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CARAVAN ROUTES OF INNER ASIA: *The third "Asia Lecture,"*  
*read at the Evening Meeting of the Society on 5 November 1928 by*

OWEN LATTIMORE

ALTHOUGH my subject concerns the geography of Mongolia and Chinese Turkistan I shall deal with it as it appears to a man who is not a scientific geographer. In 1926 and 1927 I travelled overland from Peking to India. The journey took me through Mongolia by camel caravan for a distance of some 1600 miles, along a route which, as a whole, has never been explored. Later, in Chinese Turkistan, I was joined by my wife, who made a very enterprising journey by rail and sleigh through Siberia to meet me, and together we finally reached Kashmir. The subject in which I was chiefly interested throughout the journey was the courses and movement of trade. I wanted also to get, on the ground itself, material for a comparative study of the trade routes of the present day, in relation to what we know of ancient routes in Inner Asia. I had then been in China for seven years, during which I had gained some knowledge of the workings of inland trade and, which was even more valuable, a thorough knowledge of vernacular Chinese.

I will spend most of my time on Mongolia, because the way I travelled there and the things I saw were more unusual than anything that can be told about the comparatively well-known routes of Chinese Turkistan. Also, since I am no learned geographer, I may be allowed to drag in topics which, though not strictly geographical, are allied to geography—the life of primitive people, the courses of tribal migration, and the origins and movements of trade.

The two "Asia Lectures" already delivered have been by two of the leaders of Central Asian discovery. Sir Aurel Stein has given us the benefit of his extraordinary learning and the massive industry which has enabled him to light up more than any other man the dark places of Central Asian geography and history. Mr. Roy Chapman Andrews has shown what can be done by taking a large corps of men, all of them experts in widely different fields, and transporting them about Mongolia in motor-cars, covering an enormous amount of ground in reconnaissance, as well as working intensively at chosen sites.

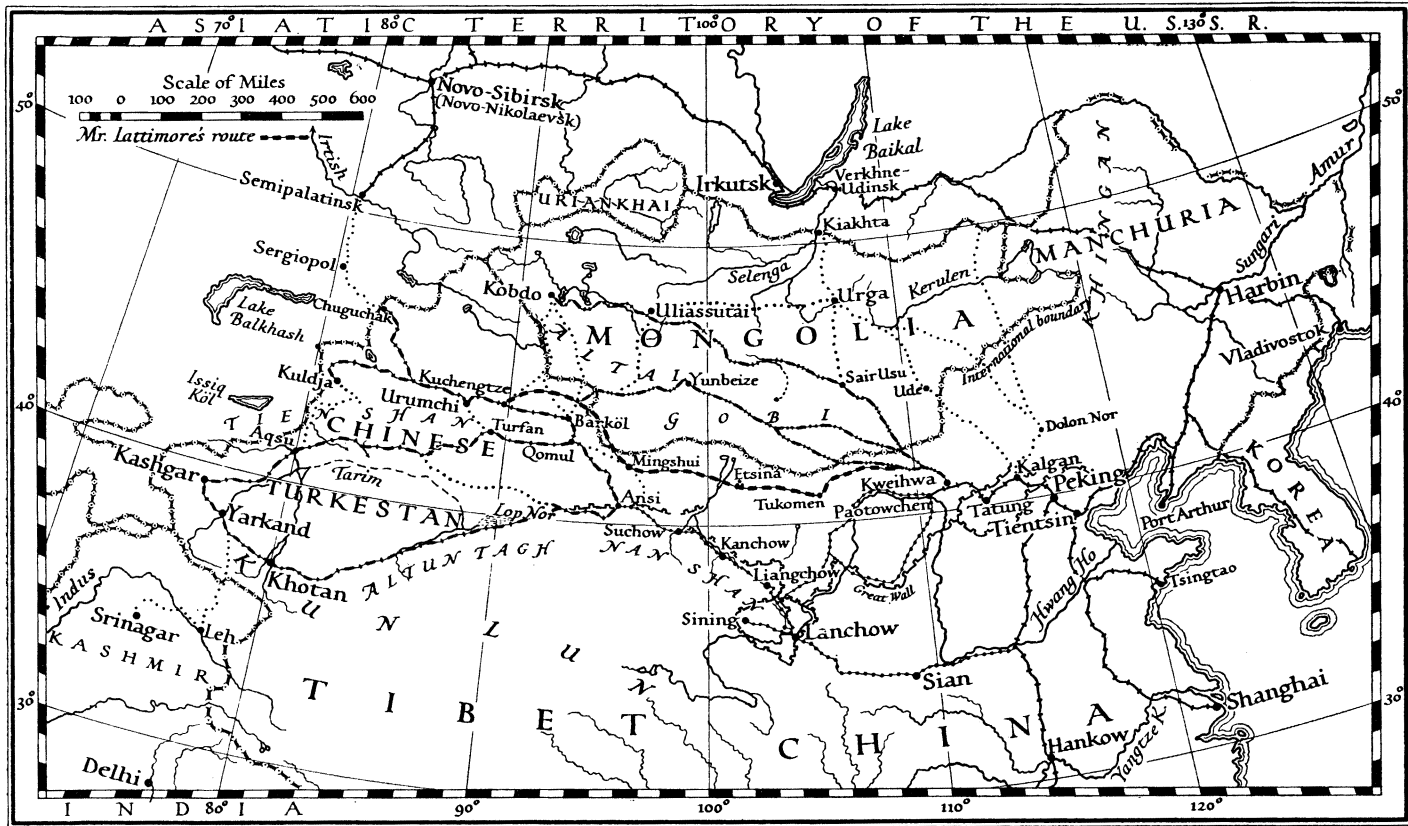
In comparison, my own work is inconsiderable. I know that I am out of date, like a survivor from earlier generations, when the traveller was perhaps more of a wanderer than an explorer. But something remains, for all that,

which can be studied best by the man who travels, so to speak, close to the ground. If you are accompanied by a number of assistants, it is difficult to remain in close, sympathetic touch with the people of the country. The mere fact that you are constantly talking in an unknown language excites curiosity and suspicion. If you do a lot of digging and surveying, if you deal much in mechanical devices—let alone such roaring monsters as motor-cars—these difficulties become almost insurmountable. You must remember that in those countries you must be prepared to deal with people who think that field-glasses are filled with human eyes. They think that only the strength of a large number of eyes put into that instrument could make it see so far. They also think that a foreigner, with his glasses, can look into the ground and discover gold and jewels.

If there is any value in the work I was able to do, it is chiefly because what I learned was learned while travelling the ancient routes of Inner Asia with caravans practically the same as those which tramped the same routes hundreds, in fact thousands, of years ago. The conditions were the same. The dangers of thirst, cold, sand-storm, snow-blizzard and attack by robbers were the same. The caravan men and traders were not different in any important respect. Everything that I saw, felt and heard would have been seen, felt and heard, with little exception, by a stranger travelling two hundred or two thousand years ago. I had not even any maps that were of any use in illustrating the daily march.\* The problems of direction and distance over which I puzzled every day would have appeared in the same light to Marco Polo, say, or William of Rubruck. I had only one advantage over them—in knowing the language of the people with whom I lived. There was no need to attempt anything so elaborate as travelling in disguise, but I did pass familiarly among these people. Not only my language, but all my routine, my food, and a large part of my clothing were the same as theirs.

Perhaps the best way to approach our subject of the caravan routes of Inner Asia is to describe first some of the daily experiences of caravan life, the men to be met and the difficulties to be encountered. In that way we can see the routes as nearly as possible from the point of view of the men who earn their living tramping up and down these obscure highways of the desert. Then, after the stage has been set, and we have seen something of the characters, we can go on to discuss the origin and development of these caravan routes which are, after all, nothing less than a magnificent historical spectacle, set in and dominated by geographical conditions of a peculiar fascination.

Of the two great routes from China into Central Asia, the only practicable land routes in ancient times between China and the West, one goes up from Central China to the edge of the desert and then crosses into Chinese Turkistan without touching Mongolia at all; the other goes from North China through the central, northern and western territories of Mongolia. As it goes west it offers a choice of directions. One lies through Uliassutai and Kobdo, with approaches to Siberia at Chuguchak or Altaiski. One goes to Kuchengtze, entering Dzungaria, or northern Chinese Turkistan. This latter version of the route is known as the Great Mongolian Road. From Kuchengtze, access



*The principal caravan routes of Inner Asia*

can be had to the inner basin of Chinese Turkistan, or trade and the traveller can continue to the north of the Tien Shan, entering Siberia either at Chuguchak or Kuldja.

When I came to set out on my travels I could not follow the first route because of civil wars, banditry and anti-foreign feeling. I could not take the second because of late years the tribes of Outer Mongolia, largely under Russian influence, have declared their independence of China and will not allow caravans or travellers from China to enter their country. These abnormal conditions throughout the hinterland made travelling more dangerous than it has been for many years. On the other hand, they had an unexpected and fortunate result, in making it possible for me to hit off an east-to-west route through Mongolia that is, taken as a whole, entirely new on our maps. Moreover it has, I think, a good deal of significance in the comparative study of ancient and modern caravan routes. It traverses country so desert that, except for this lucky pressure of circumstances, guides would have been hard to find, caravan men would have denied the existence of a practicable route, and the cost of establishing it would have been prohibitive.

This route has been worked out by the caravans trading between North China and Chinese Turkistan. It has come into use because it is less open to interference from either Outer Mongolia or the border country between Mongolia and China; but even so it is vulnerable to raids at several points from either north or south, and caravans travel in almost constant danger either of attack by robbers or extortion by soldiery. The eastern half of the route is determined by series of wells which, in my opinion, prove it to have been in all probability much used in ancient times, but neglected for centuries owing to changes in the relations between the Chinese and the peoples of the Mongolian plateau. The western half offers a traverse through the least-known country in all Mongolia, a no-man's-land of remarkable interest which, from its physical characteristics, has probably been a debateable ground throughout history.

Leaving Peking by the railway which skirts a part of the Mongolian border country, I started by camel caravan from Kweihwa, which is known to the Mongols, and is described in several books of travel, as Kuku-khoto. The start was not accomplished until I had been delayed at Kweihwa for nearly six months, by a series of difficulties which I need not describe here. I had a caravan of nine camels—several more than were necessary—which I had secured by complicated negotiations after the first camels I hired had been seized for use in a Chinese civil war. The camels were in charge of one man, their owner. The only other man in the party was "Moses," my Chinese servant.

Moses was a stout-hearted Chinese of the fine northern stock. He had been in my service a number of years, and had served my father before me. He not only volunteered to go into Mongolia, but insisted on going. His fidelity can only be appreciated by a foreigner who knows what the interior of China was like at that time, with sporadic outbreaks of anti-foreign feeling, in addition to the banditry rampant in many places. It was a time when it would have been hard to bribe a trustworthy man to accompany a foreigner on a long journey through unknown country. Moses put the matter plainly, as one of



*Watering camels at Shih-pau Chiang (Stone-slab wells), after 100-mile crossing of Khara Gobi*



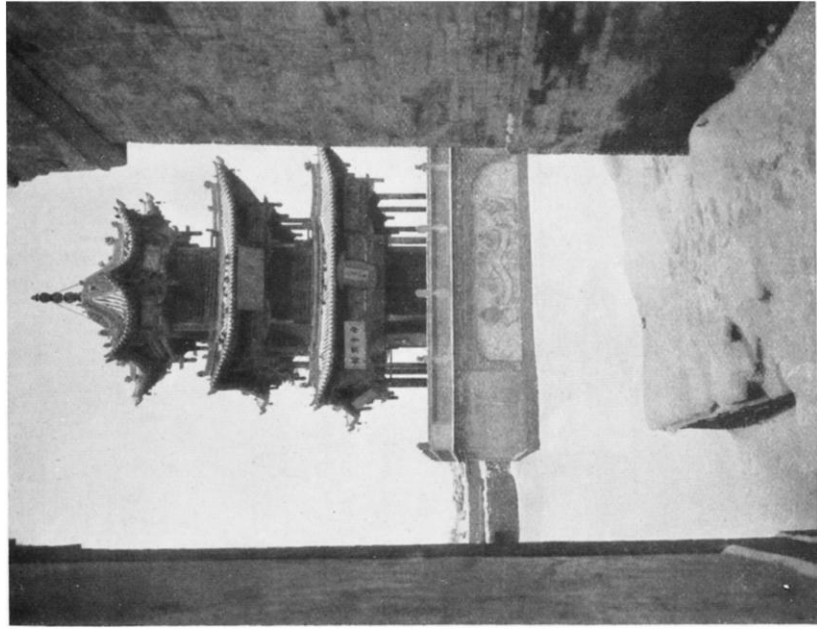
*Camp near Tuhulu in northern valley of main range of Qarliq Tagh*



*Camp at Morhgujing, where Winding Road diverges from Small Road*



*City of Maralbashi, Chinese Turkistan*



*Pagoda, Shansi Guild (chief caravan traders' guild),  
Kuchengtze*

his final arguments, when I was hesitating about taking him. He said that it was absolutely necessary for me to have a safe man behind my back. He was quite right. Had it not been for his Ulysses-like qualities of courage tempered by wily counsel, I might half a dozen times have fallen into worse trouble than I did.

