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The development of new architectural styles, infrastructure and construction materials in the Meiji period (1868-1912 CE), is tied to the creation of a modern Japanese identity. Despite recent developments toward preserving important historic property in Japan, many lesser known historical and vernacular sites continue to be ignored and have been ruined over time. An academic study of historic preservation is rare in Japan and in geography. The main purpose of this research is to clarify the role of historic preservation and to identify it with the rise of Japanese nationalism, economic development, and construction of the built environment during the pivotal Meiji period. The natural setting and history of Japan was examined and strategic plans for potential improvement in the field of Japanese historic preservation in the future are illustrated using case studies of the preservation projects of the Ise Jingu, Horyu-ji, the Tomioka Silk Mill, the Tokyo Station, and the Meiji Mura.

Keywords: Built environment, cultural landscape, historic preservation, Meiji-Japan, national identity

GEOGRAPHIC STUDY OF HISTORIC PRESERVATION:
EVOLVING CULTURAL LANDSCAPE AND
DEVELOPMENT OF MODERN JAPAN

by

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CHAPTER I

INTRODUCTION

1.1. Overview

The thesis of this study is that architecture records the impacts and influences of a geographically specific cultural identity and the landscape in which it is embedded, as well as recording the economic evolution of its time and place. This is demonstrated by a study of historic architecture from the early modern era of the Meiji Restoration in Japan. The cultural landscape constructed during the Meiji period (1868-1912 CE) in Japan represents the most important stage of Japan's modernization blending traditional and Western aspects due to the social phenomena, Civilization and Enlightenment, known as the *Bunmei-Kaika*, but these structures and their context remain undervalued and under examined in the academic literature. Geographer Peirce Lewis argues that "All human landscape has cultural meaning" (Riesenweber 2008, p.24). Architect Steen Eiler Rasmussen wrote that "the building is produced like a motion picture without star performers, a sort of documentary film with ordinary people playing all the parts" (Rasmussen 1959, p.14).

Characteristic architectural examples from the Meiji period will be used to demonstrate this statement regarding the cultural landscape and argue for the importance of preserving these landmarks of Japan's modernization. Lefebvre's (1991) model of the

social production of space provides a framework for this case study of major Meiji era structures, illustrated by a literature review from a variety of sources to demonstrate its historic importance and the need for its preservation as geohistorical landmarks of Japan's modernization process.

The human-made cultural landscape is a key location where cultural and economic capital, ideology, political activities and vernacular traditions are continually negotiated. It is where society literally reproduces itself as a spatial practice (Lefebvre 1991; Herrington 2008). Indeed, architecture truly reflects the natural environment and the identity of a nation, and economic development and political involvement shapes architecture. The evolution of an architectural landscape represents the intersection of the physical and cultural environment (Tyler et al. 2009). Architecture records the impacts and influences of the cultural identity of its time and place, demonstrating economic and societal evolution if sufficient examples of architecture from previous periods are preserved. Drawing on a review of literature concerning Japanese history and architecture, this research focuses on five examples illustrating two traditional model and three significant Meiji era structures.

This thesis examines the evolution of buildings from traditional through modern, along with a burgeoning interest in preservation that took place beginning with the rule of Emperor Meiji. This is the most important cultural, economic, and political transition period in Japan, during which rule by a military-political shogun was replaced by restoring an emperor (in this case one with the chosen reign name of "Meiji," meaning "enlightenment") to supreme power. More specifically, the relationship between the

Meiji Restoration, architecture, and national identity are explored. Several significant buildings constructed during the pre-modern and early-modern periods will be described and compared to trace the evolution of a modern Japanese identity critical to the country's development. Those selected buildings, Ise-Jingu, Horyu-Ji, the Tomioka Silk Mill, the Tokyo Railroad station, and the Meiji Mura, were chosen because they represent distinct economic stages of Japan's early modernization during this period. They are from pre-modern society and early modern period. Each buildings are evidence of a developmental stages of nation's economy, from the primary and traditional/ agricultural stage (Ise-Jingu and Horyu-Ji), the secondary / manufacturing stage (the Tomioka Silk Mill) to the tertiary-/ service stage (the Tokyo Railroad Station), concluding with an examination of Meiji Mura as a unique approach to the historic preservation of Japan's identity through the built environment (Herrington 2008).

By using materials such as brick and steel along with western architectural styles and engineering methods, Japan was creating an image of a modern nation state that competed with the United States and other Western powers. This demonstrates an important feature of the Meiji period when Japan was transitioning from a traditional feudal country to a modern nation state. The preservation of historic architecture in Japan serves to allow nation's constructed landscape to promote a modern national identity distinctive from that of other cities around the world. Early modern buildings should be preserved because their architecture represents a particular time in history and reflects the underlying Meiji culture and the prevailing social and economic phenomena.

1.2. Statement of the Problem and Hypothesis

Many of Japan's historic structures from the Meiji period have been demolished before their value was fully appreciated. This research tests four hypotheses of why historic Meiji structures are disappearing: 1) Meiji era buildings are traditionally undervalued and are not respected because they were not constructed in a traditional Japanese style. 2) Meiji architecture is considered to be relatively new for preservation. For instance, some argue that a structure has to be more than 400 years old to be considered a "historic" building in Japan. 3) Historic preservation and cultural landscape is hard to define and the term rarely appears in Japanese literature. Therefore, despite understanding their value, people do not know how to preserve historic structures. 4) Some consider that these architectures represent a dark period of Japan's military history, leading up to and through World War II (Siegenthaler 2004). This research will focus on a broad range of social phenomena during the Meiji period, how adaptation of Western architecture occurred, and who played an important role in the establishment of modern architecture in Japan. This thesis will demonstrate that the architecture of the Meiji period is visual evidence of the Cultural Revolution of late 19th to early 20th century Japan, and should be preserved as part of the country's natural heritage.

1.3. Theoretical Model

Geographer Peirce Lewis argues that "Our human landscape is our unwitting biography, reflecting our tastes, our values, our aspirations, and even our fears in tangible visible form" (Lewis 1979; Brand 1994; Riesenweber 2008; Taylor 2012, p.22). As cultural geographers Carl Ortwin Sauer and Lewis state, geography is a science of

observation and all human landscape has cultural meaning. This meaning might be understood by reading the landscape as if it were a book (Riesenweber 2008). Human action and the natural environment shape our built environment. Thus, “cultural landscapes are cultural properties and represent the ‘combined works of nature and of man’” (UNESCO 2008, Taylor and Lennon 2012, p.45). Today historic preservation in Japan does not apply only to old shrines and temples, but has started to include varieties of buildings from modern periods including Meiji infrastructure. The brick and stone materials used in the Meiji period are not prime sources for today’s architecture, which uses steel frame and concrete construction. The age of the brick and stone building lasted only sixty years in Japan. When the Great Kanto Earthquake hit in 1923, many western influenced buildings were destroyed. However, Meiji architectures should be preserved because those buildings represent a particular time in history and reflects the underlying early modern period of Japanese culture and the prevailing social phenomena of the nation.

Japanese architecture experienced radical changes from traditional forms of wooden construction within this short period. Indeed examining Meiji architecture teaches important aspects of the Meiji period, particularly the ways that Japan adapted Western aspects to its own national identity and purpose of modernization. The Meiji period was the bridge between traditional and modern Japan, and was the bridge between Japan and the West. Therefore, Meiji architecture should be preserved because it represents a particular history and reflects the underlying culture and prevalent social phenomena of early modern period Japan. This in turn indicates how the country

successfully and rapidly modernized during its transition into the present day. Examples of Meiji architecture discussed in this research such as the Tomioka Silk Mill, the Tokyo Station, and infrastructure in the Meiji Mura demonstrate the evolving identity of Japan as a modern nation state.

Landscape is defined by our vision and interpreted by our minds. However, landscape is not identical with nature. Nature is a part of every landscape, but is no more than a part of any landscape which has felt the impact of human (Meinig 1979). A discussion of Japan's indigenous religion of Shinto and the process of the Meiji Restoration is necessary to understand the Japanese attitude toward natural, the cultural landscape and preservation (see section 2.1).

Japan is seeking ways to preserve its built heritage despite the change of its economic environment, and is beginning to save examples of western-style architecture constructed during the Meiji period. As a part of its landscape, the natural environment has an enormous impact on Japanese buildings. Most cultural landscapes are intimately related to the physical environment. Thus, the reading of the cultural landscape also presupposes some basic knowledge of the physical landscape (Meinig 1979). Wood particularly plays a huge role in Japanese construction. Also, natural disasters, especially earthquakes and tsunami, have a significant impact on the built environment (see section 3.1).

French philosopher and social theorist Henri Lefebvre argues that “monumental space offered each member of a society an image of that membership, an image of his or her social visage. It thus constituted a collective mirror more faithful than any personal

one. Such a 'recognition effect' has far greater import than the 'mirror effect' of the psychoanalysts" (Leach 1997, 9). Many scholars agree that a landscape is a cultural image, a pictorial way of representing, structuring and symbolizing surroundings (Daniels and Cosgrove 1988). Nearly all items in human landscapes reflect culture in some way. Furthermore, most items in the human landscape are no more and no less important than other items, yet, public landscape tends to be something more external and objective than our personal sense of place, and something less individual, less discrete, than the usual named place (Meinig 1979, p.3). Tracing selected buildings of the Ise-Jingu, Horyu-Ji, the Tomioka Silk Mill, the Tokyo Station, and the Meiji Mura reflects the Japanese cultural image in the historical and early modern age of its landscape. These structures are an indication of evolution of the cultural landscape and provide the unique characteristics of the Japanese built environment specifically economic development during the early modern period of the country.

The Meiji period is known as a time of intensive cultural transformation. *Fukoku-Kyohei*, a system of enriching the nation and building up the army, and *Shokusan-Kogyo*, promoting industry, were two goals of the newly formed Meiji government. The reformation included a new structure of the government, finance, education system, and the adaptation of non-Japanese culture. The Meiji government began to make a positive effort to introduce advanced Western technologies from the beginning. As a part of modernization, the Meiji government adapted Western styles of architecture, including the design of buildings and construction technologies as well as building materials, to demonstrate cultural progress (Watanabe 1996). Geographer D. W. Meinig states that we

regard all landscapes as symbolic, as expressions of cultural values, social behavior, and individual actions worked upon particular locations over a span of time (Meinig 1979, p.5). By looking at the buildings constructed after the Meiji Restoration, the rapid process of modernization can be traced.

One of the most significant events in Japanese history and a symbol of the beginning of modernization, the Meiji Restoration started in 1868 and dominated the next forty-four years of Japan's politics. The Meiji period marked the end of feudalism and *samurai* rule in Japan. The Meiji era saw campaigns of reformation and modernization in many aspects of Japanese life. It marked the beginning of a new era due to an increase of Western ideology. Under the Meiji government the country industrialized rapidly, shifting from a politically isolated, agricultural, and feudal nation to one of the largest economies in the world continuing to today. Therefore, the Meiji period should be considered as important as any other time period in Japan (Meinig 1979).

What we can see of the past in physical relics is highly selective, because materials decay and because later structures on a site necessarily displace earlier ones (Lowenthal 1979). The preservation of historic buildings should include not only the physical structures but also a community's history and a sense of place. Historic preservation does not simply imply saving old or original buildings, but it also identifies preserving a built environment. Cultural values and religious beliefs reflect one's attitude toward architecture and materials to be used in a particular culture. Preserving traditional construction systems and technology presents the uniqueness of different cultures, which places this study in the areas of cultural, historical and economic geography.

1.4. Methodology: Literature Review

The methodology of this research paper will rely on a literature review to compare stages of economic progress and corresponding architectural evolution using the examples of traditional structures and in early-modern societies in Japan. These buildings are from pre-modern society and the early modern period. Each building represents a development step of Japan economy, from the primary and traditional/ agricultural stage (Ise-Jingu and Horyu-Ji: see section 3.2.4 and 3.2.5), the secondary / manufacturing stage (the Tomioka Silk Mill: see section 4.1) to the tertiary-/ service stage (the Tokyo Railroad Station: see section 4.2), concluding with an examination of Meiji Mura (see section 4.3) as a unique approach to the historic preservation of Japan's identity through the built environment (Herrington 2008). Notable geographers are presented including James M. Fitch, J. B. Jackson, Henri Lefebvre, David Lowenthal, and D. W. Meinig. The geographic analysis will focus on how each represents the evolution of Japan's built environment in the particular time period discussed and how it in turn reflects the evolving economics, philosophical, political, and scientific setting of Japan.

In each section clear definitions are provided for terms including historic preservation, built environment, cultural identity and nationalism, feudal and modern society, and economic and political development. The building examples selected will illustrate how these concepts are reflected in the built environment. These terms need to be clearly identified in order to understand Japanese history, from which came the formation of the nation state of Meiji Japan. Information on the construction material,

style, and concept of architecture will come from English and Japanese literature, maps, numerical data, and photos.

CHAPTER II
HISTORIC PRESERVATION:
KEY THEMES AND SIGNIFICANCE

2.1. Definition and Issues of Historic Preservation

Non-Japanese scholars argue about why the Japanese adapted non-Japanese architecture in the late nineteenth century. The main characteristic of traditional Japanese architecture was a wooden frame. This traditional style had been preserved over two thousand years. Adapting non-Japanese architecture seemed to oppose the Japanese cultural attitude. The geographer David Lowenthal (1985) reflects on the importance of traditional building in Japan:

Preserving material objects is not the only way to conserve a heritage. The great Ise Shinto temple in Japan is dismantled every twenty years and replaced by a faithful replica built of similar materials exactly as before. Physical continuity signifies less to the Japanese than perpetuating the techniques and rituals of re-creation. The Japanese thus the dilemma inherent in conserving objects-its ultimate impossibility. Everything we think of as 'preserved' is more or less altered; it is really the form that endures, not the substance (p. 384-385).

Western architecture and engineering were adapted in Japan starting in the early 1870s. However, it is important to understand the global and national political environment in order to explain why Japan adapted western culture.

Historic preservation represents a major component of a cultural landscape and it identifies a local atmosphere beyond simply preserving old or original buildings. The preservation of historic buildings should consider the area's history and sense of place reflected in the architecture. Preserving buildings only as inanimate structures makes them period set pieces—objects of curiosity, but not much more. This attitude can lead to the kind of preservation represented by the term “façadism,” wherein only the front façade of a structure is preserved and the rest of the structure is demolished (Koura 2002; Tyler 2009, 15). According to the American National Trust of Historic Preservation,

[Historic preservation is] defined as the process of identifying, protecting, and enhancing buildings, places, and objects of historical and cultural significance. This process embraces many phases including the survey and evaluation of historical, architectural, and cultural resources in an area; the development of planning and legal measures to protect these resources; the identification of public and private funding sources applicable to preservation projects; the design for the restoration, rehabilitation, and/or adaptive use of historic structures; and the ongoing maintenance of these resources
(National Trust of Historic Preservation 2013).

Contrary speaking, the term “Historic Preservation” is rarely seen in Japanese literature. Instead, these terms of cultural properties or historic environment, *Rekishi-Teki-Kankyo* often are often used (Siegenthaler 2004). The Ministry of Education, Culture, Sports and Science & Technology (MEXT) designate important cultural properties in Japan. MEXT states that cultural properties are;

Cultural properties are essential to accurately understand the history and culture of Japan, and they also form the foundations for its future cultural growth and development. It is extremely important to appropriately

preserve and utilize such cultural properties, which are the heritage of Japanese people (MEXT 2012).

The structures are the most important properties for understanding the uniqueness of each community and tradition (Hayden 1995). In principle, the communities or individuals who own these cultural properties are responsible for their management, repair and public exhibition. The government provides guidance and financial support while restricting some changes. In most cases, each community has strong support for their historic sites.

The Cultural Properties Law of 1975 created six types of preservation categories in Japan (Table 1). 1) *Yukei-bunkazai*, tangible cultural properties including buildings paintings and sculptures (Table2); 2) *Mukei-bunkazai*, intangible cultural properties including theater, music, and applied arts; 3) *Minzoku-bunkazai*, tangible and intangible folk properties that consists of houses, clothes, manners and customs; 4) *Kinenbutsu*, monuments including man-made and natural sites, plants and animals 5) *Bunkazai*, cultural landscape such as terraced rice fields and mountain villages (Table 3); and 6) *Dentoteki-Kenzobutsu-Gun*, traditional buildings groups. Buried Cultural Properties and traditional techniques and skills are preserved as cultural properties (Table 4, 5) (Thornbury, 1994; MEXT, 2013). Cultural properties in Japan vary in size from hand crafts to an entire landscape. The following Tables list details in the categories treated in this research.

Table 1. Cultural Properties in Japan

Tangible Cultural Properties	Structures Works of fine arts and crafts: Paintings, sculptures, crafts, calligraphic works, classical books, ancient documents, archeological artifacts, historical materials
Intangible Cultural Properties	Drama, music, craft techniques
Folk Cultural Properties	Tangible folk cultural properties: Clothes, tools and implements, houses, and other objects used in connection with intangible folk cultural properties Intangible folk cultural properties: Manners and customs related to food, clothing, and housing, to occupations, religious faith, and annual events, etc.
Monuments	Ancient sites: Shell mounds, ancient tombs, sites of forts or castles, monumental dwelling, Houses Places of scenic beauty: Gardens, bridges, gorges, seashores, mountains Animals, plants, geological and mineral formations
Cultural Landscape	Landscapes that have evolved in association with the modes of life or livelihoods of the people and the geocultural features of the region, which are indispensable to the understanding of the lifestyles and/or livelihoods of the people of Japan: Terraced rice fields, mountain villages, waterways
Groups of Traditional Buildings	Port towns, castle towns, farming or fishing villages
Conservation Techniques for Cultural Properties	Techniques for production of materials, restoration and conservation, necessary for the preservation of cultural properties
Buried Cultural Properties	Cultural Properties buried in the ground

Source: http://www.bunka.go.jp/english/pdf/h24_chapter_06.pdf

Note: Cultural properties in Japan vary in size from hand crafts to an entire landscape. This reflects how Japanese people see their built environment. For Japanese, intangible properties such as manners and customs, are as value as physical landscape. The latter category is a focus of this research as it demonstrates the historic, economic, and cultural geography in which architecture is embedded and symbolizes.

Table 2. Buildings and Other Structures Designated as National Treasures or Important Cultural Properties (as of April 1, 2011)

Category	Sites	Structures
Early modern period or earlier		
Shinto shrines	563	1,175
Buddhist temples	848	1,122
Castles	53	235
Residences	94	150
Private domestic buildings	344	785
Others	193	262
Subtotal	2,095	3,729
Meiji Period Onward		
Religious buildings	24	31
Residences and private buildings	73	248
Schools facilities	38	65
Cultural Facilities	31	39
Governmental offices	22	27
Commercial buildings	20	27
Civil engineering structures	66	221
Others	5	17
Subtotal	279	675
Grand total	2,374	4,404

Source: http://www.bunka.go.jp/english/pdf/h24_chapter_06.pdf

Note that “Historic Properties” are dominated particularly by pre-Meiji religious institutions, the role and nature of which are illustrated in this research by the Ise Shrine. The argument presented is that Meiji era examples should also be in this category for preservation as examples of a critical turning point in Japan’s modernization.

