Machiya:
Japan's Urban Townhouse

by

Lauren Winter Dawson

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Thesis Committee:

Akiko Walley, Chair

Chiara Gasparini, Member

Keith Eggener, Member

University of Oregon

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Thesis Abstract

Lauren Winter Dawson

Master of Arts in Art History

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Machiya ("townhouse") was a wood and plaster shop-residence used by townspeople that was a common feature of Japanese cityscapes since the Edo period (1603-1868). However, studies today focus solely on Edo period Kyoto *machiya*. This thesis challenges this pre-conception by arguing that: 1) *machiya* existed beyond just Kyoto, and 2) *machiya* was built into the twentieth century continuing as a shop-residence. To prove these points, this thesis first discusses the definition of the word, *machiya*, and the recognizable architectural aspects of *machiya* since the Edo period. Next, an analysis in the evolution of *machiya* in the city of Edo and its successor Tokyo highlights the differences between these cities and Kyoto. Finally, why people today consider *machiya* in Kyoto to be representative of this type of architecture is explained through the history of city preservation and tourism in Kyoto and Tokyo.

Curriculum Vitae

NAME OF AUTHOR: Lauren Winter Dawson

GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:

University of Oregon
Arizona State University
Fashion Institute of Technology

DEGREES AWARDED:

Master of Arts, History of Art & Architecture, 2025, University of Oregon
Certificate of Completion, Japanese Language and Culture Program at Senshū University, Tokyo, Japan, 2024
Bachelor of Arts, Art History, 2021, Arizona State University
Associate of Applied Science, Visual Presentation and Exhibition Design, 2014, Fashion Institute of Technology
Minor, Art History, 2014, Fashion Institute of Technology
Associate of Applied Science, Photography, 2012, Fashion Institute of Technology

AREAS OF SPECIAL INTEREST:

Japanese Art and Architecture
Vernacular Architecture, Ceramics, Woodblock Prints, Textiles, and Folklore (*Kami* and *Yōkai*)

PROFESSIONAL EXPERIENCE:

Collections Intern, Jordan Schnitzer Museum of Art, Eugene, OR, 2024

Teaching Assistant/Graduate Employee, History of Art and Architecture, University of Oregon, Eugene, OR, 2023-2024

Patron Services Associate, BlackRock Center for the Arts, Germantown, MD, 2022-2023

Visitor Services Representative, National Building Museum, Washington, DC, 2016-2017

Office of Building Renovation and Exhibition Services Intern, Smithsonian National Museum of American History, Washington, DC, 2014

GRANTS, AWARDS, AND HONORS:

Mr. and Mrs. Eric G. Clarke Scholarship
Department of the History of Art and Architecture, University of Oregon, 2024
To conduct field research in Japan on *Machiya*: Japan's Urban Townhouse

The Gloria Tovar Lee Scholarship in Art History
Department of the History of Art and Architecture, University of Oregon, 2024
To conduct field research in Japan on *Machiya*: Japan's Urban Townhouse

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Introduction

There are many resources on Japan's architecture, from its palaces to its temples and shrines, and even documentation on its rural farmhouses of the past. Another type of Japanese architecture are townhouses, which started to appear in Japan's urban areas around the medieval periods (1185-1603). The number of townhouses increased during the Edo period (1603-1868) when the population in urban areas rose rapidly, and they still dot the cityscapes today. In Japanese, these buildings are called *machiya* (literally, "townhouse"), but they were not just urban residences. They were a type of architecture for merchants and artisans that combined a shopfront or workshop together with a private residence in the back.

Townhouses are an integral part of Japan's unique culture which preserves, cherishes, and presents this image of physical heritage to foreign travelers. The interest in Japan's heritage is reflected in scholarship and photographic books in English. Many publications and presentations of *machiya* disproportionately focus on the city of Kyoto leaving many other areas of Japan unnoticed. For instance, *Machiya: The Traditional Townhouse of Kyoto*, published in 2019, provides an accessible introduction to architectural elements commonly associated with *machiya* alongside high-quality photographs of both the buildings' exterior and interior (often off limits to the public).[1] Yet, it is clear from its title that the book's sole interest in *machiya* is in extant examples from the city of Kyoto. Similarly, other works such as the article by Martin Morris, "Kyo-Machiya: Tracing the development of the traditional town houses of Kyoto through the medieval centuries" (2006), and two chapters in Yamasaki Masafumi's special issued book, *Kyoto: Its Cityscape Traditions and Heritage* (1994), present a detailed discussion of the

[1] Kumiko Ishii, *Machiya: The Traditional Townhouses of Kyoto.* Kyoto: PIE International, 2019.

historical development of *machiya*, but they still focus only on examples from Kyoto and their examinations for the most part end by the mid-nineteenth century.[2]

This exclusive focus on Kyoto's *machiya* and of pre-modern times skews the perception of *machiya* as a style of Japan's urban architecture. *Machiya* existed practically everywhere in Japan's urban areas and not just Kyoto, whether in small post towns along highways, cities, or other metropolises, including Edo (present-day Tokyo) and Osaka. Past the end of the Edo period in 1868, *machiya* faced many challenges as Japan transitioned into a new age, but it continued to develop into the modern periods. For these reasons, the pre-modern, Kyoto-centered discussions seen so far prevent a comprehensive understanding of the variation and richness of *machiya* architecture and the common people's lives who used these buildings. The aim of this thesis, though, is not to deny the significance of Kyoto *machiya* in understanding the history and style of this type of architecture. Rather, this thesis challenges this Kyoto-centric scholarship on two points: 1) *machiya* existed beyond just Kyoto, and 3) *machiya* are not a static building of the pre-modern past.

