rams."

MANY travellers have passed up the Canton river, and by the way of Nanhiung, over the Meiling Pass and across the Poyang lake, reached the Yangtsze Kiang through the province of Kiangsi; while very few have reached the same Great River through the province of Hunan, across the Tungting lake and over the same range of hills, further west, by way of Loh-chang in the province of Canton. Before the foreign trade in this country began to assume large dimensions and was limited to Canton, the growth of teas for that emporium was in a great measure restricted to the provinces of Fuh-kien, Kiang-si and Cheh-kiang; and the general route for all these teas was over the Meiling Pass; likewise the northern silks, the nankeens, and porcelain, all came by the same way, while the only articles of foreign consumption coming to Canton through Hunan, the more westerly route, were rhubarb and muck, which, particularly the former, thence assumed an importance in the eye of the Chinese, which they never deserved.

Of late years, however, the cultivation of teas has extended rapidly in the provinces of Hupeh and Hunan; and the city of Siang-tan has become the inland depôt of these teas, to the mutual benefit of both it and Canton. But by the opening of the Yangtsze to foreign commerce, and the establishment of a new mart at Hankow, a problem has to be solved, viz: in what way and to what extent will Canton, in its commercial prosperity, be affected thereby; and there are so many elements to be taken into consideration here, that time alone, and that not a few months or even years, can give us the true solution of this problem.

Anxious to ascertain what are the facilities as well as the difficulties of travelling by the western route, and aware that many respectable Chinese every spring make their way from Canton into the central provinces, we concluded that what they could do, we, with the official support afforded by the late Treaty, could do also. On consulting these gentlemen, they told us that the obstacles were great and the discomforts many; while the teamen were all, *en masse*, opposed to foreigners visiting the interior of the country. Thus both difficulties and dangers were magnified with a view evidently to deter us from our purpose.

Now in regard to the modes of travelling, the whole route, with the exception of about thirty miles, is performed by water. On this side of the hills, in the province of Canton, only two changes of boats are required; and only

one, in Hunan. The stages and time ordinarily occupied by the Chinese in passing from one to another, were stated to be, to Loh-chang, ten or twelve days; to Ping-shih, two; to Ichang, one half-day; to Chin chau, two days; to Siang-tan, six; and to Hankow, five days.

For the first stage, we hired one of the largest boats employed in the northern trade, manned by natives of Hwuichau, a prefecture between Canton and Hongkong. One of the principal difficulties of travelling in China arises from the great variety of dialects, spoken in different parts of the empire; but on a great thoroughfare it might reasonably be expected that persons, speaking any one of the local dialects, would easily understand that of the provincial city. On starting, however, we found that it was very difficult for our boatmen to understand what we or our servants said to them. This drawback was compensated for in part by their thorough knowledge of the river,—its depth, its currents, its branches—and of the localities and villages on its banks, and also by their great good-nature towards us, as well as towards each other.

After passing the market-town of *Fatshan*, we reached Sanshwui (Three rivers), where the expansion of the waters is very great,—forming a delta of some thirty miles in breadth, the whole being a complete network of divisions and subdivisions. In the channel through which we passed, the depth was only three or four feet; but the water was unusually low, and the boatmen said it was then twice that depth in other branches of the delta.

Five days brought us to Tsing-yuen: but on a pony, it may be reached in about as many hours, from Canton. The "North river," Peh kiang, after running nearly due south, makes a great bend near Sanshwui, and thence passing *Fatshan* flows on due east to the provincial city.

In order to avoid any difficulty at the custom-houses on our route, we stipulated with our boatmen that they should not take cargo on board; and, moreover, we were furnished with a communication from the Commissionner of Customs, the Hoppo of Canton, addressed to the principal of the customs at "*Shew-kwan*," as the station is called at the city of Shau-chau. Officers, however, were usually deputed from the *Yamuns* to visit us; but being quite aware of the nature of our expedition, they gave us no molestation. The levies collected at "Loopau," below Tsing-yuen, are always spoken of by the Hunan and Szechuen merchants as something frightful, and our boatmen manifested no small anxiety on account of two bags of salt, which seemed to be all the cargo they had with them.

The whole traffic between the central and northern parts

of the empire on the one side, and Canton on the other, passes Shau-chau, and affords an opportunity for *squeezing* which is not to be hurried over by a *cumshaw*, but is to be done leisurely and thoroughly; and for securing this object, the city is well situated, being built on the point of land where two rivers unite, the one coming down from the north-east by Nanhiung, bringing the products of Kiangsi and the Grand Canal, and the other, by Lohchang, bearing those of Hunan and Szechuen. Across each of these streams a bridge or barrier of boats has been constructed; and a gate or pass in each barrier is opened only once a day, at 8 A. M. At the time of our arrival, several boats were on each side of these barriers, waiting for the opening on the following morning; and it would seem, from all we could gather through our boatmen, that the local officers are not content with having but one opening each day, but also limit that one to a certain time; and if all the boats shall not have passed within that certain time, they must wait till the following day.

Shortly after leaving Shau-chau fu, a small gun-boat appeared, and reported itself to us, as having been deputed to escort us to Loh-chang. On approaching this place, we found that the station, to which all the salt boats bring their cargo, is about two miles below the city, and we there made the discovery that our *Hwuichau* boatmen, instead of only two bags of salt, had on board between sixty and seventy! The inspection and the purchasing of this article here seem to be entirely in the hands of the fair sex. Our boat was immediately boarded by some of these masculine looking dames, each armed with a sharp-pointed section of bamboo. At once their attention was centred on the bags of salt, as they were brought one after another on deck. So long as the salt was there, our own presence was neither a matter of interest or curiosity; *how much salt kave you?* was the only point of interest with these inspectors. From this depôt, the salt is carried over the hills and into the surrounding country. The price of salt in the shops was about $2 per picul.

The city of Loh-chang is situated at the foot of a high range of hills, on the left bank of the river, near the head of navigation for such large boats as that in which we came. Accordingly we had now to hire other and smaller boats to take us on to Ping-shih; but we had no difficulty in doing this, for the people, to some of whom we had brought letters from Canton, were very attentive and obliging. We had an interview with his honour, the chief magistrate of Loh-chang, who had been in a steamer from Canton to Hongkong and Swatow. He told us that the new treaty had been widely

distributed in Loh-chang, and we ourselves were glad to see copies of it posted on the walls of the city.

Leaving Loh-chang and its vast fleet of boats on the forenoon of the 26th, three days brought us to Ping-shih, "Stratified rock." Throughout this whole stage the scenry was remarkably fine. The lofty hills on both sides of the river, clothed with forests of every variety of foliage; the boldness of the rocks, here and there; the wildness of the narrow rapids, a score or more in all; the fearful velocity with which boat after boat shot down the rocky channel; the stillness of the deep pools and eddies above and below the rapids; the fragments of many boats, in some places high up on the banks and at others fast lodged between rocks in the midst of the foaming waters; also, now and then, dead bodies of the wrecked in different stages of decomposition, floating past us as we were dragged slowly up the turbulent stream, our boats ever and anon thumping against the rocks; all these things, and the frequent offerings made to the gods of the river by the boatmen, could not fail to produce a feeling of deep solemnity; and on the counantences of the men and women who pass their lives in the midsts of these dangers they have stamped an expression of firmness, determination, and self-condence, rarely seen elsewhere among the Chinese.

Ping-shih is not a walled town, and consists mainly of one long street on the right bank of the river, here spreading out into a wide deep reach. The whole beach was lined with boats; we calculated that there could not have been less than a thousand in all. They are very light, and sharp at both ends; each has a small mat covering, and is usually propelled by two men. Only three weeks before our visit to Ping-shih it had been visited by a band of marauders from the west, who burnt about one hundred houses, but had fled precipitately on hearing that imperial troops were marching to attack them.

Exchanging the three boats that had brought us up from Shau-chau to Ping-shih, for four of these smaller craft, we were soon again moving on towards Ichang. This town, which is in the province of Hunan, stands on the banks of one of the branches of the Canton North river, and is thus an exception to that general rule in Chinese topography, which usually makes the summit of the watershed the boundary line btween the neighbouring provinces. But the hills north of Ichang are so much lower than those on the opposite side, that the whole district seems to be much more accessible from Hunan than from Canton; and this sufficiently accounts for the exception in question. We were only twenty-four hours *en route* from Ping-shih to Ichang. No guard-house

or other mark appeared to indicate the exact boundary line between the two provinces.

The city of Ichang, though small, is prettily situated, and has extensive suburbs on both sides of the river, with many warehouses, inns, and shops. The dwelling houses, both within and without the walls, have an air of neatness, indicating the prosperous condition of the inhabitants; and some of them, built on three sides of a square, with gables brought forward, have quite an Elizabethan look. A large store-house for salt, belonging to the government, stands near the east gate, and this article for local use, in this district, is probably brought up from the province of Canton. The country, so far as it came under our observation, seemed fertile, much of it being under rice cultivation. Surrounding the town and at no great distance from it, there is a range of mountains, some of them rising 3,000 feet above the plain.

Having made the necessary arrangements for chairs, coolies, etc., we left Ichang on the 2nd of May, and soon found ourselves on a good road, ten or twelve feet broad, flagged with large slabs of limestone. This road, instead of passing over the high range, named above, runs along a valley, and at its greatest elevation did not seem to be more than two or three hundred feet above the plain of Ichang. It is a great thoroughfare for man and beast; and during the day and a half, we were upon it, we met many hundreds of mules, carrying merchandise, both foreign and domestic and in considerable quantities. Its length is about thirty-five miles, and throughout, except for a short distance at the northern extremity, we found it in excellent repair.

The inn, or half-way house, at which we passed the night, gave us anything but comfortable quarters or quiet rest. Our rooms were in the second storly; and we had not been long there when it seemed as if all the people of the village had assembled on the premises to keep holiday; and crowding into our apartments, the floor at length gave way with a crash, but no serious damage was sustained by them or us.

The next day brought us to Chin chau, a prefectural city, situated at the head of navigation on our route through Hunan. The curiosity of the populace and the rudeness of the soldiery here were no less than at our last station; and we were no less willing to take our departure, which we did in two boats, at early dawn on the following day.

We had not gone far before a chain across the river brought up our boats before a custom-house, and so we went on shore to get a glance at the scenery along the banks and over the hills, where we saw camps, and soldiers under drill, going through odd manœuvres. After a short detention, our boats were again in motion, carrying us

rapidly down stream. The country was beautiful, and the objects of attraction numerous on every side. The river, in some parts of its course, has worn its way through sandstone, the action of the current along the banks by slow degress rounding off the faces of huge masses of the rock into smooth black round walls, down which the water, from the fields above, was seen trickling in perpendicular lines. The strata, much softer in some places than in others, had been so worn away as to form shelves, on which huts or *joss-houses* were seen; and in some parts also steps had been cut in the face of the rock, up the steep bank, leading to the fields above.

Nga-ping is a small village situated on the west bank of the river; and there we exchanged our two small boats for a large and more commodious one, the river having now become deeper and broader by the confluence of two branches just above the village. The country and its inhabitants on the north of the watershed, over which we had now passed, we found to be very different from what we had seen on the south. In Hunan we saw no rapids, no broken boats, no dead bodies, while the people in their clean varnished boats floated leisurely down the meandering stream without fear of danger.

Our course was now due north, on the *Lui Shwui*; and having glided past the city of Yung-hing, we came directly upon the Siang Kiang which is the principal river. The Lui-shwui unites with it just below the city of Hang-chau, which in its position in Hunan is not unlike that of Shau-chau in Canton. Both are admirbly situated for commercial purposes. Below Hang-chau, the Siang Kiang becomes a noble stream, with a depth of water seldom less than 14, and often over 25, feet. In our walks along the banks we were surprised to find the country exceedingly sterile, and in some places perfectly barren, and the population sparse.

We reached Siang-tan on the 11th of May, just one month from Canton. The river seemed covered with boats, all having white cotton sails. Long rows of junks were anchored near the town and the landing-places were all thronged. The city itself is not more than 1,400 yards in length, and surrounded by a good wall, abutting on the river. There is an extensive suburb, extending some two miles above the city. At present, Siang-tan is evidently the centre of a very large trade, which is not confined to the teas of Hunan, but extends to those of Hupeh as well, and also to many articles coming from, or designed for, the markets of Canton, Szechuen, and other regions. Its position is such, in relation to the Yang-tsze, the Tung-ting lake, and the provinces on the west and south-west, as naturally to

make it a great emporium, a great resort for merchants from various and remote parts of the empire. About two years ago, it was visited by a band of rebels, who soon retired, and have ever since left it unmolested.

Proceeding on our way, we next came to anchor off the provincial city Chang-shah, which appeared even larger than Canton. Imperial junks with long streamers were seen close to the shore, near the city; but no considerations could induce our captain or crew to move from our anchorage over to that side of the river—which is there perhaps a little broader than the Hwang-pu off Shanghai. It was said that an attack on the city was expected from the Nanking rebels.

Near Chang-shah there is a branch of the river, coming from the westward, which is the ordinary route to Sezechuen, running south of the Tung-ting lake. So we were told by a merchant going to that province.

On the 17th of May we reached the city of Siang-yin. It is a small place, with dilapidated walls. It has a temple dedicated to Confucius, celebrated as having been built, in part at least, by the Emperor Kien-lung, who is said to have visited it while on a tour through this part of his dominions.

On elevated grounds near the mouth of the river, there stands a pagoda which forms an excellent landmark for those on the lake, especially for such as wish to make this river. We passed this pagoda early in the evening, when the lake in the distance was all dotted over with white sails, seeking shelter for the night. Eastward from the pagoda on the shore of the lake there is a hill, one part of which forms a peninsula, where there is a little cove, into which our boat with several junks ran and there anchored for the night.

Starting early the following morning, our boat formed a unit in a long fleet of some two hundred or more of white sails, wending their way across the lake and making for a strait between two islands and the shore. Through this whole course there was always more than twenty-six feet of water. The day was beautiful; nearing the shore we landed at a temple, which some years ago had been demolished by the rebels. That same afternoon we reached the city of Yoh-chau, just after the departure of the U.S.A. steamer *Saginaw*. Having visited the city, we soon again made sail, and with many other boats laid our course down the "Great River," for Hankow, where we arrived on the 19th of May, thirty-nine days after leaving Canton.

Having thus given a résumé of the trip, I will now add a few notices of what may appear of more or less general interest. The journey was so quiet and attended with

so few incidents, that the regularity of breakfast, tiffin, and dinner was never or rarely broken. The scenery was on the whole quite what we expected to find it, though in some parts less grand. The hills and mountains about Loh-chang present a fine field for botanical research; and a trip to those regions can easily be made in twelve days from Canton. By taking up his residence at Loh-chang, the lover of natural history can extend his researches in all directions, far and near, over almost any sort of ground he may please.

To the geologist the whole route is one of extreme interest, as it is also to the political economist and merchant. I am unable to give any detailed account of the different strata over which we passed, but they semed to consist of all kinds and of every variety; and any geologist, particularly acquainted with his subject, would here have a new and comprehensive field, marked by clear lines and decided boundaries.

The very extensive and extraodinary deposit of limestone, in the district of Ying-teh, is succeeded by symptoms of black clay-slate and sandstone; and in the prefecture of Shau-chau coal is found between the layers of sandstone, and is of different kinds in different places. On crossing over the hills, as we passed from Loh-chang into the province of Hunan, sandstone again came into view, and with it coal also.

This coal-field doubtless extends quite across the mountains, which form the watershed between the provinces of Canton and Hunan, and I know not how far eastward, and westward, but at least one hundred miles in the latter direction from the route on which we travelled. Some of the very best coal comes from Pauking fu. Judging from the number of boats and men, women and children, engaged in the working and the transportation of coal, labouring hard all night in some instances, we may safely conclude that the present system of supplying the market is inadequate to the demands, and would soon give way to one furnished with all the appliances of modern science. At the present day, when the demand for coal is so great in China, and is likely ere long to become far greater, this subject calls for investigation and detailed reports, so that all the various kinds of coal, and the means and cost of procuring each kind, may be ascertained.

The thickness of the strata and their depth below the surface will doubtless be found to vary in different localities here, as in other parts of the globe. So far as we could ascertain, the Chinese are ready to go to any depth, provided they only have the requisite apparatus; but as they are wholly

unprovided with means for raising and carrying off the water from the pits, these now are never sunk below such a line as will allow the water itself to flow out. Under the present position of affairs, as inaugurated by the new treaty, foreign engineers could easily gain access to these coal-fields; the proper machinery could quickly be brought into use; and the proprietors, whether officials or private individuals, would be glad to find new sources of revenue opened up to them, even though it were all to be accomplished by the agency of "barbarians."

The cost of this coal would of course vary according to circumstances of place, etc., but it could no doubt be laid down at Hankow for a comparatively low price; and I trust that before long full practical and scientific details will be obtained on this subject which is now so essential to all the commerce of the East.

In the province of Hunan, along our whole course, white marble appeared in public works. At Siang-yin the arched bridge, the gate-ways and balustrades of the Confucian temple, were all of pure white marble. In many places it was very white and with but few flaws; it was not generally however, so far as we saw, of a very fine grain.

Here I may allude to the practicability of employing steamers on these "inner waters" of China Proper. In coming down through the province of Hunan, moving with the current, we generally kept near the middle of the stream, and for three hundred miles above the lake we never had less than ten feet depth, and often fourteen or fifteen feet. Our boatmen, however, usually told me, when the line gave only ten feet, that other parts of the river had deeper water. Through the Tung-ting lake, there seems to be no obstacle to steam navigation. The water is clear, and the course is distinctly marked by the pagoda, above-mentioned, standing near the mouth of the river below Changsha.

Of the river in the province of Canton, where the people are now all anxious to have steamers, it is not so easy to express an opinion. Our boatmen, when asked, did not hesitate to say that steamers could ascend the rivers far up on the south side of the great watershed; but I doubt if a boat drawing over seven feet could reach the city of Shauchau.

All these ideas, about steam navigation, gave way in the minds of our party, to the facilities which the route seems to afford for a *railroad*. The common impression is, that all China is cut up by canals and creeks, or covered by rich fields of rice and vegetables, and that the difficulties of crossing these and of purchasing the land must be such as to render visionary all prospects of opening any railroads in this country.

Now, in the first place, a physico-geographical view of the country shows that to the North River, running nearly due south, there can be but few tributaries, and that consequently only a few ranges of hills can intersect its course. Such is in reality the case. Up through its whole course, we found only four or five streams, of any size, coming into it from the east. Nor are there, on that side, many hills that would require cuttings. The great bend at Sanshwui, between Canton city and Tsing-yuen, would be avoided by the railroad; and but little or no difficulty would be anywhere encountered in the hills, except at the Tsingyuen *Hap* (or gorge), and one other near Lohchang; and both of these, I think, might be easily overcome by proper engineering. In the second place, we know that there is, even in the province of Canton, much uncultivated land, not indeed close on the banks of the rivers; but far back from these water-courses, there are no canals, no rice fields, and but few gardens.

Ignorant as we all were of what engineering difficulties are, it seemed to us that a line of railroad might easily be made along the whole course of the North River and over the watershed into Hunan. There is a road for chair-bearers over the Lohchang range, but of its exact course and gradients, I am unable to speak. Further on, beyond Ichang, the country was so level that it seemed as if rails might be laid down on the present road.

If then a railroad were made along this route, from Canton to Hunan, it would not only take up the present enormous traffic, but would in due time develop a much larger amount of business, especially in coal and such articles of commerce as are now barely remunerative or unproductive on account of expensive carriage. When we take into account that at the season we passed over the hills the pay of coolies was unusually low, in consequence of the little business then doing,—though on an average, we met one at every ten yards,—and also that we met some five or six hundred heavily laden mules in two hours, we may form some idea of what an amount of traffic and travelling there must be in busy times. As we passed along, constantly observing the primitive mode of carriage, it seemed to us more and more evident every day that no greater boon could be conferred on these provinces, and indeed on China generally, than the introduction of our most approved modes of land carriage. It seemed to us that the formation of a company in England, to send out competent engineers and the means for laying down a good railroad, would hold out the prospect of a most remunerative enterprise and of a most excellent investment of British capital.

Everywhere, both in the country and on the rivers, we were much impressed with the want of capital to carry on any extensive operations. An influx of it into China, with proper securities and under good direction, would develop wonderful resources, now dormant only for the absence of such capital and such direction.

The elements, on which we must found the prospects of a good investment in this case, are three, the gradients, the water-courses, and the traffic. We have already seen that the points of difficulty in the gradients are but few,—the amount of difficulty at each of these, however, can only be determined by an actual survey; that the water-courses, requiring bridges, are not very numerous; and that the traffic, likely to be secured on such a railroad, must be immense. I would, therefore, urge on all those who are interested in the prosperity of Canton, and especially on the mercantile community, the expediency of promptly setting about what will alone restore the fallen fortunes of the Queen of the South and replace her in the situation she held so long, and which, from the very nature of the country, she must be destined ever to hold, whenever steam carriage shall be able to supplant steam navigation.

Among other products of Hunan, which came under observation, were the tea shrub; likewise the plant from which grasscloth is manufactured; and also a small shrub or tree, from the fruit of which the *Cha-yu*, a well-known oil, is expressed. This latter is manifestly of no inconsiderable importance, as large tracts of land were covered with it. We also saw here and there, the cotton, tobacco, and other plants, with some fields of rice.

Much of the hill country, over which we passed, especially in the province of Canton, seemed to hold out inviting prospects to sportsmen. Deer of different kinds are said to abound on the mountains; and we know that pheasants, partridges, and other game are not wanting.

Here too, may be noticed the regularity of private mail carriers, who, as we had opportunity to learn, are despatched at stated times from nearly every line on our whole route. This postal service may be turned to good account, as we can testify, and it may too be greatly improved.

From what we now know of the navigation on the Yang-tsze, it is easy to see why it was that the Hunan and Hupeh teas came to Canton rather than to Shanghai. As we now understand all the circumstances of the two different routes,—that to Canton on the one side, and this to Shanghai on the other,—it is no longer any matter of surprise that these teas were carried off on the southern route; but whether Canton is actually to lose this great traffic

is at present a matter not of speculation but of observation.

Hankow evidently derives much of its importance from its facilities for internal communication by the waters of the Han and other rivers. Probably at a somewhat remote period, the broad expanse of waters now forming the Tungting and several of the small neighbouring lakes was one immense inland sea, as it indeed now appears to be after or during the inundations which are of frequent occurrence. This great basin is gradually filling up with the mud which is brought down from the highlands by the Han and the other rivers which empty themselves into the Tungting and neighbouring lakes. The Han, in particular, has formed a sort of delta, through which by four or five outlets its waters enter the Great River. The upper branches of the Han communicate with the provinces of Shensi and Honan, and through those two again with others more remote and with both the Yellow River and the Grand Canal. But the resources and capabilities of the Han, so far as foreign commerce is concerned, remain to be developed. If carefully surveyed, it might at once become a powerful auxiliary to the increasing trade of the "*Han's Mouth*," Hankow.

The Yangtsze, at Hankow and vicinity, appears to be exposed to two annual freshets; the early one is caused by the melting of the ice and snows on its northern tributaries; while the later, usually occurring in June and July, is occasioned by the heavy rains which fall on the southern hills, chiefly in the provinces of Hunan and Kweichau. In passing down the Great River, we found its banks, in many places, deep under water, which some two months before were twenty or thirty feet above it. These annual floods entail on the inhabitants living near its banks, the necessity of building houses of a very temporary nature, which, if easily swept away, may again be quickly replaced. It is this constant action of the Yangtsze, it appears to me, that has given rise to the idea of "extensive desolations," as now existing all along its banks, and which I failed to see excepting only near the city of Nganking.

Hukow is the district town of Hukow hien, and a place of considerable importance, far preferable, it seemed to me, to Kiukiang, since all the products of the province of Kiangsi, destined for the North or for Shanghai, must pass Hu-kow, (*Lake's mouth*), so called from its position at the entrance of the lake Poyang.

The city of Woohoo, which is still in the hands of the rebels, is also a town of some importance, especially on account of its being the outlet (though not the most westerly one), of the inland navigation south of the Yangtsze,

opening a channel for small boats directly from Shanghai to Hankow and Kiukiang, without having to pass by the city of Nanking.*

Of this Southern Capital it is unnecessary for me to write. No description of it, however, that has ever come under my observation, does it ample justice. The day we passed it was remarkably fine. The Yangtsze here glides down in magnificent quiet. The hills which encircle the city are not too distant nor too near; between these and the Yangtsze, the undulating country is of great extent; and under a good government would soon become as rich in varied crops as the river would be with traffic. Surrounded by these fertile regions, and easily accessible by this noble river, there like a queen stands the fine old city of Nanking. The site is one for the capital of a mighty empire.

* The Chinese often speak of this channel as if it were uninterrupted; but so it was not found to be by Dr. Medhurst in 1845. He says: "Having reached the market town of Ting-fow, the boatmen informed us that they could take us no further, as a neck of land, several miles in extent, here breaks the water communication, and separates the western from the eastern water. There seems also to be a difference of level, not only between the waters on either side, but also between them and the small canal which traverses this neck of land, which divides the *two* water communications from each other." See Dr. Medhurt's "Glance at the Interior of China," p. 186. A careful inspection of native maps seems to corroborate Dr. Medhurst's statement.—*Ed. Com.*

ARTICLE IV.

THE OVERLAND JOURNEY FROM ST. PETERSBURG TO PEKIN.

BY A. WYLIE, ESQ.

A QUAINT old volume entitled "The principal Navigations, Voyages, Traffiques and Discoveries of the English Nation, by Richard Hakluyt," gives a detail of the "Journey of Master Anthonie Jenkinson, from the famous citie of London, into the land of Persia," whither he had gone with a view of opening up a commerce with Eastern Asia and Kathay. This may be considered the beginning of English enterprise towards the East. Some Portuguese adventurers had already found their way to the coast of China, and the fame of their deeds led to the formation of a Company of merchants in London, "for the discoverie of lands and countries unknown." Instead of risking an encounter with the former on the high seas, they preferred to seek an entrance into China by some more northern route; and Jenkinson, their agent in this undertaking, was only prevented from continuing his adventurous journey, by the incessant warfare existing in the countries that lay between him and that great eastern empire. During his residence at Bokhara, however, he obtained the itineraries of several travellers, for the route from the latter city to the kingdom of Kathay, all of which are still on record. Giving an account of his voyage from London, Jenkinson thus commences his journal: "First by the grace of God, the day and yeere above mentioned, I departed from the sayd citie, and the same day, at Gravesend, embarked myself in a good shippe, named the Primerose, being appointed, although unworthy, chiefe captaine of the same, and also of the other 3 good ships, to say, the *John Evangelist*, the *Anne*, and the *Trinitie*, having also the conduct of the Emperor of Russia his ambassador named Osep Nepea Gregoriwich, who passed with his company in the sayd Primerose." These "four talle shippes being well appointed, as well for men as victuals and other necessarie furniture," left Gravesend on the "12th day of the month of May 1557," pursued their journey northward and after several times taking the ground, meeting with head winds, and putting into haven for safety on various occasions, on the 17th day of June, the squadron lay off Flamborow head. Well satisfied, apparently, with their progress, they sailed from thence with a "mery winde," and skirting the coast of Norway, Finnmark, and Lappia, they reached the "citie of Mosco," viâ the rivers Dwina and Succona, on, "the sixth day of December," having been nearly six months on the journey.

The natural difficulties of the route, however, and the harassing wars that prevailed in Central Asia, held out little hope of a profitable trade in the direction of Persia, and European commerce with the East began to be established by way of the Indian ocean. About the same time Russia was commencing its conquests in Siberia, and within a century, the whole of that vast country was brought under Muscovite rule. In 1619, we find a Cossack named Evashko Pettlin was despatched from Tomsk, with instructions to endeavour to search out his way to Cathay. He reached Peking, and brought back a letter to Tobolsk, which none of the worthy Siberians were able to decipher. A more formal embassy was sent under Boicof in 1659, with little better result. Individual traders, in the meantime, had been finding their way into the Chinese empire, and carrying on an irregular traffic, but it was not till 1689 that this kind of commerce was duly licensed and protected by the treaty of Nerchinsk, concluded with the Chinese authorities by Count Golowin on behalf of the Czar. With the view of enlarging this trade, which was found very productive, Peter 1st despatched an embassy under Isbrand Ives, in 1692, who obtained the same liberty to caravans, which the previous treaty granted to individuals. Since that time, the caravan trade, which was the exclusive privilege of the crown, has become gradually open to the enterprise of private mercantile firms. Year by year the journey between St. Petersburg and Peking has become more frequent and familiar; the difficulties of the way have, in great part, been overcome; the once desolate Siberian steppes and the arid desert of Mongolia, have become a well-beaten and much-travelled highway; and the distance between London and the capital of China may now be accomplished in very few days more than Anthonie Jenkinson spent between London and Flamborow head. It is a fact that Russian officials can perform, and have performed the journey from Peking to St. Petersburg, in 35 days; and although they possess certain privileges and facilities above the mass, yet the same may be done by the private traveller in some two weeks more. The electric telegraph is now completed as far as Irkutsk, which is within about 15 or 16 days journey of Peking, and by a line of couriers, that distance might probably be effected in little more than half that time; while negotiations are now in progress with the Russian government, for the regular transmission of the English mail to Peking viâ Siberia.

For those travellers who feel themselves altogether out of sorts, as soon as they quit their native shore, and are miserably put about at the first French railway station or

hotel, because they do not find everything according to the English model, this is by no means an advisable journey. But for one who is willing to comply with the customs of the country in which he travels, who can easily forego the little comforts and luxuries of home life for a season, who feels a pleasure in the study of national character and characteristics, and who possesses an ordinary share of health and vigour, this route will be found full of interest, and will amply repay the little inconveniences and trials to which he may be occasionally exposed.

In several European countries, passports are now dispensable; but in Russia it is otherwise, and the traveller who proposes entering that empire will do well to be careful that all necessary formalities are attended to before he leaves London. A passport may be obtained at the Foreign Office for two shillings, giving a general permission to travel through any country of Europe. This must be *viséd* by the Russian Consul, whose office is at 2, Winchester Buildings, Old Broad Street, London; the fee for the same being 1s. 7d. Every necessary information may be procured there; but should anything be overlooked, or remain doubtful, if the bearer of the passport be in Berlin between the hours of 12 and 3, by shewing it at the office of the Russian Consul in Unter den Linden, he may prevent much needless vexation. Some good letters of introduction for the principal towns in Russia will be found of great service. Should the traveller be familiar with the Russian language, he will then find the journey as easy and practicable as in any other European country. In any case it is desirable to get up a few common phrases. After Russian, the most useful language is French, as most well-educated Russians speak it with great facility. There are a great number of Germans and German-speaking Russians in the principal towns of European and Siberian Russia; but English will scarcely be found serviceable beyond St. Petersburg and Moscow. It is a great mistake for two who are ignorant of the Russian language and customs to travel together, as they thus lay themselves open to annoyances and impositions innumerable; whereas, the single traveller will have little difficulty in meeting with a native who can speak French, in almost every part of Siberia, and who will be glad to accompany him, as the advantage will be mutual.

If the route selected be by Dover and Calais, it is desirable to get a sovereign changed into francs before leaving London, and some five or six pounds may be changed into Russian rubles; but the latter is not necessary, as rubles may be obtained easily at Berlin; and at the frontier railway station in Russia, an exchange office is always opened

about an hour before the train starts. Should the traveller pass that point without procuring sufficient Russian money to take him to St. Petersburg, he will find it very difficult to dispose of his sovereigns on the way, except at a heavy loss. The following outline will give some idea of the time necessary for this journey, by taking advantage of the ordinary methods of locomotion.

1st day.

Leave the London Bridge station of the South Eastern railway, by the Mail train, at 8.30 p.m., arriving at Dover in good time for the Packet which leaves about 11. A passage of 100 minutes brings the traveller to Calais, and he has then the satisfaction of knowing that he has terminated all the sea voyage that lies between him and China. An omnibus on the pier conveys him direct to the railway station, where he has ample time to make any arrangements or obtain refreshment, as the train starts at 2 a.m. By 4 o'clock, he will reach Lille, and may there get breakfast, as he must wait two hours for the train, which will take him to Mouscron by 6.40, where there is a delay of half an honr for the examination of passengers' luggage, on crossing the Belgian frontier. At Malines by 10.15, he will have to change carriages. Here there is a delay of half an hour, and a good buffet; at Verviers, which he reaches by 2.15 p.m., a similar change and delay takes place, and crossing the Prussian frontier at Herbesthal he reaches the city of Cologne by 6.p.m.

2nd day.

With a rest of four hours and a half, there is plenty of time to visit the magnificent Cathedral and get dinner; after which he starts from the Deutz Station, on the opposite side of the Rhine, at 10.30 p.m., and proceeding, viâ Dusseldorf, at 11.25, reaches Minden by 4.7 a.m. and Hanover by 5.45. There is only about a quarter of an hour allowed here and the train starts for Brunswick at 6, reaching the last-named town at 7.36. Nine minutes are allowed here and a quarter of an hour at Magdeburg, which is reached by 10.45. From thence there is little stoppage till the train arrives at Berlin by 2.40 p.m. The traveller will now have some eight hours to wait for the departure of the train for Russia, and as the station is at the opposite side of the city from that by which he entered, he will probably go to some more central hotel, in the interim. There will litttle difficulty in passing the time, in such a place as Berlin, and a guide may easily be procured to lead him round to the principal objects of interest, without loss of time.

Taking leave of Berlin at 10.45 p.m., and proceeding, viâ Frankfort on the Oder, he reaches Kreuz by 3.40 a.m., where there is a delay of 10 minutes; and at Dirschau by

9.17, he has a quarter of an hour. By 1.6, next morning, he
3rd day. reaches Königsberg, where the train stops for half an hour, and there is a buffet and dressing room at the station.

Eydtkuhnen, the last Prussian station, is reached by 5 a.m., half an hour after which a train starts for Wierzboloff, the first station across the frontier, which is only a five minutes run. Here a scrutiny of luggage takes place, and if there are any foreign books or papers, they are taken away and sent to St. Petersburg for examination, the owner receiving a ticket to reclaim them, on payment of the carriage for the same. If there be nothing objectionable in them, they will be returned at the Censorate in the capital, on application. The passport is also examined here and returned. There is above five hours to wait at this station, and very little of interest to occupy the attention of the wayfarer. At 11 the train starts, passing Kowno at 2.7 p.m., and reaching Wilna at 5.24, where there is a well-supplied buffet, and a stoppage of half an hour. Arriving at Duna-
4th day. burg at 11.18, the train stops nearly three hours, leaving again at 2.5 a.m. The passports are taken away at Gatchina, the second station before reaching the capital, but are returned at the terminus, where the train arrives at 5.40 p.m.

The stranger will find the Hotel de Russie a well-
5th day. conducted establishment; the proprietor is a German, and there is a waiter who speaks English. Miss Benson's boarding establishment is much frequented by Englishmen, and will be found exceedingly comfortable. The charge for board and lodging is four rubles per diem. The house stands on the Naberejnaya Angliskaya, (English Quay) immediately facing the landing-place for steamers coming up the Neva. Droshkies are always in attendance at the railway station, ready to convey passengers to any part of the town. Should expedition be paramount, the traveller will, immediately on arriving, hand over his English passport to the Commissioner at the Hotel or Boarding house, instructing him to procure one to leave the country with; and he should be very careful to get it made out for Peking, and not for Kiachta; otherwise the Commissary at Kiachta may consider he has no authority to grant a pass for crossing Mongolia, and thus cause some trouble and delay; but with one for Peking from the Governor-general of St. Petersburg, all difficulty is at once removed. The English passport will be returned with the the Russian one, and should be preserved in case of need. If by previous correspondence he may have been able to obtain, from the Minister of the Interior, a special general order for assist-

ance, he will find this of much use along the road, for a ministerial seal carries great weight with it in Russia. The more letters he can get to people of influence on the line of route, the better. A supply of Russian money should be obtained here sufficient for the journey to Kiachta. Silver rubles are quite a rarity, being scarcely ever met with in ordinary transactions, except at Kiachta, where they are in great demand for the Chinese trade, and are at a premium. Ruble notes may be got for about 3s. 1d., and about £100, in most cases, will be a good supply. A large proportion should be got in *One Ruble* notes, as it is often very difficult to get change when posting in Siberia, and there are a great many false notes in circulation, which would scarcely be detected by a stranger. A smaller number of *Threes*, *Fives* and *Tens* may be got. Each kind of note is on a different-coloured paper. To provide against contingencies, it may be well, further, to procure from 50 to 100 five ruble gold pieces, called *Pol imperial*, which will be found much more advantageously convertible, at the end of the journey, than paper. These are at a nominal premium of 3 per cent, but actually about double that at St. Petersburg, and at Kiachta much higher. A large quanity of small silver coins will also be found very useful,—10 kopek, 15 kopek, and 20 kopek pieces; for the copper currency is very cumbrous, and somewhat puzzling to a stranger, as it is two-fold, the old and the new. The old passes for less than a third of its nominal value; thus, an old 10 kopek piece is only reckoned 3 kopeks, although it is as large as the modern piece of the same nominal value; a 5 kopek piece reckons 1½ kopeks, and so on; which makes change for a ruble in the old currency something formidable in weight, and, to a novice, not less so in calculation.

6th day. Having completed all needful arrangements, the traveller may take his place in the train for Moscow, which leaves St. Petersburg at noon.* The road lies over an extremely flat, rather woody, and very

* For any one who has the time to spare, a week may be easily disposed of in visiting the sights of St. Petersburg and environs. The spacious, long and cleanly streets, the fine canals and bridges, with the lines of quays along the banks of the Neva, and the noble public buildings, make this, the most northern, as also one of the finest capitals of Europe, a splendid memento of the enterprise of Peter the Great, its founder. Among the numerous palaces the Hermitage and the Winter Palace claim the chief notice. The Kazan Cathedral, and, more especially, the Izak Church are, above all, worthy of attention, as also the Preobra-jensky Church with its many trophies: and the Church of St. Peter and St. Paul in the citadel, which contains the coffins of all the emperors from Peter the Great. The cottage of that great monarch is an interesting relic; and in very many of the public institutions there is something commemorative of the virtues of the man whom the Russians delight to honour. The stranger will have no difficulty in discovering the chief points of attraction in this metropolis.

scantily cultivated country; with very little variety until near Moscow, when it becomes somewhat more picturesque. As it is customary with the Russians to carry feather pillows with them when they have to pass the night in a railway carriage, it will be well to provide one before leaving St. Petersburg.

Arriving at Moscow by 8 A.M. the traveller has a long day before him, but there are so many objects to be seen and examined in this city, that he will only be puzzled to know to which the preference is to be given. As Englishman will find a comfortable location at Billo's private hotel, and Mr. B., who speaks English perfectly, will put him on a plan to see the chief points of interest in the shortest time. The Kremlin of course will be visited, and if it be possible to get admission into the Treasury, it should, by all means, be seen. The collection of historical antiques deposited there is rare and unique. The Great Bell is not far from the same building. Ivan's tower should be ascended, as the view of the city with its 365 churches, from the summit, is a sight not to be equalled. The Cathedral of the Archangel Michael is sumptuous, and contains the coffins of nearly all the Czars, previous to the time of Peter the Great. The Riding schooi, the Chinese city, the Gardens, the Monasteries, the Palaces, the view from the Sparrow hils, and the drives about Peterskoi, are enough to occupy several days. When time is of importance, a judicious selection must be made, and a guide may be procured for 2 rubles per day.

