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Author(s)	Koshino, Takeshi; Kado, Yukihiro
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Early Western Style Architecture and its Diffusion in Hokkaido

Takeshi KOSHINO, Yukihiro KADO

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Abstract

One of the authors, Koshino, has published a book, *Kaika-no Katachi*, in 1979[1)] to describe the historical outline of the earliest phase of architectural westernization in Japan, and in conclusion, pointed out that we should consider the historical meaning of the early western style architecture also in its diffusive process together with the characteristic changes inevitable in the course of assimilation to make it a very ordinary style of building in Japan. This paper deals with this subject in Hokkaido, focusing on three principal cities and the coastal region along the Sea of Japan. In two cities, Hakodate and Sapporo, a few of important buildings of, and after, the *Kaitakushi* (Colonial Department of the Government, 1869～82) and ordinary town buildings of the so-called *machiya*, which are the typical and traditional town houses in Japan usually having space for stores or shops in it will be discussed. In Otaru, town buildings with characteristic structure of timber-masonry will be discussed. In the coastal region, several early public buildings and fisherman houses will be considered.

In order to deal with the large numbers of ordinary buildings, some engravings published around 1880s and 1890s are surveyed together with observations of buildings standing today.

1. Western Style Architecture in Hakodate

Hakodate, a port city at the southernmost part of Hokkaido, was one of the centers where the earliest western style buildings appeared since it had been first opened to the over-sea trade in 1859 at the same time as Yokohama and Nagasaki. And there, after the Meiji Restoration in 1868, the Hakodate Branch of the *Kaitakushi* built many public and governmental buildings in western style, which, although only a few remain, had certain characteristic and scrupulous carpentry in comparison with those of Sapporo. In addition we should notice that it executed a town planning after the conflagrations in 1878 and 1879 to transform the urban structure of Hakodate from the medieval meander into the modern one consisting of grid pattern.

We hardly have many remaining buildings from the post-*Kaitakushi* era before the

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conflagration in 1907 that destroyed almost all of the principal parts of the city. Of the buildings rebuilt after the disaster, a representative is former Hakodate Public Hall in 1910[2]. Certain features of this two-storied timber structure, for instance, E-shaped ground plan, pedimented wings, open loggia at the upstair front, etc. might make one imagine the classical composition, neverthless the actual appearance utterly differs from it. The first impression of all may be the brilliant painting in two contrasting colors, bluish grey and yellow, that would have never been conceived in whitish classical architecture[3]. We could point out the same primitive characters in the arabesque ornaments on the pediments, strange carvings of capitals and flutings of the columns, uncorrespondency of disposition between the columns of loggia and the inner openings, and so on. These primitive style were usually seen in the earlier western style architecture in Hakodate. Hakodate Public Hall was designed by municipal architect Asajiro (Tomojiro ?) Konishi (1879～1924), who was not a born carpenter but a self-trained person to have learned the architectural tradition of Hakodate. We could observe that in Hakodate, the characteristics and the relatively high quality of earlier western style architecture had been kept until around 1910s. Another example is the office building of Soma Company from 1915, supposedly designed by a carpenter who was customarily employed in Soma family buildings. It is a two-storied timber structure with refined classical features such as pedimented windows, a Palladian window, finely carved brackets of cornice, and so forth.

As to the westernization of the ordinary *machiya*-houses in Hakodate, we should consider two types ; fire-proof and timber structure[4].

It is well known that the *Kaitakushi* ordered the fire proofing of houses as one of the necessary programs in the urban renewal after the conflagrations in 1878 and 1879. We can list 70 buildings along *Odori* Street (Main Street) and 30 along Wharf Street from a panoramic picture taken in 1889, and numbers of engravings in *Shoko Hakodate-no Sakigake*, a kind of illustrated trade directory, published in 1885, and in *Hakodate Jitchi Meisai Ezu*, a map of

Table 1 Types and Styles of Buildings along Odori and Wharf Streets in Hakodate, based on a panoramic picture in 1889, *Shoko Hakodate-no Sakigake* in 1885, and *Hakodate Jitch Meisai Ezu* in 1891 and after.