To expand the scope of *machiya* examinations and deepen our understanding of Japan's urban culture this thesis aims to examine *machiya* from different angles. Chapter 1 examines the etymology of the word "*machiya*" and the readily available images of this type of architecture on

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[2] Martin Morris, "Kyo-Machiya: Tracing the Development of the Traditional Town Houses of Kyoto through the Medieval Centuries," *Vernacular architecture* 37, no. 1 (2006): 1-23; and Yamasaki Masafumi, *Kyoto: Its Cityscape Traditions and Heritage*, *Process: Architecture*, No. 166, (1994): 45-118. Morris investigates the origins of *machiya* from the late medieval into the Edo periods. Using two eighteenth century *kyō-machiya* as his examples, Morris identifies architectural details that could have been derived from earlier building types, such as Buddhist lodgings, roadside shops, and Chinese shop-houses. Yamasaki Masafumi's contribution traces the development of Kyoto *machiya* from the Heian period (794-1185) to the twentieth century. Although Yamasaki briefly notes Kyoto of the modern period, his focus is on the Edo period. One study that positions *machiya* in contemporary times is Lidwine Spoormans, "Adapting Traditional Machiya to a Contemporary Lifestyle," in *Heritage, History and Design Between East and West: A Close-Up on Kyoto's Urban Fabric*, edited by M.T. van Thoor, and S.Stroux, (Netherlands: Delft University of Technology, 2018), 83-99. However, the aim of this article is to shows how some of the architectural elements and spaces of *machiya* can be reused or reconstructed to contemporary life-styles, thus it only notes the history very briefly.

the internet in order to elaborate the common perception of these buildings today. The commonly recognized Kyoto *machiya* that exists today will also be introduced in this chapter. Chapter 2 provides background information of Edo period government policies on urban residences and townspeople's lives in the cities, as well as *machiya* examples in Kyoto and specific elements of this type of architecture from this time, which are now appreciated ahistorically as "traditional" architecture. As a counterpoint to Kyoto, Chapter 3 analyzes examples in the city of Edo to modify the Kyoto-centrism in the present discussion of *machiya*. This chapter clarifies that the city of Edo and its *machiya* in the Edo period present a markedly different development from Kyoto. Chapter 4 extends the case studies from the mid-nineteenth century to 1945 by tracing the development of the city of Tokyo and its *machiya*. Extending the investigation past the Edo period reveals that *machiya* continued to be built after the city began to modernize starting in the Meiji period, retaining architectural elements of their pre-modern predecessors while breaking from these formats into a new kind of "modern *machiya*," which indicate continuity and evolution. Finally, Chapter 5 discusses how the differences between Tokyo and Kyoto's history since 1868 shaped their individual approaches to post-war urban planning and tourism, which in turn affected their specific attitudes towards the preservation of *machiya* as an architectural heritage.

Chapter 1: *Machiya* Today

While conducting my thesis research in Japan, a few people asked me what I was studying. When I told them "*machiya*," a confused look would appear on their faces. However, if I wrote out the *kanji* characters 町家 or 町屋 (both pronounced *machiya*) or showed them pictures from an internet search, they would instantly recognize and understand what I was talking about. From this experience, I realized that simply saying the word *machiya* does not necessarily evoke any type of architecture in the minds of people in Japan today. Yet, even in Tokyo, where one could encounter very few *machiya*, a person could recognize what scholars generally define this type of architecture as from written *kanji* or internet pictures: a pre-modern (or pre-modern looking) townhouse in Kyoto.

This chapter discusses four points that define *machiya* today. First, the etymology of the word *machiya*, tracing it from its earliest recorded appearance in Japanese text through its use during the Edo period to today. An introduction involving the different *kanji* used to write "*machiya*" and their meanings illuminates how the term connects to the architecture. Second, results of cursory Google searches with keywords related to *machiya* demonstrate the most common impression of this type of architecture, which is further focused into a specific tourist areas in Kyoto. Third, my own experience in the most represented area in Kyoto elaborates how the city's tourism industry maintains and reinforces the Kyoto-centric popular imagination of *machiya*. Finally, an introduction to the most popularly recognized styles of Kyoto *machiya* today will provide a base for later chapters.

1.1 – The Term "*Machiya*"

The term *machiya*, no matter which *kanji* used, translates to "townhouse" in English. The English translation is vague and not representative of what this type of architecture actually is. For the sake of clarity, this section uses "*machiya*" to mean the word, while the architecture associated with this word is called by its English translation "townhouse."

