

## American Geographical Society

---

The Shu Tao or Road to Szechwan

Author(s): Herold J. Wiens

Source: *Geographical Review*, Vol. 39, No. 4 (Oct., 1949), pp. 584-604

Published by: American Geographical Society

Stable URL: <http://www.jstor.org/stable/210674>

Accessed: 17/12/2008 19:50

---

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at <http://www.jstor.org/action/showPublisher?publisherCode=ags>.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is a not-for-profit organization founded in 1995 to build trusted digital archives for scholarship. We work with the scholarly community to preserve their work and the materials they rely upon, and to build a common research platform that promotes the discovery and use of these resources. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).



*American Geographical Society* is collaborating with JSTOR to digitize, preserve and extend access to *Geographical Review*.

<http://www.jstor.org>

# THE SHU TAO OR ROAD TO SZECHWAN

HEROLD J. WIENS



Hard are the Ways of Szechuan,  
Harder than scaling the sky.

Peaks join on to the heavens,  
Scarcely a foot between;  
Hollow old firs o'er-drooping  
Chasms of depth unseen.  
Torrents and cascades rushing  
Rage with a stunning roar,  
Boulders whirling before them  
In thundering caverns pour.

Dangers such as are here . . .  
Invaders, ah! from afar . . .  
Why come to this scene of fear?  
Why come to this world of war?  
Buttressed on towering rock,  
The Hall of Swords ascends.  
Thousands can never shock  
This Pass, if one defends.

—Li Po, *d.* 762

THUS the famous Chinese poet Li Po<sup>1</sup> describes the Shu Tao or Road to Szechwan and its chief barrier fort, the Chien-ko or Hall of Swords. Romantic though the theme may be for poetic fancy, what is the significance of this road for the geographer?

In the retarded development of China in modern times the poorness of land communications is generally recognized as a fundamental impediment to progress, economic, political, and cultural. An especially important communications line is the Shu Tao, which cuts across the rugged and roughly parallel Tsinling Shan and Tapa Shan. Throughout Chinese history

---

<sup>1</sup> Translation by W. J. B. Fletcher: *A Guide to Chungking*, China Information Committee, 1939. Figure 1 (above) is a Chinese artist's conception of the Chien-ko. The road follows the face of the cliff to the right center, passing through the three-storied fort.

► DR. WIENS is an assistant professor in foreign-area studies at Yale University. This article is from his doctoral thesis. He has spent 18 years of residence, travel, and study in China, where he was born.

these ranges have interposed a formidable barrier, climatic<sup>2</sup> as well as topographic, to intercommunication between the two main divisions of China, the dry North and the humid South. The changing role of the transmontane roads spanning the Central Mountain Belt has been intimately related to the historical and geographical evolution of China, a relationship that has continued to the present day.

Two regions of China have made unique contributions to the rise and growth of the Chinese nation. The Wei Ho Valley of Shensi Province is the site of one of the earliest civilizations in the world. It was the cradle of the nation and, until the end of the Han period (A.D. 220), the core of what Chi Ch'ao-ting calls the "key economic area" of China.<sup>3</sup> The Szechwan Basin, the "storehouse of China," adjoining Shensi on the south, has been important in Chinese history for more than 2000 years as what Chi calls one of the two "secondary key areas." It is now by far the most populous province of the republic and one of the richest in natural resources. As Shensi gave birth to the old political and social system of China, so Szechwan has nurtured the new. In the nine years of war with Japan ending in 1945, Szechwan proved to be the salvation of China.

Through the western part of the Central Mountain Belt separating these regions ran the historic Linking-Cloud Trestle Road, Lien-yün Tao, across the Tsinling Shan and the Road of the Golden Oxen, Chin-niu Tao, across the Tapa Shan.<sup>4</sup> Together they constituted the Shu Tao or Road to Szechwan. More difficult ways through these mountains have been used, but for most of the last 2000 years this 430-mile route has been the principal, and for long periods the sole, channel of communication between North China and the rich lands of the Szechwan Basin and the Chengtu Plain and beyond to Kunming and to Lhasa.<sup>5</sup> During recent centuries the importance of this route has declined, and the road has been allowed to fall into disrepair and decay.

#### HISTORICAL ROLES OF WESTERN TSINLING SHAN ROUTES

Northward from the abrupt descent of the Tsinling Shan stretches the climatically dry but fertile basin of the Wei Ho, composed of alluvial deposits from the surrounding loess hills. South of the divide the humid

<sup>2</sup> "To come to Szechwan in the winter time from the adjoining province of Shensi is to experience a dramatic contrast between the frozen, yellowish land of the Wei Valley and the lush green growth of the Red Basin" (H. L. Richardson: *Soils and Agriculture of Szechwan, China, Ministry of Agric. and Forestry, Natl. Agric. Research Bur. Special Publ. No. 27, Chungking, 1942, p. 5*).

<sup>3</sup> Chi Ch'ao-ting: *Key Economic Areas in Chinese History as Revealed in the Development of Public Works for Water-Control*, London, 1936.

<sup>4</sup> Feng Hsien Chih (*Feng District Gazetteer*), 1892, ch'uan 1, pp. 15-23.

<sup>5</sup> Liu-pa T'ing Chih (*Liu-pa Subdistrict Gazetteer*), 1842, ch'uan 4, pp. 14-19.

landscape of South China suddenly appears and the mountain slopes merge into the subtropical Red Basin of Szechwan. The Wei Ho Basin was the garden plot of Chinese civilization, from which the verdant tendrils of Han culture spread to the north, east, and south. In the rich soils and abundant moisture of the protected Red Basin, the Han culture put forth new shoots, and Szechwan became at an earlier date than other parts of South China a cultural branch of the Wei Ho civilization and a mainstay of the new Han state. To continue the metaphor, the tendrils of this culture that curled and wound south through the mountain belt to Szechwan followed the "Chan-tao" or trestle roads over which the Ch'in rulers of the north had driven to subjugate Szechwan in the third century before Christ.<sup>6</sup>

During the last thousand years the principal route has not changed, though before the Sung dynasty alternative routes through the Tsinling Shan were maintained for courier use. What has fixed this route as the main line of travel since Sung time? Foremost, perhaps, is the fact that the Lien-yün Tao makes the most direct connection with the Chin-niu Tao, the easiest route into Szechwan from the Hanchung Basin. By going as far west as possible on the comparatively level route through the Wei Ho plain and then striking south from Paoki through the Tsinling Shan the traveler avoided the devious and rugged course up the Han Kiang that was necessitated by a crossing of the Tsinling Shan farther east. Moreover, abundant food and comfortable lodgings were to be found on this well-traveled highway, in contrast with the routes which in part follow the river below the Hanchung Basin, where level land for crops is scarce. The approximately 155 miles of mountain road of the Lien-yün Tao between the Wei Ho Valley and the Hanchung Valley is 20-90 miles shorter than other routes through the Tsinling Shan.<sup>7</sup> An older route, which strikes south from Meih sien, the Pao-yeh Tao, is about the same length or a bit shorter but traverses much more difficult terrain. The passes on the Lien-yün Tao are generally lower, only two or three reaching an elevation above sea level of about 6000-7000 feet; on other routes they exceed 7000 feet, and one crosses at 8690 feet.<sup>8</sup>

Naturally, too, the destination in Szechwan influenced the location of the main route. Chengtu, the cultural and political capital, set in the midst of the most prosperous and populous section of the province, caused a

<sup>6</sup> Liu Ting-sheng: *Ssu-ch'uan Li-shih* (History of Szechwan), Chungking, 1944, pp. 5-6.

