
ASSIMILATION OF THE INDUSTRIAL VILLAGE CONCEPT BY JAPANESE BUSINESS CIRCLES AT THE TURN OF THE TWENTIETH CENTURY

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This article explores how the industrial village concept would have been regarded and discussed in Japanese business circles at the turn of the twentieth century. It reflects on how this concept was assimilated in Japan—through books collected by Japanese higher-education institutions, and the overseas travels of Japanese business people. Schools of Economics and Commerce compiled notable book collections on the subject of the industrial village, some of which were donated by business leaders. This indicates that the concept had been accepted in various contexts, and graduates of various business fields could have been aware of it. By conducting an analysis of Japanese overseas travellers experiences, we found that business travel increased rapidly in the 1890s, and by 1910, one-third of all overseas travel was business-related. This paper concludes by a) examining the remarkable case of the Nikkō Electric Copper Smelting Co. that consistently dispatched core administrators such as Tsunesaburō Suzuki and Tetsutarō Hasegawa to Western countries, and b) discussing the likely extent of their knowledge and understanding of the industrial village concepts they had observed and how they contemplated applying these concepts on their return to Japan.

Keywords

Japan, industrial village, foreign books, housing, welfare facilities

How to Cite

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INTRODUCTION

At the turn of the twentieth century, Western industrial magnates began developing model communities for their factory workers. These villages came to be called industrial villages. This article considers how Japanese business circles would have become aware of the Western industrial village concept, and how they would have incorporated it into their activities during the formative period of urban planning in this country.

Many studies have considered how planning ideas from other countries were transmitted to Japan.¹ Carola Hein² focused on the role of foreign and Japanese planning experts to describe the historical phases of their importation into Japan.³ Hein also pointed out some fundamental features of modern Japanese planning, such as the role of bureaucrats. Sorensen discussed the importance of civil society, and described the planning developments that occurred during the ‘Taisho Democracy’ period.⁴

We take another approach, by examining the roles of entrepreneurs and business leaders in planning developments. Since modern planning methods had been developed in response to the process of industrialization, and industrialization was considered a key measure of Japan’s increasing national prestige, this approach merits attention. However, few studies have taken this approach.⁵ In his early study on Magosaburō Ohara’s achievements at the Kurashiki Bouseki Co Ltd., Ishida pointed out the ‘immaturity’ of Japanese industrial villages as planning projects.⁶ We assume that this is why it has not been thought possible to trace the obvious ‘transmission’ of the idea to Japanese industrial village projects. In addition, it has seemed difficult to comprehend the actions of diverse and fluid business circles, and contextualize each of their case studies,⁷ especially in the formative phase of Japanese industrialization.

To portray the elusive notion of the industrial village concept in Japanese business circles, we introduce the alternative notion of ‘assimilation’, instead of ‘transmission’. The word assimilation connotes the gradual understanding of an idea, and its use for one’s own initiative, whereas the word transmission simply means passing an idea or piece of information from one person, place, or thing to another.

From known examples, we posit two main channels of assimilation. The first channel was the books describing industrial villages that were imported into Japan. The second channel was the direct experiences of Japanese business people who travelled overseas to Western industrialised countries.

The Shogunate and influential feudal clans of western Japan—such as Choshu and Satsuma—collected books on European scientific knowledge, and the Meiji government continued this practice. By the turn of the twentieth century, various types of higher-education institutions had been established to supply a pool of educated people to advance industrial development.⁸ These institutions, where most business leaders in the private sector had been trained, acquired literature on the industrial villages. A known example of the introduction of the industrial village concept through the literature is that of Sanji Mutō (1867–1934) of Kanegafuchi Bōseki (Kanegafuchi Spinning) Co. He acquired relevant knowledge by studying foreign titles, which he asked Tokuzō Fukuda (1874–1930), a professor at the Tokyo College of Commerce (today’s Hitotsubashi University), to translate.⁹

Beginning in the mid-nineteenth century, students and officials were sent abroad for the purpose of importing advanced technologies and industrial policies. After returning home, their observations were reflected in technical innovations and industrial policies, and in this way they accelerated the industrial revolution in Japan. The private sector soon flourished, triggered by the privatisation of government-operated factories and mines under the *Kan-ei Kōjō Haraisage Gaisoku* (*Regulation for Government Operated Factory Privatisation*) of 1880. At this stage, business people in private companies were becoming interested in advanced theories and practices for the improvement of workers’ circumstances, particularly in relation to their housing conditions. They conducted research and inspections of European and American factories and industrial villages before Japan’s *Kōjō Hō* (*Manufacturing Act*) legislation was passed in 1911. This Act set the basic policy for the improvement of workers’ circumstances.