As these lists indicate, the designation of cultural properties in Japan applies beyond buildings. By looking at these lists, it is clear that the term of historic preservation used by the National Trust of Historic Preservation in the U.S. does not cover what significant historical properties are in Japan. This chapter presents background including preservation law, the current situation and significant issues.

2.1.1. Historic Preservation: Origin, Development and Issues

Conservation legislation which directly relates to historic preservation in Japan can be divided into five periods. In the first period (1868-1926), the first cultural property preservation legislation was established. During the second period (1926-1945), the production of Natural Treasures was made more satisfactory and prevented them from being taken abroad. The origin of historic preservation can be found during the third period (1945-1966). The Cultural Property Preservation Law was enacted and has been maintained until today. In the fourth period (1966-1975), the Ancient Capitals Preservation Law was enacted to preserve historic landscape. Finally, in the fifth period (1975-present), the Conservation District of Traditional Building was introduced by the amendment of the Cultural Property Preservation Law (Asano 1998).

When the Meiji government was established in 1868, traditional art objects and historic buildings were demolished and vandalized due to the impact of Westernization. The social trend and the policy of the newly formed government were anti Buddhist due to the policy of *Shinbutsu-Bunri* (the separation of Shinto and Buddhism). The first conservation legislation of historic preservation in Japan, *Kokikyobutsu-Hozonhou-no-Hukoku*, or Historic Objects Preservation Proclamation, was introduced in 1871. This was

the first step in the modern period to preserve historic art and craft. Preserving Shinto Shrines and Buddhist Temples Preservation Grant was established by the Ministry of Home Affairs during the period of 1880 and 1894. The first law of preserving buildings, *Koshaji-Hozonhou* (Historic Shinto Shrines and Buddhist Temples Preservation Law) was enacted in 1897, influenced by the sudden rise of racial consciousness after the Shino-Japanese War in 1894-1895 with China. As a general rule, the buildings and treasures owned by religious bodies were designed as *Tokubestu-Hogo-Kenzobutus* (the Special Protection Law) or *Kokuhou* (National Treasures). This is the prototype of the present cultural protection institution. The new law was replaced by *Kokuho-Hozonhou* (National Treasures Preservation Law) in 1929 to expand previous law and previously unrecognized valuable buildings owned by central or local governments (Asano 1998; MEXT 2013). Before the laws existed, the destruction of historic sites and natural monuments occurred as a result of urban development and economic growth (Table 3). The idea of preserving historically important sites as a nation started at the beginning of the Meiji period. However, awareness of saving historic properties in general only started after the World War II.

Table 3. History of the Law Concerning Cultural Properties

1871	Historic Objects Preservation Proclamation
1897	Ancient Temples and Shrines Preservation Law
1919	Historic Sites, Places of Scenic Beauty, and Natural Monuments Preservation Law
1929	National Treasures Preservation Law
1933	Law Regarding the Preservation of Important Works of Fine Arts
1950	Enactment of the Law for the Protection of Cultural Properties

	<ul style="list-style-type: none"> -Committee for the Protection of Cultural Properties established -Amendment of designation system (division into two-grade categories of National Treasures and Important Cultural Properties) -Establishment of system for protection of Intangible Cultural Properties and Buried Cultural Properties
1954	<p>First Amendment</p> <ul style="list-style-type: none"> -Expansion of system for intangible properties -Expansion of system for Buried Cultural Properties -Expansion of system for folk materials
1968	<p>Second Amendment</p> <ul style="list-style-type: none"> -Agency for Cultural Affairs established -Council for the Protection of Cultural Properties established
1975	<p>Third Amendment</p> <ul style="list-style-type: none"> -Development of system for Buried Cultural Properties -Expansion of system for folk cultural properties -Establishment of system of Preservation Districts for Groups of Traditional Buildings -Establishment of system for protection of Conservation Techniques for Cultural Properties
1996	<p>Fourth Amendment</p> <ul style="list-style-type: none"> - Establishment of system of Registered Cultural Properties
1999	<p>Fifth Amendment</p> <ul style="list-style-type: none"> -Transfer of authority of prefectures and designated cities - Reform to Council for Cultural Affairs
2004	<p>Sixth Amendment</p> <ul style="list-style-type: none"> -Establishment of system for protection of Cultural Landscape -Addition of Folk Techniques as objects of protection -Expansion of system of Registered Cultural Properties

(Source: Asano (1998, 1999), MEXT (2013))

Shiseki-Tennenkinenbutsu-Hozonni-Kansuru-Kengian (Historic Sites and Natural Monuments Preservation Proposal Draft) was introduced in 1911 and *Shiseki-Meisho-Tennen-Kinenbutsu-Hozonho* (Historic Sites, Scenic Beauty and Natural Monuments Preservation Law) was enacted in 1919. Historic buildings such as castles owned by central or local governments were being ruined because existing laws applied only to buildings owned by religious institutions. *Juuyo-Bijyutu no Hozonni-Kansuru-Horistu* (Important Art Objects Preservation Law) was enacted in 1933. This temporary legislation prevented important art objects from being taken abroad and foreigners from removing objects from Japan, encouraging Japanese to preserve culturally significant items (Asano 1998; MEXT 2013) (Table 3).

Historic preservation in Japan prior to 1945 emphasized individual sites including shrines, temples, castles and homes of nobilities (Siegenthaler 2004). After Japan's defeat in the Second World War, *Oukyusyori-Gokanen-Keikaku* (the Five Years Temporary Restorations Plan) for Natural Treasure buildings was implemented from 1948 to 1952. This plan became the prototype of the current Important Cultural Property Restoration Grant. One of the major turning points in legislation of historic preservation was when the historic wall painting in Horyu-Ji Temple, a World Heritage Site of Japan, was destroyed by fire. After the incident, a new preservation law, *Bunkazai-Hogoho* (the Cultural Property Preservation Law) was enacted in 1950. The law was a part of a comprehensive plan to recognize and preserve Japan's cultural heritage (Asano 1998; MEXT 2013) (Table 3).

Bunkazai-Hogoho repealed and unified three significant preservation laws of the pre-war period: the Historic Sites, Scenic Beauty and National Monuments Preservation Law, the National Treasures Preservation Law, and the Important Art Objects Preservation Law. The designated objects protected by the laws were divided into two grades: *Kokuho* (National Treasure) as Grade I and *Juuyo-Bunkazai* (Important Cultural Property) for Grade II. The law of 1950 was amended in 1954 in order to state clearly the obligation of local government conservation. To encourage the second amendment, in 1968 the *Bunkacho* (the Agency for Cultural Affairs), a branch of the Ministry of Education, Science, Culture, and Sport, was established (Asano 1998; MEXT 2013).

The *Bunkacho* was responsible for the protection of cultural properties of national importance. The purpose of the Cultural Properties Protection Law was to preserve Japan's *Bunkazai* (cultural property) as a vital element of its culture. The law specifically gives lower governments, such as prefectural (state) and local bodies, the right to select their own intangible folk cultural properties from among those not already designated by the national government (Kobayashi 1969; Thornbury 1994). Also in order to control the quality of new buildings and qualification of architects, *Kenchiku-Kijunho* (the Building Standard Law) and *Kenchiku-shiho* (the Architects Law) were also adopted in 1968. These laws, however, are not applicable to historic buildings or to technicians or architects who are engaged in preservation work due to its unique character (Kobayashi 1969).

Outside of an established district, there were no tools to protect non-designated areas. Many historic cities and villages were gradually destroyed by urban development

in the high-growth period of the 1960s. Thus the movement by citizens in ancient capitals such as Kyoto, Nara, and Kamakura to protect heritage sites started. As a result of this, *Koto-Hozonhou* (The Ancient Capitals Preservation Law) was enacted in 1966. This law was specifically designed for protecting historic and natural environments over a wide area in ancient capitals. The City Planning Law, *Rekishiteki-fudo-Tokubetsu-Hozonchiku* (the Special Preservation Area of Historic Landscape) was established as a new zoning district. The Ancient Capital Law applied only to ancient capitals, and even there, saving historic streets and villages were not included.

Some local governments enacted their own regulations to conserve their heritage during the 1960s and 1970s. The third amendment of the Cultural Property Preservation Law in 1975 was to introduce *Dentoteki-Kenzoubutsugun-Hozonchiku* (Conservation Districts of Traditional Buildings [CDTB]). The CDTB also applied to villages outside the city planning area. Almost 100 districts were investigated by the central government and 46 districts were designated as CDTB in 1997. The number of CDTB generally increases by two or three a year. At the same time, the Special Preservation Area of Historic Landscape was also amended to introduce these new conservation areas. *Toroku-Bunkazai-Seido* (Listed Cultural Property) was introduced to amend the Cultural Property Preservation Law in 1996. Reforming the Council for Cultural Affairs took place in 1999. The Cultural Assets Law is used to conserve areas of historic value. Since 2000, 54 districts have been designated, most of which are located in small cities. However, the total number is significantly lower than in England where more than 440,000 buildings are designated as the National Treasures or Important Cultural Properties (Asano 1998;

MEXT 2013). Finally, in 2004, expansion of the system of Registered Cultural Properties was enacted to complement current conservation practices (Asano 1998; MEXT 2013) (Table 3). The preservation of a historic building is determined by three different levels: by the *Bunkacho* Cultural Affairs Commission: with government funds, by the local authorities, or by the guidance of national and local government. In the last two levels, the Commission is responsible for the preliminary plans of repair as well as restoration, and sends technicians to the site to ensure that changes are made properly and correctly (Kobayashi 1969; Roberts 1993). The Cultural Properties Protection Law protects communities from changing attitudes about historic preservation. (Thornbury 1994).

The term “historic” or “old” is different from one culture to another. Some argue that a structure has to be more than 400 years old to be considered a “historic” building in Japan. In contrast, historic buildings must be only 50 years or older in the United States (Tyler 2009, 140). In Japan, as of April 1, 2011, a total of 2,374 structures are listed as historic buildings. Ninety percent of those buildings are wooden construction and have been designated as National Treasures or Important Cultural Properties. About 1,900 buildings are protected by prefectures or states and 5,600 buildings are designated as an important historic structure by cities, towns, or villages (Siegenthaler 2004; Tyler 2009; National Trust for Historic Preservation 2013).

Not many modern buildings constructed after the Meiji Restoration of 1868 have been designated as National Treasures or Important Cultural Properties, but the value of Meiji and post Meiji structures is gradually being recognized. About 95% of Japanese National Treasures or Important Cultural Properties are old Shinto shrines and Buddhist

temples, most of which are wooden structures. Unfortunately, none of these old building techniques are used for the ordinary wooden structures in contemporary industrial Japan (Kobayashi 1969; MEXT 2013). Most designation of historic buildings is still limited due to the shortage of funds in the government budget. Structures like the Kobe Old Settlement, have not been evaluated as historical buildings because they are constructed with western materials and technologies (Koura 2002).

In addition to religious sites, vernacular architecture, particularly farmhouses, plays a significant role in the Japanese built environment. Vernacular architectures are not often given the status of architectural designs. They are different from those employed by modern architectural designers. Many vernacular cultures bear a strong relationship to a dominant culture, but are circumscribed by habit and tradition to a particular culture in a certain area. They suffer from the neglect of architectural historians and their construction methods are unnoticed and unrecorded. Since the 1920s, architects and historians have taken a special interest in vernacular buildings. It has special resonance because agricultural life is widely believed to be the fountainhead of Japanese culture and is at the heart of Japan's symbolic values. Furthermore, they offer a uniquely Japanese tradition long independent from China and the West (Reynolds 2002). For instance, traditional manufacture is deeply rooted in the daily life Kyoto and supports the local economy. It is useful to talk about the relationship between economics and politics, but discussing these matters is not enough. Social phenomenon also play a key role in preserving the historical environment (Taniguchi 1995).

2.1.2. A Case Study: Conflict between New and Old in Urban Areas

The conflict between a traditional structure and a modern building can be observed in many urban areas. Most of the urban centers in the big cities in Asia are now losing their traditional environment while undergoing the drastic change to be modern cities with high-rise buildings. Originally Japanese cities were built in harmony with nature, and as such they are quite a contrast to the rather artificial-looking European cities that are built according to strict rules outside nature (Koura 2002). The traditional townscape is characterized by a straight building line and an open space in the middle or in back of the site. This open space is important for the ventilation and sunlight in the house as well as daily life.

Introduction of non-traditional Japanese land use are another result of westernization (Taniguchi 1995). For example, the urban center of Kyoto has historically been developed as a mixed land use area, but the modern zoning system does not have appropriate categories to preserve the historical space structure and land use. Preserving those spaces is a part of historic preservation. While Japanese cities to develop, traditional spaces are been replaced by high-rise condominiums. As a result of rapid development within the city, the confusion of the townscape appears in some Japanese cities in two different ways. One is the disorder of building height; the other is to build new structures in order to filling-in of the open space in the middle and rear of buildings as well as along the street. Today's high-rise condominiums have a completely different space structure (Koura 2002).

Other cities are also concerned about disappearing historic structures. Osaka, a major business city in Japan, is confronting urban contention, maintain the economy or preserve the traditional townscape at the same time, as it attempts to create policies. Soon after the Meiji restoration started, the city began to face economic hardship. During the period of Japan's accelerating economic growth in the 1960s and the 1970s, the city lost its position as the largest domestic business center due to other major cities such as Nagoya which experienced major growth. However, this economic hardship gave the city a chance to reconsider its unique locality. The cultural value of old brick and masonry buildings in Kobe was discovered in the 1980s and led to the reuse of structures for shops and offices. This allowed the area to retrieve the role of an active urban center. The sense of place even increased after the earthquake of 1995 as people gained a greater appreciation for the city which was nearly destroyed. (Koura 2002).

2.1.3. Summary

The term of historic preservation is clear, but the public awareness of the field is still relatively weak. Preservation of cultural landscape should include not only the physical structures but also a community's history and a sense of place. Thus historic preservation is a process. In this chapter, the origin and development of preservation law was presented. It was at first only applied for protecting religious institutions and national monuments, particularly from the pre-Meiji period. It slowly began to protect modern heritages and vernacular sites. At the same time, issues such as the low status of professionals and lack of academic programs were revealed. Unless awareness of historic preservation in public in general increase, historic preservation will continue to face a

hardship of its existence. From this perspective, historic preservation has not received enough support from the public. Japanese conservation legislation influenced other East Asian countries, especially South Korea and Taiwan. At the same time, there are many requests from other Asian countries to Japan to cooperate in conservation projects (Asano 1998). It is necessary to increase understanding of historic preservation by solving problems in Japan. Therefore, Japan can be a leader of the historic preservation movement in East Asia.

CHAPTER III

MAJOR THEMES AND HISTORIC REVIEW

3.1. Role of Natural Hazards in an Unstable Setting

The natural environment has a major impact on the Japanese cultural landscape and must be fully considered in an exploration of the nation's built environment. In this section there will be less discussion of historic preservation or architecture. Instead, the emphasis will be on how the natural environment affects the construction of buildings, such as materials used, styles of buildings and related legislation.

3.1.1. Evolution of Building Technologies: Preventing Earthquake Damage

Earthquakes are a part of Japanese identity throughout the country's history. One traditional explanation for the phenomenon is that an earthquake is caused by the struggle of huge catfish underground (Figure 1). Japan experiences many earthquakes almost every day. The majority of historic buildings in Japan are built of wood and therefore, naturally susceptible to fires. During the Edo period (1603-1867 CE), there were at least ninety-seven major urban fires. Fires spread easily across the city because of the wooden structure of buildings (Philips 1996). On the other hand, wood was more durable during the shaking phase of earthquakes. In addition, open wooden frames provided for much better air circulation. This is very important especially since the heat and humidity during summer is almost unbearable. In typical buildings in Japan, windows are much

larger than those found in non-Japanese buildings. For these reasons, Japanese architecture retained the open wooden framed building for a long time.

Figure 1. The Struggle of Huge Catfish Underground!!



Source: <http://www.lib.u-tokyo.ac.jp/tenjikai/tenjikai2008/photo/5-1.jpg>

In order to minimize damage, Japan developed unique technologies to protect infrastructures from natural disasters. Even slight vibration causes deformations and damages, which accumulate overtime. Eventually, after several centuries, a strong

earthquake will destroy buildings. Because of the lack of effective preventive measures, to stop gradual weakness in construction, Japanese engineers created a very efficient way of periodical repair. First, the parts easily subject to damage, such as roof tiles and clay walls, should be repaired frequently.

Table 4. Japanese History

pre-12,000 B.C	Paleolithic period
ca. 12,000 B.C-ca. 400 B.C.	Jomon period
ca. 400 B.C.-ca. A.D. 300	Yayoi period
ca. 300-700	Kofun period
710-794	Nara period
794-1192	Heian period
1192-1333	Kamakura period
1338-1568	Muromachi period
1568-1600	Azuchi-Momoyama period
1606-1867	Edo period
1868-1912	Meiji period
1912-1926	Taisho period
1926-1989	Showa period
1989-	Heisei period

Source: Kodama (1995), Kono (2006), Hamashima (2008)

Secondarily, about every 200 years buildings should be strengthened or partially dismantled and reassembled. Finally, every 300-400 years major repair work should be carried out (Ito 2007).

Human beings first inhabited the land of Japan over thirty thousand years ago (Table 4). For the first twenty thousand years, it is not clear whether people had dwellings or not. At least twenty thousand years ago, people began to live in pit dwelling. The topsoil was dug about one meter below ground level to make the floor. Huge raised-floor buildings, like watchtowers, began starting around 3,500 B.C.E. People used the technique of cutting trees as big as nearly one meter in diameter with a stone axe. Such huge trees were processed and erected as earthen fence posts. Big timbers were necessary for use as structural members in every part of the huge raised-floor buildings, and buildings became very heavy but strong against lateral loads. The disadvantage of earthen fence posts was that the feet of posts were attached to ground, therefore, were likely to rot in the humid condition in Japan (Ito 2007). The topsoil was dug about one meter below ground level to make the floor. Huge raised-floor buildings, like watchtowers, began starting around 3,500 B.C.E. (Figure 2 and 3). People used the technique of cutting trees as big as nearly one meter in diameter with a stone axe. Such huge trees were processed and erected as earthen fence posts. Big timbers were necessary for use as structural members in every part of the huge raised-floor buildings, and buildings became very heavy but strong against lateral loads. The disadvantage of earthen fence posts was that the feet of posts were attached to ground, therefore, were likely to rot in the humid condition in Japan (Ito 2007).

Due to its geographic location, China and Korea had a huge influence on Japanese architecture. Many Buddhist temples were established starting from the sixth century. Traditionally in China, posts were attached to the ground directly. However in Japan, posts were set up on foundation stones to avoid decay. Buildings were placed on podia, some bays between posts were filled with thick clay walls, complicated bracket compounds were added to the posts, and roofs were covered with clay tiles. Japan did not simply adapt new building technology, but adjusted it for Japan's environment. Japanese preferred more open and bright buildings because of warmer and more humid conditions than in the Chinese climate. In order to accommodate this, posts gradually became slender and a thin board panel was preferred to thick clay walls (Ito 2007). Other major characteristics of traditional Japanese architecture are simple lines and angular forms. This is because wood is not sufficiently flexible to allow curved lines. As previously mentioned, wood was the only material used in construction. It does not mean that the Japanese did not possess the skills to create stone and/or brick structures. However, the natural climate and environment surely affect the attitude of building technology. Almost 75% of the country is forest, primarily in the mountainous regions. Because of the availability of natural resources, high quality wood is the predominant material of Japanese buildings (Egenter 2012).