7th day At 10 P.M. an express train leaves Moscow for Nijni Novgorod, reaching the latter city about 9. next morning. The country along the line is uninteresting, abundance of sand being the chief characteristic, and this obtains to a painful extent on entering the city, if it be dry weather. Should the traveller arrive here at the time of the fair, which lasts from about the middle of July to the end of August (Old style), he will feel a strong temptation to linger for a day to witness one of the most extraordinary scenes that are to be met with. Considering that there is then an influx of some two hundred thousand people to a town usually numbering about thirty thousand, and that merchandise changes hands to the amount of £15,000,000, while the various traders arrive even from the most remote countries of Europe and Asia, it may be well imagined that the novelty of the group is of surpassing interest. At other seasons there is nothing particaularly worth stopping for in Nijni, and the traveller will possibly be disposed to drive direct to the steam-boat wharf, which lies on the other side of the town, and where there are vessels for Perm, six days out of the seven, either at 10 A.M. or 3 A.M. These steamers are

8th day generally much crowded in summer, but the chief cabin is tolerably comfortable; the fare for which is 30 rubles. Wood is used for fuel, and they have to stop every forty or fifty miles to taken in a fresh supply. The banks of the Volga are tame, though they improve in character, somewhat, when approaching Kazan, the landing place of which is reached about noon. The Kremlin of this ancient city has a bold appearance from the river, and the town has many historical antiquities. There is a large Tartar quarter; but in general appearance it is not to be compared to St. Petersburg or Moscow. There will probably be time to take a drive up to the town and back while the steamer stops. It is about two miles distant, but over one of the roughest roads imaginable.

9th day Forty miles below Kazan, the steamer leaves the Volga, and enters the Kama. The intervening country, Master Jenkinson tells us, "is called Vachen, and the inhabitants be Gentiles, and live in the wildernesse without house or habitations." The next day the stations of Laisheva and Chistopol are passed. The Kama is a mighty

10th day stream with gently elevated and woody banks, and these become more picturesque as we advance.

11th day Next day the stations of Pyanagoboga and

12th day Kamabarok are passed; Sarapul on the following; and the day after, Perm is reached about noon.

Perm is a quiet town of about 13,000 inhabitants and not yet a century old, having been built in obedience to a ukase of Catherine 2nd, issued in 1780. The government, of which this is the capital, is probably the richest in mineral resources throughout Russia. The town of Perm is a good deal dependent on the traffic in iron, copper, salt, &c., being likewise the highway for tea and other oriental produce coming through Siberia to Europe. The extensive mines and iron works of the Demidoffs and the Strogonoffs, in this region, are a strong temptation to the wayfarer to quit the main road for a day or two in order to visit some of these far-famed establishments. A large government copper foundry existed formerly about three miles from Perm, but it has recently been converted into a foundry for cannon. About 1,500 workmen are employed, forming a very considerable village, with a Church and Hospital. A new foundry for the same object is just being erected, nearer the town. There is a scheme in a forward state for a railway from Perm to Tumen in Siberia. The director of the Government Gazette in Perm, is Mr. Penn, an Englishman. The only hotel worthy the name belongs to the *Kavkas and Mercury* steam boat Company.

The only method of continuing the journey now is by

post horses, along with which a certain kind of vehicle is furnished gratis, but it is presumed there are very few Englishmen who will have the hardihood to venture a Siberian journey in a Russian telega; in which case a tarantas (kind of post chaise) may be hired as far as Ekaterinburg; but, as it is impracticable to hire beyond that point, it is advisable to purchase one at Perm, where there is a better choice than at Ekaterinburg. By making a bargain, a sufficiently good article may be got for 100 rubles or less, and the chances are that it may be sold for nearly as much on reaching Irkutsk, where there is a constant demand for them. As it is most desirable that two at least should travel together, if the traveller has come thus far by himself, it will have been well if he has secured a companion for the journey, among his fellow passengers in the steamer; this may generally be managed without much difficulty, as there are always passengers to and from the various towns in Siberia. By making enquiries at the hotels in these towns, an agreeable companion may frequently be obtained. A mattrass must be purchased here, and a supply of tea and sugar. These and all other things requisite for the journey may be bought at the *Gastini dvor*, a kind of bazaar that obtains in every Russian town. It will not be amiss to lay in two days' stock of bread also, as there is little but black bread to be got at the villages on the road. It should be understood that there are no hotels between the large towns, and the passenger must consider himself fortunate if the postmaster has anything prepared in the shape of dinner, which is often the case. *Shtshee* or babbage soup with meat in it, is the most prevailing dish, sometimes accompanied with a joint, and more rarely game, with abundance of excellent milk and cream. From Perm to Bogandinskaya, the stage beyond Tumen, the posting is in the hands of a private company who have a contract with the government for the monopoly. The charge is three kopeks per verst for each horse. From the 15th May to 15th September, and 1st December to 15th March, (O. S.) two travellers pay for two horses only, without regard to the number actually employed; three persons pay for three horses, and so on. At the other periods of the year, an extra horse has to be paid for. The traveller must always be provided with a *padarojna*, *i. e.* a government order, without which he cannot procure horses. This is obtained for the sum of ½ kopek per verst per horse, and is examined at every station.

13th day. Supposing the arrangement of preliminaries to occupy a day, and the traveller starts by post at noon on the day following his arrival, he will reach the fortified town of Kungur about 8 or 9 in the

14th day. evening. This is the fourth stage from Perm, and he is now gradually ascending the slope of the Ural chain. The road is tolerably good, though somewhat hilly and in parts precipitous, but there is no obstacle to continuing the journey during the night. If the weather be fine, there are many good views in passing. Biserskaya 15th day. will be reached by the following evening, a neighbourhood which has an evil repute for bad characters, and if two or more post chaises happen to be going in the same direction, it is customary to wait one for the other and travel in company during the night; the road lying nearly all the way through a forest. Early next morning the Chusawaia river is crossed in a ferry boat, and the *Zavod* or Iron works of Bilimbaefskaya is reached, where there is a very large village. This is the property of the celebrated Strogonoff family, a name intimately connected with the first Russian conquests in Siberia. In the middle of the 16th century, Anika Strogonoff, one of the ancestors, established a barter trade with the North Western parts of Siberia, and thus amassed a very considerable fortune. In recompense for his enterprise, the Czar gave him large grants of land, where he found ed colonies upon the banks of the Kama and Chusawaia rivers. It was this man's grandson, Maxim Strogonoff, who protected the celebrated adventurer Yermak, supplied him with boats, arms, and everything necessary for the subsistence of his troops, while passing a winter at Orel on the Kama, previous to his invasion of Siberia. The first decisive blow was struck by Yermak, the following spring, in the capture of Tumen and Tobolsk, the further subjection of the country being followed up by the Czar, after the death of the famous bandit chief. About two miles beyond the next station, Talitsa, with very little perceptible ascent, a blue marble obelisk is seen by the road side. This marks the boundary between Europe and Asia. On one side is the single word "Europa" and on the opposite, "Asia." On the front is an inscription recording a visit to the place by the emperor in 1857, and also by Maximilian, the Duke of Leichtenburg, in 1845. A single solitary house, inhabited by a shoemaker, stands close by. Early in the afternoon the town of Ekaterinburg is reached, where fresh supplies may be laid in and any further preparations made. Should the weather be getting cold, furs may be bought here to advantage. There is a very good *Gastini dvor* and a large market. There are two or three hotels in the place, and rooms may be hired also at the post house, if the traveller be disposed to stop the night. A new arrival is not long in this town before he is waited upon by the

commissioners from some of the lapidaries, offering their precious wares for sale, and some of these are of exquisite beauty. This is the chief mart for the sale of the Ural gems, among which are found jasper, agates, amethysts, diamonds, malachite and lapis lazuli. There is a Government establishment for cutting, polishing and manufacturing these into various articles for the imperial palaces and many beautiful specimens of Siberian work help to decorate the apartments of the Czar, in St. Petersburg and elsewhere. There is also a government machine factory in Ekaterinburg where steam engines are now made. The nominal chief is a Russian officer, but the practical director under him is Mr. Bispham, an English engineer, who receives a far higher salary than his superior. Immediately adjoining this fabric is the mint where the copper currency of Russia is coined. The whole process from the melting of the copper to the completion of the coin may be seen at the same time, the ingenious and complicated machinery being worked by a powerful steam engine. The finished coin however is far inferior to the productions of the English mint. The preparation and engraving of the dies is also carried-on on the premises. The famous gold washings of Berezofsky are about 10 miles from Ekaterinburg, and although the mines are now mostly closed, the stranger will probably be interested to see the manner of collecting the gold from the surface earth. The number of hands now employed is not nearly so great as formerly.

16th day. If however the traveller resolves to proceed without stopping to see any of the lions, he will reach Kamuyslof next morning. This is a neat little town on the river Pushma, containing a few thousand inhabitants, and in great measure dependent on carrier traffic. The country now assumes that flat monotonous character known as the Steppes, which continues with little variation for about a thousand miles. The soil is black and exceedingly rich.

17th day. Tumen is reached next day about noon. This is a long straggling place on the banks of the Tura, with a good deal of trade, being the earliest Russian town in Siberia. There is a good *gastini dvor* and a market, the town being a busy and interesting scene on market days. Great numbers of Tartars come in from the surrounding country on these days, to dispose of their wares and provide for their wants. In the summer season, steamers run from this to Tobolsk, Omsk, and Tomsk, being used as tugs, but they take passengers also. Their progress however being slow, and the route very circuitous, they are two or three times as long in making

the last named two places as is necessary by the post road. Tumen is specially famed for the manufacture of a kind of rug, something after the fashion of Turkey carpets. In the neigbourhood of the town, on the high bank of the Tura, is the tomb of Steller the Kamchatkan traveller.

18th day. The traveller who values time, will doubtless follow the ordinary post road to Omsk, leaving Tobolsk to the east, and at Bogandinskaya, the first station, he will have reached the terminus of the posting monopoly. Beyond that the posting is directly in the hands of the Crown, and horses are charged 1½ kopek instead of 3 kopeks each. The town of Yalutoroysk will probably be passed in the night; the road in this part becoming very bad, and getting worse and worse till near Omsk. The following day

19th day. is occupied with a succession of villages, in which, as in every other part of the route, the houses are all built of wood; for which reason smoking is disallowed out-of-doors in any Russian town or village. The general features of the country hereabout are admirably described by Madame Cottin in her touching tale of "Elisabeth, ou les Exilés de Sibérie." Early next morning the town of Ishim is

20th day. passed, and, the following day, Tiokalinsk, a neat town with a good post house. The river Irtish is

21st day. crossed on a flying bridge between the third and fourth stations beyond, and the town of Omsk is reached in good time the following day.

There is little worth stopping for at Omsk; the town is pleasantly situated on both sides of the river Om. The fortress was built about the end of last century. The palace of the Governor-General of Western Siberia, a large military college, and a number of handsome government buildings give an air of importance to the place. There are a great many Khirgese living in the vicinity, who visit the town in large numbers as horse dealers. There is a tolerable hotel, Gastennitzi Moskva, and charges are moderate.

22nd day. Leaving Omsk there is no place of importance in the first day's journey; the road is good, and the Om is crossed on a floating bridge. Next day the traveller will leave the government of Tobolsk, and enter that of

23rd day. Tomsk. The following morning he will be at Kainsk, a small but very busy market town.

24th day. Continuing his course over the steppe of Barabintsk, he will be at the town of Koluivan on the evening of the following day, a place celebrated for its

25th day. porphyry works. He is now in the neighbourhood of a region rich in the precious metals, famed for its mines and its picturesque scenery. The river Ob is crossed here. The next evening he will cross the

river Tom, and arrive at the town of Tomsk, where if he be
26th day. disposed to stay the night, he will find no want of hotel accommodation.

Tomsk is a town of about 24,000 inhabitants, and contains some handsome buildings. There is much wealth in the place, and having been long notorious for intemperance and its attendant evils, its present character fully justifies the charge. When Pallas visited it in 1771 he complained that the mud was so abundant that carriages sunk up to their axles in it. Even now, although it must be vastly improved since that time, any one who is there on a wet day, will have no difficulty in believing his statement.

Proceeding eastward from Tomsk, the country becomes
27th day. more irregular and hilly, and the fir and cedar begin to appear in the forests. There are nothing but villages on the first day's journey. Next day brings the
28th day. traveller to the small town of Mareinsk of no special note; and the following, he enters the government of Yennissei, remarkable for its beautiful
29th day. macadamized roads. Towards evening he will pass through the town of Achinsk pleasantly situated on the banks of the Tchulym. Let no one be deterred by the statement of Cochrane who travelled this road in 1820. He says:—"I proceeded through it (Achisnk) and many villages, till I reached Krasnojarsk, distant eighty miles, over a road, with little exception, almost impassable; that part which lies between Chornaresk to Malokemtchoutska is so bad that I know of no better punishment to call the faculties of the director-general of the roads into exertion, than making him ride the distance of fifty miles every day in a téléga; if that did not recall him to his duty, I think nothing could,—at all events, it would be no sinecure. For my own part, my bones were so shaken, that I preferred walking." Whether the complaints of the worthy Captain and other persecuted wayfarers may have had any influence on the director-general, does not appear, but it is certain that in that very place, the roads are now almost proverbially excellent, being unsurpassed in any part of the Russian empire. The writer of this traversed the greater part of the distance named at full gallop. If the traveller is determined to sacrifice everything for the sake of time, he may save 15 versts by avoiding Krasnoyarsk altogether, but it is to be presumed, few who take the Siberian route, will consider that a satifactory equivalent. The city of Krasnoyarsk may be reached on the afternoon of the following day, and there is a hotel in connexion with the posting house, where every requisite may be obtained. This is a clean town lying in a valley between the

Yennissei and its affluent the Katcha, in a picturesque situation, almost surrounded by hills. The commerce of the place is insignificant, but agriculture is in a thriving state, and cereals very abundant. A project for planting a colony of Scotch agriculturists in this neighbourhood was favoured by the emperors Paul and Alexander I., but was never brought to fruition.

30th day. If the traveller resolves to proceed without delay, he will cross the Yennissei on a ferry boat, about fourteen miles from the city, and proceed along a very hilly road, in some parts even precipitous. The road, on the following day, lies through a fine hilly country, remarkable for some iron mines and foundries; and early next

31st day. morning the town of Kansk is reached. This place is said to have been celebrated in former times for its trade in furs, but at present the trade in that or anything else seems to be insignificant.

32nd day. During the night or at an early hour in the morning, the river Kan will be crossed, this being the boundary between the governments of Yennissei and Irkutsk, the same being indicated by a white obelisk on each side of the river. The road for the day lies through a succession of forests abounding with game; bears are yet sometimes seen and foxes are very abundant, but wolves have entirely disappeared.

33rd day. Nijni Udinsk is reached the following morning in good time for breakfast. This town, which stands on the banks of the Uda, presents a rather imposing appearance on approaching it from the North west. Provisions here become scarcer and dearer. At Hudoslanskaya, the second station beyond, the made road ceases, and for 150 versts there is the most wretched route that can well be imagined. The work is in progress however, and in the course of a year or two the present state of matters will be rectified.

34th day. The next day's journey is through a more open country, assuming something of the steppe

35th day. character; and Irkutsk is reached towards the

36th day. evening of the day following, after a pleasant and picturesque drive of some hundred miles or so.

Irkutsk is the largest and finest town in Siberia, having a great number of handsome shops and other buildings of an imposing appearance. Besides the Governor of the city, the Governor-General of Eastern Siberia resides here, as also the Archbishop of Irkutsk. In addition to the usual government establishments, civil and military, there is a museum, a Geographical Society, and other devices for the instruction

and amusement of the residents. The best hotel is the Gastennitzi Amur.

If the traveller arrive at Irkutsk between the middle of May and middle of August (O.S.) he will be able to cross the Lake Baikal in a steamer. From the beginning of December till the middle of March, it may be done even more expeditiously by sledges on the ice; but during the intermediate times, when the ice is forming and thawing, the lake is impassable. It is necessary then to take the mountain road, round the south end of the lake, which is a very difficult path, and in time of snow, not without danger. About 150 versts must be travelled on horseback, as there is no made road yet. During the time above indicated, a steamer crosses to and fro twice a week, leaving the landing place on the western side every Wednesday and Saturday morning at 7 o'clock. The fares across are, 1st cabin, 8 rubles; 2nd, 5 rubles; and deck, 3 rubles. It should be observed however that the weather frequently interferes with the above arrangement, as regards time; for the storms, which are specially prevalent towards the end of the season, often delay the steamer for days beyond its time. Should the traveller resolve to continue in his carriage on to Kiachta, he will have to pay twenty rubles for taking it across the lake, and four rubles for landing it. He will however find a much better market for the sale of it at Irkutsk, and the *kibitkas* furnished by the post between that town and Kiachta are quite passable for so short a distance.

Assuming then that the traveller arrives at Irkutsk on Tuesday or Friday, and is anxious to push on without stopping, he may start by post the same evening about 10 or 11 o'clock, and coursing along the north bank of the Angara, he will reach Listvenishnaya, the third station, an hour or two before the steamer weighs. The scenery of the Baikal is grand in the extreme, and is considered by many travellers to be unparalleled. If the steamer start at the appointed time it will probably get to the other side about noon. Our salt water captains would no doubt be somewhat amused at the appearance and conduct of the Baikal skipper, and no less so at his Buryat crew. As there is no jetty, the landing has to be effected in boats, on a spit of sand, stretching out about 12 miles from the village of Possolsky; to reach which, carts will probably be in waiting, but it will be safer to have engaged horses by previous correspondence as this is off the post road. At Possolsky there is a large monastery and an archimandrite, who is the head of the Russian mission to the Buryats. It will be observed that the majority of the inhabitants are now Buryats, but exhibiting little of their original independence,

being everywhere in abject submission to the Russian power.

37th day. By the following morning, the traveller will find himself in quite a picturesque region, coursing along the left bank of the Selenga, and if desirous, for the sake of saving time, he may shorten the route a little by

38th day. avoiding the town of Verchni Udinsk, leaving it on the left, and passing on to Selenginsk, which he will reach in the evening. This is a small town, but was formerly of considerable importance as in the immediate neighbourhood of the mercantile entrepot between Russia and China. Early next day he will arrive at Kiachta on the frontier, the authorised station now for all commercial dealings with the Chinese. It is a small town, but contains much wealth and many good houses.

A different style of travelling has now to be adopted; the tarantas, if brought thus far, must be disposed of at all hazards, and some subsitute employed more in accordance with Mongol notions. Officials in the service of the Chinese and Russian governments have the privilege of posting across the desert, and may in that manner accomplish the journey to Peking in 12 or 14 days, which costs about 200 rubles for a single person without baggage. This is not a charge, however, as the service is theoretically free; but it is customary to make presents to the Mongols, to the amount of about 3 rubles at each station. This is generally given in brick tea, as the use of money is not yet fully understood among these nomads. The mere private adventurer, however, is not allowed to travel in this manner, and must consequently make an engagement with some of the numerous Mongol carriers to convey him across the desert. He may either engage sufficient camels for himself and his baggage, and have merely two or three Mongols as his attendants, in which case the journey to Kalgan on the Great Wall may be done in 23 to 30 days according to the weather. Or if he is willing to join some caravan, he will find the journey less expensive, though perhaps occupying a little more time; but, on the whole, it will be the pleasanter way of proceeding. In this part of the route, the Mongolian is undoubtedly the most useful language, but there are generally some Chinese in the caravans who can also speak Mongolian. Any other tongue is of little use in crossing the desert. The Mongols are accustomed to journey for eighteen hours at a stretch on the backs of their camels, and then pitch their tents for six hours, the time allotted for cooking, eating, sleeping, etc. The Chinese merchants, however, often take their own carts with them, which are drawn by a camel, and

being covered, are very warm and commodious for sleeping in; and most European travellers will no doubt be disposed to follow their example. These carts are of two kinds; the better sort, having wheels with spokes and an iron tyre, may be got at Kiachta for from 60 to 70 rubles; but another kind of a ruder make will be procured for from 20 to 30 rubles. The main difference is in the wheels, which, having no iron on them, get worn into a very irregular shape after a few days' use, giving a most unpleasant jolting motion, which increases as the journey continues. There is no fixed charge for this journey, but contracts have been made according to circumstances, from 30 to 150 taels. It has been usual to have such contracts made out in writing either in the Chinese or Mongol languages, but the Mongols will be found most scrupulously faithful to their engagements, and the mere verbal agreement will probably be held as sacred by them as by any people. Europeans often carry their tent with them, and have it pitched at every halt; but much trouble will be saved by one who is willing to put up with the tent occupied by the Mongols; he will receive a welcome to a place among the rest, and will thus, moreover, have an opportunity of seeing something of Mongol life. Before leaving Kiachta, it will be advisable to lay in some stock of provisions for 25 or 30 days. Sheep may be purchased in the desert for about a tael of silver each, and in summer time milk may always be got. A canteen with portable cooking apparatus is a most useful auxiliary, and a small Mongol grate should also be procured. If towards winter, a good supply of furs is indispensable.

Having waited on the Russian Commissary at Kiachta, and shewn his passport received at St. Petersburg and made out for Peking, the traveller will receive from that functionary a passport drawn up in the Russian, Chinese and Mongolian languages, and stamped with the seal of the Chinese mandarin at Maemaechin, the Chinese mart adjoining the Russian town of Kiachta.

44th day. All preliminaries being so far arranged, five days' continuous travelling through a rugged mountainous region will bring him to the Mongol town of Urga. This town, which is inhabited by ten thousand lamas, is the head quarters of Mongolian lama-ism, being the residence of the Kutuchtu or spiritual chief, and in the neighbourhood of which is the establishment of the Tsetsen khan, one of the most powerful of the Mongolian princes. There is a Chinese town about four miles distant, also called Maemaechin, where almost all the trade of the place is carried on. About midway between the two, on an open plain, is the Russian Consulate, where a large and handsome

building is now being erected. About 20 days more will
64th day. probably see the traveller at the town of Kalgan on the Great Wall of China, after having crossed the magnificent pass in the Hinggan chain of mountains.

It will be necessary to shew his passport to the local Chinese mandarin at Kalgan, and for the journey thence to Peking, the usual way is to hire a palanquin borne by two mules, and extra mules for baggage if required. A palanquin with a couple of mules will cost about 8 or 9 taels. The first day he will pass through the prefectural city of Seuen-hwa, the ancient Ta-too, or Great Capital of the Mongols, likewise a picturesque mountain pass, and stop the
65th day. night at Ke-ming-e. Next day, passing through the cities of Paou-gan, Sha-ching and Too-moo, he will stay the night at Hwae-lae. About noon on the
66th day. following day he will reach the Cha-taou fort from which he will travel through 15 miles of the
67th day. grandest mountain scenery in the whole of his journey, and stop for the night at Nan-kow, a village at the southern end of the pass. Beyond this it is all a level and extremely dusty country as far as Peking, the
68th day. metropolis of China, which may be rached before the gates are shut on the following day, this completing the journey from London to Peking in two months and a week, without any particular exertion, and with what some will consider a great advantage,—a sea-passage of only 100 minutes. By pushing matters, probably it might be done in a week less time.

ARTICLE V.

THE MEDICINE AND MEDICAL PRACTICE OF THE CHINESE.

By James Henderson M.D., F.R.C.S.E.

It is not without a feeling of deep interest that the Student of Medical history proceeds to survey an art which has occupied the research, and afforded scope for the talents of some of the greatest philosophers and best men that our world can boast of. His interest especially will be awakened, if he sees the people of an Empire equal in number to one-third of the whole earth's inhabitants, all but utterly destitute of the benefits and blessings accruing from an advanced and carefully cultivated knowledge of this art. We believe, too, that China was one of the first (if not the first) nation to practise Medicine, and in all probability was at one time the most advanced in Medical science. The mind wanders backwards over a period of nearly four thousand years; and during those hoary ages, when Abraham fed his flocks on the plains of Mamre, and Joseph sold corn in Egypt, Medical art in China was just as well known, the nature of disease as well understood, the structure of the body and the functions of its different organs as well known, and the people of China as much benefited by the healing art, B.C. 1892 as in A.D. 1862. Why is this?

When we glance backwards at the history of Medicine, those mighty in Medical art and science, though long dead, are conjured up before us, and pass on as a panorama. A grave-looking Chinaman seems to take the lead; the shadowy form of some Egyptian priests, and some Grecian priests headed by Esculapius scarcely less shadowy, follow; then come the silent and deeply contemplative Pythagoras and his disciples; next come the Cnidians and the Asclepiades, with Hippocrates at their head. Socrates, Plato, and Aristotle bring up the rear of this group. Afterwards come the disciples of the Alexandrian schools, with those of Pergamus—Galen, Cœleus, Aretœus, Aurelianus, Pliny, Dioscorides, Avicenna, Paul of Egina, Boetius, etc. Then follow the Arabians, with Rhazeres at their head in the 9th century. It is a strange and motley array; cowled priests, short-frocked bath men and barbers, hooded women, gowned and bearded Necromancers, with the symbols of Astrology and Christianity on their banners. The panorama moves on;

light begins to dawn. Galileo, Bacon, Vesalius, Harvey, Sydenham, Hunter, and Jenner, with other names as familiar, appear on the scene; while intermingled with these great and good men come Rosicrucians and pretenders, Alchemists and Humoralists, Solidists and Chronothermalists, Mesmerists and Hydropathists, Homœopathists and fantastic dreamers of all sorts. Few things will be found more interesting than to trace the progress of the healing art through its various stages of progress and improvement.

The first period may be called one of *instinct*, arising naturally from the wants of man, and extends from the Mythological age to the fall of Troy. The second period may be called *Mystic* or *Sacred*, and extends from the fall of Troy to the dispersion of the Pythagoreans, B.C. 500. The third may be called the period *Philosophical*—Hippocrates was the first who added philosophy and reasoning to observation and experience. He introduced those doctrines which finally overthrew empiricism, and caused dogmatism to triumph in the time of Galen. "He appears to have had the sagacity to discern the great and fundamental truth that in Medicine, even probably more than in any other science, the basis of all our knowledge is the accurate observation of actual phenomena, and that the correct generalization of these phenomena should be the sole foundation of our reasoning." It was Hippocrates who, by introducing a system of inductive philosophy to the cultivation of Medicine, and by stating with particular care the natural history of disease, *i.e.*, the tendency of diseases to a favourable or fatal issue, raised the *art* of Medicine to the dignity of a *science*, and by his great nobility of soul and utter contempt of all ostentatious charlatanry, amulets, and all mystical machines to impose upon the ignorant credulity of the masses, together with his perfect freedom from all popular superstition, and above all by *his great love of truth*, and his unwearied diligence in searching after it, he made Grecian Medicine far outstrip that of any other nation, proving beyond the shadow of a doubt, that the art of healing in Greece, in the days of Hippocrates (B.C. 450), was far better known and more skilfully practised, than it is now in China in the 19th century. I have now touched the key which answers the question previously put, in regard to the backward state of Medicine in China; the reason is that the cultivators of Medicine have never cared to do what Hippocrates and many of his followers in the West have done, namely—searched diligently after truth, and loved to discover and follow it, believing that the discovery of a particle of truth is worth almost any amount of toil and trouble, and will fully reward the earnest student, and stimulate him to

fresh efforts in the exploration of that great, noble, and fertile field, which the Almighty Author of truth has laid open to be explored and cultivated by his truth-loving children.

A thirst for knowledge sprang up in Greece in the days of Pythagoras, and received an impetus from his disciples Plato, Aristotle, and Hippocrates, who established the Erudite school in Greece, that during all the centuries that have since elapsed, including the long period popularly known as the Dark Ages, has never been extinguished. China during her long history can produce no such period during which a thirst after knowledge in Medicine, Philosophy, and Natural Science prevailed as in Greece so long ago as the days of Pythagoras. He was both the Galileo and Luther of his age. And I will challenge any student of Chinese history to shew that the Chinese in their writings during any age down to the present have manifested a knowledge of physical science in any manner approaching to that exhibited by him 500 years before Chirst. He taught the doctrine of the unity of God, of mind and matter being two eternal and uncreated essences, the homogeneity of nature, and its indefinite perfectability. He taught also a doctrine of development in animated nature, closely analogous to that laid down in the "*Vestiges of the Natural History of Creation.*" To shew his views on this point, I subjoin an extract from a commentary on the doctrines of Pythagoras, in the "*Nouveau Dictionnaire d'Histoire Naturelle.*" "He could conceive a time when insects, shellfish, or the impure reptile, knew no superior in the universe, and were at the head of organized being. Who knows whether in the Eternal Night of ages, the sceptre of the world will not pass from the hand of man to that of a being more perfect, and more worthy to bear it? Perhaps the Negro, now inferior, reigned at one time over the Earth, before the white man was created. If Nature has necessarily granted Empire to races which she has formed more and more perfect, why should she stop her progress now? Who shall place limits to her power? She is upheld by God only, and it is his powerful hand which guides her.' Nor was China by any means wanting in Sages and thinking men about this interesting period—one of the most memorable epochs in the intellectual development of the human race, for contemporary with Hippocrates was Confucius, one of China's greatest and best men; Zoroaster, and the great statesman Pericles, also the poets Sophocles, Alochycus, Euripides, Aristophanes, and Pindar; likewise Socrates, Plato, and Xenophon, with the historians Herodotus and Thucydides, and Phidias the great sculptor, etc. A host of distinguished contemporaries unrivalled by any age or period. Hippocrates

was the type of the philosophic physician,—his strong love of truth and virtue,—his singular disinterestedness and self-denial,—his patriotism and unwearied benevolence, contrast most favourably with all that is known of the cultivators of medicine in China, down to the present date. His highly cultivated mind, and strong common sense, enabled him to attain that depth of knowledge so difficult to secure, and which never seems to have been reached by a Chinese physician, namely, the knowledge of his own ignorance. For notwithstanding their utter ignorance of Anatomy, Physiology, and Pathology, together with their very imperfect Symptomatology, and crude system of Therapeutics, they are always ready to explain every difficulty however complicated; no doubt is ever expressed, no conscious ignorance is ever deplored, and no hope of, or anxiety for clearer views, or more knowledge of any subject, sickness, or remedy is ever desired. Such a system, and contemptible state of self-reliance, superciliousness, and satisfaction without any ground or reason is deplorable indeed, and so long as it lasts must of course prove a fatal barrier to improvement in every respect. How different was the spirit in which Hippocrates cultivated medicine his maxim shews—"Art is long, life is short, opportunities are rare, experience deceitful, and judgement difficult." Hippocrates, like every wise and judicious physician, always endeavoured to assist nature in the efforts which she makes to throw off disease. "Nature," he says, "is the great physician of diseases," and like every truthloving man, he gave Nature, or the *vis Medicatrix*, her proper share of credit in the cure of them; and although he lays it down as a rule that the physician should regulate his treatment "to do good or at least to do no harm," yet on certain occasions his practice was bold and decided;—he was the first to discover and to practise the principle of derivation, and revulsion in the treatment of disease; he bled freely in inflamatory affections of the chest, and in milder cases he practised cupping both with and without scarifications. He practised medicine and midwifery in all their branches, with a boldness and decision, and in some respects, a skill, which has never been surpassed by any physician in any country, and certainly never approached by any Chinese practitioner. He was a bold and fearless operator in the practice of Surgery;—he opened the chest in case of Empyema, and Hydrothorax; he also perforated the skull with the trephine in injuries of the head. His interesting works—"*De Fracturis*" and "*De Articulus*," give ample evidence that he was well acquainted with the various kinds of fractures and dislocations; he had a very skilful mode of adjusting fractured bones, and securing them by means of wax bandages. In treating dislocations, he applied mechani-

cal power when human strength was not sufficient to restore the displaced bones. His minute description of accidents which are common at the hip and elbow joints shew him to have been a profound thinker, an accurate observer, and a scientific man.

His remarks on the nature and treatment of club foot also display a sagacity and skill that might shame some professors of Surgery in the present age. His work entitled—"*De Aerœ, Locis, et Aquis,*" shews that he paid great attention to the influence of climate, temperament, changes of the weather, food, and drink upon health and disease.

He was the first to observe critical days and crises in disease, and the natural tendency which the body has to cure itself by critical evacuations at certain periods of the disease.

His work *De Virtus Ratione in Morbis Acutis*, shows that he was also well versed in the science of dietetics, and no physician of the present day could read it without profit.

At that early age we do not wonder that the Chinese physicians knew so little; we only wonder that Hippocrates knew so much, especially when we remember with what abhorrence the dissection of the human body was then held. Practical anatomy was not permitted, physiology was not known, and in this respect Hippocrates had no greater advantages than the Chinese. We have no reason to believe that he had any opportunity of acquiring a correct knowledge of the structure of the human body, of the circulation of the blood, of the existence of a nervous system, or of the relations of different parts to each other; but he did the next best thing, which the Chinese have never done: he examined and dissected animals, and thus by comparative anatomy, and by the study of pathological changes as occurring in the lower animals, and by an inductive philosophy, he traced the structure and functions of healthy organs from the lower to the higher animals; and that with certain modifications the same diseases and the changes produced by them, are common to both.—Thus he attained to a degree of Medical knowledge based on inductive science and experience, which greatly surpasses anything to be found in China even at the present day.

The *Anatomical* period may be called the fourth in the history of medicine. (It is necessary that I should thus glance rapidly at the progress of Medical art in the West, in order more fully to shew its real condition in China.) The third or *Philosophical* passed into the *Anatomical*. Aristotle mastered the philosophy of his day, and after middle age, began to study comparative Anatomy, Natural History and

Philosophy; he attended Plato's Lectures with the greatest assiduity. A Macedonian by birth, he was selected by Phillip as preceptor to his son Alexander; and when he went to the conquest of Asia Minor, Aristotle corresponded with him on matters of science, and had many interesting specimens of Natural History sent home to him, and thus formed a museum. The patronage which Alexander bestowed on the studies of his Tutor, soon set the prejudices against human dissections systematically at defiance, and two of his Generals —Ptolemy Lagus in Egypt, and Eumenes in Mysia,— followed in their great leader's footsteps, and became rivals in all scientific pursuits. The one founded the school and library of Alexandria, the other those of Pergamos; and science and literature received such an impetus that in less than a century after they were founded, the library of Alexandria contained no less than 600,000 volumes—and that at Pergamos 200,000.

The whole cycle of science was vigorously cultivated by the Ptolemies; they made large collections in Zoology and Botany, they fitted out geographical and commercial expeditions, and cultivated bibliography; but medical science was their favourite pursuit. Ptolemy Soter and his son Philadelphus established an University or academy of science, and at a great expense arranged the Alexandrian library, and encouraged and supported both teachers and philosophers. Amongst these were the two distinguished Anatomists— Erasistratus and Herophilus; the former was the grandson of Aristotle, and founded a Medical School at Smyrna.

The Ptolemies not only encouraged human dissections, and made provision for supplying the Medical Schools with subjects, but they also dissected themselves; and so famous did the Alexandrian School become at last, that to have studied there was sufficient to establish the reputation of any physician. Such a happy state of things however did not continue very long, for the Romans conquered Egypt and interdicted all dissections of the human body; the noble library of Alexandria was also destroyed under Julius Cæsar, and although Cleopatra subsequently transmitted that of Pergamos there, the obstinate imbecility and folly of Coroialla rendered her praiseworthy patronage all but useless.

After the lapse of nearly a century, the Medical school at Alexandria again began to flourish, and produced amongst other great and good men—Galen, Celsus, Pliny, and Dioscorides. The sixth and seventh books of Galen's work prove that his knowledge of physiology as far exceeded anything that the Chinese have ever known, as the physiology of Europe at the present time exceeds that of Galen. He

taught that the heart was the fountain of life—the seat of vital powers, "the stove from which the innate heat is diffused over the system by the arteries." He says the purposes of respiration are twofold: first, to mainatin the animal heat, and to evacuate the fuligrinous part of the blood. Indeed, it may be said that Galen anticipated the theory of respiration, lately so accurately described and announced by Liebig, for he points out the analogy between combustion and respiration, and concludes that the two processes are very similar. He compares the lungs to a lamp, the blood to the oil, the heart to the wick, and the animal heat to the flame. He gives a wonderfully accurate description of the arterial and venous systems, and everywhere inculcates that the heart is the centre of the arterial system, and that the office of the valves of the heart is to prevent the regurgitation of the blood from the left to the right side of the thorax during the systole. The valves and cavities and substance of the heart are also described with marvellous accuracy. (*De Motu Musculi*—§3). It must be admitted, and Harvey himself admits, that Galen made a very near approach to the theory of the circulation, for he seems to have been well acquainted with the anastomosis of arteries and veins, and stoutly maintains against Erasistratus that the contents of the arteries is blood and not spirits. He also seems to have held that at every systole of the heart and arteries a portion of blood is thrown out by the exhalant and secretary vessels; and also at every diastole, blood from the liver and air from the lungs, rush forward to supply the vacuum.

Thus like some physiologists now, he seems to have held "that the expansion of the ventricle and arteries is the cause of the influx of the blood," instead of teaching like Harvey that the diastole is caused by the influx of the blood.

This period closes with the works of Paulus Ægineta, which constitute a complete Cyclopædia of the Medical literature of his day.

In A.D. 640, the Alexandrian school was again broken up by the Saracens, and its library of some 500,000 volumes was used to heat the public baths for a period of six months. By this time also, the Franks, Visigoths, and Lombards had overrun Europe, and the Arts and Sciences found protection only at Constantinople, and with the Caliphs of Arabia; and here the 5th period may be said to have commenced.

Haroun al Raschid was the most celebrated and enlightened of the Arabian Caliphs. His court became a refuge for the intellectual persecuted Christians. He established public hospitals and schools in Bagdad, and here his son founded an University, which in the Middle Ages almost equalled in reputation that of Alexandria. He

directed his Ministers and Ambassadors to purchase at any price, all Medical and philosophical manuscripts, and for 40 years he paid a Christian for translating, literally the weight of what he translated in gold. Rhages, a Persian by birth, was a distinguished writer and professor at the University of Bagdad, and chief Physician of the great Hospital.

About this period also, the Moorish princes cultivated Medical science in Spain. The library of Cordova contained 224,000 volumes on Medical science and philosophy.

The school of Salerno in Italy was also famous for this branch of learning, between the 10th and 13th centuries.

Between the 11th and 15th other Physicians and Surgeons of great note flourished in Western Europe: Lanfranc, professor of Surgery in Paris, and Jean Pitard, who founded the famous College St. Come, in the 16th century.

Nicolas Leonicenus, professor of Medicine at Ferrara, translated some of the works of Hippocrates and Galen into Latin, in 1428.

In 1483, at the siege and sack of Constantinople, many learned Greeks fled into Italy, taking with them valuable manuscripts on Medicine. Linacre studied at Florence, under Demetrius Chalcondyle, a Greek refugee; he founded the London College of Physicians, also, a Chair at Oxford and Cambridge, for expounding the works of Hippocrates and Galen.

It was necessary for me thus to glance rapidly at the history and progressive steps of Medical art in the West during the Early and Middle Ages, in order that its condition and real state may be fully understood in China at the present day. I am also anxious to demonstrate by these means, what I feel is so true, and what I have already asserted, namely, that Medical art in China has *not yet* reached by a long way that degree of progress or perfection, which it did in Greece in the days of Hippocrates; nor has it ever been cultivated with anything like that degree of earnestness, and thirst after knowledge and love of truth, which was displayed by that great and noble truth-loving man, and his energetic followers.