Districts / Types & Styles		ODORI STREET (west – east)						WHARF STREET
		Benten-cho	Oh-machi	Suyehiro-cho			Total	
				west	middle	east		
Fire Proof	Japanese	7	9	1	2	1	20	5
	Western	1	6	9	5	1	22	2
Timber	Japanese	1	4	4	3	5	17	13
	Western	2	3	3	1	2	11	10
Total		11	22	17	11	9	70	30

Hakodate with building illustrations, in 1891 and after (Table 1). 42 of 70 buildings along *Odori* Street, whereas only 7 of 30 along the Wharf, were of fire-proof structure. Two different kinds of fire-proof buildings can be distinguished. One is a plaster, or godown type, constructed with timber frame and thick wattle-and-daub faced with plaster in rather traditional style of Japan. This type is found along the older west part of *Odori* Street. Another is also of plaster but designed in somewhat western style, which is distributed along the east part of *Odori*, rather newly developed and most flourishing at the time (Fig. 1). As considered from a few remains, for instance, former Kanemori Store from 1880, most of those buildings designed in western style are conjectured to have been built with brick masonry. A noteworthy exception is former Tsuneno Store built as early as in 1876, that was of the traditional plaster type, but had a balcony at the front in western style[5].

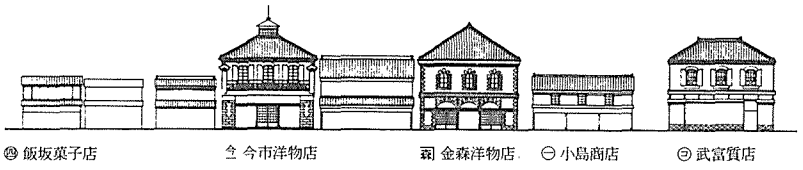

Fig. 1 Elevation of Buildings along Suyehiro-cho, Odori, Hakodate

We can observe that there is, among the various timber *machiya*-houses built after the conflagration in 1907, a typical and almost standardized style ; the upstair front is designed in western style, with double-hung or casement glazed windows, corniced eaves and painted weather-boarding, whereas the groundfloor front, that is usually a store or shop opened for customers, is nothing but of Japanese traditional style often with the vertically latticed openings. The *machiya*-houses of western style such as this, or a conglomarate of upper western and lower indigenous, are found not only in Hakodate but generally in Hokkaido, but those in Hakodate are large in numbers, and made with relatively more excellent carpentry (Fig. 2).

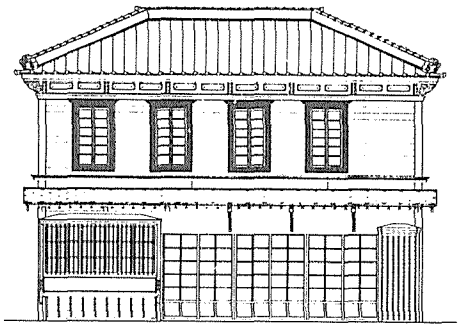

Fig. 2 Former Tanaka Store, 1901, front elevation

This style can be traced to as early as about 1873 in a picture to view a telegram office just newly built in the year and a neighboring *machiya*-house along *Odori* Street with upper western style windows and painted weather-boarding and lower usual openings for a store. Whereas only 7 of 131 *machiya*-houses drawn in the engravings in 1885, 27 of 69 *machiyas* in 1891 were of this western style. At the time around 1890 the style seemed to begin spreading. They had such various elements clearly indicating the western style as arched openings, balconies and so on, rather more than those after 1907, when, for the purpose of urgent

rebuilding after the fire, certain standardization and simplization occurred.

2. Western Style Architecture in Sapporo

Sapporo is a city newly established as the capital of Hokkaido by the *Kaitakushi*, that built there most of the important public and governmental buildings. In the buildings by the *Kaitakushi*, the American influence is evident. Head Quarters Office of the *Kaitakushi*, completed in 1873 and destroyed by fire in 1879, was a two-storied timber edifice with a classically pedimented central wing, crowned with a large cupola, though only in appearance, on the octagonal drum, as designed after the Georgian style in eighteenth and nineteenth century America.

From buildings of Sapporo Agricultural College, today remain the Military Hall with a clock tower built in 1878, and the barns in the college farm in 1877[-6)], both of which were constructed with timber in the balloon frame, fashionable in contemporary America and introduced by American professors of the college. Hoheikan in 1880[-7)], a hotel accomodation founded by the *Kaitakushi*, is a representative of the *Kaitakushi*'s works of architecture, where we can observe an interesting conjunction of the architectural style derived from America and the ornamentation from the Japanese tradition, for instance, medallions of plaster relief on ceiling which were skilfully worked out to reproduce the Japanese peculiar designs by the plasterers supposedly sent from Yedo.

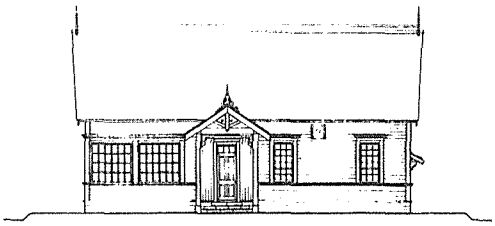

Fig. 3 Company Headquarters of the *Tondenhei*, c.1884, Nopporo, Ebetsu.