The *Shogunate*, a new feudal warrior government, was established at the end of the twelfth century. During Japan's feudal periods (1192-1867 CE), additional architectural technologies were introduced from the continent and contributed to the development of Japanese architectural techniques. The first was *nuki*, which is similar to

American timber frame work (Figure 2). In this system, square holes are curved in the surfaces of two posts and horizontal tie bars are inserted into these holes and tightened with wedges. At first *nuki* was inserted separately in each bay, but later they were long enough to penetrate two bars or more. The system of using *nuki* and thin walls continued until end of the 19th century. The second technique was *sujikai*, or a diagonal brace, which emerged in the 13th century. It did not survive, because it sometimes caused cracks on the surface of clay walls (Figure 3). Clay walls were also used together with *nuki* but soon became thinner (Ito 2007).

Figure 2. Nuki

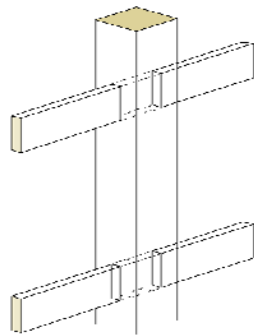
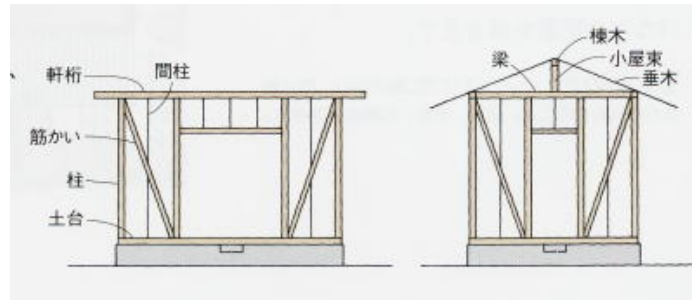


Figure 3. Sujikai



Note: Nuki refers to penetrating tie beam and Sujikai is a braced frame
 (Source: <http://www.kenchikuyogo.com/315-to/011-dounuki.htm> and
<http://www.kenchikuyogo.com/213-su/007-sujikia.htm>)

Until Perry's arrival in 1853, Japan's geographical isolation resulted in the use of a few non-traditional Japanese materials. There are some examples of castles features Chinese or Korean influences, but these were rare due to the lack of need for fortified structures. Therefore, most of Japan's historic built environment is dominated by wooden buildings. There are two different types of wooden architecture. State-of-art buildings, such as

religious sites, only use wood without using any nails and are robust against earthquakes. Shinto shrines and Buddhist temples are strong against lateral loads because of their comparatively thick members and complicated, but tough construction. Ordinary buildings and vernacular dwellings either constructed before and/or during the Restoration were much more poorly constructed and subject to serious damage by lateral loads and seismic attacks (Ito 2007, Takahashi 2012).

At the beginning of the Meiji period no interest was paid to the improvement of timber buildings. Though the main material for constructing buildings in Tokyo was wood at this time, wooden buildings were extremely unsustainable especially when fires occurred. More fire resistant bricks and masonry began to appear in the middle of the 19th century due to Western influences (Philips 1996). These new materials were much more durable against fire. However, the 1891 Nobi earthquake - which caused the death of 7,000 people and damaged or destroyed approximately 230,000 buildings - demonstrated that bricks and masonry buildings were fragile against this natural disaster. The consensus is that many historic wooden buildings would be strong enough to resist most seismic attacks. About 1,400 buildings were designated as a cultural property. Most were shrines and temples, which had rather thick members and complex structures (Ito 2007) (Table 2). These events prove that building in brick and stone does not provide as much as quake resistance as wooden structures do.

Japan improves ordinances every time it sustains heavy damages by a natural disaster. For example, the Great Kanto Earthquake of 1923 led to the establishment of the Building Standard Law, which was renewed in 1950 and is active still today. According

to the law, big wooden buildings, such as new Shinto shrines and Buddhist temples, cannot be constructed in town districts because of the danger of fire (Ito 2007). With the enactment of the Law for the Protection of Cultural Properties in 1950, the object of the law was to protect properties rather than preserve them. The law defines that the word *protection* means preservation and utilization. In order to utilize cultural property for present-day use, properties should be actively used, either for the proper usage, for the sake of tourism, or for any secondary purposes such as a museum. In order to do so, cultural properties must be made earthquake-proof to ensure the security of the people visiting them. Earthquake-resistant repair of a building helps to protect human life and prevent severe economic loss (Japan Meteorological Agency 2013).

3.1.2. Japan: Natural Environment

The Japanese respect nature such as frail cherry blossoms in spring, bright autumn foliage, full harvest moons, and silvery winter snow. Before the Restoration, however, there was no Japanese word for nature. Only after the Meiji period does the descriptive word *Shizen* for nature in the abstract come into use. In the West, Christian doctrine helped to shape conceptions of nature as either a paradise that human alone corrupts, wildness where human is condemned to wage a life or death struggle, or a frontier on which humans can impose their will (Nicol 1997). The Japanese view of nature sees it as where each and every natural phenomenon reflects the manifestation of different native *kami*, or Shinto gods. Man is neither the victim, the enemy, nor the lord of nature, but adapter to and collaborator with it. Nature and man are one, inseparable in essence (Nicol 1997).

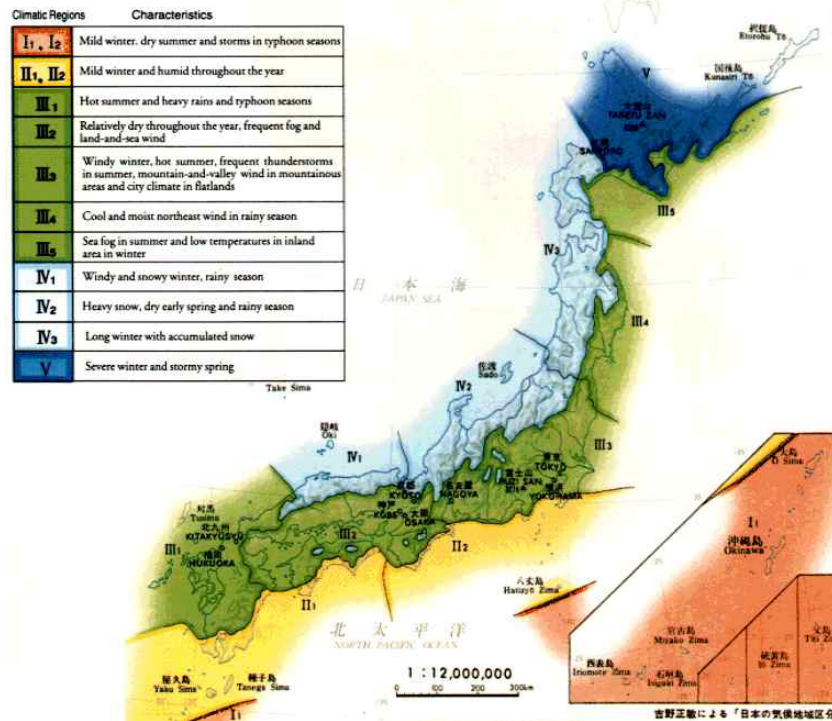
About seventy-five percent of Japan is mountainous, reflecting a volcanic creation. Several distinct mountain chains, each containing numerous spectacular peaks, rise from the spines of the larger islands. The highest and most rugged of these mountains are the Japanese Alps, located in the central part of Honshu. There are about two hundred volcanoes in Japan. Nearly sixty of these were active during Japan's recorded history. The most famous of Japan's mountains is Mount Fuji, designated as an important natural environment of Japan, a dormant volcano that last erupted in 1707. The mountain is located fifty miles west of Tokyo, and rises to 12,388 feet above the sea level. Fuji's symmetry and beauty make it the object of special reverence among the Japanese, who depict it often on posters, postcards, calendars, and paintings. Fuji is recognized worldwide as a symbol of Japan and designated as an UNESCO's World Heritage Site in June, 2013 (Cybriwski 1994). This indicates that a natural environment plays a major role of the Japanese cultural landscape.

The islands of Japan offer a variety of climates, strongly influenced by the surrounding sea and by the seasonal shifts of the East Asian monsoons. The southernmost islands of Japan are subtropical. At the northern end of the country, winters are long and temperatures are frigid (Figure 4). Most of Japan lies in the middle latitudes and has a temperate climate, similar to that of the eastern coast of the United States, due to the ocean currents that pass by them. All of Japan has a humid climate, but the time of the year during which most precipitation occurs differs according to the relative influence of the summer and winter monsoons (Cybriwski 1994).

For most of Japan, the prevailing winds of winter blow from the Asian mainland and bring cold dry air from eastern Siberia. Because this air picks up moisture as it crosses the Sea of Japan, the windward sides of Honshu and Hokkaido receive heavy snowfalls during the season. In summer, the winds typically come from the southeast and the east, over the Pacific Ocean, bringing heavy rainfall to many parts of the country. The first of the almost daily rains occurs on the southern islands, and then spreads gradually northward. The most pronounced rainy season, known as *baiu*, or the plum rain, lasts for about four weeks during June and July. The end of summer, at the end of August and the beginning of September, is the season for typhoons, which are strong storms that originate over the tropical Pacific Ocean (Cybriwski 1994).

The major disasters and accidents that occur in Japan are fire, typhoons, and earthquakes. In the case of earthquake, volcanic eruptions and tsunami waves result in destruction. Typhoons marked by high winds and downpours of rain are especially common in Kyusyu, Okinawa, and other southern islands. Typhoons cost many lives and do hundreds of billions of yen in damages nearly every year.

Figure 4. Climate Regions of Japan



Source: <http://www.env.go.jp/en/nature/npr/wetland/vegetation.html>

Tsunami tidal waves accompanying earthquakes and typhoons also inflict considerable damage on heavily populated coastal area. In addition to the physical damage caused by mainland earthquake, substance fire constitutes a secondary thread. Due to improvements in fire protection law and services and flood prevention, damage done by these disasters has declined in recent years (Japan Metrological Agency 2013).

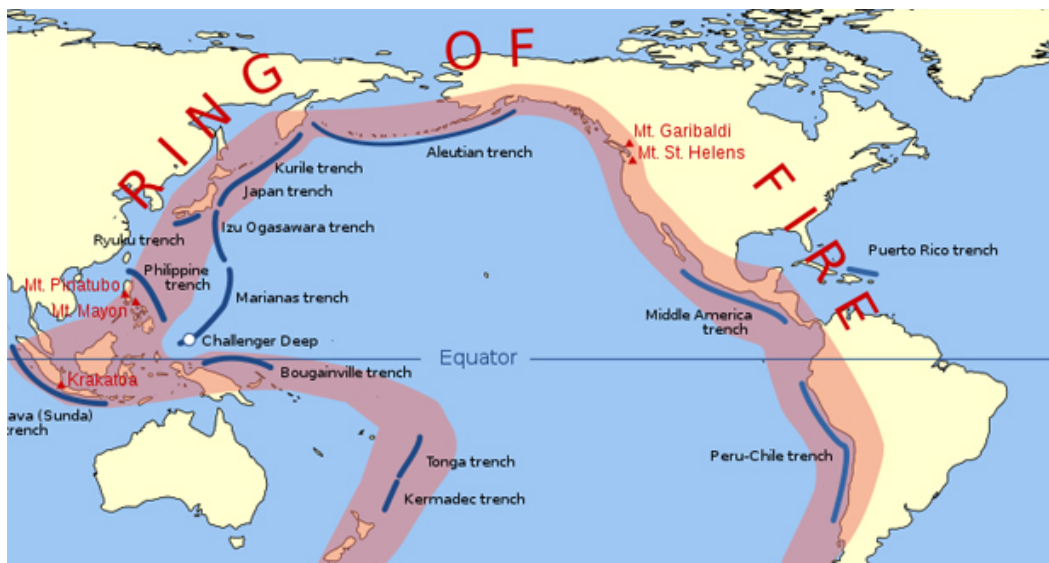
Despite these constant threats, Japanese tend to see the force of nature as intrinsically good, something to be accepted and adapted to rather than fought and conquered. Japan compensates for earthquakes and storms with its mild climate, abundant scenic charm, and lush vegetation. The blessings of rain, *Umino-sachi*, marine

products, and animals and plants yielded by the land are not there for the taking but precious gifts of bountiful nature (Nicol 1997).

3.1.3. Earthquakes

The Japanese archipelago is located in the “Pacific Ring of Fire” (Figure 5) one of the world’s greatest zones of geological activity (Nicol 1997).

Figure 5. Pacific Ring of Fire



Source: <http://www.australiangeographic.com.au/journal/the-10-biggest-earthquakes-in-recorded-history.htm>

There is no place where an earthquake is not generated in Japan; several thousand tremors occur there each year (Cybriwski 1994). Approximately 20 percent of all earthquakes in the world occur in Japan. Additionally, 10 percent of the world’s earthquakes larger than a magnitude of 6.0 occur near the Japanese islands. This is an astonishing frequency because the land area of Japan constitutes only 0.3 percent of the

entire world (Japan Meteorological Agency 2013). Only China, Indonesia, and Iran experience more earthquakes than Japan (Takahashi 2012).

A huge earthquake in the Tohoku region in 2011 was a special case but earthquakes can happen at any time in Japan. Yet loss of life and severe damage to property is very rare. Earthquakes are very unique disasters. Statistically, there are many fewer victims from earthquakes than from traffic accidents or fires. An earthquake occurs rarely but it may seem like it occurs suddenly and cause great damage (Japan Meteorological Agency 2013). The number of deaths in each earthquake is relatively low. Since the Meiji period, around a hundred earthquakes resulted in death. Eighty percent of the time, the death toll was below 100. 1,000 people died in eleven tsunami and three devastating earth quakes These include Nobi in 1891, the Great Kanto in 1923, Kobe in 1995 , and the most recent disaster of 2011(Japan Meteorological Agency 2013) (Table 5 and Figure 6). Disasters associated with earthquakes include tsunami, enormous and deadly walls of water caused by ocean bottom earthquake, and fires, which often cause wide spread damage after the shaking stops. General fires are those caused by appliances used for cooking and heating and chemical fires which are caused by catalytic reactions of chemicals. The most disastrous example was in 1923, during the Great Kanto earthquake when 366,262 houses were destroyed by fire in Tokyo (Kobayashi 1969). The Great Kanto earthquake occurred at 11:58 a.m. on Sept. 1, 1923. In Tokyo city 129 fires broke out, of which 99 were general and 30 were chemical fires. Most of the general fires were started by kitchen ranges, clay charcoal cooking stoves and braziers burning wood

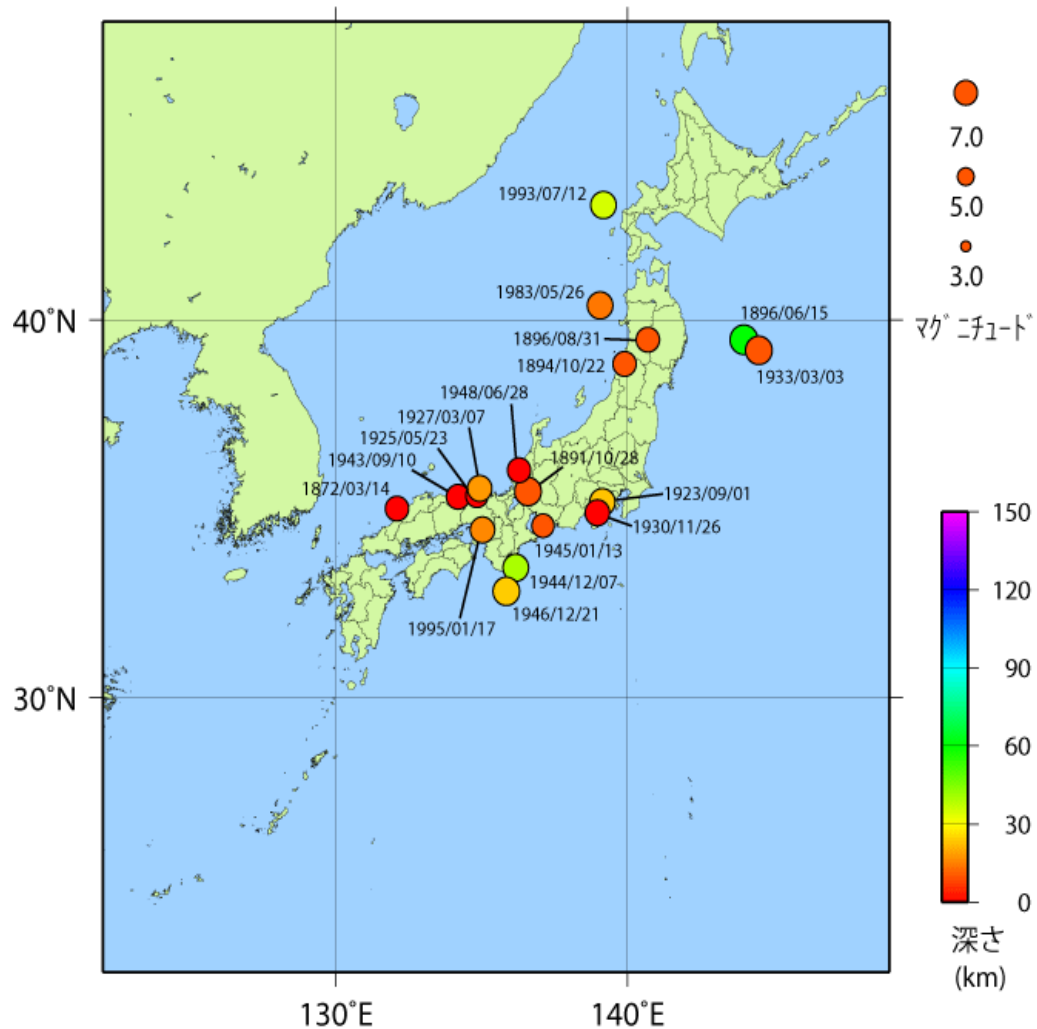
and charcoal as fuels while recent earthquakes were started by appliances using oils, gas or electricity as fuels.

Table 5. Major Earthquakes after 1868

Name	Year	Dead and missing	Magnitude
Nobi	1891	7,273	8.0
Meiji Sanriku	1896	21,959	8.2
Kanto	1923	105,000	7.9
Mikawa	1945	2,306	6.8
Fukui	1948	3,769	7.1
Chili (Tsunami)	1960	142	9.5
Kobe	1995	6,437	7.3
Tohoku	2011	Over 20,000 As of June 2013	9.0

Source: Japan Meteorological Agency (2013)

Figure 6. Major Earthquakes after 1868



Source: <http://www.seisvol.kishou.go.jp/eq/higai/higai-1995.html>

Earthquakes occurring after the Great Kanto consisted of less serious fires that burned fewer houses. This may be because of the changes in building styles, materials, and appliances and their fuels. However, as Japan still has a lot of wooden houses continuously built in urban regions, there is still a potential that fire can become a major agent of destruction in earthquakes (Kobayashi 1969). After the 1968 Tokachi-oki

earthquake, the oil stoves became equipped with automatic flame suppression devices by fire code. Of 71 general fires, only 30 (42.3%) started from collapsed buildings and in the case of 17 chemical fires, it was only one. In addition, since the 1964 Niigata earthquake fires occurred not only in wooden buildings but also in fireproof buildings but none of them started from collapsed buildings. Therefore, it is more appropriate to analyze the rare fire outbreak in relation to seismic intensity (Kobayashi 1969). Despite improvement of building protection technologies and ordinances for preventing further damage, the 1995 earthquake in Kobe left over 6,000 dead, and damaged approximately 100,000 other structures including a major freeway, railroad tracks, and buildings. The fire damage was significant, but the earthquake started at 5:46 a.m. before many households began to cook breakfast.