As the route we followed has so recently come into regular use, it is unknown to numbers of men who have been bred up in the caravan trade. My camel man did not know the way, and thus for a great part of the time we travelled by attaching ourselves to trading caravans. In this way I came to live among the caravan men exactly like one of them. We travelled mostly at night. Had we travelled by day and turned the camels loose at night to graze, there would have been a danger of their straying and getting lost; whereas by grazing them during the day we were able to keep an eye on them.

We began the day at dawn, by making tea. We had with us only brick-tea, made of the coarsest grades of leaves, twigs and tea-sweepings from the warehouses compressed into solid blocks, from which we would chop off as much as we needed for each brew. In this tea we used to mix either roasted oaten flour or roasted millet—looking like canary seed, which in fact it was—stirring it into a thin slush and drinking it down. About noon we had the one real feed of the day. This would be made of half-cooked dough. We carried the white flour along with us, and would make the same sort of dough every day. We would moisten the flour, roll it and thump it, and then either tear it up in little blobs or cut it into a rough kind of spaghetti.

The reason we drank so much tea was because of the bad water. Water alone, unboiled, is never drunk. There is a superstition that it causes blisters on the feet. Our water everywhere was from wells, all of them more or less heavily tainted with salt, soda and I suppose a number of mineral salts. At times it was almost too salt to drink, at other times very bitter. The worst water was in tamarisk regions. The tamarisk is a desert tree, or rather shrub, sending down its roots to a great depth to reach water. When the water is near the surface the roots, rotting in the moist earth, turn the water a yellow colour. It is thick, almost sticky, and incredibly bitter and nasty.

Sometimes we had water every day; usually we came to a well every two or three days, carrying a supply with us in flat-sided, wooden butts, which could be loaded two on a camel. Our longest distance between wells was in the crossing of the Black Gobi, where we had one stretch of nearly 100 miles between wells. Our average march was 15 or 16 miles, but in forced desert crossings we could push the distance up to 30 miles.

The men of the caravans belong as unmistakeably to their calling as seamen belong to the sea. Perhaps 10 per cent. of them are Mongols. The rest are Chinese of different northern and western stocks, from Shansi and Kansu and the communities of Chinese settled in Turkistan. Almost all of these Chinese have strains, more or less remote, of Central Asian blood—whether Mongol or pre-Mongol, Turkish or Tangut, or some other of the migrating peoples that in the course of centuries have alternately invaded or been thrown back from the border country. Whatever their origin may be, they are first and last men of a calling. They belong to the Gobi routes. When they set out on a journey they put behind them every association binding them to cities and

tilled fields. They even hold lightly associations which have almost a sacred force among the Chinese, such as their responsibilities as householders or heads of families.

It is perhaps too definite to say that they leave behind their gods and the creed of their ancestors, because at best their gods and creeds are vague and unformulated. Yet the departure has all the effect of such a renunciation. They discard one set of customs, observances and tabus, and submit themselves to another. *Tso hou-ti, sui hou li*, they say: "Travelling in the Back Country (the Mongolian plateau, that is), follow the observances of the Back Country." They feel that in the desert human actions are subject to the attention of a different array of powers. In fact, they become nomads. Many of their propitiatory rites and self-defensive tabus are not only taken over from the Mongols, but are inheritances, among the Mongols, from the most primitive instincts of nomadic people. They strive to propitiate the powers and spirits that follow at the heels and lurk about the tents of savage, wandering people at grips day and night with the harsh menace and niggardly resources of a raw, unmastered country.

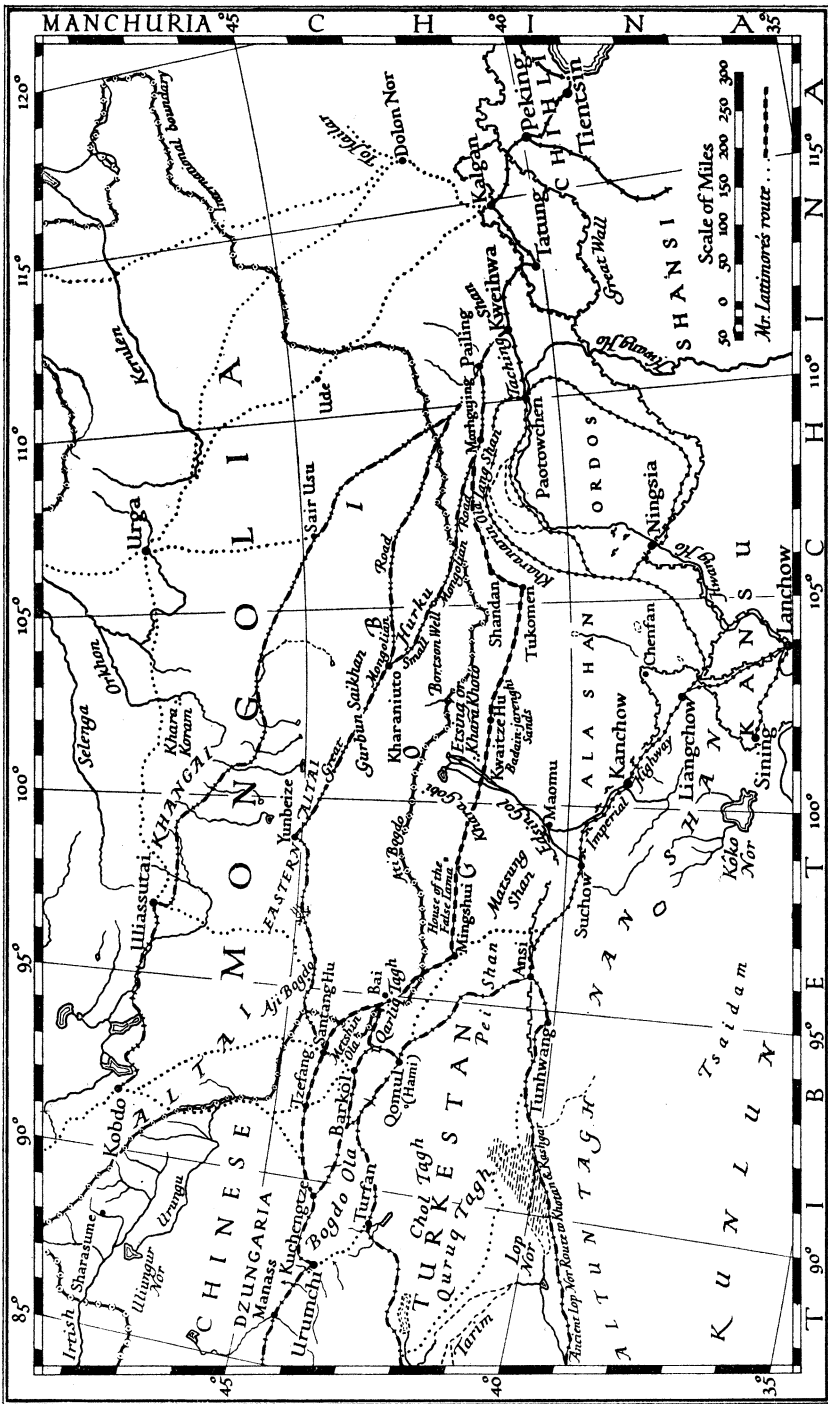
From the moment that the tent is pitched at the first camp, the "Custom of the Caravan" prevails.\* Fire and water assume a different importance. Each time that the tent has been set up in a new place, a little of the first water boiled and the first food cooked must be thrown on the fire, and a little out at the door. The offering to the fire is evidently to honour it for its services, and the offering thrown out at the door is to honour the *genius loci*, lest it be dismayed or angered at the intrusion of men. The caravan men themselves naturally, have no such explicit theory of their behaviour. They say simply that they are observing the *li*, the custom or ritual.

Other observances are in the nature of tabus. A caravan man may not slaughter a camel, nor eat camel flesh, nor sell the hide of a camel. If a camel becomes too weak to follow the caravan, it is left by the trail to die. The owner will not kill it, for fear that its soul might follow the caravan, haunting the other camels. The tabus on camels apply especially to the caravan men. Other tabus are part of the Mongol life reflected in the caravan life. In eating mutton, a caravan man is almost as scrupulous as a Mongol in stripping the bones of every particle of flesh, gristle and sinew. The Mongols regard sheep as their staple of life. A sheep may be deprived of life only to prolong the life of man. It is not only the flesh of the sheep, but the vigour of its life that enters into the body of man. Therefore to waste any of the flesh would be to treat the loss of its life as a matter of no account, and for this the disturbed soul of the sheep might well haunt either the taker of its life, or his flocks. The soul of the sheep is only honoured if its flesh is eaten scrupulously without waste.

The souls of animals and men, in other words, are distinct from their lives. The life of the sheep enters into the man: the soul survives. To make doubly sure that the soul of a sheep will not work mischief, it is both honoured and injured. Certain of the major bones, preferably the shoulder blades, ought to

\* Except among Muhammadan caravan men, who think themselves above all these propitiations. Islam is like Christianity; in going abroad it asserts itself against all the gods it finds in the way.





Caravan routes from China to Central Asia, showing Mr. Latimore's route from Kweichwa to Kuchengtze

be broken. As long as the bones are uninjured, the soul has a vehicle which it may use in haunting the man that slaughtered it; but if the bones are broken the soul is lamed and powerless.

I hope that with this talk of ungeographical things, ghosts and superstitions and the practices of more than half barbaric men, I have been able to raise up something like a real background of living men and living traditions for the more technical discussion of these caravan routes of Inner Asia. It is important to remember that along these routes are preserved, in our time, the traditions of the past. We are dealing with trade routes in modern use, but they are routes that can be used to advantage only by a special class of trader, and this class must have been essentially the same in the past as it is now. The men who take caravans out and back through Mongolia are migrants. They are a mixed race, without true nationality, one might say, forming a link between the nomadic and the settled races. They are not business men, able to calculate in advance their yearly turnover, maintenance charges, and percentages of profit. Like the nomads, their wealth is tied up largely in living animals, whose capital value is subject to great variation. They take up a cargo on the edge of China, migrate with it for hundreds of miles into Mongolia, or across Mongolia to Chinese Turkistan. There they pick up the most advantageous freight they can find and make a return migration toward China.

There may be a fortune in the business. There may be only privation and suffering. There may even be robbery or captivity, or death by storm or violence. The men travel between known destinations, it is true, but they must be prepared on the way to open new passes across mountains, or undertake new detours through deserts. They represent an adaptation of nomadic society to the uses of civilized trade. They are, in fact, commercialized nomads, and it is this perpetuation of the nomadic tradition that I wish to bring out in discussing the geographic distribution of caravan routes. It is not only a clue to the right appreciation of routes in Central Asia, but it distinguishes the two main classes of trade routes. One class comprises the routes which lie in channels created by migration, by the movement of whole peoples. The other includes the routes of what we may call a normal kind; routes, that is, for which the normal use, throughout history, has been the transportation of goods from point to point for commercial advantage, routes by which individuals or parties of men have always travelled as we travel now, for political, personal, commercial or even religious reasons.

A rapid survey of my own route will show some of the geographical factors which have been important in the past, and many of which have an undiminished importance in the present. A reference in brief to the map will show the most important correspondences between this route and areas traversed by other travellers. Up to Morhgujing it corresponds roughly to the Younghusband route of 1887. At Shandan Miao and Tukomen (Bain-tuhum) it crosses different routes of Prjevalski. In the region of Kuai-tze Hu important work has been done by Kozlov. The Edsin Gol has been visited by Kozlov, Stein, and Warner. West of the Edsin Gol the only known route appears to be that of Ladighin (one of Kozlov's assistants) from north to south. At Ming Shui the route probably touches again that of Younghusband; at any rate

from then on it approaches country worked in by Obruchev, Holderer and Futterer, and their successors.

Kweihwa stands in a wide depression. On the south are the hills that in time past were the frontiers of Shansi province. On the north are the hills rising to the Mongolian plateau. The region is by nature a debateable ground, and has been disputed between the Chinese and different Tatar races. A legend survives of the ruse by which a Chinese general established the tradition that the northern rather than the southern range should be the perpetual boundary between Mongols and Chinese. The resources of the country about Kweihwa, especially in grain and other supplies, make it a natural centre of Mongol trade and a nodal point of caravan traffic.

