

In the case of carts drawn by oxen the proportion of profitable load would scarcely work out more favourably, considering that the rate of progress would be far slower. The fact that bullock-carts are scarcely ever met with on the present main routes of Chinese Turkestan seems to suggest that there may be local reasons operating against their general employment.

Notwithstanding the discouraging conditions under which traffic was thus carried on, and the very great hardships which the use of the route must have involved, especially for large bodies of travellers, we read in Ssü-ma Ch'ien's history that Chang Ch'ien about 119 B.C. proceeded by it to the Wu-sun country as 'leader of an expedition consisting of 300 men, each with two horses, and oxen and sheep in myriads'.<sup>16</sup> The same contemporary record shows that, during the years immediately succeeding, commercial and political missions from China followed this route in rapidly increasing numbers.<sup>17</sup> As they were often exposed to attack and robbery in Lou-lan and Ku-shih (Turfān), a military expedition numbering 'more than seven hundred cavalry' proceeded in 108 B.C. to chastise those territories.<sup>18</sup>

But of the physical difficulties which all these enterprises encountered on the Lou-lan route, we gain a true idea from the account given by Ssü-ma Ch'ien of the view held among the people of Ta-yüan or Farghāna: 'China is far away from us, and in the Salt Lake [region] numbers of travellers have met with destruction. To the north of it one falls into the hands of Hu [Tartar] robbers; in the south there is dearth of water and vegetation. . . . Chinese missions consisting of merely a few hundred members have quite commonly lost more than half their staff by starvation. If this be so, how much less could the Chinese send a big army?'<sup>19</sup>

In spite of the great obstacles so graphically recorded in this passage, the 'Èrh-shih general' (Li Kuang-li) was none the less ordered to set out in 104 B.C. by the Lou-lan route for the distant goal of Farghāna, 'with six thousand cavalry of the feudal states and several hundred thousand men, being recruits selected from the riff-raff of the provinces'. We are told that the Chinese army

of goods, supplies, &c., and that these could be carried to a more distant destination. Camels during the winter cold and even in the late autumn might well go without water for a week or longer, and would, if in good condition, need but little in the way of reed-straw on the journey.

Against such an assumption it must, however, be mentioned that the use of camel-carts is not known nowadays in the Tārīm basin or in Kan-su. I have been told of their employment in portions of Dzungaria, e. g. in the sandy tracts north of Bar-kul, and they are actually to be seen about Delhi and in certain neighbouring tracts of the Panjāb. It should also be remembered that advantage from this change of transport, just on the ground for which camels are best adapted, could be secured only if the other draught animals used in bringing the carts to the limit of the waterless area were taken back over the route they had come by. Arrangements for such a substitution of transport would require a great deal of organization and care, and could certainly not be resorted to at all in the case of privately owned transport such as, no doubt, was used in the case of trade caravans and the like. Even in the case of Government convoys, &c., the practical difficulties attending such 'transshipment' at stations in the desert would be many and serious.

My friend, Major Frank Douie, D.S.O., R.E., has kindly called my attention to the help that might have been derived from the additional expedient of large 'dumps' of water or ice, reed-straw, and fuel at the stages devoid of resources

of any kind. The loads carried on carts moving with detachments of troops could in that case have been confined to the rations needed by the men and animals on these marches and to the indispensable *impedimenta* of the former. The transport of the supplies to be 'dumped' would have been facilitated by the use of camel-drawn carts. Major Douie's suggestion finds support in the fact that the use of depots along that portion of the route which lay in the Bēsh-toghrak valley is distinctly attested, at least at one point, by the *Wei lio's* mention of the 'Chü-lu granary'; cf. above, p. 308.

The absence of any traceable remains of such 'dumps' or depots can, I think, be adequately accounted for. On the one hand there were no materials for buildings of any sort available on the ground which the waterless portion of the route crossed. On the other, it is certain that such occasional caravans, individual travellers, &c., as still continued to move along the Lou-lan route during more than two centuries after the easier route via Hāmi had come into general use both for trade and military movements, would naturally use up, to the last stick or straw, whatever may have remained at those 'dumping-places' of materials capable of being turned to use for fires, &c.

<sup>16</sup> Cf. Hirth, 'The Story of Chang K'ien', *J.A.O.S.*, xxxvii. p. 101.

<sup>17</sup> See *ibid.*, pp. 103 sqq.

<sup>18</sup> Cf. *ibid.*, p. 106.

<sup>19</sup> See *ibid.*, p. 109.

Records of route used by Chinese missions.

Dangers of Lou-lan route referred to.

Chinese expedition to Farghāna.