3.1.4. Summary of the Natural and Built Environment

The natural environment has an enormous impact on Japanese buildings. The traditional wooden material of building plays a huge role in construction infrastructure. However, without maintenance, wood structures usually last only for thirty years or less; but good quality wood with regular maintenance can last indeterminately. Yet a natural disaster, especially fire, caused huge damage to wooden structures throughout history. Newly imported construction materials such as brick and stone are more durable against fire, but less sustainable against the biggest threat of the built environment in Japan earthquakes. Laws protecting buildings and people from these disasters were upgraded after major incidents yet those efforts do not do enough to save the lives of people. The

challenge of the built landscape of Japan is how to deal with the natural environment.

Without understanding it, preserving historic materials cannot be achieved.

3.2. Cultural attitude / belief systems: Shintoism and Buddhism

Cultural values and religious beliefs reflect one's attitude toward architecture and the materials to be used in a particular cultural context and built environment. Preserving traditional construction systems and technologies reflect the uniqueness of different cultures. The main discussion of this chapter will focus on Japan's indigenous Shinto religion and the relationship of the Meiji Restoration to *Ise-Jingu* (Ise Temple) and to Shintoism. The Japanese attitude toward preserving structures, including religious structures, will also be described in this connection.

3.2.1. Shinto

Shinto is Japan's indigenous religion, but no one knows when it began. Shinto has existed longer than the oldest written record of Japanese history. No one is able to define what Shinto is in a precise manner. Perhaps it was a practice influenced by rice based agriculture. In a rice cultivating community, it was necessary that people live in harmony with each other as well as with the natural environment. Shinto's gods are called *Kami* (spirits), and they are believed to be a part of all nature: rain, wind, land, and many others. The basis of Shintoism lies with the interrelation of the natural and social environments (Teeuwen and Scheld2002; Ise-Jingu 2013).

It is clear that the word Shinto has been used in a great variety of ways. The meaning of Shinto can be divided into the following six categories: 1) religious beliefs found in indigenous customs passed down in Japan, 2) the authority, power, activity, or

deeds of a *Kami* itself, 3) concepts and teachings concerning *kami*, 4) the teaching propagated by a particular shrines, 5) the way of the *kami* as a political or normal norm, and 6) sectarian Shinto as found in a new religion. The *kami* associated with ancestor worship are one example of such local deities. Until at least the Kamakura period (1185/1192-1333 CE), the word Shinto was used not to refer to a “popular religion” by that name, but more or less as a synonym for *kami* (Kuroda 1981; Teeuwen and Scheld 2002).

During the late Heian (794-1185 CE) and Kamakura periods (Table 4), the worship of these *kami* functioned as a well-integrated constituent of *Kenmitsu* Buddhism, the orthodox system of exoteric and esoteric Buddhist schools that dominated religious practice throughout the pre-modern period (Teeuwen and Scheld 2002). During this time period, Shinto and Buddhism gradually coalesced into a set of practices and beliefs known as *Shinbutsu-shugo*. Since then, Shinto and Buddhism officially interacted over the centuries. Japanese culture is also grounded by Taoism and Confucianism, both of which are belief systems that came from China during the Tang dynasty period of openness and borrowing (Grapard 1984). Japan is the land of the *kami*, with both its political and religious implications. The land of the *kami* does not indicate that Shinto was without any religious character but rather shows that the Buddhist system which lay behind it pervaded all aspects of everyday life. It is highly unlikely that Shinto was perceived as an independent religion in opposition to Buddhism during the pre-modern era. In medieval times the word Shinto generally meant the authority, power, or activity of a *kami*, or the state or attributes of a *kami* (Kuroda 1981; Teeuwen and Scheld 2002).

Shinto was officially re-separated from Buddhism at the beginning of the Meiji period. This is reflected in the many Shinto and Buddhist shrines and temples standing next to each other throughout Japan. The temple-shrine complexes where *kami* and Buddha were worshiped side by side were paradigmatic for the religion of that time. These institutions were not a compromise or a mixture between two opposing religions, but a well-integrated system of religious thought and practice applied to a range of different deities (Grapard 1984; Teeuwen and Scheld 2002). It is generally held that an indigenous self-consciousness is embodied in the word Shinto. Among the many Shinto sanctuaries in Japan, Ise-Jingu is the supreme. For the establishment of the Restoration state during the Meiji, the key unifying factors were the Imperial Household for society and the production of rice for its livelihood (Kuroda 1981; Teeuwen and Scheld 2002).

3.2.2. Shinto and the Meiji Restoration

The status of certain shrines relied on recognition by the emperor, symbolized in imperial ritual offerings to the shrine. Shinto emerged as an independent religion only in modern times, and then only as a result of political policy. Previous to the Meiji period the notion of a non-Buddhist Shinto religion lacked general acceptance and was not implemented in practice. It was largely due to repressive Restoration politics toward Buddhism that Shinto achieved the status of an independent religion. At this point Shinto also became useful for political propaganda (Teeuwen and Scheld 2002). As part of the Meiji assault on Buddhism (which originated in India and came to Japan through Korea and China), the government ordered that all Buddhist monks return immediately to lay

life, all Buddhist representations, buildings and objects of the cult be removed, and all divinities bearing syncretic names had to be renamed (Grapard 1984).

For most of Japanese history the emperor held little power. The emperor became significant in Shintoism in the late Tokugawa period as the *Kokugaku* (“National Learning”) ideology came to support the restoration of the emperor in place of the Tokugawa shoguns. *Kokugaku* was a movement described as the wellspring of religious nationalism in modern Japan, envisioning a strict and methodical purging of native religious traditions. During the middle of the Edo period, many Japanese were attached to an emerging school of Kokugaku, “National Learning”. This interest in Japanese tradition took on both nationalistic and religious symbolism. A return to Shinto tradition provided many Japanese with a sense of cultural security as western ideas began to circulate. It laid the basis for the powerful conservative reaction to the foreign threat under the slogan of Sonno-joi, “Revere the Emperor, Expel the Barbarians” (Akao 2000). Interestingly, however, not the Tokugawa Shogun but the Emperor became important in Japanese ideology during the end of the Tokugawa regime.

For leaders of the Meiji Restoration, Shinto justified the uprising against the Tokugawa. At the beginning of the Meiji period, an attempt was made to create a pure Shinto that could serve as the national religion of the new or restored imperial state (Teeuwen and Scheld 2002). It was necessary for the newly formed Meiji government to prove who had the authority of the nation state in order to bring Japan together as a unified nation. Shinto and the religious site of *Ise-Jingu* became particularly important ideological tools for the government (Reynolds 2001).

The Meiji separation of Shinto and Buddhism, and its suppression of Buddhism, were coercive and destructive “correctives” pressed by the hand of government. Shinto achieved for the first time the status of an independent religion, distorted though it was. During this period the historical consciousness of an indigenous religion, existing in Japan since ancient time, clearly took shape. This has remained the basis for defining the word Shinto down to the present. From the Meiji period through World War II, Shinto became inextricably bound with extreme-nationalism and false -imperialistic conquest (Kuroda 1981; Reynolds 2001).

3.2.3. Wood: the Main Material for Japanese Architecture

Wood plays a very important role in Japanese history and heavily influences the traditional architecture and belief system. The material is viewed as the connection between the earth and heaven, though the concept of heaven differs from what non-Japanese religions believe. In Japanese religious sites, shrines and temples, massive wooden posts occupy the center of the building. The posts are not only supporting a structure, but also serving as a connection between heaven and earth (Shiba 1999).

Hinoki (Figure 7), a Japanese cypress, is considered the most valuable tree for construction since it is not too hard and has flexibility and durability. *Hinoki* remains strong for at least two hundred years after being cut, and gradually loses its strength through the next century. *Hinoki* from the Kiso region is considered to be the best tree for constructing buildings in Japan. The skin of *Hinoki* resembles the color of human skin. As it loses the color of pinkness over time, it relates to being old and dying. The Japanese relate the routine of daylight and the cycle of sunshine each year to the life cycle of a

human being. A Japanese cypress also represents a landscape of Japan as well as a cherry blossom. In order to avoid death, the concept of *Shikinen-Sengu*, which is used for rebuilding the structure at Ise-Jingu every twenty years, was created and is discussed in the next section (Shiba 1999).

Figure 7. Hinoki



(Source: <http://www.shinrin-ringyou.com/tree/hinoki.php>)

Note: A Japanese cypress or Hinoki is a part of natural landscape in Japan. The tree is known for the best construction material for buildings. Therefore, a building constructed by using Hinoki represents a built environment which consist nature and human action.

3.2.4. Ise-Jingu

Jingu is the most completely original creation of Japanese architecture (Reynolds 2001). It often refers to “*Ise-Jingu*”, or Ise Shrine/Temple (Figure 8).

Figure 8. Ise-Jingu



Note: The 62nd Shikinen-Sengu, the practice will be conducted in October 2013

(Source:

<http://www.google.com/imgres?q=%E4%BC%8A%E5%8B%A2%E7%A5%9E%E5%AE%AE&sa=X&biw=1280&bih=882&tbn=isch&tbnid=mTh0Wp0It9WHM:&imgrefurl=http://www.kagojinjacho.or.jp/news/post-12.html&docid=2yfD8uqStJtH3M&imgurl=http://www.kagojinjacho.or.jp/image/S-1.JPG&w=1901&h=1535&ei=swjbUZmEAYzm8gTqtIC4DQ&zoom=1&ved=1t:3588,r:>

[80,s:0,i:329&iact=rc&page=4&tbnh=176&tbnw=205&start=72&ndsp=25&tx=109&ty=44#imgdii=\)](#)

However, the official name is "*Jingu* "without "*Ise*." *Jingu* is the Japanese temple complex composed of the *Naiku* and *Gaiku* (Fitch 1990). *Naiku* is where *Amaterasu-Omikami*, the ancestral kami of the Imperial Family, is worshiped, and *Geku* is the place where *Toyouke-Omikami*, the kami of agriculture and industry, is worshiped. *Amaterasu-Omikami* does not have the character of the absolute God of Christianity, but is rather the one who brought great harmony to heaven and earth.

During the fifth and sixth centuries an elite based in the Yamato region, today's Nara prefecture, established a military and political hegemony that came to dominate the main islands of Japan. The ruling family of Yamato, referred to today as the imperial family, claimed direct descent from the sun goddess. *Amaterasu* was significant as a link to the ancient political stature. By the end of the sixth century, the Yamato established links with *Ise-Jingu* as a site for the worship of its own divine ancestor (Reynolds2001).

Ise-Jingu is famous for *Shikinen-Sengu*, a set of sacred structures has been completely replicated every twenty years on sites adjacent to its current location (Grapard 1984; Fitch 1990). This practice has taken place for thirteen hundred years (Teeuwen and Scheld 2002). During the construction project, sixteen separate shrines along with sixty-five associated infrastructures such as bridges, fences, and others, are renewed. The total cost of renewal is around USD \$320 million. One reason for the reconstruction is that wooden structures are extremely susceptible to decay. The buildings themselves remain on the site only for a twenty year period. However, preserving the construction

technologies, known as cycling reconstruction remains for centuries. Based on the traditional religion of Shinto, Japanese do not divide the world into good and evil but believe that everything is relative and that every endeavor has the potential to be viewed as sacred. As a part of the traditional belief system, the secret shrines are reborn every twenty years. Maintaining construction is not easily achieved due to wars, both internal and external, and natural disasters such as fires that occur predominantly in a cycle of twenty to twenty five years (Adams 1998).

A site of identical size adjoining the main building of *Naiku* serves as, the sanctuary for Amaterasu-Omikami, where a new building of exactly the same form is constructed once every twenty years. It involves the reconstruction of the building as well as the renewal of the sacred apparel and the treasures which are carried to the new sanctuary building along with the symbol of the *kami* on the occasion of the *Sengyo*, the transfer ceremony. Since late in the 7th century CE, this ceremonial system, referred to as *Shikinen-Sengu*, has been conducted. The first *Shikinen-Sengu* was performed in the period of the 41st Emperor Jito, the wife of the 40th Emperor Tenmu who established this system. Since then, with only a few exceptions, this ceremonial system has been continued. The 62nd *Shikinen-Sengu* will be conducted in October 2013 (Sankei 2013). The *Kanname-sai* ceremony, the offering of the First Fruits to *Amaterasu-Omikami*, is the most important ceremony in the annual cycle. This ceremony is conducted every year, and culminates in the year of *Shikinen-Sengu*. As food, clothing and shelter form the requisites of our life, we have to prepare similar requisites for the *kami*, if we wish to receive blessings from them. Therefore, the ceremony of the *Shikinen-Sengu* includes the

renewal of buildings as well as the renewal of the treasures and the offering of first fruits. By performing the *Shikinen-Sengu*, Japanese citizens renew their minds by remembering *Amaterasu-Omikami* in Ise, and praying that the current Emperor will live long and that peace will prevail in Japan and the world. It also involves the wish that Japanese traditional culture be transmitted to the next generation. The renewal of the buildings and of the treasures is conducted in the same traditional way since the first *Shikinen-Sengu* was performed approximately 1,300 years ago, thus conserving traditional preservation technologies (Adams 1998; Ise-Jingu 2013).

The main materials for constructing shrines include Japanese cypress for the primary buildings, *kaya*, a reed, for roof thatch, along with iron fasteners- and river-washed white pebbles. These materials are locally available. Trees used for the largest columns are typically three to five hundred years old. Adapting foreign culture, the gold-copper decorations from China was used since the eight century. Yet this type of elaborate and expensive material does not quite fit the original building style. Therefore, the gold-copper was omitted for the last reconstruction of 1993 (Adams 1998).

The labors work with a specific material as a group and complete their task by hand based on experience level. Labor-forces include sawyers, carpenters, thatches, and others. They are mainly from the surrounding area, but workers from other places in Japan also can be found. Thatches are hard to find since this material is rarely used for roofs today. Electric tools and gas-powered engines are not allowed during construction within the sacred building site or during the final shaping and finishing of construction. The old buildings are disassembled, and wood that has not decayed is saved for reuse in

the construction and repair of newly built shrines. Reusing building materials was documented at least since the tenth century (Adams 1998).

Construction takes approximately seventeen years from start to finish, but the main portion of physical work takes about eight years. Planning and material procurement occurs in the earlier years. On-site installation is concentrated during the last few years of the entire construction. The construction takes place under a temporary shed which is large enough for building the new shrines and protects it from the weather, bird droppings, and public view (Adams 1998).

Ise-Jingu and its reconstruction tradition is a different type of historic preservation and is extremely rare. Yet, *Jingu* consists of elements of a philosophy of life and death in Japan. Many particularly non-Japanese scholars misrepresent the reconstruction of *Ise-Jingu* (Lowenthal 1985, 384; Fitch 1990, 85; Tyler 2009, 25). They are often incomplete when they introduce *Ise-Jingu*. What these scholars need to describe is that many shrines and temples in Japan are preserved for centuries without reconstruction.

3.2.5. Another Temple Perspective: *Horyu-ji*

The grounds of *Horyu-ji*, *Horyu* Temple (Figure 11), constructed during the Asuka Period (mid 6th to the beginning of the 8th century), include the world's oldest surviving wooden structures, conveying images of Japan as it existed more than 1,300 years ago, *Horyu-ji* contains over 2,300 important cultural and historical structures including nearly 190 that are designated as National Treasures or Important Cultural Properties. In December 1993, *Horyu-ji*, as a unique storehouse of Buddhist culture,

became the first treasure of any kind in Japan to be selected by UNESCO as a World Heritage site (Horyu-ji 2013) (Table 6). Note that the lists of sites include selections from both the cultural landscape and natural landscape.

Figure 9. Horyu-ji



Note: the oldest existing wooden structure in the world Horyu-ji uses a traditional preservation technique, saving the original structure as long as possible. This temple was constructed in 607. Source: <http://whc.unesco.org/en/list/660/gallery/>

Table 6. List of UNESCO World Heritage Sites in Japan

Type*	Name	Inscription
C	Buddhist Monuments in the Horyu-ji area	1993
C	Himeji-jo	1993
N	Shirakami-Sanchi	1993
N	Yakushima	1993
C	Historic Monuments of Ancient Kyoto	1994
C	Historic Villages of Shirakawa-go and Gokayama	1995
C	Hiroshima Peace Memorial	1996
C	Itsukushima Shinto Shrine	1996
C	Historic Monument of Ancient Nara	1998
C	Shrines and Temples of Nikko	1999

C	Gusuku Sites and Related Properties of Kingdom of Ryukyu	2000
C	Sacred Sites and pilgrimage Routes in the Kii Mountain Range	2004
N	Shiretoko	2005
C	IwamiGinzan Silver Mine and its Cultural Landscape	2007
C	Hiraizumi-Temples, Gradens, and Architectural Sites Representing the Buddhist Pure Land	2011
N	Ogasawara Iskands	2011
C	Fujisan, sacred place and source of artistic inspiration	2013

*C=Cultural, N=Natural

(Source:UNESCO2013)

Around the time that Buddhism was introduced to Japan from China, the idea of the temple complex was born when the Emperor Yomei prayed that Buddhism would heal him of his illness. He died shortly thereafter, but Empress Suiko and Crown Prince Shotoku fulfilled Emperor Yomei's deathbed wish by building in 607 CE a temple and a statue of a Buddha, to whom the temple was dedicated. On the night of April 30, 670, a great blaze swept through the ground, but the temple was reconstructed soon after the incident. *Horyu-ji* boasts an illustrious fourteen centuries of continuous observance of tradition since it was established by Prince Shotoku. Today, *Horyu-ji* is composed of a few sites- such as *Saiin-Garan*, the Western Precinct. *Yumedono*, the Hall of Vision in *Goju-no-To*, the Five-Story Pagoda and *Kondo*, the Main Hall, and *Toin-Garanare* in the Eastern Precinct. Throughout the 187,000-square-meter grounds are irreplaceable cultural treasures, bequeathed across the centuries and continuing to preserve the essence of eras spanning the entire journey through Japanese history since the seventh century (Horyu-ji 2013).

Despite its great history, *Horyu-ji* suffered from the modern development of anti-Buddhist policy after the Restoration. The new government proclaimed Shinto as the official religion, establishing the Department of Shinto in its Administration. Shinto priests became state officials and important shrines started to receive government funding. On the other hand, many Buddhist objects such as statues and temples were destroyed, relocated, or sold overseas. This continued until the Old Shrines and Temple Protection Law was enacted in 1897 (Table 3). Between 1868 and 1897, Shinto shrines were well maintained and Buddhism temples were not. *Horyu-ji* was not exception from *Haibutsu-Kishaku*. Many valuable items including Buddhist statues, paintings, texts, and ritual objects were removed, and buildings were broken and burnt (Grapard 1984; Horyu-ji 2013). Despite new protection laws, negative incidents toward *Horyu-ji* continued after the war, and the complex was allowed to fall into disrepair. It was further damaged by fire in 1949. Awareness of the historic monument increased after each incident, and the Cultural Preservation Law was enacted the following year. *Horyu-ji* is *not* only an artifact of value, and it has made a huge impact on the legislation of preservation in Japan (Asano 1999).