The range to the north, called by the Chinese the Taching Shan, looks from Kweihwa to be a true mountain chain, but on ascending through it a plateau is found on the northern side, instead of a descent, and it is seen to be an escarpment of the Mongolian plateau. On the southern face of the Taching Shan a few patches of coniferous forest survive, by virtue of being temple sanctuary. Larger forests must have survived until comparatively modern times, as the deforestation is attributed by local legend to the building of the Mongol temple-community which is the core of Kweihwa town. The minor hills which break the surface of the plateau on the north can hardly have been forested in historical times, but air currents from the Pacific, caught by the Taching Shan, extend their influence well into the plateau, ensuring a precipitation of rain and snow enough not only to nourish excellent pasture, but to make possible the cultivation of the hardier cereals, such as oats. This frontal part of the plateau is being rapidly penetrated by Chinese colonists, but vast reserves of pasture are left. These ideal grazing grounds for the annual "conditioning" of camels during the period when they shed their hair, in proximity to cheap food-supplies for men, explain the natural importance of Kweihwa as a caravan centre.

The transition from the pasture country to desert conditions is marked in a general way both by a gradual rise in altitude and by the diminishing effect of the Pacific moisture. The main Gobi trends roughly from south-west to north-east. In the extreme west it abuts on the Quruq Tagh, on the far side of which is the Taklamakan desert. It is apparently at its widest, from north to south, from long. 100° to 105° E., diminishing gradually toward the east and at last "running out" in Eastern Inner Mongolia as it approaches the Khingan Mountains. On the northerly side of the main Gobi it would appear that moisture is again condensed by such important ranges as the eastern Altai and the Khangai. In the belt of country under the climatic influence of the eastern Altai, good pasture is found, supported by springs and subsoil drainage, where wells can be dug to tap underground watercourses at no great depth. Still farther north the Khangai Mountains determine a region of great plenty, with forests, arable country as well as pasture, and lakes and rivers draining toward, or flowing into, Siberia.

Directly north of Kweihwa the Gobi is nothing like so formidable as it is farther to the west. Caravan routes toward the west and north-west therefore make very little westing until the arid country has been crossed, and lines of water and grazing can again be picked up. These lines lie parallel with the

governing orographical features of the country, which are formed of chains of hills with a general south-east to north-west tendency—departing at a widening angle, that is, from the axis of the Gobi, as they go west. As these hills decline into plains the subsoil drainage which they conserve approaches the surface, grazing is found, and wells can be dug even if no springs break forth.

The caravan men distinguish the various alternative routes according as they take the northerly or southerly side of the hills. All of these routes, however, have at present the political disadvantage of entering Outer Mongolia; for the Gobi itself distinguishes Inner Mongolia (the sphere of Chinese activity) from Outer Mongolia (the sphere of Russian activity). Thus the political boundary is not a handy and absolute demarcation but (except in the extreme east, where Inner and Outer Mongolia blend into Manchuria, and an according political confusion prevails) an arid waste of variable width.

The route which I followed goes only far enough north to find a practicable line to the west, without trespassing on the northerly side of the Gobi, where the wells are watched by patrols of the independent Mongols. Then it strikes right away west, holding almost straight on through what appears, by a comparison of available accounts and on the testimony of the caravan men themselves, to be by long odds the most extensive and the most arid desert country in all Mongolia; the heart of the main Gobi. This is the route that always ranked in my own thoughts as distinctly the “desert road” to Turkistan.

The broad structure of the main Gobi is so simple, and so lacking in salient local details, that it is hard for an uninstructed traveller like myself to apprehend minor details of formation, though they may be of great importance. I had to acquire the “feel” of the desert gradually, while travelling for hundreds of miles, and storing my mind with hints from the talk of veteran caravan men; for these men themselves, though they have an admirable geographical sense, go almost entirely by the feel of the country. They can hit off an excellent line of march, conforming to the general features of the country, but they cannot analyse, they cannot give you a rational explanation of the particular topography of a piece of country immediately under their noses.

Fortunately, my general impression of physical characteristics along the route I followed is borne out by the particular observations of such explorers as Prjevalski and Kozlov. These have established that there is a series of depressions in an east-to-west line, roughly following the long axis of the Gobi and about in the middle of its expanse from north to south. The Gobi itself is a plateau, tilted toward the south, but this series of depressions forms a shallow trough down the middle of it. Toward this trough there seeps a scanty subsoil drainage. It is as if the Gobi had a sunken spinal channel, instead of a raised spinal ridge of mountains, and the caravan route simply feels its way along the line of depressions, keeping as far as possible to the lowest country.

The Winding Road or Desert Road does not immediately strike into this line of depressions. For a travelling distance of about 240 miles it accompanies what the caravan men call the Small Road, a southern branch of the Great Road or chief route to the West, which it later joins. This first stage lies through the pasture country under the climatic influence of the Taching Shan and its westerly extensions. Then for some 40 miles an increasing aridity

is apparent. This may be because the mountains on the south, forming the rim of the plateau, are not so high as the Taching Shan.

After entering the arid country the Small Road diverges to the north-west, at a point called Morhgujing, while the Winding Road holds on more to the west. The Small Road, as I understand it, coincides with the route followed by Younghusband in 1887. It goes far enough north to reach the southerly flanks of the Hurku hills, and continues along them until a line of wells is picked up tapping the drainage to the south from the eastern Altai. The Winding Road, after the divergence, crosses a range called by the caravan men the Laohu Shan or Tiger Mountains. These hills, I infer, decline on the north to a gap, on the far side of which rise the Hurku, which in turn come more or less into touch with the Gurbun Saikhan, the most easterly spurs of the Altai.

West of the Laohu Shan the Winding Road, after crossing a shallow depression of desert country, skirts on their northern edge the foothills of the Khara-narin-ula of Prjevalski, which are a western projection of the Lang Shan. Then it descends again to low country at the temple of Shandan (marked by Prjevalski) at which point there is a cross-route toward the north, and takes a long southerly cast to avoid very sandy country and large dunes. The sandy country evidently fills one of the hollows in the east-to-west series through the central Gobi.

The detour finishes at the temple of Tukomen (evidently the Bain-tukhum of Prjevalski) and the westerly direction is resumed. There is an important salt marsh near Tukomen. Dunes encroach on the meres in places, and I assume that the whole basin was formerly a lake. That the recent tendency is toward increased aridity rather than a recovery of the lake is indicated by a line of fine old elms following an underground watercourse that flows toward the marsh. All the trees are old and big, evidently with roots that go deep enough to nourish them though the supply of moisture has decreased; but there is not a sign of new growth.

Minor depressions are evident to the west of Tukomen, until Kwaitze Hu, the biggest of them all, is entered. I am not sure that the depression at Shandan is in the main line of these depressions, but I think so, and I am sure that from Tukomen on, the route follows what may be called the spinal trough of the Gobi. Evidently there is a tendency for the successive depressions to be deeper toward the west and shallower toward the east.

The landscape is desolate, with a certain monotony, owing to the lack of strongly defined hill ranges, but the sense of vast space is exhilarating. The soil generally is a sandy clay, from which is derived by wind erosion the sand found in the dune area. I remember passing only one place where clay terraces had been cut up by wind erosion into "witnesses," or truncated, flat-topped pinnacles. In these pinnacles, as in the banks of clay cut vertically by vanished streams, the clay lay in horizontal strata. Many old stream-beds could be seen; but they were on the whole almost easier to detect from a distance than when one was close upon them, for ages of weathering and wind-action had gone far toward obliterating local features.

Small, irregular lines of hills, usually with an east-to-west direction, lay along our line of march for much of the way; but at other times the topography

would be confused by immense basins, bordered by low, steep-faced bluffs, or by the vague courses of dry "washouts." Occasionally, when there was no dust haze, we could see as we got farther west distant blue ranges of higher hills lying on our south. I got the general impression that the country is, if anything, getting dryer. I have mentioned the old elms, unaccompanied by new growth. Farther to the west we entered the first large area of tamarisk growth; the region is called the Black Tamarisks, for all the growth is dead. It is found on comparatively hard, flat clay, and there is little evidence of "tamarisk cones."

In the country through which we travelled Mongols were rare, and their life obviously affected by the desert conditions, for sheep were largely replaced by goats and ponies by donkeys. The population was thicker near the edges of the sandier districts, which permit the growth of coarse tufted grass. Along most of our march grew nothing but low, gnarled, sapless, woody plants.

The people are a division of the Olöt (Eleuths), commonly called the Ala Shan Mongols. Their centre of population and trade is based on the Ala Shan, which lay to the south of our route, where far better conditions are found.

From what I have said, it can be seen that this country is as desolate and inhospitable as any in Mongolia. Sir Francis Younghusband has described some of the lonely stretches of wilderness through which he passed on his journey, which followed in great part the Small Road. I can assure him that, on the testimony of the caravan men, that road is by comparison full of joy and amenity. They remember with grief the days in which they were free to travel by it, and revile what they call the "bitterness" of the Winding Road. They had, however, one thing good to say about the Winding Road, which brings out an important physical contrast between it and the other routes. On the Winding Road, because it follows a linked series of depressions, the water is always found close to the trail. Owing to the scantiness of the water, and the fact that it drains at a shallow depth from hills of inconsiderable height, it is full of the salts which impregnate the superficial clays. It is never very palatable, and often vile, but at least it is easier to find, a matter of some importance, seeing that the end of the march always comes in the night, and the position of the well must be determined in the dark. On the greater roads, the wells often lie as much as a mile off the track; for the tendency is to take the line of march along lower levels, both to get better going and because what drainage there is comes to the surface at the foot of the slope from the mountains, and the best grazing is to be found there; while the wells, in order to make sure of an adequate supply of water, must tap the drainage higher up, nearer its sources in the ranges which guide the alignment of the routes.

At a travelling distance of over 200 miles from Shandan Miao, where we had entered the Ala Shan deserts, we reached the most easterly of the depressions, which is at once the largest and the most remarkable. It is called by Kozlov "Goitso," I believe from a Mongol word meaning "pleasant," but the caravan men call it Kwaitze Hu. I travelled some 75 miles along the edge of it, and found it a series of reedy marshes, apparently deepest at the southern edge, which I skirted. To the north stretched great expanses of reeds, while the south and west were closed in by dunes. These dunes range in height—I take Kozlov's figures rather than my own judgement—from 10 to 30 metres,



*Caravan in valley descending to open desert, north of Metshin-ola*



*Above the gorge of K k-su, Tien Shan*



*On the Sasser Pass*



*Devil dance at lamasery of Chao Ho, north of Kweihwa*



with a short northerly and a long southerly pitch. They themselves mark the northern edge of a region that he calls the Badain-jarenghi sands, in which he notes a lake called Kuku-burdon, in the position occupied on an old Chinese map by an "enormous lake" called Yü Hai.

The sands themselves were pivoted, so far as I could see, on a core of irregular hills. If the Chinese had, at some date in the past, knowledge of a large lake, or even a great marsh somewhere in this region, then we have good evidence of a change of climate toward more arid conditions within historical times. The depression of Kwaitze Hu itself could obviously be converted by a slight rise in the water-level to a great shallow lake. Springs break out everywhere, and along my line of march were several big pools; but it was impossible to judge the real amount of surface-water, because of the huge reed-beds.

We entered a great belt of dunes at the point where the sands curve round the western edge of the depression, and traversed large dunes for a marching distance of over 30 miles, and sandy country for another 14 miles, as the dunes dwindled away. The dunes were held down in parts by belts of strong tamarisk growth; the largest tamarisks that I ever saw, without a sign of being killed off by the sands. In other parts the dunes were quite clear of all growth, and were probably shifting formations under the influence of wind action. Everywhere they were based on hard clay, which in places was exposed; and wherever the clay was exposed, small beds of dry reeds could be seen. The caravan men said that in such places water could be found at a depth of not more than 3 or 4 feet. This dune region, and that which we had skirted in turning to the south from Shandan to Tukomen, were the only large expanses of loose sand encountered on the journey.

Immediately west of these dunes the east-to-west series of depressions is cut across by a much more obvious trough from south to north, the valley of the Edsin Gol. This valley itself is really very shallow, and in its northern course it fans out. The water which flows in it is carried to two connecting lakes, but a number of dry channels which must once have been flood-beds diverge toward the north-east. The Edsin Gol itself flows here in two channels, about 20 miles apart. It derives from the snows of the distant Nan Shan, in Kansu province, and in a distance of hundreds of miles from east to west its valley forms the only corridor practicable for large bodies of men or transport from north to south across the Gobi, from Outer Mongolia toward China. It is known that this corridor was used by Jenghis Khan in his invasions of Kansu (then ruled not by the Chinese but by the Tanguts) in 1227.