A known example of learning from direct experience is Teijirō Kurosawa (1875–1953) of Kurosawa & Co., who built a typewriter factory and workers’ houses at Kamata in 1918, following his stay in the United States, which began in 1891. He was in Chicago in 1894, and he may have visited and obtained information about Pullman Town. Yamaguchi described the Kamata factory workers’ village as follows: ‘it is assumed to be an industrial village built with an American idea, learnt though his stay in America.’¹⁰

This study first investigates higher-educational institutions’ historic collections of foreign books pertaining to Western industrial villages, in order to form an understanding of the basic circumstances required for the assimilation of knowledge.¹¹ We investigated foreign books that had been acquired by 1931, the end of the ‘Taisho Democracy’ period,¹² and examined them based on their titles and acquisition processes.

This study also reviews the entire picture of Japanese’ overseas business travel in the late nineteenth and early twentieth centuries, by analysing an existing compendium of detailed information about these travellers, examining fluctuations in the number of personnel involved, their areas of activity, and places of employment after their return to Japan. Finally, this paper examines the remarkable case of the Nikkō Electric Copper Smelting Co. (currently called Furukawa Electric Co. Nikkō Plant, hereafter Nikkō),¹³ which consistently dispatched core administrators to Western countries for the purpose of observing business practices, in order to foster an understanding of these practices and how they could be applied when they returned to Japan.

BOOK COLLECTIONS AND THEIR INFLUENCE

First, using Ci-Nii Books,¹⁴ a search engine for Japanese higher-education institutions’ book collections, we targeted books with titles that used the specific phrases summarized in Table 1. Next, we examined every library that had a collection of the targeted books, and documented the years in which they had been acquired, and the process that had been followed to acquire the books. In addition, targeted books were written in major European languages (English, French, and German), and had been acquired by 1931.

With regard to the books written in English, older titles were those published from 1905 to 1906. *Model Factories and Villages: Ideal Conditions of Labour and Housing*, by Budgett Meakin (London: T. F. Unwin, 1905), which had been acquired by several Colleges of Commerce.¹⁵ The Schools of Economics and Colleges of Commerce¹⁶ had been major collectors of historical titles on the subject of industrial villages. It is notable that *Village Industries: A National Obligation*, by J. L. Green (London: The Rural World Publishing Co., 1915) was acquired by Schools of Agriculture.¹⁷ *The Model Village and its Cottages: Bournville*, by W. Alexander Harvey (London: B.T. Batsford, 1906) was acquired by Tokyo Art School (today’s Tokyo University of the Art) in 1906, and *Houses for Workers* (Westminster: Technical Journals, ~1923) had been acquired by the School of Architecture, Kyoto Imperial University by 1921. These books contained images, plans, and drawings. We believe that they were selected for readers with specialized interests in design.

LANGUAGE	PHRASES
English	industrial village, model village, worker’s house ,worker’s village, company town, factory town
French	cite ouvriere, logement ouvriere, habitation ouvriere, cite industrielle
German	Arbeiterwohnhaus, Arbeiterwohnung, Arbeitersiedlung, Arbeiter-Kolonien
*Other phrases that made no hits in the search are omitted	

TABLE 1 Phrases targeted in book collection search

In the collections of books written in French, we found some remarkable features. First, the French books were older than those acquired in English. For example, *Cités ouvrières: des modifications à introduire dans l'architecture des villes*, by Charles Fourier (Paris: Librairie phalanstérienne, 1849), had been acquired by two schools.¹⁸ A copy at the Osaka College of Commerce (today's Osaka City University) was originally purchased by Professor Tokuzō Fukuda of Tokyo College of Commerce in 1922.¹⁹ Second, publications related to the Paris World Exposition of 1889 were found in many library collections. Three institutions²⁰ collected *État des habitations ouvrières à la fin du XIXe siècle: étude suivie du compte rendu des documents relatifs aux petits logements qui ont figuré l'Exposition universelle de 1889*, by Émile Cacheux (Paris: Baudry & Cie, 1891). Related titles such as *Les habitations ouvrières en tous pays* by Émile Muller and Émile Cacheux (Paris: Baudry & Cie, 2nd ed. 1889),²¹ and basic reports from that period²² were also acquired. This illustrates the far-reaching effects of the 1889 Paris World Exposition.²³ Kyoto Imperial University acquired a copy of a title by Cacheux dated 1924, as part of the Bücher Collection that had originally been assembled by Karl Bücher (1847–1930) at the University of Leipzig, after which the Koyata Iwasaki of Mitsubishi²⁴ purchased the collection, and donated it to the Kyoto Imperial University. A copy of the same title had been donated to the Kyusyu Imperial University in 1927 by Sadajirō (or Teijirō) Kuwayama, a steel manufacturer.²⁵