The word *machiya* is first seen in the twelfth century as 店家 and 町屋 meaning a house in the city, a town's house, or a merchant's house.[3] The "店" in 店家, pronounced *mise* on its own, today means shop. From the twelfth century to the Edo period *mise* 店 was an abbreviated version of *misedana* 見世棚 or 店棚, meaning a place where products are sold and customers are cared for within a shop.[4] It also came to be associated with:

> A room or space at the front of a *machiya* 町家, the urban houses of artisans and merchants, adjacent to the entrance and facing onto the street. The room served as a shop where goods for sale were displayed, as a business office, and, on occasion, as part of an artisan's workshop.[5]

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[3] *Unabridges Dictionary of the Japanese Language* (hereinafter U), s.v. "まち-や 【町家・町屋】" ("*machiya*"), last accessed April 2025, through JapanKnowledge at https://japanknowledge-com.uoregon.idm.oclc.org/lib/search/basic/.

[4] U: s.v. "みせ 【店・見世】" ("*mise*"). Also, see *Japanese Architecture and Art Net Users System* (hereinafter J), s.v. "*misedana* 見世棚" and "*mise* 店," last accessed April 2025, https://www.aisf.or.jp/%7Ejaanus/.

[5] J: s.v. "*mise* 店."

The term *machiya* resurfaces in the seventeenth century with 町家 or 町屋.[6] A variation in the first character from the first *kanji* used in the twelfth century (underlined) appears here. The 屋 and 家 were used interchangeably, though 屋, pronounced *oku* or *ya* on its own, has often been attached as a suffix to another noun to indicate a business or to make a shop name (e.g., *hon-ya* 本屋 = "bookstore," *Echigo-ya* 越後屋 = lit. "House of Echigo Province," which was the name of a prominent textile vendor).[7] Both *kanji* carried forward the definition of a "town's" house, but by extension now referred to the people who lived in them, the "townspeople."[8] 町 is pronounced *machi* on its own and has many meanings related to either rice fields in ancient times or blocks within cities from the medieval periods onward.[9] Yet in the Edo period, "[*machi* (町) was] used especially for areas inhabited by artisans, craftsmen and merchants, whose residences and shops directly lined the streets."[10] Because 町 did not just refer to any people who lived in a "town," but more specifically to those who engaged in the making and selling of goods, *machiya* 町家 also did not simply mean any residence in a town but a residence where goods were made

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[6] U: s.v. "まち-や 【町家・町屋】" ("*machiya*").

[7] U: s.v. "おく［ヲク］ 【屋】" ("*oku*").

[8] U: s.v. "まち-や 【町家・町屋】" ("*machiya*").

[9] J: s.v. "*machi* 町."

[10] J: s.v. "*machi* 町."

and sold.[11] The Japanese Architecture and Art Net User System's (JAANUS) definition is interesting when compared with 店 from the same site seen earlier. Here 町家 means:

> From the mediaeval period, through the Edo period and into the Meiji period, the urban houses of craftsmen or artisans *shokunin* 職人, and merchants *shounin* 商人, classes collectively referred to as townspeople, *chounin* 町人. Typically, *machiya* directly abutted the public street, and combined residential functions with the accommodation of a workshop or manufacturing space, office and retail space.[12]

Today, the term 町 generally means town, block, or neighborhood, without any specific associations to the professions of the people who live in them. The historical meaning of *machiya* as a shop-residence, specifically associated with people who engaged in an urban area's commerce (merchants and artisans), is now mostly lost. This loss of meaning may explain the confusion some people had when I told them about my thesis topic. Although the term *machiya* still exists in the Japanese language today, its specific historical meaning – and by extension the historical importance of this type of architecture – is now lost to many people of Japan.

These historical terms show that from at least the Edo period, townhouses existed as a house in a city owned, not just by urban people, but specifically by merchants and artisans.

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[11] U: s.v. "ちょう-か［チャウ..］ 【町家】" ("*chōka*").; J: s.v. "*machiya* 町家."

[12] J: s.v. "*machiya* 町家."

1.2 – First Impressions of *Machiya*

Machiya is no longer a term that refers to shops today that operate in a city but are reserved for specific architectural characteristics of a type of building that hark back to pre-modern townhouses regardless of their age or current use.[13] For this reason, as mentioned at the beginning of this chapter, today, *machiya* is not a word that appears in daily conversations in Japan, even to the point that some people do not immediately think of the *kanji* or image related to a specific type of architecture. However, even these people can recognize *machiya* architecture when they see the *kanji* or an internet image of the building without knowing what it is called. It is then not enough to discuss the etymology of the word *machiya* to understand the general perception of this type of architecture. In order to understand what people, both Japanese and foreigner, think of when they see or hear the word *machiya*, the visual representations that they associate with this term must be explored. This section investigates the shared popular impression of a *machiya* 町屋/町家 through two English Google image searches using the romanization of "*machiya*" and "Kyoto," and three Japanese Google image searches using 町屋, 町家, and 京都 (Kyoto).