This corridor was marked by the walled city of Etsina, which was occupied at least until the time of Marco Polo, at the end of the thirteenth century, though it has been completely uninhabited now for centuries. The site of Etsina or Khara-khoto is, to my mind, very significant for the reconstruction of early trade routes. I must have passed within a few miles of it, though unfortunately I did not see it; but we know from the descriptions of General Kozlov, Sir Aurel Stein, and Mr. Langdon Warner that it as a city of some size and prosperity, far more than a mere garrisoned stronghold. The existence of such a city at such a site presupposes an important trade. It may well be that the snows in time past lay deeper on the Nan Shan, and that at their

seasonal melting the volume of water carried by the Edsin Gol toward the desert may have been greater. Even so, and even if it had been possible to divert water from the river for irrigation, the nature of the country shows clearly that the city can never have been the centre of a large or flourishing agricultural district, or even an administrative centre for numerous nomadic tribes.

I think that the importance of Etsina must have been based on its convenience as a point from which trade radiated both to the north, into Outer Mongolia, and toward the east, to the Kweihwa region. A slightly greater amount of moisture in the past may not have meant more favourable conditions for habitation in the Gobi, but it may well have meant a much more practicable caravan route down the trough-line that I have indicated through northern Ala Shan. At the time that Etsina was flourishing as an outpost of the Tangut power, Kweihwa was the capital of another minor kingdom, that which Marco Polo calls Tenduc. It is obvious that at a time when such minor kingdoms existed, trade between them would be much more likely to use a caravan route sheltered by deserts than one farther south, through inhabited country, where other local chieftains probably existed who would have been prone to levy all kinds of caravan tolls.

At present, the route which I have been describing with a good deal of detail is not physically suited to caravan traffic; not nearly so well suited as the routes farther north. If even two large caravans are travelling in company, they have often to space out the watering of their camels at alternate wells, as many of the wells would not suffice for, say, three hundred camels in one day. In addition to this, the grazing is not sufficient for caravan camels. Even in such unfavourable country, nomadic existence is possible if people live widely scattered, and rely on such frugal animals as camels, goats, and donkeys, rather than horned cattle, sheep, and ponies, because their baggage animals are worked only spasmodically. For a caravan camel, however, travelling day after day with a heavy load, feed must be carried. On an average, 30 per cent. of caravan camels on this route are laden with feed. As this is used, loads are divided and redistributed, so that at the end of the journey the average load is much decreased. In addition to feed carried, however, feed must be bought on the way, especially in a hard, cold season. This feed is supplied by traders who come up from the borders of China and camp along the middle section of the route, in the Ala Shan deserts. The cost of caravan travel is therefore greatly increased, while its earning capacity is decreased by the number of camels used for carrying feed. In spite of the extra cost, the loss in camels abandoned on the road through weakness is far greater than along routes with better grazing. In other words, the route could not stand competition, were it not for the political factor. In my book "The Desert road to Turkestan," I have given some account of differences in methods of camel-mastery and caravan handling, between the trading caravans of the great routes and the local caravans of the Ala Shan.

Yet I think it fair to believe that the route may have been more favourable within the historical period. The evidence of the depressions or trough country that I have described shows it to be possible that within the past few centuries moisture was more plentiful along the route. The evidence of dead

tamarisks and old trees that are being succeeded by no posterity of new growth adds confirmation. Finally, there is a class of evidence which has little to do, directly, with change of climate, but which I myself think to be of considerable importance as bearing on possible changes of trade routes. That evidence is in the temples, or rather the lama monasteries, to be found along the route. Lamaism did not gain a strong hold in Mongolia until the reign of Kublai Khan, in the thirteenth century, so that no lama monastery can of itself boast an age of more than six hundred years or so. The sites of monasteries, however, may well have a much longer history as holy places. Any one acquainted with holy places in Central Asia knows that there is a tendency in a supplanting religion (as in the case of Islam in Chinese Turkistan) to occupy sites that were already recognized as holy under the earlier religion. A site may gain a reputation for sanctity for any one of a number of reasons; but the sites which tend to become centres of popular resort, and thence by a natural process of evolution the centres of important religious establishments, are those which lie on lines of travel.

There are two important lamaseries, Shandan and Tukomen, on the line of the Winding Road through the deserts of Ala Shan, and each of them appears to have enjoyed in the past the same sort of advantages that contributed to the past importance of Etsina, in occupying points where north and south routes crossed the line from east to west. Prjevalski went to the north from Tukomen, and he notes that the line from the north through Shandan was used by a convoy from Urga in 1873, which was bound for Tibet to seek a new Living Buddha, but did not dare follow the better-established route farther to the west, because of the troubles consequent on the Muhammadan rebellion against the Chinese.

A lama monastery is generally founded at a point which makes a good centre at which the nomads can gather for seasonal festivals. These festivals tend to become the scenes of fairs, and if the site is on a convenient crossing of lines of trade, permanent trading communities gather about the temple. Urga, Uliassutai, and Kobdo, the rudimentary towns of Mongolia, appear to have grown from such origins. Shandan and Tukomen appear to be sites which were once in a good way to acquire a similar importance (though of course in a less degree) and to have justified the building of large temples, housing several hundred monks or lamas; though at present the poverty of the surrounding country, and until very recent years the poverty of traffic, would in no way justify such large establishments. There are strong grounds for supposing that they were built on sites which had originally a much greater importance, and that this importance had not wholly vanished at the time they were built. Such an importance can only, I think, have depended on a comparatively flourishing trade route; for, though changes of climate may have occurred sufficient to account for the difference between a good caravan route and a bad one, conditions are not likely ever to have favoured large resident or even nomadic populations. Some minor support is lent to this theory by legends that I heard which implied the existence of stone monuments near the routes; monuments which would hardly have been executed except in a period of comparative prosperity.

West of the Edsin Gol the character of the route changes decidedly. It is

not likely ever to have been an important trade route in the past, for it does not lie on a natural line of communication that would in any historical period have linked important centres of trade. It appears to have been always an infrequent line of passage used by Mongols; perhaps in small parties on migration, but more likely only when hunting or raiding. It rises slowly to a bleak plateau, broken by small hills, which are often irregularly grouped but have a prevailing east and west tendency. The depth of bad desert country from north to south is here vastly increased, and communication must always have been difficult. The plateau is composed of hard, sandy clay, overlaid with black gravel in flat pieces. The hills are of the same formation and are covered with the same gravel, while occasional large pieces of fissile black rock show the origin of the gravel. Rainfall is practically unknown, and very little snow falls in winter. The hills are marked only by faint channels down which drains the moisture of the scanty snows or of rare summer cloudbursts, and in these are found the scant vegetation of tiny stunted tamarisks and a few dessicated shrub-like plants which are even smaller. Farther to the north the nearest animal life is in the Kuku-tumurten Ola, reported by Ladighin, a member of one of Kozlov's expeditions. To the south there is no route for many days' journey; at least no route that is practicable for trading caravans.

Leaving a well some 40 miles west of the West Edsin Gol, in what is already forbidding desert country, the route crosses a dry stretch of nearly 100 miles before the next well is reached. The swell of the plateau leaves no depression where it would obviously be possible to dig a well, though the caravan men believe that water could be struck, were a party to come out well enough supplied with water and prepared to dig long enough and deep enough. There is no grazing for camels except stunted, brittle tamarisks, and shrubs in which there is not a particle of sap. This is the Black Gobi, the Khara Gobi, in its full desolation. Farther to the north there is another practicable line of march, on which wild camels are reported, and where the grazing is said to be slightly better.

The crossing of this most forbidding part of the Black Gobi ends at a well in a pocket among hills. The plateau then breaks down a bit, and rises again to a lesser plateau, one slightly less sterile. In between the plateaus is a well called the Wild Horse Well, near which a few antelope range, and where wild horses are reported. We were accompanied from the Edsin Gol to the edge of the Black Gobi by small birds like crows, with grey hoods. In the desert itself I saw no bird life, but in the second stretch of desert, travelling for about 50 miles from the Wild Horse Well to the next well, I saw a small bird something like a woodpecker, called the tamarisk bird. The gravel in this minor stretch of the Black Gobi thins out; the flat black fragments are interspersed with quartz-like fragments.

This plateau again breaks down, this time into depressions filled with dried-out marshes, and the prospect is varied by the sight of hills, especially on the south and south-west, where they rise to a fair height, looking like a definite range, which is evidently the main range of the Matsung Shan. In this depression region I saw antelope, and sand-grouse (in migration); while wild ass and wild camel were reported. I saw also a large wild sheep, which had possibly been forced down by drought from the higher hills in the south, to

drink at the marsh. The region is accessible with comparative ease from Outer Mongolia. Somewhere through it passes the route of Ladighin from north to south; the only explorer's route of which I know in all the country through which I had travelled for more than 200 miles from the Edsin Gol.

This country is dangerous for caravans. It is known as a sort of no-man's-land, all the inhabitants being renegades, either desperate characters or men who have fled from different Mongol communities to escape tribal taxation. It is naturally adapted to be a refuge for lawless men, for it can support herds and flocks, yet it is not so attractive to peaceful nomads as the country more to the north and north-west. I think it quite probable, however, that it was strongly held by the Huns, as an outlying territory, during the long period when their power was centred on the Bar Köl range. We know the Huns to have raided in some force against the western marches of Kansu, and from this region the caravan men report a feasible line of march southward to Suchow.

The region rose to a position notorious for several years in Central Asian politics, but obscure to the outer world, during the period after the War when first White and then Red Russian partisans were carrying on a savage guerilla warfare in Mongolia, involving not only Russians but Chinese and Mongols. During this period a man who appears to have been a Mongolized Chinese, but who is remembered only by the name of "The False Lama," gained some measure of power in Outer Mongolia. Apparently when Soviet Russia began to assert a positive control over the affairs of Outer Mongolia, he thought it wise to flee, carrying with him a considerable following, some of them his own fighting men and others Mongols that he gathered up to form a population about him.

He established himself in this no-man's-land, built a stronghold of which the ruins can still be seen, and set to with great energy to open a caravan route and found, if possible, a trading city. He was the first to see the possibility of working out the Winding Road to replace the roads closed to Chinese caravans in Outer Mongolia, and thus maintaining the trade between Kweihwa and Chinese Turkistan. He brought up supplies from Suchow, gave safe-conduct to caravans free of charge, sold provisions at a low rate and took charge of any worn-out camels which the caravans were willing to leave in his protection. It is related that he first established the crossing of the Black Gobi now in use, and that he intended to dig a well to relieve the hardship of the worst stages.

Unfortunately, he was not popular among his own people, many of whom he had forced to accompany him and over whom he ruled with a strong hand. The prospect of his rise to power gave no little concern to the rulers of Outer Mongolia, and in the end he was murdered. The murder is said to have been carried out by a small band of raiders despatched from Urga, and it is also said that it could not have been accomplished without the passive acquiescence of some at least among his own subjects.

From the House of the False Lama, as the stronghold of the adventurer is called, we worked in and out among the foothills of the Matsung Shan. The name of these hills is said by the caravan men to mean "horse-hoof-print hills"—the Horseshoe Hills, as we should say. The prevailing formation is one of crescent-like bays among low hills. This brought us to a camping-

place of some importance, called Mingshui. I take it, tentatively, to be the Mingshui marked on many maps. It appears to derive from a map of the Germans, Holderer and Futterer, which includes a route of the Russian Obruchev; but it may not be the same place, as Mingshui simply means "clear water," and can be applied to any spring-fed well. It is a place where routes from Kansu and Outer Mongolia converge on the Winding Road; toward the west, two main lines of march diverge. One goes round the northern side of the Qarliq Tagh; this is the line of the Winding Road. The other goes round by the southern side of the Qarliq Tagh and reaches Qomul or Hami.

I take Mingshui to be the point, approximately, where Sir Francis Younghusband's route of 1887 crosses that which I followed, for he finished his camel-caravan journey at Hami.\* It is remarkable that his route, striking enough in all conscience at the time it was made, has never apparently been followed by another traveller. It seems to have coincided for the most part, as I have indicated, with the Small Road, until the junction of the Small Road with the Great Road; then to have followed the Great Road until it had overshoot the no-man's-land of which I have just been speaking, and finally to have made a traverse to the south and west, striking across country more or less, to round the end of the Qarliq Tagh and make for Hami. The final stages of this interesting route are, to my mind, the most remarkable; for they illustrate what I should like to point out as the essential feature of the true Mongolia-going caravan routes—they do not follow absolutely a fixed itinerary, but are really nothing more than a *direction of march*, governed by water and grazing and by nothing else except tribal hostilities or coalitions, or the shelter offered to raiders.