It should be noticed that Hoheikan, apart from its semi-circular portico with coupled Corinthian columns, gives one rather more simplified and lighter impression than the classical Georgian architecture. It may come from its general appearance consisting of double-hung windows without any endowment such as pediments, and bare plain weather-boarded wall. There remain the original specifications of Hoheikan, directing 'windows with pediments and with scrolls and ornamented panels beneath,' although they were never carried out. Architects[-8)] of the *Kaitakushi* seemed to prefer the plainness and simplicity particularly since the introduction of the balloon frame construction into the college buildings. And this preference went on influencing the later timber buildings in Sapporo and its vicinities. This could be noticed in two examples : the company headquarters of the *Tondenhei*, or the Colonial Militia, at Nopporo, Ebetsu from c.1884 (Fig. 3), and at Shin-Kotoni, Sapporo, from c.1886[-9)], and the houses offerred to foreign professors' families of Sapporo Agricultural College from 1884[-10)].

In order to observe the ordinary *machiya* and other town buildings in Sapporo, of which almost none remains today, available are numbers of engravings in two publications : *Sapporo Hanei Zuroku*, an illustrated trade directory, in 1887, and *Sapporo-ku Jitchi Meisai*

Ezu, a map with illustrations, in 1893, both of which were in the same series as of Hakodate quoted above (Table 2). The former contains the engravings of 75 buildings including 44 *machiya*-houses or -stores, while the latter 82 including 60 *machiyas*. Because downtown Sapporo was destroyed by a fire in 1892, each of the two groups of engravings generally recorded the buildings before and after the fire.

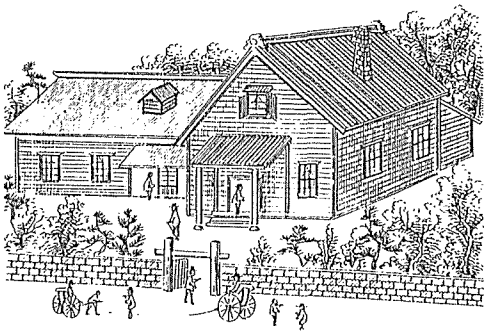

Fig. 4 Soji Lawyer's Office, Sapporo, from *Sapporo-ku Jitchi Meisai Ezu,* 1893.

As shown in Table 2, 6 of 9 fire-proofed stores in 1893 were drawn as representing masonry construction, of which nothing appeared in 1887. Although it is impossible to say whether they were of stone or brick masonry merely from the engravings, some buildings recorded in pictures were of stone, that will be discussed later.

Among the timber buildings there were not so many designed in western style : only 6 of 42 timber *machiyas* in 1887, and 6 of 60 even in 1893. Whereas, 11 of 13 timber buildings

Table 2 Types and Styles of *Machiya* and Other Buildings in Sapporo, from *Sapporo Hanei Zuroku* in 1887 and *Sapporo-ku Jitchi Meisai Ezu* in 1893.

Types & Styles		Hanei Zuroku, 1887			Meisai Ezu, 1893		
		Machiyas	Office Bldgs	Inns & Others	Machiyas	Office Bldgs	Inns & Others
Fire proof	Masonry	0	0	0	4	2	0
	Plaster	2	2	0	3	0	0
Timber	Western Style	6	2	0	6	11	2
	Others	36	7	20	47	2	5
Total		44	11	20	60	15	7
		75			82		
Abjacent Storages	Masonry	8	1	1	24	1	0
	Plaster	19	2	1	15	0	0

for the purpose of bank and office in 1893 showed a certain mode of western style. In Sapporo the western influence seemed to be more explicit among the office biuldings rather than the general *machiya*-houses (Fig. 4).

3. Timber-masonry Buildings in Otaru[11]

Otaru is a trading port near the capital Sapporo, that rapidly developed since a railway was laid in 1880 there to Sapporo, and in 1882 extended to Horonai coal mines. The

townscape of Otaru is noticeable because of numbers of stone masonry buildings, as a survey in 1978 reporting there ramain more than 450 masonry buildings for various uses, large commercial storages, small household storages, stores, and offices[12]. Our investigations on remaining buildings in 1975 and 1976[13] made it clear that those of masonry in appearance are actually in general constructed with inner timber frames and faced with, not thin but, about fifteen centimeters thick blocks of stone, or tuff thought to be supplied from quarries near Sapporo and Otaru. This construction is never indigenous to Japan, but is derived from western buildings. That is apparent from the fact that the roof frames were usually constructed with king-post truss.

