Railway Transportation in Japan

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PREFACE.

The present paper was prepared for the presentation to the Faculty of the University of Michigan for the degree of Doctor of Philosophy. Considering the growing importance of the railway question in Japan and the absence of any systematic treatise on this particular question I have chosen the present subject.

As to the sources of information I owe much to the Annual Reports of the Railway Bureau in the Department of Communications of the Imperial Government, several legal documents relating to railways, the Life of Sir Harry Parkes by F. V. Dickens, Young Japan by J. B. Black, Special Consular Reports of the United States, etc. Several periodicals both at home and abroad have also rendered services, especially Engineering, (London), Tokio Niche Niche and Jiji. Besides, by means of personal communications I obtained assistance from many quarters.

Regarding to the future railway policy in Japan the reader will notice rather optimistic tone of my argument, while some improvements in various ways are suggested. I am conscious of this fact myself. Yet before coming to the final conclusion well-known authorities on the history and problems of railways abroad were often consulted; above all: A. B. Stickeen: The Railway Problem; Professor A. T. Hadley: Railroad Transportation; J. S. Jeans: Railway Problems; C. F. Adams: Railroads, their Origin and Problems, and the Reports of the Interstate Commerce Commission have rendered greatest services in offering many suggestions to the writer.

I am under special obligations to Dr. Frank H. Dixon for reading the of manuscript and offering valuable suggestions and criticism, to Mr. F. Shimomura, formerly president of Tokio Post and Telegraph College, for kind encouragement and assistance in various ways. I am also indebted to Mr. U. Mochizuki, formerly member of the Railway Council, etc. Mr. T. Shirane of the Department of Home Affairs, Mr. S. Tabata of the Department of Foreign Affairs, Dr. Y. Ono of the Bank of Japan, and Mr. Romanzo C. Adams, a fellow student in the University of Michigan, all of whom helped me in many directions. My thanks are also due to the Kinshu Railway Company which kindly sent me its own reports covering several years since its establishment.

R. KODAMA.
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CHAPTER I.

General Remarks.

Before making any general remarks on Japanese Railroads, it may be allowable to examine primitive conditions of transportation in Japan, and then turn our attention to modern developments.

After the middle of the seventeenth century the well-known policy of exclusivism was rigidly carried out under the government of the Tokugawa family. The leaving of home to go abroad was strictly prohibited. All ships of more than fifty tons displacement were ordered to be destroyed. The building of a boat which had more than one mast was made illegal. Thus were the Japanese people prevented from navigating the open sea and so coming into contact with foreign nations. It is self-evident that these restrictions would result not only in stopping intercourse with other countries but would also hinder domestic trade, for Japan consists of several islands. The importance of water transportation in such a country in domestic trade, as well as foreign, cannot be overestimated. Yet the policy of exclusivism was continued until the middle of the present century.

When Commodore Perry, of the United States, went to Japan in the year 1853 the Tokugawa Government came to believe that it was not wise policy to continue the prohibition against the building of large ships and the restrictions were removed. A Russian ambassador who arrived after the American, had to build a new vessel in Japan, his warships being destroyed by a violent earthquake. The Tokugawa Government was deeply impressed by the design of the Russian schooner and determined to build ships of the Western construction. Soon afterwards th Government
bought a Dutch merchant vessel, this being the first three-masted vessel of foreign form. The several Daimios (feudal lords) bought steamers and sailing vessels for private use and principally for military purposes. In the year 1869 an edict was issued to the effect that the people were allowed to possess vessels of any size. This edict gave a great impetus to maritime trade and introduced a new era in the history of Japan.

LAND TRANSPORTATION AND COMMUNICATION.

From an early period, the Japanese Government endeavored to promote land transportation and communication. It was in the eighth century that the establishment of stations thirty ri or about seventy-five miles apart along the highways for the convenience and comfort of travelers, was strongly encouraged by the Government. The regulation as to the distance, however, could be modified in any way according to local needs, and as many stations as were needed might be built. Later, by order of the Government, local authorities and wealthy people were required to bring grain for exchange to certain important places on the highways. To enforce the order various means were devised, one of them being to have the names of those who sold more than a certain amount of grain reported to the government. These sellers of grain were commended as public benefactors and were rewarded by the government.

It may be worth while to mention the work of the earlier Buddhist priests in the promotion of transportation and communication facilities. In the sixth century, the priests often chose solitary and mountainous parts of the country for the erection of temples. In the history of Japan many of the priests were noted as discoverers and engineers. The building of bridges and embankments, and road-making through almost impassible hills and mountains were frequently effected by the priests. Throughout the country many temples and cathedrals in the mountainous parts remain as everlasting memorials of the earlier priests. Gyoki
who lived in the early part of the eighth century was one of the most notable among them. He traveled all over the land with his disciples and never left any important regions without doing something for the public benefit. The people were deeply touched by his example and gladly helped him in his work. Through Gyoki's efforts numerous canals, water-reservoirs, bridges, and good roads, were constructed. The Government fully appreciated Gyoki's work and rewarded him liberally.

When the Tokugawa family came to assume the supreme power early in the 17th century, there were three important highways in the mainland, all radiating from Yedo, where the Tokugawa Government was located. Two of them connected Yedo with Kioto where the seat of the Imperial Household was; one, called the Tokaido, passed along the eastern coast of the country, and the other, the Naka-sendo, passed through the interior of the land. The length of each road was about 300 miles. Another road radiating from Yedo was the Oshu Kaido, 500 miles long, which led to the northern end of the country. All these roads and their branches served, during the feudal ages of the Tokugawa Government, almost exclusively for military and administrative purposes. They are still the main roads of the country.

The opening of Japan to the world in the middle of the present century and the later Restoration marked the beginning of the new era in every sense. The Restoration of 1868 is known as the dividing line between the new and the old Japan, in every sense, political, social and industrial. The Restoration meant the revival of the Mikado's authority, the downfall of feudalism, and the beginning of a new life of the united nation. The factors of the modern civilization have been introduced rapidly but have been well digested and are readily assimilated in the national character.

As to transportation and communication, new methods and machinery have been brought in and applied extensive-
ly in both public and private works.

The progress of the new Japan is that of only thirty years. Let me state briefly the process of this new development in transportation and communication.

First came the erection of light-houses. This was considered by the new Government as one of the most urgent requirements for maritime transportation. Many European engineers and artisans were employed for this work. By their exertion and the later work of the native engineers almost all important points along the coasts have been furnished with good signals, the dangers of maritime transportation being thus diminished. The telegraph also attracted the attention of the Government soon after the Restoration. Under the direction of an English engineer the first telegraph line, eighteen miles long, was constructed in 1869, between Tokio and Yokohama. Others followed. In March, 1896, there were 9,740 miles of telegraph line with 29,602 miles of wire, besides 244 miles of submarine cable.—The Statesman’s Year Book (1897). All the telegraph lines are owned by the Government. The postal service in the country has also made remarkable progress. In 1871 a letter post service was established by the Government between the three largest cities, Tokio, Kioto and Osaka, the Postal Laws of the Western countries being adopted and the postal money order and the Parcel Post being introduced. Every part of the country now enjoys the benefits of the new system and there is no place where letters cannot be dispatched and delivered.

ROADS.

There are three classes of roads in Japan: State or National roads, prefecture roads and village roads. State roads are maintained at the national expense, though their regulation and repair are entrusted to the prefectures through which they pass. Prefecture roads are kept up by a joint contribution from the Government and from the particular prefecture, each paying one-half of the sum needed. The