It may be that Sir Francis Younghusband made his Mongolian journey much as I did; that he simply consigned himself into the hands of his caravan men, demanding to be delivered right side up in Chinese Turkistan, but fussing very little about the exact route taken. If that is so, then I think I must be right in my guess that his men chose their route for reasons that correspond in an interesting way to those which led to my hitting on the Winding Road; the same reasons that led the Mongols to travel by an unusual route from Urga to Tibet in 1873 as noted by Prjevalski. This great journey of the first white man to travel through Mongolia and Chinese Turkistan to India was made just after the savage wars of the Muhammadan Rebellion, which led to a great deal of freebooting in Western Mongolia, owing to the presence in the Altai of a Muhammadan tribe, the Kirei clan of the Qazaqs. These men are always prone to exchange raids with the Mongols and to harry the caravan trade. During the Muhammadan rebellion they sacked Kobdo, and according to the tales current among the caravan men, made travel impossible in Western Mongolia. It is probable that they had not entirely quieted down after the suppression of the rebellion in Chinese Turkistan itself, and that for that reason Sir Francis Younghusband's caravan men led him into such an interesting route, rather than continue along the Great Road until they

\*Since writing the above, Sir Francis Younghusband has been kind enough to show me his own route-survey. From this it is plain that my route converged again on his a good deal farther west than Mingshui; in fact on the outer skirts of the Metshin Ola, near the small oasis of Adak.

approached the Baitik Bogdo, a well-known haunt to this day of Qazaq raiders.

Shortly after leaving Mingshui we picked up sight, across an enormous hollow in the desert, of the everlasting snow on the peaks of the Qarliq Tagh: a stupendous vision, like the sight of a promised land. There is little else to record of the journey itself. I tried unsuccessfully to cross a snow-filled pass from Tur K l, on the northern side of the Qarliq Tagh, to the Bar K l basin. Failing this, I turned out along the outer flanks of the Metshin Ola, a buttress of the Qarliq Tagh, and eventually reached Kuchengtze. This was not accomplished, however, until I had undergone a detention of some fourteen days at a border post, a delay which entailed very difficult travelling with my small caravan through appalling winter weather. The entry into Kuchengtze was made just over four months after I had left Kweihwa.

In thus giving a fairly close survey of the physical characteristics of a particular caravan route, I have touched on two geographical features, the Gobi and the Altai, which play a great part in orienting the trade routes throughout Mongolia. In appreciating these trade routes, however, the geographical factor must be supplemented by two others, the social and the historical. The social factor is the prevalence throughout this geographical region of the nomadic culture or social order. It is responsible for the fact that the oldest trade routes in Mongolia appear to have originated not in trade but in the migrations of peoples. The historical factor is the contact between the tribes of nomadic culture and their neighbours of a different social order; of whom the most important appear always to have been the Chinese, not only as the nearest, but as the most solidly attached to their own civilization and the most widely distributed, along a strategic frontier which throughout history must have been of vital importance to the nomadic tribes.

This type of caravan route, originating in the passage of nomadic peoples, has been, I think, studied less and less fully understood than the other avenues of commercial, cultural, and military movement through Central Asia. In the first place, because of the social order of nomadic tribes, the sites of permanent occupation are rare, and arch ological evidences comparatively scanty. In the second place, modern exploration has been devoted more to the cartography of mountain ranges and deserts than to the elucidation of routes, so that the routes of the explorers themselves have tended to cut across country to striking points of vantage. In the third place, the trend of exploration has largely followed the direction given by the early Russian travellers, who were concerned with traversing Mongolia in north-to-south lines, to elucidate its topography in relation to the political frontiers of Russia and China; thus cutting across rather than following the natural lines of communication. Lastly, the vagueness of even the most frequented routes in a country where travel follows the customs of the nomad rather than of the trader has made them less obvious to comparative study.

In some ways the historical approach to the study of these routes is even more illuminating than the geographical. Above everything else there stands out the historical phenomenon of the Great Wall of China, itself based on a sound geographical line of cleavage, and reinforced in part by the valley of the Yellow River. The bias which it gave to all the lines of communication in

Central Asia more than two thousand years ago has endured ever since. It was designed originally, we are told, to turn back the inroads of different Hun tribes which at that time threatened China from Mongolia; a threat which must evidently have been developing for an appreciable period, and have constituted a menace of the first order. It might give a clearer idea of the truth to say that the Great Wall was an attempt to establish a permanent cultural demarcation between the lands of the nomad tribes and the lands held by settled people. I need not attempt to enlarge on the relations between the Chinese and the nomad tribes, Hun, Turkish and Mongol, which broke in successive waves against them. I should like merely to stress the function of the Great Wall, during some two thousand years, in determining, however roughly, the frontier between two types of civilization. It has often been pointed out, sometimes with a good deal of contempt, that the Great Wall was awkward to defend, easily penetrated by invaders with any real instinct for warfare, and easily turned when once penetrated. We should not, however, allow such criticism to obscure the true worth in history of this colossal achievement in defensive engineering. To begin with, its construction dates the rise of a power of resistance in the unwarlike civilization of China; and it was this power of resistance, deflecting the aggression of the Huns, which gave a westward trend to the whole period of the Great Migrations, throwing against the Near East and Europe the destructive weight of the barbarian hordes.

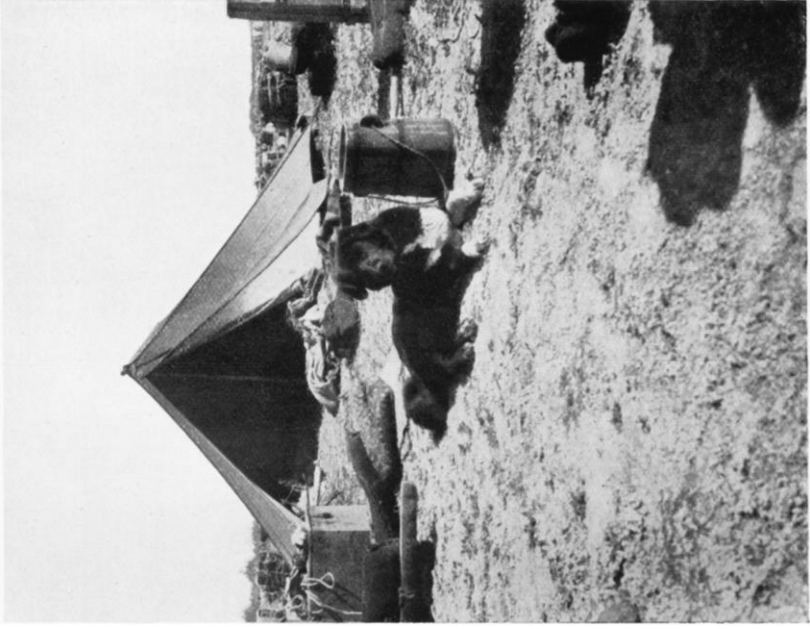
Later, the Great Wall formed a *point d'appui* in the frontier policy of the Chinese. The actual frontier varied according to the amount of pressure bearing on it, alternately from the Chinese on the south or the barbarians on the north and north-west. At different times invaders established non-Chinese kingdoms in Kansu, Shensi, Shansi and Chihli. Some of the waves of conquest swept into China with sufficient momentum to penetrate even farther, and resulted in the founding of dynasties that controlled the whole, or practically the whole, of the country. These fluctuations, however, are overborne by the fact that nomadic peoples overpassing the military barrier of the Wall have in practice always recognized it as a frontier of civilization. They have always faced about to defend it, and they have tended to become merged in the civilization they found within it, adapting their own social order to the possession of tilled fields and walled cities. They have all become Chinese, and the lands they mastered have never been considered anything but Chinese, in spite of differences of dialect and racial type.

The only open land frontier in China is the Central Asian frontier. On the Chinese side of the Great Wall there have always been roads radiating from the centre of the country and approaching that frontier. The most celebrated of all these roads is the cardinal route commonly known as the Imperial Highroad. From classical and pre-classical times it led from Central China through Shensi and Kansu and ultimately toward Turkistan and the countries known vaguely to the Chinese, from the most ancient times, as the Western Regions. Other roads led northward toward Mongolia; by the approach of Wutaishan and Tatung through Shansi; by the Kweihwa approach north of the great bend in the Yellow River; by the Jehol approach through northern Chihli; and by the Shanhaikwan entry into Manchuria.





*Fruitsellers in small town of Chinese Turkistan*



*Camp and caracian dog, western Edsin Gol*



*Qazaqs fording Tekes river, Tien Shan*



*Camels on iris-grown prairie by salt pool of Ulan nor, north of Kweihwa*



*Ssu Ta-tze Liang (Dead Mongol Pass) between Tur Kól and Basin of Bar Kól*

All these roads have the character of what we may call true roads. They are as normal as Roman roads. They are adapted, wherever possible, to wheeled traffic, and to the orderly supervision of officials and tax-collectors. They follow lines of least physical resistance. Shelter for travellers is not limited to tents, but is provided at inns, at regular stages. Food for travellers does not have to be carried, nor do transport animals have to depend on grazing, but provisions and fodder are gathered from agricultural communities situated along or near the road and made available at the regular halting-places.

It is this character of the normal roads which distinguishes them from the caravan routes of Inner Asia. North of the Great Wall routes are determined by two classes of desert conditions, which may conveniently be distinguished as the oasis-desert, where people are settled in fixed communities, and the pastoral desert, where people live as nomads. The first is utter, irredeemable desert, what Sir Aurel Stein calls "true desert," and the Old Testament a "howling wilderness," but broken by oases. Each oasis is isolated, and its population relies in the first place on the resources of the oasis itself, and in a lesser degree on trade with other oases. In such conditions the trade route retains a strong resemblance to the normal road. Transport is concerned with the special difficulties of bridging gaps of desert and of providing food and other necessities between the oases. Trade, however, continues to move between fixed points, and because these points are fixed, the lines of communication tend to become fixed channels. Roads adapted to the type of desert broken by oases prevail throughout southern Chinese Turkistan, and in comparatively modern times have been extended into northern Chinese Turkistan. The roads evolved under the conditions of the pastoral desert must conform to totally different requirements. These are the roads that have prevailed throughout the historical period in Mongolia, and until the recent past must have been typical also of what we call Dzungaria and of northern Chinese Turkistan.

In these regions we depart altogether from the canons of the normal road. Routes, in fact, are no longer roads designed to communicate between fixed centres of population. They become, rather, general directions of march. Each direction of march is determined by the needs of a migrant population, moving not from one oasis to another but between vaguely defined areas. The areas themselves are determined by prevailing geographical conditions. They are not selected in the first place with regard to the potential development of trade, but because they meet the needs of flocks and herds. Men go where their cattle and sheep must go, and such trade as later develops must be able to follow the wandering men.

Throughout Mongolia and Dzungaria, over territories larger than all Western Europe, it is the lack of oases that has controlled the activities of human society, inevitably requiring the evolution of nomadic tribes. There are no mountain ranges (except a portion of the Altai) with large glaciers and large beds of perpetual snow, sending down into the desert streams from which oases can be formed. The prevailing climatic condition is one of sub-aridity, producing enough grass to support flocks, but requiring migration if the flocks are to enjoy the best available pasture throughout the year.

It has been roughly estimated that about a fourth of Mongolia is either

utter desert, or so arid as to invite the occupation of only the poorest nomads. Not all of the remaining three-fourths are arid enough to compel nomadic pastoral life, without the alternative of settled occupation. Every important mountain range appears to be a centre of good climatic conditions, including a regular water supply, from which the climatic lines radiate outward and downward, through arable land and steppe country to sterile desert. This, however, is a physical structure which makes the mountains centres on which nomadic life converges, rather than barriers separating one climatic region from another. The tendency to a nomadic life, therefore, has always dominated the tendency of society to attach itself to particular localities and develop the culture of fixed communities. Well-favoured regions exist in Mongolia where agriculture is quite possible. Still more favoured regions are to be found, with abundant forests, good arable land, and easily worked mineral deposits, where it might be expected that men would readily turn from the nomadic life to one of permanent occupation. Historically, however, it has always been difficult for a minority to settle in such regions, because they lie open to regions in which a conversion from the nomadic to the agricultural life is not likely, and the accumulated wealth of settled inhabitants would provoke raids from the wandering tribes.

It is evident that there have been attempts in Mongolia to break away from the nomadic tradition. In the fertile part of northern Mongolia, where numerous lakes and rivers drain toward Siberia, many tumuli and stone monuments indicate that the country was once held by the Uighurs, who appear to have been the central stock of all the Turkish tribes, and the first of the Turks to adapt themselves to agriculture and permanent habitations. The Uighurs, apparently, first showed a tendency to settle down while in this region, but they were dislodged by the tribes whose modern representatives are the Qazaqs, and after migrations which took them first westward, in the direction of Chuguchak or perhaps farther, they pitched at last on the northern flanks of the Tien Shan, which form the southern rim of Dzungaria. There they speedily adopted agriculture and rose to a high degree of culture. Their capital is supposed to have been near the modern Urumchi, and they even spread beyond the Tien Shan to Turfan, which is in the true zone of oasis-culture.