Nations do not differ so much in physical conformation, as they do in mental characteristics and peculiarities. Classical and æsthetic taste distinguished the ancient Greeks. A solid substantial and warlike cast of mind marked the old Romans. Roving predacious and contemplative habits characterized the Arabs; persecution and bigotry the Mahomedans and Turks; and metaphysical subtelty, listlessness and pliability, the dark-eyed Hindoo. The Chinese may be stamped a matter-of-fact and practical people, great utilitarians, ready to sacrifice everything for present profit

and pleasure, decidedly low in their æsthetic taste, sadly defective in the sentiment of religious veneration,—knowing little of, and caring less for, beauty, sublimity, perspective, proportion, picturesqueness, melody, harmony, sculpture, drawing. &c. They are, however, an observing people in matters readily cognizant to their senses, though their observations are often superficial, and their deductions consequently ridiculous.

They are neither fond of, nor profound in, scientific pursuits, and as the study of the natural and abstruse sciences appears to them unproductive of *immediate* benefit, they all but utterly neglect them.

In their habits they are industrious and indefatigable; they have made considerable progress in the Science of Ethics; but the politeness which they exhibit seldom has its motive in good will, and consequently when the tarnish is off, the rudeness, brutality, and coarseness of the material is seen.

One of the worst features however of the Chinese character, and that which I believe proves the greatest obstacle to their improvement as a people, is their UTTER DISREGARD FOR TRUTH.

In the pursuit of every branch and department of science, a love of truth must ever form the integral element from first to last; every consideration, opinion, and system must bend and break down before the force of *truth*.

There must first be a strong desire to find her; she must be loved and highly esteemed for her *own sake alone*.

But how can the science of Medicine, which for its very existence leans on the love of truth in its cultivators, progress amongst a people who individually are trained from their birth to falsehood,—whose highest officers of State feel no shame at being detected in a lie,—a people whose talents are measured by their ability to deceive, and who are taught to fear no punishment from their gods for deception and falsehood.

The Chinese are no more ignorant of the science of Medicine than they are of the other sciences; of pneumatics, hydrostatics, optics, electricity, mineralogy, geology, chemistry, and many cognate sciences, they literally know nothing, nor do they profess to know them. Of Medicine, however, they do pretend a knowledge, even from the remotest times of antiquity.

Perhaps there is no tribe of men, far less a nation, on the face of the Earth, but what has some knowledge of the healing virtues of some plants, and of the use of them in the cure of disease. Before, however, diseases can be treated with safety or any prospect of success, it is absolutely

necessary for the student to have a thorough knowledge of the structure and function of the human body *in health*. Man must be studied both in his physical and psychical nature; his relation also to the external world must be intimately known, and as these studies necessarily open a vast field of scientific research and accurate observation, the subjects connected with the moral, mental, and physical constitution of man will form a good criterion, by which we may judge not only of the scientific superiority of some nations over others, but also of certain individuals in regard to talent and superiority over their fellows of the same nation.

I shall now give a brief account of the Medical writers and their writings in China, beginning only with those whose authentic history may be traced. Afterwards I shall summarily describe the present state of Medical practice in this great Empire.

Chinese Medical authors have been numerous from the most remote periods. Before the Christian era volumes were written on the various branches of Medical practice; and there seems little doubt that the art had been reduced to a sort of system as early as the days of Solomon, or the siege of Troy.

Shing-Ming, and Hwang-te, are described as the first who wrote treatises. Their writings are chiefly composed of traditional rules and maxims handed down from the time which no authentic history reaches; twenty-four volumes of commentary were written on Hwang-te's works in the Eighth century by Wan-ping.

A work in twenty-four volumes called "*Ling-chu-king*," describing minutely the practice of amputation and the nature of internal diseases, is also said to have been written by Hwang-te, and has been largely commented on by subsequent writers down to the 18th century. A curious work called the "*Nang-king*," is said to have been written in the 3rd century B.C., wherein 80 difficult or doubtful questions are said to have received a solution. It must have received considerable attention, for no fewer than 11 commentaries were written upon it before the 14th century. In the 15th century, a physician named *Chan-she-hung*, published a new Edition of it illustrated by diagrams. The celebrated court physician *Wang-shuh-ho*, published a work on the Pulse in 10 volumes about A.D. 290, called Mi-king, along with his own observations; much traditional knowledge on the same subject is taken notice of. Many subsequent editions of this work have been published during the several dynasties, and the work is much prized at the present time.

In the 10th century a small work on diseases of the Eye was written, called *Yung-hae-tsing-we.*

During the Sung dynasty Chingkuo, published a collection of prescriptions in 8 volumes, entitled *Su-Chin-leang-fang.*

A work on Fevers in six volumes, *Shan-han-tsung-pin-lung*, was also written during this period. This work contains a chapter on the composition of medicines.

In the 13th century, Ching-tsze-ming wrote a work in 24 volumes, called *Foo-jin-ta-tsuen-leang-fang*, on the diseases of women. This contains a large number of prescriptions said to be useful in curing the various complaints. Subsequent abridged editions of the work have appeared.

About this period was written a book in 12 volumes, called *Eh-lin-yuen-jung.*—It treats of fevers and other diseases, and has undergone much alteration in various editions.

About 1340, Wae-yi-ling wrote a book in 20 volumes, called *She-e-ti-hean-fang.* It is divided into 7 parts. The 1st treats of the diseases of large blood vessels; 2nd, small blood vessels; 3rd, nervous diseases; 4th, parturition and diseases of women; 5th, Eye diseases; 6th, diseases of the mouth, teeth, and throat; 7th, the treatment of fractures and arrow wounds. In treating of the diseases mentioned above the writer describes the cases where he thinks acupuncture may be used with success.

About 1360, Wan-le wrote on Fevers a work called *E-kin-soo-hwy-tsie,* treating also of external and internal diseases generally, and of apoplexy. A treatise on diseases of the Skin was written about this time by *Tse-te-che,* in which he discusses the causes and cures of different skin diseases.

A celebrated work on Therapeutics called *Poo-tse-fang,* was written by *Choo-su* an Imperial prince of the Ming dynasty. It consists of 160 volumes, and contains some 2,000 lectures on about 2,150 subjects. It has upwards of 770 rules, 240 diagrams, and about 22,000 different prescriptions. The famous Materia Medica entitled "*Pun-tsoon-kang-muh,*" was written by *Le-she-chin,* in the middle of the 16th century, in 52 books. A considerable part of this work is made up of extracts from more than eight hundred authors, and of 1,890 different Medicines or remedies only about 370 are new. The basis of this celebrated work is said to be a small treatise written by Shing-Ming, several centuries before the Christian Era. The *Pun-tsans* has not been translated into any European language; but through the kindness of the author, Mr. Daniel Hanbury of London, I have before me a most

interesting and carefully written paper, reprinted from the "*Pharmaceutical Journal*" for July and August 1860, containing "a synopsis of the contents of the Chinese Herbal" in a tabular form. A careful perusal of this excellent paper will repay any one who is interested in these subjects. With rare talent and research the author has made the most of his scanty materials.

It was about this period, (during the Ming dynasty,) that the faculty of Medicine was fixed by the Government to consist of 13 branches. The Imperial Medical College at Pekin, however, at the beginning of the Tartar dynasty, fixed the number at 11, and subsequently it was reduced to nine, and the branches are at present—diseases of large blood vessels and small-pox; diseases of small blood vessels; diseases of the skin: diseases of the eye; diseases of the mouth, teeth and throat; diseases of Women, diseases of bone, fevers and cases for acupuncture.

In 1602, a work by *Wang-kang-tang*, in 120 volumes, was published, called *Chin-che-chun-shing*. It treats of the diseases of women and children, fevers and ulcers. The writer quotes largely from preceding authors.

In 1591, a work of 20 books was published on Hygiene, called *Tsung-sang-pa-tsun*. It treats of diet, drink, regimen, amusements, rest, study, proper clothing, how to prevent disease and live virtuously. Several short treatises appeared about this period on the diseases of children, with collections of prescriptions and cases and rules for treatment quoted from old Authors. About this time a work came out in 7 volumes—*Tung-pu-chin-kew-king*, on acupuncture, with a large number of rude diagrams. Two copper anatomical figures of the human body were made by command of the Emperor to assist in illustrating the practice of acupuncture. One of these models it is said is still in Pekin, but is most unlike that which it is intended to represent.

During the Ming dynasty several works were published on Smallpox. The first is called *Wang-jen-tho-tow-chin-lung*. Some of these books are illustrated with diagrams of the disease, and contain numerous prescriptions for its treatment. Two works on Cholera were written during the 17th century. One is called *Chu-chin-tseun-hoe*, the other *Cha-choou-yeu-hang-tseuen-shon*, which contains a large number of prescriptions, and discusses largely the methods of treating that disease.

In 1684 a work in eight books, called *Neu-ko-king-hing*, was published by Swon-Hein, on the diseases of parturition.

In 1674, a work in six volumes, entitled *Shing-sho-you-han*, was published by *Foo-jin-yu* on diseases of the Eye;

and about this time another on parturition called *Ta-san-yaou-cho*, in which are given directions for the management of Children.

In 1696 Sung-yu wrote a work in 16 books, called *Sung-yoo-tsung-sang-tseuen-shoo*, in which he gives many rules for the preservation of health, and mentions several drugs which will cure every disease. A work on the properties of Medicines in 6 volumes called *Chin-ste-ee-kun-fang-lung* by Ching-le-ting, was written about this period; another edition was published in 1707, containing prescriptions for almost every pain and symptom of disease that man could have. A work appeared about the same time called *Keh-kew-kwang-sang-tseh*, made up of plans for saving life in case of accidents and suicide, and also for its prolongation. The most complete work on the practice of Medicine was published in 90 books in 1740, called *Yoo-tswan-e-tsun-king-kee*. This treats largely of the pulse, discusses the circulation of air in the body, contains many prescriptions of celebrated physicians, and rules for the treatment of fractured bones. It contains many plates and diagrams, and a vigorous attempt is made to classify different diseases. Several summaries on the practice of Medicine were written about this period, amongst others, one by Chin-kwo-pang, called *Eh-heo-sin-wu*, which embraces the whole art of Medicine: another, *Eh-tsun-pie-tu*, in ten chapters by Le-chun-tsze. In 1832 a work was published by Le-tsun-yung in 8 books called *Eh-kong-te-yoon*. It contains chapters on cold and heat, dry and moist, full and vacant, stoppage and free passage, ascending and descending, masculine and feminine, external and internal &c., &c.

Other works on Medical art might be mentioned, but enough has been done to shew, that however fanciful and worthless the quality of the material, there is no lack of quantity.

Unfortunately, however, throughout the whole range of Medical literature in China, lamentable ignorance and supercilious conceit, are everywhere manifest. In all their writings, there is no evidence of disinterested industry, or yearning after knowledge and more light; their best theories are based upon empty speculations and wild fancy; in their endeavours to support what they consider consistency and harmony in their system of physics, they unscrupulously sacrifice not only truth, but also intelligibility and reason; in most of their writings their aim seems to be to mystify and make every subject as mysterious as possible, professing as they do most to admire and reverence that which is least known and understood. In none of their works is there any evidence to shew that human dissection was ever practised, so that both human and comparative anatomy as a science

is utterly unknown; hence they make no distinction between arteries and veins, or between nerves and tendons; true, they have some anatomical diagrams, but as Mr. Lockhart says, "these are just as if some person had seen an imperfect dissection of the interior of the body, and then had sketched from memory a representation of the organs, filling up parts that were obscure out of his own imagination, and portraying what according to his own opinion the parts ought to be, rather than what they in reality are." The Chinese are as ignorant of physiology as of anatomy, of the functions of the heart, lungs, liver, kidneys, and even of the brain they know literally nothing; they make no distinction between venous and arterial blood. They seem, however, to have some idea that certain sympathies exist between different organs, and viscera, and of one organ deranging another, as they call the heart "the husband, and the lungs the wife." They call a man Seaou-tien-tsz, *i.e.*, a microcosm, or little universe. Man's body they say is composed of five elements—fire, water, metal, wood, and earth, and these in some extraordinary manner they connect with 5 plants, 5 tastes, 5 colours, 5 metals and 5 solid viscera, excluding the brain; diseases they say are produced by a derangement in the balancing of these 5 elements. Fire and moisture, cold and heat, when in excess or deficiency, derange the economy, and the secret of success in the healing art is to supply what is wanting in the body or withdraw what is superfluous, and thus to reproduce harmony and an equilibrium amongst the five elements; hence they pretend to have Medicines to "strengthen the breath, put down the phlegm, equalise and warm the blood, repress the humours, purge the liver, remove noxious matters, improve the appetite, stimulate the gate of life, restore harmony," &c., &c. Medicines also are said to have a healing and correcting influence upon certain mysterious dual powers in nature called the *yin* and *yang*, corresponding to light and darkness, earth and heaven, strength and weakness, &c. They call the heart the prince of the body, and from it, and the pit of the stomach, all ideas and delights proceed. The soul resides in the liver, and from this organ emanate all great and noble purposes. The gall-bladder is the seat of courage; and the individual is bold or timid according to its size; its ascending in the body is the origin of anger. "The Chinese sometimes procure the gall-bladder of animals, as tigers and bears, and even of men, especially notorious bandits, executed for their crimes, and eat the bile contained in them under the idea that it will impart courage." The small bowels are joined to the heart, and the urine passes through them to the bladder, the large bowels are joined to the lungs, and "have 16 convolutions."

They regard the osseous system as a sort of framework; they speak of the skull as one bone, so of the fore-arm, leg, and pelvis. But of all the systems of solemn quackery, none is so evident or prevalent both in theory and practice as their doctrine of the pulse. As they are ignorant of the function of the heart, so they are of the circulation of the blood. This is proved, 1st, by their asserting that there is a different and distinct pulse for every part of the body. 2nd, In none of their writings is there any mention of valves in the veins, which both Galen and Harvey were much struck with, and concluded that they were placed there for some great object. 3rd, No notice is taken of the changes which the blood undergoes in lungs and capillary vessels, nor is there any mention of a double circle. 4th, Their practice of feeling the pulse at both wrists, or as they say at both sides of the body, and declaring that not only does the pulse differ on both sides; but they pretend to distinguish three on one arm, the first immediately on the metacarpus called respectively "the bar" and "the cubit." It is true that in their early writings they mention "the blood as the chief source of life;" but this they seem to have gathered from the fact that when all the blood is withdrawn from the body the individual dies! All they say is, that the blood "moves or oscillates in blood vessels." Some of their diagrams "represent tubes issuing from the fingers and toes, and running up the limbs into the trunk, where they are lost, or reach the heart, lungs, or some other organ, as well as they can, wandering over most parts of the body in their course."—Scarcely two Authors however agree as to the manner in which the body is irrigated with blood.

Now—what is most striking and what excites our surprise is, that century after century, and generation after generation, should have passed away in a vast country like this, and especially among such a large number of men who set themselves up as authorities or teachers of others, there should not be found *one* with a mind independent enough to make fresh investigations, or sceptical enough to doubt the numerous unreasonable assertions of his predecessors.

The *observations* and *facts* of Chinese physicians are of an extraordinary nature, and would never satisfy the mind of the truth-seeking student of the Caucasian division of the human race. Observation it is true must form the basis of advancement in Medical Science; but we must first clearly understand what observation is, and what it implies. An observation means more etymologically, than an act of the senses; it means also an act of the mind, the careful investigation of a thing; nothing can be carefully investigated without a knowledge and reference to a thing's antecedents,

relations, or co-efficients; therefore, both perceptive powers and reasoning must be exercised in making an observation. Defined by Springel thus,—"Sequitur animadversionem observatio, quæ nihil aliud est, quam attentissima et studiosa succedentium sibi phænomenorum animadversio. Quæ ut in observationem transeat, opportet primum attendere animum ad-res, earum formas, qualitates, et proprietates."

The process of observation becomes simple and intuitive by practice and accumulated knowledge; for example, when the scientific Physician feels a pulse, he exercises two distinct mental acts at the same moment, viz, "A clear and precise computation of the thing to be observed," and "an examination of its reciprocal relations and connexions." In other words, he has to determine the relation of the pulse to the heart, lungs, and nervous system of the case. Chinese physicians state that the whole superstructure of Medical practice rests on this theory of the pulse,—the diagnosis, prognosis, and treatment of all diseases depend entirely on this. Here is a system pursued for thousands of years with absurdity and falsehood on the face of it, "for it sets at defiance the simplest laws of hydraulics, and gives a vital force and quality to a pulsating and conducting tube, which it could never possess." So much for observations and facts of Chinese physicians.

The celebrated Cullen, referring to the state of Medical science in Europe in his time, observed, "that there were more false *facts* than false theories in medicine;" so it is in China; everything is false, simply because everything rests on a false foundation; falsehood is at the root of every system, rendering correct information and reliable facts impossible. A fact in Medical science is that which is evident to the educated senses of an intelligent observer. The senses must be educated before facts can be discerned; for example, it may be a fact that certain valves of the heart are diseased; but unless the senses are educated we do not know the fact. The observer must also have intelligence to generalize phenomena, and to arrange the facts he may discover, according to well understood principles and laws, which regulate and sustain the animal economy. Chinese physicians may not be to blame for want of penetrating astuteness or natural talents, but they are to blame for declaring that they know, what they *do not* know, for declaring they feel in the pulse what they *do not* feel, for not seeking more knowledge, and for resting satisfied with present attainments.

After having practised 18 years among the Chinese, and having mastered their language, Dr. Hobson in an excellent paper in the *Medical Times and Gazette* of Nov. 18th, 1860, says—"While they—the Chinese—write learnedly about the

wonderful properties of the pulse, and palm a lie upon the public in professing to distinguish its minute and varied forms, yet I have never met with one Chinese Medical practitioner who dared affirm to my face that he had done so; or was willing to try his boasted skill on a patient of mine, though offered a considerable reward to point out any well-known disease by the pulse alone."

Again, in the same paper, Dr. Hobson writes,—"The extent of the pulse is one Chinese inch on the right and left wrists, and nowhere else. It is divided into three parts, called Tsün, Kwan, and Chih. Each of these has an external and an internal pulse, that is, there is a distinct pulse in each of these three places, and on the inner and outer side of the plusating vessels, making altogether twelve pulses, six on the right, and six on the left. This explains why both wrists must be felt, and the astonishment that is expressed on a foreign physician's being content with feeling the pulse in one wrist only. Besides these twelve, there are others which scarcely admit of explanation, being too refined even for Chinese doctors themselves, and are confessed to be unimportant in practice; but of those just mentioned, each one of the twelve corresponds with, or belongs to, twelve viscera, two of which are imaginary, viz., the gate of life, and three upper, and middle and lower membranous expansions, which I translate Membranes of the Viscera. The following table will shew the theory more clearly:—

CHINESE THEORY OF THE PULSE.

EXTENT, one inch, or three fingers placed side by side on the right or left wrists.

DIVISION into three parts,—1st called *Tsün*; 2nd *Kwan*; 3rd *Chih*.

Pulse of the left wrist.

Tsun	External side	bel'g to the heart.
	Internal side	,, ,, small intestines.
Kwan	External side	,, ,, liver.
	Internal side	,, ,, gall bladder.
Chih	External side	,, ,, kidney.
	Internal side	,, ,, bladder.

Pulse of the right wrist.

Tsun	Outside	belong to the lungs.
	Inside	,, ,, great intestine.
Kwan	Outside	,, ,, spleen.
	Inside	,, ;, stomach.
Chih	Outside	,, ,, gate of life.
	Inside	,, ,, Membranes of the Viscera.

There are four kinds of pulse,—1st *Fow*, the strong full pulse; 2nd *Chin*, deep, feeble, small pulse; 3rd *Che*, the slow pulse; 4th, *So*, the quick pulse.

The three places of the inch pulse, may each have a different pulse,—

The *Kwan* may be *Fou*, or strong and full;

The *Tsun* may be *So* or quick;

The *Chih* may be *Chin*, small and feeble;—All at the same time.

Who can say, with this theory before them, that Chinese know anything about the true circulation of the blood?

I shall here give copious extracts on the pulse from "A Description of the Empire of China, *from the French of P.F.B. Du Halde, Jesuit.*" The writer seems to have full confidence in the skill of the Chinese physicians respecting the pulse.

"To understand diseases, and judge whether they are mortal or not, the best way is to examine the pulse.

In disease of the Heart the pulse of the left wrist must be consulted.

In those of the Liver, the left hand must likewise be taken, but it must be examined precisely at the joining of the wrist with the bone of the cubit.

In diseases of the Stomach, examine the pulse of the right wrist, and in those of the lungs, examine the pulse in the joint of the same hand.

In distempers of the Kidneys, the pulse must be examined above the joint, at the end of the cubit,—the right hand for the right kidney, and the left hand for the left kidney.

Every season of the year has its proper pulse.

In the first and second moon the season when wood is predominant, the pulse of the liver which answers to wood, is *Hyen*; that is to say, a long tremulous motion not unlike that of the instrument called *Tseng*.

In the fourth and fifth moon, the pulse of the heart, which answers to fire, is as it were overflowing—*Hong*. As to the stomach, which is referred to the earth, its pulse at the end of every season (that is in the third, sixth, ninth, and twelfth moon) ought to have a moderate slowness—*Wan*. In the seventh and eighth moon, when metals govern, the pulse of the lungs, which answers to them, is the slender *Sye*, superficial *Few*, short *Twan*, and sharp *Se*.

In the tenth and eleventh moon, water reigns; and the pulse of the Kidneys, which corresponds thereto, is deep *Chin*, and slender *Syé*.

In spring, to have the pulse of the lungs is mortal, the pulse of the heart being set aside: for the heart is the son of the liver, which has the kidneys for its mother, and the stomach for its wife.

In spring to have the pulse of the stomach, in the winter the pulse of the heart, in summer that of the liver, are very

bad symptoms. This is the sum of what relates to the different pulses, proper to the different seasons, regard being had to the order of the generation or opposition of the five elements.

Care must be taken not to confound the different kinds of pulse which resemble each other: for the pulses *Hyen* and *Kin*, *Se* and *Wey*, *Few* and *Kong*, *Hong* and *She* have some affinity, and yet their indications are very different and contrary. Thus the pulses *Chin* and *Fu* come to the same point by different roads; but those called *Syn* and *To* have a sort of relation even in their indications.

If the pulse of the wrist be *Key* or quick, it is certainly attended with the headache; if it is *Hyen*, long and tremulous, it is a sign of the heartburn; if it is *Kin*, short and tremulous, it indicates the colic; if it is *Wan*, or moderately slow, the skin is as it were in a sleeply state; if it is *Wey*, or small, the breast has suffered from a cold; if it is *Su*, or in a great hurry, there is a violent heat at the stomach; if it is *Wha*, or slippery, blood abounds; if it is *Sa*, or sharp, there is a loss of spirits; when it is *Hong*, or overflowing, the breast and sides are as it were too full, and the patient perceives an oppression there; when the pulse of the wrist is *Chin*, deep and sunk, a pain is felt in the back.

When precisely at the joining of the wrist with the cubital, the pulse seems to be *Few*, superficial, and *Wan*, moderately slow, there is a nausea or want of appetite. If the pulse is *Kin*, short and tremulous, there is an oppression and redundance of flatulent matter, which is very difficult to cure effectually. If it is *Yo* weak, and *Su* in a hurry, there is great heat in the stomach; if it is *Hyen*, long and tremulous, and *Wha*, slippery, the stomach has taken cold.

If it is *Wey* or small, the heart is, as it were, oppressed with fulness.

If it is *Chin*, deep or sunk, a weight end heavy pain is felt in the region of the diaphragm, and this proceeds from repletion; whereas, if it be *Syn*, soft and as it were moist, though there be a swelling in the lower parts from the reins to the feet, it proceeds from emptiness, and being exhausted, wherefore the watery humours must be dissipated as soon as possible.

To know if a Patient will recover, you must carefully examine the motion and duration of the Pulse.

If the pulse frisks like a fish that dives every minute, and then comes up again sometimes so slow that one would think she was held by the tail, and yet makes its escape; alas! the best of these pulses is worth nothing at all. Had a physician the philosopher's stone, he could not recover such a patient, who must resolve to die.

But there are certain distempers wherein the patient, though free from such pulses as we have just mentioned, has his intellects disturbed, loses his speech, or has hardly any voice. Sometimes also one cannot perceive any motion of the pulse either at the wrist or joint. If however it be felt at the extremity of the cubitus,—if the beating and intervals have much the same extent, and if the motion continues pretty regular for some time, though the patient seems to be at the last extremity, he will not die; at least a skilful physician may save him. This is the sense of an ancient text: the tree is without leaves, but the root is still alive.

The manner of feeling the Pulse.— On the left, the heart, the small guts, the liver, the gall, the left kidney. On the right, the lungs, the large intestines, the orifice of the stomach, the stomach itself, and the right kidney.

On the right (at the wrist), the lungs, the large intestines; (at the joint) the orifice of the stomach, and the stomach itself; (at the extremity of the cubitus) the right kidney.

The same doctrine will hold in examining the distempers in women, with the difference, that in females the pulse of the cubitus in its natural and healthful condition, is contrary to that of men.

There is a bone which rises at the joining of the arm with the hand, and there the pulse must be felt, which is called the gate or the joint; before this joint is that which we call the mouth, an inch long. *Tsun-kew* (the wrist) behind the same joint, is what we call the cubitus, *Che;* the wrist is termed *Tang*, and the cubitus *In*, in the language of physicians. In feeling the pulse at these three places, great care must be taken to lay the fingers upon the vessels precisely where they ought to be.

If in the same space there are six pulses, there is an excess of heat; if seven, the excess is considerable; but if they amouut to eight, the danger is very great; and if they exceed that number, the patient is dying.

If in the space of one respiration the pulse beats but once, the distemper is come to a great height and dangerous; but it is much worse if it beats but once in the space of two respirations, for it is a sign death is not far off.

Too many beatings of the pulse proceeeds from excess of heat, and too few from excess of cold. This is a constant tradition received from all ages; the various degrees thereof are set down in the book of the eighty-one difficulties.

In Spring the long tremulous *Hyen*, in Summer the overflowing *Kong*, in Autumn the softness of hair or feathers, in Winter the hardness of stone: it is necessary also to subdivide these seasons into *Tsye-ki*.

Seven sorts of Pulses which indicate danger of death.

When the pulse being felt in the morning seems to bubble under the fingers irreguarly like water over a great fire, one may be assured that the patient will die in the evening; that is, has very little time to live.

It is a sign that death is equally near, if the pulse seems like a fish, whose head is stopped and cannot move, but frisks with its tail, not very regularly. The cause of the distemper lies in the kidneys.

When the pulse after beating in a hurry changes all of a sudden,and becomes very slow and sluggish, there is likewise danger of death, but it is not altogether so near.

If the pulse by the hardness of its beats, resemble in some sort a bullet or stone, or dried earth shot out of a cross bow, both the lungs and stomach want spirits, nor is this a transient failure but a rooted distemper.

In like manner, if the pulse seems like drops of water, that fall into a house through some crack or little hole in the roof, and in its return is scattered and disordered, much like the twists of a cord that is unravelled, the bones are dried up, even to the very marrow.

Also, if the motion of the pulse at the extremity of the cubitus in both arms resembles the pace of a frog embarrassed in the weeds, or that of a toad, death in all these cases is certain.

If the motion of the pulse resembles the hasty picking of the beak of a bird, there is a failure of spirits in the stomach. We may also conclude that the heart performs its functions ill, and the blood is in no good condition.

He who is to feel the pulse, takes the left hand of the patient if a man—the right hand of a woman.

He begins by placing the middle finger exactly where the wrist bone locks with the cubitus, then claps the two next fingers one on each side. At first he presses but gently, then a little harder, and at last very hard, taking care that his fingers be rightly adjusted; after which he may proceed to examine the pulse in the three places appointed, laying it down for a principle, that a regular pulse beats four, or at most five times to two respirations.

The pulse at the end of every season, commonly called the *pulse of the stomach*, is equally and moderately slow, and felt by a moderate pressure.

When these pulses are in a due temperament, it is a sign of health; if there be an excess or defect it is a disease.

To a long wrist you need not apply the finger several times, but on a short one there must be a good number of trials, and very close to each other.

OF THE PULSES OF THE SEVEN PASSSIONS, OR AFFECTIONS OF THE MIND.

In joy the pulse is *Wan*, moderately slow; in compassion, *Twan*, short; in sadness, *Se*, sharp or rough; in frenzy, *Kye*, very irregular; in fear, *Chin*, deep; in a sudden fright, fluttering; in anger, close and hurrying.

DIFFERENCE OF THE PULSES ACCORDING TO THE SEX.

In a man, the pulse of the wrist should always be brisker than that of the *cubitus*; if the contrary happens, it is unnatural, and indicates a defect in the kidney.

On the contrary the pulse of the woman at the cubitus ought always to be brisker than that of the wrist; otherwise it is unnatural and indicates a defect in the *Tsyau*, the superior stove or fireplace."

Then follow long descriptions of the pulse, peculiar to different organs affected with different diseases, as "the pulse of the Heart;" "the pulse of the Liver;" "the pulse of the Stomach;" "the pulse of the Lungs;" "the pulse of the Kidney;" "the pulse of the left wrist proper to the Heart;" "the pulse of the joint of the left wrist proper to the Liver;" "the pulse of the extremity of the left cubitus proper to the Kidney;" "the pulse of the right wrist proper to the Lungs;" "the pulse of the joint of the right wrist proper to the stomach;" "the pulse of the extremity of the right cubitus proper to the Kidney," etc., etc., etc.

Thus it will be observed that Chinese books contain so much nonsense and patent absurdities regarding the pulse, that an effort is required to repress a feeling of rising indignation against a hoary system so full of falsehood and folly. What is still worse, a system which *every Chinese physician knows to be utterly false*, but which must be respected because it is old, and because being false it is much more in unison with all the other systems and institutions prevailing in China. Poor China! she seems quite unable to distinguish between truth and falsehood; she seems to have been "given over to strong delusions that she might *believe* a lie."

"The Chinese Materia Medica," says Dr. Hobson "fills several volumes; it is of ancient origin, and as the science of Chemistry is unknown, it contains very few preparations from the Mineral Kingdom, which forms so important a part of our Pharmacopoeia; nor is there anything at present in the language to represent an oxide, alkali, or salt, hence medicinal substances are drawn chiefly from the Vegetable Kingdom, and are confined to those produced in China and the neighbouring countries. In a popular abridgement or selection of Chinese Materia Medica, which I examined a few years ago, I found there were 442 medicinal agents described. Their name is just given, then the part or

organ of the body into which they enter or assimilate with; next their properties, whether hot or cold, their taste, smell, and colour; and lastly their uses and doses. It had the advantage of the larger work in being methodically arranged into classes and orders. A list of these, so far as I have been able to identify and name them, will show what disgusting and worthless substances are mixed up with what are appropriate and useful even in a selected Chinese Materia Medica. It will also exhibit the plan of a therapeutic arrangement in putting the properties of Medicines before their mere physical qualities, which is an improvement worthy of commendation.

ORDER I.—TONIC MEDICINES.

First.—*Those Medicines which warm and strengthen the Viscera*, such as the ginseng, dried dates, fruit of lung-gan, li-che, flesh of fowl, beef, honey, &c.

Second.—*The mild or tranquillising tonics.*—Liquorice root, parasite of mulberry tree, fruit of the cypress, old rice, broad beans, species of yam, asses' glue, birds' nests, duck, mutton, pigeon &c., &c.

Third.—*Medicines which increase the natural fire (or stimulating Tonics).*—Cassia, cinnamon, aloes, wood, sulphur, asbestos, stalachite, fresh tops of stag horns, dried red spotted lizard, silk worm moth, etc.

Fourth.—*Medicines which nourish the secretions, especially of the Kidneys.*—Linseed, hempseed, Elm bark, medlar, minium, black and white lead, tortoise shell, human milk, and various parts of the pig.

Fifth.—*Medicines which strengthen kidneys and testes.*—Extract from stag horns and various parts of the animal, dog's flesh, dried placenta, a species of fern, walnuts, &c.

II.—ASTRINGENTS.

First.—*Warm and tonic Astringents.*—Nutmeg, gallnuts seeds of lotus flower, poppy heads, &c.

Second.—*Cooling Astringents.*—Pomegranate, charcoal bones and teeth of the dragon, oyster-shell, &c.

Third.—*The general pure Astringents.*—Seeds of the date, armenian bole, quince, sour plum, &c.

Fourth.—*Repressing weakness or Astringent tonics.*—Iron filings, hematic iron ore, loadstone, talc, litharge, gold and silver leaf, &c.

III.—RESOLVENTS.

First.—*Dispersants of cold.*—Fragrant basil, a species of ginseng, fresh ginger, orange stalks, different parts of onions, &c.

Second.—*Medicines which disperse wind.*—Mint, calamint, species of bivalve shell, branch of cassia, mimosa pods and seeds, seeds of species of acacia, tiger's bone,

spotted and black snake, musk, dried scorpion, cicada, centipede, shed snake skins, camphor.

Third.—*Medicines which disperse moisture* (not recognisable.)

Fourth.—*Medicines which disperse morbid heat.*—Species of yam, black residue of beans, soy, &c.

Fifth.—*Emetics.*—White hellebore, seeds and root of turnip, stems of sweet melon, sulphate of copper.

Sixth.—*Warm Resolvents.*—Native nutmeg, varieties of long, white and black pepper, cardamons, putchuck, mugwort, aniseed, a species of ginger, dried ginger, gelangel, species of corn flag, a species of nut, tobacco, cloves, sandal wood, gum-bensoin, camphor, barley, rosin, caraway and mustard seeds, &c.

Seventh.—*Mild or Equalizing Resolvents.*—Chamomile, scouring rush, seeds of burdock, native putchuck, duck weed, betel-nut, and covering, pumelo skin, dried orange skin, mint, dried silkworm chrysalis and ordure.

IV.—PURGATIVES.

First.—*Absorbents of Moisture.*—Rice paper plant, sliced China root, &c.

Second.—*Laxatives*, seeds of plantago, soap stone, petrified pecten, sage, amber, small red bean, &c.

Third.—*Diuretic class.* Species of fern, several not recognisable.

Fourth.—*Suppressing Phlegm* (expectorants).—Alum, bezoar, species of borax pistacio nut, coarse mica, juice of bamboo, &c.

Fifth.—*Purgative and cooling.*—Rhubarb, raspings of bamboo, parsimmon tops, water melon, pear, verdigris, species of sea shell, gypsum, common salt, sulphate of soda, snow water, crystallised salt, calcareous spar, catechu pearls, bear's gall, preparation from human excrements, &c.

Sixth.—*Purging away the Fire* (Refrigerants).—Gentian (red and yellow,) sliced peony, mulberry root and leaves, shavings of antelope's horns, loquat leaves, shavings of rhinoceros' horns, &c.

Seventh.—*Repressing humours.* Almonds, buckwheat, &c.

Eighth.—*Mild or digestive Aperients.*—Root of a species of lily, wormwood, vinegar, coarse rice, turtle shell, &c.

V.—MEDICINES WHICH AFFECT THE BLOOD.

First.—*Those which warm and nourish it.*—Germander (?) brown sugar, olibanum, cassia wood, wine, scallions, rabbit dung, cuttlefish bone.

Second.—*Medicines which cool the blood.*—Bastard saffron, young cypress, elm tree root, cinnabar, rabbit's flesh.

Third.—*Astringents of the blood.*—Madder, turmeric, myrrh, dried varnish, seeds of species of plum, dragon's

blood, peach seeds, arrow root, old copper cash, dried leech, red marble, goat's ordure, cantharides, &c.

VI.—MISCELLANEOUS.

First.—*Medicines which destroy worms.*—Assafœtida, betel extract, quicksilver, a chloride of mercury, vermillion, &c.

Second.—*Medicines which disperse poisons.*—Seeds of castor-oil plant, resin, shavings of ivory, Elephant's skin, preparation from toads, &c.

Third.—*Expelling poisons (or alteratives.)*—Seeds of burdock, honey-suckle stamens and pistils, species of green pea, dried earth-worm, &c.

Fourth.—*Poisonous substances.*—Seeds of croton oil plant, arsenic, &c.

The following is a list of the kingdom and class from whence they are taken:—

Vegetable Kingdom.

Herbs	191
Shrubs and Trees	72
Fruits	25
Seeds	16
Vegetables	10
	314

Mineral Kingdom.

Metals	6
Minerals	29
Crystals	10
Earths	5
	50

Animal Kingdom.

Parts of Animals	25
Reptiles	8
Fishes	3
Molluscous shells	10
Insects	22
Parts of human body	10
	78

Chinese doctors know nothing of the composition of the simplest compound substances. They regard as simple bodies what we know to be compound. When told that gases in certain proportions constitute water and atmospheric air, they profess a sceptical surprise. They have no knowledge of gases (except so far as these impinge on their olfactory nerves.) *Ke* air—or breath, embraces all they know. When composing a work on pneumatics, Dr. Hobson had to invent names for oxygen, hydrogen, nitrogen, carbonic acid gas,

&c., &c. New names had also to be invented before the electric machine, galvanic battery, air pump, thermometer, barometer, &c., could be explained or described. In optics, solar light, the radiation of heat, indeed in all the natural sciences, they have not got beyond the A.B.C. Nothing is known of Chemistry, and hence the difficulty to explain the composition of different substances, is all but insuperable. A Chinese Doctor gives a very incredulous stare, when told that there are 16 or 18 different substances in opium, some of which have quite opposite actions. Every country in Europe employs medicinal substances from all parts of the world. For example our aloes are from the Cape of Good Hope, our opium from Turkey, our spices, camphor, &c., from Singapore and India, our Cinchona bark, (quinine,) from South America; and our musk and rhubarb from China.—Stereotyped exclusive China however confines her materia medica almost entirely to the 18 provinces, except a very few substances which come from Siam and Japan. All the drugs in common use by Chinese practitioners are simples prepared in the crudest way, made up chiefly for administration in the form of decoctions, infusions, powders, and boluses, the latter about the size of a common marble or walnut, and which the patient commences to eat as he would a small pear or apple; by biting the side with his teeth. I may state here that however small a pill may be, or however disagreeable its taste, a Chinese patient will on no account swallow it until it is well masticated.

His way of taking pills is precisely the way that we eat green peas; he thinks he should eat from 10 to 40 at a time. At the treaty of Nankin one of the Chinese commissioners sought the advice of a member of the English medical staff, who at once sent a box of pills for His Excellency, with instructions to take one for a dose at certain intervals. Whether the Mandarin had misunderstood the directions given; whether he thought one small pill too little for such a large man, or whether he had the idea of some who ought to know better, viz., that if one pill will do good 10 pills must do better, it is not easy to determine, but H.E. *ate* ALL *the pills at once*, and died within 20 hours.

Almost all the drugs used by Chinese doctors are from the vegetable and animal kingdoms; very few are in use belonging to the Mineral kingdom, though the number and variety of mineral preparations are considerable. I shall mention the names of the metallic substances used in China for Medicinal and other purposes; all are in a very crude state of preparation.

SULPHUR,—Native sulphur, also found largely in Japan.