Using English Google, the keyword "*machiya*" presents photos of primarily two story restaurants, inns, and shops in Japan made of wood and plaster. Upon closer inspection over 75% of these images come from Kyoto with some utilizing terms like *Kyō-machiya* 京町家. *Kyō-machiya* is a word that is specific to *machiya* from Kyoto, distinguishing them from townhouses in other cities. In fact, tourism advertisements for the city of Kyoto capitalize on the scenery of

[13] A search was done on *Japanese Architecture and Art Net Users System*, which provided the result noted.

city neighborhoods lined with *machiya* more than other cities. Another expression that appears often alongside *machiya* in this search is tradition (*dentō* 伝統) or traditional (*dentōteki* 伝統的), connecting the photographs of this type of building with a pre-modern idealized past. The strong ties between the city of Kyoto and *machiya* is further evident by Google's AI-generated definition that appears at the top of the search, which defines *machiya* as: "traditional Japanese wooden townhouses, particularly prevalent in Kyoto."[14]

The results for Japanese Google with the keywords 町屋 or 町家, present a somewhat different result. For instance, depending on which *kanji* you use the results differ. When 町屋 is typed in, the search results provide few *machiya* among a larger number of photographs of modern shops, restaurants, businesses, and cityscapes. In fact, only 105 photographs show *machiya*; while this number is large, the number of modern buildings outnumbers this by at least half. Out of these *machiya* photographs more than 60% come from places outside Kyoto or are unidentified. However, 町家 produces a different result with the majority of photographs showing *machiya*, 388 images or over half of the images. Out of these images more than 55% are from outside Kyoto or are unidentified. At the same time, over 35% of the remaining images are identifiable as Kyoto *machiya*. These searches reveal that 町家 is the more common *kanji* to write *machiya*, while 町屋 was not recognized as a compound of the two *kanji* within the search algorithm.

[14] Google, s.v. "*machiya*," accessed April 24, 2025, https://www.google.com/search?client=firefox-b-1-d&q=machiya.

Comparing the English and Japanese image searches, revealed that *machiya* and *Kyō-machiya* does not hold as strong a presence in Japanese Google as it does in English Google. Thus, it could be said that the keyword "*machiya*" using Google search engine established the popular image of this type of architecture presented to English-speaking people which is predominantly associated with the city of Kyoto. For this reason, Google image searches with the keywords "Kyoto" and "京都" was done. In the English Google image search, alongside historical buildings such as the reconstructed former imperial palace, and temples and shrines, *machiya* appear in over 150 photographs of city districts famous for their streets lined with these townhouses. Modern buildings only begin to appear after scrolling over halfway down the image results, but even then, images of historical Kyoto are more predominant. In the Japanese Google image search with the keyword 京都 (Kyoto), a balanced mix of historical and modern Kyoto is more prevalent. Only the first area, before scrolling down under the keyword 京都, shows a stronger presence of historical buildings and of the more than 95 photographs of *machiya*, over 75% are of streets lined with *machiya*. Interestingly, an overlap between the English and Japanese searches indicates that while there are many districts within Kyoto that preserve this type of architecture, people's image of "*machiya*" is in fact much narrower than that: *Machiya* is a specific type of architecture in specific districts of Kyoto.

In Higashiyama, to the east of the Kamo River the eastern side of the original grid plan in the city of Kyoto, there are a series of walking paths known for *machiya* that lead to popular tourist sites, the Yasaka Pagoda (Yasaka-no-Tō 八坂塔) and Kiyomizu Temple (Kiyomizudera 清水寺). This area makes nearly 10% of the image result from the "*machiya*" search and over

70% of the *machiya* images in the "Kyoto" search in English Google. Using Japanese Google, this area is more minimally seen in both the keywords 町屋 and 町家 with less than 5% of the images.[15] However, using the keyword 京都 (Kyoto), the results are closer to the English Google image search with over 60% of the *machiya* images presented.

In short, these Google image searches reveal a higher concentration of Kyoto *machiya*, especially those from the Kiyomizu Temple area, which further provides the impression that people will have of this type of architecture.

1.3 – Tourist Attraction: Kiyomizu Temple Area

The significant representation of the pathways leading to the Kiyomizu Temple in the searches above is not unwarranted. Unlike other areas of the city also known to have this type of architecture, the paths to Kiyomizu Temple are lined with *machiya* that are still operating as shops. They are the closest for tourists to imagine what the commercial streets might have looked like during the Edo period. Afterall, unlike in other parts of the city, the *machiya* on these pathways contain shops lining the streets creating the same lively activity as they did in the past. These paths create the bustling activity of shops that visitors experience as they interact with *machiya* lined streets, this section provides a personal account of visiting the Kiyomizu Temple area.

