

River
dammed for
irrigation.

But what can be asserted without question is that the tradition recorded by Li Tao-yüan about the construction of that barrage accurately describes the method still in use throughout the Tārīm Basin for securing irrigation to tracts dependent on rivers passing through flat alluvial plains. It is by means of just such a dam, thrown right across the Yārkand River two marches above Marāl-bāshi and requiring annual reconstruction after the summer floods by a considerable force of labourers, that the great oasis is assured of the main portion of the water necessary for irrigation.²⁷ On ground close to the head of the ancient river-bed once carrying water to Lou-lan we find just the same conditions illustrated nowadays by the newly formed agricultural settlement of Tikkenlik, the existence of which is wholly dependent on the barrage or *tugh* annually constructed across whichever may be the main channel of the Tārīm.²⁸

Difficulties
of dam con-
struction.

In view of the limited time available between the melting of the winter ice and the advent of the spring flood, and also owing to the primitive building materials employed, mere earth and brushwood, the construction of such dams is a serious engineering task and calls for the simultaneous employment of an amount of labour which is often beyond local resources, especially while the colony is still young. Hence it would be easy to illustrate the demand for labour which So Man is related to have made upon the neighbouring territories of Shan-shan, Yen-ch'ī, and Kuchā by parallels taken from modern irrigation works which have been effected in the Tārīm Basin since the present Chinese administration was established after the downfall of Yākūb Bēg's régime.²⁹ Nor can any one familiar with the 'mass psychology' of modern Turkestan feel surprise at the popular imagination of the time having attributed the success of So Man's engineering feat to the miracle which Li Tao-yüan's story describes. M. Chavannes has already called attention to the curious resemblance it bears to the fight between Achilles and the River Xanthus related in the Iliad.³⁰

Date of agri-
cultural
colony.

Li Tao-yüan's text does not give a date for the foundation of the agricultural colony at Lou-lan. But there are indications, I think, which show that he or his source placed the event in the period of the Later Hans. In the first place, it should be noticed that the commentator Ch'üan Tsu-wang, already referred to above, mentions as one of his critical reasons against the authenticity of the story that the title of 'Ērh-shih general' did not exist under the Second Han Dynasty.³¹ Evidently he must have had some ground for assuming that this chronological placing of the story was intended or implied. In the second place, I may point out, with all the reserve due from a non-Sinologist, that the name of So Man and the main fact related of him bear a curious similarity to what a passage of the biography of Pan Yung, contained in the Later Han Annals, tells us of a precursor of this famous Chinese general.³² In M. Chavannes' translation of this biography we read that in the year corresponding to A.D. 119 the governor of Tun-huang,

²⁷ Cf. regarding this dam the graphic and detailed account given by Dr. Hedin, *Reisen in Zentral-Asien*, pp. 225 sq. The tumultuous scenes annually enacted at the final closing of this dam, and the stories of intentional human sacrifice connected with it, curiously recall the legendary setting of the account of So Man's barrage.

²⁸ Cf. Huntington, *Pulse of Asia*, p. 265 sqq. Prof. Huntington rightly points to Tikkenlik as 'essentially the modern representative of Lou-lan', but takes too gloomy a view as to its immediate future. The information collected by me in 1915 showed that Tikkenlik still continues to flourish notwithstanding the difficulties which the frequent changes in the main terminal course of the Tārīm create, and which are far more serious than the alleged salinity of the water. In 1914

I heard the Lopliks at Abdal complaining of the construction of a new big dam above Tikkenlik as the cause which had kept the summer flood of the Tārīm from reaching their marshes.

²⁹ Thus I was told at Maral-bāshi that the first construction of the barrage above referred to could be effected only with the help of great contingents of forced labour brought by the Chinese from the oases of Kāshgar and Yārkand. See for a similar instance in the Khotan region, above, pp. 203 sqq.

³⁰ Cf. *T'oung-pao*, 1905, p. 568, note 5.

³¹ See *ibid.*, note 1.

³² Cf. Chavannes, *Trois généraux chinois*, *T'oung-pao*, 1906, p. 246.