With regard to German book collections, some titles were acquired that referred to workers' houses. The oldest title is *Die Arbeiter-Wohnhäuser in Ihrer Baulichen Anlage und Ausführung: Sowie die Anlage von Arbeiter-Kolonien* (Leipzig: Karl Scholtze, 1879) in the Bücher Collection of Kyoto Imperial University. *Das Arbeiter-Wohnhaus, Anlage, innere Einrichtung und künstlerische Ausgestaltung, Arbeiterkolonien und Gartenstädte*, by Karl Robert Weissbach and Walter Mackowsky (Berlin: E. Wasmuth, 1910), was the only German title in the school of architecture's collection. It had been acquired by the Kyoto College of Technology (today's Kyoto Institute of Technology) in 1911, and the Kyoto Imperial University in 1921. The School of Economics at the Tokyo Imperial University received a copy of *Die Berliner Arbeiter-Kolonie, ihre Entwicklung und Arbeit* by A. F. Schlunk (Berlin: Verlag der Berliner Arbeiter-Kolonie, 1903) that had been donated in 1921 by Gentarō Shimura, the president of Nippon Kangyo Bank.²⁶ A title that referenced Krupp's worker colonies, *Die Arbeiterkolonie Margarethenhof: die Schlafhäuser und das Speisehaus* (Essen: 1907), was acquired by Professor Yoshizō Sakanishi (1877–1942) of the Kobe College of Commerce. He also owned other titles that referenced Krupp's welfare facilities, and seems to have had a special interest in Krupp's practice. He also collected titles on *Gartenstadt*, and was interested in the relationship between industry and housing. Major collections were established by schools of economics and commerce, such as those at the Kyoto Imperial University, Tokyo Imperial University, Kobe College of Commerce, and Nagasaki College of Commerce (today's Nagasaki University), rather than by the schools of architecture and civil engineering. The most noteworthy point here is that some parts of these collections had been donated by entrepreneurs (Iwasaki) and business leaders (Kuwayama, Shimura). This suggests that the business sector initiated the adoption of ideas about industrial villages, and these book collections would have stimulated the next generation's business leaders to study these ideas.

OVERSEAS EXCURSIONS BY JAPANESE BUSINESS TRAVELLERS

We reviewed all overseas travels by Japanese people from 1861 to 1912, the late Shogunate period to the Meiji period, by analysing an existing compendium of records that pertained to Japanese overseas travellers that had been edited by Akira Tezuka and others.²⁷ The main part of the compendium is a database that extracts travellers' personal information from historical documents such as *Kōbun-Roku*, *Dajō Ruiten*, *Tokō Jin-Meisai-Bo*,²⁸ with the addition of supplementary information from various biographical materials. The information compiled in this database pertains to 6,573 people. We analysed the database primarily to distinguish the historical movements of Japanese business travellers from those of other travellers. We focused on travellers who went to Europe and the United States, and from this group, selected individuals whose information included terms related to *Sangyō* (Industry), *Seiji* (Policy), *Keizai* (Economics), and *Eisei* (Hygiene). We then classified their fields of activity, their status while travelling, their destinations, travel dates, learning and training places, the schools from which they graduated, their hometowns, and the dates of their return.