The most photographed streets in this area are a series of paths that lead directly to the Kiyomizu Temple (Map 1.1). This main approach consists of walkable slopes (*saka* 坂) up a

[15] It should be remembered that 町屋 resulted in 105 photographs of *machiya* while 町家 has 388 photographs.

small mountain lined with *machiya* known as Ichinen-zaka 一念坂 (一年坂), Ninen-zaka 二寧坂 (二年坂), Sannen-zaka 産寧坂 (三年坂), and Kiyomizu-zaka 清水坂 (Figs. 1.1-1.2). Along the sides of these slopes are *machiya* with shops and some restaurants. The most photographed spot along these slopes is at the point where Ninen-zaka ends right before connecting to Sannen-zaka since this spot has a great view of the *machiya* and of the slope (Fig. 1.1).

Starting from a bus stop, the first thing one sees is modern buildings on a wide street with a small number of *machiya*. A large stone *torii* gate 鳥居 marks the entrance into the outer section of the temple district. The number of *machiya* immediately increases as soon as one is past the *torii* gate both along the main road and down the side streets, outnumbering modern buildings. The number of *machiya* continues to increase the closer one gets to the entrance to Ichinen-zaka. By the time one arrives at the entrance to Ninen-zaka, there are no modern buildings in sight. The *machiya* on Ninen-zaka, Sannen-zaka and Kiyomizu-zaka are filled with shops selling anything from souvenirs, packaged food (mostly sweets), Kyoto ceramics, and more.

Once one enters into these streets, it feels as though you have stepped back in time. Here one can experience the bustling, lively activity of commercial streets surrounded by wood and plaster buildings no taller than two stories along stone paths. The *machiya* that surrounds the shopper gives a feel of consistency much like what will be described as Edo period Kyoto *machiya* in the next chapter. Upon closer inspection, the buildings along these paths exhibit a mix of *machiya* styles with no consistency, making it difficult to identify the most prominent exterior types, though, the mix-match of *machiya* styles seem to complement each other.

What these paths provide is not an experience of this district from one historical period, but rather an idealized or generalized impression of Kyoto's, and by extension Japan's, past, of which the Kiyomizu district is active in maintaining this illusion. If the buildings along these slopes were modern, then the experience of stepping into the past would not exist. Here, even mainstream companies like Starbucks follow the architectural style of the area so as not to detract from the experience visitors have upon entering this district. This Starbucks is only recognizable on the exterior from a wooden signboard with its brand's logo that hangs on the second story of the building.

The tourist experience is in one sense authentic providing visitors to the Kiyomizu Temple area an expected experience of a generalized and idealized atmosphere of what the townspeople's lives could have been like before modernization with bustling commercial streets lined with *machiya*. Nevertheless, as enticing as these streets are, what is presented is just an appearance and not what *machiya* were prior to the modernization of the city and its people. Today, the *machiya* along the Kiyomizu paths are just shops. The people who sell their goods in these *machiya* do not live in these buildings. To fully understand these Kyoto *machiya* as historical buildings, they must be properly placed in the context of the changes to the physical city and government interventions.

Chapter 2: Edo Period and Kyoto *Machiya*

Machiya architecture reached its maturity by the end of the Edo period. This chapter summarizes Edo period Japan through a brief history centered around the three metropolises, as well as government regulations and the people that impacted *machiya*.[16] Following this is an introduction about Kyoto, its *machiya*, and generally associated elements of this type of architecture during the Edo period. As discussed in the previous chapter, these Kyoto buildings are commonly recognizable with *machiya* today. The descriptions from this point forward of *machiya* focus on the exteriors of these buildings, due in large part to the inaccessibility of interiors today, as well as few documentation of this type of architecture since the Meiji period.[17]

2.1 – Government Policies in the Edo Period

Machiya went through major development during the Edo period when there were two "capitals:" the capital of Kyoto, where the emperor and his court resided since 794 that retained its sovereignty in name only by the Edo period; and the political center of Edo, where the Tokugawa Shogun ruled the country. Edo was the newest and most rapidly developed metropolis since Tokugawa Ieyasu (1543-1616) established his government at this location in 1603. Ieyasu

[16] Building regulations and administrative activities behind urban planning during the Edo period are well documented, but so far scholars writing about *machiya* have focused on architectural details of this type of architecture without noting the restrictions the owners had to adhere to when building their residences. Tsunenari Tokugawa, *The Edo Inheritance*, translated by Iehiro Tokugawa (Tokyo: International House of Japan, 2009); William Coaldrake, "Edo Architecture and Tokugawa Law," *Monumenta Nipponica,* 36, no. 3 (1981): 235-84.; Adriana Piccinini Higashino, "Japanese Traditional Architecture and Its Roofs: Gables Used as Social Icons," Academia (2017): 149-164.