We could not find any masonry building clearly documented until about 1880, although some published histories of Otaru refer a few masonry storages built in earlier times[14]. In a *Kaitakushi's* investigation in 1880 about all buildings along the streets to be improved in Otaru, there was no masonry building documented[15]. They would begin to appear around 1884 when a land reclassification into a quarry at Okusawa in the outskirt of Otaru was permitted, and then become rather popular since 1887, as seen afterward.

But before continueing our story on Otaru, we must go back to Sapporo, where some earlier masonry buildings were built.

It is well known that Headquarters of the *Kaitakushi* in 1873 was originally intended to be built in masonry as advised by H. Capron, the chief advisor to the *Kaitakushi*, and it would be actually, as Dr. Endo conjectures, of timber-masonry construction[16]. Anyway this intended design was impossible to be carried out, because at that time they failed to find an adequate quarry near Sapporo. It was in 1879 when the *Kaitakushi* for the first time completed a small masonry storage building adjacent to Headquarters. Previously, in 1877, Torazo Suibara, a building contractor, built his own house, which was a timber two-storied structure designed in western style and thereby awarded by the *Kaitakushi*, together with an attached storage of masonry — perhaps of timber-masonry, as conjectured from the amount of used tuff and timber. In the engravings in 1887 (*Hanei Zuroku*), 10 stores having masonry storages, though no *machiya*-house, were found, and Imai Store opened in 1888 was thought to be a timber-masonry structure according to pictures that remain.

The supply of tuff from the quarry at Ananosawa near Sapporo, that had been experimentally opened in 1875, was about 27,000 blocks in 1880, and production doubled the following year. Correspondingly, in the same years, the price decreased from .172 *yen* per block to .122. It went on and became stable to be .07 *yen* to .09 around in 1885 and 1886.

In Otaru again, former Suminoye Store of drugs, c.1887, was referred to as being "the first masonry house in Otaru," in a biography of carpenter-builder Katsumasa Shimizu in *Otaru Risshi Hyakusen* (Hundred Self-made Men in Otaru) in 1903. The store remains today, however largely altered. The lost frontage could be reconstructed from an engraving in *Otaru-ko Jitchi Meisai-zu*, an illustrated map, in 1893, and some photographs. It was a two-storied *machiya*-store, constructed with inner timber frame and outer facing of tuff blocks, but the front part of masonry wall was plastered to result in an appearance resem-

bling the traditional plaster type *machiya*, although there are found some western manners such as segmentally arched windows at the front, Tuscan-like posts in the store, and king-post trusses of roof (Fig. 5).

Several documents describe that masonry structures in Otaru fast became to be built after Suminoye Store. *Otaru Shiryo*, historical documents of Otaru, contains news in July, the follwing month after the fire in 1887, saying "masonry stores of Yamada, Enoki, Horii and Suhara are now under construction," and another in December, 1892, "248 masonry buildings exist in present day Otaru." Also we know that some of the large commercial storages of timber-masonry structure along the wharf were erected immediately after the completion of the reclamation of land at the wharf in 1889[17].

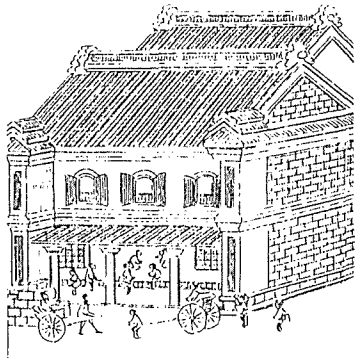

Fig. 5 Former Suminoye Store, c. 1887, Otaru, from *Otaru-ko Jitchi Meisai-zu*, 1893.

General situation of buildings in those years could be seen in the engravings from *Shiribeshi-koku Seigyo Zuroku*, an illustrated directory, in 1889 and *Otaru-ko Jitchi Meisai-zu* in 1893 (Table 3). In the former, 19 of 49 stores had adjacent masonry storages, but only 2 *machiya*-stores were of masonry, while in the latter, 63 of 99 stores had adjacent masonry

Table 3 Types and Styles of *Machiya* and Other Buildings in Otaru, from *Shiribeshi-koku Seigyo Zuroku* in 1889 and *Otaru-ko Jitchi Meisai-zu* in 1893.