3.2.6. Summary of Cultural Attitude and Belief System

The cultural attitude and belief system have a huge impact on Japanese belief and architecture. Using a Japanese cypress, Ise-Jingu's *Shikinen-Sengu* has been conducted for 1,300 years. Cypress was also used for the construction and repair of the world's oldest wooden structures at *Horyu-ji*, which also survived for 1,300 years. *Ise-Jingu* and *Horyu-ji* present two different types of preservation methods. One is *Shikinen-Sengu*, the

life cycle of traditional preservation techniques. The other is a more typical preservation method of saving an original building as long as one can. However, when the Meiji Restoration started in 1868, cultural attitude abruptly changed. Western construction material such as- brick and stone- began to dominate Japan's urban landscape, replacing the traditional wooden structures. By specifically paying attention to Shinto, the Restoration was no different than any cultural revolution. Prior to 1868- many non-Japanese religions peacefully and harmoniously lived in Japanese society for centuries. When the Restoration began religion was misused for political propaganda. This affected how Japan approached the conservation of religious structures for the next 150 years.

3.3. Modernization as Westernization Adoption/Adaptation

The Meiji Restoration symbolizes the beginning of modernization in Japan. For the Japanese the year 1868, which marked the beginning of the Restoration, is as significant as 1066, 1776 and 1789 in Great Britain, the U.S. and France. Each of these years represents a major turning point in world history. However in Japan, the year 1868 marks the beginning of a new era because of a great increase in the impact of Western ideology, followed by reformation and modernization in many aspects of Japanese life including architecture (Rosovsky 1969).

Table 7. Japanese History: Edo-Meiji period

1600	Battle of Sekigahara
1603	Ieyasu Tokugawa is granted the title of Seii Tai Shogun The foundation of the Tokugawa Shogunate
1637-1638	Shimabara Uprising
1853	Commodore Matthew Perry arrived
1867	Return of Political Rule to the Emperor by Yoshinobu Tokugawa
1868	Meiji Restoration: restoration of Imperial Rule
1869	Formal return of dominal registers
1870	Telegraph connects between Tokyo and Yokohama
1871	Establishment of prefectural system Postal service established
1872	Railroad begins Shinbashi and Yokohama
1873	Gregorian calendar adopted Land Tax Reform Law issued
1889	Constitution of the Empire of Japan promulgated
1894-1895	Sino Japanese War
1904-1905	Russo-Japanese War

Source: Kodama (1995), Kono (2006), Hamashima (2008)

The completion of the Restoration did not occur until 1889 when the Meiji Constitution was established. Some argue, however, that the victory over the Romanov Emperor of Russia in 1905 was the end of the Restoration and the beginning of

militarization (Table 7). This demonstrates that the newly formed Meiji government did not have authority over the institutions of Japan and military forces. The main goal of this section is to discuss how the natural setting and human activities influenced Japan's built environment in the middle of the 19th century. In order to do so, it is necessary to examine Japanese history prior to 1868.

This chapter starts with the symbolism of the Japanese emperor. Without understanding the unique role of the emperor, the history of Japan cannot be understood. More importantly, the emperor is directly related to historic preservation in Japan due to the position's close relation to the religious ideology of *Shintoism* and its shrines. In order to understand the Meiji government, understanding the seat of authority in Japan prior to the Meiji period is necessary. A brief discussion of the Tokugawa regime is covered in the following section, then focus falls on a broad range of social phenomena during the Meiji period, how adaptation of Western architecture occurred, and who played an important role in the establishment of modern architecture in Japan.

3.3.1. The Emperor

The history of Japan cannot be discussed without understanding the position of the emperor and what changed over time, which is very unique to this country. Unlike Chinese emperors or European kings, the power of the Japanese emperor is not absolute. He is a figurehead, holding a position of respect, but little authority. The first state in Japan, the Yamato, emerged during the Kofun period, which began in 300 CE (Table 5). No written record exists, but diplomatic relations were established with the Korean states and the Chinese courts at the time. *Kojiki*, the "Record of Ancient Matters", and *Nihon*

Shoki, the historic chronology of Japan, state that the political leaders of Yamato became the rulers of the whole country during the late Kofun period. Buddhism was introduced between 538 and 552 CE. The Asuka period, dating from 592 to 710 (Table 5), is usually considered the beginning of the historic age in Japan because writing was introduced. The Japanese formed the monarchial system in which the Emperor reigned over the state. During ancient times, people considered the emperor as a more god-like figure. The *Taiho Codes*, the national policy of legal codes established in 701, assured that the emperor was the head of the state of Yamato. Descendants of the Yamato dynasty established themselves as the authority of the country. The idea of a nation of Japan as a unified kingdom started from this time period. The nobility were land-owning aristocrats who passed their wealth and status through their bloodline, gaining power around the 9th century. In the twelve century, the nobility lost their influence to warriors or armed-farmers, also known as *samurai* (Kodama 1995; Akao 2000; Kono 2006).

On a few occasions an emperor tried to recover influence over the Imperial Court, but for the majority of the medieval time to the Meiji period, the *samurai* were the authority of the country. However, the emperor gained his political power back during the Meiji period. The Meiji Constitution of 1889 invested the emperor with authority in many areas, such as command of the armed forces making peace and declaring wars, and dissolving the lower house to call elections. Effective power lay with the executive branch, but executive authority was vaguely defined and seemed to interfere with the imperial prerogative. After the defeat of World War II, many changes were instituted

under the Occupation, including the constitution's reduction of the emperor to purely symbolic status (Akao 2000; Kono 2006).

3.3.2. Historical Background

Japan was largely isolated from the outside world for over two hundred years from 1641 to 1854. The industrial revolution and imperialism by advanced western states occurred during Japan's isolation. These advanced western states were the successfully industrialized countries of Europe and North America, such as Great Britain, France, Germany, Russia, and the United State of America. These states began to colonize outside their countries by using military force. The arrival of Commander Perry in 1853 was the consequence of this western colonization. After Japan reopened its ports because of external pressures, its leaders were shocked by the realization of their own backwardness (Yamamura 1968). Japan had two options. One was emulating western customs and becoming an advanced state. The other option was to be colonized by the West. During the mid-nineteenth century, leaders in Japan accepted that some degree of indoctrination and westernization were necessary for survival (Buntrock 1996).

Geographer David Lowenthal argues that the past plays an essential part of our present and the future. Without history, we would lack all sense of continuity, all apprehension of causality, all knowledge of our own identity (Meinig 1979, p.103). In 1853, the Naval Commodore of the United States of America, Matthew C. Perry, arrived in Japan with four massive navy ships, demonstrating the technology and the military power of the West. Japan had been largely isolated from the outside world for over two hundred years. During Japan's isolation, the industrial revolution and imperialism in

advanced Western nations began, leading them to colonize outside their countries by using military force. The arrival of Commodore Perry was a consequence of a Western colonization movement. During the mid-nineteenth century, leaders in Japan accepted that indoctrination and westernization were necessary for development (Buntrock 1996). At that time agriculture dominated the economy of Japan and former *samurai* were the only social group who had any military training and advanced education. After the Restoration, however, no matter what kind of social rank, if one had perseverance they could be a doctor, a government officer, a soldier, or a teacher. The small country tried to be a world military power as an advanced Western nation state, though it had no way to financially support its efforts. Yet, the main goal of the Restoration was to establish a powerful modern nation state with a world class military power (Shiba 1978). Cultural landscape and history are symbiotic. Understanding of Japanese history in the middle of nineteenth century is necessary to increase knowledge about built environment in the country.

In 1858 Commodore Perry forced the Tokugawa Shogunate government to allow trade (Table 7). Japan offered the United States some strategic stopping ports for the route to Asian markets. The Tokugawa dynasty declined in prestige as a result of their inability to enforce their will and faced a growing sentiment for deposing them. During most of the Tokugawa regime, the Shogun set up seclusion laws that allowed only the Dutch and the Chinese to have a Japanese port in Nagasaki. Yet starting from the middle of the 1850s, more foreigners arrived in Japan and became a disruptive element in Japanese society. Their presence caused unrest, civil war, and armed conflicts with the

Western powers (Brown 1962; Rosovsky 1969; Cybriwski 1994; Reynolds 2002; Hamashima 2007). Tokugawa Yoshinobu, the last *shogun* (the Commander in Chief of the Expeditionary Force against the Barbarians), relinquished power in November 1867. On January 3, 1868, the formal Imperial Restoration took place. In 1871 the clans or *Han* were abolished by Imperial Decree to centralize the authority of the Meiji government (Brown 1962).

3.3.3. *The Meiji Regime: the Process of Becoming a Modern Nation State*

The Meiji period began on September 8, 1868, and the completion of the Restoration ended in 1889, when the Meiji Constitution was promulgated. The Meiji remained in power until July 30, 1912 (Table 7), when the emperor died (Kodama 1995; Akao 2000; Hamashima 2008). At the beginning, the new government and emperor moved to Edo. The city was renamed Tokyo, which means “eastern capital”, and it was designated as the new national capital. The period commenced with the collapse of the Tokugawa *Shogunate* and the sweeping reforms that accompanied the Meiji Restoration. During the Meiji period, Japan transformed from a feudal society to a modern industrial nation state, emergence from isolation, and joined the ranks of the major world power. The restoration was not a single event, however, but a process of social phenomena transformation.

The Meiji government launched a series of reforms in various areas. Throughout the Tokugawa regime, there were two central governments that existed in Japan. One was the symbolic authority of emperor, and other was the military commander of Tokugawa *Shogunate*. Combining authorities was the priority for international diplomacy and

internal affairs (Shiba 1997). To centralize the authority, the Meiji government adopted land reform, dissolving the traditional boundaries of the *han* and establishing new modern prefectural unit. By abolishing *han* in 1869, the Meiji government was able to take back land controlled by *samurai* family, consolidating their power more effectively. However, all appointed governors were *daimyo* from former domains. This continued to limit the influence of Tokyo. More drastic reform was passed in 1871 abolishing all *han*. Two years later, a prefectural system was established (Shiba 1994; Akao 2000). After those two events, a transition to centralized united nation state was completed.

Westernization and modernization are interrelated at least in the case of Meiji Japan. Under the Meiji government, the country industrialized rapidly, shifting from a politically isolated and feudal nation to one of the largest economies in the world today. Modernity refers to a set of related attributes that resulted from the Industrial Revolution and its social and economic ramifications. Modernization requires technological advancement, capitalism and military power. Under the process of becoming a modern nation state, Japanese tradition was rejected in favor of progress and development took away all traditions (Rosovsky 1969).

The newly formed Meiji government set a slogan of *Fukoku-Kyohei* or a system of enriching the nation and building up the army, and *Shokusan-Kogyo*, promoting industry. In order to avoid being colonized by a world power, Japanese leaders began to work to emulate the powerful nations of Europe and the United State in as many ways as possible. That included the re-structuring of the government, finance and education systems, and economic development. The government needed to promote growth of new

industry. Flourishing manufacturing establishments did not spring up by chance, but it grew mainly with government supervision and support. A bountiful supply of food and commercial crops, particularly rice and silk, depended on government sponsorship of improved agricultural practice. In turn, economic development became the source of military strength for the government (Rosovsky 1969).

In order to catch up to the West, a large part of the Meiji leadership toured the United States and Europe from 1871 to 1873. The objectives of the Iwakura Mission were to negotiate amendments of Japan's unequal treaties with the West and observe conditions in industrialized nations. The inadequacy of Japan's internal system as yet meant the delegates were unsuccessful in amending the treaties, but having observed modern parliamentary and bureaucratic systems, the nation embarked on *Fukoku-Kyohei* (Buntrock 1996; Akao 2000; Hamashima 2008).

The Meiji government attempted to emulate the Western military, political, economic power and political structures through cultural imitation (Hamashima 2008). For instance, modern building concepts, techniques, and materials, such as stone and brick, were introduced at the beginning of the Meiji period. The government attempted to imitate the culture of the West in order to grow to be a world power. Ironically, however, the cultural identity of Japan strengthened by the end of Meiji period.

The social phenomena of Civilization and Enlightenment, known as the *Bunmei-Kaika*, were a phenomenon of the Restoration. The newly formed Meiji government began to make a positive effort to introduce Western civilization. At the same time, *Bunmei-Kaika* devaluated oldness. For example, the ancient samurai class deprived of its

reason for being was phased out. In 1876, the system of the hereditary class structure was abolished. The *samurai* staged a series of revolts across the country from 1874 to 1876. The hardest test for the new government came with the Satsuma Rebellion of 1877 (Table 7), led by the widely admired Takamori Saigo's followers (Shiba 1994; Akao 2000). Finally, ten years after the Restoration, the victory over the Satsuma firmly established the Meiji regime. Westernization of daily life changed many aspects of Japanese customs during *Bunmei-Kaika*. For example, men were forced to cut off topknots, and stop wearing swords; the Gregorian calendar was adapted, telegraph and postal services were implemented; and railways were constructed (Kodama 1995; Kono 2006). All of these events took place prior to 1876.

At the time of the Restoration, small scale agriculture dominated the Japanese economy. Approximately 80 percent of the population were farmers. There were no modern technologies or industries in Japan in the 1860s, but these developments rapidly spread throughout the country in the 1870s. The shift from agriculture to other industries, initially light industries, came to be a part of Japan after 1868 but initially impacts were restricted to urban areas. One of the reasons for the rapid development was the nation's high literacy rate. For example, at the end of the Tokugawa era most of the members of the upper class, also known as *samurai*, were capable of reading and writing the Japanese language and most of them knew some Chinese. In the towns, a good proportion of the population could at least read and write Japanese. Japan's high literacy rate, which was greater than most currently underdeveloped countries and greater than in any European

country at a comparable stage of development with the exception of Holland and Prussia, allowed the Meiji government to quickly develop industry (Rosovsky 1969).

3.4. National Identity Construction and Global City Image: Buildings as

Examples

The newly formed government began to make a positive effort to introduce advanced Western technologies from the beginning of the Meiji period. As a part of modernization, the Meiji government adapted Western styles of architecture to demonstrate the cultural progress of the government (Watanabe 1996). Adapting Western architecture included the design of buildings and construction technologies as well as building materials. By looking at the buildings constructed during-the Meiji Restoration, the rapid process of modernization can be traced.

3.4.1. Adaptation of Western Architecture

The Meiji government also imitated Western building technology, starting from urban landscape and civic infrastructures. The mission of the Meiji government was to introduce international standards and practices to Japan. Architecture was a key component of the westernizing reforms driving the nation's ambitious modernization policy. Since Commodore Perry's visit to Japan in 1853, a number of nations established consulates in Japanese port cities including Yokohama, Nagasaki, and Kobe. There were also foreign mercantile houses in these cities. Europeans living in Japan generally commissioned western colonial style houses designed by foreigners and built by Japanese craftsmen. At the time, the British dominated the coterie of foreign engineers and

architects. Therefore, the Meiji government hired architects and engineers mainly from Britain. These specialists were collectively referred to as *Oyatoi*. The first buildings to be westernized were in the public sphere. Public buildings and shops such as banks, universities, rail stations, and schools were the first to be westernized. In more isolated areas, where foreign architects were not present, indigenous carpenters attempted to reproduce the finishes and spatial characteristics of western buildings. Also, because of the difficulty and expense of getting new material, it took some years before domestic architecture were westernized (Abe 1954).

As early as 1873, the government established the Imperial College of Engineering (now called the University of Tokyo). The purpose of the school was to prepare Japanese architects to design buildings in the western style using modern technologies. By 1877 the college had secured the services of a young English professional, Josiah Conder (1852-1920), who is referred to as the father of modern Japanese architecture. The program at the University of Tokyo is still one of the premiere training grounds for architects in Japan. Interestingly, in the early years of the Meiji period, little attention was paid to Japan's own architecture and its history and the traditional wooden structures featuring the trabeated style were replaced by brick and stone construction (Abe 1954; Buntrock 1996; Reynolds 2002; Tseng 2004).

By the middle of the 1870s, western building styles began to appear in other cities including the capital of Tokyo. As the trend spread, Japanese designers adapted foreign materials and tradition, blending them with the ancient Japanese vernacular style. Afterward, a modified Western style of building began to appear in cities such as Edo and

renamed Tokyo in 1869. In earlier days, brick buildings were the symbols of civilization and these civilized buildings were not able to be designed without help from foreign engineers. The construction of a contemporary steel building at first appears to be Western because traditional Japanese spatial forms and materials are not evident and materials developed in the West are used. However, it is more accurate to say that Japanese practice advanced by creating a hybrid based on the materials technologies from the West and Japanese conventional practices. Japan already had an established and successful set of practices, but materials and technologies which were first developed in the West were around and were adopted as more suitable for the nation's needs. Therefore, while the West was emulated widely and freely, only selected aspects of Western culture were adopted. They did not simply copy the European mode but adapted aspects of their designs that were more suitable for the nation's needs and natural environment, creating a unique blend of foreign and national influences (Abe 1954, Buntrock 1996, Reynolds 2002).

3.4.2. Architectural Difference between Edo and Meiji Period

It is easy to identify clear differences between pre-Meiji architecture and Meiji period architecture. The chief characteristics of Japanese architecture --, the wooden post-and-beam structures -had been unchanged for two thousand years. Previously traditional Japanese buildings had a relationship with their surrounding natural environment. Buildings were not only for protection or shelter, but had a more intimate connection with people. For example, *Shinto* shrines functioned more like a local community center. However, buildings after the Meiji Restoration were largely designed as simply shelter.

Connection to the surrounding nature and the openness of building plans were the main differences between traditional Japanese and Meiji architecture (Nicol 1997; Egenter 2012).

A great revolution in architecture broke out in Japan as a part of the Meiji Restoration. Starting from the Meiji period, the concept of what architecture is changed drastically. The early introduction of foreign architecture during the Meiji period clearly altered Japanese construction practices. The traditional Japanese wooden structure began to be replaced by western technologies, such as red brick walls and steel framework. Western materials were rapidly adopted; first brick, and later concrete, offered a solution for the frequent and catastrophic fires which plagued Japan's cities. Yet, because of the difficulty of getting new material and its high price, it took some years before dwelling houses buildings outside cities were westernized (Abe 1954; Nicol 1997; Egenter 2012).

Two types of the western-style architecture were accepted. One is a purely western-style, but built by Japanese contractors employed by foreigners. Another type of the western-style architecture is semi-foreign, which is a compromise between Japanese and western-styles. It was developed by Japanese builders who trained with and worked for western contractors. This type shows how Japanese builders understood and adopted western -architecture and technologies within a short time period at the beginning of the Meiji reign. Japan already had an established and successful set of practices, but found some western materials to be more suitable for the nation's needs. Therefore, while the West was emulated widely and freely, only selected aspects of Western culture were adopted. Japan was able to maintain aspects of its non-western identity by selecting only

those elements which appeared most useful. The Japanese practice was advanced by creating a hybrid based on the materials technologies from the West and conventional practices (Buntrock 1996) (Figure 10).