[17] Unless otherwise noted, including the previous citation, most historical information came from: John W. Hall, and James L. McClain. *Early Modern Japan*, The Cambridge History of Japan, vol. 4, (New York: Cambridge University Press, 1991); Marius B. Jansen. *The Nineteenth Century*, The Cambridge History of Japan, vol. 5, (New York: Cambridge University Press, 1989); Peter Duus. *The Twentieth Century*, The Cambridge History of Japan, vol 6, (New York: Cambridge University Press, 1998).

defeated military rivals by 1615 bringing about peace, resulting in commercial and social booms involving mass migrations into major cities, especially Edo and Kyoto.[18] The largest growth in population occurred during the seventeenth century. While Kyoto's population was over one hundred thousand, Edo's reached over one million, making it the largest city in the world. During the Edo period, Kyoto began to fall behind Edo in commerce and population but remained a center for culture.

The Tokugawa government solidified a social hierarchy based on Confucian values, which placed warriors at the top, and artisans and merchants, commonly grouped together as townspeople (*chōnin* 町人) toward the bottom.[19] In reality, wealth blurred the boundaries of the social classes that people were born into, which determined not only what they could and could not have and do but also where they could live.[20] The common people who served the social elites lived in the political centers and towns surrounding warlords' domains since the medieval periods and were often relegated to condensed areas of the urban plan with larger estates reserved for upper classes.

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[18] Although it is outside the scope of this thesis, there were three metropolises during the Edo period called the "Three Capitals" (*santo* 三都); Edo, Kyoto, and Osaka. Edo was the political capital, and Kyoto was the imperial capital, while Osaka was the economic and commercial capital. This thesis focuses on Kyoto and Edo for its comparison. Ichikawa Hiroo, "The Evolutionary Process of Urban form in Edo/Tokyo to 1900," *The Town Planning Review* vol. 65, no. 2 (1994): 179-196; André Sorensen, *The Making of Urban Japan: Cities and Planning from Edo to the Twenty-First Century* (London: Routledge, 2002), 1-44; Matthew Stavros, *Kyoto: An Urban History of Japan's Premodern Capital* (Honolulu: University of Hawai'i Press, 2014).

[19] Another urban group were the day laborers that fell outside the government's ideal Confucian social structure. Day laborers often included children of farmers who came to the city for work temporarily or permanently, as well as city dwellers that did not fall within the four main social classes. The focus of this thesis is *machiya* architecture, which were the outward appearance of the city and merchants, thus day laborers fall outside this scope. However, they were often connected to merchants as workers and as renters of rowhouses (*nagaya* 長屋) in the backstreets behind *machiya*. They also lived on the outer edges of the cities where temp offices formed.

[20] During the Edo period, the *chōnin* filled the lower levels of the government in the City Office (*machi kaisho* 町会所) under the City Magistrate (*machi bugyō* 町奉行), a prominent merchant.

Not only was urban planning stratified, but environmental concerns also affected the residences of townspeople. People feared the depletion of the natural resources around them since the Kamakura Period (1185-1333). Efforts were made to reduce waste where they could, but the situation did not improve. By the Edo period, building materials became increasingly scarce, prompting the Tokugawa government to regulate the number of trees people could cut down for construction. This was followed by designating certain forests to be exclusively for the government's use. The shogunate further restricted townspeople from using specific species of trees, such as hemlock, fir, cedar, zelkova, and cypress, that were regarded as high quality timber. The Tokugawa also adopted an earlier initiative by regional warlords and eventually marked all forests the property of the shogunate.[21] This in effect kept building material supplies stable throughout the Edo Period.

In addition to the restriction on the use of timber, the government enforced regulations on urban buildings, including *machiya*. Under Confucian-driven sumptuous laws, use of what was considered luxurious materials or ornamentations, such as the use of gold and silver, or the application of carvings and specific furnishings, became prohibited for the common people. In addition, the Tokugawa government regulated the size of the lots and rooms, as well as the heights and widths of buildings. For instance, the Tokugawa government required that all commoner residences must not exceed one and half stories high. The shortened overall building height combined with the internal structural framing for the roof resulted in a second story that did not have enough space for an adult to stand (Fig. 2.1).

[21] Hall and McClain. *Early Modern Japan*, 503. All of these regulations on resources started in the sixteenth century and continued into the Edo period.

Taxes were used as a means to enforce restrictions of the width of buildings facing the street that included *machiya*. In the Edo period townspeople were taxed based on the width measured in bays, of their building. For a *chōnin* who needed direct access to the street for their business, this was a crucial consideration. However, the value of land owned by the merchants and artisans, in particular, was irregular in the beginning of the Edo period. In the early eighteenth century, the shogunate standardized lot sizes by stabilizing the value of land. Primarily, the taxes inflicted on the common people did not only come from the upper levels of the government, but also from the local community administration as town maintenance fees.

Regulations also extended to building interiors. Residences of the common people, including *machiya*, were prohibited from using wall paintings. The laws also forbade common people from building gates (*mon* 門) either at the front or back of their buildings or decorating the interior as a *shoin*-style (書院) room. *Shoin*-style became popular across social classes in the Edo period.[22] A *shoin* (lit. "writing hall") consisted of three main elements arranged based on the owners' preferences, the *tokonoma* 床の間 (decorative alcove), *wakidoko* 脇床 (side alcove) with *chigaidana* 違い棚 (staggered shelves) and "raised" or "floor" cabinets (*tenbukuro* 天袋 or *jibukuro* 地袋), and *tsuke-shoin* 附書院 (built-in desk). In elite residences, the *shoin*-style interior design was implemented in audience rooms and rooms for important guests.