Types & Styles		Seigyo Zuroku, 1889			Meisai-zu, 1893		
		Machiyas	Office Bldgs	Inns & Others	Machiyas	Office Bldgs	Inns & Others
Fire proof	Masonry	2	0	0	16	1	0
	Plaster	1	0	0	3	0	0
Timber		46	3	20	81	6	7
Total		49	3	20	100	7	7
		72			114		
Adjacent Storages	Masonry	19	1	3	63	4	2
	Plaster	21	0	1	37	0	3

storages, and 16 of 100 stores themselves were of masonry. Four stores above referred in the news in 1887 are also seen in the engravings. Enoki Store was designed in the most western-like style, however generally saying, the masonry stores in the illustrations showed nothing but the Japanese traditional manner resembling the plaster type *machiya*.

Among the remaining timber-masonry buildings, Iwanaga Jewelry Store from 1896 and former Sasaki Firearm Store from 1899 show certain designs in western style such as a

balcony, corniced eaves with brackets and panels, fluted pilasters, dormer windows, fanlight openings etc (Fig. 6). Those designs might represent their trading items, watches and firearms, that were not indigenous but came from the West. The former Hayakawa Branch Store from 1905 and Natori Store from 1906 built after the downtown fire in 1904, however have the least of the western style designs but the appearance closely resembles the traditional plaster type *machiya*.

Interestingly, in Otaru the timber-masonry construction was applied not only for the *machiya*-stores and storages, but for buildings of a new type, that is, office buildings of moderate size. Former office of Otaru Shinbun-sha (Newspaper Company), now reconstructed in the Hokkaido Kaitaku-no-mura (Historical Village), Sapporo, was completed in 1909. It is a rather simple block-like building of three-stories. The wall is made of about fifteen centimeters thick tuff blocks, but the actually load-bearing structure of wall as well as of roof and floors is the inner timber frame. Pilasters articulate the facade into four bays, the second of which is for a portal with Doric orders on pedestals and entablature, and stressed by a top gable piece ornamentation. The rest of the openings are wholly simple flat-arched windows with iron-sheet shutters for fire protection (Fig. 7). The architect is unknown, but only the name of a master carpenter, who, we think, would have designed this office building, perhaps stimulated by some much more authentic works of architecture realized at the time, for example, Branch Office of Nippon Yusen, 1906, by architect Shichijiro Satake[18].

Among the remaining buildings of the same type are former Dai Hyaku-ju-san Bank from 1908, Shimizu Company from 1912, former Josei Wholesale Store from 1921, and so on.

In Otaru, there appeared a few buildings of timber frame and brick or concrete facing other than stone masonry. Former Suzuki House from c. 1896, is a two-storied, timber-brick structure, and former Kyosei Company from 1912 is another example, but larger in size and more sophisticated in design. Sato Store from 1927 and former Kobori Company from 1932 resemble in appearance the traditional plaster type *machiya*, but their structure is timber

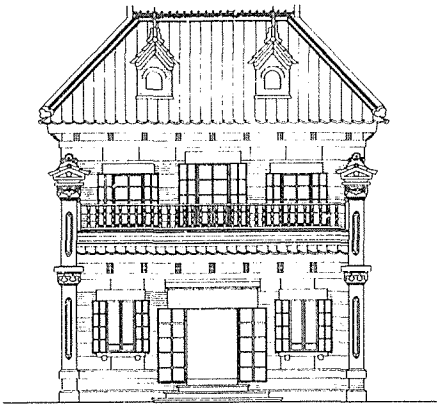

Fig. 6 Former Sasaki Firearm Store, 1899, Otaru, front elevation.

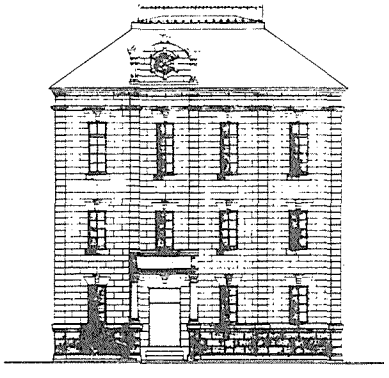

Fig. 7 Former Otaru Shinbun-sha, 1909, Otaru, moved to Hokkaido Historical Village, Sapporo, front elevation.

frame and thin concrete facing , which must have later become to substitute for the tuff masonry.

4. Coastal Region along the Sea of Japan

Local governmental and public buildings, particularly elementary schools, generally played an important role in the earliest diffusion of the western style architecture out of the principal centers. We have some documents including pictures as to several elementary schools designed in western style in the coastal region : five in Shiribeshi district—Ryotoku School in Otaru, built in 1878, Sawamachi School in Yoichi, 1879, Hamanaka School in Furubira, 1880, Kodomari School in Bikuni (Shakotan), 1881, and Obonai School in Iwanai, 1880 —, and one in Hiyama district—Kashiwagi School in Esashi, 1878.