An analogous and much more complete example of the conflict between the nomadic and settled cultures can be seen at the present time in the Ili region, which lies, like Urumchi, on the northern side of the Tien Shan, but is more accessible from countries that have always been peopled by nomads, and is much nearer the central corridor of passage used in the great historic migrations. The valleys of the Ili river and its affluents offer every advantage for the development of agriculture and town life. It is even apparent that settled communities flourished there during the past; but only at intervals. At the present time, it is evident that the whole country has been overwhelmingly dominated by the nomadic culture for a number of centuries. It lies too much open to the inroads of nomadic tribes, and all the great westward migrations in sweeping by it on the way toward the steppe country of southern Siberia and Russian Central Asia, overthrew the successive efforts at the establishment of permanent communities.

In the zone of oases, on the southern side of the same mountains, the permanent communities were never uprooted. They were open to raids from the nomadic tribes, but they did not invite nomadic occupation because the absolute desert intervening between oases did not favour the passage of nomads with all their cattle and transport. Different phases of indigenous civilization were damaged by these raids, but the communities persisted. In this they offer an historical contrast with the Ili country, where after the gradual subsidence of the great migrations, agriculture and city-building may still be seen in the initial stages of development. Indeed, what development there is may be ascribed entirely to the peaceful immigration of Chinese colonists and settlers from the oases across the mountains. The people of the country, the Qazaqs, who represent the long succession of nomadic invaders, are only beginning to modify the nomadic traditions which were necessary to their survival during such a prolonged period, and to cultivate a few catch crops. Many of them are farmers and flockmasters by turns, with only the poorest tending to attach themselves permanently to the land, thus representing the actual process of transition between two social orders.

In order to understand the Mongolian caravan routes, which I have classified as "directions of march," it is essential to arrive at some idea of the migrations which first worked out their geographical possibilities. It is well enough established that most Mongols are only semi-nomadic, moving ordinarily to high pastures in the summer and to low, sheltered regions in the winter. They derive obvious advantages from restricting as far as possible the orbit of migration, husbanding their flocks and herds by moving them only to obtain shelter or a change of pasture. The essential thing about them, in fact, is not that they *do* move, but that they *can* move. The structure of their habitations, the quality and quantity of all their belongings, are conditioned more by the necessities of the short seasonal migrations than by the conveniences they might otherwise elaborate during the comparatively long periods when they do not move their camps. Given a sufficient impulse, there is no limit except the presence of grass and water to the possible range of their migrations.

The Mongols, in the past, very probably did not wander to any greater distances than they do at present. There is no reason to suppose that their habitual migrations covered enormous distances even in the periods immediately antecedent to the wholesale migrations which affected so profoundly the history of both Europe and Asia. It can hardly be doubted that the cause of these huge displacements of whole populations must be sought in climatic changes. The geological evidence, I understand, points to a steady desiccation of Mongolia and the adjacent regions of Central Asia. The researches of Professor Ellsworth Huntington have, I think, gone a long way toward establishing the theory that this prevailing tendency has not been absolutely uniform within the last 2000 years. In other words, the graph of desiccation is not an unbroken curve, but is broken by relapses toward moister climatic conditions, if I may so phrase his theory of "climatic pulsation."

Among the most interesting findings of Professor Huntington are the figures he quotes from Australia to illustrate the effect on pasturage, and consequently on sheep and population, of rainfall in semi-arid regions. "According

to Hann," he says, "a rainfall of twenty inches a year in New South Wales makes it possible to keep over six hundred sheep on a square mile of land; with a rainfall of thirteen inches only about a hundred can be kept; and with ten inches only ten sheep." A decrease of 35 per cent. (from 20 inches to 13) in the rainfall, that is, means a decrease of over 80 per cent. in the number of sheep that can be kept in the territory affected.

It would not take nearly so great a fluctuation of climatic conditions to start a people like the Mongols on migrations far more extensive than their normal spring and autumn orbit. They would either have to resign themselves to the loss of a great part of their stock, and to hardships that would severely diminish the population, or strike out to extend their grazing grounds. In such a search for new pastures each tribe would naturally find itself brought up short by the neighbouring tribes until, the pressure becoming more insistent, a movement of cohesion set in, and the united tribes pressed forward in common hordes.

Naturally, no such period of drought would set in abruptly; the pressure would increase gradually until an impulse toward general migration gathered way. After the pressure of population had been relieved, a period of repopulation would naturally set in; and during such a period, especially if the climate underwent for a period of several generations a slow reaction toward better conditions, it is easy to see how a great reserve of nomadic tribes could again be gathered in Mongolia. These in turn would be set in motion when the next "pulsatory" period of increasing drought recurred.

The cyclical process of migration and recuperation seems to have been terminated finally by an artificial measure; and that measure, curiously enough, was first applied under Kublai Khan, one of the greatest Mongol emperors. It was he who first encouraged the spread of Tibetan lamaism in Mongolia, hoping that it would act as a civilizing agent. The ultimate effect of this debasing religion was to withdraw an enormous percentage of the able-bodied men from active, productive life, and both to check the reproduction and drain the wealth of the race. The degenerative action of lamaism, however, did not take effect until much later; the period when the Manchus conquered China was the last period in which a general migration nearly came to a head. The campaigns of the Zungars or Western Mongols in the seventeenth century, almost rivalled the conquests of the Manchus, and had they not been checked by the Manchus might well have drawn all the Mongol tribes after them in a last assault on civilization. The Manchus, however, were the last conquerors to lodge themselves within the Great Wall, and they defended their conquests to such purpose that no general invasion has since threatened the Great Wall. After breaking the power of the Zungars or Ölöts Mongols in the west, and the Chahars in Central Mongolia, they continued the policy of favouring the lama church, until it had gained a hold on the Mongols from which they are never likely to recover. At the present time, whatever the progress of desiccation in Mongolia may be, it is not likely to impel the tribes to migrations of conquest. Saturated with lamaism, the Mongols are not increasing in numbers; indeed, many observers believe that they are actually decreasing. The population of the country is far below the number that even the arid territories might support.

The first migration from Mongolia of tidal proportions, that of the Hun tribes, appears to have taken place about the dawn of our own era, at a period when the power of the Chinese was also in the ascendant, and the Great Wall frontier was being asserted. The power of resistance which it represented gave the migration a set that took it to the north-west, away from China and the settled country and into the Russian steppes. There is ample evidence in history to show that this initial westward drift, though confirmed by subsequent migrations, was concurrent with periodic backwashes that affected China and northern Chinese Turkistan. Strong Hun tribes were established for a long time in the Bar Kōl Tagh, dominating the obvious trade-route approach from Kansu province to Qomul (Hami) Turfan and Urumchi, and forcing the Chinese to work out the more difficult "silk road," the classical route through the wastes of Lop Nor into southern Chinese Turkistan.

A survey of the Great Wall frontier and of the mountains and deserts of Mongolia shows convincingly why the nomadic tribes, whenever Chinese resistance was at all formidable, found it more satisfactory to carry out the prodigious migrations which carried them to the north-west, into the Russia steppes and thence into the nearer east and Russia. Northward from the Great Wall a system of zones appears. First, following roughly the Wall itself, there is the zone of the marches, an area of fusion between settled Chinese and nomadic Hun-Turkish-Mongol culture. In the west this zone is wide and vague, fortified by outer desert buffers. In Ala Shan the Chinese influence reaches far to the north. In the Ordos region, which is like an elbow of Mongolia thrust into the ribs of China, the Mongol influence penetrates far to the south. Farther east, between Ala Shan and Manchuria, we have what is now known as Inner Mongolia proper. Here again the Great Wall frontier, though standing in the main, has frequently been overpassed. Nomadic tribes at different times have seized large parts of North China, tending to merge themselves in the Chinese culture, but leaving strong traces of their blood and probably modifying also the dialects of spoken Chinese. At the present time the Chinese in their turn are encroaching to the north, occupying belts of arable land formerly held by the Mongols.

North of the marches and Inner Mongolia is the Gobi, a zone in itself and the only frontier in Mongolia that is of itself a barrier. North of the Gobi there is the zone of Central Mongolia, geographically contained in the basins of the lakes and rivers flowing into, or trending toward Siberia. In the west there is the zone of the Altai, and lastly the zone of northern Turkistan and southern Dzungaria, lying between the Altai and the Tien Shan and forming the zone of transition between the true nomad country and the oasis-country of southern Turkistan. The geographical relation between these zones is one in which they do not cleave apart on lines of strict division, but merge into one another. Most important of all, the mountain ranges in general are at the centres of their zones, so that historically they have served not as dividing barriers but as strongholds and rallying points. The zones, taken all together, have such a geographical unity that historical causes felt in one zone have had immediate repercussions throughout the others.

The tribes inhabiting these zones are controlled in their lines of communication by an axis of deficient water and grazing up and down the length of the

Gobi, and two axes of water and grazing, one along the Altai and one farther north. The great sweep of the main Gobi, from south-west to north-east, must always have served as a secondary outwork to the defensive system of the Great Wall. The terrain itself was too difficult for either Chinese posts or nomadic tribes ever to occupy it in strength. At the same time, it created a gulf between the marches, or Great Wall front, and the steppes of Outer Mongolia which were naturally the most favourable assembly-ground for great nomadic hordes.

On the hither side of the gulf, in what is now Ala Shan and Inner Mongolia, there is not room for nomadic tribes in formidable numbers. There must, in consequence, have been a tendency among the minor tribes between China and the Gobi to distinguish their particular interests from the general interests of the major hordes to the north of the Gobi. That such an attitude would be a natural one is proved by the way that the Inner Mongolian tribes threw in their lot with the Manchus at the time of the Manchu conquest of China.

The Manchu irruption was itself only the most easterly phenomenon of a phase of universal unrest throughout Inner Asia. Had they not been forestalled by the success of the Manchus, the Mongol campaigns, which were being headed by the Ölöt Khans in the west and Likdan Khan of the Chahars in Central Mongolia, might have eventuated in irruption: a series of attacks on the Chinese from the north, and simultaneously a migration of conquest from western Mongolia into the Russian steppes. The first wave of migration, the last migration of the Mongols on a large scale, had already been launched. The Torguts of the Tarbagatai, Ölöts themselves, but at odds with the Zungars and the main body of the Ölöt tribes, had set forth for the Volga, from which they were to return seventy years later after the pacification of Inner Asia by the Manchus; and the way was clear at Chuguchak, which has always been the nomads' gate, for further migrations in the direction of Russia and western Central Asia. The tribes of Inner Mongolia, however, threw in their lot with the power that approached them from Manchuria and China rather than the powers at work in the steppes of the greater hordes, in Outer Mongolia, and the Manchus were thus able to buttress the Great Wall frontier and consolidate their conquests.

Along the Altai range there is an axis of water-supply, running from north-west to south-east and fading, beyond the Gurbun Saikhan and Hurku, into the waterless axis of the Gobi. The Altai do not have such a commanding relation to the arid country of Mongolia as the Kunlun and Tien Shan have to the inner basin of Chinese Turkistan. Except in the limited high crests of the range, far to the west, they do not hold sufficient reserves of ice and snow to nourish outward-flowing streams that gain in volume as the heat of summer increases. Nevertheless, they provide a climatic range. As the snow melts on them in summer, flocks can be sent up towards their crests in search of summer pasture. More important still, along their flanks are to be found unailing lines of wells. The streams originating in the Altai, the eastern Altai especially, do not have sufficient volume to flow far above ground. They sink into the piedmont gravel glacis that buries a great part of the lower flanks of the range; but, protected thus from evaporation, they continue to flow underground. Below the gravel glacis the water, tending toward the surface again, supports



pasturage, and, by detecting the channels of underground flow, wells may be sunk that furnish a good supply of water. Thus it is possible either for nomads or for trading caravans travelling in the nomadic manner to follow directions of march parallel to the Altai, sure of water and sure of grazing, and at the same time avoiding passes and difficult marching country.

These corridors north and south of the Altai are fair examples of the evolution of the caravan route from nomadic "directions of march." By continuing on the southerly and westerly side of the Altai, the direction of march can be carried all the way to the Tarbagatai country and the verge of the Russian steppes. On the northerly and easterly side a similar line can be followed, if anything even more favourable to the passage of large bodies of transport animals, flocks and herds, except for final passes over the Altai rising to about 8000 feet.

Yet another direction of march, offered by the Khangai ranges, links the central steppes of Mongolia with the Altai. Beyond that, passage to the north, into Siberia, is barred by the dense forests of the Yenisei basin and the Syansk range. Even tribes migrating from north-eastern Mongolia into Siberia would find their passage westward barred by lake Baikal, and, in fact, the only important Mongol tribe that ever established itself in that part of Siberia appears to be the Buryats, whose lands are east and south-east of lake Baikal.

In the east of Mongolia the Khingan range appears to be less a barrier between Mongolia and Manchuria than the backbone of an extreme eastern zone of Mongolia, which is roughly the last district in that direction inhabited by nomads of the Mongol or pastoral type. Beyond them there appear to have been, throughout the past, nomads of a different type, the Tungus tribes, among them the ancestors of the Manchus. They belonged to the hunting, fishing, and forest-roving order of primitive people, whose territory, by reason especially of the forests, is necessarily less open to the passage of shepherd nomads than either steppe country or such civilized country as North China.