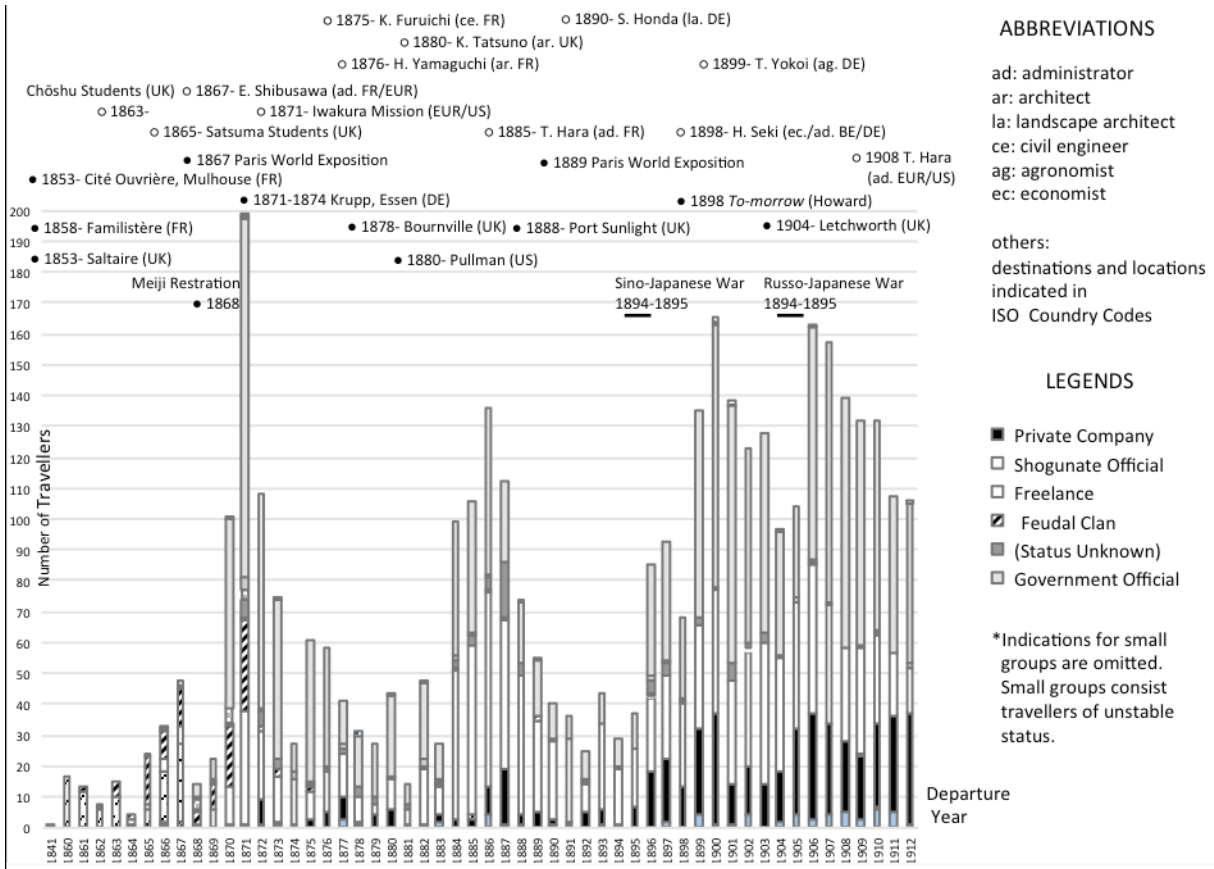


FIGURE 1 Fluctuations in the number of Japanese business travellers to Western countries relative to their employment status from 1841 to 1912.

Figure 1 depicts fluctuations in the numbers of travellers relative to their employment status (indicated as legends). We noted the years when well-known Western industrial villages' developed, any related information, and personal individual information for several well-known administrators and important specialists (in the fields of architecture, civil engineering, hygiene, and landscape architecture) as historical benchmarks, such as their years of departure, names, specialties (abbreviated), and destination country.

The figure shows two peaks in the total number of travellers in 1871 and 1886, and this number increases steadily from 1896 to 1912. The peak in 1871 reflects travel to the Paris World Exposition of 1867, in which the Shogunate and feudal clans of Satsuma and Saga participated, and travel by the Iwakura Mission, which departed in 1871. The drop between the two peaks is due to the rebellion of 1877 (*Seinan Sensō*) and deflation in 1882. The peak in 1886 reflects the end of deflation, and the full-scale growth of private industry from 1885 through 1889, following the *Kan-ei Kōjō Haraisage Gaisoku* in 1880. The next decline reflects a financial crisis in 1890, and the outbreak of the Sino-Japanese War in 1894. Although the number of travellers decreased after the world financial crisis in 1900, the economic prosperity that followed the Sino-Japanese War and the Russo-Japanese War led to an increase in the number of travellers after 1896.

With regard to the employment status of travellers from 1865 to 1867, the number of travellers that belonged to the Shogunate and feudal clans increased, including travellers to the Paris World Exposition of 1867, and as part of the Iwakura Mission. Private travel increased from the late 1880s, and the number of travellers affiliated with private companies increased beginning in 1896, and thereafter accounted for a substantial proportion of the travellers. The number of travellers fluctuated at higher levels after 1899.

We then reviewed the compendium and recorded the travellers' workplaces after they returned to Japan, as a way of evaluating companies' travel commitments. The earliest cases of dispatching employees overseas occurred in the mining industry. The first was Sumitomo, which sent two people in 1876,²⁹ after which there was a twenty-year interval before they sent another traveller. Of the mining companies, Furukawa sent the largest number of travellers,³⁰ as we discuss in more detail later. After 1898, Furukawa, Mitsui, and Mitsubishi sent numerous personnel. The effort required to organise these trips illustrates these companies' sincere commitments to their development.

ASSIMILATION OF THE INDUSTRIAL VILLAGE CONCEPT BY THE NIKKO ELECTRIC COPPER SMELTING CO.

Nikkō, a subsidiary of the Furukawa Mining Co., commenced operations in 1906, for the purpose of smelting products from both of its copper mines, Ashio and Kusakura.³¹ The company repeatedly sent their core administrators (directors and managers) to Western countries from 1889 to 1945.³² They were often sent abroad before they had been appointed to administrative posts. Furukawa Mining Co., the holding company, dispatched its first director, Kisaburō Yamaguchi, and then its second director, Suekichi Nakagawa. Tsunezaburō Suzuki, the third director, remained in the United States from 1904 to 1907, as a tutor for Toranosuke Furukawa,³³ who was studying at Columbia University. During his stay, Suzuki worked for an American railroad company, after which he studied accounting at Harvard University. In 1911, soon after his return to Japan, he made another trip to Europe and America, for the purpose of learning how factories were administered. After returning home, he was appointed the third director. In later years many directors travelled to Western countries, including Hideo Kajiyama (the fourth director), Juroku Kaku (the sixth), and Sakichi Kishino (the tenth).³⁴

During Suzuki and Kajiyama's administrations between 1912 and 1915, a hospital and a kindergarten were established. During Keizō Nishimura³⁵ and Kishino's administrations between 1936 and 1948, the factory was designated a munitions factory, and some company houses were built to accommodate the growing number of factory workers and their families. Kishino's appointment also occurred after he returned from his travels.