<sup>7</sup> Ou Yang-yin: *Li-tai Chan-cheng Yü-ti T'u*, Ya-hsin Ti-li-she (Historical Atlas of Regions and Wars, Ya-hsin Geographical Society), Wuchang, 1933; P'eng Hsueh-p'ei: *Chien-kuo Kai-lun* (An Analysis of National Reconstruction), Chungking, 1944; Chung-hua Shu-chü (Chung-hua Book Company): *Chung-kuo Ti-li Hsin-chih* (New Atlas of China), Shanghai, 1935, Sect. 5, Chap. 9, pp. 201-202.

<sup>8</sup> Sir Francis Younghusband: *Peking to Lhasa*, London, 1925, pp. 33-38.

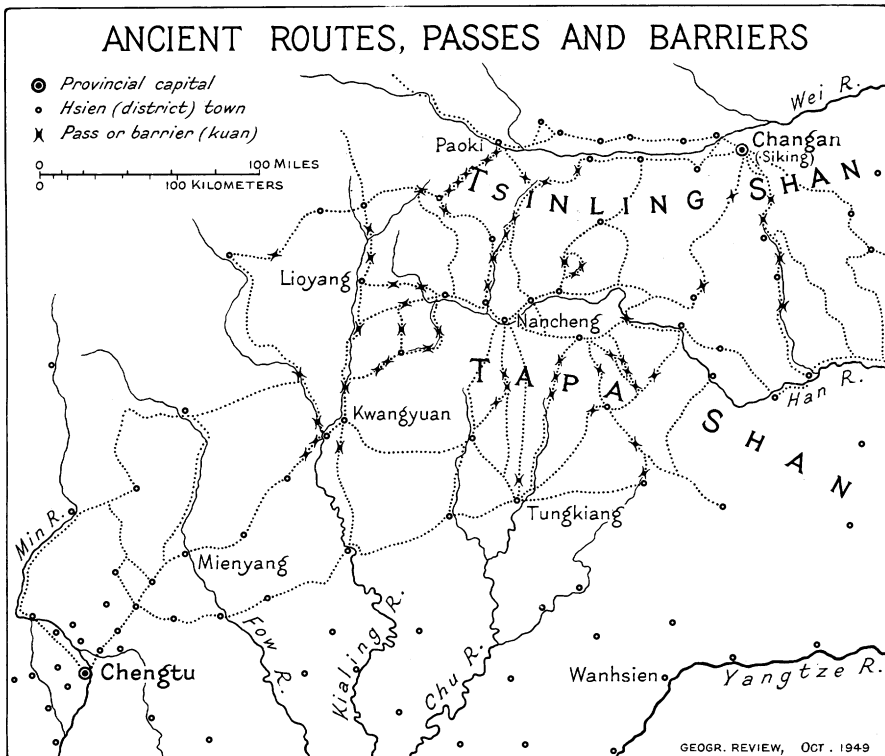


FIG. 2—For a map of the modern highways see Figure 12, p. 597.

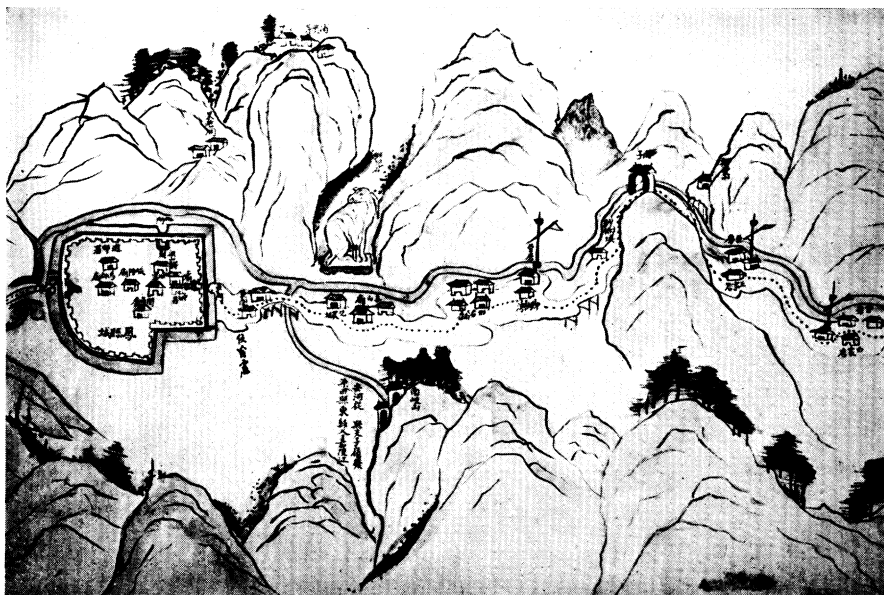


FIG. 3—Photographic copy on a reduced scale of a section of a 60-foot-long scroll map of the Linking Cloud trellis road dated sometime during the Ch'ing dynasty. The walled enclosure depicts the town of Fenghsien. The original is in the Library of Congress.

