1. Introduction

When a "World’s Fair" (referred to below as the “Vienna World Exposition” ウイーン万国博覧会) was to be held in 1873 in Vienna, Austria, in the center of Eastern Europe, the Japanese government participated on a nationwide basis. The aim was to present Japan as a unified nation state to the outside world, promote the "industrial promotion policy" (殖産興業政策) which was a slogan of the government at the time, to get a clear picture of the state of advanced European industry and its manufacturing products, and to learn and implement the techniques and technologies to modernize the country. Alexander von Siebold, who was in Japanese government employ at the time, was involved with the Exposition as an assistant to Tsunetami Sano,佐野常民 who was vice-president of the Japanese administrative staff for the Exposition. Also, von Siebold’s younger brother Heinrich played a role. Heinrich was a temporary trainee interpreter at the Austro-Hungarian embassy in Japan, and he was appointed as a liaison officer for the Japanese government with the Exposition’s administration.

Thus, the Japanese government originally decided to participate in the Vienna World Exposition ウイーン万国博覧会 with the major national purpose of furthering the promotion of industry 殖産興業 in Japan; however, with the involvement of the Siebold brothers, another task emerged – that of introducing Japan to Europe. In tracing the circumstances by which the Meiji government ended up participating in the Vienna World Exposition ウイーン万国博覧会, and furthermore in following how technical training and deployment was subsequently undertaken, let us here draw mainly on "Okoku Hakurannkai Sandou Kiyou" 紹介に関する会議手記 (edit. Yoshio Tanaka & Narinobu Hirayama, 田中芳男・平山成信 1897, which constitutes a detailed report on the Vienna World Exposition, ウイーン万国博覧会. Aside from this, let us also examine what perceptions of Japan’s traditional culture and technology arose, both in Japan and abroad, as occasioned by this train of events.
2. The Circumstances of Japan’s Participation in the Vienna World Exposition

These events started at a meeting at the Ministry of Foreign Affairs in March 1871, when Heinrich Ritter von Calice, the Austro-Hungarian ambassador to Japan, proposed to Nobuyoshi Sawa, Japan's Minister of Foreign Affairs 外務卿沢宣嘉, that Japan should furnish exhibits for an exposition to be held in Vienna in 1873 to commemorate the 25th anniversary of the accession of Emperor Franz Joseph I. The Japanese government eventually decided to take part in the Exposition at the end of the year, and discussions were held on what kind of exhibits should be sent. The government's plan to join the Vienna World Exposition ウイーン万国博覧会 became a matter of broad public knowledge in January 1872, when the Grand Council of State made a proclamation on the subject. 1)

We can see from the proclamation that the general aim was to scour Japan widely for outstanding products and articles, and to promote overseas trade for the national interest by exhibiting them abroad. In May, Tsunetami Sano, who was Kobu-taijo 工部大丞佐野常民 (the Senior Secretary of the Ministry of Engineering), became a third-class officer at the Ministry and became responsible for administering the Exposition. He was also appointed as an Investigator. Thus, involved with the Vienna World Exposition ウイーン万国博覧会, Sano submitted a "Memorandum on Exhibits for the Austrian Exposition" 「澳国博覧会出品に関する伺書」 to the Central Council 正院 in June, laying out the objectives for joining the Exposition as follows: Firstly, raising overseas interest in Japan by exhibiting the country’s natural and man-made products abroad. Secondly, undertaking survey research on the state of European industry, and acquiring education and training on each of the specialized areas involved. Thirdly, building an exposition site in Japan as well, and holding such events at home in the future. Fourthly, acknowledging how Japanese products were evaluated overseas, and considering ways to increase exports. Finally, researching the cost price of well-known goods and articles from a wide range of countries, and gather data to promote overseas trade. From the Memorandum, we can see that the idea of joining the Exposition as an extension of a policy to survey the situation abroad and to adopt and utilize what was found to be advantageous. Also, to realize the second aim, on-site specialized overseas training was recommended for each technician in each field.