SILICA,—Massive quartz.

Alkaline Salts.

Nitrate of Potash, several varieties.
Native Carbonate of Soda.
Borax, Biborate of Soda refined.
Sulphate of Soda, Crystals.
Chloride of Sodium, impure.

CALCAREOUS SUBSTANCES.

Carbonate of Lime, calcar-spar.
Levigated white marble.
Carbonate of Lime and Magnesia.
Sulphate of Lime.
Oxide of Calcium.
Silicate of Lime and Magnesia.

MAGNESIAN AND ALUMINOUS SUBSTANCES.

Silvery white mica, Brown mica.
Steatite or Soap-stone.
Silicate of Magnesia.
Silicate of Alumina.
Agalmatolite.

ARSENICAL SUBSTANCES.

Arsenious acid, a natural mineral.

Yellow sulphuret of Arsenic. Native Orpiment is shipped to India, and is used by the Chinese in cases of ague. Native red sulphuret of Arsenic, Realgar, is shipped to London from Canton.

FERRUGINOUS SUBSTANCES.

Magnetic oxide of Iron.
Magnetic Iron ore.
Per-oxide of Iron.
Red Hæmatite.
Brown clay Iron ore.
Hydrous Peroxide of Iron.
Nodular Iron Pyrites.
Green Sulphate of Iron.

MERCURIAL COMPOUND.

Mercury.
Nitric oxide of Mercury.
Red Precipitate.
Chloride of Mercury—Calomel.

Calomel contains a fourth part of sulphate of Lime; perhaps comes from Russia. The Chinese use calomel as a purgative and also in an ointment for foul sores. There are also several crude compounds of lead, zinc and copper. The Chinese make a plaster of carbonate of lead and copper.

CINNABAR.

Red Sulphuret of Mercury.—Mr. Daniel Hanbury says, —"This mineral has been regarded by the Chinese as the *Philosopher's stone,* and most extravagant ideas have been

entertained respecting it. The Revd. J. Edkins in a communication recently laid before the China Branch of the Royal Asiatic Society, has pointed out that alchemy was pursued in China long previous to its being known in Europe; in fact that, for two centuries prior to the Christian era, and for four or more subsequent, the transmutation of the base metals into gold, and the composition of an elixir of immortality, were questions ardently studied by the Chinese. It is moreover a matter of history, that intercourse between China and Persia was frequent both before and after the Mahommedan conquest of the latter country; that embassies from Persia as well as from the Arabs, and even from the Greeks in Constantinople, visited the court of the Chinese Emperor in Shansi; that Arab traders settled in China, and that there was frequent intercourse by sea between China and the Persian Gulf; that China had an extensive alchemical literature anterior to the period when alchemy was studied in the West. All these facts go to prove that that pseudo-science originated not with the disciples of Mahommed, but that it was borrowed by them from the Chinese. With regard to the Philosopher's stone, it is remarkable that while the alchemists of the West have spoken with doubt as to what it was, with the Chinese its identity appears hardly to have been questioned. That wonderful body, which when used as a Chemical agent was supposed to have the power of converting other metals into gold, and when employed as a Medicine of conferring immunity from death, is according to the Chinese alchemists *Cinnabar*. Of this the author of a work of the fourth century writes in terms thus translated by Mr. Edkins: 'When vegetable matter is burnt, it is destroyed, but when the *Tan-sha* (Cinnabar) is subjected to heat it produces mercury. After passing through other changes it returns to its original form. It differs widely therefore from vegetable substances, and hence it has the power of making men live for ever, and raising them to the rank of the genii. He who knows this doctrine is he not far above common men? In the world there are few that know it, and many that cavil at it. Many do not even know that mercury comes out of cinnabar. When told, they still refuse to believe it, saying that cinnabar is *red*, and how can it produce a *white* substance? They say also that cinnabar is a stone—that stones when heated turn to ashes, and how then can anything else be expected of cinnabar? They cannot even reach this simple truth, much less can it be said of them that they have been instructed in the doctrine of the genii.'"

Unfortunately the idea of rejuvenescence is not confined to the power of this pseudo-philosopher's stone; Chinese

medical books say, that old people can renew their youth by drinking human milk. "Its taste," they say "is sweet; it nourishes the viscera, is a soothing application to abraded skin, and to inflamed eyes; it fattens old decayed persons, and its virtues surpass considerably cow's, goat's, or mare's milk. Formerly some toothless old men who took human milk lived on a hundred years, became fat, had good spirits, and begat children." Nor is this opinion of the wonderful virtues of human milk confined to doctors or their books. Dr. Hobson, mentions a case which I believe is not singular among Chinese nurses in Shanghai. "An infant a few months old, in consequence of the mother being unable to continue nursing, was committed to a Chinese wet-nurse, and as money was no object, the woman that had the best supply of milk was chosen for this purpose. For a few days the child seemed to go on tolerably well, but it soon after became affected with head symptoms; and as one child had died a year before from symptoms somewhat similar, the parents became alarmed, and begged that I would come in, in consultation, to see the child. I found the child lying listless and almost insensible on a friend's lap, labouring under the symptoms so graphically described by Dr. Marshall Hall, and Dr. Watson, of spurious hydrocephalus. I examined the nurse, who was a young healthy-looking woman, with breasts full of milk to over-flowing. I had some put by in a cup for inspection; it threw up no cream on its surface, and looked pale and watery. On further investigation I discovered that the woman had been in the habit of selling her milk in small cups-full to old persons, under the idea of its highly nutritive properties, and thus her milk though abundant in quantity soon became quite degenerated in quality, and instead of being nutritious was actually poisoning the child dependent on it, and now fast sinking from inanition. I recommended the nurse to be changed immediately. Happily a suitable one was found in a few hours, and in three days afterwards I saw the child laughing and playing on the sofa by the side of its new nurse."

From these short notes given above it will be seen that there is great variety of metallic substances in China, and that it only requires Western science, capital, and energy, to develope a rich and splendid commerce of these metals to other lands.

In Kæmpfer's History of Japan, 1727, I read at p. 113, that "Quicksilver and Borax are imported (into Japan) by the Chinese. I met however with two sorts of Borax growing naturally in Japan, but they are so thoroughly mixed with heterogeneous substances, that the inhabitants don't think it worth their while to pick them up. Sublimate Mercury is

very much asked for by some private people, who will give an extravagant price for it. They use it as the chief ingredient of a Mercurial water, which is in great vogue among them for the cure of ulcers, cancers, and other cutaneous disease. Native Cinnabar is by them given inwardly in several distempers. The artificial cinnabar they make use of for a colour. Both are imported from China. The buying and selling of this commodity is in the hands of private merchants, who monopolize it by virtue of letters patent from the Emperor. The native cinnabar in general is of a beautiful red colour, but some of it is so exquisitely fine that it is sold for more than its weight in silver."

The Chinese make a beautiful vermilion, the preparation of which is described by an old Chinese author, and recorded by Mr. D. Hanbury thus,—"I ℔ of mercury and 2 ℔ of sulphur are triturated together until they form a blackish powder, which is put into a crucible closely covered with an iron lid, and luted down. The heat of a wood fire is then applied, the lid being kept cool by something wet. The sublimation is thus effected, 1 ℔ of mercury usually producing 14 oz. of cinnabar of the first quality, and 3½ oz. of the second. In the library of the India House (London) is a series of beautiful native drawings representing the preparation of vermilion by the Chinese."

Chinese vermilion is an article of regular importation into London, where the finer qualities realize from 3*s.* 3*d.* to 3*s.* 6*d.* per ℔.

Native orpiment or yellow sulphuret of Arsenic is occasionally taken to produce death. A young woman was lately carried to the Chinese Hospital here, who had in a fit of anger or disappointment swallowed nearly two drachms of this substance; she recovered. Opium, however, is in much greater favour for such purposes among the Chinese, the irritating poisons produce too much suffering and trouble. Both orpiment and realgar are used by the Chinese to cure intermittent fever, but the dose is so uncertain that it proves worthless in almost every case. They have cups made of realgar (red sulphuret of arsenic) and by making the patient drink a little warm water out of one of these cups, they say they can cure an ague.

Arsenic is found in Yunnan and Burmah; 60 years ago it was exported in large quantities from China to India. An impure preparation of carbonate of copper is sometimes used by Chinese practitioners to induce vomiting in cases of opium poisoning. Nearly all the medicines used by Chinese physicians are of the most simple and inert kind. In the medicine shops which are well arranged, and used *only* for medicines, there are drugs of different qualities neither of

which is first rate, all the best being sent to the foreign market; while the second and third qualities only are kept for native use. Dr. Hobson says—" I found that the medicines sold in the druggists' shops, were not only naturally weak in their medicinal properties, but were often much injured by damp, and the careless mode of collecting and drying them. Rhubarb instead of a bright yellow variegated colour, was generally of a dark colour, with little smell. On enquiring the cause, the medicine vendor said that the people would only pay for cheap medicines, and, with regard to rhubarb and musk all the best was bought up for the foreign market, so between the ignorance of the doctors, and the poor quality of the medicine administered, the sick in China stand but a poor chance of deriving much benefit from medical skill, even though the doses are unusually large."

The quantity ordered makes up to some extent the defect in quality, for pints and quarts of infusions and decoctions are sometimes taken for a dose. Fluids as well as solids are sold by weight, for the druggists have no fluid measure. In making up prescriptions the weights most commonly used are from ten grains or one candareen and a half, to ten drachms, or one tael. The drachm weight or 60 grains is most frequently used. Respectable Chinese doctors seldom keep their own drugs, but write prescriptions, and give to their patients, to send to the medicine shops.

Medicines are all classed under one or other of the five elements, and to remedy the disorder must possess the suitable qualities of hot or cold, dry or moist, sweet or bitter, &c. In practice also, much is spoken of the *yin* and the *yang*, or the dual powers in nature, relating to strength and weakness, light and darkness, Earth and Heaven, &c. Upon these, medicines are said to act in some mysterious manner. Like physicians in Europe, some are much more popular than others, not so much on account of superior skill or greater success in practice, as on account of extra pretension, more assurance, and assumed mannerism.

The description by Dr. Hobson of the active every day practice of a Chinese doctor whom he knew at Canton is a very good example of the life and work of the medical practitioner in every city in China. Dr. Hobson says—"This man was nick-named Ta-wang-seen-sang, or Dr. Rhubarb (from his frequent use of this medicine, and his great faith in its remedial powers). He and some others that I could name were engaged from morning to night in medical practice. He would keep at home prescribing for the sick until a late breakfast hour; after ten he would commence going his rounds in the sedan chair carried in great haste by three or four men. Those patients were visited first who

had their names and residences first placed in the entry book, and as the streets were narrow and crowded, to avoid trouble in finding the house, a copy of the Doctor's sign-board would be posted up outside the patient's door, so that the chair bearers should be able at once to recognize the house without delay."

The Doctor being ushered into the hall or principal room, is met with bows and salutations by the father or the elder brother of the family. Tea and pipes are offered in due form, and he is requested to feel his patient's pulse; if a male, he sits opposite to him, if a female a screen of bamboo intervenes, which is only removed in case it is requisite to see the tongue. The right hand is placed upon a book to steady it, and the Doctor with much gravity and a learned look, places his three fingers upon the pulsating vessel, pressing it alternately with each finger on the inner and outer side, and then making with the three fingers a steady pressure for several minutes, not with watch in hand, to note the frequency of its beats, but with a thoughtful calculating mind, to diagnose the disease and prognosticate its issue. The fingers being removed the patient immediately stretches out the other hand, which is felt in the same manner. Perhaps a few questions are now asked of the father or mother, concerning the sick person, but these are usually few, as it is presumed the pulse reveals everything needful to know. Ink and paper are produced, and a prescription is written out, which consists of numerous ingredients; but there are one or two of only prime importance—the rest are servants or adjuvants. They are all taken from the vegetable kingdom, and are mostly simples of little efficacy. The prescription is taken to a druggist to be dispensed; the prescriber seldom makes up the medicine himself, and as large doses are popular (a *quid pro quo*), so the decoction made from the whole, amounts to pints or even quarts, which are swallowed in large portions with the greatest ease; powders, boluses, pills, and electuaries are also used. If the patient is an officer of the Government or a wealthy person, the nature of the disease, prognosis, and treatment are written out for inspection of the family; for this the Doctor's fee is a dollar, about 5*s*, but generally speaking, both the Doctor and the patient's friends are quite satisfied with a verbal communication; and if the man has a gift for speaking and has brass enough to use it to his advantage (both of which are seldom wanting in time-serving men) he will describe with a learned and self-satisfied air the ailment of the patient, and the number of days it will take to cure him. The fee is wrapped up in red paper, and called "golden thanks," and

varies from 6*d*. to 2*s*. 6*d*., or more according to the means of the patient; the chair bearers being paid extra. The Doctor returns to make another visit if invited, but not otherwise. It is more common if the patient is not at once benefited by the prescription, to call in another, then a third, then a fourth, and even more, until tired of physicians (for the Chinese patience is soon exhausted, their faith by no means strong in all their Doctor's asseverations) they have, as a last resource, application made to one of the genii, or a god possessing wonderful healing powers. The result is, that the patient dies or lives, not according to the treatment received, for that must be generally inefficacious, but according as the natural strength of the patient is equal to surmount the difficulties by which he is surrounded.

Chinese medical practitioners never attempt strictly speaking the use of surgery; their ignorance of anatomy, the accurate knowledge of which is essential to the surgeon, most effectually precludes them from using the knife, and from all surgical operations. Hence when accidents occur, when bones are fractured, the doctor is never thought of; there is no attempt made to set or adjust the bone. The sufferer is placed upon a bed if a lower extremity is fractured, and the bones allowed to unite or remain apart as the case may be. Either way, the injured man is made an object for life; in 99 cases in the 100 he can never walk again. Bones are never attempted to be brought into apposition by extension or counter-extension. And the ends of fractured bones are left to ride over each other.

As little is done for dislocation as fracture; rough handling is used occasionally by fellow workmen where the deformity is great, but it can easily be understood how little good will be done by such a method. No rollers or bandages are ever applied to support disabled extremities, no sticking plaster is used to bring incised wounds together, and heal them by the *first intention*. There is no classification of sores or ulcers. All kinds of tumours, fibrous, fatty, vascular, cystic, osseous, sarcomatous, simple, malignant, medullary, cerebreform, &c., &c., are mixed up and confounded together, without the slightest distinction; so with Aneurisms, hernia, hydrocele, and abscesses, all are confounded together, and these again with tumours. Scarification, cupping, bleeding, opening abscesses, &c. are never practised; far less is amputation ever attempted (except that summary one between the head and shoulders). No distinction is made between the different diseases of the eye; cataract, glaucoma, and amaurosis, are confounded together, so are iritis, choroiditis, retinitis, cornitis, sclerotitis, &c., &c.: indeed the greatest confusion prevails

regarding the whole symptomatology of diseases of the eye and of surgical diseases generally, I may say of all kinds of disease. For example Dr. Hobson says: "The Chinese have no name for inflammation, and I had to transfer the term, or a contraction of it, before I could describe its symptons and treatment. They have a term which means hot; but a hot disease is not inflammation, nor have the well known characteristics of the disease ever been described in any book that I have seen or heard of in China; so that though they have a large nosological list, this most important pathological affection is not even so much as named. A more striking proof of the want of accurate observation in the study of diseases could not be given." Their chief surgical operations consist in acupuncture, *i.e.*, where a bone or muscle or joint is in a state of inflammation chronic or acute, a substantial stiletto is thrust into it and stirred about in a most reckless manner. Thus in some cases producing the most terrible consequences, sometimes causing death, or making the patient a cripple for life. In bad cases of dyspepsia also where there is much pain, a long, strong needle is thrust in, through the epigastric region for several inches, piercing the stomach or liver, or both together as it happens. I have had several serious cases brought before me of this kind with the marks of the needle quite fresh and distinct, where it had evidently pierced the stomach and produced a large amount of inflammation, and a very unmanagable form of gastric irritation. Thus it will be observed that if the Chinese ever knew as much of anatomy as to enable them to practise acupuncture safely and usefully, they certainly do not so now. The mode of treating fevers, small-pox, etc. is just as absurd, and were their remedies powerful would be as mischievous; happily however for the patients, the drugs are generally inert and unless the case is very severe, the sufferer struggles through, just as patients do at home under homœopathic treatment. On one occasion I was requested to visit the daughter of a graduate, a girl of 16. Three native doctors had been attending, but had pronounced her disease necessarily mortal, and some of her friends had commenced to make the grave clothes. I found her labouring under one of the most severe forms of typhus fever; there was intense restlessness and delirium, and altogether the case looked very unpromising. I prescribed quinine and wine in large quantities with fifteen grains of Dover's powder at night. Twenty-four hours after, there was a decided improvement, and convalescence proceeded gradually and steadily. In treating low fevers no Samsu or strong stimulants are used; infusions and decoctions of weak and simple herbs with cups of warm, very weak tea, and for

food, congee or rice and water constitute the whole routine of treatment. Nature never gets a friendly lift from a Chinese doctor when she is struggling to throw off a low continued fever. The same may be said of small-pox; the poor patient sinks or swims according to the severity of the disease and the strength of the constitution, and although inoculation by putting small-pox virus up the nostrils, has been practised by the Chinese for more than a thousand years, no attempt has been made to improve the treatment. Dr. Pearson first introduced vaccination into China. He wrote a tract explaining it, which was translated by Sir G. Staunton in 1805. Since then it has been carried on to some extent by Chinamen who have devoted themselves to this department, but has never been taken up by Chinese doctors generally, though they all yield a passive assent to its utility.

The *type* of disease among the Chinese is very different from what is seen in England, or in Europe generally. The variety of temperament is not met with in China which prevails in Europe. Among the Chinese there is no nervous or sanguine, or nervo-sanguine temperament, indeed with the exception of perhaps 1 in 10,000, all Chinamen have the phlegmatic or lymphatic temperament. The bilious is met with among the upper and literary classes, but it is comparatively rare. This lymphatic temperament renders inflammatory diseases of an acute kind almost unknown. Inflammatory diseases constitute very nearly one-fifth of the whole mortality in England, and if we include inflammation and *its consequences* a much larger mortality will be the result, but it is not so in China. With the exceptions of inflammations of the eye, I may say all others are chronic or sub-acute. As I said before the Chinese doctors have no word in their vocabulary which can be construed to mean inflammation. Since I came to China I have had upwards of 100,000 natives under treatment, and among these I have not met with a well marked case of pneumonia, pleurisy, pericarditis, phrenitis, peritonitis, cystitis, nephritis, or even hepatitis, either from traumatic or idiopathic causes. The lympathic temperament of the people would partly account for this, but the chief cause is their mode of living, the absence of all stimulating food and drink. Hence diseases produced by deficiency or poverty of blood are frequent, while plethora is scarcely ever met with. Next to intermittent and remittent fevers, diseases of the digestive organs are most frequent among the Chinese; diarrhoea, dysentery, dyspepsia, cholic, cholera, vermes, jaundice, ascites, hæmatemesis, diseases of the liver and spleen, tabes, mesenterica. &c. That terrible disease *Cancrum oris* is as might be expected frightfully common among children, especially among

female children. Chinese doctors can do nothing for it, and should the poor sufferer survive the ravages of the disease, the mother or friends endeavour to dispose of the patient in such a way as not to be troubled with it in future. Diarrhoea and dysentery are the most fatal diseases in China. From extensive observation I believe that one half of the mortality amongst the Chinese, is more or less connected with these two diseases.

Diseases of the respiratory organs are common, especially in the Northern provinces. Phthisis however is not nearly so common as in Europe. Bronchitis in all its stages and forms prevails, with catarrh and hæmoptysis. Chronic rheumatism is extremely common, but as might be expected gout is never met with, nor is there much of heart disease and aneurism, which are so common amid the rivalry and intense excitement and competition of Western nations.

Venereal diseases of the most malignant kind, in every possible form and stage, prevail to an alarming extent amongst all classes. Chinese doctors seem to know nothing of this class of diseases; at all events nothing is done in the way of treating them, and hence the poor victim frequently sinks under its ravages. Paralysis is also common, and the native doctors can do nothing for it. It is usually of a simple nature and readily yields to a course of strychnine. Skin diseases I need scarcely say are terribly common; every possible form is met with, though psora is most usual. Indeed, so prevalent is this disease that it is almost rare to meet a mandarin, merchant, official, or man of any calling, who is perfectly free from this unpleasant and uncomfortable form of skin disease. Rupea, Elephantiasis, herpes, lepra, porrigo, favus, psoriasis and leprosy, also prevail to a greater or less extent.

Cases of apoplexy occur though they are not common. Apoplexy is called *Chun-fung*, *i. e.* struck by wind. The doctors are in utter darkness as to its pathology. Hysteria is exceedingly rare amongst the Chinese; I have never met with a well marked case of it. Many Chinese women suffer from diseases resulting from over lactation. It is no uncommon thing for a mother to continue to nurse her child two, three, and even four years; many however break down in consequence, and the woman begins to look old before she is two and twenty. The mortality resulting from parturition must be very great in China. No data can be found on which to form an estimate of women who die from this cause, but judging from statistics made of the native women in India, where as in China every thing is left to nature, the mortality must be immense. Statistics on this question some years ago, shewed that 20 per cent. of the native

women in India died in childbed. In other words, one woman in every five dies for want of proper attention! In contrasting this with European statistics, we see strikingly manifested the advantages of science and art in obstetric practice. For example, in 1660 when this art had made but little progress, I find from the London bills of mortality, that *one woman in thirty-six died in childbed.* A hundred years later (in 1760) when more attention was given to this branch of medicine, the deaths fell to *one in eighty-one.* In 1800, the mortality had fallen to *one in a hundred and thirteen,* and now it is so low as to be about *one in a hundred and fifty or sixty.* What a contrast to Asiatic nations, where absurd prejudices, helplessness, and ignorance, in art and science, cause an amount of mortality *which might easily be prevented,* scarcely to be credited. *Ignoratione rerum bonarum et malarum maxime hominum vita vexatur.*

Several authorities have stated that Insanity is rare among the Chinese. This however is not my experience. For example, since the middle of January this year, I have had eleven cases of insanity under my care, as indoor patients in the Chinese Hospital. Of these, four have been cases of *dementia,* and seven have been acute mania. One case of dementia is in the Hospital at present, and one case (a woman) of acute mania; both are under treatment and have considerably improved, and will I think be ultimately cured. In cases of mania the Chinese tie firmly the patient's hands and feet, lay him on the ground, and leave him to struggle, so that in two or three cases that have come under my care, the wrists have been much cut with the cords used for binding. Two or three cases have been as violent as I ever saw in England. To the great terror of their friends and bystanders, I have invariably set the patients at liberty, though sometimes I have been obliged to have recourse to handcuffs, having been attacked on three occasions by the worst maniacs. One attempted to bite in a most savage manner, more than once, but was ultimately cured. Indeed, all were cured except two who positively refused all food, drink, and medicine. For a time they were fed by the stomach pump, but ultimately died from inanition.

My opinion has often been asked regarding the effects of Opium on the Chinese. The epidemic denunciations, or the systematic crusade against Opium in China, seems to have died away, and the last two or three years we have heard nothing of it. The first year I was in Shanghai, Dr. L——, from the United States, attended very regularly for a time at the Chinese Hospital, and professed great interest in the emancipation of the Chinese from this bad habit. He denounced the use of opium in a most unqualified manner,

and told me that he was about to open an Hospital for the Chinese, and would devote much of his time, talents, and attention to the cure and prevention of opium smoking. As I never saw him without a cigar in his mouth, and having seen the bad effects of tobacco as well as of opium, I proceeded to examine this radical reformer regarding his own personal habits; with the result that on an average he smoked 14 cigars, drank from one to three tumblers of beer, and two or six glasses of wine, every twenty-four hours! "Physician heal thyself,"—reform thyself before you commence the reformation of others.

Mahomet denounced the use of wine among his followers; hence we must point to Mahomet as the Father of all the Opium smokers, because, in those countries where the sway and influence of Mahomet have been most felt the use and abuse of opium have prevailed. In *every* nation, among *every* people, *some* beverage is used. Alcohol in some form or other has been employed by most nations from the earliest times; and when the pseudo-Prophet put his strong veto upon wine, a substitute had to be sought for, and hence we see Persia, India, Turkey, and last of all China becoming centres of opium-consuming nations; simply because the religion of the people prohibited the use of wine. China however would seem to be a sort of exception, being of so passive a character as to be the slave of circumstances rather than the devotee of religion; but no one can deny that of all the beverages used by man, opium seems to be the most suited for the Chinese; and as soon as we can prevail on the people of England to give up wine, *then, and not till then,* shall the Chinese be prevailed upon to give up the use of opium. In saying this I do not advocate the use of opium. I have seen much mischief result from it; never so much, however, as I have seen at home produced by alcohol. *But this does not modify the evils of opium;* still we should all study a little consistency, and wipe our own eyes before we proceed to operate on those of our fellow men.

Upwards of 1,500 opium smokers have been under my treatment, but (except in cases of suicide) I have not been able to trace a single death directly to the effects of opium smoking. I often see men who have smoked 20 to 25, and some 30 to 35 years, who appear to have suffered very little from its use. In other cases again, visible effects are produced after a few months' indulgence, and the man has to stop, which I do not think is such a formidable thing as some writers say. The first injurious effect of opium is the derangement of the digestive organs, the appetite is diminished as in that of a wine-bibber. If the habit is largely indulged in, little food can be taken, and emaciation becomes great, with

a peculiar complexion and expression of countenance never to be mistaken by an experienced eye. The Chinese doctors can do nothing for this habit beyond advising the patient to diminish the quantity he smokes by degrees, but I doubt whether any are cured by this means. The use of opium seems never to have reached to that extent in China, which we read of its having done in Persia, Turkey, and India. For example, I read in *Morewood's "History of Inebriating Liquors,"* of "an English Ambassador lately sent to a Mahometan prince, who was conducted, on his arrival at the Palace, through several richly decorated and spacious apartments, crowded with officers arrayed in superb dresses, to a room small in dimensions, but ornamented with the most splendid and costly furniture. The attendants withdrew. After a short interval, two persons of superior mien entered the saloon, followed by state-bearers, carrying under a lofty canopy a litter covered with delicate silks, and the richest cashmere shawls, upon which lay a human form to all appearance dead, except that its head was dangling loosely from side to side, as the bearers moved into the room. Two officers holding rich fillagree salvers carried each a chalice, and a vial containing a black fluid. The Ambassador, considering the spectacle to be connected with some Court ceremony of mourning, endeavoured to retire; but he was soon undeceived by seeing the officers holding up the head of the apparent corpse, and after gently chafing the throat and returning the tongue, which hung from a mouth relaxed and gaping, pouring some of the black liquor into the throat and closing the jaws till it sank down the passage. After six or seven times repeating the ceremony, the figure opened its eyes, and shut its mouth voluntarily; it then swallowed a large portion of the black fluid, and within the hour, an animated being sat on the couch with blood returning into his lips, and a feeble power of articulation. In the Persian language he addressed his visitor, and inquired the particulars of his mission. Within two hours this extraordinary person became alert, and his mind capable of arduous business. The Ambassador after apologizing for the liberty, ventured to enquire into the cause of the scene he had just witnessed. "Sir," said he, "I am an inveterate opium taker. I have by slow degrees fallen into this melancholy excess. Out of the diurnal 24 periods of time, I continually pass 18 in this reverie—unable to move or to speak. I am yet conscious, and the time passes away amid pleasing phantasies; nor should I ever awake from the wanderings of this state, had I not the most faithful and attached servants, whose regard and religious duty impel them to watch my pulse. As soon as my heart begins to

falter, and my breathing is imperceptible except on a mirror, they immediately pour the solution of opium into my throat and restore me as you have seen. Within four hours I shall have swallowed many ounces and much time will not pass away ere I relapse into my ordinary torpor." Although the subject has been largely discussed by many writers, and even tried in Courts of law, there is no proof to show that indulgence in opium shortens life. This was very fully investigated in a trial which took place in 1831, between Sir W. Forbes, and the "Edinburgh Life Assurance Company." The late Earl of Mar had effected large insurances on his life, *while* much addicted to the use of opium, and which the Company did not know at the time of the insurance. Lord Mar died two years after the insurance, of dropsy and jaundice, and the Company refused to pay, on the ground that his Lordship had concealed from them a habit which shortens life. After a long trial and much discussion, the Insurance Company was found liable, and had to pay the policy. The chief ground however of the decision was, that they had not made proper enquiries into his Lordship's habits. It was proved that the Earl had taken from *one to three ounces of laudanum daily for* 30 *years*, that he lived very freely, that he suffered much from rheumatism, and that he died of jaundice and dropsy at at the age of 57. Dr. Christison mentions "a well known literary author about 60 years of age, who has taken laudanum for 35 years, with occasional short intermissions and sometimes in enormous quantities; but enjoys tolerably good health." The same distinguished author records the case of another "eminent literary man who died about the age of 63, and was in the habit of drinking laudanum to excess from the age of 15. His daily allowance was a quart of mixture consisting of three parts of laudanum to one of alcohol."

Thus it will be observed, that it is still an open question, whether the constant use of opium really shortens the natural life of man, or whether its constant use be productive of any particular train or forms of disease which necessarily shorten life. In cases of opium poisoning, Chinese doctors are not usually sent for; the popular remedy in such cases, is to pour common oil down the patient's throat till he runs over. Doctors have been known to give a crude preparation of copper to induce vomiting. This practice however is very rare.

Tumours, both simple and malignant, are very common amongst the Chinese. Among the former the cystic and fatty are most general. Carcenoma and cancer are frequently met with both in the breast and in the uterus. Chinese practitioners can do nothing either to prevent or to cure this class of disease. I have never met with, nor have I ever

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heard of a case of scarlet fever among the Chinese. This is not much to be wondered at when we remember the type and character of this fever, and the constitution and temperament of the people. It is however a subject of marvel to many, and I have often been asked to explain how it is that comparatively there are so few epidemics of *low* fever among the Chinese? shut up as they are in cities, in narrow crowded streets, and in low, damp houses, with city, streets, houses and people filthy in the extreme. True, the mortality is great but *not nearly so great* as might be expected.—The chief causes I think are these: All the houses and shops are, for the most part, built of wood, which is put together in the most careless and unworkmanlike manner, the wind blowing through every seam and joining of the wood; but especially all the shops have the *whole front open*, and owing to the great narrowness of the streets, projections over the door almost meeting each other, these shop fronts can be kept open in all weathers and at all seasons. Another chief cause is, I think the narrowness of the streets (or rather lanes,) and their being almost completely covered in above, by means of balconies, mats, and boards; thus in hot weather, although the streets are notoriously dirty, the powerful sun is excluded so as to produce no pernicious exhalations, which would evidently be the case were they exposed to the sun. In his famous Medical Dictionary, Dr. Copland remarks—"It is established beyond a doubt, that the narrow-winding streets of towns built in low situations, or the vicinity of marshes, are, especially where the houses are high, actually conducive to health, inasmuch as the exhalations transported from thence have a less ready accession to all parts of them, the horizontal currents of air being more completely intercepted by the nearest buildings; also, when the streets are narrow, and the houses high, the sun cannot act upon the soil, which necessarily becomes saturated with animal exuviæ, unless deeply intersected and purified by drains and sewers." The same results were noted by the great historian Tacitus, when Rome was rebuilt after its destruction by Nero.—"Erant tamen, qui crederent veterem illam formam salubritati magis conduxisse, quoniam angustiæ itinerum, et altitudo tectorum non perindè solis vapore perrumperentur. At nunc patulam latitudinem, et nullâ umbrâ defensam, graviore aestu ardescere."

I would now bring these somewhat irregular papers to a close;—irregular, because written at intervals and during short leisure moments in the midst of other duties. I cannot close however without mentioning the excellent works published by Dr. Hobson in Chinese, and the manner in which they have been received by this people. Dr. Hobson

has placed four volumes containing the Principles and Practice of Western Medical science, before the reading people of China, and these works have been well received, and well spoken of. The *first* work appeared in 1851. It was a treatise on the well established truths of *physiology*, and was illustrated with many engravings both from stone and wood, executed by Chinese artists at Canton. The book commences by describing the bones, muscles, nervous system, and the senses; then follow descriptions of the digestive, respiratory, and circulatory systems, organs and functions, with a short history of man, and the book closes with some excellent remarks on the wisdom, design, unity, and power of the Great Creator. This book soon became very popular, and so great was the demand for more copies that some persons holding high official rank, republished it in Canton, and this in China is considered an extraordinary mark of respect to the author of a book. Sir Henry Parkes has translated the preface of the Editor of one of these republications; as it is an excellent illustration of Chinese phraseology, I give it as he translated. It will be observed that few practitioners of modern times would venture to excel the Mongolian Physician either in boldness of design or in practical ingenuity,

"Those doctrines of the faculty which date from the works of Tung-Wan, surnamed Le, and which were disseminated by Lo-Keënfoo, through Chekeäng and the Keäng provinces, are known as the Southern school of Medicine; and those which originated with the writings of the Tan-ke, surnamed Choo, and were spread by Len-kwang-how throughout Shanse and Szechuen, are called the Northern school: in the same way as we number in the North and South two different denominations of Buddhism, or distinguish between the Southern and Northern schools of painting. Again, in medicine, we have the Eastern school, which dates from the introduction into China of the 'Precious Mirror,' a work by Heutseuen, Prince of Yang-ping in Corea, for it has not been thought right to exclude writings adapted to the use of posterity because emanating from a remote and obscure foreign quarter.

"The people of the West have a quick and ingenious current of thought, and are fond of discussing abstruse or scientific subjects; their different writings on Astronomy and Mathematics have long been received in China as standard works, and the Medical science is the only point on which we have hitherto remained uninformed. In the commencement of Keäking's reign, the European physicians introduced among the Chinese their art of Vaccination and more lately they have opened Hospitals at Canton for the

treatment of disease, so that no objection can be taken to our now naming them the Western school, in addition to the Eastern spoken of above.

"This new treatise on the human body is written by Hobson, a Western Physician. Whenever in his country a person dies of an unusual disease, it is imperative on the Surgeons to open the body of the deceased, examine all the internal parts, in order to ascertain the cause of death, and experiment with various medicines how the disease could be cured. We know therefore, for these reasons, that some benefit may be derived from this book; the order in which it is arranged is similar in some respects to that of the illustrated work of Wang-wei-tih of the Sung dynasty. Notices are limited to the anatomy of the human body in its original or sound state, and the treatment of diseases is not entered upon. For as the art of healing disorders, whether they be of an internal or external nature, consists simply in restoring the whole frame to its original condition, it follows that a knowledge of this subject, aided by deep study and careful thought, will ensure the acquirement of the requisite skill of the Practitioners.

"Although this book is entitled a new system, it is not to be supposed that all which it contains is new to us. Thus the argument that the brain is the seat of human understanding may be judged to be credible by the case of Tse Tsze-fung, a Doctor of the Hanlin College, which is related in the prose and poetical works of Woo-ting. At one time he possessed such an extensive learning and so powerful a memory, that he was called a walking library. Having fractured his skull by a fall from his horse, a skilful Mongolian Physician replaced the injured part of his cerebrum with a portion of the brain of a Cow, and so far saved his life; but the accident occasioned the utter prostration of his eminent powers of mind, and he became from that time forward a wholly different man to what he had been before. Those parts of the book, on the other hand, which expressly contradict the doctrines of Ling-Hew and Soo-Wan, serve only to prove the partial and narrow bent of the writer's views, and the one-sided nature of his reasoning. Take, for instance, that passage in which he states that the moral qualities of courage and decision have no dependence on the size of the gall-bladder. Is he ignorant that this fact, according to the old writings, was ascertained by post-mortem examinations? and would he maintain that proof is only to be deduced from the postmortem examinations of his own country, and that those held in China are not sufficiently trustworthy for the verification of facts? Again, in regard to his theory of the circulation of the blood, and of the

different form of the fœtus during the several stages of pregnancy how, may we ask, could any post-mortem examination have shewn him the blood flowing in the veins of a corpse, or have enabled him to ascertain the age of the uterine formation? All that he says therefore on these subjects, is distorted and erroneous. Still, as the writer is able to study Chinese works, and to inform himself of the excellent instruction they contain, we may assume that what he advances is not entirely without foundation. He says on his part, 'I think so and so,' and no harm can come on our part from giving him a hearing. Viewed as a means of opening up new trains of thought, and stimulating the mind to understand the mode of curing disease, the book itself can scarcely fail to be of service to the members of the Profession, and on this account, therefore, I have been induced to give it a place in my collection, and have endeavoured in these prefatory remarks to indicate briefly its merits and defects. Written by Tih-yu, the proprietor of the Hae-shan-seen-kwan, and dated on the 8th day of the 12th month of the 1st year of Heen-fung."

In another edition published at Canton, a recommendatory notice of the same book runs thus,—"A Western writer Hobson, has published a Treatise on Physiology, with illustrations, in which the subject is thoroughly elucidated. He gives first a general description of the entire body, and afterwards treats of its various parts separately. The illustrative figures are 271 in number, they were lithographed at the free Hospital at Kum-le-fou in Canton. These I have arranged after the orginals on eight scrolls which may be hung side by side, and so be conveniently studied, and they will be very suitable for presents. To persons desirous of acquiring the healing art, they will give a complete insight into the internal and external structure of the body, and the principles of its organization, and possess them of the means to obtain a true diagnosis of diseases. They are properly characterized in the following terms,—The myriad processes of life are here displayed, and the human frame is opened to view. The internal and external organs are distinguished and accurately delineated. From the form the nature is demonstrated; what appears to be anomalous is shewn to be well ordered. It is the first time that we have beheld such productions. Our science indeed cannot compete with that of the philanthropic Author. By Yeh-Suy-ung; from the Palace of the Governor General of the Two Kwang provinces, in this 8th autumnal month of the third year of Heen-fung."

From the foregoing remarks, it cannot be doubted that the people of China are both ready and willing to be taught a more excellent way in regard to Western science and

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philosophy, did we but take the trouble to lay the principles, practices and truths of these matters before them. That the people of China can be taught, no reasonable man could doubt. What China wants, are—1st, Good schools superintended by Europeans, in which will be taught one of the most universally spoken European languages, because it is now an established fact, that, modern science can only be taught in an European tongue. 2nd, We want schools in which would be taught the various sciences—Philosophy, Mathematics, Medicine &c., &c., &c., all superintended by Europeans. And I feel convinced that if such schools were once established, and in good working order, the people would support them of their own free will—for nothing is ever to be expected from this effete and despicable government, or dynasty. The great question is,—Who is the man or where is the body of men that will earn immortal laurels, and the gratitude of one-third of the whole human race by establishing such schools? Is such a man or body of men living? We shall see. The work on Physiology was succeeded by one on Surgery, a large octavo volume, with upwards of 400 illustrations in wood, carefully copied from Liston, Fergusson, Druitt, Erichon, and others; this also was well received, and after this a small work was published on Midwifery and the diseases of children. As I have already said, Chinese doctors know nothing of the subjects treated of in any of these works. The fourth work by Dr. Hobson was on the Principles and Practice of Medicine, and contained a digest of the British Pharmacopœia. At the end of this work there were short treatises on the properties of light, heat, air, electricity, and water, &c. These interesting works have not only been well received and circulated throughout the Empire of China, but every one of them has been printed and published in Japan. They have appeared in fourteen thin octavo volumes both in Yedo and Miaco, and it is a fact worthy of record, as it shews how well the Japanese know the Chinese written language, that these works are all published in the Chinese language, with interlineations and various notes in Japanese bearing on the meaning of the text. It is only fair to state that British and other foreign merchants with their proverbial munificence and liberality in every good cause, bore all the expenses of the first publication of these most useful and interesting works for the edification the people, and for the advancement of the *Medicine and Medical Pratice of the Chinese.*

ARTICLE VI.