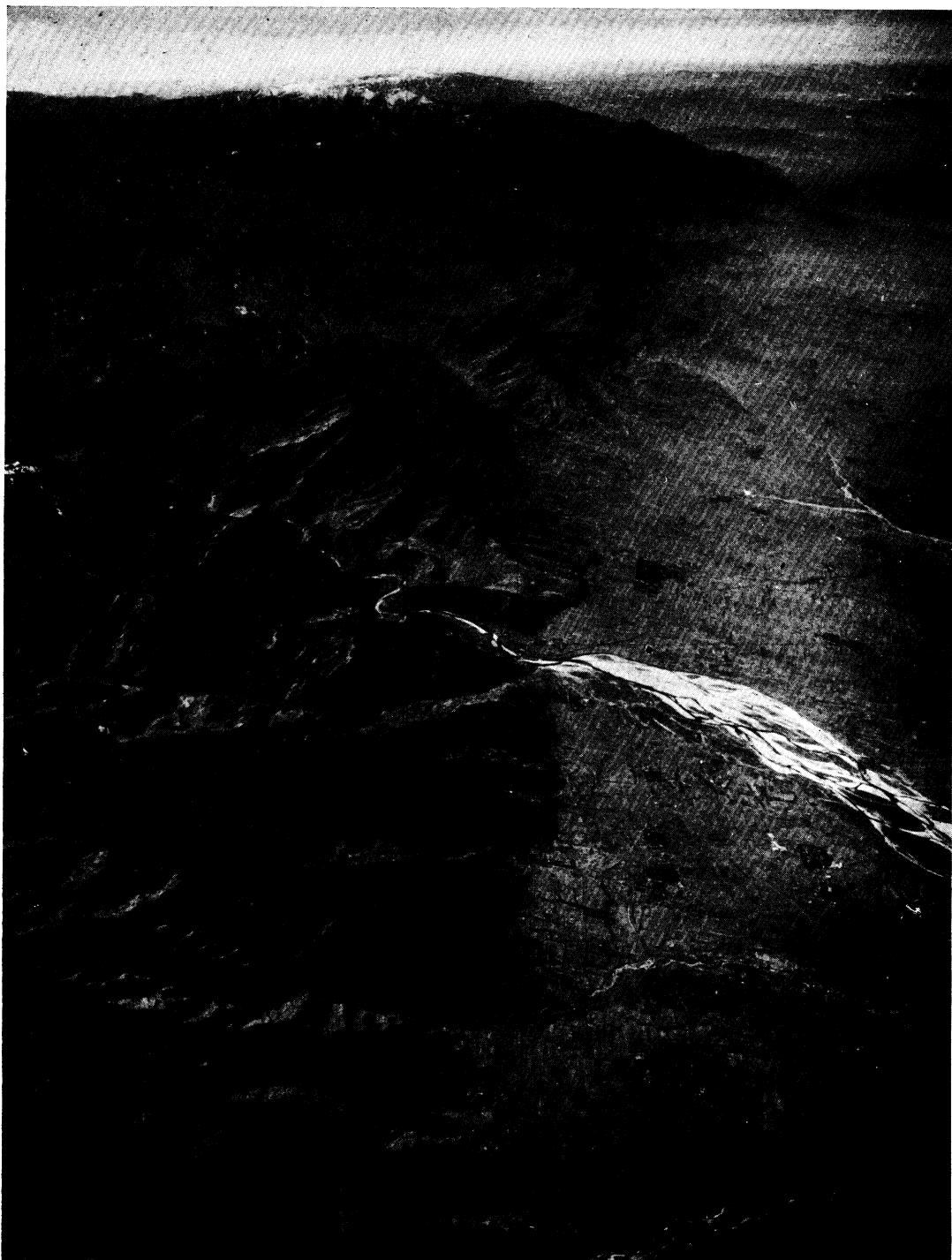


FIG. 4—The abrupt rise of the Tsinling Mountains from the Wei River plain is seen in this aerial view looking westward up the Wei River Valley from above Chowchih, Shensi.



FIG. 5—A view in the western section of the Tapa Shan and the rugged Tibetan border country of northwest Szechwan, illustrating the obstacle presented here to north-south communications in West China.

gravitation westward. Had Chungking been the leading center, the main route no doubt would have followed the valley of the Chienyu River due south to Shihchuan on the Han River and thence crossed the Tapa Shan to Wanyuan, from which a navigable tributary leads to the Chü River, the Kialing, and Chungking.

A final factor fixing the main transmontane route along the Lien-yün Tao was the relatively easy access it provided to the Kialing River, the source of which is only about 50 miles from the Wei River. This stream is navigable for native boats as far as the Kansu border and provides an alternative and quick route southward through the Tsinling Shan and the Tapa Shan, cutting the Road of the Golden Oxen at Chaohwa City.

The importance of these western transmontane roads is indicated by the immense engineering effort put into them. During the Later Han period (A.D. 25-220), merely to repair and rebuild the 430-mile official road through the mountain belt required three years and 23 million man-days of the conscripted labor of 766,800 men.<sup>9</sup> About a third of this road rested entirely on wooden trestle shelves propped upon canyon cliffs or along stream beds. Liu Ting-sheng asserts that the Ch'in and Han unification of China was accomplished through the use of Szechwan resources via the channel of the Tsinling Shan trestle roads. Pai Shou-i lists the transmontane road to Chengtu as one of the six main trunk roads of the great T'ang-dynasty network (A.D. 618-907).<sup>10</sup> Tao Hsi-sheng, a Chinese political scientist, goes even further in stating that, broadly speaking, there were only four main courier routes during the T'ang period, of which the Tsinling Shan road to Chengtu was one.<sup>11</sup> During the military events of the Three Kingdoms period and in subsequent times of political division in China the roads through the Tsinling Shan were of prime political and military importance.<sup>12</sup>

It is not only in their administrative and military aspects, however, that these routes have been of vital importance. They were channels by which cultural influences traveled southward from the Wei Ho Valley. Thus a highly developed system of irrigation was introduced into the Chengtu Plain. The city of Chengtu itself was planned and built two centuries before

<sup>9</sup> Pao-ch'eng Hsien Chih (Pao-ch'eng District Gazetteer), 1831, ch'uan 8, p. 2.

<sup>10</sup> Pai Shou-i: Chung-kuo Chiao-t'ung Shih (History of China's Communications), Shanghai, 1937, p. 115.

<sup>11</sup> Tao Hsi-sheng and Wu Hsien-hsiang: Nan-pei-ch'ao Ching-chi Shih (The Economic History of the Period of North and South Dynasties), Shanghai, 1937, pp. 101-102.

<sup>12</sup> See Mei Hsien Chih (Mei District Gazetteer), 1909, ch'uan 1, pp. 11-13, also Liu-pa T'ing Chih (*op. cit.*), also Chi, *op. cit.*, p. 102.



Christ in imitation of the Ch'in capital at Sienyang in the Wei Ho Valley.<sup>13</sup> By these spillways famine refugees from the impoverished loesslands poured into rich Szechwan many times in ages past; over these routes transplanted populations moved both northward and southward. Such influxes often brought trained artisans and craftsmen into the Red Basin to diversify the culture of Szechwan. Kao-tsu found here his path of conquest to become the founder of the long-lasting Han dynasty. Twice, too, these transmontane routes of the west became the paths of flight of emperors seeking the sanctuary of protected Szechwan.<sup>14</sup>

The routes were also channels of trade. Although private interregional trade has been discouraged by various Chinese rulers, even in periods of strictest control it has persisted along the Tsinling Shan routes. The publicized fame of the Great Silk Road to Inner Asia and Rome has obscured the fact that the silk itself originated in Szechwan and was carried northward over the Chan-tao or trestle roads of the Central Mountain Belt.<sup>15</sup> The Chan-tao might therefore be considered the first segment of the Silk Road. It is of some interest, furthermore, that one of the principal forms of native transport in North China, the wheelbarrow, was developed and first used on the Tsinling Shan roads by the hero of the Romance of the Three Kingdoms, Chu-Ko Liang.<sup>16</sup>

#### DECLINE OF NORTH-SOUTH COMMUNICATIONS IN THE WEST

With the southward expansion and consolidation of the Chinese nation and the development of the productive ricelands in the lower Yangtze delta and the building of the Grand Canal, the "key economic area" shifted from the Yellow River plain to the Yangtze Valley. As the Yangtze became increasingly dominant as a transport route, transmontane north-south trade in the west declined in favor of an east-west alignment. In the reign of the Han emperor Wu-ti (140-86 B.C.) the need for grain in the imperial capital in the Wei Ho Valley had led to an unsuccessful attempt to establish canal transport across a large part of the western Tsinling Shan along the Pao River.<sup>17</sup> After the construction of the Grand Canal, tribute grain could be

<sup>13</sup> Liu, *op. cit.*

<sup>14</sup> Han-chung Hsi-hsiu Fu-chih (Revised Gazetteer of Han-chung Prefecture), 1815, ch'uan 1, Chan-tao maps.