Another type of the western-style architecture is purely western style (Figure 11). Japanese constructors were employed and direct by foreigners. At the beginning, the pure western architecture dominated in the Japanese urban scape, but rapidly the semi-foreign type replaced it. The blending of traditional fabrication practices and Western materials technologies are in fact still evident today (Abe 1954).

Figure 10. An Example of Hybrid Architecture: Foreigner's House, Kobe Foreign Settlement



Source: <http://www.meijimura.com/english/openwin/s032.html>

Figure 11. An Example of Pure Western Architecture: Iwakura Substation of Nagoya Rail Road Co.



Source: <http://www.meijimura.com/english/openwin/s066.html>

The *Ginza* district located between Shinbashi and Nihonbashi, has long been the finest commercial district in Tokyo and was the first western-style district in Meiji Japan. After *Ginza* buildings were largely destroyed in the great fire of 1872, the Meiji government decided to substitute brick buildings for the wooden structures. The reconstruction of *Ginza* was executed by the Building Bureau and the main street was completed in 1873. The district features well-ordered streets, a row of planned trees, sidewalk, gas lamps, as well as brick construction. The rebirth of *Ginza* was an indication of western urban planning methods (Abe 1954).

3.4.3. Josiah Conder: the Father of Modern Japanese Architecture

By 1877, the Englishman Josiah Conder (1852-1920), who was recruited to teach architecture by the Imperial College, had become one of the leading Western influences in Japan. He conducted regular architectural education and was one of the most

outstanding foreign experts. The program he developed is still one of the premiere training grounds for architects in the country today (Buntrock 1996; Reynolds 2002).

Condor was born in London, and arrived in Japan at the age of twenty four -just after finishing his education and training as an architect in London. Uniquely, he received instruction both in the classroom and an architectural practice, which was rare during that time. Condor moved to the firm of William Burges (1827-1881) in 1874 and landed in Yokohama three years later. As a professor, Condor believed that architecture should be a reconciliation of science and art; a scientific education is equally as necessary for an architect and as important as an artistic background. Condor acted as a principal force in laying the foundation of Japan's new architectural style. Because of this, he is commonly referred to as "the father of modern Japanese architecture." He ended up spending his entire career and life in Japan (Tseng 2004).

As an architect, Conder designed over fifty major western-style buildings in Tokyo. During the early Meiji period, Victorian style buildings were the most popular. Conder used a variety of styles including Gothic, Tudor, and Renaissance, as well as Moorish, and of course Victorian. Condor was a teacher at the Imperial College of Engineering. He also trained a cohort of young students, who are referred to as "the first Japanese modern architects." The first class of Japanese architects trained by him in 1879 and his students dominated the architectural scene of Japan for the next 40 years (and even today). Not only as an architect, but also as a professor, Condor left a huge impact on Japanese architecture. *Kingo Tatsuno*, who designed the Tokyo Station, was one of Condor's most well-known pupils (Reynolds 2002; Tseng 2004).

Condor encouraged his students to look to history as a guide to future design. He had deep respect for pre-modern Japanese architecture and called upon his students to explore their architectural traditions. At the same time, Japanese history was treated only briefly as a part of a survey of world architecture in the Engineering College's classroom. Finally in 1889, a full course devoted to Japanese architectural practices was introduced into the curriculum at the University of Tokyo. The intense exploration of Japanese traditional architecture during the Pacific War was an effort to reconnect with a cultural identity placed in suspended animation during the scramble to modernize during the Meiji period (Reynolds 2002)

In addition to teaching at the Engineering College, Condor also served as an Architect to the Public Works Department. His first building in Japan was a school for the blind in 1879. The most significant, which he completed of his early buildings was built in Tokyo near the Edobashi Bridge over the *Sumida* River, the insistence of Kiyotaka Kuroda the president of the Colonization Board of the Hokkaido. The building was structurally everything Japan wanted from Western architecture. Most importantly, it was built of brick, promoted by the government since fire was periodic in Japan (Lerski 1979). Western building was innovative not only in material and form, but also its functionality. Brick construction was signaling both permanence and innovation in building during the Meiji period (Tseng 2004). In his notes on Japanese architecture, Condor discussed the danger of fire:

Some of these large dwellings of the nobles have fallen prey to treachery and wanton destruction, other have been burned to the ground through the introduction of European heating appliances into wooden walls without precautions and protection. The Tokyo Foreign office, one of the purest old Japanese buildings in the capital, which was entirely destroyed this year by fire, is said to have been set on fire from a stove pipe running through a wooden wall without any protection whatever (Lerski 1979, 271).

Condor's buildings were an exercise in Western modes, complete with fireplaces, chimneys, and truss-structure roofs secured by iron bolts, all previously unknown to Japan. Condor also appropriately pioneered the use of Hokkaido oak for his building's frames such as post-and beam. This excellent wood was from the island of Hokkaido, which the Meiji government annexed in 1869. Condor also helped make Japanese structure more resistant to natural disaster. Condor's product, The First Bank of Japan, was the first building in Japan to use a Western invention for protecting a building against earthquakes. After the Great Kanto earthquake in 1923, it was burned inside, and left standing erect with its walls uncracked. This building was resisted and became a part of the Tokyo scenery.

Condor's Ueno Museum in Tokyo, completed in 1881, is important for the rapid development of Japan's Meiji national identity. Operation of the Ueno Museum (Figure 12 and 13) started at the same time as the Metropolitan Museum of Art in New York and the Museum of Fine Arts in Boston and it was the first commissioned project in the modern period of Japan. The building encompassed multiple layers of meaning. The design of the Ueno Museum was a result of the development of a Japanese nation state rather than a single building. This museum presented a high point of excitement in an age

of acculturation and profound changes from pre-Meiji period. It stood as a symbol of new Japan. Meiji officials believed that the aim of the museum was to promote man's wisdom and craft through the teaching of the eye. A museum can link knowledge to progress and national strength, and can serve as a source of income and national pride in the international competitions (Tseng 2004).

This museum demonstrates how the Japanese were capable of implementing European technologies. It was damaged by the Great Kanto Earthquake in 1923 and was replaced by the main building of the Tokyo National Museum designed by *Jin Watanabe* in 1938. *The Ueno museum* stood as a symbol of the newly formed Meiji Japan. The rise and fall of *the Museum of Ueno* made a mark on the discipline and ideology of building in a “Western” architectural style in modern Japan. This museum still fulfills the ideal of a modern national architecture that was established at the beginning of the Restoration (Tsong 2004).

Figure 12. The Museum of Ueno during Meiji period



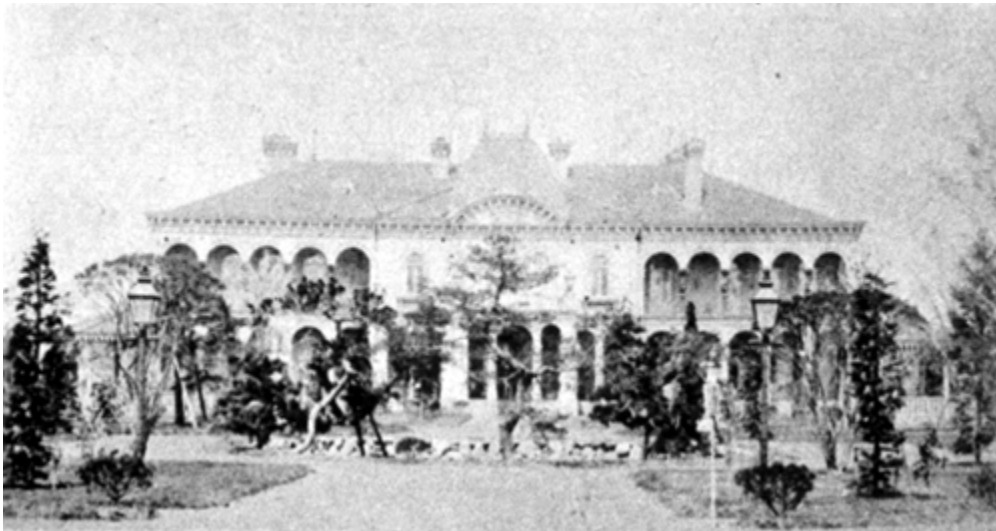
Source: http://www.tnm.jp/modules/r_free_page/index.php?id=150

Figure 13. The Museum of Ueno Today



Source: http://www.tnm.jp/modules/r_free_page/index.php?id=115

Figure 14. Rokumeikan



Source: http://meiji.sakanouenokumo.jp/blog/archives/2006/11/post_368.html

Another national monument designed by Condor was *Rokumeikan* (Figure 14). The entertainment venue was the site of dances and masquerade balls for foreign

dignitaries and ministers of foreign affairs by the government. The building opened in 1883, and was a symbol of life during the Meiji period as it represented the goal of increasing wealth and military strength. Being western affected daily activities of living such as architecture, cuisine, and entertainment. These high-fashion activities took place in the *Rokumeikan* where western style could be visibly displayed. The Meiji government built the *Rokumeikan* to impress citizens of the country and foreigners and to prove the power and stability of the regime. Further, the building proved that the Meiji government was progressive. This building demonstrated that Japan was no longer isolated, but a country worthy of being treated as an equal by the West. The Meiji officials believed that temples or shrines were closely associated with the old feudal time period (Watanabe 1996). Guests were Japanese politicians, nobilities, high-ranking bureaucrats and foreign diplomats (Figure 15).

Figure 15. Dance Party in Rokumeikan



Source: <http://mitiko02.k-free.net/roku1/roku1.htm>

Although the building was originally designed to accommodate foreign visitors, it became a symbol of the Western way of life espoused during the period of *Bunmei-Kaika*. Interestingly however, some suggest that Rokumeikan was a starting point for the rejection of the western influence in Japan. To many Japanese, Rokumeikan became a symbol of absurdity and excess. At this point, Japanese began to appreciate traditional architecture as well as Western style. Rokumeikan was renovated in 1897 and demolished due to its weak foundation in 1935 (Watanabe 1991).

3.4.4. Summary

The Meiji Restoration marks the beginning of the modern period of Japan. As a part of the modernization's presentation, the Meiji government began to make a positive effort to introduce advanced Western styles. These efforts included importing building materials and technologies, as well as inviting foreign experts to design buildings and to train Japanese architects. By looking at the buildings constructed after the Meiji Restoration, the rapid process of modernization can be traced. Meiji architecture was clearly different from the traditional wooden architecture. Brick buildings proved the power and stability of the Meiji regime. Many foreign professionals made a huge impact on the Meiji government's modernization campaign. "The father of modern Japanese architecture," Josiah Conder, helped to design a new urban landscape, including *the Museum of Ueno* and *Rokumeikan* under his guidance. The University of Tokyo, at the time the Imperial College, became the leading architectural educational institution in Japan, which it remains today.

CHAPTER IV
ECONOMIC MODERNIZATION AND IMPACTS ON ARCHITECTURE:
THREE CASE STUDIES

After a half century of modernization, Japan emerged as a militarily first-class nation following its victories in the Sino-Japanese (1894-1895) and the Russo-Japanese (1904-1905) wars. However, Japan could not achieve the goal of the Meiji Restoration only by relying on military force. With military strength, a country must possess wealth including capital (Nakamura 1994). Industrialization in Japan developed primarily as a reaction against the military intimidation by the Western powers, which was directly linked to furthering economic stabilization. It took almost the entire Meiji period to reach the stage of industrial achievement that Japan first sought in 1868 (Hayashi 1979; Sen 1979). This period witnessed increased exchanges with the West that resulted in new social and economic programs, as well as artistic practices that blended Western and Japanese ideas. Three Meiji architectural structures - the Tomioka Silk Mill, the Tokyo Station's Marunouchi Red-Brick, and Meiji-mura - represent a particular time in the built environment reflecting the underlying early modern period of Japanese culture and the prevailing social phenomena of the nation.

Meiji Japan embarked on *Fukoku-Kyohei*, a system of enriching the nation and building up the army, and *Shokusan-Kogyo*, promoting industry. In the late 19th century,

the Tomioka Silk Mill provided a solution for development of capital. The mill was an example of integration of Western technology applied to traditional craft. The Tomioka Silk Mill became the crucial component of the Japanese economy until relatively recently. Because of its important role in Japan's modern history, the Tomioka Silk Mill was designated a national historic site, and its preservation causes some issues. However, the Mill was not only Japan's economically pivotal facility. Western industrial culture also spread from Tomioka.

The Tokyo Station's Marunouchi "Red-Brick" building represents the achievement of the modernization of Japan and illustrates a social phenomenon of the country in a few different aspects. The Tokyo Station was built as a symbol of Japan's victory in the Russo-Japanese War over Russia, a powerful Western nation state (Ando 2010). This indicated that Japan was finally able to catch up to powerful Western nation states, which was the goal of the Meiji Reformation government. Architecture represents two levels of significance: it refers to symbolic meanings attached to the structure and provides a historic record. The symbolic use of heritage is an expression of a conservative national identity of a specific time period.

During the economic growth of the 1960s and 1970s, Japan reached a level of maturity when the nation recovered from World War II and began to play an important role in the global economy. When Japan arrived at this level, the country started to be able to pay attention to and appreciate its past. The Meiji-mura, now a tourist attraction in the Aichi prefecture, presents an example of the early modern (1868-1945) architecture of Japan. This chapter will examine the history of those three structures from the Meiji

period in Japan, how they affected the rest of country, and the debate surrounding their preservation.

4.1. Expansion of the Economy: the Tomioka Silk Mill

4.1.1. The Tomioka Silk Mill: Background

The Tomioka Silk Mill was a major government-owned factory in the field of raw silk-reeling during the Meiji period, and represents the economic progress of newly formed Meiji Japan. The mill began operating on October 4, 1871, and was the first large-scale mill facility in the country. Within a short period, Japan became the world's largest exporter of raw silk. In order for Japan to progress towards Westernization, there was a need to increase capital creation. The wealth generated from the sale of raw silk was part of the solution to this problem.

However, it is misleading to state that modern Western technologies were responsible for this success in Japan after the Meiji Restoration. Silk-reeling was a traditional indigenous industry dating back to much earlier times, therefore, it is necessary to ascertain the technological level reached before the advent of Western technology to fully understand its real influence. Prior to the Restoration the sun-drying method was used in which fresh cocoons were exposed to the sun in order to kill them by the warmth. This method lowered the quality of the cocoon, and it was not as effective as using steam (Hayashi 1979; Sen 1979; Nakamura 1994).

During the Meiji period, the government not only began importing manufactured goods, but also more importantly began to acquire the knowledge of and technology required to provide goods within their national borders. For manufacturing silk, the

Western idea was used to process silk more efficiently in order to encourage higher profit. The Tomioka Silk Mill was one of three areas in which foreign technology was effectively introduced during the Meiji period. Silk mills were the leading sector in the first half of industrialization in Japan. Silk production was recognized as an export industry and was the most important earner of foreign currencies. Silk-reeling technology in Japan lagged behind that of China, but it was able to capture the international market for the following reasons: 1) The stagnation of silk production in China due to the Taiping Rebellion (1851-1864); 2) the spread of the corpuscle disease in France, the major producing area in Europe; and 3) the cheap price of Japanese silk, which was almost one half the international price (Nakamura 1994).

Figure 16. Tomioka Silk Mill



Source: <http://www.tomioka-silk.jp/hp/en/gallery/01.htm>

The Tomioka Silk Mill, a fully mechanized steam-powered filature set up and operated by the Japanese government, played an important role in introducing modern technology. The Tomioka plant was a large-scale, Western-style complex built of red

brick. It comprised a total of 17 buildings, including cocoon warehouses, a boiler room, and buildings for cocoon-drying, silk-reeling, and re-reeling, dormitories for the workers, and an official residence for the French employees, who were recruited by the Japanese government to improve the silk industry of the country (Figure 16). Machinery could be effective only to a limited extent in silk-reeling. During the Tokugawa regime, the industry relied solely on hand-reeling. Because of this, however, Japan exported only a small portion of Europe's supply, mainly because production was low and not as dense as other silks. The government tried to disseminate new technology in the Tomioka Silk Mill. All machines and equipment were imported from France, and French experts were also invited (Hayashi 1979; Tomioka Silk Mill 2013).

4.1.2. Significance of the Tomioka Silk Mill

The city of Tomioka was located in Gunma prefecture, approximately sixty miles north of Tokyo. Tomioka was chosen as the location for the following reasons: 1) Tomioka and its vicinities could secure the necessary cocoon to make raw silk, 2) wide scale land could be secured for the construction of the factory, 3) the water necessary to make silk could be secured from nearby rivers, 4) necessary coal for the fuel could be obtained from the nearby Takasaki Mountain, 5) necessary labors were already existed in the southern Gunma region, and 6) the location is relatively close to Tokyo (Tomioka Silk Mill 2013).

The technological development of silk-reeling during Japan's early modernization followed a distinctive pattern. Unlike other modern industries introduced from the West, silk-reeling was characterized by a combination of indigenous Japanese technology

developed during the Tokugawa regime and advanced Western technology. This development can be divided into three periods. The first period was the early 1870s, when Western technologies were introduced. During the second period, between 1875 and 1900, mechanized silk-reeling was transformed and adapted to Japanese indigenous conditions. Many smaller scale mills were built throughout Japan by using this unique blend of western technology and indigenous tradition. In the third period, from the early 1900s to 1945, there were major improvements and innovations in mechanized silk-reeling. It is important to view the process of introducing and adopting foreign technologies together with the historic and social conditions of the recipient country (Nakamura 1994).

The Tomioka Silk Mill is evidence that the adaptation of western architecture and construction technology in Japan did not necessarily mean that Japan totally westernized. Western architectural styles and building materials were introduced at the beginning of the Meiji period, but the mill created a hybrid style. The style applied to the familiar method in Japan of constructing wooden frames and then layering the bricks between them. This method is known as “e-brick” building construction (Figure 17). The e-brick method fluctuates between Japanese and Western methods. The main materials for the building construction consist of straw mat, lumber, bricks, and tiles. Windows with metal frames and hinged doors were built. The lumber consisted of large cedars. Several hundred thousand bricks were allegedly made there. Jointers between the bricks were made of plaster instead of cement. Bricks were laid using a French method known as Franc Dollar Piling to bring elegance to the buildings. Applying a hybrid style was

intended to overcome the forces of Japanese nature with the mass and inflexibility of brick, stone, and iron.

Figure 17. An Example of E-Brick



Source: <http://www.tomioka-silk.jp/hp/building/index.htm>

Wooden buildings were perceived as flexible, fragile, and temporary. Therefore, in some aspect of construction technology, foreign knowledge and architecture was not perfectly suitable to the Japanese environment (Wittner 2007; Tomioka Silk Mill 2013). The way in which architecture and construction was modified made it uniquely Japanese.

The infrastructure of the Tomioka Silk Mill was revolutionally in many different aspects. For example, the main thread factory was 140.4 meters long, 12.3 meters wide, and 12.1 meters tall. There were about 300 iron spinning instruments, while advanced European factories only included 50 to 150 instruments (Figure 18). The scale of the factory was magnificent for the time period. Underground drain systems, which were very advanced technology during the late nineteenth century, were installed. Not only was the scale of the production larger, but the facility also featured an advanced hygiene environment.