Figure 2 shows the entire layout of the industrial village of Nikkō (above left), and the typical development clusters. Development progressed in each of the clusters in a way that was appropriate for its topographical features, and a cluster was equipped with facilities that included a Consumers' Cooperative Society kiosk, a public bathhouse, a kindergarten, a clinic, and an assembly hall. Tansei-Shataku (upper right) was a relatively spacious neighbourhood built in 1936 and 1937, intended for company engineers. Arasawa-Shataku (bottom), the largest cluster, was developed from 1940 to 1945, and accommodated 617 families in 1954. We can observe green belts or open spaces partitioning the area into six units.

We can assess the impacts travel had on the administrators' understanding of the Western industrial village concept through their writings. During his second tour, Suzuki visited Cadbury's model industrial village Bournville in the United Kingdom. After returning home, he wrote a book titled *Rōdō Mondai to Onjō-Shugi* (*Labor Problems and Paternalism*) in 1915.³⁶ Using the coined word 'Onjō-Shugi' (closely translated as paternalism), he described his travel to Bournville. 'I found that the British and German model factories all had a warm employer-employee relationship', Suzuki wrote, and that 'the famous chocolate magnate Mr. Cadbury³⁷ says that labour efficiency is in direct proportion to the warmth of the employer's heart'.³⁸ Four years later in 1919, Suzuki wrote again of his findings during that trip:

*Mr. Cadbury] said workers' houses, where workers recover from fatigue, should be as home-like as possible. In other words, they should not be like barracks, not like Nagaya (row houses). Sufficient space should be provided so as to allow them to grow plants and flowers.*³⁹



FIGURE 2 Nikkō Electric Copper Smelting Co.'s Industrial Village, captured in an aerial photo in 1963.

The photographs in Figure 3 clearly show Nikkō Company houses, and how the village was laid out. Tansei-Shataku for engineers (left) had detached houses surrounded by individual hedges. Wanoshiro-Shataku, the village for plant workers (right), accommodated 258 families in semi-detached houses. We can observe that improvements had been made relative to barracks or the *Nagaya* type of housing. Here we need to confirm that Suzuki's implementation of an industrial village was the result of his first-hand experiences, and that the idea of developing such a community was reflected in subsequent developments in Nikkō.⁴⁰

In 1903, a section manager named Tetsutarō Hasegawa travelled to the United States with Suzuki, and studied at the Massachusetts Institute of Technology and Yale University. He studied medicine and hygiene, and majored in metallurgy. After returning to Japan in 1908, he was employed by Furukawa, and worked with Suzuki at Nikkō during the same period. In his book titled *Kōjō to Shokuko (Factory and Workers)* published in 1915, Hasegawa explained his ideas on factory management. He also discussed workers' housing, and, furthermore, welfare systems, educational facilities, and hospitals, in a chapter titled *Shokkō no Fukuri Zōshin ni Kansuru Setubi (Facilities for Workers' Welfare Extension)*. Here he introduced Krupp's welfare facilities in Essen Germany, and Cadbury's Bournville, and provided photographs of these facilities.



FIGURE 3 The Nikkō company houses. Tansei-Shataku (left) and Wanoshiro-Shataku (right).

With regard to housing, Hasegawa wrote that, *When workers do not have the means to settle down in one place, they lack conscientiousness about their work and this impedes progress. As a result, the factory lacks skilled workers and expends its energy on the mass production of inferior goods. All factory owners must pay attention to prevent workers' dispersion and transfer. Therefore, housing is an essential topic of study for factory management.*⁴¹

Hasegawa then commented that, *In European countries, not only municipal authorities, associations and factory owners provide affordable and comfortable housing, but also national governments intervene in housing problems by taking down low quality houses, providing suitable new houses, and employing other effective means according to law and ordinances.*⁴²

In addition, Hasegawa emphasised the importance of a consumers' cooperative society. 'With this [a cooperative society] workers are able to cultivate a sense of self-support and cooperation, and are able to learn how to balance saving and consumption.'⁴³ He went on to describe the Nikkō cooperative society in which Yamaguchi, the first director, ordered workers to organise, and subsequent directors paid special attention to the society and its facilities (Figure 4 left). Hasegawa also noted that education and training institutions are 'extremely important for factory progress', and again described the practices of setting up an apprenticeship system and a kindergarten at Nikkō, which, at Suzuki's initiative, he started to build in 1912 (Figure 4 right). In his descriptions of these welfare, education, and training institutions, Hasegawa again used Krupp as an example, with detailed references to the Krupp Education Association, Affiliated Sewing School and Housekeeping School, and especially the Krupp Consumers' Cooperative Society.⁴⁴

Nikkō's practices were introduced to Japanese business circles in a book titled *Mohan Kōjō Nikkō Denki Seidōsho (A Model Factory–Nikkō Electric Copper Smelting Co.)*, by Riemon Uno (Osaka: Kōgyō Kyōiku Kai, 1914), in which the author wrote, 'The factory pays close attention to the workers' housing'. Another article titled *Sankan no Den-en Toshi (A Garden City Among the Mountains) on Jiji Shinpō* (Tokyo: 1909)⁴⁵ reported that, 'the company is going to acquire land nearby the factory and is going to construct single-family houses with flower and vegetable allotments. In four or five years the company will let workers live there with no charge', and, the 'company set up kindergarten and night training schools for apprentices'.