<sup>15</sup> [Albert] Terrien de Lacouperie: Western Origin of the Early Chinese Civilisation, London, 1894, pp. 196-198.

<sup>16</sup> Tz'u Hai [encyclopedic dictionary], Shanghai, 1937, Sect. Ch'en, p. 84. In the opinion of L. Carrington Goodrich (A Short History of the Chinese People, New York and London, 1943, p. 78) the invention of the wheelbarrow is "rather dubiously" assigned to Chu-Ko Liang.

<sup>17</sup> Shih Nien-hai: Chung-kuo ti yün-ho (China's Canals), Chungking, 1944, p. 43.



FIG. 6—The Wei River and plain with the Tsinling Shan in the distance. Hardly a square foot of the plain is unoccupied. The motor highway at the lower right (cf. Fig. 12); nearer the river the Lung-hai Railroad.

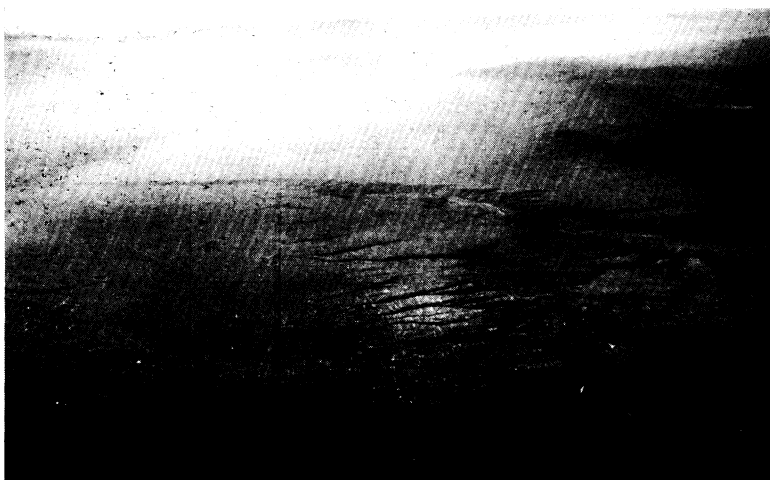


FIG. 7—Deep gashes made by erosion in the flat plain of the Wei River. The beginning of badlands formation here illustrated marks the beginning of increasingly difficult communications in the semiarid loess land.

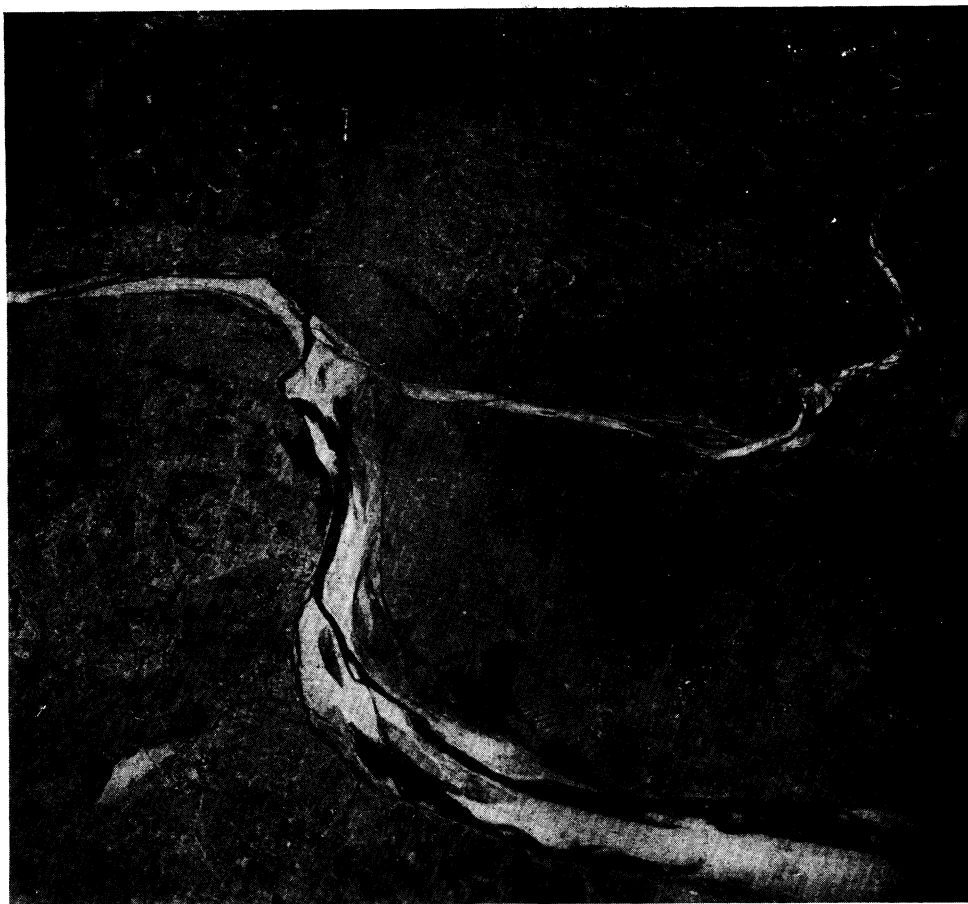


FIG. 8—The Hanchung Valley from a point above Hanchung (Nancheng) looking southeastward toward the Tapa Shan about Chingshikwan. A highway enters the Tapa Shan at the right.



FIG. 9—Aerial view of Yungchow city and one of the deep loess canyons which form such serious obstacles to communications in the western part of the Wei River Valley. The city wall is 20 to 25 feet high.

transported more cheaply down the Yangtze and northward along the Grand Canal than by pack animal across the mountains. The later shift of the seat of administration from the location south of the Yellow River to Peking in the northeast also emphasized this factor.

At the end of the Ming period (after 1644) civil disorders resulted in the annihilation of a large part of the population of Szechwan. The province also suffered depopulation and chaos during the T'ai-p'ing Rebellion, which lasted from 1850 to 1866. Thanks to the Tsinling Shan barrier, the Wei Ho Basin of Shensi escaped the T'ai-p'ing rebels, but it was ravaged by the Muslim Rebellion, lasting from 1862 to 1877.<sup>18</sup> Such disorders and loss of population greatly reduced the north-south trade and led to neglect of the mountain roads.

More recently, railroad development under the drive of foreign interests in China was directed toward tapping the raw-material resources of the interior and creating a westward channel for foreign products entering from the Pacific coast. The Lunghai Railroad offered a means of cheap transport eastward of bulky products from the Wei Ho Valley and Kansu, and the Han River and the Yangtze River served the same purpose for south Shensi and Szechwan respectively. The reluctance of commerce to exchange products across the difficult Tsinling Shan barrier was thus increased.