On the basis of Sano’s proposals, the Central Council 正院 decided in September to send technical workers with the delegation. In October, Councilor Okuma 大隈参議 was appointed as the president of administration for
the Exposition, with Investigator Sano as vice-president. Nobuakira Yamataka 山高信離, along with other staff of the Ministry of Finance 大蔵省, was appointed as the secretary for the team. Tsunetami Sano 佐野常民, who was to travel to Austria as vice-president of the delegation, was from the domain of Saga. In 1848, he began attending the Tekijuku 逓築 academy in Osaka, run by Koan Ogata 緒方洪庵. After his studies there, he learned scientific subjects such as Physics and Chemistry from Genboku Ito 伊東玄朴 in Edo. He led a delegation of domain samurai from Saga to the Paris Exposition of 1867 パリ万国博覧会, and after the event had finished, he made an inspection tour of navy and industry in the Netherlands and Britain, returning to Japan in 1868. After his return, he introduced reforms to his domain's military organization, but he then began working for the national Meiji government in 1870. Nobuakira Yamataka 山高信離, the Exposition team's secretary, was a native of Hamamatsu domain 浜松藩. In 1865, he was chosen as a member of the first student intake at Yokohama French Academy 横浜仏蘭西語学所, and he sailed to France for the Paris Exposition with the official rank of Sakuji-bugyo 作事奉行格 (Commissioner for Buildings). After the Exposition, he continued his stay in France as a foreign student, but after the restoration of Imperial rule he was recalled by the Meiji government. He then, too, gave his services to the new regime. We can see from the careers of both Sano and Yamataka that these administrators had studied Western languages and culture during the closing years of the Tokugawa Shogunate, and furthermore that they had both gained direct experience of Western civilization in Paris, London and other locations.

While delegates of this caliber were being chosen, search was launched for products and articles to be exhibited at the Exposition. In this process, it is worth noting the views of the foreign contract workers who had been hired by the Japanese government and who formed part of the Japanese delegation to the Vienna World Exposition ヴイーン万国博覧会. Alexander von Siebold (who was working for the Central Council at the time) was of the opinion that in order to raise interest toward Japan in Europe, Japan needed to send very large-scale exhibits to the Exposition. The outcome was that objects of a grand size were chosen for the Exposition; these included the golden dolphins from Nagoya Castle, 名古屋城の金鯱 a life-size replica of the Great Buddha of Kamakura 鎌倉大仏, and a model of the pagoda of the Yanaka-Tennoji temple 谷中天王寺五重塔 in Tokyo. Neither should we overlook the opinions of Gottfried Wagener, another of the foreign contract workers. Wagener was a native of Hanover, Germany. After earning a doctorate at the University of Göttingen, he moved to Japan for employment as a soap-works technician in Nagasaki, arriving in 1868. He also was a technical advisor in the production of pottery at Hizen Arita. 肥前有田 After the abolition of the feudal domains and their replacement by local-government prefectures, Wagener left for Tokyo, where he got a teaching post at the Daigaku-Nanko academy 大学南校, lecturing in fields such as Physics and Chemistry. He was involved with the Vienna World Exposition ヴイーン万国博覧会 as a technical advisor for sourcing articles for exhibit. Wagener, too, was of the opinion that the better course would be to present traditional craft goods rather than products of technologies as yet still immature in Japan, and he put a great deal of effort into sourcing handicraft goods in Kyoto and other locations. We can see that both von Siebold and Wagener aimed to raise awareness of Japan worldwide by exhibiting traditional Japanese objects.

3. Scenes from the Vienna World Exposition

The objects chosen for display at the Exposition were loaded onto a ship of the French mail Company, along with most of the administrative staff, technicians and other delegation members. Departing Yokohama in January 1873, they docked at Trieste after a voyage of fifty days. From there, they traveled to Vienna by rail. The entire party for the Exposition consisted of seventy-two members. Akekiyo Sekizawa, 関沢清明 one of the event administrators, had been sent on ahead to make arrangements for receiving the party and the transported objects. He also contacted the local press with articles and a list of the Japanese exhibits for advertisement.

From Sekizawa's material, we can see that traditional Japanese craft goods such as lacquerware, pottery, and
copperware had been chosen on the basis of the recommendations made by Siebold, Wagener and other organizers. After all the preparations, a splendid opening ceremony for the Vienna World Exposition was finally held on May 1 in Vienna’s Der Wiener Prater park, before a crowd of tens of thousands and with the Emperor Franz Joseph in attendance. The countries taking part included Japan, Germany, France, Britain, Portugal, Italy, Belgium, the United States, China, Turkey, and Persia; there were over twenty countries altogether. On May 5, the Emperor and Empress, with a retinue of nobles and notables, visited the Japanese garden which had been constructed at the Japanese pavilion, crossing the newly constructed garden bridge.