Four schools in Shiribeshi except in Bikuni showed a similar appearance, impressive with an octagonally projected central wing. They were common also in details such as segmental arches, bracketed eaves and others at the central wing, and Kodomari School was also common in details of the general walls and openings. We think, therefore, these schools were designed by the *Kaitakushi*, althouh they were excluded from the official documents of its building enterprise, because their buildings were immediately financed by inhabitants' donations. However, the *Kaitakushi's* role would have been actually restricted only in basic design, as admitting certain contributions of local carpenters and as a result rather naive expressions different from the other officially carried-out works including elementary schools in Sapporo. Situations were the same also in Kashiwagi School in Esashi, which was designed by the Hakodate Branch of the *Kaitakushi*.

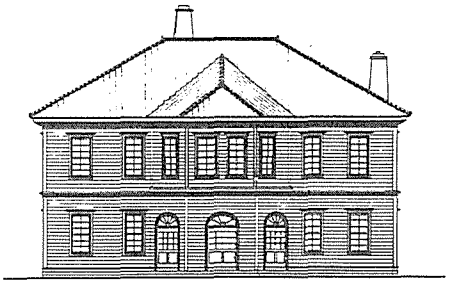

Fig. 8 Hiyama-*gun* Office, 1877, Esashi, front elevation.

In 1880, nineteen offices of *gun* (sub-prefecture, or county) governments[19] were established, but the only remaining building is Hiyama-*gun* Office built in 1887 in Esashi (Fig. 8). It is a two-storied timber building, of which the upperfloor was for governmental office, while the groundfloor was for a police station. The center of the front is octagonally projected in porch wing with, although now altered, arched doorways. The eaves have a cornice composed only of horizontal mouldings, that is common in Kashiwagi School and the lost Esashi Local Courthouse built in 1889.

Iwanai-*gun* Office from 1893, of which nothing but several pictures and engravings remain, was also a two-storied timber building attached to a police station, and occupied a commanding position in a kind of the public quarter consisting of an elementary school (Obonai School above referred), an hospital, a telegram office and official residences.

In the coastal region the herring fishery had been so flourishing until the early

twentieth century that there were built numbers of fisherman houses, often very large in size. They generally accorded with the traditional building style, but occasionally took certain western manners in. Our investigation in 1970～73[20] observed something of the western building manners in 16 of 71 remaining fisherman houses, although they were generally restricted in, for example, double-hung or casement glazed windows as observed in 12 houses, eaves cornice of horizontal mouldings in 7, trussed roof frames in 3, and so on. Other than these partial influences, a western style appearance was anyway realized in the followings : Sato House at Utasutsu, Suttsu, c.1891 (Fig. 9), Kimura House at Gokibiru, Hamamasu, c.1900, and Kona House at Yagishiri Island, Haboro, 1900.

Sato House has a front with the upper western, segmental arched windows in row and the lower indigenous, latticed openings like the some contemporary *machiya*-houses observed in Hakodate. At the ridge of the hipped roof, a hexagonal lantern is placed illuminating the central room, the space of which is as impressively stressed in vertical direction as seldom seen in Japanese traditional architecture. In Kimura House a guestroom is designed in western style with plaster work of ceiling medallion, tiled floor, and a baywindow which is, in outside too, a principal element of the appearance. Kona House, like the Sato House, has an upper front in western style, and designed to contain postage and telegram offices in the

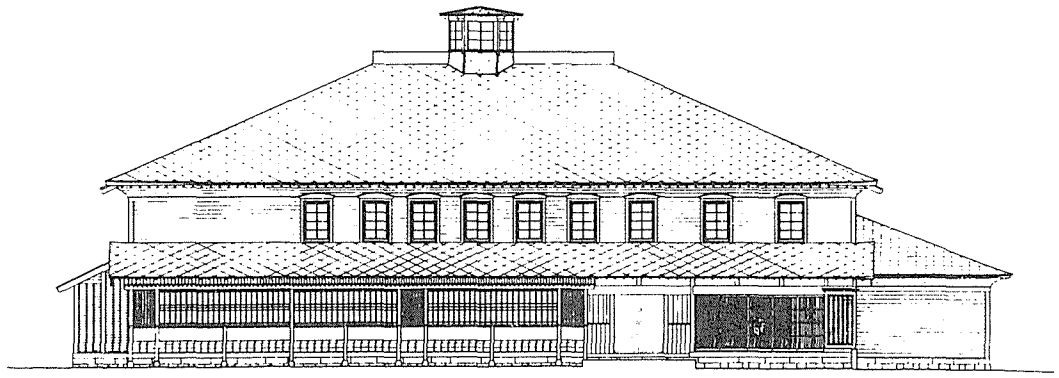

Fig. 9 Sato House, c.1891, Utasutsu, Suttsu, front elevation.

house.