Townspeople circumvented these regulations whenever possible. These violations were often tolerated by the government as long as they did not openly defy the Tokugawa sovereignty.

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[22] Coaldrake, "Edo Architecture and Tokugawa Law," 272-273; Hall and McClain, *Early Modern Japan*, 670, 672, 702.

For example, many *machiya* had higher pitched roofs or taller (even full) second stories in the back, so that if one was to look up at the building from the street, it appeared to have a tall roof rather than a full second story. However, there are also examples seen in this thesis of *machiya* that did not follow this height regulation, building two full stories seen from the street. While the townspeople mostly followed the ban on building gates as they could easily be seen from the street, the use of *shoin*-style elements - including wall paintings inside the *tokonoma* and *wakidoko* – spread among *machiya* throughout the Edo period. Due to the size of the building, *machiya* were not often constructed with all the elements associated with a *shoin*. Instead, commoner's residences would have at least a *tokonoma* (decorative alcove), and never usually incorporating a built-in desk make these rooms a partial *shoin* (Fig. 2.2).[23]

2.2 – Edo Period Kyoto City

Tokugawa government policies impacted urban commoner residences including *machiya*, as well as urban planning. Kyoto existed as the imperial capital since 794 with its urban plan changing over time. This section repositions Kyoto *machiya*, the most recognized townhouses today, within the context of the city's Edo period urban history.

Kyoto is one of Japan's historic cities based on Chinese designs that implemented a grid plan (Map 2.1).[24] Over time reality shrunk the ideal grid plan, reconfiguring it to about half the original layout (Map 2.2). The grid is still visible in central Kyoto today, but changes occurred

[23] Today, on the interior, there are *machiya* that have a decorative alcove for displaying hanging scrolls and flower arrangements found in the most important room on the residential side of the building. This singular element of a larger styled room became popular in *machiya* (Kyoto and elsewhere) in modern times. However, because this element has already appeared in elite residences and tearooms beginning in the sixteenth century, it has often been assumed that the decorative alcove was a common feature of *machiya* architecture.

[24] Heijō-kyō 平城京 (present-day Nara, est. 710) is the other former capital that was also built after a Chinese city.

throughout its history.[25] During the late sixteenth century, the grid system was further subdivided to allow direct access to smaller buildings, including rentals that sat behind *machiya*. The city's plans persisted throughout the Edo period with the northern areas designated for nobility and the textile industry (including Nishijin), while the common people were designated to the southern areas (roughly corresponding to present-day Nakagyō and Shimogyō).

Prior to the Edo period, shops were concentrated along specific streets. The streets of Shinmachi and Muromachi, in particular, connected the northern and southern areas throughout Kyoto's history and were the main streets for commercial activity. During the Edo period, *machiya* dominated these areas of commercial activity. Some of these areas, like Shinmachi and Muromachi in Kyoto, became the heart of cities as goods were transported in and out, as well as within, supplying goods to all people no matter their social standing. During the Edo period, when a ward system was introduced (e.g., Higashiyama ward, Nakagyō ward, etc.) there was no difficulty in segregating districts because by this time, areas had already developed around concentrations of people based on their professions.

Prior to the Edo Period, Kyoto also developed both within the city's original eighth-century grid and organically in outer areas. The organically developed outer areas mostly centered around temples and shrine, which came to be surrounded by towns of common people, mostly merchants catering to the temple and visitors. By the end of the seventeenth century these temple towns (like the area around the Kiyomizu Temple to the east of the Kamo River) began to merge with each other and with central Kyoto. When Kyoto emerged as a metropolis during the Edo period, it continued to expand outward to the east, west, and north. These areas of expansion

[25] The largest change occurred in the late sixteenth century under Toyotomi Hideyoshi (1537-1598) who consolidated many temples and shrines, as well as the Imperial palace and the residences of nobility into specific areas of the city.

included a large number of residences, shops, and inns, resulting in a hodgepodge of people and trades.

By the end of the seventeenth century, Kyoto had become a major tourist destination due to its history and beautiful scenery, as well as its highly sought after culture and goods. Kyoto took advantage of this to the point where it was said that there was not a single building on major streets that were not selling something.[26] Map 2.3, dated 1686, features many of the elements that characterized the city of Kyoto since its founding at the end of the eighth century, including the surrounding mountains with scattered temples and shrines. When compared to Map 2.4 dated from the late sixteenth century, Map 2.3 shows that the city expanded to the east.

Starting around the eighteenth century, due to continuous growth and development in economics and culture, the standard of living improved throughout Japan, resulting in better residences, food, and clothing. New businesses began to open in the cities, including restaurants and book-lending shops. The increase in businesses in the city meant an increase in shop-residences that altered many urban areas including Kyoto towards places of commerce and trade. By the mid- to late-eighteenth century Kyoto started to fall behind the other metropolises as a center for commerce but remained a center for tourism and culture. For the physical city this meant an even further breakdown of the original zoning plan based on professions. However, the earlier urban planning, or rather the grid and organic streets, persisted throughout the Edo period.