The multiplicity of routes through the mountain belt that are now known and used<sup>19</sup> contrasts with the comparative paucity during the earlier historical period, due not so much to the elevation of the passes and the ruggedness of the terrain as to the lack of human settlement along possible routes. The deforestation of much of the mountain area, particularly in the accessible valleys, has largely removed the obstacles. The savage animals that once made travel dangerous are gone for the most part. Settlements of isolated farmhouses and small agricultural villages have penetrated into much of the Tsinling Shan and the Tapa Shan, so that the present-day traveler can usually find a bite to eat and a modicum of shelter at reasonable intervals. In 1892:

The ancient trestles are no longer essential and are becoming dispensed with. One may travel by various and numerous routes now. Hoping to evade excise taxes that are collected along the better road of the courier route, commercial travelers and traders go from Pao-chi into Szechwan via Hui and Liang-tang, and go from Yang direct to Mei and Ch'i-shan, most of them using small paths.<sup>20</sup>

---

<sup>18</sup> A. W. Hummel, edit.: *Eminent Chinese of the Ch'ing Period*, 2 vols., Washington, D. C., 1944-1945, Vol. 1, pp. 362-368, and Vol. 2, p. 765.

<sup>19</sup> Lin Chao: *The Tsinling and Tapashan as a Barrier to Communications between Szechwan and the Northwestern Provinces*, *Journ. Geogr. Soc. of China*, Vol. 14, 1947, pp. 5-14.

<sup>20</sup> Feng Hsien Chih (*op. cit.*), ch'uan 1, pp. 15-20.

It was only natural that the diminished dependence on the official road should result in less interest in its upkeep.

#### NEW IMPORTANCE OF WESTERN COMMUNICATIONS

The resurgence of the old channels of communication between the Wei Ho Valley and the Szechwan Basin is to be attributed, on the one hand, to certain entirely new circumstances and, on the other, to some of the old factors operating under increased compulsion.

In the first place, although the "key economic area" continues to be the lower Yangtze Valley, China's preoccupation with seaboard development to the exclusion of the western interior has been modified first by the Japanese invasion from the east and second by the Russian threat in the northwest. The Japanese invasion forced Nationalist China to rely for a long period largely on the resources of Szechwan and adjacent western provinces. At the same time, it compelled China to re-evaluate its western resources, particularly with a view to future reconstruction, industrialization, and political strengthening of the country. The conclusions of such an assessment, though at times soaring on the wings of wishful thinking, awakened an immense interest in the possibilities of the undeveloped west, particularly Sinkiang Province.<sup>21</sup> In the last decade numerous travelogues, newspaper articles, and more scholarly studies have been published concerning the "frontier regions."

The necessities of war communication and transport pushed the construction of the first motor highway over the Tsinling Shan to make possible the support of the Chinese Nationalist armies of the north.<sup>22</sup> This highway, one of the principal-wartime engineering works and a rival of the Burma Road, for a time also brought military supplies to beleaguered Chung-

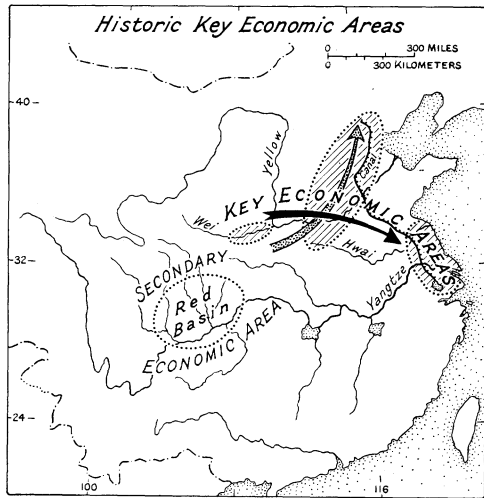


FIG. 10—Szechwan's trade routes were realigned after completion of the Grand Canal, c. A.D. 600.

<sup>21</sup> On the Academia Sinica Expedition of 1943 to examine possibilities for development see Chang Chih-yi: Land Utilization and Settlement Possibilities in Sinkiang, *Geogr. Rev.*, Vol. 39, 1949, pp. 57-75.

<sup>22</sup> *Ssu-ch'uan Ching-chi Chi-K'ang* (*Szechwan Economic Quarterly*), Chungking, April, 1945, pp. 58-62.

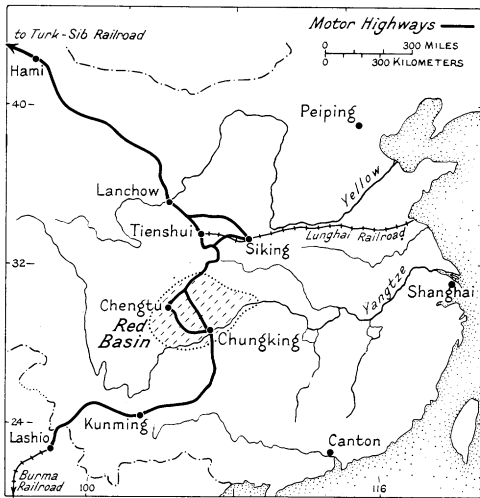


FIG. 11—A map of China's chief westward high-way connections.

king by way of the Turk-Sib Railway and the Sinkiang-Kansu Highway, then the only alternative supply route to the Burma Road.<sup>23</sup>

The Russian threat in western Sinkiang is both economic and political. To a Nationalist China, the necessity of strengthening contact with the unstable northwest is obvious. Easier land access to the abundant food and manpower resources of traditionally conservative Szechwan would be one answer. Should the Chinese Communists over-

run China, the political importance of good communications between Szechwan and Inner Asia northwestward across the Tsinling Shan would be increased by the greater intimacy of China with Soviet Russia. The rise of Szechwan as a political base in dealing with the northwest indicates the extent to which the ancient traditional roles of Shensi and Szechwan have changed, and how the political and cultural functions of the Tsinling Shan and Tapa Shan routes have been reversed.

In economic exchange, too, between southwest and northwest a new situation is developing, in which the technology of modern transportation makes profitable hitherto uneconomic transactions. At least a part of the products that have been forced to use the east-west channel of the Lunghai Railroad and the Yangtze River will be diverted in the future to the north-south transmontane trade routes. Potentialities have always existed for the interchange of the products of the humid semitropical Szechwan Basin and those of the dry continental loessland and steppe, but they have been held in abeyance by transportation costs. The formidable mountains and deep canyons of the Tsinling Shan and the Tapa Shan that have impressed Western travelers from Marco Polo to Baron von Richthofen raise the question of the economic feasibility of railroad construction. Motor transport can surmount the great barrier ranges. The present motor highway has a maximum grade in

<sup>23</sup> See Owen Lattimore: China's Turkistan-Siberian Supply Road, *Pacific Affairs*, Vol. 13, 1940, pp. 393-412.