On June 3, the Tomomi Iwakura Mission, which was traveling across America and Europe to negotiate the revision of treaty – arrived in Vienna, and the Mission visited the Exposition. Kunitake Kume, who was charged with making the official record of the Mission’s doings, wrote a special report on the scene of the Vienna World Exposition, titled “Ui-n Banaku huakurankai Kenbunnoki” in his general record of the Tomomi Iwakura Mission, “Tokumeizenkentai Beikoukairan jikki.” Kume reports that among the various exhibits, the pottery, lacquerware, cloisonné ware, inlay works, straw crafts, and dyed leatherwork had been especially well received. In particular, the folding fans that the Japanese put on sale had flown off the shelves, leading to local Viennese manufacturers producing their own; these locally produced versions had also proved an instant hit. Indeed, Japanese products did very well at the Exposition, winning an honor certificate and a total of 218 awards. Total sales of samples while the Exposition was in progress reached 83,200 Austrian gulden. After 186 days, the Vienna World Exposition drew to a close on November 2.

In regard to the other objective of joining the Exposition – technological training and transfer – Sano decided to select just a few of the delegation for it. To cover their expenses, 6,000 yen was allowed to be drawn down from the proceeds of sales at the Exposition, and the project thus went ahead as planned, with government funding. Sano and Wagener visited each areas of Europe to observe the trainees’ progress, met with their instructors, and made requests for tuition.

4. On-Site Technical Training of the Participants and their Activities Post-Return

Having finished all of his administrative work for the Exposition, Sano arrived back in Yokohama in December 1874. In January of the following year, he presented a “Report” to the government, and followed this up by having it printed and widely circulated to the public. So here, let us look at what kind of training the technicians were given in various parts of Europe after the Exposition, what they did after their return home, and how they contributed to the advancement of Japanese manufacturing and technology.

Naganobu Sasaki, who reported on sericulture, was from the domain of Fukui. He had been dispatched to America in 1867 as a buyer for military supplies. After his return, he worked as an importer of weapons and books. He subsequently found work with the Meiji government, taking on the technical post of Kankouryo of the Ministry of Engineering. After the Exposition, he went to a sericulture laboratory in the town of Görz in Austria, where he studied sericulture and the care of silkworms. After returning to Japan in 1874, he joined the Naito Shinjuku Experimental Laboratory of the Ministry of Home Affairs, where (among other achievements) he detected pébrine ("pepper disease"; a disease of silkworms) first in Japan under the microscope. In 1877, he set up a spinning facility for waste thread at Shinmachi, Midono County, Gunma Prefecture; the facility was managed by the Ministry of Home Affairs.

Kaijiro Noutomi, who reported on ceramics, came from the domain of Ogi. In 1862, he went to Shanghai. Attending the Vienna World Exposition as an inspector of ceramic
illustrations and composition, he went to a porcelain manufacturing plant in Elbogen, Bohemia, where he studied the production of plaster models; he did so in the company of Chujiro Kawahara, who reported on porcelain manufacturing. Noutomi also toured the ceramics manufacturing center of Sèvres in France before returning to Japan. After coming back, he took up the inspector's post of Kangyoryo of the Ministry of Home Affairs, where he advocated the adoption of Western methods of ceramic production. In 1877, along with Makoto Shioda, he set up the Edogawa Ceramics Manufacturing Plant in Shinogawamachi. There, he worked as a technical specialist, with Chujiro Kawahara as the factory head.

Other specialists, such as Sen Tsuda and Seisuke Tanaka, were active in their respective fields after they returned to Japan. We can discern the following from these reporters' subsequent careers and activities: Firstly, technicians such as Naganobu Sasaki and Sen Tsuda had already had experience of the West. Looking at their achievements, we can say that they combined the Western studies they had engaged in during the closing years of the Tokugawa Shogunate with the concerted introduction of modern scientific technology, and that they proactively built on their experience to open up research in new fields. Secondly, specialists such as Kaijiro Noutomi and Seisuke Tanaka, who undertook survey research on European manufacturing and introduced new technologies in Japan, went on to found new business in this area. Here we see the transfer of expertise and enterprise from government to the private sector, and we can understand this as an important development with the sell-off of government-managed factories when considering the flow of technological training and innovation in early Meiji-period Japan.