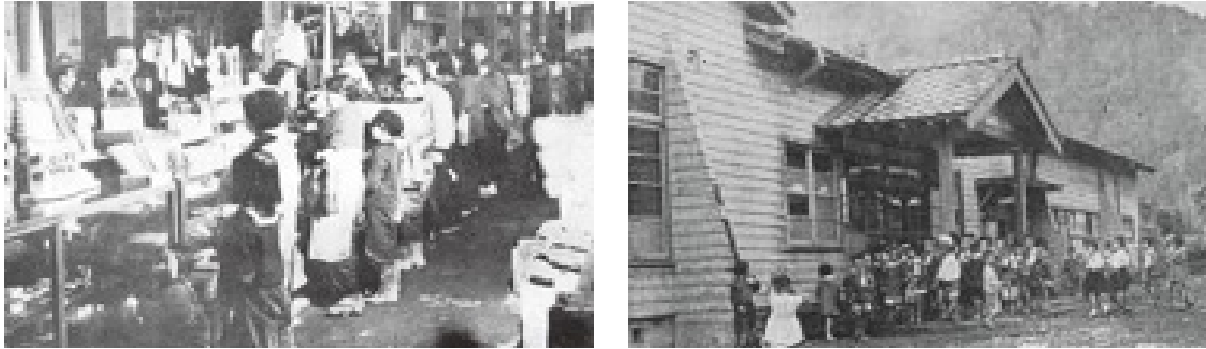


FIGURE 4 A Nikkō Consumers' Cooperative Society kiosk (left) and a Nikkō kindergarten at Hosō-o Shataku (left).

CONCLUSION

This paper explored two means by which the concept of Western industrial villages was assimilated into Japan: the books collected by Japanese higher-education institutions, and the overseas travels of Japanese business people. Schools in various fields obtained titles related to industrial villages written in various languages. In particular, schools of economics acquired substantial collections on this topic, and, more importantly, some of these collections were donated by business leaders. This indicates that the idea of industrial villages, including the Garden City industrial village, could have been encountered in various contexts, and, through schooling, these ideas could have been passed to school graduates in various fields of business.

The extent of business travel undertaken increased rapidly in the 1890s, and by 1910, one-third of all overseas travel was for business purposes. These trips enabled Japanese businesses to be exposed to concepts and practical information regarding Western industrial villages first-hand. Companies had organised business travel, as was demonstrated by Nikkō's directors' overseas travels. By studying Tsunesaburō Suzuki and Tetsutarō Hasegawa's writings, we confirmed that they obtained an understanding of the industrial village concept through their first-hand experiences, and, to some extent, that knowledge was reflected in subsequent improvements to Nikkō's industrial village.

The connection to the West that developed through the importation of relevant books and business travel at the turn of the twentieth century, as described in this paper, indicates that business circles' exploration of Western industrial development laid an important foundation for the broader recognition and immediate application of Western planning ideas.

Further studies of the specific roles assumed by Japanese business people in planning development should be undertaken, and their importance in the international planning history should be argued collectively.⁴⁶ In this respect, studies on Japanese industrial villages are urgently needed to document the historical relationship between industrialisation and planning. For example, the Nikkō industrial village had been demolished by 2010, but the basis of its origin and the design practice it represented is a subject that requires further study.

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No potential conflict of interest was reported by the author.

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Haruka Yokokawa received a Master of Engineering degree from Kobe University in 2015, having studied book collections related to the garden city concept and academics' understanding of this concept at Japanese higher-education institutions.

Hanna Okada received a Master of Engineering degree from Kagoshima University in 2016, having studied how understanding of the industrial village concept developed through overseas travels at the turn of the twentieth century.

Endnotes

Shun-ichi Watanabe, the author of *The Birth of Urban Planning—Japan's Modern Urban Planning in International Comparison* (Tokyo: Kashiwa Shobo, 1993), pioneered this field of study.

Carola Hein, 'The Transformation of Planning Ideas in Japan and its Colonies', in *Urbanism: Imported or Exported?* ed. J. Nasr and M. Volait (Chichester: John Wiley & Sons, 2003). 51–82.

Using terms coined by Stephen Ward (2000), Hein describes historical periods and characteristic actions as 'generalized imitating and borrowing' from the West (1868–1919), and 'selective borrowing (1919–1945)'.