Thus the natural directions of march in Mongolia appear to be predominantly from east to west and from south-east to north-west. All of them converge on the Tarbagatai range and the valley of the Emil, in which stands at the present the town of Chuguchak. The Tarbagatai, linked with the Barlik and Ala Tau ranges, offer a traverse to the northern Tien Shan and the rich steppes about Issiq K l. On the route south of the Altai a similar traverse is offered from the Baitik Bogdo range across an easily negotiable trough of desert to the eastern Tien Shan in the neighbourhood of Kuchengtze. The route still farther south, that which I followed through the heart of the Gobi, is quite evidently exceptional. Even if, as I myself suppose, water and grazing were in time past more plentiful, it can have served only to communicate between the Edsin Gol and the northern bend of the Yellow River. West of the Edsin Gol no nomadic direction of march can ever have been practicable. The importance of the route must have depended in the main on its junction at the Edsin Gol with a corridor to the north, into Outer Mongolia.

Granted the alignment of these directions of march, it is obvious that any effective resistance from the Chinese on the front of the Great Wall must have diverted the nomad tribes, at the periods when increasing drought impelled them to migration in search of new lands, toward the west. Converging by all

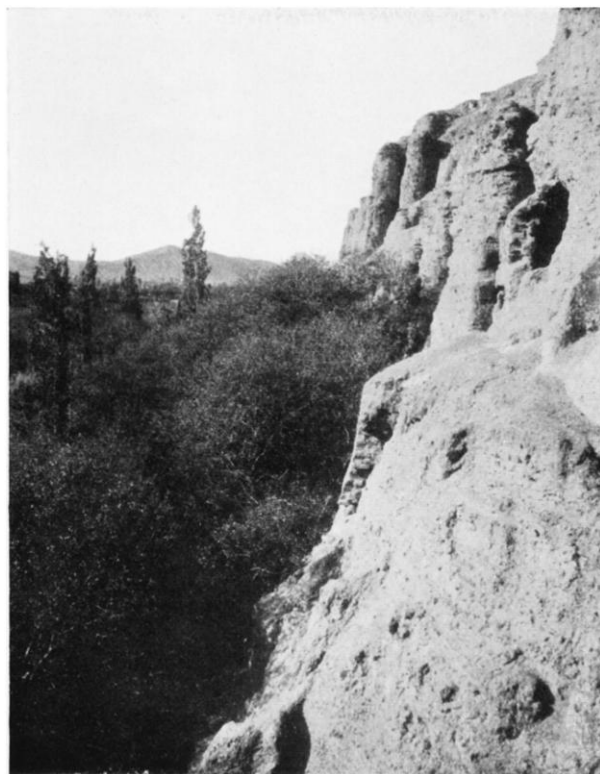
the routes on the nomads' gate in the valley of the Emil, they swept into the Russian steppes and thence diverged all over western Central Asia, the Near and Middle East, Russia and Europe. Only at such periods of prodigious expansion as the upheaval under Jenghis Khan and his grandson Kublai did the Mongols make wide conquests in China; and even then the number of Mongols diverted to the subjection of China must have been small compared to the hordes that under such a leader as Batu Khan alone poured out to the overthrowing of Russia.

The development of trade routes along such avenues of nomadic passage must have been slow in the remote past, when the tribes were unsubdued and the hazard was increased by outbreaks of tribal warfare. Caravan trade can only have existed as an adventurous kind of barter, carried on by men leading their convoys tentatively along the routes of migration, passing at their own risk from the restricted orbit of migration of one tribe into that of the next. For evidences of trade of a more organized kind, at the earlier periods of which we have knowledge, we must cast farther to the west, to the regions that centre on the basin of the Tarim river. These routes have been discussed in such a masterly way by Sir Aurel Stein that I should hesitate to make more than a running comment on them; enough only to bring them into relation with the routes of nomadic origin.

I take for granted an acquaintance with the physical conditions: the central desert, the enclosing mountain ranges, the streams breaking down through gorges from the mountains and permitting the irrigation of land in such limited zones as can be fed with water from canals and ditches. The human factor can be summed up as one of oasis-culture. The routes connecting oases are, primarily, trade routes. Owing to the absolute desert so frequently intervening between one oasis and the next, the lines of communication are not naturally adapted to the movement of peoples in migration. Even military conflict must be abnormal. The human tendency toward expansion is, among the people of such an oasis-culture, sufficiently gratified by developing the transport of goods. They are not easily impelled to abandon one set of farms in one oasis merely to sally across a desert and occupy similar farms in another oasis.

One point, however, which appears to me of great significance, has never been touched on by the authorities who have worked over the routes of the oasis country. That is the tendency toward what I should like to call tentatively a perpendicular as against a horizontal development of civilization. The normal tendency of all settled peoples is to expand laterally into touch with their neighbours, to provide an exchange of commodities. The peculiar geography of the inner basin of Chinese Turkistan encourages a different tendency.

The typical oasis of southern Chinese Turkistan is placed near the end of a river flowing from the mountains into the desert, at a point where the flow of water retains impetus enough to be carried out fan-wise in irrigation ditches. The typical river, if traced upward, is found to break down through an outer, desert barrier range, beyond which it can be followed up into more fertile mountains. This vertical construction, of fertile mountains, barrier range, desert and oasis, is more pronounced along the flanks of the Tien Shan than



*Irrigable valley at foot of desert barrier-range,  
Turfan depression*



*Ruined fortress of the False Lama, Matsung Shan, W. Mongolia*



*Qazaq moving camp, with yurt framework packed on bullocks*



*Felt yurt of Qazaqs, at mouth of Köksu gorge, Tien Shan*

along the Kunlun, but it is characteristic of both. The high mountains may produce timber. They always produce gold and other minerals, and offer a certain amount of pasture. There is, consequently, an incentive to trade between the mountains and the oasis. The people of the mountains bring down wool, hides, and metals to exchange with the people of the oasis for grain, cloth, and such rude manufactures as can be better developed in a town than in the mountains.

Thus each oasis tends to develop a self-contained trade and civilization, passing vertically up into the mountains and back. Vertical communication is, it is true, more difficult than lateral. The passage of the mountain gorges is commonly so difficult that the peoples of the plains and of the mountains do not merge into one polity. Those in the mountains remain pastoral and even semi-nomadic, while those in the oasis remain farmers, town-dwellers, and artisans. Yet the diversity of the products that can thus be exchanged is much greater, and therefore more stimulating to trade, than the diversity of products to be exchanged laterally, between oases. Lateral communication is likely to thrive only with the development of a through traffic, as opposed to local traffic: such a traffic as is, in fact, known to us from the great historical periods, as when, for instance, the Chinese built up the trade of the Silk Road.

Indeed, nothing is more obvious than that the people who turned the local routes of the oasis zone into important channels of communication between different races and different civilizations were not the oasis people but the Chinese. In periods like the Han and T'ang dynasties, when China was a great power, the Chinese thrust westward, throwing their weight into Inner Asia. I think it fair to assume, on the evidence from a number of sources, that the Chinese were not primarily concerned with conquest in the inner basin of Chinese Turkistan.

No single fact is of more significance than that the first organized effort of the Chinese to penetrate the Lop Nor deserts, reach the zone of oases and open communication with the Western Regions should have been the celebrated mission of Chang Ch'ien. This mission was despatched toward the end of the second century B.C., to seek an alliance with the Yueh-chih or Indo-Scythians, against the Huns. The Great Wall had been completed during the hundred years preceding the mission. The Chinese had not only been establishing a front along the Mongolian border against the Hsiung-nu, or early Huns, but had reasserted themselves in what is now Kansu province, and that part of Kansu especially which appears on the map as a corridor running past the foot of the Nan Shan toward the Western Gobi. The Hsiung-nu, or Huns, had not long before displaced the Yueh-chih in this very Kansu region, forcing them to migrate far to the west, toward Transoxiana, whither Chang Ch'ien went to seek them out, hoping—a hope that was disappointed—to ally them with the Chinese against their common enemy the Huns. Finally, it should be noted that to complete their turning movement which had pushed the Huns away from China, the Chinese had carried a supplementary fortification (the celebrated *limes* discussed by Sir Aurel Stein) from the Great Wall in Kansu right away to the Lop Nor basin.

In fact, it appears that the initial entry of the Chinese into Inner Asia was

to gain a foothold that would enable them to manipulate the nomadic barbarians of contiguous regions, to maintain the north-westward drift of migration, and prevent a recoil toward China. Trade, it is fairly plain, did not precede the flag, but followed it. After Chinese embassies and missions had begun to pass among the oasis peoples, carrying rich gifts of Chinese produce to impress them with the power and wealth of China, they came in touch with the regions beyond, which are now Russian Turkistan and Persia: regions much richer in potential trade and revenue. Still farther to the west were even more valuable markets for Chinese products, especially silk—how valuable, we can divine from classical and post-classical references to silk and the “silk-weaving Seres,” who were none other than the Chinese, standing behind the shadowy kingdoms and powers of Inner Asia.

Thus the development of trade routes in the zone of oases appears to have been, throughout history, dependent on the introduction of through traffic from exterior regions. The mere falling away of through traffic, however, would by no means account for the pronounced evidences of decay in the inner basin of Chinese Turkistan. To account for the abandoned cities far out in the desert, and the withdrawal of population to points nearer the source of water supply, we must approach again the vexed problem of desiccation.

It has been much debated how far the ruins of Chinese Turkistan were due to local causes and simple abandonment, and how far to a widespread dislocation of human life by general desiccation, entailing great movements of peoples and destructive wars. I venture to think that some light may be cast on this by a consideration of what I have called the vertical structure of society in Chinese Turkistan. It may be that such a structure could account for destruction as well as for development. During a period of drought, or the recession of ice-caps in the high mountains causing a diminution of the rivers, the oasis people would tend to move up the rivers, nearer to the source. At the same time the pastoral mountain people, under pressure of the same causes, would be impelled to move downward and even to raid the people of the plains in the effort to secure a larger supply of food than they could purchase with their diminished power of barter. Neither in the mountains nor on the plain would lateral movement, or true migration, relieve the pressure, because of the difficulty of movement which would mean the abandonment of all heavy transport. It could well be argued, however, that such regional conflict might originate without a direct climatic cause. The migrations of the nomadic tribes, sweeping by on the other side of the mountains, might so dislocate the “through traffic” of which I have spoken, that a resultant economic slump would precipitate local wars.

That the painful relief of the pressure of population by war and slaughter was effected on these restricted vertical lines, up and down between plain and mountains, appears likely from our broad knowledge of the great lateral migrations, which carried the nomadic people to such enormous distances. To take only one example, a late one, the Mongol conquest of Chinese Turkistan does not appear to have moved along the trade-route line from oasis to oasis, on the southern flanks of the Tien Shan. It seems to have swarmed along the northern flanks of the range, where continuous pasturage was available; then, when they had mastered the whole northern line, they could strike back across

the mountains, descending to and conquering each individual oasis by a vertical descent along the river that supplied it with water.\*

One remarkable change in trade routes must be noted, because of its importance in linking the routes of nomadic origin with those of the zone of oases. This is the Tien Shan Pei Lu, the "Road North of the Heavenly Mountains." It runs along the northern foot of the Tien Shan from the terminal Bar Kōl Tagh to the Hsi Hu (Shikho) oasis, where it divides, one branch continuing along the Tien Shan and one traversing to Chuguchak. It is essentially a route linking oases, not one suitable to the passage of nomadic hordes. Its historical importance is that it lies roughly parallel to the true line of nomadic passage, which skirts the southerly slopes of the Altai and arrives at Chuguchak by a line providing continuous pasturage, and that it gradually supplanted this nomadic route.

This change of routes, probably originated in the seventh century A.D., when the Chinese under the T'ang dynasty gained for a period control over the eastern Tien Shan, may be said to mark the turn of the tide, and the ascendancy of settled civilization over the nomadic culture. It is true that later migrations reasserted the supremacy of the Altai route, but at intervals trade and wealth were diverted again to the foot of the Tien Shan, and at the present day the true arterial routes of Chinese Turkistan are recognized to be the road south and the road north of the Tien Shan, both the nomads' direction of march along the Altai and the Silk Road through the wastes of Lop Nor having fallen into desuetude.

Not until comparatively late in history was real coordination effected between the trade routes of China within the Great Wall, the oasis-marked routes along the Tien Shan and the caravan routes that had succeeded to the nomadic directions of march. In every movement toward coordination the culture of the Chinese predominated. Even such influences of culture as those that accompanied the religions imported successively into Central Asia—Buddhism, Manichaeism, Nestorian Christianity, and Islam—were speedily assimilated, in every material respect, to Chinese influences. It is even more noteworthy that the periods in which Chinese influences were most widely paramount were those in which the Chinese themselves were ruled by alien masters—the Mongols of the Yüan dynasty in the thirteenth and fourteenth centuries, and the Manchus of the Ta Ch'ing dynasty, whose downfall a few years ago has been followed by a weakening of the Chinese power in every territory beyond the Great Wall, and in Tibet.