THE SEA-BOARD OF RUSSIAN MANCHURIA.

By J.M. Canny Esq.

Read before the Society on 5th Sept. and 29th Nov. 1864.

The following paper on the Russian possessions on the coast of Manchuria is the result of the writer's personal experience while serving in the Russian navy in the years 1862-3. During that time he visited in succession almost all the settlements and colonies along the sea-board of the Amoor Territory and the opposite island of Saghalien; and living as he did amongst the Russians themselves, hearing their opinions and having access to all the information within their reach connected with the different places, he had many facilities for seeing and judging of the country and its inhabitants. When to this it is added, that a slight knowledge of the Russian language enabled the writer to communicate with the settlers at the different ports, including soldiers, peasants and convicts, and to ask them of their hopes and fears, their joys and sorrows, the society will be at once in possession of the various sources of information from which this paper is drawn, and of the circumstances under which it was written.

In order, however, to understand more clearly what follows, it will be necessary to take a brief retrospect of the facts connected with the occupation of this country by the Russians. It is only a few years, no doubt, since the annexation actually occurred, and the leading events of the affair are still familiar to many of the gentlemen here present to night; but nevertheless the present state of the country is so intimately connected with its past, and so much the result of that annexation, that a brief glance at history is indispensable for a complete apprehension of the subject.

Down to the middle of the present century the possessions of Russia on the Eastern coast of Asia, did not extend further south than the 55th parallel of North latitude. Aian in the sea of Okhotsk and Petropauvloosk in the peninsula of Kamschatka were her two most southerly settlements; and these were quite inaccessible to traders for the greater part of every year. It was consequently natural for the Russians, located in these inhospitable regions, to

cast their eyes longingly southwards, where there were ports and harbors in which their ships could conveniently winter, and a country rich in timber and other unexplored resources, and but loosely held in the feeble grasp of the Chinese Government. It would have been a tempting bait even to a less aggressive nation than the Russian; but to a man like the Emperor Nicholas it was irresistible. In the year 1849 therefore the first advance was made to the south, and Petrovsk on the Northern entrance to the straits of Saghalien or Tartary was occupied. In the year 1850 the exact position of the mouth of the Amoor was determined, and in 1857, Nicholaiëfsk, now the center of government for the whole of Maritime Siberia, was founded. Shortly after, in 1853, De Castries Bay, latitude 51½° N, and Port Imperial, lat. 48½° were taken possession of, and a military post of 150 men located at Aniva Bay in the South of Saghalien. This was a rather rapid advance southward—seven degrees of latitude on the main-land and the whole southern end of the island of Saghalien were annexed—and from the facility with which it was done and the want of opposition on the part of either natives or Chinese, there seemed much to hope from the future.

But hitherto the occupation of territory and the advance of the Russians had been confined to the coast—and the great valleys of the Amoor and Usuri as well as Manchuria proper remained still as they had been for centuries, Chinese soil. Russia might have wished, as no doubt she did, to advance down the Amoor and thus obtain an easy communication between the far interior of Siberia and the ocean—but the opportunity was wanting; and without the opportunity she was obliged to wait and watch.

She had not long, however, to wait. The outbreak of the Crimean war was just the opportunity she wanted. England and France were occupied in Europe, and Russia was left to do her will in Asia. But it must be admitted that while the Crimean war afforded her an opportunity of extending her possessions in Eastern Asia, it also, to a certain extent, imposed the necessity of so doing on her. Russia could not have well avoided the invasion of the Amoor Territory in 1854. She had several men of war out here, some of which had been chased half round the world by the Allied fleets. They had no ports of refuge, no place where they could provision in safety;—Aian and Petropauvloosk were perfectly open to the attack and blockade of the allies; the sea-board of China was still more insecure, and the coast of America equally unsafe. It was a trying time for them:—a stormy period that of the spring of 1854:—clouds surrounding the horizon on every side and hardly

one glimmer of hope anywhere visible.

The difficulties, however, were bravely and successfully met. In the beginning of that same year, Count Mouraviev, Governor General of Siberia, who, by the way, should not be confounded with his namesake of Polish notoriety, fitted out an expedition of 1,000 men with provisions and supplies for the fleet; and while the snow was still on the ground they marched out of Irkutsk for the head waters of the Amoor. In May they reached the Shulka, one of its upper sources where a small steamer built in the Trans-Baikal, and a fleet of fifty rafts were in readiness to convey them down the river. On their passage they met with a good deal of opposition from the Manchus and local mandarins—but nothing in the shape of positive resistance. They were too strong for the small Chinese posts along the river. In July they reached the sea, and the object of the expedition was accomplished—the fleet in the Pacific was relieved, a place of refuge opened for it, and a grand line of some 2,000 versts of water communication connecting the interior of Siberia with the sea was for the first time thrown open to the Russians and the civilized world.

From that time forward, we may look upon the northern valley of the Amoor as virtually Russian territory. Strong military posts were located at different strategic points along the river. In 1855—6 and 7, men were poured down by the thousand, and such a firm hold was taken of the country that it became, thenceforth, utterly impossible for the Chinese ever to recover what they had lost. But while the Russians kept strengthening themselves on the Amoor they did not quite neglect the coast of Manchuria. In 1858 Olga Bay was occupied; and in 1860 Ports May and Passiet, both in Victoria Bay and the most southerly of any of the places hitherto annexed, were formally taken possession of. This completed the list—Russia had gone as far South as she could; her territory reached to the Northern frontier of the Corea—only the Shan-a-liu chain of mountains separating her from that country. It was a natural boundary which Russia did not deem it either advisable or prudent to pass, and which has remained and is likely to remain the frontier line between the two countries on the south.

Up to 1857 Russia had invaded and taken possession of Chinese territory without any attempt to obtain a legal right to it. In that year, however, overtures were made to get a formal cession of the country from the government at Pekin—but unsuccesfully. In 1858 they were again renewed, while the Chinese were smarting after the capture of Canton, and so effectually, that a treaty was obtained from the Emperor transferring the left bank of the Amoor and the right bank

of the Usuri to the sea, to the Russians. In 1859, after our repulse at the Taku forts, the Chinese government denied the authenticity of this treaty:—but the taking of the Summer Palace in 1860 by the Allies brought them again to their senses, and in November of the same year a new and much more ample treaty was signed, transferring, once and for ever, the whole of the newly acquired territory to the Russian government. By this treaty Russia obtained a sea-board of over 700 miles in extent, and a stretch of country along the Amoor of more than 2,000 versts inland.

It was in the autumn of 1862 that the opportunity first presented itself to me of visiting the country. I was at the time on board an eleven-gun corvette which was ordered from Hakodadi to make a survey in Victoria Bay. The survey lasted eleven weeks; and during that time we visited many parts of the coast of the southern Manchuria and the two Russian settlements of Ports May and Passiet.

Victoria, or Peter the Great's Bay, as the Russians call it, is a large inlet extending N. E. and S. W. for 140 miles, and indenting the coast westward to a depth of some 40 miles. Its northern boundary is Cape Polormpoëe and on the south it reaches to the Corea. It is a noble bay, possessing, in its center a magnificent group of islands called the Eugenie Archipelago and several fine harbors and anchorages in which ships are safe at all seasons of the year. The country all along its western and northern shores is exceedingly fertile and productive; it is thickly wooded, and watered by numerous small streams from the coast range. To the north, Victoria Bay is divided into two deep gulfs, called respectively Guerin and Napoleon, by Albert peninsula; and on the southern extremity of this peninsula is situated Port May, the chief Russian settlement on the coast of Manchuria. The name of Port May, which it has in our charts, has been changed by its present masters, who call it Vladi-vostock—Dominion of the East. It is in 43°.3′ N. and 131°.58′ W. and within two days and a half of Hakodadi by steam. About 120 miles south of Port May or Vladi-vostock is Passiet—the next most important place in southern Manchuria. Passiet is the frontier post on the south betweeen the Russians and the Chinese. It is only a few miles from the River Tumen, the actual boundary, and within sight of the Shan-a-liu chain of mountains which divides Manchuria from the Corea.

Both Ports May and Passiet are military settlements—especially the former, the governor of which has more men under his command and more extended powers than any other on the coast. He it is who superintends the postal communication with the different settlements and colonies,

and the despatch of couriers to the center of government at Nicholaiëfsk on the Amoor during the winter. In the summer there is no regular post maintained—the carriage of letters and despatches being effected in an uncertain, irregular manner by means of the government transports on the coast; but in the winter, when the rivers and lakes get frozen over and travelling may be done in sledges, there is a fortnightly overland mail. The route taken by the mail carriers is from Vladi-vostock to Lake Hanka, and from thence in sledges down the river Usuri to the Amoor—the whole journey being made in a month or five weeks.

The Russian settlement at Vladi-vostock on our arrival there in September 1862, consisted of some twelve or fifteen log huts with a population of fifty or sixty men and only two women. The men with a few exceptions were all either soldiers or sailors—the less said about the women, the better. They were pardoned convicts sent down from Siberia and given their freedom and liberty at Vladi-vostock. The exceptions referred to amongst the men, were, two free peasants, a tavern keeper, and an agent of the Russian Amoor company who kept a small store of what the Americans call "notions." Rum, sugar, printed cottons, woollen stuffs and all sorts of imaginable things, were given in exchange for furs, or sold at an exorbitant price for Russian roubles.

All the houses at Vladi-vostock are wooden structures —one story high,—such as are commonly known as block houses. The trees are felled, stript of their bark, and then, without any further preparation than that of cutting them to the proper length, are laid longitudinally one over the other —the interstices being stopped with oakum, flax or coarse grass to keep out the wind. At the angles they are morticed and joisted into one-another—the structure being completed by a wooden roof painted red or green, and a few glass windows. They look rather picturesque from ship-board with their coloured roofs and white window-frames gleaming amongst the trees, and contrasting with the brown, unpainted timber that forms the side of the house. They are well built and durable structures, but they become fearfully infested with insects, and are hot and uncomfortable in summer. The hospital, one of the first buildings we visited on shore, was comparatively clean and orderly, but it was utterly impracticable to rid it of the thousands of insects and creeping things that congregated in the crevices and interstices of the timbers. In the house of the port captain or governor this evil was partially remedied by having the walls of the rooms well cleaned and papered; but whenever the paper got torn, as it frequently did on such an uneven surface, the insects would again make their appearence—much to the discomfort of a

stranger visiting the place for the first time, though without in the least disquieting the permanent residents.

Besides the houses already noticed, there are in Vladivostock barracks for the military and sailors, two or three government stores, a church, bake-house and public bath—the latter, no unnecessary appendage, by the way, to a Russian colony. All these are substantial wooden structures—the church in particular, which is the best building in the place. Attached to it is a very old padre, or pope as the Russians call their priests, who was chaplain in the navy so long ago as 1812. He remembered quite distinctly the death of Catherine the second, and had served in almost every part of Russia from Bessarabia to the Amoor. Nevertheless he was still strong and hearty; and seemed to care little about the prospect of ending his days in such a solitary, out-of-the-way place as Vladi-vostock. His wants were few and easily satisfied. An invitation to dine on board ship, where he could get something better than his own coarse fare of black bread and fish or some sort of meat, was enough to make him perfectly happy. The present of a few roubles for the decoration of his church never failed to bring down his blessings. His room—he had only a single room to live in—which I frequently visited, was primitive in the extreme. Its whole furniture consisted of a rude wooden bedstead—the linen of which was neither very fine nor very carefully arranged—a table, a chair and two or three old religious books. The walls were bare and unpainted; and the only ornament visible was a picture of our Saviour in one of the angles of the apartment before which a small lamp was suspended.

The house of the governor, one of the most pretentious buildings in the place, is located in the center of the settlement without any enclosure or compound to separate it from the others. It is an oblong structure of about 45 feet by 30 feet, divided into four apartments—a sitting room, two bed rooms and a kitchen. The interior of the house with its furniture and fittings, has been admirably described by M. Lindau in the *Revue des deux Mondes* for August 1863:—the sitting room, "in the middle of which was a round table covered with an old cloth, on which were scattered glasses and cups, cigars, cigarettes, an open book and some journals; behind the table a sofa which bore traces of long use; in another corner, a square table for writing, and underneath, as a sort of carpet, a magnificent bear skin on which no one had ever trod; above the table a portable book case was attached to the wall, containing treatises on navigation and meteorology, as well as some French novels. Near the window there was another table, the work of a sailor, and on this, as well as on the sill, might be seen jumbled together

indiscriminately, uniform caps, a tobacco bag, boxes of cigars and several tattered volumes of the works of Gogul, Poushkin, Lermonthog and Krylov. Round the room were hung a number of bad likenesses of the Tzar and different members of the imperial family, alternating with those of the relatives and friends of the master of the house. In another part was suspended a carbine and revolver, two swords, a pair of pistols, a cocked hat, a pair of spurs, together with a riding-whip, a marine glass, a barometer and thermometer." The description is admirable; it would be perfectly accurate only for one oversight—M. Lindau failed to notice a pack of cards. I have never been in the house of a Russian officer on the coast of Manchuria in which I did not see not only one, but several packs of them thrown loosely about the sitting room. They are as indispensible to a Russian as food and drink; they are the resource by which he contrives to trifle away the dull summer's day and the long winter nights in these lonely regions. But though not elegantly or tastefully fitted up, we passed some very jolly evenings in the house of Lieutenant Bouratchock whose hospitality was unbounded. In fact, he kept open house for us during our stay, and hardly an evening passed without a party of officers going there to play *lansquenet*, or otherwise amuse themselves. A supper of venison, fowl or fresh pork with black bread was served every evening at 10 p. m., after which vodhka and brandy made their appearance. Invitations were never given on these occasions; every one came and went just as he pleased —it was hospitality *sans cérémonie*.

The officers at Vladi-vostock and all the coast settlements pass a dreadfully isolated and lonely life. Cut off almost completely from communication with the rest of the world, it is rarely that anything occurs to disturb the monotony of their existence. Months frequently pass without their hearing from home, and a newspaper half a year old is quite a god-send to them. Lieutenant Hildebrandt told me that he had been on one occasion for over five months without having any authentic information from home, either in the shape of letters or newspapers—and that, at a time when the internal state of Russia was extremely critical—the period of the emancipation of the serfs.

During the summer there are occasional breaks in the dulness and monotony of these places; ships arrive with letters and periodicals, and the daily routine of life in superintending the men at work, is in itself a distraction. But in winter everything is in a state of stagnant unchange; the sailors and soldiers are shut in by the cold and cannot engage in out-door labor. One day follows another without variety. The officers sleep, smoke and play cards; they

read a good deal at first, but after a time their stock of books becomes exhausted, and then they are thrown on their own resources for amusement. Occasionally, however, they go on hunting excursions into the interior, or travel on horseback or sledges to visit the neighbouring settlements.

There is very little cultivation carried on in or about Vladi-vostock. Potatoes, cabbages, cucumbers and vegetable marrows are grown in small quantities, and hay is cut from the meadows for the use of the cattle. Very little corn is produced, but it was in contemplation to send a body of agricultural colonists down there from the Amoor, which was done, I understand, towards the close of last year. The Russian peasants, however, make bad colonists; they have a rude and obsolete method of cultivation and they are lazy and idle to a degree. They work well, and, strange to say, willingly enough, under a taskmaster, but when left to themselves they are improvident and indolent in the extreme. With English colonists this rich and fertile country could not remain long unproductive; but there is very little to be expected for years to come from the settlers the Russian government is sending into it—the greater part of them pardoned convicts who have been accustomed only to forced labour, and have forgotten in Siberia the little of agriculture they knew at home. Further on, we shall see the conditions under which these colonists are sent to the different settlements along the coast.

The country to the back of Vladi-vostock is undulating and hilly—covered with walnut, birch and oak, but with many stretches of grass land free from timber, from which the Russians cut a very fair quality of hay. They feed bullocks, horses and sheep on these spots, but the land appears to be too moist and rich for the latter. The prices of these bullocks varies from $20 to $30 a piece—nearly twice the price we paid for them at Hakodadi. They were, however, much heavier and fatter than the Japanese bullocks and the beef was far superior.* Most of the cattle we bought in the place for the ship's use belonged to the governor; but any one that pleased, either officer or soldier, native or peasant, had the same rights to the soil—the same liberty of feeding as many bullocks or horses as he could procure or purchase. There was no restriction—nothing to pay, but a perfect communion in the possession of the land. Any person, however, bringing a piece of ground regularly under cultivation became at once its owner to the exclusion of all other claimants.

A word now about the military state of the settlement. In September 1862 there were from fifty to sixty sailors and

* They have so increased, however, within the last eighteen months that they may now be bought for about $10.

artillerymen in Viadi-vostock. Afterwards some fifty more artillerymen arrived from Nicholaiëfsk on the Amoor with a few pieces of mountain artillery such as are used in the defiles and fastnesses of the Caucasus, and may be conveniently carried on horse-back. Part of these men were sent down to the frontier post at Passiet, and the remainder were kept in Port May—thus raising the number of men of all arms in the place to about eighty. I cannot say much, however, in favour of their *morale* or discipline. I never saw them once drilled during the time I was there; and they seemed to regard uniform, except when on duty before the government stores as sentries, as a useless and unnecessary restraint. I could never see them in their abnormal style of dress—half Russian and half Manchu,—without being reminded of Jack Falstaff's "Ragged regiment." They hardly seemed to me to be soldiers at all; they were employed indiscriminately at all sorts of work—building houses—repairing jetties,—loading and unloading ships and in cutting down wood for the winter's firing. They were occasionally permitted to go on hunting expeditions into the interior, and I have frequently met them during my rides, returning from such excursions with bear skins and other spoils of the chase slung before them on their horses. Tigers are rarely or never met with in the summer, but in the winter they enter the settlement and kill the dogs and young oxen. I saw in the house of Lieutenant Bouratchock the skin of a tiger which was shot by an officer the preceding winter from his own window. About a day's ride from the settlement deer are quite numerous, but none of us were tempted to make an excursion there, owing to the unpleasant prospect of a fifteen or twenty hours' ride on an uncomfortable wooden Manchu saddle.

To return, however, to the military state of Vladivostock—the most important fact connected with it at the time of our visit, was that the Russians had collected a very large supply of artillery there. There were seventy-four guns in the place altogether—seventy 60-pounders and four 36-pounders. They were all smooth bore, broadside guns, and were lying unlimbered on the beach in front of the government stores where the carriages were kept. It was a large supply of artillery for such an unimportant place, and evidently betrayed an intention on the part of the government of providing against some danger, other than that arising from either the natives or the Chinese.*

* Captain Fletcher of Hakodadi, who visited Vladi-vostock only last May, informs me that all the guns were then being removed to Nicholaiëfsk on the Amoor: so that the authorities would seem to have changed their intention of fortifying the place.

It was rumored at the time that 1,000 men were shortly to arrive from Nicholaiëfsk to construct batteries and forts:—but the rumor turned out to be a myth. The men did not come, and the construction of the batteries was deferred *sine die*. The real cause of the delay was owing, I believe, to the fact that the government had not decided whether they were to be erected at Passiet or Vladi-vostock. Both of these places possess fine harbors—particularly the latter; but they are not naturally strong, and it would be difficult to protect either of them satisfactorily. Vladi-vostock might be easily protected from an attack by sea, as the entrance to the harbor is narrow and admirably suited for defence—but it is perfectly open to the attack of landing parties, and is completely under the command of a ridge of hills on the opposite side of the bay—only a mile and a half distant. Passiet is more exposed still, and might be shelled without any difficulty by a fleet. In the summer of last year, Generals Condratiev and Ushakov were sent from the capital of Siberia to judge of the capabilities of these ports; and an adjutant of the Emperor sent from St. Petersburg followed directly after. What the result of their inspection has been, I am unable to say,—their reports were sent in to the government last winter, but have not, as far as I am aware, yet been made public.

The native inhabitants of Port May and of all the country round Victoria Bay, are a Manchu race, intermixed with Chinese and a few Goldi from the head waters of the Usuri. They are, for the most part, adventurers who have run away from the neighbouring Chinese provinces, and made their way into Manchuria in order to avoid the punishment for crime or debt at home, or through a mere spirit of adventure. On this account they are almost all young or middle-aged men with hardly a woman or child amongst them. They cannot bring their families with them, of course, when they leave China; and in Southern Manchuria there is no aboriginal race with whom they can again inter-marry. Further North the country is inhabited by the Tazas or Oroches, and when the Manchus wander so far up the coast, they take wives from amongst them with whom they form temporary unions. The natives of the country round Victoria Bay live in small villages of from three or four to a dozen miserable cabins, and pass their time in hunting and the cultivation of small plots of ground. Some of them, especially those that live near Hanka lake and the Upper Usuri, cultivate the *Ginseng* plant, and others devote themselves to the search after gold which has been found in small quantities in the beds of the rivers that flow from the coast range.

In their dress and personal appearance they hardly

differ from the Chinese. They shave the head, and wear a tail, but they are dirtier in their habits, and generally speaking, possess a much coarser and more Mongolian type of features. During the winter they wrap themselves in skins and furs which they seldom change, and in the summer they wear white and blue cottons tied round the body with cords and strings. These garments are almost invariably in a tattered, ragged condition, and have very little to boast of in the matter of cleanliness. Their shoes are after the Manchu fashion; they are made of tanned leather and are similar in shape to those worn throughout Manchuria Proper. They live in miserable cabins made of reeds and long grass. Several of the native huts which I have seen on the coast were so small that a man could not stand erect in them, and so narrow that there was only room in the interior for two beds—one on each side of the entrance. These beds, which were almost on a level with the ground, were covered with bear and deer skins; the inmates sat and lounged on them during the day and slept on them at night. In the large villages of the interior the houses are said to be much better. Even on the coast I have seen some two or three comfortable houses, built of roughly hewn planks after the northern Chinese style.

It may not be amiss here to correct a statement of M. Lindau's, in the article already referred to in the *Revue des Deux Mondes*, with regard to the natives of this part of Manchuria. Speaking of some he had seen at Vladi-vostock he says:—"Ils etaient hidieux de saleté et de laideur, et il y avait dans leur regard farouche et craintif quelque chose de la bête fauve."—"They were hideously dirty and ugly, and there was something of the wild beast in their fierce, cowering look." Nothing could convey a more erroneous idea of them in my opinion. I have seen far more of the natives of the whole country both north and south than M. Lindau has, and I must say, that any one who should take the above statement as a literal fact applying to the people in general, would be very much mistaken indeed. That many of them are both dirty and ugly, I am readily prepared to admit; but that they are offensively so,—"hideous with dirt and uglinesss" is far from being correct. I have seen few of them, no doubt, whose clothes or person might not have been improved by a bath—but none that were so bad as M. Lindau's words would seem to imply. The same may be said with regard to their good looks—many of them are certainly ugly enough; but I have seen among them some fine-looking, well made Manchus, standing over six feet high, and models of anything but ugliness. There is no reason why these men should be either fierce or cowering. I have never noticed

it and never heard it remarked amongst the Russians. Going on board a foreign ship for the first time, they would be naturally timid and reserved in their manner. I once saw an old Manza tremble with fear while he was being sketched by a Russian officer on board ship. He fancied, I believe, that we were trying to bewitch him; and the moment the sketch was finished he rushed down the ship's side into his boat and pulled rapidly ashore amidst the laughter of his companions. But in their villages these men are quite different. It could not be otherwise considering the free independent lives they lead. The authority of the Chinese government hardly ever extended to the sea coast of Manchuria,—and the Russians, since their occupation of the country, have made it a rule to interfere as little as possible with the natives. On the contrary, they let them do just as they please so long as they observe the common laws of justice between man and man. Strict orders are given to the governors of all the posts throughout the country not on any account to disturb them in the possession of the soil—nor are they obliged to pay taxes. One result of this policy is that the Russians and natives are now on the friendliest terms all over Manchuria. When the former first entered the country they met a little opposition at Port Passiet—a boat's crew under Lieutenant Nazimov having been fired on. But the natives soon saw they made a mistake and had more to gain than lose by the presence of their new masters. The consequence is, that they are now as quiet and inoffensive as could well be expected. The Russians travel about the country in small parties with the utmost freedom. In the winter two postmen carry the mails, and sleep in Manza houses and villages—yet I never heard of one of them being either robbed or otherwise injured. I once saw a young Manza flogged by a Russian officer and it was the only punishment I have ever seen inflicted on a native. He had got into the hospital and sold a bottle of vodhka to one of the patients. He was caught in the act, and received the knout in the most summary manner.

One advantage which Vladi-vostock possesses over the other posts on the coast consists in its facilities for communication with the interior. Two roads lead from it—one, to Hanka Lake from which there is a free water communication with the Amoor by means of the Usuri, and even to Peking, it is said,—and the other to the frontier post at Passiet. On both these roads relays of horses are kept—at distances varying from 20 to 30 versts. That to Passiet, which is about 300 versts in length, has thirty horses for ordinary duty; and the other a still greater number. As the former road, or, more correctly, bridle-path, extends round

the whole north-western and western shores of Victoria Bay, some of the officers and myself tried to arrange an excursion along it; but owing to the movements of the ship being so uncertain, surveying amongst the islands, now on one part of the coast, and then on another, we were unable to manage it. As it was, however, we saw very much of the country all round the bay, and had a splendid cruise of about a week through the Eugénie archipelago.

This is a magnificent group of islands—thirty or forty in number—extending south from Albert Peninsula, and separated from it by Hamelin straits—or the Bosphorus, as it has been re-christened by the Russians on account of its picturesque beauty. It well deserves the name—I have seen nothing more beautiful in the East,—nothing to surpass the scenery amongst these islands, rising as they do into richly wooded hills with long sweeps of meadow land in the valleys, and descending to the sea in bluff headlands and bold escarpated cliffs of clay, slate, sandstone and red porphyry. Tronson who visited them in 1855 on board H. M. S. *Barrocouta* says: —"Here the islands are very pretty, rising into truncated cones or table land covered by rich pasture; pleasing valleys add a charm to the scenery, their sides clothed with oak, hazel walnut, wild vine, dog rose and currant now in fruit; and near the houses (of the natives) are well tilled gardens containing potatoes, onions, kidney beans, vegetable marrows and cucumbers." In another place he says: "The hills are covered with rich long grass, peonies, orange lilies, convolvolus, vine, and orchids." It used to be our habit of an evening, when we had dropped anchor for the night in one of the picturesque bays or inlets of these islands, to go on shore and pick grapes and wild raspberries. The vine grows wild over the hills and in great abundance,—but the grapes are small and somewhat tart. This latter fault we remedied by mixing them with milk and sugar *à la Russe*. Half an hour was generally sufficient for two or three of us to gather several dishfuls. A stroll over the hills with a gun was usually rewarded with a brace or two of pheasants; but the birds were rather wild and not very numerous.

The country to the west of Victoria Bay is thickly wooded and fertile. Its geological character along the coast is similar to that of the islands—sandstone, red porphyry, and white marble. Coal has been found, however, in several places. I first saw it in the North Eastern angle of Guerin Gulf, where a superficial opening had been made by the Amoor Company, and several thousand tons of slack coal been collected. It was merely the upper surface of the bed as it cropped out on the side of a soft sandstone bluff that had been dug out—not the slightest attempt having been made

to sink a shaft or penetrate more than a dozen feet beneath the surface. On the opposite side of the same gulf, near the mouth of the Sooi-phoon river, another opening was made, which has been worked by the government, but with little better success. It was only a few feet deep, and the coal, though somewhat better, was still of an inferior quality. Between the Sooi-phoon and Passiet, coal crops out in several places along the coast; so that it seems, in fact, as if the whole western shore of Victoria Bay were one vast coal field. Nowhere, however, except at Passiet, has it been worked in any regular, systematic manner. There a shaft has been sunk to the depth of 120 ft. and a steam engine employed in pumping the water out of the chambers. A fair quality of coal has been obtained, which is used instead of fire-wood by the soldiers of the settlement, and by the government transports on the coast when they run short of Saghalien coals.

The commercial prospects of Southern Manchuria may be summed up in a few words. Nothing can be done in the way of an import trade—the native inhabitants are too few and too poor, and the Russian settlements too small. There is no demand for any articles of European produce, except perhaps, a little whiskey or rum. The government supplies the soldiers with all necessaries in the shape of clothing and eating, and the Manchus get what little clothing they want from the interior. There is a small barter carried on at present between the natives and Russians at the different settlements along the coast. The former exchange sables, bear and tiger skins for lead, printed cottons and vodhka. Whenever we wanted to buy any furs, we found the current prices to be:—from $4 to $6 for sables, according to the quality—$3 to $4 for a bear skin and* $10 to $12 or even $15 for a good tiger skin. The residents, however, could buy them much cheaper, as they were always ready to buy when the natives were obliged to sell.

The most important business with the natives, however, was to be done in fish and sea weed. The creeks and harbors of Victoria Bay abound with different sorts of marine fish, and the rivers in some places absolutely teem with salmon. Take an instance which came under my own observation. On one occasion, when we were at anchor near Vladi-vostock, seven or eight of our sailors obtained permission from the first lieutenant to go on shore to fish. They left the ship about midnight and went to a small stream three or four miles distant, where they waited until the tide went out. They then lighted a number of torches and beat the fish up before them into a small pool two or three feet deep. Here

* Captain Fletcher informs me that he has purchased some hundreds at the rate of two paper roubles ($1) each, and the other furs correspondingly cheap.

they were prepared to catch them with nets and spears—but they were so numerous that they were afraid the nets would break,—and they rushed into the midst of them and began tossing them on shore with their hands. Next morning they returned on board with nine *poodhs* weight (324 lb. English) of salmon*. The natives, when they have salted and dried enough salmon for the winter's consumption, carry the surplus into the interior where they exchange it with the more settled Manchus for clothes, millet, pipes, powder &c. They also bring for barter a species of sea-weed which is much esteemed and which they collect in large quantities round Victoria Bay. It is not so good as the Japanese. I have seen as many as fifty or sixty closely packed bundles (about 70 or 80 lbs. each) of this at Vladi-vostock ready to be sent down the coast for transportation into the interior. I am unable to say what price was demanded per bundle. Capt. Fletcher says it is equal to No. 3 Japanese but much dearer.

Gin-seng can hardly be said to be an article of commerce in any of the coast settlements. It is chiefly cultivated in the interior, towards the upper waters of the Usuri, and the Manzas of the seaboard set quite an extravagant value on it. I remember having been once asked $160 for a handful of roots by a native. He kept it carefully preserved in a rich, black clay, wrapped up in birch bark. It was much whiter and more transparent than Japanese *Gin-seng* and quite smooth on the surface. Near Hanka Lake *Gin-seng* can be bought for a very moderate price; and further north on the coast I have seen living plants sold for $3 or $4 a piece. A native of Olga Bay made me a present of one in August last year, with the necessary instructions as to its proper treatment. It was to be planted in the richest earth I could get—to be kept moderately watered, and screened from the sun's rays. I followed my instructions to the letter—watering it daily and protecting it from the sun with a white cloth, according to the advice of my Manza friend, but all my care was useless. In about ten days it began to wither, and died in a few weeks after.

A word about the timber trade of Southern Manchuria. This is the only trade in the country at present which might be really valuable, and it is the only trade which the government interdicts. Permission was granted, a short time ago to export lumber from Port Imperial—a small settlement on

* Capt. Fletcher says that the salmon is of a very fair description—somewhat similar to Japanese; but not so good as English.

Beche de Mer of an excellent quality is found all round Victoria Bay: but the natives asked such a high price for it ($60 a *poodh*) that they must have a better market for it in the interior than is to be had at Shanghai.

the 48th parallel of North latitude. This has been done as an experiment, and in case it succeed the export of wood will be allowed from some of the other ports. The islands and country round Victoria Bay, as has already been noticed, are splendidly wooded. From the sea to the coast range—a distance that varies at different places from 15 to 30 miles, the country is one immense forest covered with oak, ash, walnut, elms and limes. The cork tree is also abundant in this region, not very large—rarely attaining a greater diameter than a foot or fifteen inches. Walnuts and limes attain a height of thirty or forty feet, and the ash still larger proportions. Oak, however, is the grand staple product of these forests; it overspreads the whole country both in the islands and on the main land, and though not very large near the coast, it increases rapidly in size as one penetrates inland. On the banks of the Sooiphoon, a river that falls into Guerin Gulf, it is said to attain a diameter of three or four feet, and towards Lake Hanka it becomes still larger.

From the references already made to Passiet, and from the frequent allusions to it when describing Vladi-vostock it will be unnecessary to enter into a fresh description of the place. In fact all these coast settlements in Manchuria are quite alike in external appearance; they are built after a certain type, and when you have seen one, you have, in a certain sense, seen all. Passiet is the frontier post of the Russians to the South—only a few miles from the river Tumen which is the boundary between them and the Chinese. It has the same style of block houses as Vladi-vostock—an hospital, government stores, barracks and a garrison of sixty or seventy men. When I was there in 1862 there were two women in the place—one, the wife of the hospital dresser, the other, the wife of a soldier. The Russians lived in the same way there as they did at Port May—a solitary, lonely life, the monotony of which was only broken by the arrival of an occasional man-of-war or transport in the summer, and of the government couriers from the Amoor in winter. The Commandant, Captain Cherkasky, told me he hardly ever saw a newspaper, and the few books he had were conned over so often that he knew them by heart. He found a little amusement in studying English, which he did by means of a MS. dictionary and an old newspaper. Cards, hower, were the great resource to pass away the dull days and evenings of winter.

The climate of Passiet is similar to that of Vladi-vostock. It is rather hot in summer, and during the spring and autumn, fogs are very frequent all over Victoria Bay. As a consequence of this, and of the heavy rains that fall from June to September, colds and lung diseases are rather

common. There is hardly any other disease known, however, and the country is said by the Russians to be exceedingly healthy. In winter the cold is severe—the harbor of Vladi-vostock being frozen over for nearly four months, and Passiet for nearly the same time. The following table of Meteorological observations will give a correct idea of the temperature of Passiet. It was given to me by Captain Cherkasky who was himself the compiler. It shews the average temperature for each month of the year 1861-2 according to Reaumur's thermometer.

1861-2.

September	+11½°
October	+ 4¾
November	— 1½
December	— 8½
January	— 8¾
February	— 5¼
March	— 0¾
April	+ 6½
May	+ 9¾
June	+14
July	+18
August	+17

North of Victoria Bay there are several Russian settlements on the coast, but only three of any great importance. These are, Olga Bay, Port Imperial and De Castries Bay. Port Imperial, or, as we call it, Barracouta Bay, I have not seen, but Olga and De Castries I visited last year, and made a stay of six weeks at the former. As there is nothing however to distinguish De Castries Bay from the Russian settlements already described—nothing very remarkable about it, except that it is the port of call for vessels bound to the Amoor, in which they can get pilots and steamers to tow them through the difficult navigation of the Liman,—I will conclude the present paper with a description of Olga, which is a purely agricultural settlement and as such somewhat different in character and type from the others.

Olga Bay, situated 43° 40′ N. by 135° W. was discovered during the Crimean war by Captain Forsyth in H. M. S. *Hornet*, and called by him Port Seymour. In 1857 it was visited by Admiral Count Putiatine, who gave it its present name and decided on sending a colony thither. The colony arrived in the following year, and consisted of an officer with about a dozen sailors under his command and five or six agriculturists with as many women—all pardoned convicts. These latter the government supplied with everything necessary to their new position,—farming implements, live stock and grain, and agreed to support them for two years,

that time being considered sufficient to enable them to bring such a quantity of land under cultivation, as would provide them with a subsistence.

It may not be uninteresting here, perhaps, to enter into a few details regarding these conditions. They are the same as those under which the authorities at Nicholaiëfsk have been sending settlers down to the different ports along the coast for the last four years, and under which they are still sending them. They are unusually favorable to the colonists, and as such manifest the anxiety of the government to people the country with Europeans. During my six weeks' stay at Olga I have seen the working and practical results of these conditions, and have had from Lieutenant Homekov, the governor of the place, all the information that he could give me on the subject.

Every peasant, whether free or a pardoned convict, on his arrival at any of the coast settlements, has a house built for him; farming implements are then supplied to him, as much grain as he wants, and whatever land he brings under cultivation he becomes at once the proprietor of. He also receives a horse and cow, two sheep and some fowls, and as much black bread as he and his family can eat, during two years. These gifts are not altogether *gratis*—the peasant has to pay for them afterwards to the government; but when or in what form has not yet been decided. These conditions are exceedingly favorable to the Russian settlers in Manchuria; but some of them have, from circumstances, become, in fact, too much so, and have a prejudicial influence on the colonists themselves. That clause, for instance, which entitles the peasant to be supported for two years, has worked anything but well—owning mainly to the fact that its terms have not been strictly adhered to. Instead of two years, as originally intended, the period of supply has been in many cases extended to three and even four, and the peasants have come to look upon it as a matter of right which cannot be wrested from them. As a consequence of this they are lazy and indolent, and trouble themselves little about the future. Their present wants are satisfied—they have got enough black bread,—and for a Russian peasant that is the *summum bonum* of life, the goal which when attained he hardly ever looks beyond. In the summer of last year when I was at Olga—over four years after the first establishment of the colony—the extent of land brought under cultivation did not exceed twenty acres! The number of settlers had in the meantime increased to twelve by successive importations, and another small colony of seven or eight males—mostly sailors—and as many females, had been established fifteen versts inland near the Gilbert river. These latter had brought

nearly the same amount of land under cultivation, and were, on the whole, much more industrious than their brethren at Olga. Wheat, barley and rye were the principal crops, and owing to the fertility of the soil the return was very good. They say, however, the climate is not well suited to cereals; it is too moist and wet in summer and the corn ripens only slowly and imperfectly. The land is unusually rich, and much freer from wood than is the neighborhood of Victoria Bay; it is easily brought under cultivation, and there are miles of fertile valleys extending inland from the coast on which I have seen rich meadows of grass only waiting for the scythe to convert it into hay of excellent quality.

The interior of the country round Olga is but thinly peopled. There are two races differing in language and manner living there together—the Manzas or Manchus whom we have already met at Vladi-vostock and another people called by the Chinese and Russians, Tazas. These, like the Manzas, dress much after the Chinese fashion; but they do not shave the head, and instead of tail they train the hair backwards into two plaits which fall on the shoulders on either side behind. Strings of shells and glass beads interspersed with a few metal trinkets usually stretch across the back of the neck connecting these plaits, and a metal ring is no uncommon appendage to the left nostril. There is a marked contrast between the Manzas and Tazas in personal appearance. The former are tall and robust with intelligent oval faces, while the latter are small and not so strong, with a broad Mongolian face, high cheek bones and deep, sunken eyes. The relation of master and servant exists between them for the most part throughout the country. Wherever the Manzas have settled they have availed themselves of the services of the Tazas to perform all the out-door labour of the household. The Manza cultivates the soil and grows corn and vegetables, but the Taza is the delver of the ground who does all the hard work. He toils for the Manchu and gives him his daughter in marriage—for the Manchu here, around Victoria Bay, have no women of their own and are obliged to take Taza females when they wish to contract marriage alliances.