As to the coastal region too, there were published several illustrated directories in a series : *Hokkai Risshi-hen* (Self-made men in the Northern Sea) for Hiyama district, 1894, another *Hokkai Risshi-hen* for west Shiribeshi, 1893, *Shiribeshi-koku Seigyo Zuroku* for east Shiribeshi, 1889, including Otaru as already referred, and again another *Hokkai Risshi-hen* for Soya, 1897. We could observe 168 fisherman houses drawn in the engravings from those publications, and recognize in about 38 of them certain western elements in appearance, which are almost simply glazed, upright rectangular windows, but rarely balconies, porches and others to express the western style more explicitly (Table 4).

In any event noteworthy are regional differences in numbers of cases having the

western elements : rarity in Hiyama and east Shiribeshi districts, while relative abundance in west Shiribeshi and Soya. In the southern coast, Hiyama, the most prosperity of herring fishery had already passed away in the age when the western style architecture worked its influence. In the northernmost coast, Soya, as conjectured from our investigation of the remaining houses, fishermen tended to build rather utilitarian houses temporarily used only for the fishing season, and there the elements to be recognaized as western are virtually nil except for small glazed openings.

Whereas, we could not easily explain why such a sharp contrast was made between two halves of Shiribeshi district, that is, east and west sides of Shakotan Peninsula ; no one out of 47 in the east while 23 of 54 in the west. The remaining houses show a similar tendency that there is no one out of 14 that had a western style design in appearance in the east, while there are 4 out of 12 in the west. There was no difference between both districts as to influencing sources, Otaru to the east and Iwanai to the west[21]. We could observe

Table 4 Fisherman Houses along the coast of the Sea of Japan. Numbers in brackets show the houses with any western element. From *Hokkai Rissihens* for Hiyama in 1894, for west Shiribeshi in 1893, and for Soya in 1897, and *Shiribeshi-koku Seigyo Zuroku* for east Shiribeshi in 1889.

	Engravings						
	Before Meiji e.	1868 ~76	1877 ~86	1887 ~	Unknown	Total	Remaining (1970~72)
Hiyama	2(0)	1(0)	7(0)	3(1)	13(0)	26(1)	7(0)
West Shiribeshi	5(0)	2(1 ?)	16(11)	10(7)	21(4)	54(23)	12(4)
East Shiribeshi	—	—	—	—	47(0)	47(0)	14(0) *
Ishikari	—	—	—	—	—	—	9(4)
Rumoi	—	—	—	—	—	—	20(5)
Soya	—	—	3(0)	21(10)	17(4)	41(14)	9(2)
Total	7(0)	3(1 ?)	26(11)	34(17)	98(8)	168(38)	71(16)

* Former Saito House at Yobetsu in east Shiribeshi has a western style interior staircase, but its exterior is utterly Japanese style.

there even the certain informative circulations as above discussed in the elementary schools designed in similarly western style. One of the reasons is perhaps because a matured type of fisherman houses characteristic in the large scale herring fishery came into being earlier in east Shiribeshi district.

Of 23 houses in west Shiribeshi, although only a few had the appearance wholly designed in somewhat western style, 12 were the cases simply having one or several glazed, rectangu-

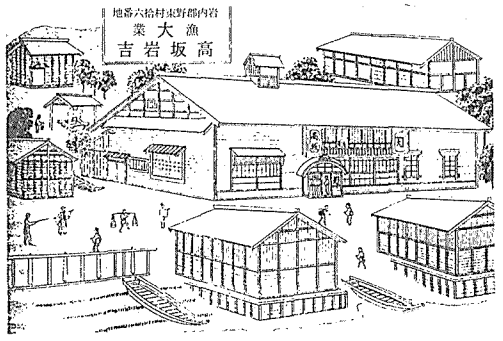

Fig. 10 Kohsaka House, 1891, Iwanai, from *Hokkai Risshihen,* 1893.

lar windows but explicitly intended to express the western manner, as typically shown in Kohsaka House built in 1891 (Fig. 10). A similar case in the remains is former Tanaka House, built in 1893 in Tomari, west Shiribeshi, and now moved to Otaru, that is an imposing building of Japanese traditional style but having at its front three glazed rectangular windows. It is remarkable that the western influence was very early in this district as shown in Ishibashi House, built 1880, resembling Kohsaka House.