# MOTOR HIGHWAYS 1945

Numbers indicate statute miles between marked points

SCALE : 1 : 4,800,000      0 50 100 MILES      Contours in meters  
 0 50 100 KILOMETERS

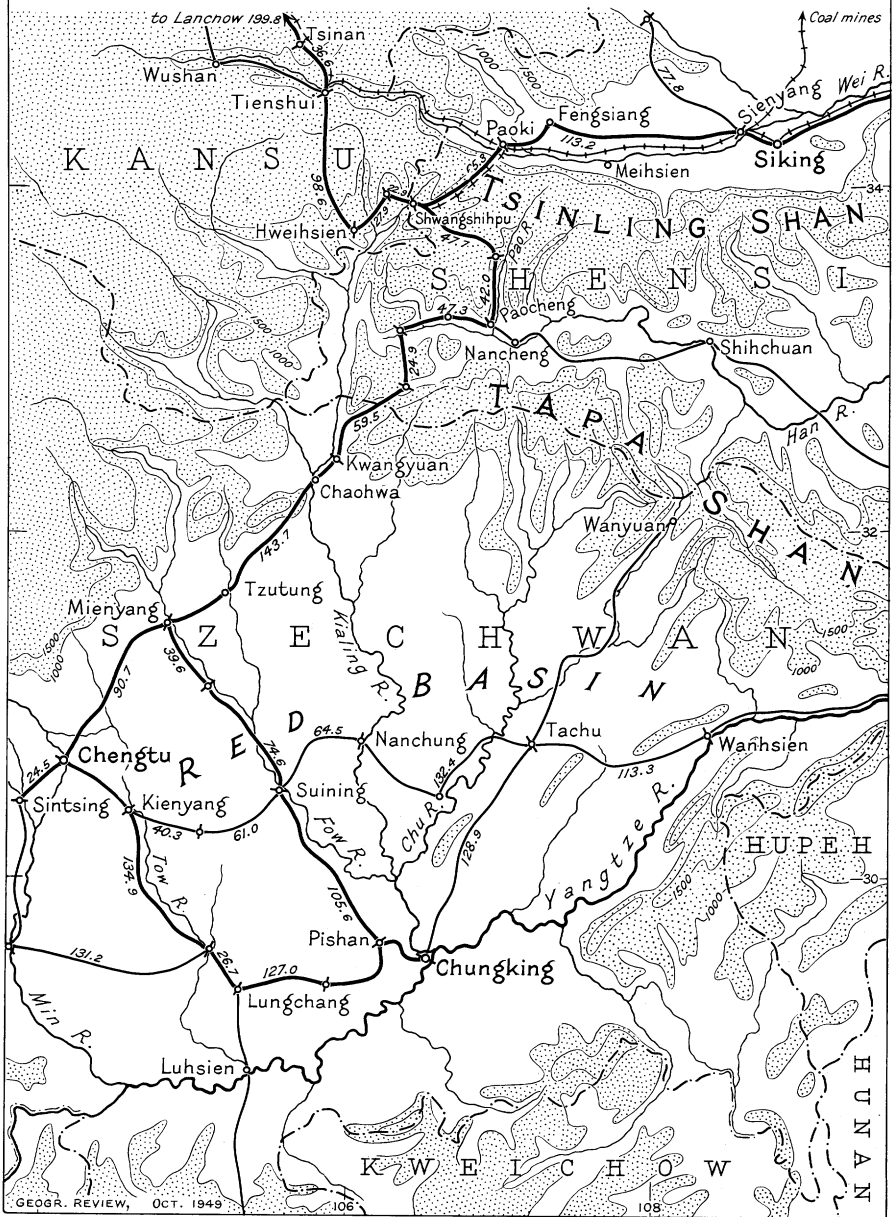


FIG. 12

short stretches of 16 per cent.<sup>24</sup> In wartime the use of the road was limited largely to military and other government transport, so that the economics of commercial freight carriage cannot be evaluated because of the inflation and lack of statistics. Although fuels range from gasoline and charcoal to alcohol, rapeseed, and tung oil, all motor fuel is expensive in China, and gasoline, the most efficient, is also the most expensive, or at least its acquisition requires foreign exchange, whereas the other fuels are obtainable locally.<sup>25</sup> But the speed and relative convenience of motor transport have brought a continued lively demand for passenger space, even in cargo trucks, and it seems probable that motor transport would do a profitable business even with high fuel costs.

#### RAILROAD PROSPECTS

Nevertheless, it is rail transport that would bring about revolutionary changes in the transmontane trade and provide a political and cultural binder in the internal unification of China. Such rail connections were envisaged in Sun Yat-sen's plan for a railroad net for China.<sup>26</sup> The operation of a railroad through the Central Mountain Belt requires power for its locomotives even where its value is only political. The only practical fuels for locomotives at present are coal and hydroelectricity, both of which could be made available for transmontane railroads between the Red Basin and the Wei Ho Basin. The same mines about 30 miles north of Sienyang, Shensi, that are the source of coal for the Lunghai Railroad could be used for the Tsinling Shan section of the transmontane line. Szechwan coal from the Kwangyuan and Chengtu areas could supply the southern section.<sup>27</sup>

There are numerous possible hydroelectric-dam sites in the Central Mountain Belt. The rainfall south of the Tsinling Shan divide is sufficient in amount and satisfactory enough in distribution to provide water for hydroelectric development. The cover of vegetation on the southern slopes of the mountains prevents the excessive silting found in the rivers north of the divide. A Chinese engineer has shown in a study of one development site that a dam 200 feet high and 1056 yards long across the Pao River just north of Paocheng could supply power for the operation of a 35,000-kilowatt

---

<sup>24</sup> From a report of a survey by the United States Army Engineers, March, 1945.

<sup>25</sup> There are several oil seepages in the red beds of Szechwan, but prospects for production are not encouraging; exploration in the older rocks, however, is believed to be worth consideration (J. M. Weller: Petroleum Possibilities of Red Basin of Szechuan Province, China, *Bull. Amer. Assn. of Petroleum Geologists*, Vol. 28, 1944, pp. 1430-1439).

<sup>26</sup> H. J. von Lochow: China's National Railways, Peiping, 1948, p. 15.

<sup>27</sup> Chow Li-san and others: *Economical Atlas of Szechuan*, China Institute of Geography, Peipei, Szechwan, 1946, p. 54.



plant for most of the year. This is estimated as enough power to run a meter-gauge railroad across the Tsinling Shan and part of the Tapa Shan and to meet all the light and power requirements of the upper Han Basin cities and towns as well.<sup>28</sup> The question of power for locomotives does not, therefore, present insurmountable problems. In view of the likelihood that hydroelectric projects of any considerable magnitude will be slow in forthcoming, coal will no doubt be the fuel used for powering locomotives in this region.