André Sorensen, 'Urban Planning and Civil Society in Japan: Japanese Urban Planning Development During "Taisho Democracy" Period', *Planning Perspectives* 16, no. 4 (2001): 383–406

Recently, a series of studies has been made using Riemon Uno's concept of workers' dwellings by Naoki Hirai et al. (2013). They mention Uno's recognition of Western industrial villages. Shigeo Nakano et al. (2014) studied the introduction of the 'neighborhood unit' concept into industrial development, though the major target is official planning by the public sector. There are also some classic case studies such as those described by Fujiya (2009), Ishida (1990), and Yamaguchi (1984), though these remain without sufficient contextualization. Katagi (2000) pointed out the historical importance of the industrial village in relation to the introduction of the Garden City concept to Japan, though he considered it difficult to find a competent Japanese industrial village as a counterpart to a foreign example.

Yorifusa Ishida, 'Japanese Industrial Village and a Reformist Factory Owner', *Planning Perspectives* 5, no. 3 (1990): 295–305.

With contributions from other authors (Kikata, Nakae), *Shataku Kenkyu-Kai* (2009) compiled case studies on the built environment in industrial villages in Japan, though the meaning of planning practices in an international context has not been addressed.

For a historical outline of Japan's higher-education system, see Motohisa Kaneko, 'Japanese Higher Education: Contemporary Reform And The Influence Of Tradition', in *Asian Universities: Historical Perspectives and Contemporary Challenges*, eds. Paul G. Altbach and Toru Umakoshi (Baltimore: Johns Hopkins University Press, 2004).

Youetsu Fujiya, 'Bousekigyō no Kishukusha' [Board Houses of Spinning Industry], in *Shataku Gai -Kigyō no Unda Jutakuchi*, ed. Shataku Kenkyu-kai (Tokyo: Gakugei Shuppansha, 2009), 60–64.

Hiroshi Yamaguchi, 'Kamata no Warera ga Mura-Kurosawa Sadajirō no Kōjō Mura' [Our Town in Kamata, an Industrial Village Built by Sadajirō Kurosawa], in *Kōgai Jutakuchi no Keifu*, ed. H. Yamaguchi (Tokyo: Kajima Shuppankai, 1984), 110–18.

Yokokawa and Nakae (2015) have demonstrated the effectiveness of this methodology on Garden City ideas.

In 1931 the Manchurian Incident occurred, after which the democratic government came to an end, and military dominance increased. This year is commonly referred to as the end of the Taisho Democracy Period. Sorensen op. cit., and Yorifusa Ishida, *Nihon Kindai Toshi Keikaku no Hyakunen* (Tokyo: Jichitai kenkyu-sha, 1987).

Okada, Kikata, and Koyama (2016) have produced an outline of the background of the Nikkō industrial village development.

<http://ci.nii.ac.jp/books/> (hosted by the National Institute of Informatics).

Acquired by the School of Law, Kyoto Imperial University in 1906, the Kobe College of Commerce (Kobe University) in 1906, and the Oita College of Commerce (Oita University) in 1926.

In this section, a 'School' is equivalent to a 'Bunka-daigaku' or 'Gakubu' of Imperial Universities, and a 'College' is equivalent to an independent 'Kōtō Senmon Gakkō' (literally translated as higher specialized school).

Acquired by the School of Agriculture, Tokyo Imperial University in 1915, the School of Agriculture, Tohoku Imperial University in 1915, and the Kagoshima College of Agriculture and Forestry (Kagoshima University) in 1915. Three other institutions acquired it by 1917.

These are the Osaka College of Commerce and Kyushu Imperial University.

The Fukuda Collection at Osaka City University includes Tokuzō Fukuda's own collection, and part of the collection of his mentor, Lujo Brentano (1844–1931), from the University of Munich.

These are the Kyoto Imperial University, the Osaka College of Commerce, and Kyushu Imperial University.

Acquired by the School of Economics, Kyoto Imperial University, in 1928 and 1932. An earlier acquisition is assumed to have been donated by Hideshirō Murakami.

Le logement de l'ouvrier et du pauvre by Arthur Raffalovich (Paris: Guillaumin, 1887) was acquired by the School of Economics, Kyoto Imperial University in 1924, the Tokyo College of Commerce in 1931, the School of Economics, Tokyo Imperial University in 1924; *Le logement de l'ouvrier et du pauvre en Belgique* by Louis Bertrand (Bruxelles: Chez l'Auteur, Paris: à la Revue Socialiste, 1887) was acquired by the School of Economics, Kyoto Imperial University, in 1924

For the impacts of international exhibitions, see Helen Meller, 'Philanthropy and Public Enterprise: International Exhibitions and the Modern Town Planning Movement, 1889–1913', *Planning Perspectives* 10, no. 3 (1995): 295–310.

Koyata Iwasaki (1879–1945) was the fourth president of Mitsubishi company group.

A person named Sadajirō Kuwayama was appointed the first director of Nippon Steel Co. Hirohata Works in 1937. We assume that he donated the historical collection at Kyushu Imperial University.