Figure 18. Tomioka Silk Mill Today



Source: <http://japanlivenews.com/japan-news/travel/places-in-japan/tomioka-silk-mill-recommended-world-heritage-site>

For example, labor circumstances were very different from the traditional Japanese work force. Treatment costs from injuries and medical fees were all included. Limited working hours were also introduced (Nakamura 1994). All of these aspects are directly related to the Japanese welfare program today.

The contribution of the Tomioka Silk Mill cannot be underestimated. When the first government-operated mill was established, its activity introduced Western technology, while taking local conditions and indigenous technology into account. With the diffusion of mechanized silk-reeling from government filatures to local and private enterprises, the new technology was further modified and adapted to local conditions. This process was particularly evident after the 1870s, when the development of the industry was due mainly to the efforts of middle-class farmers turned entrepreneurs.

Lacking adequate financial resources, however, these silk-reelers of rural origin could not afford to tie up their scarce capital in costly investments for infrastructure and equipment. They needed to simplify and adapt western technology to reduce the amount of financial investment required. This was a very unique characteristic of technological development in Japanese silk-reeling (Hayashi 1979; Nakamura 1994).

The Tomioka Silk Mill was responsible for the spread of the technological developments to smaller mills across the country. Young female workers comprised the great majority of the work force in the silk-reeling sector. They were from different parts of Japan and were seasonally contracted. They earned money, but also took techniques home with them. These female laborers saw differences between the Tomioka Silk Mill and smaller regional mills, which featured a more local style of architecture. The equipment and buildings of the newly established mill in Mastushiro, Nagano, for example, were inferior to those of the mill at the Tomioka. Wood was used in place of copper, iron, and brass. Wire was substituted for glass and brick floors became earth floors (Hayashi 1979; Nakamura 1994). These local mills were loose copies of the Tomioka Silk Mill.

Though they tried to save money in the construction of the facilities, silk was produced fairly well at the regional mills. And those who adhered to the indigenous technology realized that the silk produced in these poorly equipped mills was still sold to the foreign buyers at a handsome price (Nakamura 1994). Vigorous efforts were made to encourage home production. There were good reasons for this. First, imported machines and plants were extremely expensive. Second, technology was often obsolete by the time

it was imported. It took a long process of trial and error to learn the best way to reproduce imported finished goods and machinery. For example, an attempt to manufacture textile machines was made in the government machine tool factory, but it resulted in complete failure (Hayashi 1979). Interestingly, however, with the success of small local mills, the Tomioka Silk Mill consistently faced chronic deficit.

4.1.3. Issues of Preserving Tomioka Silk Mill

The Tomioka Silk Mill played an important role in the textile industry for 115 years. In 1987, the mill finally closed its operation because producing silk was no longer profitable for the facility. Its most important role was one of modernization, though it did not enjoy great financial success. The mill has been preserved in excellent condition. The historical role of the Tomioka Silk Mill should be highly evaluated, regardless of its negative history. Currently, the mill is owned by the city of Tomioka. In 2006, the entire site, which includes the mill, silkworm-egg storage, and the old railroad system, was designated as a Historic Site and an important cultural property of Japan. More importantly, there is a possibility that the factory will be designated as a World Heritage site in the near future. The site includes the main silk mill and three facilities in the Gunma prefecture. Each of the facilities became the prototype for its purpose, and modification of the building types spread throughout Japan (Yoshida 2010). Without them, Meiji Japan was incapable of mass production of high-quality silk during the period. It not only affected Japan's technological innovation, however, but also improved the development of the international silk industry. The United Nation will examine whether the mill will qualify as a World Heritage Site in 2014. The Tomioka Silk Mill is

one of the finest examples of preservation in Japan because the property was maintained without significant alternation to its condition (Fitch 1990, 46; Tyler et al. 2009, 191-192; Tomioka Silk Mill 2013).

However, there is a negative side to preserving the mill. First of all, preserving an entire factory costs about 100 million yen (100 million U.S dollar: As of October, 2013) each year. Although residents of Tomioka are enthusiastic about qualifying for a World Heritage site, businesses near the factory are not responding enthusiastically to the movement because of the strict preservation rules that apply to surrounding areas, including height limitation of buildings. Another dark side of preserving the Tomioka Silk Mill is the expansive size of the property (Yomiuri 2004). Since the site is big, it is very difficult to use for another purpose. Also, what if the site is not designated as a World Heritage Site? Who will cover the maintenance cost?

4.1.4. Summary

The Tomioka Silk Mill provided the capital in order to achieve *Fukoku-Kyohei*, a system of enriching the nation and building up the army, and *Shokusan-Kogyo*, promoting industry. The mill diffused integration of Western technology to the traditional silk craft across the country. In order to spur economic development, the mill also became the focal point for creating a unique industrial architecture in Japan. Additionally, an idea of the Japanese welfare system today could be traced from the mill. The Tomioka Silk Mill is not simply trying to preserve a facility of industrial development, but also to preserve a built environment of the Restoration. This approach of protecting a wider area makes the mill more interesting and a unique site.

4.2. Importance of Transportation: The Tokyo Railroad Station

4.2.1. The Tokyo Railroad Station: Background

Tokyo Station and historical “Red-Brick” is located in Marunouchi, the main business district. The station faces the Imperial Palace, formerly known as the Edo Castle, the previous name for Tokyo when Kyoto was the country’s capital (Y. Date 2012). Since the beginning of the seventeenth century, the entire area, including where the station currently stands, has been one of the most important and busiest transportation centers in Japan. Operation as a train station started in 1914. It continues to play a role as a radiating central power in Japan’s economy.

The Red-Brick was a survivor of both a natural disaster and World War II. Despite leaving extensive damage throughout the region, the great Kanto earthquake of 1923 did not cause any major damage to the building. However, the attack by the U.S. Air Force during World War II caused serious structural damage, yet the station did not lose functionality. Today it is very difficult to find a building that is evidence of the war besides the Hiroshima Peace Memorial. The Red-Brick is an exception and is a survivor of the national tragedy. During the 1960s and the 1970s, the Red-Brick faced another problem. The entire area of the Marunouchi business district transformed its landscape due to the very rapid development of Japan’s economy. The Red-Brick is the only building surviving from the period of the Edo to the economic expansion during the middle of the twentieth century. The Red-Brick building represents the history of Tokyo and by extension, the history of Japan. (Table 8).

Table 8. History of Tokyo Station

1889	Place Decision of the Station
1907	Foundation Work Start
1914	Operation Start
1923	The Great Kanto Earthquake
1933	Appoint in aesthetic area
May 1945	The airstrike by the US air force
March 1947	The repair work nearly completed
1960s-1970s	Debate: Preserve or demolish
1990	Investigation for the reconstruction
2003	Designation for the Important Cultural Property
2007	Renovation Start
2012	Completion of the Renovation

Source: Ando (2010), Y. Date (2012)

4.2.2. Historical Background: Meiji through World War II

The goal of the Meiji government was known as *Fukoku-Kyohei*, or “wealth and military strength” in order to catch up to advanced western nation states. Due to cutting outside contact, Japan was isolated from world affairs for nearly two hundred years except in the port city of Nagasaki where Dutch and Chinese traders were permitted.

Through the city, however, the Tokugawa regime was able to obtain information from abroad. What threatened the Tokugawa and the entire country was the expansion of the West during the nineteenth century. Even the great country of China was no match for the Western countries during the Opium Wars. Long before the arrival of Perry in 1853, Japan realized that without improving military power, the country would soon become another China (Gomi 2006).

As a part of *Fukoku-Kyohei*, the Meiji government attempted to transform Tokyo into a modern world city. The government hired professionals and imported advanced knowledge and technology from abroad, particularly from advanced European nation states. The best known professionals were Thomas Waters, Baron George and Eugene Haussmann of France, James Hobreht of Germany, and Josiah Condor from Britain. These individuals were planners and architects who established modern London and Paris and heavily influenced early planning in Tokyo. Traces of these professionals can still be seen in the Ginza district in Tokyo, one of the most active commercial centers during the early Meiji era and today. The middle of the Meiji period was the transition period from the pre-modern city of Edo to the modern city of Tokyo.

Transformation of Tokyo into a modern world city was necessary in order to achieve *Fukoku-Kyohei*. Not having a city like London or New York put Meiji Japan at a disadvantage. Yet at the beginning of the Meiji period (Brown 1962) the government did not have much authority to reform the city within a short time due to financial instability and a lack of authority and trust from the people. Finally, after twenty years, the Meiji government introduced urban improvement laws and ordinances including a fire

prevention ordinance in 1881 and an urban improvement plan in 1888 known as *Shiku-Kaisei* (Table 9).

Table 9. History of Urban Improvement and Planning in Tokyo

1870	Fire prevention zone created in Kanda
1871	Road repair and improvement plan
1872	Ginza Brick District Plan
	Land tax and land titles established
1878	Regulations on street management
1878~	Building regulations for reconstruction
1881	Slum Clearance Plan for Kanda
	Tokyo Fire Prevention Ordinance
1888	Tokyo Urban Improvements Law (Shiku-Kaisei-Jyorei)
1919	City Planning Law
1945	Post-war Reconstruction Plan
1961	Urban District Remodeling Law
1968	New City Planning Law
1969	Urban Redevelopment Law
1975	Urban Redevelopment Law (amendment)
2002	Urban Renaissance Special Measure Law

Source: Ando (2010), Y. Date (2012)

The original plan for the Tokyo station, to be located in the center of the city, started in 1889 as part of Meiji's *Shiku-Kaisei*, city planning and improvement. The intention was to connect the Ueno station where trains ran to the northern part of Japan and the Shinbashi station whose trains traveled to the western part of the country. The area was essentially open before the Tokyo station was constructed. Its only use was barracks and parade grounds for the Japanese military. Also it was very wasteful not take advantage of such a wide open space in the middle of Tokyo. Separation of the two train stations was very inconvenient for people and slowed Japan's economy down because two major stations (Ueno and Shinbashi) were located separately.

The Meiji Emperor requested that the new station should look like a majestic western- style building. The architect Kingo Tatsuno (1857-1927) was hired to design the station. The original floor plan -designed by Tatsuno but inspired by his teacher, the German planner Franz Baltzer (1857-1927) - included one underground level and three above ground. The station had an entrance on the south side and an exit on the north side, as well as a gate for the Imperial Household at the center. The station was a huge structure for that time. It had a total length of 335 meters and internal space of some 180,000 sq. meters. The Tokyo Station was completed in 1914, and was named as the Central Station of Japan. It took thirty years for completion after the proposal was made due to social instability and lack of finance of the Meiji government. Because of its massive size, the station became an indication of a global city and the symbol of a major victory over a powerful western nation state (Ando 2010).

4.2.3. Restoration Efforts

The Great Kanto earthquake in 1923 did not cause any serious damage to the station but the third floor and some part of roofs and the ceilings were destroyed in an air raid during the war. Japan's World War II defeat marked the start of reconstruction of bombed and worn-out facilities. Restoration of key facilities, such as tracks, took priority and there was little budget for station restoration. However, the pace of urban reconstruction was astounding and demand from communities for station renovation was strong because stations formed the city "face" and the core of the Japan's transportation network. The third floor was heavily damaged due to fire and needed to be torn down. However, the core part of the brick wall was significantly steady because it was a high quality structure. The repair took place during a time when there was an extreme shortage of construction materials after the war. It was believed that the third floor was likely to be saved if there were enough supplies. Since then, the station had been used with a two-story "temporary" restoration, but the "temporary" structure lasted for 67 years. These two factors - a high quality core part of the building and long lasting temporary floor - prove how high level the engineers were who were involved at the station (Y. Date 2012).

After the recovery from World War II and the experience of rapid economic growth in the 1950s and 1960s in Japan, the Tokyo Station and its surrounding area faced many redevelopment projects. Developers threatened to demolish the station. One plan was to demolish the entire historic structure, and to construct a totally new building on the same site. One plan included a twenty-four story building replacing the Red Brick. The aesthetic area or city beautiful movement had not started in Japan during this time

period. What was worse, the height regulation of building was abolished in 1963. The three story building did not seem to be appropriate to stand against the social trend of the time period. Those who supported demolition of the red-brick argue that there was no time to enjoy nostalgia; instead constructing a new and more efficient building was better for the country. Protecting a static scenic urban landscape was still extremely rare in the 1960s and 1970s (Y. Date 2012).

Some people argued that the Red Brick was obstructing further economic development of Tokyo. Creating better transportation flow was necessary in order to boost Japan's economy. The station was already under-capacity for carrying passengers because the original station in 1914 was set up for only an estimated 12,000 maximum passengers. Today, approximately 400,000 passengers use the station for daily use. It is said that brick buildings are inflexible and difficult to remodel. The mainstream of urban planning was demolishing the old and constructing the new. Also there was a huge boom of development and real estate in Tokyo then. For realtors, the location where the Red-Brick stood had a huge potential for development. Some also argued that they were not satisfied with the station's safety. The station did not match the safety code of the 1960s and 1970s (Y. Date 2012; Kashima 2012).

On the other hand, many citizens throughout the country supported preserving the "Red Brick" building because it was and is the witness and the symbol of recovery of the disaster of the war. This is enough to save the building for the future. The building carries many memories for the country and for thousands of citizens. Additionally, many

foreigners cannot understand why some Japanese insisted on wiping out traces of the great Meiji period (Y. Date 2012).

In 1987, the movement to preserve the Tokyo Station's historic red brick building began. The Tokyo station reflects urban planning/improvement in the central part of Tokyo. According to Kamata (2007), the Tokyo Station represents the main character of entire metropolitan Tokyo and reflects the image of the global city. The main goal of this restoration project was how to renovate the station and how to make the building perpetually in full use. This restoration movement is totally opposite to the phenomenon in the 1960s and 1970s (Kamata 2007; Matsutani 2012).

The main focus of the restoration, returning the building to the building to the original condition, was to restore the station to its original three-story height. It focused on loss of the roof and ceiling during the war (Fitch 1990, 46; Tyler et al. 2009, 194). Also new technologies, earthquake resisting capacity, and seismic isolation design were introduced for this project. It was said that operation and maintenance of Red-Brick had become costly and difficult in recent years (Kamata 2007; Y. Date 2012). The station was under restoration for five and a half years and finally reopened on October 1, 2012. Station buildings intended to increase passenger convenience with restaurants and shops while increasing railway operator income started appearing at the same time.

After being restored to its appearance of a century ago, the station became a new tourist spot, and its pulling power brought cheer to facilities around the station. The number of passengers using short-distance tickets at the station increased by 37 percent. Expectations are growing that the economic effects generated by the renovated station

building will spread further. The potential station space -some 180,000 sq. meters- was sold to the operators of six buildings, including the Marunouchi Park Building, Shin Marunouchi Building, Gran Tokyo North Tower and Gran Tokyo South Tower. The impact is already being felt. Station traffic excluding commuters and bullet train riders jumped about 40 percent in the opening week compared with the previous year, suggesting numbers will grow if long-distance travelers are included. Many of the visitors are middle-aged and senior couples. Today, approximately 400,000 passengers use the station for daily use. The Tokyo Station is home to the so-called bullet train, also known as “*Shinkansen*,” many local and regional commuter lines, an Express to Narita Airport, subways and many bus lines and taxi centers. Hotels, restaurants, and dozens of department stores (just like strip malls in the United States) are attached (Sasaki 2012).

The renovation of the historic “Red Brick” building received much attention. According to Norman Tyler, “restoration refers to the process of returning a building to its condition at a specific time period, often to its original condition” (Tyler 2009, 194-195). Many citizens’ support preserving the historic building, but not its renovation. They argue that the building represents the tragedy of the war similar to the Hiroshima Peace Memorial. Therefore the building must remain how it had been as a “temporary” two story building. Regardless of people’s opinion, a new phase of the historic “Red Brick” has started. The renovation project took over five years and caused inconveniences for people including creating traffic flow jams, but that is over.

4.2.4. Summary

The historic “Red Brick” went through four phases. The plan for constructing the Tokyo central station started in 1889. The Meiji Emperor requested that the newly built station should look like a western style building. The father of modern Japanese architecture, Kingo Tatsuno, designed the station with one underground level and three above ground. The first phase of the “Red Brick” building (Figure 19) was from the beginning of the historic operation until May 25, 1945 when the entire area of Marunouchi was attacked by the U.S Air Force.

Figure 19. The First Phase of the Red Brick (1914-1945)



Source: <http://japan-web-magazine.com/japanese/tokyo/tokyoeki/index.html>

As a result, the third floor, some part of the roof and the ceiling were lost. On 1945, May 25, incendiary (fire) bombs were dropped by the B-29s, but two days after the attack, five trains began to depart from the station. It was ‘temporarily’ repaired, expected to last only for a few years, but remained over sixty years. The second phase (Figure 20) was relatively short. It lasted only three years from 1945 to 1947 until repair of the damage was completed. The repaired structure expected to last for a short period, but instead stood there for sixty-one years. This third and longest phase (Figure 21) remained until 2007 when the latest renovation project started. The fourth phase (Figure 22) began when the renovation was completed in 2012 (Y. Date 2012).

Figure 20. The Second Phase of the Red Brick (1945-1947)



Source: <http://takesanpo.blog.fc2.com/blog-entry-250.html>

Figure 21. The Third Phase of the Red Brick (1947-2012)



Source: <http://japan-web-magazine.com/japanese/tokyo/tokyoeki/index.html>

Figure 22. The Fourth Phase of the Red Brick (2012-)



Source: <http://japan-web-magazine.com/japanese/tokyo/tokyoeki/index.html>

Tokyo Station's Marunouchi "Red-Brick" building has observed many national phenomena. The station was constructed for the achievement of the *Fukoku-Kyohei*. The

“Red-Brick” was a survivor of the natural disaster and World War II, economic development in the 1960s and 1970s and “lost decade” of recent years. Today, it is very difficult to find a building that represents early modern Japan. By looking at the history of the Red-Brick building, it can be seen that this structure contains the entire history of Tokyo and the modern history of Japan.

The “Red-Brick” represents not only the achievement of Meiji Japan but also illustrates a social phenomenon of the country in many aspects. Forty years after the Meiji period started, the first operation took place in 1914. This duration of time demonstrates the difficulty and effort of the Meiji government to catch up to the advanced western nation states. As mentioned, the Meiji Emperor requested that the newly built station should look like a western style building. Many people argue about why the Japanese adapted non-Japanese architecture. However, unless one has knowledge of the situation of Japan during the middle of the nineteenth century, it would be very difficult to understand why Japanese accepted Western culture. Being a part of the West was the only way to survive. After World War II ended, a two-story ‘temporary’ restoration took place. However the ‘temporary’ structure lasted for sixty-seven years. This proves how high the level Japanese engineers were. The “Red-Brick” is not simply a building from the early modern period of Japan, but it is the one of the most important cultural properties in Japan.

4.3. Mutuality of National Identity: the Meiji-mura

4.3.1. The Profile of Meiji-mura: “Greenfield Village” of Japan

The “Greenfield Village” of Japan, Meiji-mura (Mura refers to village), is an outdoor museum, presenting a great example of conservation, preserving historic buildings and cultural materials for the future (Ikegaya 2012). As of March 2013, it consists of sixty-seven relocated buildings and associated infrastructure from the early modern period (Meiji to early Showa period, 1868-1945) in five village’s areas within the property (Table 10).