When not in the regular service of a master, the Taza has rarely a settled dwelling—but leads a sort of gipsy life in the forests and on the rivers,—living indifferently in one place or another as circumstances may dictate, and supporting himself chiefly by fishing and the produce of chase. Several species of deer together with the bear, wild boar and other kinds of game with which the forests abound, afford him the means of gratifying his taste for hunting, and at the same time of supplying himself with the necessaries of

life; while the sable and squirrel are shot by him for their valuable furs which are exported in large quantities into China and across the Russian frontier to Haborovka and Nicholaiëfsk.

The Tazas are the *Oroches* of European geographers—they inhabit the sea-coast of Manchuria from Olga Bay to near De Castries, seven degrees of latitude, and are quite a distinct race from the Goldi and Manguns of the Usuri and Amoor. One proof of this is in their different ways of dressing the hair—another in the fact that the Tazas do not tattoo themselves—a practice very common amongst the Goldi and Manguns.

It may not be uninteresting here to give some extracts from a diary which I kept during my stay in Olga last summer. It will give an idea of the life a European may lead in such an out-of-the-way place. I had been up to the Amoor and the island of Saghalien in a gun-boat with Admiral Popov, and on our return six officers and myself were left at Olga to wait the arrival of the flag ship to which we belonged. She was here in Shanghai undergoing repairs, and instead of a few days, as we anticipated, we had to remain six weeks before she came.

DIARY:—

July 27th. Left by the Admiral at Olga Bay with six officers to wait for the *Bogatier*. The governor of the settlement has given us half his house. We have all squatted ourselves, however, in one large room—two of us only having sofas, the others being obliged to sleep on the floor. There are no beds; one fellow has got a bear skin, and another a Japanese mat,—the rest manage as best they can.

July 28th. The *Abreck* left yesterday, so that we are now quite alone in this barbarous place. Except the society of the commandant and wife who speak nothing but Russian, there is no one with whom we can converse. About a dozen sailors, with as many peasants and their wives—these latter all pardoned convicts—make up the rest of the community. The peasants live about a verst inland, where they have from 15 to 20 acres of land under cultivation—and we, on a hill overhanging the bay. There are two bays at Olga, an outer and an inner—the latter, round which the settlement is built, is perfectly land-locked and about a mile and a half in length by three quarters of a mile wide. Our resources for passing the time until the *Bogatier* comes, are:—a couple of guns, a boat to pull round the bay, a small collection of books, four dozen of wine—and a few packs of cards.

July 29th. Got a horse and rode into the country for about ten versts—The country through which we passed was very beautiful—lovely green hills crowned with timber—valleys

open and free from any impediment to cultivation. Reached a few native houses and had a sort of conversation in broken Russian with the master, a tall good looking Manza. The interior of the house was neat and comfortable—construction of the fire-place rather peculiar. A square dais or platform of masonry about two feet high by four or five wide extends nearly the whole length of the house. At one end of this is the fire-place, from which a tube or channel runs longitudinally under the dais, and after passing beneath the wall of the house, close to the foundation, suddenly turns upwards and forms a regular chimney on the outside. By this neams the smoke is all utilized and made to heat the dais on which the inmates sleep at night and lounge during the day. Several bear and stag skins were spread over it which were used both as bedding and covering. Many junks of dried venison and some sacks of rice were to be seen, the house was as comfortable in fact as the houses of the Russian peasants—though not so substantially built nor so warm in winter. Two or three Taza cabins stood near the house of the Manza —wretched abodes built of reeds and long grass. Two women and a man were lounging about them. They were neither clean nor good looking and their huts were closs and stifling.

July 31st. This place is fearfully infested with insects and all sorts of creeping things. Mosquitos and other more dangerous insects, at night—and millions of the most tormenting flies during the day. We have no mosquito curtains of course—such a luxury was never seen at Olga.

Aug. 4th. It has been raining for several days, so that we get up to our knees in mud and slush when we leave the house. Some of the fellows have been out to shoot once or twice, but returned with only a few small birds and a solitary duck. No fishing to be had at this season of the year. Yesterday we were amused by the arrival of four or five natives, both Manzas and Tazas, with venison and wild boar for sale. Our host, who acts as caterer for us, bought a side of vension weighing over forty pounds for a dollar—and twice the quantity of wild-boar for three.

Aug. 7th. We visit almost every day the houses of the peasants. The men are good looking and have very little of the appearance of convicts about them, but the women on the contrary, are coarse, ill-looking and forbidding. These Russian peasants are the laziest men imaginable. We never enter the village without finding some of them lounging about their doors, wasting their time smoking and drinking. They are true Asiatics in indolence, and Russians in their passion for vodhka. As for the women—they are hardly the class suited to increase the population of the country.

The houses of the peasantry are rather comfortable and clean, if we make allowance for the thousands of insects that are generated in the crevices of the wood. With their liberty and freedom from official interference, the peasants are better off, in my opinion, than they would be at home. The single apartment, which is kitchen, sleeping room and all, in these houses, is invariably boarded—the walls either white washed or papered with the leaves of books. I was surprised to find among the ornaments which decorated one of them, an old number of the *Illustrated London News* and a placard of Bass's Pale Ale! There is always a heavy, oppressive atmosphere in these houses, owing to the large Russian stove; and I cannot remain any time in one without sitting near the open window.

Aug. 24th. More boating and shooting, with occasional excursions several miles up the Gilbert river and a few short rides on horse-back. Shooting good in the interior, but not so, near the coast.

Have had several visits during the past ten days from Tazas. They come to sell furs and game, and buy lead. One of them had some *Ginseng* plants to dispose of. They navigate the bay and rivers that fall into it, in boats of from twenty to thirty feet long formed from a single tree scooped hollow. I have seen a whole family, husband and wife with a couple of children, in one of these open boats—their entire furniture consisting of a few skins, a matchlock, fishing spear and some dry birch-bark used as torches for their night fishing. Their fishing spear is a three pronged instrument with a double barb on each prong. Was down yesterday at the jetty when a Taza boat arrived. There was on board a family consisting of husband, wife and child. The woman exceedingly good looking—pretty in fact, with a rich olive complexion, regular features, brilliantly white teeth and large pensive, dark eyes. Never saw a better looking Tartar woman—she was almost beautiful.

Sept. 5th. Have been to visit the native village again where I met a Manza. He repeated some words in English and counted up to thirty with considerable facility. He had Chinese ink and brushes with which he was writing when we entered, but we were unable to make out from him what he had been writing. Went into another house and found the owner softening in hot water the hard tendons at the roots of a stag's antlers. He was converting it into a gelatine which is much prized all through Manchuria.

NOVEMBER 29TH.

In the paper read before the Society on the 5th September, the writer gave his experience of the Russion settlements in

Southern Manchuria. In the present, he proposes to advance much further to the north, to the town of Nicholaiëfsk on the Amoor river, and again off the mainland to the posts of Kusunai and Dui on the island of Saghalien. The subjects have much in common—the Russian settlements both North and South, in Manchuria and in Saghalien, being all to a certain extent alike, founded and established after a particular type, and occupied by similar classes of men; but at the same time a new field of enquiry is opened and many new questions of interest are suggested. This is particularly the case with that part of the subject which refers to the settlements on Saghalien where the Russians are circumstanced very differently from their compatriots on the mainland, and where they are brought into contact not only with the aborignal races of the island but with the Japanese. They have only two settlements on the whole island—viz. Dui, where there is a considerable body of convicts who work the coal mines, and Kusunai situated so low down as 48° N. lat. where the Russians and Japanese meet and have two small out-posts on the frontier line. It was my good fortune to visit these places in the summer of last year on my way to the Amoor, and though in neither was my stay very long, yet it was sufficient to enable me to see what the Russians were doing, and how they conducted both their own affairs and their relations with the natives and Japanese.

KUSUNAI:—On the 8th of August 1863 I left Olga, and after two days with calm weather and clear skies I found myself before Kusunai, Lat 48° 35 N. and 142° E. The Russians first settled on Saghalien in 1853, when Dui and the Muraviev post in Aniva Bay were occupied. During the war they found it necessary to abandon both of these settlements but shortly after the conclusion of peace in 1856, Dui was again occupied, and a garrison of about twenty men sent to Kusunai. On some grounds, which have not transpired, the post in Aniva Bay was not re-established; so that Kusunai is now the most Southern of the Russian possessions on the island. It is an open road-stead, utterly unprotected, and exposed to all gales from S. E. to N. We dropped a single anchor about a mile and a half from shore, and from shipboard we had an excellent view of the little settlement. It is prettily situated on a rising ground some two hundred yards from the beach, and is backed by a range of beautiful green hills clothed with maple, birch and oak, and with occasional patches of long rank grass on their slopes. The houses are similar to those we have already seen on the coast of Manchuria—black buildings of one story high, with white sashed glass windows, and a wooden roof painted red or green. That of the officer in charge of the post stood

out prominently on the summit of a hillock, and beside it a flagstaff from which floated the Russian tricolor.

Shortly after casting anchor a party of us went on shore with Admiral Popov, where we were met by the commandant and about twenty soldiers whom he had under arms to receive us. A group of six or eight natives, who formed in regular military line, stood a few yards apart, looking curiously at the novel spectacle. They were stout, strongly built fellows of about the middle height, with the long hair, flowing beard and regular eyes of the Aino. Their costume was after the Japanese fashion, but some wore Russian boots and a few had old military uniform caps which they removed on our approach. They saluted us as we passed after the manner of Russian peasants, and looked frightened at the crowd of strangers in gold lace that surrounded them.

There are altogether only six or eight houses in Kusunai, that of the governor hardly differing from the others in furniture or appurtenances. The barracks, bakehouse and bath-rooms which we visited were clean and orderly, but the men seemed to feel their loneliness and isolation more than their brethren on the mainland, and several of them questioned the officers as to when they were likely to be recalled to the Amoor. They have certainly a dull monotonous time of it there—they are not agriculturists, and consequently have no interest in the cultivation of the soil, but are a purely military post, thrown on their own resources for occupation or amusement nearly all the year round, and having hardly any connexion or communication with the rest of the world. There is no line of posts from Kusunai to the Amoor in winter, as is the case with the settlements in Manchuria, and the vessels on the coast very rarely visit the place in summer.

The little garrison had been left for nearly two years previous to our visit without receiving either money or supplies, and they were at one time so hard pressed for provisions, that the men were obliged to be put on a short allowance of black bread. Tea or sugar they had not tasted for ten months, and the only thing in the shape of spirit they could procure was a little saki from the Japanese.

The harbour of Kusunai, as has been already remarked, is an open, unsheltered road-stead; a small stream which runs in a S.W. direction and falls into it is almost the only break on the coast line. This stream is the boundary between the Russians and Japanese in Saghalien. The former occupy the northern or right bank of the river about half a mile from where it falls into the sea, and the latter have located themselves lower down on its left bank. Opposite their settlement, which is nearer the mouth of the river than that of the Russians, they had erected weirs, and so effectually dammed

the river across, the Russians were unable to get a single salmon in their part of it. The Russian officer in charge had frequently remonstrated and threatened, but remonstrances and threats were useless:—the Japanese said that they were the first comers, the rightful owners of the country, and that to them belonged exclusively the privilege of fishing in the river. The Russian officer in command of the station was unwilling to push matters to an extremity and come to open hostilities, although he might have done so with very little risk; and the Japanese gained their point for the time. Matters remained in this way up to the period of our arrival. When the case was explained to the Admiral, however, he made but short work of it. No interpreter being to be had at the time, it was of course impossible to argue or reason on the case with the Japanese; he therefore ordered a boat's crew to break down a passage in the dam, and gave directions at the same time to the Russians not to allow them to rebuild it. I could not avoid admiring the coolness of the polished, two sworded officer, a veritable Yakoneen, shaved in the most approved fashion, during this trying scene. He seemed to look on the work of the boat's crew with the utmost indifference, though I have no doubt that he was vowing in his own mind at the time to be even with the Russians on some future occasion.

The Japanese settlement at Kusunai consists of about half a dozen houses, built in the Japanese style, though somewhat more substantial than the houses in Japan, in order to resist the severe cold of the winter season. The precise number of their garrison I am unable to state; it may be safely set down, however, as within ten or twelve, in addition to which we may add an equal number of natives employed as servants. While we were parleying with the officers on the right of fishing the river, we were surrounded by six or eight of these latter. They were all pure Ainos, with broad faces, small eyes and long black hair divided in the middle. Two of the number were particularly noticeable and contrasted strongly with the others. They were mere youths, of what sex I could not determine; they stood somewhat aloof from the crowd, and seemed rather afraid to approach us. Their immense heads, broad, bloated features, and large, dark lustrous eyes immediately characterised them as the very exaggeration of the Aino type. There were no women in the group, and if there were any in the houses they were not visible.

We have just seen with what jealous watchfulness the Japanese at Kusunai look after the Russians, and how tenaciously they adhere to their claims. They yield their ground foot by foot and inch by inch, and submit to necessity only

when they are absolutely obliged to do so. They are precisely the neighbours for an aggressive nation like Russia. Their ingenuity in creating obstacles and impediments stands in the place of physical force, and gives them a means of check-mating the Russians, so long as there is no resort to arms. This is the only alternative the Japanese have to dread; the Russians could at any time drive them out of the island if they wished to fight, but they are not prepared to do so. There are diplomatic difficulties in the way; the treaty which opened Japan to the nations of the west guaranteed the integrity of Japanese territory, and Russia would have to answer to more governments than one for any infraction of its terms. Even as it is, however, the Russians look upon the whole island as really theirs. I have hardly ever met one of them who does not so consider it, and in a semi-official map of Oriental Siberia in my possession, published in 1861, the whole of Saghalien is coloured as if it were Russian territory. That it will eventually be so, there can be no doubt, and I, for one should not regret the change. If there is to be any amelioration brought about in the lot of the natives, especially in that of the interesting race of Ainos, it can only be accomplished by the Russians. Any one who is at all acquainted with the history of Northern Japan, and the grinding tyranny to which the Ainos are subjected, must see that there is no hope from the Japanese. Centuries of wrong have raised an insurmountable barrier of hate and fear between the two races, and the Japanese of the present day, instead of trying to remedy these evils, only perpetuate and augment them. The 'Aino in their eyes is but a dog and he is treated little better than one.

Of the interior of Saghalien but very little is known. The northern part of it was partially explored by Leopold Von Schrenck, who crossed the island near 51° North latitude, in a sledge drawn by dogs, in February 1856. The southern part is still a terra incognita. The Russians have no settlements in the interior, and it would appear, from all that can be learned on the subject, that the Japanese are similarly circumstanced. According to Schrenck, as quoted by Ravenstein, Saghalien is occupied by three different races—the Gilyacks in the north, the Oroke on the east coast, and the Ainos in the south. Of the Gilyacks we shall hear further on:—the Orokes I have never come in contact with, they are said to be a Tungusian race, and are the only people on Saghalien who domesticate the rein-deer; they are a purely Tartar tribe, however, akin to several on the mainland, and with the oblique eye and high cheek bones of the Mongol. With the Ainos it is quite different. These are possibly the most curious and interesting people that Europeans have

hitherto come in contact with in the east. They are, if I may use the expression, a European people surrounded on all sides by the oblique-eyed races of central Asia, from whom they essentially differ in origin and physical characteristics. The following description of their personal appearance by Ravenstein, is extremely accurate:—"The head is large, and the face broader and more rounded than with Europeans. Their countenance is animated and agreeable, though destitute of that regularity and grace which in Europe are deemed essential to beauty. They have large cheeks, a short nose rounded at the tip, with very broad nostrils. Their eyes are of moderate size and lively, for the most part black, though occasionally blue may be seen. The eyebrows are bushy: the mouth of the common size and the voice strong. The skin is of a tawny colour. It is however the quantity of hair which distinguishes these savages most strikingly from their neighbours and the Eastern Asiatics generally. They wear moustaches and long beards reaching down to the middle of the breasts. The arms, chest, neck and back are very hairy; individuals, however, quite as hairy may be found in Europe."* I have occasionally seen them in the streets of Hakodadi, and they seemed almost as much an object of curiosity to the Japanese as they were to us. I always fancied that there was an expression of welcome in their lively intelligent faces when they met a European, as if they considered his presence as the dawning of a new era for themselves.

The origin and early history of this people is buried in much obscurity. They possess, I believe, no authentic records of their own, and their conquerors, the Japanese, preserved very little worth knowing about them. From these however it would appear that they were the aboriginal inhabitants of Northern Nipon, and were brought under the sway of the Japanese about the beginning of the 10th century. Owing to ill-treatment and other causes, they gradually disappeared from that island; and in the 14th century when the Japanese invaded Yeso they had either been driven northward or amalgamated with their conquerors. They are now wholly confined to Yeso and Saghalien, and chiefly occupy the interior of the former.

On the question of their origin, I do not feel myself justified in hazarding an opinion. My acquaintance with them was too slight and too restricted to enable me to form a theory on the subject or to substantiate any private opinion or surmise. M. Mermet de Cachon, late of Hakodadi, published a small pamphlet in Paris a few months ago, entitled, "Les Ainos" which will, I have no doubt, throw very much light

* Ravenstein p. 393.

on the subject. Only a few copies of M. Mermet's book have as yet reached China—none of which I have been able to see.

Dui:— Dui, 50° 46′ N. 142°.20′ E. is the second settlement of the Russians on Saghalien. It is 120 miles north of Kusunai and about 60 miles to the S. E. of Castries Bay on the opposite coast. It is at present the great coaling station of the Siberian fleet, and is the most populous of any of the places hitherto described. Steaming in from the sea-ward, the first object that strikes the eye is a range of hills 800 or 1,000 feet in height, which change their color from blue to green as the vessel advances; and next a neatly built, wooden light-house situated on a bold headland which overhangs the settlement and falls down to the beach in an abrupt cliff of five or six hundred feet in height. Then, as we approach nearer, the fir and larch, with which the hill sides are clothed, become clearly visible—the cliffs seem to rise higher and higher, the visitor strains his eye inland to discern some positive indication of a village or a human habitation, but nothing presents itself to his view except a few black patches and streaks on one of the cliffs, which might be the openings to coal beds or the stains of coal working. A few minutes later, however, we can distinguish a wooden jetty which runs for some twenty yards into the sea, and two or three long, low sheds filled with coal. Then, in a pretty little valley, lapped in between green hills, and forming a regular vista, we see a line of block houses.

The settlement is composed of twenty or thirty houses similar to those already seen on the coast of Manchuria, winding along the valley for about half a mile inland. They are pitched indiscriminately in all sorts of places, wherever the owners' freak or fancy suggested, without any regularity or system; a plot of ground for growing vegetables is attached to each, and a net work of foot-paths leads from one house to another. The barracks which we visited were rather comfortable and in fair order, but badly ventilated. The appearance of the soldiers was not prepossessing, but their rifles and side arms were kept clean and in good order, and they themselves, if not very neat in their *personnel*, were certainly stout, healthy fellows. Few of them appeared to have suffered from bad health or the severity of the climate, and in the hospital the cases of sickness were not worth mentioning.

After visiting all government buildings, such as the barracks, store houses, hospital etc. the house of the *Nachalnick posta*—chief of the post, or governor, next claims attention. It resembles in all essential particulars the houses before described as occupied by Russian officers in these inhospitable regions. The personal comfort of the occupant is not

by any means carefully looked after, and the limited means of amusement which I before indicated, are here still more circumscribed.

The population of Dui in July 1863 consisted of about two hundred souls. Of these a hundred and twenty were convicts, and the remainder composed the garrison. The convicts were all condemned to forced labour in the coal mines, some for life, and others for periods varying according to the magnitude of their offences. Soldiers superintended them, and kept them to their work during the day, and in the evening they were dismissed to their homes which lay sprinkled over the valley. No guard was maintained over them from then until the following morning, and at such times, as well as on all Sundays and holidays, they enjoyed comparative freedom and had full liberty to occupy or amuse themselves just as they pleased. A few of the worst cases however were kept under a somewhat stricter surveillance and had less liberty accorded them. Many of these convicts were married or had formed unions with the female *condamnés* of the place, and they had their own little block houses round which were plots of ground on which they grew vegetables. Their lot, on the whole, was not a very hard one: they were subjected to little restraint, and if they were obliged to work as a matter of necessity they had the satisfaction of getting paid for it. Government had adopted this expedient, knowing that much more could be got out of such a body of men on the system of payment than by mere forced labour, which, even with constant supervision and watchfulness, is seldom remunerative. Two *kopecks* (about a cent and a half) is therefore paid for each *poodh* (36 lb. English) of coal brought out of the mines, and with this money the men support themselves—government supplying them with the staple of life, black bread, at cost price. Meat and vegetables they procure as best they can. This system had worked very well up to the time of my visit—there was far more work done than could have been possible on the principle of forced labour, and the expenditure was but very triflingly increased. Add to this, that a healthy social life was thus infused into the convicts; they had no incentives to idleness; industry was rewarded, and every man felt that he had a definite goal before him. At the time of my visit last year, ordinary labourers were able to bring from 30 to 35 *poodhs* of coal a day out of the mines, for which they were paid from sixty to seventy *kopecks*—about two shillings English—and hard working men have occasionally made as much as a ruble—3s. 2d. English—by their day's labour*.

* The average, however, is much lower than either of these—something about 1s. 6d.—a result that is mainly due to the innate laziness of the men themselves.

Provisions and clothing are exceedingly dear at Dui, owing to the great difficulties of transport, and but few are able to save any money out of their earnings.

Out of the 120 convicts settled at Dui in 1863 there was not a single instance of one of them having been sent there for a political offence. They were all criminals; they had been sent to Siberia, some for robbery and other such offences, and some for murder. Capital punishment has been abolished in Russia, and the penalty for murder is banishment to the mines for life. There are many such offenders at Dui, and the governor occasionally finds it difficult to manage them. The houses of many of the convicts are neat and comfortable—and the owners in some cases made quite a little independence. They have scraped together a small capital at first by hard work in the mines, and afterwards increased it by trading with the natives principally in furs, which they receive in exchange for Russian merchandise. These furs we found somewhat dearer than those on the coast of Manchuria, owing of course to the proximity of Nicholaiefsk where there is a good market for them.

The coal of Dui is of a very fair quality and the beds are said to be of unlimited extent. All the Russian steamers of the Siberian fleet use it, and several of the engineers whom I have spoken to on the subject pronounce it much superior to any coal hitherto found on the eastern coast of Asia. On our return from the Amoor in the gun-boat *Abreck* we took a supply on board and were able to steam nine knots and a half per hour, when we could make only about eleven and a half with English coal, and not more than seven with Japanese. The Russian government are at present anxious to establish a market in China for its sale; and Admiral Kassakevitch, Governor of maritime Siberia, was empowered at the beginning of this year either to sell it at the rate of $5 per ton or to let the whole mines for a certain period.

The native race in and around Dui, and on all Saghalien from the 50th parallel north, is Gilyak—the same people that we find round the mouth of the Amoor on the opposite coast. There can be no doubt about the origin of this tribe; their flat noses, high cheek bones and small oblique eyes at once tell the tale, and class them as pure Mongols. It is strange, however, that they have a tradition of their own which points, not to central Asia, as the cradle of their race but sea-ward towards Saghalien. M. Fanclet, a French missionary, tells me that whenever he asked the Goldi, Manguns and other Tunguze tribes amongst whom he lived, where they came from—they invariably pointed *up* the river, indicating a land to the westward; but that when the same question was put to the Gilyaks they always

pointed *down* towards the sea. The Gilyaks are the dirtiest and most ill-favored of any of the Mongol races along the Amoor, and their houses, which are miserable sheds constructed of fir bark, are described both by Tilley and Ravenstein to be wretchedly filthy dens. Those which I saw were mere hovels in which the whole family were huddled indiscriminately together, the sexes living promiscuously. They are said, however, by the Russians, not to be an incontinent or debased race. Their notions of right and wrong, of *meum* and *tuum* are, it is true, rather hazy—and if I could believe the Russians whom I met on Saghalien and the Amoor, they are the most vindictive and unforgiving of the Mongol tribes of Eastern Asia. An injury is never forgiven by them, and a wrong is only to be blotted out in the blood of the wrong doer.

The Gilyaks dress something after the Chinese style;—they do not shave the head, but train the hair backwards into one or two plaits which fall on the shoulders. They subsist chiefly on fish; but in the winter they support themselves by hunting, and carry on a barter trade in furs with the Russians and the neighbouring tribes on Saghalien and the mainland. From the Russians they get woollen cloths, lead, powder and spirits. For these commodities they exchange sable, fox and squirrel skins. The sable is bought from the Gilyaks for three or four rubles, and forwarded to St. Petersburg to realize from ten to fifteen. This trade is principally in the hands of the American and the Amoor companies, and with proper management very much might be made out of it, but it has not proved over lucrative, and neither company has much to boast of its commercial success on the Amoor.

With regard to the approach to the Amoor, and the appearance of, and mode of life at Nicholaïëfsk, I cannot do better than transcribe a few pages from a journal which I kept at the time of my visit.

July 2nd. This morning at 2 a.m. we left Castries Bay with its bold cliffs and steep headlands. Today we are steaming slowly northward through the Liman or narrow straits that separate the north-western shore of Saghalien from the mainland. The shores on either side are quite visible—on the right, the low, sandy shore of Saghalien—and on the left the abrupt, hilly country that intervenes between the lower Amoor and the Straits of Tartary. Neither looks very inviting from ship-board. The coast of Saghalien is a level sandy flat with a range of mountains that looks like a blue mist, far away in the interior, and the opposite mainland a bleak-northern looking country, the hills covered with dark-hued spruce and pine,

and without the slightest trace of a cultivation or a human dwelling.

Outward we steam, carefully feeling our way through the intricate navigation of the Liman, for the strait is shallow and the fair-way for ships tortuous and but imperfectly buoyed. We have an experienced Russian pilot from Castries Bay on board and the best charts, but, notwithstanding these advantages, we have been three times aground—at no time, however, longer than fifteen or twenty minutes. Fogs are of unusual frequency in this place and exceedingly hurtful to navigation.

July 3rd. Anchored before Nicholaiëfsk. We had expected to arrive early in the forenoon of yesterday; but were disappointed. The anchor was only dropped at 9 a.m.

The country round the mouth of the Amoor is dreary and uninviting in the extreme. Nothing meets the eye but gloomy forests of larch and Ayan pitch pine, which in many places have been burned down, and present a charred, blasted appearance. From thence upwards to Nicholaiëfsk there is nothing worthy of observation, except a few Gilyak villages and the fortress of Chnerah which was begun on a very large scale by the Russian Government in 1861 and carried on since then at an enormous expense.

NICHOLAIEFSK:—the capital of Maritime Siberia—is a town of 6,000 or 7,000 inhabitants, 4,000 of whom are military. It is pretty well laid out on a high plateau on the left or northern bank of the Amoor, with all the streets running in straight lines parallel or perpendicular to the main street which fronts the river. The houses are block buildings, for the most part one story high, and are separated from one another by gardens or parterres on which a few hardy shrubs are grown. The streets are unpaved and very badly kept, while ruts and the stumps of trees are to be met in the most public thoroughfares, rendering locomotion in a carriage far from safe.

July 6th. Visited the principal government establishments such as the military and naval barracks, the hospitals and the government school. I found the barracks comfortably built and in tolerable order, but the atmosphere in all close, and reeking of garlic. It was the siesta time of the soldiers—from 11 A.M. to 1 P.M.—and several were lounging about smoking and talking. They seemed a rather tatterdemalion set of fellows, with torn clothes and only the pretence of a uniform, but stout and healthy and apparently capable of enduring any amount of hardship, and their arms were in all cases well kept. The hospitals are neat and orderly; they are divided into dormitories with a double row of beds in each, and at the foot of every bed a placard is put up with

the patient's name and disease.

There is, or ought to be, a telegraph between here and Mariinsk,—but although it was begun three years ago, it is still *in statu possibilitatis*. It is like everything Russian here; brilliant projects and grand schemes are being perpetually canvassed and accomplished on paper—but their accomplishment is confined to paper. This affair of telegraphic communication from Nicholaiefsk up the Amoor river and on to Irkutsk and St. Petersburgh is an instance—the fortress of Chnerah is an instance, and a railway across the whole continent of Asia from Europe is another instance. The telegraphic line was begun by the government in 1861, and was to have been completed in some four or five years, but I have not much hesitation in saying that it will not be in working order in ten. At the time of my visit to Nicholaiefsk last year, only 120 versts—80 miles—from Nicholaiefsk to Mikhailovskoi were completed, and that short distance was hardly ever in working order. The fortress of Chnerah is a still more notable example of what I say. This was begun in 1859 on a very large scale, and the Russians said great things of it and looked upon it as the Sebastopol of the east. Military engineers were sent from St. Petersburgh to superintend its construction, two thousand convicts were sent down the river to build it, and in three years some 3,000,000 rubles—about half a million sterling—was spent on the work. The result has been that a few weeks before our arrival orders suddenly came from St. Petersburgh to stop the works, and it was found that the labour of 2,000 convicts for over three years was perfectly useless and that half a million of money had been utterly thrown away!

I am far from denying, however, that the Russians have done very much on the Amoor. On the contrary, I believe they have done more than any other European Power could have done under the circumstances. The mere fact of their having some 50,000 European settlers in a country so remote as Oriental Siberia, where ten years ago there was not one single representative of our civilization, speaks for itself. Then, they have opened up a country hitherto unknown to Europeans, and established steam communication on a river which is navigable for vessels of light draught 1,400 miles inland. They have located a force of about 15,000 military in the country, have constructed strong batteries and established a dock yard.

The club house at Nicholaiefsk, although not entitled to rank higher than a second class European tavern, is called in Russian "The assembly or club of the nobles of Oriental Siberia." Living at the club costs three rubles a day—about $2.25. During the summer it is not much frequented, but

in the winter *soirées dansantes* are held twice a month. Twenty or thirty ladies assemble on these occasions and the time is pleasantly passed with dancing and cards.

The harbor battery, Fort Nicholas, mounts about a dozen guns. It is a simple earth work some five feet high and has perfect command of the river which is over a mile wide opposite the town. Fort Constantine, which is on an island in the middle of the river, is still more heavily armed.

The dock yard is a rather extensive establishment, presided over by an American named Barr who has become a Russian subject. Over a hundred people are employed in it, and they were able at the time of my visit to construct engines for the small steamers on the river. The first steps were also being taken to establish a foundry for casting guns. The machinery in the place was all American.

From what I have seen of the foreign residents here, they are not very well disposed towards the government, or content with the administration of affairs in commercial matters. There are too many restrictions, and too much direct interference, they say, on the part of the authorities. Trade is not allowed to flow on in the channel which it naturally makes for itself,—but is being continually meddled with and diverted from its proper course.

There might be a large trade done in timber, as the middle Amoor is magnificently wooded, but the government has prohibited its export. One result of this is that all articles of import are extremely dear—the few ships that do busines with the place being obliged to go away in ballast, and freights are in consequence very high.

The value of the trade of Nicholaiefsk has varied very considerably during the past few years, but from £100,000 to £120,000 may be taken as a fair annual average. It is principally in the hands of San Francisco merchants, and consists mainly of wines, spirits, sugar, tea, coffee, glass, cutlery, crockery, clothing and all the other articles necessary for the consumption of a considerable European community. The vessels engaged in the trade leave San Francisco early in the spring, touching at Hakodadi on their way, and manage to enter the Amoor about the end of May when the ice breaks up on the river. The first vessel that arrives is expected to reap as good a harvest, comparatively speaking, as the first tea ship that reaches England from China. All the merchants at Nicholaiefsk do both a wholesale and retail trade, and the cargo they receive is in part forwarded into the interior by the small steamers which ply on the river, and in part retailed in their own stores. Of the steamers on the river, two or three belong to American

houses (there is not one English merchant at Nicholaiefsk), one or two to Mr. Sühdorf, a German merchant, and the rest are government property.

It takes these vessels from 20 to 25 days to ascend the river as far as Stretinsk—a distance of nearly 1,500 miles inland—but only 12 or 15 days to return. This is explained by the fact that the current of the Amoor is very strong, running some 4 knots an hour at Nicholaiëfsk, and the tides in the river are hardly perceptible. These steamers do a fair passenger and cargo trade, but from what I heard from Mr. Sühdorf on the subject they were not paying. According to him, there were too many of them, and the summer was too short to allow of their making a sufficient number of runs. The navigation of the river is open about the 20th of May and closed about the middle of November, and during that time the river steamers can make only four or, at the very utmost, five trips up and down.

I am rather surprised to learn that the Russians have hitherto taken no steps to convert the native races that have come under their rule. There are no missionaries amongst them, and all the priests that I have seen here are for the exclusive service of their countrymen. The French, however, have not overlooked the field, and several of them have made their way from Peking and Shanghai through Mongolia to the Amoor. Amongst others *Père Franclet*, a Lazarist missionary, who was lately in Shanghai but is now in Sze-chuen.

July. 19th, Have been several times at the stores of the "Amoor company" to buy some things, but can never get what I want. This company started originally under very favorable auspices, but has now almost fallen to pieces.

The Russians have done very much to improve the country round Nicholaiëfsk, but it still remains bleak and desert like. The town is surrounded on all sides by dreary patches of forest land whence the timber has been cut, but the stumps still remain in the ground, and being from a foot to a foot and a half in height are exceedingly inconvenient to the traveller either on foot or on horseback. There is hardly anything in the shape of cultivation to be seen in the neighbourhood, if we except a farm of the governor's and a few acres of cultivated land at a village some five or six miles distant. Oats, barley, rye and some vegetables are the only productions.

There are no roads in the neighbourhood, at least nothing that we would characterize by that name, and only foot paths lead from one settlement to another. The great highway is the river—on the banks of which, or only a few

miles inland, all the Russian settlements are situated, and this is traversed by steamers for four or five months in the summer and by sledges during the winter. The sledges for the wealthier classes and for the government mail which arrives fortnightly from Europe, are drawn by horses and dogs. Throughout the whole course of the river there are Cossack stations 20 or 30 versts apart, and at these stations relays of horses are kept, and travellers can get a few necessaries such as tea, bread and eggs during their winter journeys.

ARTICLE VII.

RETROSPECT OF EVENTS IN THE NORTH OF CHINA DURING THE YEARS 1861 TO 1864.

By R. A. Jamieson Esq.

After the political storms which had disturbed the current of European intercourse with China during the years 1858, 1859 and 1860, the year 1861 arose upon renewed friendly relations, based on a foundation far more durable than any which had formed the ground work of the hollow alliances previously made between the central Flowery land and the nations of the West. The exclusive policy, which had for so many years obtained in this country, was finally proved untenable, and a tacit acknowledgment of the superiority of European civilization was forced from the most bigoted native conservatives. The means by which this desirable consummation was brought about are well known. Constant misunderstandings, arising from false representations made to the court of Peking by unprincipled local mandarins, rendered a change in the system of official intercourse absolutely necessary, and the comparatively trifling nature of those causes which in the first instance led to hostilities was eagerly seized by the foreign representatives as a pretext for closing a fruitful source of ill feeling. The absolute necessity which existed for direct and unrestrained intercourse between the representatives of the treaty powers and the Chinese central authorities had been recognised, and instructions were accordingly issued by the home governments to the effect that permission for the foreign ministers to reside at Peking should be made a *sine quâ non* in any understanding that might be arrived at. The conscientious yet uncompromising stand taken by the European ministers, supported by a display of overwhelming physical force, brought about the results in which we now find valid reason to rejoice. It were vain to suppose that the temper or character of the Chinese official mind has been altered by these events. The local mandarins are affected solely by passing circumstances, and act either under definite instructions from Peking or in accordance with great general principles laid down for their guidance. It will, therefore, abundantly appear that continued residence at Peking, or,

in other words, the continuance of direct intercourse between the European ministers and the Crown is necessary to the stability of official and commercial relations at the ports, and to the safety of foreign life and property.

The year 1861, although, as I have said, opening on renewed professions of mutual friendship between European nations and the Chinese government, witnessed at its commencement a state of confusion within purely native circles almost unprecedented except in the history of this particular country. Large and most important portions of crown territory were in open rebellion, whilst the venality and utter powerlessness of the provincial officials were becoming too apparent to escape notice, and so serious as to threaten the total wreck of the empire. The debauched ruler of the myriads of China had retired to the recesses of the mountains, and ensconced himself within his luxurious palaces at Jehol, where, although the victim of disease and disappointment, he devoted the latest hours of a miserable life to the pursuit of every species of vice. Such a close, in truth, accorded well with the manner in which the earlier portion of Hien Fêng's reign had been spent, and with the horrors which disgraced the latter portion. The inhuman slaughterer of unoffending foreign prisoners could not have expiated his crime by any suffering too severe or by any fate however appalling. His death (22nd August 1861), therefore, accompanied as it was by all that is most horrible to an autocratic prince—powerlessness and disgrace—was a penalty far more lenient than might have been expected at the retributive hands of justice. Let us drop the curtain on the closing scene of the reign the style of which was *Universal Plenty*, and turn to the circumstances which attended the the accession of the present Emperor under the style of *Good Luck*. It was soon made manifest that the men who surrounded the throne and had been compelled by dire necessity to profess compliance with the newly inaugurated policy, were in reality opposed to foreigners, and desired nothing more than a return to the old exclusive system. So far did they carry this feeling that serious apprehensions were entertained lest the reins of government should be wrested from the hands of those who had but recently assumed their guidance in chief. However, on the 2nd December 1861, a decree was issued, setting forth the high crimes and misdemeanors of which the Council of eight appointed by the late Emperor had been guilty, and ordering a report on the degree of punishment to be awarded to Tsai Yuan 載垣, Prince of Yi, Tuan Hua 端華, Prince of Chên, and Su Shun 肅順, one of the members of the grand secretariat. On the same day an order was given for the degradation of the two

former, and the arrest of Su Shun. On the 10th appeared Tsai Yuan's, Tuan Hua's and Su Shun's death warrant, and an order for the degradation of the other members of the council. The decree to which I refer was as follows:—

CONCERNING the memorial presented to US by the Clan Court, the members of the grand Secretariat, the six boards, the nine courts, the Hanlin college, the Board of control and the Board of Censors, relative to Tsai Yuan and the other offenders, paying US to act in accordance with the statute which prescribes the punishment to be inflicted on the worst form of revolt, and to sentence them to be cut in pieces :—

WE, therefore, now (as before) issue a decree summing up the charges against Tsai Yuan, Tuan Hua and Su Shun, viz. their mutual assistance in treason, their attempt to obtain independent authority and, lastly, their general insubordination. When His late Majesty died, these men formed themselves into a council for the administration of a Regency, although in the latest directions given by His Majesty, no mention of a Regency was made, but there was simply an oral order given to Tsai Yuan and the others to the effect that WE were to be chosen as successor to the throne. Disregarding this order, and acting independently of, and even occasionally in opposition to the Empress Dowager, they arrogated imperial power to themselves, and never sought for an expression of OUR will. Thus when Têng Yuan-chên, one of the board of Censors, presented an elaborate memorial on the subject of a Regency under the Empress Dowager, these men modified the reply which WE directed, and even insulted Her Majesty by asserting that to them it belonged to give US council, and that to submit reports to the Empress was a mere empty form. The sound of their voices was like the yelping of angry beasts, and they showed most clearly that they held their sovereign in no veneration. While thus insulting US, they endeavored to prevent the princes of OUR Royal house from presenting themselves before Her Majesty, stating that that august lady had no right to summon them to an audience.