Gentarō Shimura (1867–1930) graduated from the School of Law, Tokyo Imperial University. He first worked for the Ministry of Agriculture and Commerce, then turned to the private sector, and was finally appointed as the president of Nippon Kangyo Bank in 1911.

Akira Tezuka, Toshio Ishijima, 'Bakumatsu-Meiji Kaigai Tokōsha Junbutu Jōhō Jiten' [Compendium of the Overseas Travellers in the Last Days of Tokugawa-Shogunate and Meiji Era] (Tokyo: Genshō sha, 2003).

These have been kept by the National Archives of Japan.

Sumitomo sent Kadosuke Shiono (1853–1933) and Yoshizō Masuda (1850–?) to France in 1876. Shiono studied at Ecolé des Mines de Saint Étienne, and later became the director of Sumitomo Bessi Copper Mine.

Tezuka et al. op. cit. and Furukawa Mining Co., *Sōgyō Hyakunen Shi* [Centennial History of Enterprise] (Tokyo: Furukawa Mining Co., 1976).

Furukawa Electric Industry Co., *Sōgyō Hyakunen Shi* [Centennial History of Enterprise] (Tokyo: Furukawa Electric Industry Co., 1991).

Furukawa Electric Industry Co., Nikkō Electric Copper Smelting Co., *Seidō-sho Gōju-nen* [Fifty Years of Copper Smelting Co.] (Tokyo: Furukawa Electric Industry Co., 1954).

He is the son of the founder Ichibei Furukawa, and the third president of Furukawa in later years.

Furukawa Electric Industry Co., Nikkō Electric Copper Smelting Co., op. cit.

Details of Nishimura's travel experiences are unknown, however, it is said that he travelled abroad seven times, and every time he returned home he became involved in setting up and maintaining new facilities. Ibid. 44.

Tsunesaburō Suzuki, *Rōdō Mondai to Onjō-Shugi* [Labour Problems and Paternalism] (Tokyo: Yōriki-sha, 1915).

In addition to Suzuki's writings here, several articles compiled in the appendix of Suzuki's 1915 publication reported that Suzuki had had a direct conversation with 'Mr. Cadbury'. We assume that Suzuki met George Cadbury (1839–1922), since Suzuki's visit was in 1911.

Suzuki op. cit. 3. The original text was written in Japanese; it has been translated for this paper.

Tsunesaburō Suzuki, *Kōjō Kanri Jitsugaku* (Tokyo: Daiyamondo Sha, 1919), 259–261. The original text was written in Japanese; it has been translated for this paper.

From an economic historian's point of view, William Tsutsui, who discussed the introduction of scientific management to Japan, argues that Suzuki's 'Onjō-Shugi' indicates that the paternalistic characteristic typical of Japanese is a rhetorical device, even compatible with scientific management. Beyond that, Tsutsui notes that Nikkō and Bournville are much alike in the blending of paternalism and scientific management. Nevertheless, it is unclear if Suzuki was aware of it. Tsutsui (1998), 51–56. Teppei Doi shares basic recognition of Suzuki's concept, though he emphasises Suzuki's full comprehension of the Western management concept, and adjusts its use to Japanese labour circumstances. Doi (2004).

Tetsutarō Hasegawa, *Kōjō to Shokukō* [Factory and Workers] (Tokyo, 1915), 74. The original text was written in Japanese; it has been translated for this paper.

Ibid. 76.

Ibid. 270.

Ibid. 363–364.

A serial running report in the newspaper, reported on 8 May through 11 May 1909.

In order to set up an academic platform for international comparative studies on labour history that considers the idea of paternalism, Kazue Enoki (2009) reviews previous studies on Japanese labour-management history. Enoki argued for the conceptual variety of *Onjō-Shugi*, from the religious (Christian)-based practices of Ohara, Mutō, and Tsurukichi Hatano of Gunze Spinning Co. to counter Suzuki's scientific approach. Also, he proposes that the *Kyōchō-Shugi* [literally translated as 'cooperativism'] of the Kei-ichiro Yasukawa of the Meiji Mining Co. and the Yasukawa Electric Co. should be considered a form of paternalism. In conclusion, he observed that demonstrable studies of the history of Japanese paternalism in a global context had only just begun. The same observation can be made of related studies on planning history.

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Image Sources

Figure 1: Produced by Hanna Okada under the instruction of Junne Kikata. 2016.

Figure 2: The Geospatial Information Authority of Japan (GSI), Digital Archive [KT632YZ 1963]. Notes and icons added by the author.

Figure 3: Furukawa Electric Industry Co. Nikkō Electric Copper Smelting Plant, Seidōshō Goju-nen, Tokyo: Furukawa Electric Industry Co. Nikkō Electric Smelting Plant, 1954. 105. 107.

Figure 4: (left) Hasegawa, Tetsutarō. *Kōjō to Shokukō*, Tokyo: Shuei-sha, 1915. 345. (right) Uno, Riemon. *Mohan Kōjō Nikkō Denki*, Tokyo, Kōgyō Kyōiku Kai, 1914. 123.