Now let us turn to participants of the Vienna World Exposition other than the reporters discussed above. While visiting Europe, Tsunetami Sano – the vice-president of the delegation established the Hakuai-sha (precursor to the Japanese Red Cross Society) in 1877 with the Red Cross which he had inspected while visiting Europe as a model. Nobuakira Yamataka, who attended the Vienna World Exposition as a member of administration, subsequently worked on the administrative teams for the Philadelphia Exposition (1876), the Paris Exposition (1878), and the Sydney Exposition (1879), while also contributing to the running of the first and second Naikokukangyohakurankai (national industrial expositions). The foreign contract worker Gottfried Wagener, who was also on the team that went to the Vienna World Exposition, ran stalls at the Vienna World Exposition. At Sano's suggestion, he set up a trading company in Vienna called the Kiryu Kosho Kaisya, and also secured special contracts with the British Alexander Park Company and the Viennese merchant Carl Trau for the export of ceramics, copperware, silk, cotton, lacquerware, leather, fans, and paper products, among other articles. During the eighteen years until the company was dissolved, the firm exhibited at eleven world expositions, and contributed to the promotion of Japanese exports by opening a branch in New York in 1877, and another in Paris the following year. We should note that the such trading company for the export of Japanese handicraft goods was established occasioned by the Vienna World Exposition.
5. Conclusion

As we have seen above, Japan's participation in the 1873 Vienna World Exposition triggered major advances in the promotion of the country's industrialization. Through technical trainees who had participated in the World Exposition and received technical training, Western modern research and technology was implemented in various fields. Secondly, we also need to pay attention to the role played by the foreign contract workers involved with the Vienna World Exposition. Alexander von Siebold leveraged his participation in the Exposition to pass on Japanese exhibits to institutions such as the Oriental Museum of Vienna, the Austrian Kunsthistorisches Museum, and the Technisches Museum Wien, along with the Leipzig Museum of Ethnology in Germany, where they formed an important component of these institutes' collections of traditional Japanese handicraft goods and ethnological materials. Gottfried Wagener also went on to play an important role in the introduction of modern Western civilization into Japan, and the promotion of the country's industrial growth. He was an advisor for both the Philadelphia Exposition and the Naikokukangyohakurankai (national industrial expositions) in Japan, and was involved in the establishment of Tokyo Shokko Gakko (Tokyo Institute of Technology) in 1881.

Another point that deserves attention here is the way in which the Vienna World Exposition occasioned the creation of the Kiryu Kosho Kaisya 起立工業会社 as a firm specializing in the export of traditional Japanese handicraft goods. Through its export of traditional Japanese handicraft goods, this company made a major contribution to the development of the international trading sector in Japan. And this was not the firm's only achievement. It also developed the talents of staff members who subsequently worked overseas, such as the art dealer Tadamasa Hayashi.

Thus, we can conclude that Japan's participation in the Vienna World Exposition was highly significant in two aspects. One was the development of modernized industries in Japan. The other, as presented in the activities of actors such as the Siebold brothers and the Kiryu Kosho Kaisya 起立工業会社, was the development of the traditional Japanese craft industries.

Notes
1) “Okoku Hakurankai Sandokiyo” (Brief on Participation in the Austrian Exposition), 'Yoshio Tanaka & Narinobu Hirayama (eds.), Johen P. 9–P. 10, Tokyo Insatsu, 1897
2) “Okuma Monjyo” (Document of Okuma) Kancho kankei Monjyo (5) hakurankai kyousinkaiibu (Government office-affiliated document) (5) part of Exposition, Fair
3) “Okoku Hakurankai Sandokiyo” (Brief on Participation in the Austrian Exposition), 'Yoshio Tanaka & Narinobu Hirayama (eds.), Johen P. 16, Tokyo Insatsu, 1897
4) Mitukuni Yosida “Oyatoi-gaikokujin Sangyou” (Foreign employee Industry) P77, kajimasyupankai 1968
5) “Okoku Hakurankai Sandokiyo” (Brief on Participation in the Austrian Exposition), 'Yoshio Tanaka & Narinobu Hirayama (eds.), Johen P. 40, Tokyo Insatsu, 1897
7) “Okoku Hakurankai Sandokiyo” (Brief on Participation in the Austrian Exposition), 'Yoshio Tanaka & Narinobu Hirayama (eds.), Gehen P. 188–P.195, Tokyo Insatsu, 1897
9) Akio Haino “Kinsei no Makie” (Lacquer work in Earlymodern) P.17, Tyuokoronsya 1994

* Person explanation of this article depend on “Okoku Hakurankai Sandokiyo” (Brief on Paticipation in the Austrian Exposition) Yoshio Tanaka & Narinobu Hirayama (eds.), “Meijiin kinmeijiten” (Meiji Restoration person's name encyclopedia) “Umiokotai Nihon kinmeijiten” (Japanese person's name encyclopedia beyond the sea) nitigai asosie-tu 1985, “Nihonkinndai Sisotaikei 14 kagaku to gijyutu” (Japanese modern through outline No14 Science and technique) iwanamisyoten 1989
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