What are the prospects for, and what steps have been taken to bring about, the realization of this transmontane rail connection? In China's First Five-Year Plan, drawn up in 1936, a line was projected following the thousand-year-old courier route now also followed by the motor highway. A Belgian loan of 450 million francs was secured with a first charge on the revenues of the line, an indication that it would be profitable.<sup>29</sup>

The First Five-Year Plan was drawn up before the economic and political significance of China's Far West had been realized, and the war also prevented its execution. In a Second Five-Year Plan, projected in 1947, the northern half of the trans-Tsinling Shan railroad from Chengtu has been diverted; instead of running from Kwangyuan to Paocheng and then north, it now is to run up the Kialing River from Kwangyuan and then cross the Tsinling Shan divide to Tienshui on the upper Wei Ho. Engineering surveys have been completed for both routes. From Tienshui a railroad to Lanchow on the ancient Silk Road to Inner Asia was already under construction in August, 1947.<sup>30</sup>

At the same time, construction was pushed on a second trans-Tsinling Shan railroad, a meter-gauge spur line of the Lunghai Railroad running south along the old Linking-Cloud Road from Paoki. This line runs to Shwangshihpu in the middle of the Tsinling Shan and was reportedly completed by January, 1948.<sup>31</sup> When the line from Chengtu to Tienshui is constructed, the 50-mile gap between Shwangshihpu and Hweih sien on the spur line will undoubtedly be quickly spanned to bring Paoki into direct railroad connection with Chengtu.

Thus the ancient courier route dating from the Sung dynasty finally has a new face. On the gravel-surfaced motor road mechanical monsters made on the opposite side of the earth now chug along where hardy ponies once pounded the shelflike trestles of the Chan-tao. Instead of the grass and gruel

---

<sup>28</sup> *Shui-li Wei-yuan-hui Yueh-kang (Water Conservation Commission Monthly Journal)*, Vol. 1, No. 7 China, Executive Yuan, July, 1944, pp. 16-17.

<sup>29</sup> Von Lochow, *op. cit.*, p. 118.

<sup>30</sup> *Ibid.*, pp. 76-77.

<sup>31</sup> *Ibid.*, p. 55.



FIG. 13—Aerial view of the Chengtu plain near where the motor highway (white line in lower left) from Shensi enters it. The agricultural pattern of the moist Szechwan Basin is in distinct contrast with the pattern of the Wei River plain (Fig. 6). In the far right are the peaks of the rarely seen Great Snowy Mountains.

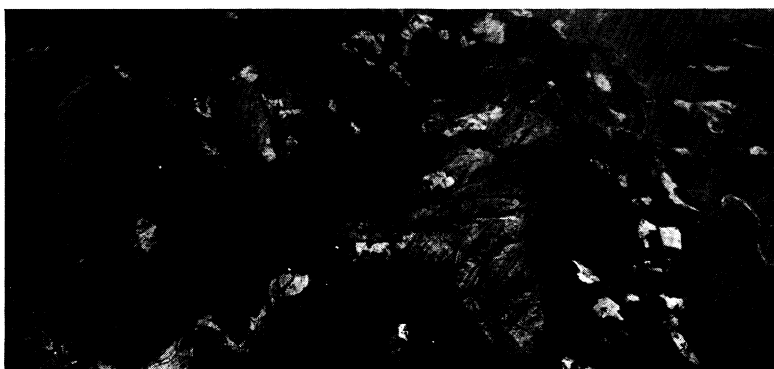


FIG. 14—Small scattered patch farming in the central section of the Tsinling Shan near the town of Fuping. Such penetration by mountaineer farmers has made possible the use of numerous though difficult routes crossing the mountain belt.

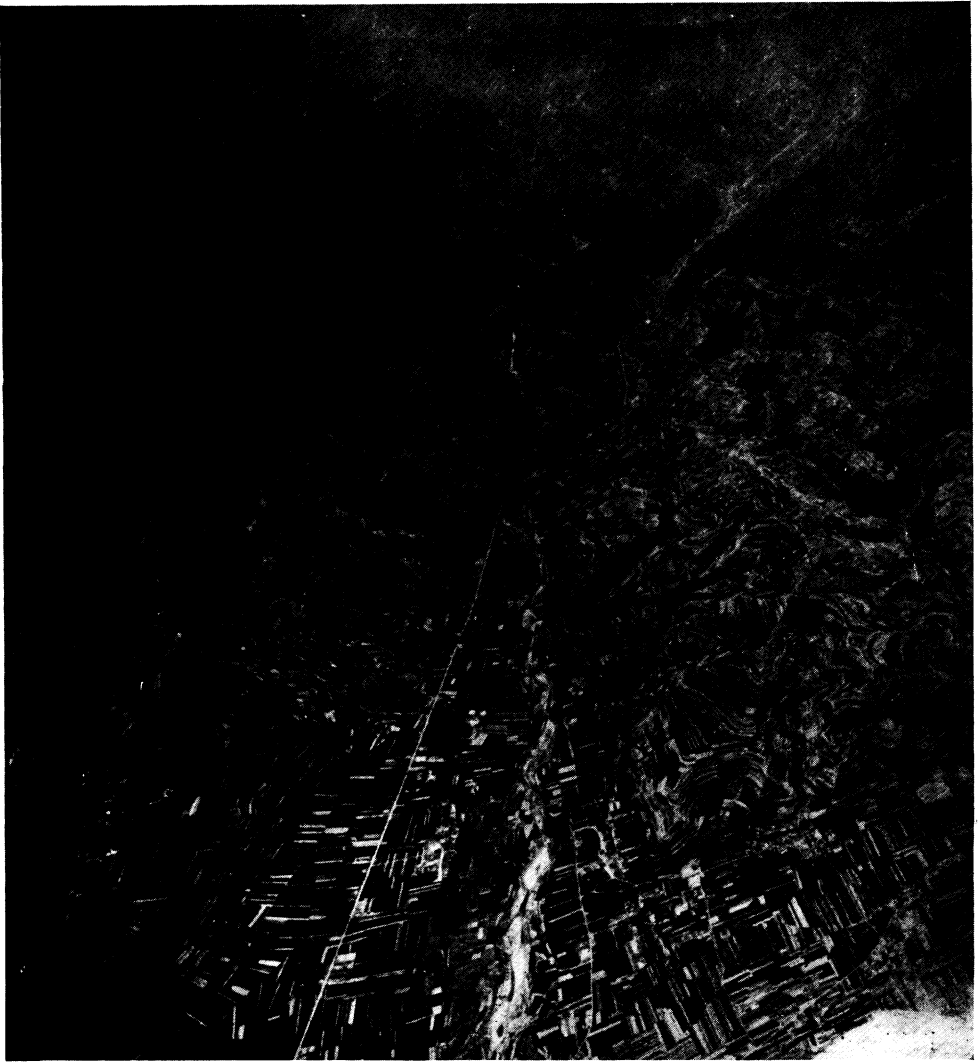


FIG. 15—Aerial view from above Paoki looking toward the Tasankwan (Ta-san Barrier). The motor highway crossing the Tsinling Shan is seen here entering the mountains after following the right bank of the Chien-yu Ho, a small stream tributary to the Wei River.