Table 10. List of Architecture in Meiji Mura (as of November 1, 2013)

Stage	Name	Address
1	Main Gate, Eighth National High School	1
	Ohi Butcher Shop	2
	Mie Prefecture Normal School	3
	Imperial Guard Headquarters' Annex Imperial Palace	4
	Sentry Box of Akasaka Palace	5
	St, John's Church	6
	Principal's Official Residence, Peers' School	7
	Reception Hall of Marquis Tsugumichi Saigo House	8
	House of Ogai Mori and Soseki Natsume	9
	Entrance Porch, Tokyo School for the Blind	10
	Lamp of Nijubashi, Imperial Palace	11
	Shinbashi Factory of the Japan Railway Bureau	12
	Mie Prefecture Office	13
2	Auditorium, Chihaya-Akasaka Primary School	14
	Physics and Chemistry Theaters, Fourth National High Sch.	15
	Higashi-Yamanashi District Office	16
	Dr. Shimizu's Office	17
	Tomatsu House	18
	Nakai Sake-Brewer	19
	Aizu Branch of Yasuda Bank	20
Telephone Exchange, Sapporo	21	

	Shichijio Police Box	23
3	Streetcars of Kyoto (Not in Operation)	24
	Kitasato Institute	25
	"Kagyo-an (Snail Cottage)", Rohan Koda House	26
	"Zagyo-so" Villa of Prince Kimmochi Saionji	27
	Tea-House "Ekiraku-an"	28
	Shinagaw Lighthouse	29
	Official Abode of Sugashima Lighthouse	30
	No. 25, Nagasaki Foreign Settlement	31
	A Foreigner's House, Kobe Foreign Settlement	32
	Entrance Porch, Religious College	33
4	Musei-do, Gymnasium for Martial Arts, Fourth National High School	34
	Ward, Japan Red Cross Society Central Hospital	35
	Barrack, Sixth Infantry Regiment	36
	Ward and Administration Office, Nagoya Garrison Hospital	37
	Japanese Evangelical Church, Seattle	38
	Japanese Immigrant's House, Registro, Brazil	39
	Japanese Immigrant's Assembly Hall, Hilo, Hawaii	40
	Rokugogawa Iron Bridge	41
	Steam Locomotive No. 1 of the Bisai Railways	42
	Steam Locomotive No. 12 and Third Class Passenger Coaches	43
	Shinbashi Factory of the Japan National Railway (Machinery Hall)	44
	Shinagawa Glass Factory	45
	Uji-yamada Post Office	46
	Barber Shop "Kinotoko"	47
	Summering House of Lafcadio Hearn (Not in Operation)	48
	Kureha-za Theater	49
	Bathhouse "Azuma-yu"	50
5	St. Francis Xavier's Cathedral	51
	Main Gate, Kanazawa Prison	52
	Konasami-jima Lighthouse	53
	Tendo Arch Bridge	54
	Shin-Hashi Bridge	55
	St. Paul's Church	56
	Head Office of Kawasaki Bank	57
	Lamp of Stone Bridge, Imperial Palace	58

Cabinet Library	59
Tokyo Central Station Police Box	60
Associated Ward, Maebashi Prison	61
Central Guard Station and Ward, Kanazawa Prison	62
Miyazu District Court	63
"Kikunoyo" Brewery	64
Oguma Photo Studio	65
Iwakura Substation of Nagoya Rail Road Co.	66
Main Entrance Hall and Lobby, Imperial Hotel	67

Source: <http://www.meijimura.com/english/list/index.html>

The purpose of the Meiji-mura is to protect endangered buildings from urban renewal linked to high economic growth starting from the late 1950s. The majority of the structures were removed from Tokyo, though some are from twenty-nine different locations in Japan and from abroad. During the Meiji period, a large number of Japanese moved overseas, including to Hawaii and Latin America (particularly Brazil) in search of jobs in agriculture. Those emigrants kept their Japanese architectural roots in their newly adopted lands. The foreign-born Japanese buildings, such as an Assembly Hall from Hawaii, the Japanese Evangelical Church from Seattle (Figure 23), and a Japanese immigrant house from Brazil (Figure 24), were relocated to Meiji-mura beginning in 1957 (Herrington 2008; Tyler et al. 2009; Meiji-mura 2013).

Figure 23. The Japanese Evangelical Church, Seattle Washington, U.S. Built in 1907



Source: <http://www.meijimura.com/english/openwin/s067.html>

Figure 24. The Japanese Immigrant's, House, Registro, Brazil. Built in 1919



Source: <http://www.meijimura.com/english/map/index.html>

Meiji-mura was officially opened in March 1965. It is located near Nagoya in the north of Aichi prefecture. Its location amidst 1,000,000 square meters of rolling hills,

lakes, and forests provides a pastoral landscape that makes the village seem as if it has always been there, and includes great architectural and historical features. Meiji-mura began to receive over one million visitors during the fiscal year of 1989-1990. Visitors pay between 520 and 1,650 yen (as of April 2013, approximately 100 yen equal to \$1.00 U.S. dollars) for an entrance ticket (Ehrentraut 1994; Herrington 2008; Tyler et al. 2009; Meiji-mura 2013). This historic village certainly provides a positive boost to the local economy. The most well-known artifact of the *Mura* is the façade of the Second Imperial Hotel (Figure 25). Built in Tokyo in 1923, the hotel was known for two things. One was that American architect Frank Lloyd Wright designed the building. It was commissioned in 1916 as a symbol of Japan as a modern nation and its relation to the West.

Figure 25. The Façade of the Second Imperial Hotel



Source: <http://www.meijimura.com/english/openwin/s067.html>

The Second Imperial Hotel was constructed mainly of volcanic stone and concrete. By looking at the building, one can see that the eclectic Wright had several stylistic influences including traditional Japanese and Western Art Deco, as well as Mayan motifs. Also, the hotel is known for surviving the Great Kanto Earthquake in 1923. For several decades it was viewed as modern and sophisticated, as well as grand. The hotel was used as the site of the headquarters for the U.S. army of occupation following the end of World War II. However, the Second Imperial Hotel was demolished in 1968 due to declining popularity and structural damage due to subway construction beneath the building. The façade, entrance, lobby, and the pool are all preserved in Meiji-mura (Herrington 2008; Meiji-mura 2013).

4.3.2. Negative View toward Meiji-mura

Prior to the opening of the Meiji-mura, many early-modern structures were demolished because their architectural value was particularly underestimated due to the Second World War. By the 1960s, Japan was also facing the pressure of expanding and modernizing its urban landscape as well as rapid population growth. Meiji-mura represents an unusual departure from other museums because its collection involved moving large materials reflecting Japan's emergence as a modern nation from their original sites (Ehrentraut 1994).

There is no doubt that Meiji-mura successfully preserved important artifacts of the past as art, but questions arise concerning the role of landscape. Despite its significant contribution to preserving historic buildings from the early modern period, Meiji-mura has received a great deal of criticism. Any open-air museum fulfills an important

educational need, and experiential learning is particularly effective for younger generations. However, theme parks tend to portray an unspecific story regarding their history. According to geographer David Lowenthal (1985), one of the defining characteristics of a theme park is its vagueness. Additionally, removing buildings from original sites and relocating them to other locations detached them from their primary purpose. Do we lose an important dimension of infrastructure and architecture when their functions are removed and they are stripped of their context? Do these artifacts become like paintings of the early modern period which were removed from original sites? Is the fabric of people's daily lives transformed into the Meiji-mura? Unfortunately, the assembly of different artifacts in the village that never existed sometimes obscures historical fact. Historic structures should not make us forget that when objects are removed and displayed in the context of an exhibition, they become transformed and acquire new meaning. As a result, removing the buildings and infrastructures from their sites and relocating them to the museum landscape literally detaches them from the primary purpose for which they were built. Yet the purpose of Meiji-mura is protecting infrastructure from complete demolition, not providing context in a surrounding environment. There is no doubt that Meiji-mura is successful in preserving important artifacts from the Meiji period (Ehrentraut 1994; Herrington 2008).

Immediately after their defeat in 1945, the Japanese could hardly bear to think of this period except as a breeding ground for mistakes. Having faced military defeat for the first time in its recorded history, not to mention occupation by a foreign power, Japan was forced to reconsider philosophically and pragmatically, as it had in the Meiji period,

its relationship to the rest of the world. Because of this social movement, people tended to see the Meiji as a dark side of Japanese history (Siegenthaler 2004). Buildings from this period became outdated especially during the time of economic growth after the war. A rising trend of the rejection of non-Japanese culture and expressions of Japanese uniqueness began to rise. As far as the outdoor museum is concerned, Meiji-mura is a peculiarly Japanese phenomenon (Ehrentraut 1994; Herrington 2008). Especially starting from the 1970s, the rural landscapes became widely idealized, while its architecture was preserved in museum collections that universally transformed obsolete buildings, often uninhabitable and at the verge of collapse, into heritage structures imbued with symbolic regional and national significance.

4.3.3. Summary

Meiji-mura attaches symbolic meanings to its structures from modern Japan. There is no doubt that Meiji-mura is successful in preserving important artifacts from the past as art, but questions arise concerning the role of landscape. However, the village also provides social identities, the characteristics and habits of the nation. It was necessary to create this type of theme park in order to save unique architecture examples in Japan. The time period witnessed increased exchanges with the West that resulted in social and economic programs as well as artistic practices that blended Western and Japanese ideas as a nation. However, the negative reaction toward the Meiji-mura still exists due to the dark side of Japanese history. Starting from the late 1970s, however, the movement of historic preservation including saving modern architecture began to rise in Japan. Thus

the role of the Meiji-mura constantly changed from its beginning, and hopefully the future generation will have better appreciating for what the village provides for them.

Architecture is truly a formation of social identities; strong sentiments become attached to buildings and shape the character and habits of the nation (Ehrentraut 1994). The brick and stone materials used in the Meiji period are not prime sources for today's architecture, which uses steel frame and concrete construction. The age of the brick and stone building lasted only sixty years in Japan. When the Great Kanto Earthquake hit in 1923, many western influenced buildings were destroyed. However, Meiji architectures should be preserved because those buildings represent a particular time in history and reflects the underlying early modern period of Japanese culture and the prevailing social phenomena of the nation.

CHAPTER V

SUMMARY AND CONCLUSION

The cultural landscape constructed during the early modern period (1868-1945 CE) in Japan represents the most important stage of the nation's modernization, which blended both traditional and Western aspects. Therefore these structures and their context should be valued and further examined in the academic literature. Studying the architecture of Meiji Japan permits doing more than simply analyzing buildings. Meiji was established with social and international relations during the mid-nineteenth century; it was not only supported by social relations in Japan but it was created by international phenomena during the particular time period. Cultural identities, social development, and architectural records are intertwined. The Meiji period was the bridge between traditional and modern Japan, and was the bridge between Japan and the West. This period presents the essential character of an early modern cultural landscape in Japan.

In order to catch up to Western powers, Meiji Japan established two goals for the Restoration. One was *Fukoku-Kyohei*, a system of enriching the nation and building up the military, and another was *Shokusan-Kogyo*, promoting industry. At the beginning of the Meiji period, the Tomioka Silk Mill provided a solution to development of the capital. The mill was an example of the integration of Western technology to traditional craft and became the crucial component of the Japanese economy until the end of the 20th century.

The mill was a pivotal facility in the economy representing the *Shokusan-Kogyo* and heritage of modern Japanese architecture so it was a natural reaction that the mill was designated a national historic site. The contribution of the Tomioka Silk Mill should be valued.

The Tokyo Station's Marunouchi "Red-Brick" building reflects the achievement of the modernization of Japan and illustrates various social phenomena of the country in many different ways. The Tokyo Station was built as a result of Japan's victory in the Russo-Japanese War and served as a symbol of victory over what was perceived as the powerful Western nation state of Russia. This victory indicated that Japan was finally able to catch up to the advanced western nation-states, which was the goal of the Meiji government's, *Fukoku-Kyohei*, a system of enriching the nation and building up the army. The Red-Brick was a survivor of both natural disaster and war. Today it is very difficult to find a building that is evidence of the war besides the Hiroshima Peace Memorial. The Red-Brick is an exception and is a survivor of the national tragedy. Another problem struck during the 1960s and the 1970s. The entire area of the Marunouchi business district transformed its landscape due to the very rapid development of Japan's economy. The Red-Brick is the only building from the beginning of the Meiji period that survived. The Red-Brick building represents the history of Tokyo and by extension, the history of Japan. The contribution of preserving the Red-Brick is significant. This will be reassessed since the 2020 Olympics will take place in few miles away from the building.

Questions arise concerning the role of landscape, but there is no doubt that Meiji-mura is successful in preserving important artifacts from the past. The Meiji-mura presents an example of the early modern (1868-1945) infrastructures of Japan which witnessed increased exchanges with the West that resulted in social and economic programs, as well as artistic practices that blended Western and Japanese ideas. The future generation will have a better appreciation for what historic symbolism the village provides for them as a memory of cultural values and practices.

While the Meiji-era buildings have been undervalued by preservationists, the value of the Meiji Restoration continues to influence Japanese culture today. During the Meiji period, pre-modern structures were demolished due to a dismissal of their historic significance. For example, the indigenous Shinto religion was used as political propaganda to justify the Meiji period's centralization of authority. As part of this movement, Shinto shrines were elevated in influence and protected, while ancient Buddhist temples were destroyed. The Japanese government had little concern for non-religious historic structures. Many of these were demolished to make way for the Meiji modernization effort which westernized the built environment. Even today, preservation in Japan still places a higher value on non-secular buildings. This demonstrates that history, cultural values, and religious beliefs reflect attitude toward architecture and materials.

Until the very recent decades, preserving historic materials was strictly applied to protecting religious institutions and national monuments, particularly of the pre-Meiji period. Historic preservation was slowly extended to protecting modern heritage and

vernacular sites. About 95% of Japanese Important Cultural Properties are still dominated by old Shinto shrines and Buddhist temples, most of which are wooden structures. Meiji architecture is considered to be relatively new for preservation. Some argue that a structure has to be more than 400 years old to be considered a “historic” building in Japan. However, situations and issues such as the low status of professionals and lack of availability of academic programs still restrict further development of the field.

The teams of historic preservation and cultural landscape are clear. As the American National Trust of Historic Preservation and MEXT states that they do not simply mean preserving old or original buildings, but it includes identifying a local atmosphere. In fact, saving traditional buildings is only a part of preserving the historic cultural landscape in Japan. The preservation of historic buildings should include not only the physical structures but also a community’s history and a built environment.

Some consider that these architectures represent a dark period of Japan’s military history, leading up to and through World War II. There is not enough evidence to support this argument. It is clearer that this period’s architecture represents a critical transition period from traditional to modern Japan.

One of the major findings of this paper is that while historic preservation was not valued by the Meiji government, contemporary Japanese leaders only recently began to protect the historic built environment. The modern historic preservation movement increased interest in protecting Japan’s pre-modern structures, but does not place high value on buildings from the Meiji period. Architecture constituted after 1868 is seen as a

reflection of Japanese nationalism, economic development, and the built environment of a modern Japanese history.

The field of Japanese historic preservation has the potential to expand in the future. The five case studies of the Ise-Jingu, Horyu-Ji, the Tomioka Silk Mill, the Tokyo Station, and the Meiji-mura represent the basics of Japanese preservation methods. However, the field does not yet include a level of appreciating the early modern period. The Meiji was not built in a day, and neither was the historic preservation of the country. This thesis provides a way of assessing Japanese historic preservation as a contribution to its future.

A main goal of this thesis was to discuss how the natural setting and human activities influenced Japan's built environment since the middle of the 18th century. The discussion of the years preceding 1868 was necessary in order to understand the unique role of the Japanese emperors. The emperors are directly related to historic preservation due to the position's close association with the religious ideology of Shinto and its shrines. The natural environment also has an enormous impact on Japanese landscape. The traditional material of wood, for example, plays a huge role in constructing infrastructure. However, without maintenance wooden structures usually last only for a few decades, but good quality wood with regular maintenance can last indefinitely. Natural disasters, especially fire and earthquake, caused huge damage to wooden structures and many other human-made buildings throughout history. The natural environment plays an important role in the study of Japanese built environment as an explanation of how these factors influenced the nation's aesthetic environment. It is also

necessary to closely look at modernization campaigns in the Meiji period in order to understand the impact of western influence, and at the historical context to understand the new look of Japanese architecture.

For future research, a more precise study of historic preservation during the Meiji period and examination of contemporary issues such as the economic benefit of preserving historic structure and the role of political involvement in the field is necessary. Exploring the history of urban planning in Edo and Tokyo, particularly around the Tokyo station, can be an interesting topic. Comparing between Tokyo and the historic city of Kyoto and cities in the western nations including New York City and New York's Pennsylvania Station could also benefit the field of historic preservation and cultural landscape increasing cross-cultural understanding, since this study focused on changes during a critical period within the single example of Japan.

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APPENDIX A

GLOSSARY

Virtually every section of this thesis includes Japanese terminology. Further explanations of Japanese terms are provided in this glossary. Clarification of the difference between bakuhan and a modern prefectural system, as well as presenting major events in chronological order are clearer than in many other academic articles. For the convenience of non-Japanese readers, all Japanese surnames in this thesis appear after the given names, contrary to the Japanese tradition. Also the Gregorian calendar was used rather than the Chinese calendar. This might reduce authenticity of the actual flavor of the early modern period of Japan. Translated proper nouns are italicized. I have avoided pluralizing Japanese terms, but a plural or singular meaning should be clear from the context in which a term is used. For example, “a tsunami” is singular, whereas “two tsunami” is plural. There are no English approximations of the following sounds which consist of only one syllable: “ryo, myo, hyo, ryu, kyu, tsu”. The pronunciation of other vowels and diphthongs are approximated as follows:

a as in “apple”

i as in “Indiana”

u as in “ultla”

e as in “elegant”

o as in “Ohio”

Bakufu: military feudal government at Edo which dominated the Japanese nation from 1603-1867.

Bunmei-Kaika: “Civilization (westernization) and Enlightenment”, the social phenomena during the Meiji period.

Daimyo: feudal lord of a han

Edo: the capital of Tokugawa Bakufu. Renamed Tokyo in 1868.

Fukoku-kyohei: “a system of enriching the nation and building up the army”, a slogan of the newly formed Meiji government.

Han: a feudal clan or domain

Kanto: a geographic region of Japan includes the Tokyo metropolitan area, a city of Yokohama, and seven prefectures. This region was hit by a huge earthquake in 1923.

Kobe: a fishing village and port on Osaka Bay, but rapidly developed during the Meiji period.

Kyoto: imperial capital during the feudal period.

Osaka: Mercantile capital.

Shogun: title of the Head of the House of Tokugawa during the Edo period (1603-1867), and other military ruler of feudal Japan from 1192 to the end of Tokugawa regime.

Shogunate: Synonymous with Bakufu. Any of three military governments, Minamoto, Ashikaga, and Tokugawa. It distinct from the civil government under the emperor at Kyoto.

Shokusan-kogyo: “promoting industry”, another slogan of the Meiji government.

Tokugawa (House of): Ruling family of feudal Japan. Ieyasu received a title of Shogun and founded Tokugawa regime in Edo 1603.

Yoshinobu Tokugawa: Fifteenth and last Tokugawa Shogun who returned political rule to the emperor in 1867.

(Hillsborough 1999; Kono 2006)