Besides these general charges, WE find that Su Shun has been guilty of gross disrespect. This man was so oblivious of all the principles of right and law, that without any authority, he in an evil moment seated himself in the Imperial chair, and, moreover, used no ceremony when entering and leaving our apartments. When at OUR mountain residence, he went so far as to use for his own personal convenience, vessels &c. designed for the Emperor's use, and that only within the palace. Yet when these things were wanted they were fonnd in use by him, and he, moreover, opposed their removal from his residence. Not satisfied with this, he formed the design of causing a quarrel between the two Empresses, and to this end he begged for separate interviews with each, when he openly disparaged each to the other. These special charges have been communicated to the Inner Council by Their Majesties. They have now been drawn up in separate articles for communication to the council of Princes and Ministers.

The latter declare it to be their opinion that the penalty to which Tsai Yuan and the others have rendered themselves liable is no less than death by torture. The prime minister, Wen Hsiang and Pao Chien, Vice Presidents of the board of revenue, the president of the banqueting hall, the six princes (*mentioned*) the grand secretaries and the president of the board of punishment have been summoned, and asked whether the punishment awarded to these criminals might not be mitigated. But without a single dissenting voice they stated their decided opinion that Tsai Yuan, Tuan Hua and Su Shun had forgotten that they were subjects, and that their guilt admitted of no mercy. WE were deeply grieved when we discovered that men so nearly related to US had rendered themselves liable to a felon's death in the market place. But on a calm review of their conduct, their plotting against the public welfare as well as the insults which they heaped on OUR Imperial house seemed to evidence that they were ready not only to outrage US personally but also to sin against the very dynasty which WE represent. They, no doubt, believed

that the verbal commission given them by his late Majesty would carry them scatheless through any dangers in which their crimes might involve them. But they were ignorant that His Majesty never constituted them a commission of Regency. WE look reverently to His departed Majesty, and WE are at a loss to discover how WE may vindicate the sacred trust reposed in US except by making an example of these men. Otherwise WE should violate the precedents of the empire, and hand down a misleading example to thousands of generations. But although the gravity of their offences would warrant US in inflicting upon them the death decreed by the court appointed to try them, yet, taking into consideration that universally recognized nobility of blood given by a nearness to the throne, WE are disposed to mitigate their punishment. While, on the one hand, it were impossible to pardon them, on the other WE will spare them the shame of public exposure.

Wherefore, out of OUR unbounded clemency, WE direct that Tsai Yuan and Tuan Hua be permitted to commit suicide, and WE order the undermentioned officers to convey OUR Imperial will to the prisoners:—viz. Hua Fêng, the Hsu Wang; and Mien Shan, president of the board of punishment.§ This indulgence is extended in order to preserve the credit of the state, and not from personal friendship for Tsai Yuan and Tuan Hua. As to Su Shun, although the extravagance of his ambition renders his guilt greater than was that of the before mentioned criminals, and leaves US every excuse for carrying out the utmost rigor of the law, yet WE are unable to decree so ignominious a death, and WE accordingly order his immediate decapitation under the supervision of Jen Shan and Tsai Ling. Thus a warning will be given to others who may contemplate following in his steps. As to Ching Shao, who although related to US by marriage was privy to the whole transaction, and Mu Yin and others who have disgraced their office by making no struggle against the usurpation of power by these men, the following is decreed:—The Court appointed to try them, while it accounted Mu Yin the worst, as he had long been a member of the Great Council, recommended that they should all be banished to the uttermost limits of the Empire. Such is, indeed, what they deserve, and such should be their fate, but that they were put in a predicament by Tsai Yuan and the others, so that it was almost impossible for them to do right.

Wherefore, Ching Shao is deprived of his office of Grand Chamlerlain, but his hereditary rank of *Kung** will not be taken from him, neither will he be deprived of his dignity as son-in-law to the Emperor. His sentence of banishment is also remitted. Mu Yin is degraded from his post, and banished to the military stations beyond the frontier. The others are deprived of their offices, but their sentence of banishment is remitted.

RESPECT THIS.

On the 7th November, Yi Hsing 奕訢, Prince of Kung 恭親王, a younger brother of the late Emperor, was appointed Regent in conjunction with the two Empresses Dowager, and the style of the new Emperor was, on account of a verbal difficulty, changed from 祺祥 *Chi Hsiang*. "Good luck," under which he had ascended the throne, to 同治† *Tung Chi*, or "Union in order."

Meanwhile, the friendly relations which existed between the Eastern and Western powers were being rapidly cement-

§ A Peking Gazette of August 31st 1864 announces that, in view of the signal services rendered by the ancestors of Tsai Yuan and Tuan Hua, the princedoms are to be revived, and bestowed on distant members of the family.

* Duke.

† The common use of the second character or *ming* of the new Emperor's name 載淳 *Tsai-shun*, was, in accordance with Chinese usage, on his accession, forbidden. On ordinary documents it is now replaced by the character 湉 The first character or *pan pei* may however be used as before.

ed by the conciliatory policy adopted by the representatives of France and England. The foreign ministers, once established at the capital, with a highroad to and from it kept open by means of the port of Tientsin, found themselves in a position so secure as to warrant them in relaxing somewhat of the severity with which the Chinese government had been treated. Accordingly the city of Canton (Kuang-chou fu) which had been held by the allies since the commencement of the war, as a security for the indemnity, was on October 21st 1861 formally handed over to the native officials. The successful working of the customs system at the various open ports, and the greatly increased revenue obtained by means of the foreign inspectorate tended to keep up the good feeling, and to exhibit the unspeakable advantages to be derived from friendship with the western powers. Thus, the overwhelming force which at first was necessary to break down the barriers which separated the inhabitants of China from their foreign brethren, was succeeded by an influence no less powerful in its effects, although far more in accordance with the laws of friendship and the rule of right. Glancing back now after more than three years of intimate political and commercial relations with the Chinese, we cannot but be struck by the far sighted policy which guided the negociators of the Treaty of Tientsin and Convention of Peking. The motto

> Est modus in rebus, sunt certi denique fines,
> Quos ultra citraque nequit consistere rectum,

was well appreciated by the English and French plenipotentiaries, and to that moderation which distinguished their actions, we owe our present satisfactory position. Had the Chinese been more hardly treated, had, in fact, the representatives of the western powers pursued their advantage to the limits to which they might justly have pushed it, the breach would have been made so wide that friendly relations might never again have existed. But with a force sufficient to crush the reigning dynasty at once and for ever, the foreign plenipotentiaries remembered mercy in the midst of justice, and refrained from annihilating a prostrate foe. Doubtless the immense responsibilities which, in view of the disorganized state of the country, would have weighed on the English and French nations, had the general anarchy been increased by any act of theirs, operated in favour of the existing government. I need hardly recall the horrors of the Taiping rebellion, which for many years had devastated the country, or lead my readers to dwell on the painful pictures which the history of its progress unfolds. When referring more particularly to the state of the Kiang-su province in the years 1862 and 1863, the consideration of the subject will be

forced upon us. In the meanwhile it will be sufficient to say that, at least up to the time of which we are now speaking, the insurgents had given no proof of an ability or even of a desire to establish any form of government by which the welfare of the country and the happiness of the people might have been secured. The friends of the Taiping movement have laid much stress on the fact that while the insurgent armies were advancing it was impossible to institute any form of general government. But the sad reality remains, that even where a district or a city was left in the peaceable possession of the Rebels, no local civil government was ever formed, but, on the contrary, martial law remained constantly in force, if, in truth, the exercise of arbitrary power by a few sanguinary tyrants can under any circumstances be qualified by the name of LAW. Thus, while the foreign relations of the established government were enveloped in clouds big with disaster, the internal administration was in a state of unparalleled confusion. The ancient capital of the Empire, the seats of learning and of commerce had been seized, and the great producing districts had been devastated by fire and sword. Even the literature, all honoured as it was, stood in imminent danger of being utterly lost in company with the grand historical monuments of bye-gone ages. The haunts of religion were desecrated by iconoclasts, whose only ambition was destruction, and whose evangelising machinery consisted solely of the axe and the spear. The scholar was driven from his books, the labourer from his toil, the ashes of the husbandman's vine and fig tree lay mingled with the smoking embers of his humble dwelling, and helped to form a pall to shroud his murdered remains. The singing of birds and the warbling of running brooks were alike hushed, and gave place to the howling of dogs amongst the ruins of the once peaceful hamlets.

The enormous resources of the Empire cannot be more forcibly illustrated than by a simple relation of the steps taken to resist the advance of foreigners into the country. That that resistance was a desperate one none will deny, and that it entailed a vast expenditure of life and treasure is at once manifest. It is difficult, therefore, adequately to realise the state of the interior, unless we examine the plain unadorned facts which from time to time came to light during the rebel occupation of the central provinces. However, when we do obtain a simultaneous view of the crippled state of the Empire, and of the extraordinary display of wealth and power which was at the same time made, we are struck with astonishment at what evidently might be done, were the natural resources of the country fully availed of, and the financial administration entrusted to competent and highly

principled men. Unfortunately the whole mineral wealth of China still awaits the pick and shovel of the adventurous of both hemispheres, and the general ignorance which prevails with regard to the simplest axioms of agricultural chemistry renders the produce of the fields far less than what might with the proper means be obtained. But doubtless a day will come when China, in spite of all opposition, will be truly opened, and its immense wealth poured at the feet of the outside barbarians. Judging by what has already been seen of western enterprise in the far east, an attempt to develop the resources of the land must be in the long run successful. But the history of foreign progress in countries rich in mineral wealth, is so disheartening that we can hardly without shuddering contemplate the sudden advent of thousands of our fellow countrymen in China.* In relation to that period, whenever it may arrive, the troubles which of late years have convulsed the country will be found to have exercised a beneficial influence. But for those troubles and the imminence of the danger which threatened the constituted government, foreigners could never have appeared to the Chinese in so favourable a light as that in which they now stand. Jealous of encroachment, the native officials possess so much confidence in the integrity of the western representative as satisfies them that no measure outside the provisions of the Treaty will be forced upon them, although, of course, very considerable influence may be used to induce their compliance. Thus, to take a familiar instance, the proposed railroad from Shanghai to Soochow was, as is well known, recommended powerfully to the local mandarins, but, when their opposition was found unbending, the project was, for the time at least, dropped. The line of telegraph from Shanghai to Wusung furnishes another example of tacit compliance on the part of foreigners with the prejudices and caprices of the unenlightened Chinese mind. We might have wrung from the central authorities a reluctant consent to both of these propositions, even without the slightest risk of bringing on any open demonstration of ill feeling, but I believe that by permitting western civilisation to make its own way, we are ensuring to the country a larger share of the blessings of that civilisation than if we in all cases compelled the adoption of such measures as to us appear wisest and best. For a new state of things cannot spring full grown into existence, and take the place of old established and time-honoured customs. We are not sufficiently acquainted with the minutiæ of the Chinese character or mental constitution to decide *ex*

*If the mines be opened it will lead to much that is nefarious, and troublesome. It must not be done. *Peking Gazette—Kea King* 19th year 1st moon, 20th day [Feb. 9th 1814]. Translated by Doctor Morrison.

cathedrâ on the fitness of such and such innovations. But so long as foreigners remain in the country, the influence now exerted will be sustained, and the obstacles which at present retard its progress will, like the block of stone adduced as an instance by the Roman poet, be worn away "by constant dropping." Thus the gradual advance of knowledge may aptly be compared to the gradual permeation of water through rugged and apparently impenetrable strata. Its progress is necessarily slow, but it is none the less inevitable, nor can it be hastened by any mere mechanical contrivance. But when, as years and cycles glide by, bringing with them the truths which are already current coin amongst the more favoured races of the west—truths, whether physical or moral, which are now unknown to the Chinese or neglected and despised by them, the whole civilised world, of which China will then form a part, will unite in ratifying the poet's dictum :—

> All truth is precious, if not all divine,
> And what dilates the powers must needs refine.

That many will look on this condition of the celestial empire as a vision never to be realised, I do not for an instant doubt. But we have already seen how, partly by physical force and partly by moral suasion, many of the old institutions of the country have been broken down, and foreigners allowed to share the privileges which before were considered the exclusive birthright of the sons of Han. Thus the right to live at the capital has been tacitly granted to missionaries as well as to officials, the customs at the open ports have been placed in the hands of foreigners, foreign officers have been placed in command of the Imperial levies, a foreign arsenal under the direction of a foreigner has been established at Soochow, and may before long be transferred to Peking, and foreigners both in the capital and the provinces are often invited to aid in the counsels of the native officials. With such an amount of progress to look back upon, it would bespeak a want of faith in the destinies of the world were we to despair of eventually welcoming China into the commonwealth of nations.

At the end of the year 1861 such was the position in China. The old restrictions had for the most part disappeared, and a healthy tone had been infused into the mutual feelings of natives and foreigners. The two civilisations were placed side by side, and a fair chance given to each by the Treaty stipulations. Much depended on the steadiness with which the reins of diplomatic power were held by the western representatives, and much also on the circumstances which might arise to prove the value of foreign assistance. The new start was a fair one, and opportunities were soon afforded

of exhibiting the immense advantage which the central government had gained by bringing the Lion and the Eagle into terms of friendship with the Imperial Dragon. Early in the year 1862, the Taiping rebels who had for some months left Shanghai in a state of fancied security, again appeared in the neighbourhood of the city, terrifying the officials, paralysing trade, and inflicting woes unnumbered on thousands of helpless villagers. The local government saw with painful distinctness that the revenues of the richest port on the seaboard of China would be lost to them unless the foreigner should draw his sword, and bring to the assistance of the effete Imperial army all the resources of brute force and of organising ability. Accordingly all the aid which we were in a position to afford was freely extended to the Imperialists. Their raw levies were drilled with arms and accoutrements, and taught to look with no terror on the tatterdemalion hosts which before seemed invincible. English and French troops were massed at Shanghai and in its neighbourhood, a powerful naval squadron was kept in constant readiness to operate wherever its presence should happen to be most needed, whilst the interior safety of the foreign settlements was watched over by a strong and enthusiastic body of volunteers. From January 1862 until May 1864 each month witnessed sanguinary contests between the insurgents and British troops, or between the insurgents and Chinese soldiers led by Europeans. Thus, the whole moral and physical influence of the western governments was thrown into the scale against the Rebels, and was lavished on the support of the Manchu rule. In the immediate neighbourhood of the foreign settlements, and far in the interior of different provinces, the prowess of foreigners was displayed, and the advantages of foreign drill and discipline tested. The result has been most satisfactory to the credit of the European name, and has afforded a selfish motive which cannot, so long as the recollection of the Taiping movement remains fresh in the minds of the government, be without its influence in determining the bearing to be for the future observed towards European states. I need not enter into a detailed account of the victories gained over the rebels. The tales are so alike in every material particular that one simple relation, accompanied by a list of actions might adequately represent the history of the campaign. Under Ward, Burgevine, Holland, Cooke and Gordon, it was still the same—an utter inability on the part of the insurgents to stand against the disciplined troops.*

*The following is a list of the principal actions which took place during the campaign in Kiang-su and Che-kiang :—

NING-PO	captured by the Rebels	Dec.	9th 1861
Kao-chiao	,, ,, (on the Woosung road)	Jan.	20th 1862
Chang-to-chao	,, by Ward (on the Putung side,)	Feb.	21st ,,

Before leaving the consideration of the decadence and fall of the rebel movement, it will prove of interest to many both in Europe and China to transcribe some few of the notices published in the *Peking Gazettes* with regard to the exploits of the foreign commanders and to the fate which befel some of them. First in order of time comes the gallant Protet, who lost his life at the attack on Nanjao, May 17th 1862. On the 11th of the ensuing month, the following edict appeared in the Gazette:—

Kao-chiao	captured by Ward and the Allies...	Feb. 24th	1862
Seaou-tang	,, ,, ,, (opposite Ming-hong)	March 1st	,,
Wang-ka-tze	,, ,, ,, ...	April 3rd	,,
Chao-poo	,, ,, ,, ...	April 17th	,,
Kah-ding	,, by the Allies	May 1st	,,
	(but recaptured by the rebels shortly after)		
NING-PO	captured by the Allies	May 10th	,,
Tsing-pu	,, by Ward and the Allies	May 12th	,,
Nan-jao	,, ,, ,, (Admiral Protet killed)	May 17th	,,
Tsing-pu	re-captured by the rebels	June	,,
Tsing-pu	,, by Ward	Aug. 9th	,,
Chê-kiang Yu-yau	capt. by the Ningpo contingent and the Al.	Aug. 11th	,,
Chê-kiang Tzu-chi	,, ,, ,, (Ward killed)	Sept. 20th	,,
Chê-kiang Feng-hua	,, ,, ,, and the Allies	Oct. 9th	,,
Kah-ding	re-captured by the Contingents ,,	Oct. 24th	,,
Shang-yu	(Ch.-kg) capt. by Cooke and Le Brethon ...	Nov. 20th	,,
Tai-tsang	attempted capture by Holland	Feb. 14th	1863
Che-kiang Shao-hsing	,, ,, by Tardif (Tardif killed)	Feb. 19th	,,
Che-kiang Shao-san	taken by Cooke...	March 21st	,,
Foo-shan	,, Gordon...	April 6th	,,
Tai-tsang	,, ,, ...	May 2nd	,,
Quin-san	,, ,, ...	May 30th	,,
Wo-kong	,, ,, ...	July 29th	,,
Fung ching	,, Macartney	Aug. 26th	,,
Seedong	,, ,, ...	Sept. 1st	,,
Fo-yang (Chê-kiang)	,, the Franco Chinese	Sept. 20th	,,
Pa-ta-chiao	,, Gordon & Bonnefoi	Sept. 29th	,,
Wan-ta-quan	,, Cooke	Oct. 20th	,,
Wu-lung-chiao	,, Gordon & Bonnefoi	Oct. 24th	,,
Wo-kong	relieved by Kirkham	Oct. 28th	,,
Si-kow	captured by Gordon	Nov. 1st	,,
Lu-kow, Wan-ti, Fu-tzu-kuan	,, ,, in the month of November		,,
SOO-CHOW	Surrendered	Dec. 4th	,,
Wu-sih	given up to Rohde	(about) Dec. 10th	,,
Ping wang	captured by Ching	Jan. 2nd	1864
Chang-chow	attempted capture by Li san-ta-jen ...	Jan. 10th	,,
Yih-shing	taken by Gordon	March 2nd	,,
Li-yang, Kin-tang	,, in the month of March ...		,,
	(The latter was soon after re-occupied by the rebels)		
Kia-shing	taken by Ching's men	March 20th	,,
Chang-chow	attempted capture by Gordon	April 27th	,,
HANG-CHOW	taken by the French Contingent	March 31st	,,
Wai-soo	,, Gordon	April 11th	,,
CHANG-CHOW	,, ,, ...	May 11th	,,
Tan-yang	evacuated (about)	May 18th	,,

(*Abstract*) Li Hung-chang announces that the foreign commanders in conjunction with the "Ever victorious army" have taken the rebel stronghold at Nan-jao, and that the French Admiral has been mortally wounded. Such is a resume of his report... ... ...The French Admiral daringly headed the advance as far as the moat which surrounded the works, and personally dashed into the midst of the rebels whilst he shouted to the soldiers to follow him. When however he was in the thick of the fight he fell mortally wounded. Now to US it seems that this heroic conduct on the part of the Admiral, whilst it adds new lustre to his fame as a French officer, is in itself a proof of the most exalted and disinterested valour. The particulars of the report have deeply moved US, and WE therefore order the aforesaid Li Hung-chang to appoint two high officers to act as OUR deputies in presenting an offering to the manes of this distinguished officer. WE also order that one hundred marten furs, and four rolls of Imperial satin be sent through the Prince of Kung to the family of the deceased as a mark of our consideration. Respect this.

Next we note the death of Ward, whose exertions in aid of the Imperial supremacy in the province of Kiangsu are well known to all my readers. As a reference to the note on page 150 will shew, he was mortally wounded at Tzu-chi on September 20th 1862. On October 12th the following edict was published:—

Li Hung-chang reports that at the recovery of Tzu-chi General Ward was mortally wounded, and he begs that an altar may be dedicated to him as a mark of OUR Imperial consideration.

Now Ward was an American who entered OUR service at Shanghai, and leading OUR troops recovered the city of Sung-kiang fu, where as well as at many other places he repeatedly routed the Rebels. These exertions were at the time rewarded by his appointment to the rank of Fu-chiang. The report forwarded by Li Hung-chang informs US that Ward, having heard that the Rebels on their way to Ningpo had taken Tzu-chi, proceeded with the utmost rapidity to the place, and commenced operations against it. The enemy, nothing daunted, returned the fire of our troops, and one bullet struck Ward on the breast, traversing his body and coming out at his back. His men, however, completed the work whilst he himself was carried back to Ningpo where he died on the following day. In truth Ward was a great man—a soldier who caused no shame. Li Hung-chang has already directed Wu Hsun and other officers to look after the funeral, and WE order that at Ning-po and Sung-kiang, altars be erected to his memory, while the Board of Rites will indicate the proper ceremonies to be observed in accordance with his rank, that thus his spirit may be comforted and refreshed. Respect this.

The officers who immediately succeeded Ward in the command of the Anglo-Chinese contingent did not obtain any large share of credit, and I therefore pass rapidly on to the expressions of the Imperial favour lavished on Gordon.

On the 24th December 1863, the following decree was issued to the Inner Council:—

Li Hung-chang memorializes announcing that having led his forces to the attack of Soochow, he has retaken the city. The perusal of his report has afforded US joy and satisfaction indeed! Gordon, as a Tsung-ping of the Province of Kiang-su, in command of his auxiliary force has displayed thorough strategy and skill, and has put forth most distinguished exertions. We ordain that a medal of distinction of the highest class be conferred upon him, and further that he receive a donation of Ten Thousand Taels, in token of OUR approbation. Respect this.

Chang-shing	captured by the Imperialists ... ...July	1st 1864
NANKING	fell ... ...July	19th ,,
HOO-CHOW	captured by the French Contingent ... ...Aug.	28th ,,

On the same day the following private decree was issued:—

Li Hung-chang is enjoined to communicate OUR Decree of approval and praise to Gordon for the great bravery and exertions (which attended) the re-capture of Soochow. The donation of Ten Thousand Taels is to be provided and sent to him by LI. Foreign nations already possess orders of merit under the name of "Stars;" let therefore the decoration of the first rank which we have conferred upon Gordon be arranged in accordance with this system. Respect this.

This "cumshaw" was sent to Quinsan for Gordon's acceptance, but he, under the impression that it was a present from the provincial authorities, refused to receive it.

In the Gazette of April 9th 1864 we find the following:—

Li Hung-chang reports that General Gordon some time since started from Li-yang hsien to attack Kin-tang. He carried with him mortars to breach the walls. At the attack he was wounded in the leg. Li has therefore recommended him to remain at rest. Such is the despatch. Now Gordon being excessively brave and fearless was wounded in consequence. WE are on this account deeply moved (with grief and admiration). On the other hand WE are informed that the wound is not serious. WE order Li-Hung-chang to visit Gordon and enquire for him daily, so as to keep his mind at rest requesting him to wait until he shall be perfectly restored to health and strength. Respect this.

Again, in the Gazette of April 30th:—

Li Hung-chang reports that Gordon when leading his men towards Kin-tang was wounded in the leg, and the Futai has therefore recommended him to rest for the present.

Gordon has proved himself most formidable in every way to the Rebels. It was thus that he was wounded. WE are deeply grieved, but are yet somewhat relieved by hearing that the wound is not serious. Li Hung-chang is therefore directed to see Gordon constantly, and enquire about him, so that he may remain tranquil, and await his recovery before attempting other conquests. Respect this.

In the Gazette of May 21st the following commission was issued:—

Gordon, the Commander in Chief in the province of Kiangsu, as a leader of soldiers, assisted US in destroying the Rebels, and was continually in action. On this occasion he with (Li Futai) attacked and subdued Chang-chow in a manner most extraordinary. He is, therefore, promoted to the rank of Ti-t'u. Moreover, in accordance with Li Hung-chang's request, WE present him with a banner and a star in order to mark OUR high appreciation of his services. WE await the settlement of the affairs of the "Ever victorious army," which, when reported to us by Li Hung-chang, will elicit a generous mark of OUR favour.

The further distinction of a Yellow Jacket (*Hwang ma kua*) and short peacock's feather was conferred on Gordon by the Gazette of June 16th, which was to the following effect:—

Formerly on account of Gordon's having acted as leader of OUR Imperial forces against the enemy, and having assisted to take Chang-chow, WE issued an Edict, expressing OUR will that he should be elevated to the honorary rank of Ti-t'u, and should be presented from OURSELF with a banner and a medal to mark OUR appreciation of his services. Li Hung-chang now reports that the "Ever victorious army" which Gordon used to lead has been disbanded in the most satisfactory manner, and he begs US to heap further distinctions on Gordon's head. Such is the substance of his despatch. Since the spring of last year Gordon has headed the "Ever victorious army," and aided the ordinary Imperial forces in the subjugation of Fu-shan, the relief of Chang-shu-hsien,

the capture of Tai-tsang-chou, Quin-san-hsien. Wu-kong-hsien, and at last, [towards the close of the year] the provincial city of Soochow. Then again he this year captured Yih-shing-hsien and Li-yang-hsien, whilst he compelled the retreat of the Rebels at Yang-shai. He finally captured Chang-chow fu, thus continually heaping meritorious acts one upon another. Moreover, he has, in the most satisfactory and peaceful manner, completed the disbandment of the disciplined army. There was no uncertainty [or vaccillation] about Gordon's services: he was ever inspired with that bravery and strategic talent which enabled him to prove so formidable. He was also intimately acquainted with the relation existing between China and other powers. It is therefore most necessary for us to mark our approval. Gordon is hereby presented with the Yellow Jacket, and a short peacock's feather. He is also presented with the official robes and paraphernalia belonging to the rank of Ti-t'u. Thus will our favour be manifested to him. Respect this.

As to Gordon's career I need not speak. The benefits he has heaped on British interests in China need no flattering notice from my pen, while the esteem in which he was held by the native government may be judged of by the extracts I have inserted above. Suffice it to say that during the entire course of his service in China he acted on the most public spirited grounds, and finally left these shores universally admired and respected.

As I have devoted so considerable a portion of this Retrospect to the progress and fall of the Rebellion, it will not be out of place to refer beiefly to the closing scene of the Taiping movement, to the destruction of the last stronghold held by the Chinese false prophet and his followers. For this purpose I cannot do better than reproduce an edict published on the 2nd of last August.

This day the report of Kuan Wên and Tsêng Kuo-fan as to the recapture of Nanking and the destruction of the Rebel leaders, was received by courier travelling six hundred li a day under a red flag. It informed US of the total extinction of insurgents, of the capture of Li Hsiu-chên (the Chung Wang) and Hung Jên-ta.

Such is an abstract of the report.

When the tidings were received WE, in common with the officials and people all over the country, were highly gratified. The long-haired rebel Hung Hsiu-tsuan had, ever since the thirtieth year of Tao-kuang, continually stirred up confusion. Coming from Kuang-hsi through the two Hu and the three Kiang he sent off detachments towards Chih-li and Shan-tung, thus almost filling the Empire with his myrmidons. Then again, in the third year of Hien Fêng, he captured Nanking, and wrongfully assumed the name and style of an EMPEROR, thus plunging the people of the Southeastern provinces into troubles and difficulties in which WE deeply sympathised, although WE could not adequately express that commiseration. The cup of crime and wickedness was at length filled up, and gods and men were alike enraged. Our Imperial Father the late Emperor, whose temple style is Wên Tsung-hsien, was much moved, and with the utmost severity carried on the work of extermination. He appointed Kuan Wen, the Governor-General of the two Hu, Imperial Commissioner to act in conjunction with Hu Ling-yi, Futai of Hupeh, to superintend the re-conquest of the districts in the neighbourhood. Hu Ling-yi took up his position in the department of Su and Sung for the purpose of clearing away the Rebels in the Eastern provinces. Tseng Kuo-fan was appointed Governor-General of the two Kiang, and Imperial Commissioner for the extinction of the Rebellion in Kiang-su and Kiang-hsi. Thus there was no confusion in the

steps taken, and day by day the design set before each progressed. In the seventh month of the eleventh year (of Hien Feng) OUR Imperial Father ascended on the dragon, at which time one half of Kiang-su and Chekiang had fallen into the hands of the Insurgents. On His death-bed he expressed his deep regret that he had not completed the extinction of the rebellion. WE, thus left at a tender age, were compelled to assume the onerous duties of the Throne, and carry out the designs of OUR August Father. We begged the assistance and guidance of the two Empresses Dowager, who recommended the appointment of Tseng Kuo-fan to the office of Vice Prime Minister, and military governor of four provinces, with sole power of organising a force. This high official has, ever since his appointment, fulfilled the duties imposed on him. His only idea seems to have been to force his way and exterminate the rebels. He ordered Peng Yu-ling, Yo-ping and Tseng Kuo-tsueh to act in concert on land and water. Day by day the cities on the banks of the Long River gave in their allegiance, until more than one hundred were restored to OUR sway. Between one and two hundred thousand rebels met their fate in the field, and at length the investment of Nanking was completed, and all means of supply cut off. On the 16th day of the sixth month of this year (July 19th) Tseng Kuo-tsueh, leading vast numbers of military officers and soldiers, made a successful attack on the outer city, and killed an incalculable number of the enemy. The Rebel chief Hung Hsiu-tsuan with his most desperate followers were, however, said to have determined to hold out within the inner wall.

So much for Tseng Kuo-fan's first report. WE received a second despatch announcing the capture of the city which by the Rebels was falsely called "Heaven-preserved." The Rebels who had made a stand within its walls were in truth excessively determined, but on the 30th day of the fifth month (July 3rd) Li Chiang-ho with others, taking a body of soldiers, seized the Dragon's Neck hill, and thus on the next and following days all the forces were enabled, by taking turns, to keep up a constant attack. Li Cheng-tien and Wu Tsung-kuo with others commenced to mine even under the guns of the wall, where the fire was the hottest. Hsiao Fu-szu, etc. raised a battery close to the wall and most courageously carried on the attack. On the 16th day of the month (July 19th), very early in the morning, Tseng Kuo-tsueh ordered a simultaneous attack on all sides, exploded the mines, and blew up more than two hundred feet of the wall. Li Chen-tien, Wu Ming-liang and others, oustripping the soldiers, made for the breach, whilst the soldiers themselves, racing on, flung themselves in a body into the opening. The Rebels who still held the wall to the left of the breach flung down enormous grenades on our men, destroying very many of them, and for a moment checking them. Peing Yu-chü, Hsiao Pen-szu and others, with their own hands cut down some few of the fellows who were retreating, and thus not a single man succeeded in forcing his way to the rear. Meanwhile Wu Ming-liang, &c. led their troops to the Kuang Lung hill, and attacked the Rebel position to the right of the Tai-ping gate, and thus the garrison was driven back. Li Chiang-ho and others at the same time attacked the suburb outside the Tai-ping gate, and effected an entrance in that direction, whilst Wang Yuan-ho and his men assaulted the wall to the north of the palace occupied by the *soi disant* Heavently Prince. Liu Lien-chieh led a body of men to the Shen-tsai (North East) gate, and by ladders scaled the wall at that place, all his soldiers rushing in simultaneously, fighting up to the Lion hill. The Yi fen (North) and Chao yang (East) gates were at the same time taken. Meantime Lo Fen-yuan got in through an old mine on the West side of the Tsu pa (South) gate and thus found his way to the top of the wall. Li Ching-chou and others having established themselves in the suburbs of the Tung chi (little East) gate, scaled the wall at that place, whilst Chen Shi and his troops made a furious attack on the Han Hsi and Shui Hsi (West) gates. Li Hsin-chen, the *soi disant* Chung wang, at the head of a rabble of desperadoes, thought to escape by the Han-hsi gate, but was opposed by the steady resistance offered by Chen Shi and his force. The rabble above mentioned were driven back, and

were fain to take refuge on the Tsing Liang hill. Huang Yi-shen, a naval commander, attacked the Chung Kuan and Nan Kiang Chi, and had a heavy fight with the rebels on the bank of the river. In conjunction with Chen Shi and Yi Liang-hu he also attacked the Han-hsi and Shui-hsi gates. Thus was the entire number of gates taken. About one or two o'clock next morning the palace of the *soi disant* Heavenly Prince as well as the residences of many other fellows who called themselves Princes, were burned, and the smoke which arose filled the heavens. The Rebel Hung and other atrocious wretches to the number of more than one thousand, issued from the palace by the Southern gate, and took refuge in the houses which surrounded it. Yuan Ta-shen with others searched them out, and killed more then seven hundred of them, taking also two jade seals and one gold seal which Hung Hsiu-tsuan had been in the habit of using. At three or four o'clock on the same morning (20th July) a band of about one thousand rebels, having assumed the dress worn by the Imperial soldiers, advanced by the breach near the Tai-ping gate, but were stopped by the men in the Kuen-tzu and Hsiang-hou camps. Tseng Kuo-tsueh ordered a squadron of cavalry to throw itself into the Shun hua-chen (a suburb of the South gate) where the *soi disant* Zealous King, by name Li Wan-tsai, was taken. The fugitives were chased to Hu-shu (a city about twenty miles to the south of Nanking), and completely exterminated. Tseng Kuo-tsueh questioned Li Wan-tsai, and elicited from him, that after the seizure of the city, the *soi disant* Chu Wang (Chung Wang's brother), the minor Western and Southern Kings, and the Ting, Tsung and Chu Wangs had fled by night, but had been taken by the Imperial forces and executed in company with many other inferior chiefs. Others who were examined stated that head rebel Hung Hsiu-tsuan, had during the fifth moon of this year committed suicide by poison, and that his grave was within the so-called palace. The young lord, Hung Fu-tien, had, they said, assumed his father's duties, but as soon as the city was carried he had ordered a funeral pile to be built, upon which he had burned himself. That criminal Li Hsiu-chen, having been wounded during the assault upon the city, took refuge in a private house on one of the hills, where he was ferreted out by Hsiao Fu-szu, and captured. In the same place Hung Jen-ta, the second brother of the *soi disant* Tien-Wang, was also seized. Thus were those old Rebels who had come from the two Kuang and the two Hu completely exterminated by the Imperial troops during the 17th and 18th days of the sixth moon. Within three days, more than one hundred thousand men were slaughtered, comprising those fellows who called themselves Princes, Field Marshals and Heavenly Generals, as well as a miscellaneous collection of high and low officials to the number of more than three thousand. (To sum up all) not a single individual escaped.

This was indeed a special Dispensation in OUR favour, for which we are grateful to Heaven and OUR Sacred Ancestors. The Empresses Dowager are unanimous in their feelings of gratitude for the peace and order which have been granted to US. They knew how to choose fit persons (to whom to entrust this great undertaking), so that everywhere there was the greatest unanimity, and both civil and military officials girded themselves for the task set before them, which has been fully accomplished. OUR Imperial Father, now enthroned in Heaven, will congratulate himself on the turn affairs have taken, whilst the inhabitants of the world, from the highest to the lowest, will be grateful. WE acknowledge that virtue lies not in ourselves, how then could WE bring about these successes? WE look back on the deceased Emperor, who never desisted from the pursuit of that purpose of his (the extermination of the rebels). It continually grieves Us to think that HE did not survive to see his designs carried out. Since this Rebel Hung first created confusion in Kuang-hsi, fifteen years have elapsed, and since he settled himself in Nanking twelve years have dragged slowly on. The Insurgents have trampled more than ten provinces under foot, and overthrown several hundred cities, which have gradually been won back. Now, however, that the originator of all this mischief has met his fate, those great warriors who during the pacification of the country were exposed to every blast of heaven, and were drenched

with rain, tasting every danger and difficulty, are indeed entitled to most unmistakable marks of OUR favour and gratitude.

As to those two criminals Li Hsiu-chen and Hung Jen-ta, Tseng Kuo-fan is directed to seek out most reliable officers to whom they are to be entrusted for conveyance to Peking, where they will be carefully tried, and compelled to expiate their crimes. Hung Hsiu-tsuan's corpse is to be exhumed, his flesh torn from his bones, his head cut off, and hung up, after having been sent round to the scenes of his villany as a warning to others. Thus the grief and anxiety of the people will be alleviated. Other matters are left to the arrangement (of the Boards), Respect this.

Thus closed the rebellion, so far as it was likely to prove formidable to foreigners, and when we look back calmly on the political influence we have gained by its means as balanced against the shock given to our mercantile interests, we may, I believe, confidently assert that the rebellion was an important element in the attainment of that position which we enjoy. Whether, theoretically, our influence is now likely to diminish on account of the restoration of tranquillity may safely be made a matter for speculation; practically we may assure ourselves that the government of China as constituted at present will never be in a position to despise foreign assistance. It may even be premature to assume that tranquillity has been restored—the recent rumours of rebellious movements in the south and west, as well as the formation of strong coalitions amongst the powerful chieftains in the northern and central provinces may bode no good to the established government. But, under any circumstances, the friendliness which now exists between the Chinese and ourselves, cannot be shivered without endangering the Manchu rule. Having this hold on their interests as a guarantee of their faith, we need not fear that the officials will commit themselves to any act of hostility directed against us.

I have not yet referred to the attempt made to establish an Anglo Chinese fleet in these waters. The particulars of the scheme are familiar to all, and I am therefore absolved from entering with any minuteness into its details. But as the train of circumstances which attended the organisation and subsequent disbandment of that fleet seemed to indicate an indifference to foreign opinion, and a desire to throw off the yoke which foreigners appeared ready to impose on the country, it is necessary to allude briefly to the nature and probable results of the Lay-Osborn expedition. The condition. The conditions under which the fleet was fitted out were as follow:—Mr. H. N. Lay, then Inspector-general of customs, animated by a desire either of raising the Chinese nation to a level with western powers, or of personal aggrandisement, obtained permission from the Tsung-li Yamên*

* Foreign Board.

to purchase vessels, guns and stores in England, to engage English officers and men to serve in the vessels, and to draw from the different Custom Houses funds sufficient to meet the requisite expenditure. The document which conferred this authority on Mr. Lay was dated "Peking, October 24th 1862." Mr. Lay accordingly proceeded to England, and made the necessary arrangements in conjunction with Captain Sherard Osborn who was by him appointed to the command in chief. In July 1863 the Prince of Kung issued instructions for the regulation of the affairs of the fleet, by which Captain Osborn was required to take a position subordinate to some Chinese high official who was to be entrusted with the supreme direction of whatever operations were contemplated. Captain Osborn at once refused to recognize this change in the intentions of the government, and with the approbation and under the instructions of Sir Frederick Bruce proceeded to disband the men and officers employed, sending them to England in detachments. The vessels were ordered some to England and some to India to await purchasers. The personal and political elements which brought failure on the scheme have been very fully set forth in a despatch from Sir F. Bruce to Earl Russell, under date of November 19th 1863,* and to that despatch I would refer my readers for a most luminous discussion of the entire question. The limits within which this article must necessarily be compressed prevent me from giving quotations at length. Suffice it to say, that the Chinese were so penetrated with the idea that Mr. Lay's objects were wholly selfish, and his mode of action utterly incompatible with his position as a paid agent of the government, that they summarily dismissed him from the post of Inspector-general of customs, at the same time hinting strongly that their confidence in foreign agents had been rudely shaken by his conduct. The following is a translation of the despatch conveying Mr. Lay's dismissal :

TO MR. LAY.