FIG. 16—The walled town of Mienyang, Szechwan, on the Shensi-Szechwan highway. Both the flat-topped hills and the valley bottoms and slopes are cultivated, the former with dry crops, the latter with paddy rice.

fed the courier ponies, a strange and varied assortment of fuels feed the new conveyances. Trailing clouds of smoke, the rather broken-down motor trucks and buses meet the symbols of the past at every point along the route. At Miaotaitze in the Tsinling Shan they come upon the beautiful temple dedicated to Chang Liang, adviser to the first Han emperor. Now it houses the modern China Travel Service Hostel. T'ang-dynasty Buddhist carvings at the Thousand Buddha Cliff a few miles north of Kwangyuan tell the traveler that this was the route along which Buddhism entered Szechwan to found one of its five most important monastery centers in China on 11,000-foot-high Mt. Omei, southwest of Chengtu. Seven miles north of Tzetung a temple dedicated to Kuan-yin and Wen-ch'ang testifies to the influence of North China architecture in the Szechwan Basin. At Tzetung itself two stone tablets, one dating from the Han dynasty and the other from the T'ang dynasty, remind us that Han civilization and culture came into Szechwan from the north. And in the village of Shihniupao south of Tzetung a half-life-sized stone ox calls to mind the mythical origin of the Road of the Golden Oxen.<sup>32</sup>

Szechwan traditionally has been a province of great inertia. It was the last to succumb to revolutionary upheaval. If civil disorder breaks out there, it tends to continue long after other provinces have been pacified.<sup>33</sup> In part, this may be attributed to the isolation, in part to the large population and area. Better communications may reduce the inertia and at the same time increase Szechwan's influence upon its neighbors.<sup>34</sup>

"The southwest and the northwest represent China's future," writes a Chinese author.<sup>35</sup> That the importance of transmontane communications linking these two regions was recognized before the Japanese invasion forced the Chinese government to seek refuge in the west is shown in a statement by T'ang Liang-li in 1935: "The Sian-Hanchung highway is not only important from a commercial standpoint, but is also strategic from the viewpoint of national defense."<sup>36</sup>

Strategically, as a military channel from a secure supply base, the road is important for the control of the northwest. The reliable productivity of

<sup>32</sup> From notes taken by Schuyler Commann on his trip over the route in 1945.

<sup>33</sup> S. C. Yang: *The Revolution in Szechwan, 1911-1912*, *Journ. West China Border Research Soc.*, Vol. 6, 1933-1934, pp. 64-90.

<sup>34</sup> The contrasts described above hold good in other matters. See, for example, Dr. Joseph Needham's report on "Science in Western Szechuan," *Nature*, Vol. 152, 1943, pp. 343-345 and 372-374. See also H. L. Richardson: *Szechwan during the War*, *Geogr. Journ.*, Vol. 106, 1945, pp. 1-25.

<sup>35</sup> C. Y. W. Meng: *China Should Have a Great Northwestern Railway*, *China Weekly Rev.*, Jan. 20, 1940, p. 276.

<sup>36</sup> T'ang Liang-li, edit.: *Reconstruction in China*, Shanghai, 1935, p. 233.

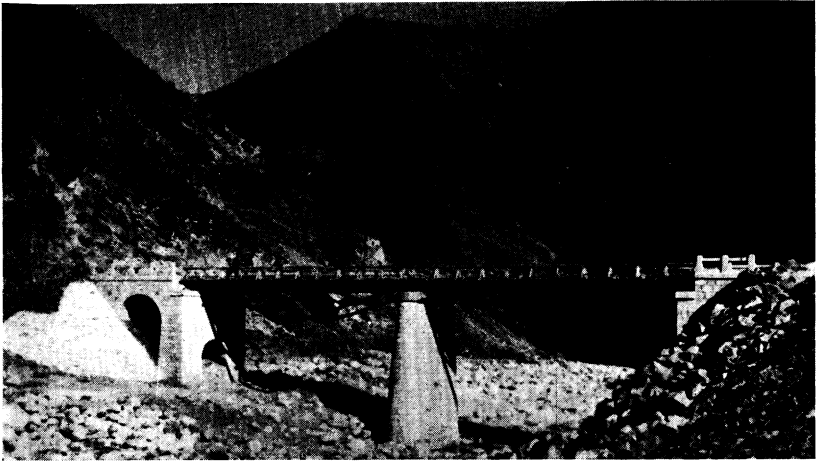


FIG. 17—A modern highway bridge on the Tsinling sector of the Shensi-Szechwan highway, north of Paocheng, Shensi, 1945. (Courtesy of S. Franklin.)

FIG. 18—The motor highway in the central part of the Tsinling Mountains passing the ghost town of Liupa, 1945.

FIG. 19—Temporary bridge for winter low-water use by motor traffic on the highway near Paoki, Shensi, 1945. (Courtesy of S. Franklin.)

Szechwan and its immense manpower of more than 50 million people are invaluable assets making it such a base.

In China's northwest the political and cultural ties that bind the different peoples under Chinese sovereignty are loose. Chinese control at times is ineffective, if for no other reason than that manpower and materials for the support of the state administration are not readily available. Railroad connection between the Red Basin and the northwest will open up the large manpower and rich resources of Szechwan for quick support in the carrying out of China's administrative policies in the northwest. A stabilizing effect on the political situation would seem to be a logical consequence, regardless of whether the Chinese administration is Nationalist or Communist or a coalition government.

Economically, too, the transmontane routes will be more significant. North and south of the Central Mountain Belt are different climatic regions, producing different, specialized commodities. Szechwan needs the petroleum, hides, wool, and cotton of the dry northwest; the northwest needs the sugar, tea, rice, and other semitropical products of Szechwan.<sup>37</sup> Both northwest and southwest can furnish important contributions to China's future industrialization.<sup>38</sup> By making possible the quick movement of food northward from Szechwan, improved land communications will lessen the insecurity of livelihood in the northwest that derives from the unreliable rainfall. Greater economic security will in turn reduce the danger of political uprisings.

The only other feasible channel of transport for bulk cargo between southwest and northwest is an extremely roundabout route along the Yangtze River, northeastward around the Tsinling Shan barrier, and then westward through the narrow Yellow River passageway. The western Tsinling Shan land routes are therefore destined to play a role perhaps even more important than in the ancient past. The paths to the riches of Szechwan were once the wooden trestle roads. Today they are the motor highway and the railroad. The cultural orientation of the Tsinling Shan routes has been shifted, however. In the past they served to expedite the political and economic penetration of Szechwan. In the present they reach northwestward from Szechwan to strengthen the economic structure and political unity of greater China.

---

<sup>37</sup> See, for example, C. Y. Hu: *The Agricultural and Forestry Land-Use of Szechuan Basin*. Chicago, 1946. (Noted in the *Geogr. Rev.*, Vol. 37, 1947, pp. 152-153.)

<sup>38</sup> H. D. Fong: *The Post-war Industrialization of China*, *Planning Pamphlets Nos. 12 and 13*, National Planning Association, Washington, D. C., 1942, pp. 28-29.