5. Conclusion

The western style architecture in Hakodate and Sapporo, two principal centers or sources from which it spread in Hokkaido, had each certain characteristics : the former kept the architectural quality, primitive but scrupulous carpentry, since the beginning until as late as 1910s, while the latter tended toward rather simple and plain. Hakodate was in advance of Sapporo also in its diffusion among the ordinary town buildings. There developed an interesting type of timber *machiya*-houses with an appearance combining upper western and lower indigenous styles, and there also a type of fire proof of brick masonry and faced with plaster expressing somewhat a western fashion. In Otaru, another type of fire proof buildings appeared, that is of stone (tuff) masonry, but actually constructed with inner load-bearing timber frames. This timber-masonry construction, apparently originated in western architecture, fast spread there, supposedly because it had certain common manner with the indigenous plaster, or godown type of building. In the coastal region we could observe its diffusion from the principal centers to sub centers, from public buildings to ordinary houses, in this region, of fishermen. Notable is that in Iwanai and its vicinities, west Shiribeshi, there appeared many fisherman houses with western elements such as windows since as early as 1880, whereas almost none in east Shiribeshi.

Notes

1) Koshino, *Kaika-no Katachi* (Forms of Enlightment), first of ten volumes, *West Meets East : The Japanese Introduction to Western Architecture in 19th and 20th Centuries,* Tokyo : Sanseido, 1979.
2) Designated N. I. C. P. (National Important Cultural Properties). *Report on the Restoration of Former Hakodate Kokaido* (Public Hall), 1983, Hakodate.
3) The colors of bluish grey and yellow were repainted after the remaining original painting at the restoration in 1980~82.
4) For the more details of town buildings in Hakodate, refer to Koshino and others' *Main Streets and their Buildings in Hadodate in the Middle Meiji Era (after the Fires in 1878 and 1879),* Transaction of AIJ., No. 360, Feb., 1986.
5) Former Tsuneno Store today remains, but much altered.
6) Former Military Hall and barns of Sapporo Agricultural College are designated N. I. C. P. Koshino, *Architecture of Sapporo Agricultural College,* Centennial History of Hokkaido University, 1982, Sapporo, etc.
7) Designated N. I. C. P. *Report on the Restoration of Hoheikan,* 1986, Sapporo, and Koshino and others, *Investigation for the Restoration of Hoheikan,* 1980, Sapporo, etc.
8) Yoshiyuki Adachi (1827~1884) is well known to have designed Hoheikan and others as a chief of the

building section of the *Kaitakushi*. Althouth he was a carpenter born in Yedo before employed in the *Kaitakushi* in 1871, it might be allowed to use a term *architect* or, say, *carpenter-architect*, for such a building engineer as Adachi, particularly in the age of the early western style architecture in Japan.

9) Koshino and others, *Investigation of the Company Headquarters of the Tondenhei, in Shin-Kotoni*, 1968, Sapporo, and *in Nopporo*, 1979, Ebetsu, etc.

10) Koshino and others, *Remaining Houses of Sapporo Agricultural College in 1884 and 1885*, Hoppo Bunka Kenkyu, Hokkaido Univ., 1968.

11) *Half-timber* should be a usual term for the conglomerate construction of timber and masonry, especially masonry infilling between the wall frames. But this *timber-masonry* is a little different, as consiting of inner load-bearing timber frame and, not thin cladding but, thick masonry wall facing.

12) Kanko Shigen Hogo Zaidan, *Otaru Unga to Sekizo Soko-gun* (Otaru Canal and Masonry Storages), 1879.

13) Koshino and others, *Remaining Buildings of Timber-Masonry in Otaru*, Transaction of Hokkaido Branch of AIJ., No. 47, 1977, etc.

14) *Otaru Shi-shi* (Municipal History of Otaru) and *Otaru Bunka-shi* (Cultural History of Otaru) record masonry storages built by Kigoro Saito, Noshima Hardware Store, Yasaburo Fujino etc. in early Meiji Era.

15) For example, Noshima Hardware Store, referred to in *Otaru Shi-shi*, had only a plaster type storage, but not a masonry one.

16) Akihisa Endo, *Kaitakushi Eizen Jigyo no Kenkyu* (Study on Building Enterprise of the Kaitakushi), 1961.

17) A part of former Otaru Soko, lost Okada Soko, etc. completed around 1888～89.

18) Designated N. I. C. P.

19) 89 *guns* (counties) were established in 1879, but actually divided into 19 joint offices.

20) Koshino and others, *Kenzobutsu Kinkyu Hozon Chosa Hokokusho* (Report on Urgent Investigation for the Conservation of Buildings), 1972, etc.

21) As a coal mine at Kayanuma near Iwanai was opened as early as in 1867, Iwanai port was important enough to receive considerable western influence.