IN consequence of your having failed to manage the affairs connected with the steam fleet in a proper and satisfactory manner, although that matter was fully entrusted to you, this Board considers it no longer expedient to employ you. Mr HART has received orders to assume the Inspector-general-ship, and you are now commanded to resign the office from the day upon which you receive this despatch, for after that time the control of the Imperial Customs will no longer be entrusted to you. The sums of money resulting from the Tonnage Dues, which have hitherto been placed under your charge, must be at once handed over to this Board, and you will yourself proceed to Shanghai, where the period of four months from the date of this despatch will be allowed

* Correspondence respecting the fitting-out, dispatching to China, and ultimate withdrawal of the Anglo-Chinese fleet, under the command of Captain Sherard Osborn, and the dismissal of Mr. Lay from the chief inspectorate of customs, page 21.

to wind up every portion of the Custom House-business, and to hand over all monies and accounts to Mr. HART. Mr. HART will on receipt of the same, report the matter for the consideration of this Board. For the four months which we have granted, although you will have formally given over office, your pay shall continue as heretofore, but will end on the expiration of the said period. This is to be considered as a proof of the great liberality of the Chinese Government. It is further to be noticed that this period is ample for the despatch of all the necessary business. It must, therefore, on no account be exceeded.

This communication has been forwarded to Mr. HART, the Inspector-general of Customs, and to the Superintendents of Customs at all the Ports, and to you also, in order that you may act in obedience to its directions. Respect this. A Special communication.

This in brief is the history of the Anglo-Chinese naval expedition which, had it been entrusted to more competent hands, would doubtless have proved a most valuable element in the reorganisation of the naval and military system of China.

I am unable to enter at length into a statement of the trade carried on at the Northern ports during the three years ended 31st December 1863. The annual returns published by order of the Inspector-general of Customs set forth very clearly the gratifying fact that the legitimate commerce of the country is steadily on the increase. The extension of trade produced by the opening of the new ports has not alone given foreign nations a larger number of markets for their goods, but has also brought them nearer to the producing districts, and has afforded an opportunity for increased intercourse with the natives. The advantages thus gained are none the less certain because no tabular statement can do justice to them. From enlarged relations with the natives occupying the interior we have everything to gain and nothing to lose. Victories gained over their prejudices are more creditable to us as pioneers of enlightenment than were the sanguinary successes which crowned our efforts at Canton, at Taku and at Peking. Indeed, we may take it for granted that so long as foreigners confine themselves to a trade conducted on those high principles which are supposed to guide the first class English merchant, they will have nothing to fear from the hostility of the Chinese. The nation is in its essence cowardly, and when it finds itself made the victim of chicanery or deceit it avenges itself in a mode which we stigmatize as barbarous or treacherous. But if any provocation should stir up a third Chinese war, I believe that I am justified in assuming that it will proceed from foreign nations.

During the past four years missionaries of all creeds have not been idle. The Catholic ministers who penetrate the country in all directions, carrying with them little germs of knowledge, civilization and refinement which they plant

side by side with the truths of the Gospel, are not often heard of, but are nevertheless idenifying themselves more and more with the people, and are rapidly pushing the work of evangelisation. The different denominations of Protestants are also working according to their several lights, but the system pursued by them is by its very nature incompetent to produce effects in any degree similar to those to which the Catholic missionaries may point. While the former trust to preaching and teaching alone, the latter use these powerful engines, and follow up their operation by entering heart and soul into the interests of their flocks—by living amongst them, sharing their joys and sorrows, healing their diseases, and communicating to them those useful arts which tend to elevate an ignorant people. It is much to be regretted, that (to adopt the words of an eminent contemporary writer) Protestant ministers "do truth the honor to believe that on manifesting it to the world as the sun casts its light upon the waves, the world will be inspired by it."* Never was there a more fatal delusion. The Chinese are by nature irreligious, and on that account require ocular demonstration of the truths which they are expected to believe. The age of miracles is past, but in the hands of the properly qualified preacher of the gospel, modern science has placed a power by which he can prove the vast usefulness of his scientific teaching and thus prepare a way for the reception of the mysteries of revelation. It was by miracles that the divine Founder of Christianity commended his moral teaching to the unbelieving Jews, and it is by their imitation of this model that the Catholic missionaries have succeeded in drawing thousands of adherents to the banner of the cross. Could there be found some devoted Protestants, who would give up their prospects in life, the fair reward of their talents and their industry, and consecrate themselves to the work of bearing the twin messages of physical and religions truth to the ignorant and perishing myriads of China—were a few properly qualified medical men sufficiently inspired by the love of souls to leave country and kin, to take up the cross and advance into the heart of China on a new and noble crusade, then indeed some hope of the evangelisation of the country might reasonably be entertained. But so long as very many of the missionaries sent forth by the Reformed churches possess no special education and but a small modicum of general knowledge, mission work will remain what it is, but will never accomplish any useful end. I am naturally anxious to avoid going offence to the few really talented and earnest men who have devoted themselves to this work,

* *La Religieuse.*

but I can fearlessly refer to those gentlemen themselves for a candid opinion on the usefulness of their efforts. An earnest Christian who, standing at the shop-board, has been dazzled by the martyr's crown apparently held out to him by the prospect of mission enterprise in the far east, and by the prestige of rising by a sudden step to the rank of a shepherd over the flock of Christ, will not necessarily make a good missionary.

Nor shall we ever find a Protestant mission worthy of the name, until the men composing it are properly selected with a view to their general talents, their genuine enthusiasm, their linguistic ability, and their physical fitness to encounnter the dangers of an eastern climate. All honour to the noble few who do risk their healths and lives in delivering (whether judiciously or injudiciously) the message of salvation. They act up to the light by which they are illuminated, but if that light be darkness, how great is that darkness! It is absurd to believe that the foreign missionary who lives in a foreign house, surrounded by foreign luxuries, preaches unintelligibly in a chapel which, as a rule, bears an air of poverty and gross neglect when compared with the mansion devoted to the use of the minister, can influence the minds of his hearers. They look for some sign of devotedness, they expect some proof of a divine commission. The learned look for wisdom, and the ignorant look for temporal benefits, but the latter are disappointed and the former disgusted. Let us, if the widow's mite and the orphan's scanty heritage is to be shared by the ministers of religions imported into China, at least secure the probability of some useful result. Let training colleges be established where the wisdom and learning of China will be as carefully taught as are the theological dogmas of the western schools. Let the language be taught at an age when even one moderately talented can with ease acquire it. Let the mind be practised in reasoning and in sophistry, for if these be not the weapons we are to use, they are at least the weapons against which we shall be compelled to defend ourselves. Let physical science and medicine enter into the curriculum of instruction, and thus, armed at all points, let the minister go forth, anxious not to obtain a means of subsistance—not to marry and settle himself in a position which otherwise he could not attain, but desirous of spreading the truths of revealed religion and of natural science amongst the dark and debased nations of the earth.

While thus speculating on the possible improvement of the spiritual machinery used to influence the Chinese, we are irresistibly led to review the national progress, if any, made in science and general knowledge during the past

four years. The Chinese have advanced. In some instances, at least, they have learned their own ignorance, and the knowledge of this is the first step to enlightenment. They have practically allowed the inferiority of their military system, and have invoked the aid of foreigners in their arsenals and manufactories. The arsenal at Soochow established by Macartney is a decided movement in advance. Natives from every part of the empire are employed in it, and will on their return to their homes spread the knowledge they have acquired. Such must be our hope, although we may be unable to form any very definite expectations on the subject. But, under any circumstances, a foreign arsenal in one of the principal cities in China is a phenomenon which ten years ago not the most enthusiastic believer in the destiny of the nation could have anticipated. Sad to say, the Chinese, so far as they have been left to themselves, have not made any progress. Their methods are as clumsy as they ever were, and we are occasionally reminded of the loss even of the arts which at one time were successfully practised. But with competent foreign advisers, with the gradual but certain spread of civilisation from pole to pole, we may hope that yet China will rise from the dust, and take her legitimate place amidst the great nations of the world. "Methinks," says Milton in the *Areopagitica*, "Methinks, I see in my mind a noble and puissant nation rousing herself like a strong man after sleep, and shaking her invincible locks; methinks I see her as an eagle mewing her mighty youth, and kindling her undazzled eyes at the full mid-day beam; purging and unscaling her long abused sight at the fountain itself of heavenly radiance, while the whole noise of timorous and flocking birds, with those also that love the twllight, flutter about, amazed at what she may mean." *

* A this moment the genial showers have not yet descended; how the coming year will be is not known. *Report by the Censor* Hea Sew-shoo, *Translated by* Doctor Morrison.

MISCELLANEOUS.

I. REMARKS *on some impressions from a Lapidary Inscription at* KEU-YUNG-KWAN, *on the great wall near Peking. By* A. WYLIE ESQ.

Fac-similes exhibited, May 6th 1864.

The impressions exhibited to the meeting, form part of a long inscription in six different kinds of character, on a remarkable limestone arch, at Keu-yung-kwan, a rugged mountain pass on the way from Peking to Chang-kea-kow on the Great Wall. The legend covers the greater part of the inner facing of the structure on both sides, from the basement to the spring of the arch.

Two of the versions are inscribed in horizontal lines at the top, in antique Devanagari and Tibetan characters respectively. Four other versions, (of which the specimens are now before us,) are inscribed below in vertical lines.

Two of these are read from left to right. The first to the left has been termed the Baschpa Mongol, after the name of the inventor Baschpa, a Tibetan lama and high priest of Buddhism in China, who was deputed by the emperor Kubla, to form a special alphabet for writing the Mongolian language. This was completed and put in circulation by the year 1269, the characters being merely a modification of the Tibetan, written in vertical columns, and connected by ligatures. Chinese history furnishes details regarding this writing, and the facts have been long noted by oriental scholars. Remusat regrets indeed that he had never seen a specimen of it; and Schmidt goes so far as to doubt the fact of it having ever been brought into actual use in China. An able article on the subject, with a copy of a Mongol inscription in that character taken from a Chinese book, with the German translation, by H. Conon v. d. Gabelentz, appeared in the *Zeitschrift für die Kunde des Morgenlands* for 1838. But it is believed the first fac-simile of the character actually in use that reached Europe, was an impression from a stone in Shanghai, sent to London in 1855, of which a

short account, with a reduced copy, was published in the *Transactions of the China Branch of the Royal Asiatic Society*, part 5. 1855. M. Pauthier of Paris has more recently been occupied with the matter, and has published some papers on it in the *Journal Asiatique;* a font of type for the character having been cast in the Imperial Printing Office there. We have records of the existence of about thirty specimens of the character throughout China.

The next compartment to the right is what the Chinese term the Ouigour character, being the base of the character in present use for the Mongol language; but whether this be a specimen of the original form, as brought to China by the Ouigours themselves, or whether it be the form it assumed after it had received the modifications of Saadja Bandida and Tsordji Osir, two Tibetan lamas, who successively applied themselves to the adaptation of this character to represent the Mongol sounds, it would be premature to state without a more minute examination. It is certainly very different from the modern Mongol character, and it differs also in many particulars from the two Mongol letters found in the French archives, sent from two Mongol princes of Persia to Philip le Bel of France, in 1289 and 1305; although it approximates much closer to them than the other. A facsimile of these letters was published by Remusat, in his Account of Correspondence between Christian and Mongol Princes.

The other two compartments are in vertical columns read from the right to the left. The first from the right is Chinese. The next is the Neu-chih character, probably the most interesting of the whole, as being the only veritable specimen which has yet reached us of a long lost language, and of which a very few specimens are known to be in existence. The history of this character is briefly told in the native annals of China. When the Neu-chih Tartars became established in China, as the Kin dynasty, in the early part of the 12th century, Akuhta, their first monarch or Tae-tsoo, jealous of the dignity of his empire, was desirous of reducing to writing their national language. As a rude tribe, but recently emerged from barbarism, they had no national literature; but having captured many subjects of the Leaou dynasty, and also of the native Chinese, they acquired some knowledge of the written language used by these two nations. Taking a hint from what had been done by the Leaou, Akuhta commissioned a scholar named Kuhshin, to invent a set of characters on the same principle, but based on the Chinese *Keae-shoo* or pattern hand characters, suitable for expressing all the sounds of the Neu-chih language. These characters when com-

pleted, were authorized by imperial edict, and ordered to be brought into general use, in the 8th month of the year 1119. These were afterwards termed capitals, and Hetsung, a succeeding emperor of the same dynasty, invented a set of small Neu-chih characters in 1138. These were first employed officially in the 5th month of 1145. A note to Ma Twan-hu's "Antiquarian Researches" states that the Classics and Histories of China were translated in this character. There is little probability however that they were ever printed, and the slightest chance of now meeting with such a rare and curious literary treasure, is too feeble to be entertained. Amongst a number of books in this character, in one of the imperial libraries in Peking, the catalogue names one on the Neu-chih alphabet. The importance of such an aid is obvious; but the stringent and unrelaxing jealousy with which every foreigner is kept without the dragon walls, effectually excludes the hope of any assistance in that quarter.

It will be observed that the inscription in each case is in two different sizes of the same character. The large character portion is one of a class of Buddhist formulae, known by the name of *To lo-ne king*, in Sanscrit *Dharani*, being a kind of precative charm, in the virtues of which much reliance is placed by the Chinese; but it is at the same time utterly unintelligible to them, being merely a transliteration of Sanscrit sounds. The last fact however renders it especially important for obtaining a clue to the phonetic value of the Neu-chih elements. At the same time there are some offset difficulties to be overcome. On comparing the four versions we find they do not literally correspond, parts in the one being omitted in the other; whilst the large and numerous blanks, occasioned by the broken condition of the stones, in each of the versions, completely break the thread of identification, and add greatly to the labour of the process. It is probable they are all made, though at different times and by different hands, from the Sanscrit original. If a copy of that, together with the complete inscription can be procured, the obstacles to decipherment will probably be very much reduced.

Another interesting fact is that the small character parts of the inscription are not a mere transliteration, but contain some explanatory details regarding the other part. These are given in the proper Chinese and Mongol languages, and there is every reason to believe that in the Neu-chih part, we have a specimen of that language and literature. Unfortunately there are many of the small characters, which we do not recognize amongst the large. As the Neu-chihs were the ancestors of the Manchus or present dominant race in

China, it is natural to conceive that theirs is but an older form of the Manchu language; and the few limited vocabularies of it, which have been preserved by the Chinese, completely confirm that view; a fact which may be turned to good account in any efforts at unravelling the mystery.

II. EXTRACTS *from a Report upon the present condition of the Sea wall at the head of Hang-chow bay. By Major* EDWARDS *R. E.*

Read before the Society August 5th 1864.

The sea wall* commences half a mile to the south of the South East gate of Hangchow, and along the bank of the river Tsientang, which here becomes an estuary, past Haining to a hill called Tien-shan, a distance of thirty two miles. Afterwards it partakes more of the form of a bund or earth embankment, and as such passes along the coast to Hai-yen, Chapû &c. to the mouth of the Yangtze. This latter part still remains in good order and is not so liable to be destroyed as the part first mentioned. The river Tsien-tang opposite Hangchow expands into an estuary and becomes a bay at Tien-shan. This estuary is very shallow and at low water nearly dry. The ebb tide runs down for ten hours, at a rate of from 8 to 10 miles an hour. The flood commences opposite Tien-shan in the form of a bore or wave varying in height, but generally 4 or 5 feet, which passes up the estuary at the rate of 12 or 15 miles an hour breaking with great force against the sea wall. In a few seconds the tide rises four or five feet. At certain times of the year, about the 8th of the 8th moon, the people from the neighbourhood of Soo-chow and other places come to see the bore, which is reported to flow in at this time with very great force.

The wall from Hangchow to Tien-shan is constructed to keep out the sea at high water, which would otherwise inundate the surrounding country. Spring tides here rise about a foot above the surrounding country: the level of which is considerably higher than that of the country around

* Major Edwards examined the sea wall in June last, by direction of Colonel Moody R. E. in consequence of certain disquieting reports which had reached Shanghai relative to the extent of the damage, and the injurious effect it might have on the waters of the Hwang-poo, which, it was said, would soon become impregnated with salt. A large sum had annually been expended by the Chinese government on the repair of this wall, but during the rebel occupation of Hang-chow, this, like every other public work, was neglected. The repairs, which will now involve a very considerable outlay, are being undertaken by the government.

Shanghai, as is shown by water running down into the Hwang-poo river.

The rise and fall of the tide near Kan-pü is 40 feet, whereas at Woo-sung it is only 15 feet. Consequently the water rises 12½ feet higher at the head of Hang-chow Bay than at Woo-sung. Near Hangchow the rise and fall is only 7 feet, which is due to the slope in the bed of the river Tsien-tang. As the tide at the head of the estuary rises at least to the same height that it does at the mouth near Kan-pü, it follows that high water mark there is 12½ feet higher than at the mouth of the Hwang-poo river at Woo-sung. However at Woo-sung the tide does not rise to within two feet of the level of the country, whereas at Hang-chow, it rises one foot above it. From this we deduce the level of the country at Hangchow to be 13½ feet above that of the country at Woo-sung, the distance between the two points being about 96 miles.

The wall is 6 feet thick at the top, and 12 feet at the bottom, having the same slope front and rear, and is in most places about 20 feet high. It is built of limestone quarried near Shaou-hing on the opposite side of the bay. The stone is very hard and durable and is cut into pieces about four feet in length and one foot in width and depth. It is built on a foundation of piles and backed up with earth 40 feet in thickness. To preserve the wall from the effects of the sea and currents, a bank built with earth and fascines and piled in front has been formed in many places in front of the masonry wall.

Within this sea wall is an interior bund of earth at a distance of from a few hundred yards to one mile from it. This has existed generally throughout, but between Hang-chow and Hai-ning it does not appear to have been kept in repair for a very long time, and for a considerable distance no traces of it are left.

From Hai-ning to Tien-shan it is in good repair.

The country in the vicinity of this wall has been occupied by the rebels for the last four years, and it is owing to their not having kept it in repair that great portions of it have been destroyed. The part most seriously affected is that in the neighbourhood of Hai-ning. Towards the east it is partially destroyed for six miles. There are many gaps in it some 500 and 600 yards in length. Here the water from the estuary is prevented from getting into the creeks by the inner bund, which is now unbroken, and no pains should be spared to maintain it so.

To the westward of Hai-ning towards Hangchow the wall is not materially damaged for the first 5 miles, but there are a few small gaps. Passing along still to the westward

the next 4 miles present a series of gaps of 400 to 500 yards in length. Immediately beyond we came upon a break of not less than 2,000 yards in length where the wall has been completely obliterated. Beyond this however there are only a few small breaks of minor importance. It is from this large gap of 2,000 yards and in those immediately preceding it, that the water now finds its way into the creeks, and inundates at high water some 60 square miles of the surrounding country. Thence it penetrates to Shih-mun on the Grand Canal, and afterwards reaches the Hwang-poo, but as that derives its water from the Tai-hu which flows into it through many creeks and small lakes south east of Soo-chow, as well as from the hills and country near Hang-chow, it is evident that so large a body of water can only be very slightly affected by the small quantity of brackish water which enters it through the breaches in the sea wall above described. This circumstance need not therefore awaken any apprehension as to the waters or vegetation around Shanghai being perceptibly affected by brackish water. Immediate steps should however be taken to repair the inner bund. This could be accomplished in a short time if sufficient means be employed at an expense of one hundred thousand taels.

The principal causes which have brought about the destruction of the outer wall, independent of those arising from its not having been kept in a proper state of repair for the last four years, are :—

1st. Faults of construction.

2nd. The undermining action of the currents of the river.

3rd. Want of protection from the action of water at the back of the wall.

With reference to the first, there are three faults of construction :

a. The wall is built without counterforts and consequently is wanting in solidity and strength.

b. The lowest course of stone is not carried sufficiently below low water mark, which often allows the water to act under it at low water.

c. The piles on which the wall rests are not of sufficient size or strength, and consequently the foundations are insecure.

The undermining action of the currents is the most difficult to deal with. It tends to bring down the angles of the wall, and more efficient means should be used to guard against this by employing stronger piles and heavier masses of stone at the foot of the wall, constant attention being paid to keep it always in a state of repair.

The remaining cause, viz: from water acting at the back of the wall arises from the want of proper "puddling". This is one of the most important things to be attended to, because in most instances the wall has been brought down by this cause alone, from the water working its way under it, and in course of time carrying away its foundations.

III. REPORT *on the appearance of the Rugged Islands. By* EDWARD WILDS ESQ. *Master commanding H. M's Surveying Ship Swallow.*

Read before the Society August 5th, 1864.

ON Tuesday 14th June we entered the Rugged Island group from the northward, passing between Spire Island and the islands next eastward, not named on the the chart; and took up a berth near the centre Rugged group, in 5 fathoms mud, with Ta-yung Island bearing S. 38° E. and the summit of Tri-point Island N. 48° E. We passed within ¼ of a mile of Spire Island, and carried 4 fathoms water.

In the evening a party landed on the S. W. side of Tri-point Island, and visited the village and neighbouring hills. This island has three small fishing bays open to the south-westward. A mud flat extends to some distance from the shore in each of these bays, which dries at low water for several feet.

Within a few feet of high water mark, at the upper part of the centre bay, (which is the largest) is situated a fishing village running parallel to the shore; and 100 feet behind it is a salt lake about 800 yards long and 250 wide, but apparently only a few feet deep.

The bay alluded to is about 600 yards long, and contained at the time of our visit 3 Ningpo junks, and 20 native fishing boats. The crew of some of the former, whom I questioned, said they came for stones for ballast, and for repairing roads at Shanghai. The village contained about 300 miserable looking houses, and I should think quite 450 inhabitants. The houses were all thatched over, and inhabited by poor fishermen, who were extremely civil, and informed us they had not been visited by pirates for several years. Some poultry were seen in the town, and several goats were grazing on the sides of the hills. Numerous small fish houses were situated on the slopes and ridges of the hills above the village, and a number of long bamboos were fixed in the ground, on which the fishermen trice their nets to dry and repair them. They also spread them over the roofs of

their houses as in the Corea. They store their fish by covering them over with large coarse mats, and secure them by passing a thick piece of grass rope about 6 inches in diameter round each about a foot from the ground. A landing can invariably be effected at any of these bays, but at low water it is very inconvenient, on account of the mud flat, as the mud is very soft, and the water is too shallow for a boat to approach close to the shore.

There appears a great scarcity of water on Tri-point Island, and it is altogether so rugged and uninviting a spot to reside upon, that at a glance, any one would condemn it as totally unfit for a sanitarium. From its highest hill, (which is about 300 feet high, situated on the N. E. side of the island,) we had a good view of the Saddles, and all the islands for 35 miles round. The marginal line of discoloured water trending to north-eastward was very clear, and a refreshing breeze was blowing, which was quite a relief after the weather we had experienced at Shanghai. There are a few cultivated spots on the sides near the upper part of the hills, producing barley, some of which was cut and tied up in small sheaves ready to be stored.

Rocks, 4 to 10 feet high, and 6 to 20 in width, were scattered all over the island, and between them are small patches of smooth grass, kept close by the goats notwithstanding their small number. On the sides of the hills blackberry and wild strawberry bushes grew thickly; they were chiefly in bloom, many were half grown, and a few ripe. The wild honey-suckle was also occasionally met with.

Throughout the night and following day, (Wednesday, 15th June) we experienced very thick weather, with rain, but, being anxious to leave the group early the next morning, at 1 P.M. I went away with a party to explore as far as possible the Island of Tayung, the largest of the Rugged Islands: and returned to the ship at five in the evening. After a hard pull of more than a mile, in heavy rain and thick weather, with a fresh breeze, we reached the extreme of a mud flat, that runs off full half a mile from the upper part of a bay which is on the N. W. side of the island; but being unable to wade through the mud to the foot of the hill, we were compelled to return to the boat, which had in the mean time by accident got broadside on to the sea and nearly filled.

We then coasted in search of a better landing, which was at length effected under the lee of some projecting rocks on the north side of the island. We walked some considerable distance to the foot of a fertile ridge, that runs from the summit of Tayung, passing through paddy fields, by a narrow foot path ankle deep in mud. The greater part of the north western side of the island has a gradual descent,

is well cultivated, and is I believe the most valuable of the group, having numerous fields of bearded wheat in ear nearly ripe, fields of ripe beans, besides Indian corn, which was very tall, strong and promising, but not yet in ear. I also noticed patches of water melons, which appeared to thrive well in the soil, and fields full of young plants of the sweet potato in large furrows. The Chinese cabbage also grew in small patches. The soil generally was of a loose, but dark sandy nature, apparently very easy to work.

We visited two villages; the principal named large Yang-seu, is on the north side of the island, the other called little Yang-seu, is very small and is situated about half a mile from the former, on the N. W. side.

The larger village contains about 125 houses, and I should think 400 inhabitants. It is situated at the bottom of a small bay, (with a mud flat which extends some considerable distance, but dries long before low water.) Six Ningpo junks were at anchor just without its edge, and a large number of native fishing boats were hauled up on shore, besides several which were on the mud or afloat. The inhabitants all appeared very poor; they were civil and acknowledged themselves to be fishermen. A few hundred yards westward of this bay there is another smaller one, in which fishing boats were hauled up, and at the upper part of which there was also a mud flat. These mud spots in nearly every case extend from the right to the left extreme of the bay. We saw a few goats, a fair number of fowls, and plenty of native dogs. The natives at this village also informed us, that they had not been visited by pirates for several years. The paths through the town were very narrow, but evidently bore signs of improvement, as I occasionally saw flints and stones newly laid down. The roofs of the houses were of coarse grass, and the sides a mixture of mud and stone, altogether rudely constructed. Over many of their houses fishing nets were spread to dry. Inside several we saw heaps of salt, and much of their time we were informed is taken up manufacturing it for use. The inhabitants stated that there was no sickness on the island, and that their general health was very good. Through a gap in the land in a south easterly direction, I saw several junks at anchor off a small bay on the S. E. side of the Island, but time and weather did not permit my visiting the S. E. or opposite side, which is probably as well cultivated as the N. W.

A few trees about 20 feet high, resembling the lilac, were seen in full bloom. The smaller village contains about 30 houses, and about 50 inhabitants:—a great deal of salt is manufactured and stored here, fish is also corned, and

stowed in the usual way under matting. This town is situated on the N. W. side of the bay, just within the point at which we attempted to land, and half a mile distant from the larger village already mentioned. The paddy fields between the two villages, extend nearly to the bottom of the hills at the foot of which they are situated. We estimated their area at 30 acres, forming nearly a square on the N. W. side of the island. From the summit of Tayung Island (as above mentioned) there is a sloping ridge trending down first towards the westward, but afterwards curving in a northerly direction, and terminating near the paddy fields. I was informed a stream of good water ran down a ravine, which could be plainly seen on the northern face of this ridge, besides a second smaller one to the left of it. There are several springs on the island, some of which I tasted and found the water was very clear and good. Had it been fine weather I should have made the circuit of the island, and climbed to the top of the hill, but at the time I was there the summit was hidden by mist. The island is much less rocky than Tri-point, and is the only one in the group at all adapted for establishing a sanitorium. Its situation in the fairway between Ningpo and Shanghai is an additional argument in its favour, as steamers plying between the two ports could easily drop passengers desiring to stay there. In other respects the Saddles would be perhaps preferable. I may mention that steamers cannot approach very near to the shore, as the difficulty of landing in rough weather is to be considered a drawback. The harbour affords good shelter from all winds, except between S. W. and N.W., and the holding ground is also good. I was informed that there was no mandarin at any of the islands composing the Rugged group.

IV. Barometric *and* Thermometric *Observations taken during the month of September* 1864, *with a view to determining the height of the Lew Shan. By Messrs.* Hollingworth *and* Piry, *of H.I.M's Customs, Kiukiang.*

Laid before the Society, December 13th, 1864.

The Lew Shan is about nine miles to the south of Kiukiang, and is a favourite resort of excursionists during the summer months. The gentlemen who made the observations given below, were, they believe, the first foreigners who had ever reached the summit. The roads are in very fair order,

and the sides of the hill are dotted with little houses originally intended for the shelter of pilgrims. The height of the summit is 5,040 feet, and thus any degree of temperature may be obtained. Add to this that delicious water is to be found in springs which occur at regular intervals, and it will appear manifest that the Lew-Shan would form an excellent summer sanitorium for the foreign residents at Shanghai and the Yangtze ports.

Note:—The following observations were taken between 24th September and 3rd October 1864. The weather at Kiukiang and in the neighbourhood from the 23rd to the 27th September was very equable, a strong N.E. breeze blowing steadily, the atmosphere clear and dry, and a few fleecy clouds passing at great height and with considerable velocity. All the barometers used are aneroids. That bearing the number 24,706 has no maker's name, the other two are by Negretti and Zambra—one without a number, the other No. 1,241. The former two are about the same size, and have thermometers attached, from which the register given below was taken. No. 1,241 is a small pocket aneroid without a thermometer. The observations made on 28th September and 3rd October were for the purpose of comparing the instruments, and were taken at a height of about 10 feet from the bund at Kiukiang. No boiling-point observations were taken.

Aneroid Bar. and Ther. No. 24,706.					No Number.			No. 1241
Date.	Place.	Time.	Thermo.	Barom.	Place.	Thermo.	Barom.	Barom.
Sept. 24	Kiukiang	2 p.m.	,,	30.05	Kiukiang	,,	30.20	,,
,, 24	,,	3.45 ,,	,,	,,	do.	78	30.15	,,
,, 24	,,	10.00 ,,	,,	,,	Se-sung-szu	73½	29.98	,,
,, 25	,,	5.45a.m.	,,	,,	do.	68	30.08	,,
,, 25	,,	7.0 ,,	72	30.18	do.	,,	,,	,,
,, 25	,,	8.30 ,,	,,	,,	Tien-cha-szu	61	27.30	26 90
,, 25	,,	9.0 ,,	72¼	30.20	*do.	,,	,,	,,
,, 25	,,	11 00 ,,	72¾	30.19	do.	,,	,,	,,
,, 25	,,	Noon.	73	30.16	do.	,,	,,	,,
,, 25	,,	1.0 p.m.	74	30.14	Summit of L.S.	63	25.12	24.92
,, 25	,,	2.0 ,,	74	30.14	†do.	,,	,,	,,
,, 25	,,	3.0 ,,	73	30.10	do.	,,	,,	,,
,, 25	,,	4.30 ,,	,,	,,	Se-sung-szu	74	29.90	29 57
,, 25	,,	5.0 ,,	72	30.12	do.	,,	,,	,,
,, 25	,,	8.20 ,,	,,	,,	‡Tsing-kea-poo	72	30.35	29.96
,, 28	,,	1.0 p.m.	70	30.02	Kiukiang	,,	30.20	29.85
Oct. 3	,,	9.0 ,,	69	30.14	do.	70	30.38	29.96

*The instruments were placed on the dry ground in the shadow of a wall
†The instruments were placed on the dry ground but only in the shade of chair cases, none other being available.
‡The instruments were hung up in a boat about the level of the Kiukiang Bund distance about 8 miles to S. of Kiukiang.

V. SPECIMEN *of a new* FONT OF CHINESE MOVABLE TYPE *belonging to the Printing Office of the American Presbyterian Mission. By* WILLIAM GAMBLE ESQ.

論語 學而

子曰、學而時習之、不亦說乎、有朋自遠
方來、不亦樂乎、人不知、而不慍、不亦君
子乎、有子曰、其爲人也孝弟、而好犯上
者鮮矣、不好犯上、而好作亂者、未之有
也、君子務本、本立而道生、孝弟也者、其
爲人之本與、子曰、巧言令色、鮮矣仁、曾
子曰、吾日三省吾身、爲人謀、而不忠乎、
與朋友交、而不信乎、傳不習乎、子曰、道
千乘之國、敬事而信、節用而愛人、使民
以時、子曰、弟子、入則孝、出則弟、謹而信、
汎愛衆、而親仁、行有餘力、則以學文、

The font of type, of which the above is a specimen, was commenced in 1861, and is now nearly completed, so far as it is intended at present to carry it, although it would no doubt be very desirable to have a complete font of movable type for the 40,000 characters in the Chinese written language. Roman type of the same size of body is called by the English *Small Pica*, and by the French *Philosophie*, but this font having been made here, may be called, in honour of the place, the *Shanghai Font*. It contains 7,400 Matrices; of which 6,000 are of full body, each one being a complete character. Of the remainder 1,291 are of two-third body, and 109 of one-third body, for casting those primitives and radicals separately, which are combined in printing for the formation of the complete characters. The total number of characters that can be made by this font is about 25,000, which is a much greater number than can be made by any of the fonts now in use. Although the characters are so small the most complex are perfectly legible, but it is doubtful whether a font of Chinese characters of a smaller size would be of much practical utility. The principal design in making this font was to place the Scriptures in the smallest possible compass, but it will also be used in printing books which necessarily have the Chinese character and Roman letter intermingled, and it will therefore be of the greatest service to scholars.

SUMMARY OF PROCEEDINGS.

1st March, 1864.

The North China Branch of the Royal Asiatic Society, which had from various causes fallen into decay, was formally re-organised at a meeting held on the first of March, James Henderson Esq. M. D. in the chair.

It was proposed and carried that a meeting of the former members of the Society and those desiring membership should be held on the 9th March.

The meeting then adjourned.

9th March, 1864.

James HENDERSON Esq. M. D. in the chair.

The Rev. R. Hamilton, Doctor Johnston and Messrs. R.J. Thomas, R. A. Jamieson, E. Lawrance, R. Hart, R. F. Gould, J. M. Hockly, O. R. Crockett. R. S. Gundry, W.S.F. Mayers, Thos W. Kingsmill, J.M. Lloyd, S.A. Viguier, H. Noetzli, J.H. Gwyther, J.A. Maitland, G. W. Talbot, A Fisher, G. Martin, O. Martin, J. J. Dawson, J. Clark, J Anderson, E. C Bowra, J. Cull, H. W. Dent, John Morriss and W. Remé were elected Resident members. Messrs. C. Thorne and A. J. Man were elected Non-esident members.

It was proposed and carried that Sir Harry S. Parkes K. C. B. should be asked to accept the office of President.

The following officers were then elected by ballot:—

James Henderson M.D.	*Vice President.*
Thomas Hanbury	*Corresponding Secretary.*
H. W. Dent	*Treasurer.*
R. Alex. Jamieson	*Recording Secretary.*
R. Hart	*Directors.*
F. C. Sibbald M. D	*Directors.*
R. F. Gould	*Directors.*
O. R. Crockett	*Librarian.*

The meeting then adjourned.

6th May, 1864.

Sir Harry S. PARKES K. C B., *President*, in the chair.

Doctor Lamprey (67th Regt.) and Messrs. Rennie, Koch, Dore, F. A. Groom, Pollard, MacDonald, Oliphant and Johnstone were elected Resident members.

The inaugural address was delivered by the President.

Mr. Wylie exhibited four impressions of inscriptions on a remarkable arch near the great wall (See page 163).

Mr. Hanbury exhibited a collection of coleopterous and other insects, made during the past summer in the province of Che-keang.

The meeting then adjourned.

June 8th, 1864.

Sir Harry S. PARKES K. C. B., *President*, in the chair.

H. E. Ying. Taotai of Shanghai, Doctor Elliot and Messrs. J. Markham, F. B. Johnson, J. Nutt, C. E. Parker, O. K. Gordon, J. T. F. Bowker, W. Pardon, A. Vischer, E. Marston, G. J. W. Cowie, J. G. Dunn, G. A. Brett, W. Tarrant, J. G. Murray, Thos. Dick, C. Jamieson and E. Oppert were proposed as Resident members.

DONATION :—From W. Saunders Esq—A Series of nine interesting views in Japan.

Doctor Lamprey read a paper on *Architecture in China*, for which the thanks of the meeting were voted.

The meeting then adjourned.

July 6th 1864.

Sir Harry S. PARKES K. C. B., *President*, in the chair.

H. E. Ka, late Perfect of Sung-kong, Captains Fairbrother and Drummond and Lieut. Wood (2nd Belooch Regt), Doctor Miller, and Messrs. C. J. King, W. Cheshire, J. K. Davis, J. S. Mackintosh, A. A. Cross, and W. W. King, were proposed as Resident members.

DONATION :—From the Imperial Royal Zoological and Botanical Society of Vienna, several volumes of Transactions.

Doctor Henderson V. P. read a paper on *The Character of the Chinese*, and received the thanks of the meeting.

A series of rubbings from the Confucian temple at Wu-chang fu were exhibited.

The meeting then adjourned.

August 5th, 1864.

Sir Harry S. PARKES K. C. B., *President*, in the chair.

Messrs. Thos. Martin, H. S. Batchelor, J. Jameson, T. Canny, H. A. Sidford and A. R. Tilby were proposed as Resident members.

A report on the Rugged Islands by Mr. Wilds, H. M. S. *Swallow* (See page 139) was read.

Extracts from a report by Major Edwards R. E. on the state of the sea wall at Hang-chow bay were also read (See page 169).

An account of the appearance of Nanking immediately after its recapture was given by Mr. Alabaster.

The meeting then adjourned.

September 5th, 1864.

Sir Harry S. PARKES K. C. B., *President*, in the chair.

The Rev. F. K. Mitchell, Messrs. H. P. Hanssen, F. B. Forbes, A. Little, N. Latimer, R. R. Westall, A. J. Adams, E. Anderson, J. McCollop, J. P. Lynill and A. Stout were proposed as Resident members. T. T. Canny Esq. read a paper on *The Coast of Russian Manchuria* (See page 106) for which the thanks of the meeting were voted.

The meeting then adjourned.

October 12th 1864.

Sir Harry S. PARKES K. C. B., *President*, in the chair.

M. le Baron von Radowitz, Messrs. G. F. Seward, T. Probst, E. Schmidt, R. W. Little and T. Sampson were proposed as Resident Members.

A paper entitled *First Impressions of Tientsin*, by E. C. Bowra Esq. was read, and a vote of thanks returned.

Some of the state dresses presented by the Emperor to Lieut-Col. Gordon R. E. were exhibited to the Society.

The meeting then adjourned.

November 29th 1804.

Sir Harry S. PARKES K. C. B., *President*, in the chair.

Messrs. T. Adkins, P. J. Hughes, E. J. Hogg, A. W. Corner, G. Robson, G. Whitfield, D. Turner and J. Kerr were proposed as Resident members.

A second paper on the Russian possessions around the Amoor was then read by T. T. Canny Esq. the writer confining himself principally to a description of the island of Saghalien [See page 127.] A vote of thanks was passed for this second contribution to the Society's transactions.

The meeting then adjourned.

December 13th 1864.

Sir Harry S. PARKES K. C. B., *President*, in the chair.

The gentlemen whose names were on the list for balloting were duly elected.

A paper on *The Geology of Kwang-tung and the Adjacent Provinces* was read by Thos. W. Kingsmill Esq., and for it a vote of thanks was returned.

A series of barometric and thermometric observations made at Kiu-kiang and on the summit of the Lew shan was laid on the table [See page 172]

It was then proposed and carried. "That a committee consisting of the Council, and such other members of the Society as the Council may call in, be appointed to revise the Constitution and Bye-laws."

The meeting then adjourned.