In such periods only could it have become profitable and safe to trade on routes that crossed Mongolia from south to north, such as that from Kalgan (or alternatively Kweihwa) to Urga, and thence to Kyakhta on the borders of Siberia, traversing the general lines of communication and the general delimitation of zones. A significant proof of this is that the traditions of the caravan men of the present day ascribe to the great Manchu emperor, K'ang Hsi, who set in final order all the affairs of the new empire, every tradition and custom of theirs which marks them off from ordinary Chinese.

\*Additional evidence that the great periods of wholesale migration had an indirect rather than a direct political effect on the inner basin of Chinese Turkistan is provided by the anthropometric data gathered by Sir Aurel Stein, which apparently indicate that racial type in the oases has varied inconsiderably throughout history.

At different times in the long, dark centuries that preceded such periods of splendour—times when the impulse toward migration and conquest lagged for awhile—those directions of march which were afterwards to become arterial caravan routes must have seen the passage of envoys and missions, going between the lords of tribal dominions, or between the Chinese and different powers and princelings of Inner Asia. The bearing of gifts is hard to discriminate from the origins of trade, and trade, of such a venturesome kind, must often have started up and died away again during that spectacular succession of troubled centuries. Only when the turbulence of Inner Asia had thrashed itself out in innumerable migrations and wars were these routes gradually made conformable to their present service.

The link between that past and our present survives in the trading caravans, which camp in solitudes that once saw the passage of migrating hosts: the fighting men in the van, and the rear brought up by tents and baggage, women and children, herds of ponies, camels and cattle and flocks of slow-moving sheep. The men of the caravans themselves represent the people of the march country, adjacent to the Great Wall, in which there has always been a mingling of influences, between the nomads and the settled Chinese. They are borderers, men of no-man's-land. Their ancestors for uncounted generations, though alternately harried by barbarian raiders and cowed by Chinese tax-gatherers, must always have served, as opportunity offered, to further trade and the intercourse of nations. In the same way they themselves continue to carry trade, and trade of much the same kind, although dragooned by Chinese militarists and plundered by Mongol, Chinese and Muhammadan bandits.

I find it a matter of pride to have travelled among these men on a level footing, hardship for hardship and danger for danger. It is my most sincere hope that I may have been able to interpret something of their spirit and tradition; for their survival and their obscure but noble calling do more than anything else to illuminate and give meaning to the ancient routes they follow.

#### DISCUSSION

Before the paper the PRESIDENT (Col. Sir CHARLES CLOSE) said: It is our privilege to-night to listen to the third Asia lecture. These lectures owe their existence to the generosity of the Rev. Mr. Dickson, who is with us to-night and who was kind and generous enough to found these lectures about five years ago. Since then each alternate Session has commenced with an Asian lecture. The first was by Sir Aurel Stein, when he gave us a remarkable and very full account of Innermost Asia; while the second was delivered by Dr. Roy Chapman Andrews, who brilliantly described an expedition which the American Natural History Museum had sent to Mongolia.

To-night Mr. Owen Lattimore is to discuss the journey which he took in Southern Mongolia along a route which has never previously been explored. The three lectures have, roughly, dealt with the same part of the world: that is to say, to the north of China and Tibet and to the south of Siberia; they are, as it were, *en echelon*. Any one who desires to learn about that part of the world cannot do better than study the two previous lectures together with that we are about to hear to-night, of which I have had the pleasure of reading a proof.

Mr. Owen Lattimore has been many years in China and has learned the Northern Chinese dialects. He was, therefore, able in a very remarkable degree



to identify himself with the people with whom he travelled. Mr. Lattimore started from Peking and eventually arrived in India, though, if I understand rightly, he looked upon the end of his journey as being about 1000 miles north of Lhasa. It was a point which most of us would have been very glad to have reached by other means. Mr. Lattimore chose the most difficult route possible, and got through. He was joined on the borders of Russian territory by Mrs. Lattimore, who also had a most interesting journey, but will not speak to us about it to-night.

Enough has been said by me to show how very valuable these Asia lectures have been in increasing our knowledge of that great continent, and when we have heard Mr. Owen Lattimore's lecture we shall have learned a good deal more about Southern Mongolia than was ever known before.

*Mr. Lattimore then delivered the lecture printed above, and a discussion followed.*

The PRESIDENT: The lecturer's route crossed that of Sir Francis Young-husband. We should be very glad to hear Sir Francis.

Sir FRANCIS YOUNGHUSBAND: The lecturer told us that his very faithful servant, Moses by nickname, advised him not to speak the truth. Well, I think he has taken that advice to heart. At any rate, although he has this evening told us some of the truth, he has not told us the whole truth; he has not told us the tremendous hardships that he must have gone through in following the Winding Road across the desert. My route went close under the mountains and was, for the Gobi Desert, comparatively good. From it I used to be able to look out in a southerly direction over the kind of country that Mr. Lattimore must have traversed. Therefore I can realize full well the tremendous difficulties that he must have encountered. My part of the road was desert enough, but the other part is more so. It is most gratifying that a man should have been able not only to have gone through those physical hardships, but to have had the tact and intelligence to get along with the people at a time when brigandage was so rife. Of course, the reason why Mr. Lattimore could not travel along that comparatively good road which I had the good fortune to be able to follow was on account of the brigandage, and he was forced down into the worst road. Even there there must have been great risk of brigandage, and we must remember that in these times China is in an altogether upset condition. The authority of the Empress Dowager does not run as it did in my time; there is not the same attention to the central authority that there used to be, and there is a great deal of brigandage. It therefore required much tact and intelligence for a traveller to get through as Mr. Lattimore did.

I should like to join the lecturer in his tribute to the wonderful caravan men who cross the Gobi Desert. They are certainly a marvellous race. I went with a small caravan and had one Chinese camel-man and a Mongol assistant, together with my own Chinese servant, and the latter seemed somehow to do what Mr. Lattimore said—he seemed to feel his way along. He would moon along at night, half doubled up and half asleep, but somehow or other at about one or two o'clock in the morning he would wake up at exactly the right spot where there was something in the nature of a well. The traveller would not recognize it as a well, but that little Chinaman would be able to tap water from the place somehow or other. They are a very hardy race, subject to great hardships and the risk of brigandage. They do somehow stick to one. I went across the country by myself and Mr. Lattimore did the same. We were both entirely in the hands of our men. It would have been very easy for them to dispose of us and nothing more would have been heard: it could have been supposed we had been run through by brigands. But they were faithful to us and saw us through.

If I might have the map put on the screen I would like to show exactly where my route differed from Mr. Lattimore's and explain what was the object of my journey. Well, it was a military object. I started off from Peking in 1887 at the time when the Russians were pressing pretty hard upon the Russian frontier, and Colonel Bell, the head of the Intelligence Department in India, had gone through the settled part of China to see how far the Chinese would be able to support Chinese Turkistan, in the event of invasion of that country by the Russians.

Chinese Turkistan touches India. The Russians had come down to Kuldja. They were pressing down towards India, and the question was whether the Chinese from China would be able to reinforce Chinese Turkistan and keep the Russians off. Colonel Bell, starting from Peking, went by the old road through the settled parts of China—the more important militarily—to see how Chinese Turkistan could be supported. I asked if I might go with him, but he said it would be waste of energy for two officers to go by the same route and advised me to try the Desert road, less important militarily, to see if there was any possible means by which Chinese military forces might get across the Desert into Chinese Turkistan. He said we would meet at Hami at a certain time at the end of the desert journey. I remember the members of the Legation saying that he probably would not wait for me more than a couple of days. I arrived ten days late, and when I got into India Colonel Bell told me he had waited at Hami a whole morning, and as I did not arrive he went on in the afternoon.

As to my route, I followed for a certain way what is apparently called the Small Road and then took the Great Road. I remember celebrating Queen Victoria's first Jubilee on the way, and my twenty-fourth birthday a week later. The route makes a *détour* in order, as Mr. Lattimore has explained, to get under the Altai Mountains, and we followed, as he has quite accurately described, along the base of the mountains, so that where the ravines came down we should be able to get just a little water. Sometimes there was a trickle of water; generally we had to dig for it. At any rate, we did not go more than a couple of days without getting water of some kind, and we used to take a camel-load with us. My route eventually left the caravan route which goes to Suchow, and I turned south, and had a most wonderful view of those beautiful Tien Shan Mountains—the Heavenly Mountains—standing right up in the sky.

But after that I had the very worst part to traverse because we descended into the lowest portion of what is known as the Desert of Dzungaria, lower than the rest and absolutely barren. I had 70 miles at the march, starting at 11 o'clock in the morning, resting for about three hours in the night, and getting into camp at 3 o'clock the next afternoon. That camp was at a place I was able to identify with Mr. Lattimore; it was on the map I made on the spot. When I was there it was park-like country with trees and a certain amount of water, but no habitation. I understand from Mr. Lattimore that there is now habitation there, and a fort somewhere near. You will realize that this is really not what may be called the permanent route between China and Turkistan. On account of the brigandage caravans have been forced down into the route Mr. Lattimore travelled, hitherto unknown to us. The other will always be the main line from China to Turkistan because it runs along the outlying spurs of the Altai Mountains. It is all the way through burning desert, but not so bad as the lower route. In conclusion, I should like to congratulate Mr. Lattimore on his very remarkable journey, and also Mrs. Lattimore for having the courage and enterprise to go and meet him.

LORD RONALDSHAY: The only part of the country described by Mr. Lattimore this evening of which I can speak from personal knowledge is on the Tien Shan

Mountains in the neighbourhood of Kuldja, a little Chinese town within easy access of that great coach road long ago established by the Russians which, starting at Tashkent in Western Central Asia, carried one for 1000 miles to the frontier of Siberia in an easterly direction and, turning north, went on about 450 miles to Barnaul to the south of the Trans-Siberian Railway. It is about twenty-five years since I travelled along that road from Tashkent, and some parts, at any rate, of the old posting road are now covered by railway. When I travelled over it, unless one was a Russian official, driving was a very slow and leisurely process. I remember a gentleman in an official position in Siberia telling me that he had once driven 1000 versts, approximately 660 miles, along one of these roads in forty-eight hours. I thought then, and still think, that he was romancing. My own experience was very different. Driving day and night, whenever that was possible, it took me thirteen days and two hours to cover the 808 miles from Tashkent to Kuldja, with a couple of Russian *tarantass*, the springless carriage which one uses in those parts. Arrived at Kuldja, I then travelled south in the Tien Shan Mountains, and in the valleys saw some of the nomadic life of Kurds and Kalmuks of which Mr. Lattimore has spoken. I also noticed that the Kalmuks whom I took shooting with me invariably broke an animal's bones, and I imagined that was only to obtain the marrow which they swallowed with satisfaction; but, unlike Mr. Lattimore, I unfortunately could not talk their language, and so did not realize they broke the bones to render the animals innocuous after death. The home-life of the Kurds and Kalmuks was simple but pleasant. I frequently had occasion to spend a night in their hemispherical tents, and found their beds extremely comfortable. I remember being entertained by the headman of one of these Kurd settlements, with herds amounting to some 4000 animals. He regaled me with *kumiss* and a sort of liqueur made from the mare's milk by a primitive process of distillation. The Kurdish women, though the Kurds are Muhammadans, did not cover their faces in the presence of a stranger and were jolly and hospitable.

May I conclude these very brief remarks by expressing to Mr. Lattimore the sense of pleasure which I have derived from listening to his most interesting account of this fascinating part of the world and from seeing the delightful photographs by whose aid he brought that country so graphically before us?

THE PRESIDENT: We have listened to Mr. Lattimore's lecture with the greatest interest. We have learnt much about a new route through Southern Mongolia which has never previously been described and about the caravan people with whom he travelled. I was delighted to hear what he said about the Chinese Wall. There has been for some years a sort of agitation against fortification, and as an engineer officer I feel the whole agitation is factitious. It is engineered, if I may use that term, by a lot of young Staff College officers. The Chinese Wall is an example of a very successful wall, or fortification, of the very worst type possible from their point of view. We ourselves have the Antonine wall, and Hadrian's wall, and the Romans were not exactly fools in the military art. Coming to more recent times, we have the Hindenburg line. I am delighted to hear Mr. Lattimore reinforce opinions which I have always held in regard to fortification. The Chinese Wall was a big thing; it affected nations; the Antonine wall and Hadrian's wall affected nations too, just as fortification in future will affect nations if only we have intelligence to study it. However, that is a little beside the mark.

We are all delighted to have had this opportunity to learn something more about Mongolia. We thank Mr. Lattimore very much for his lecture and congratulate him on his lecture and on his journey, and Mrs. Lattimore on hers.