Even though Kyoto lost its commercial status as a central hub, a map dated 1778, reveals that the city continued to expand outwards towards the north-northwest, a little into the southwest, and the east, showing a denser area than before. Surrounding Kyoto in the 1778 map

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[26] A quote from German physician, Engelbert Kaempfer, visiting Kyoto in 1691. Engelbert Kaempfer, *The History of Japan, Together with a Description of the Kingdom of Siam 1690*-92, vol.2 (Glasgow: James MacLehose, 1906), 3, 21-22. This study used the translation of the quote included in Hall and McClain, *Early Modern Japan*, 736-737.

are tracts of farmland, but a new area of building development appears past this land to the southeast. There also appear to be more developments in the mountains surrounding Kyoto, most likely in correlation with the temples and shrines by this time established as pilgrimage and tourist sites.

Around the end of the 1850s, with the alternate residence (*sankin kōtai* 参勤交代) no longer in effect, and with the shift away from the Tokugawa government many warlords began building residences in Kyoto, renting or abandoning their residences in Edo. A map dated 1831, shows that the city continued to expand into the north-northwest, as well as to the north on the eastern side of the Kamo River. When compared with another map, dated 1862 (Map 2.5), there is evidence that Kyoto is continuing to expand northerly. The timing of Map 2.5 aligns with the move of many warlords and Tokugawa government officials from Edo to Kyoto. These shifts in the nineteenth century, while bringing in high level political families to the city, show very little effect on the Kyoto's maps in relation to areas already dominated by the common people, thus revealing the strong presence of townspeople's residences.

While it may be difficult to pinpoint where *machiya* actually existed in Edo period Kyoto, it is safe to say that based on historical information and research, it can be generalized that this type of architecture existed throughout the entire city in the smaller condensed blocks seen on the maps presented here. The expansions seen in these maps, however, reveal the continued growth in the economy as more people entered the city.

2.3 – Kyoto *Machiya*

Many popular writings and even scholarly works on *machiya* do not clearly distinguish Edo period elements from later modern additions. It is thus important to emphasize that some of

the examples presented in publications as “Edo period *machiya*” were not all built in the Edo period.[27] In fact, what we see today and often associate with Edo period *machiya* are modern buildings built in the Meiji period or later. In fact, most extant *machiya* are often scattered amongst urban areas in Kyoto and other cities and towns and cannot be dated precisely. It is also difficult to define Kyoto’s Edo period *machiya*, in particular because what people have often utilized are paintings that either provide little detail or were created for a different purpose than to feature architecture. In this sense, these paintings may not be accurate when depicting the streetscape buildings that were often a backdrop for something else.

However, when comparing some paintings and descriptions of these Edo period townhouses with existing Kyoto *machiya*, one finds that many of the elements that are recognizable today already appear in Edo period visual or written documentation. For this reason, this section will discuss existing Kyoto *machiya* styles in relation to a painting from 1820 that appears to feature similar buildings to identify recognizable elements that will be further introduced in subsequent sections (Figs. 2.3).

In Kyoto today, the districts around the former imperial palace of Nishijin, Nakagyō, and Shimogyō contain a higher concentration of *machiya* besides those found in the district of Higashiyama. Nishijin was a major center for high-quality textile production located in the northern region of the city to the west-northwest of the now former imperial palace. Nakagyō is

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[27] In *Machiya: The Traditional Townhouse*, Kumiko Ishii notes the origin of *machiya* in castle towns (these began in the medieval period) and that Kyoto style *machiya* still remain. This book does not explicitly connect the samples to the Edo period, but it instead suggests their origin in an unspecified distant past. The *machiya* photographed in this book, however, are mostly either built or renovated in the Meiji period. In Yamasaki Masafumi’s book, *Kyoto: Its Cityscape Traditions and Heritage*, they mainly use paintings to discuss pre-modern *machiya*. While there is a small section on modern Kyoto *machiya*, all but one of the photographed *machiya* come from the Meiji period. Finally, Martin Morris’s article, “*Kyo-machiya*,” primarily use illustrations of prints, paintings and plans. In this article only two existing *Kyō-machiya* are used and both come from the seventeenth century. Ishii, *Machiya: The Traditional Townhouses of Kyoto*, 3-213; Morris, "*Kyo-Machiya*," 1-23; Yamasaki, *Kyoto: Its Cityscape Traditions and Heritage*, 45-118.

located directly south of the former imperial palace. Shimogyō, which used to encompass the district of Nakagyō, sits one section further south. For most of Kyoto's history Nakagyō and Shimogyō were sections designated for the common people, especially merchants and artisans. In particular, Shinmachi and Muromachi streets, primarily in Nakagyō, were the centers of commercial activity since about the tenth century (Map 1.3).

Within the *machiya* from these three districts, a popular feature that is often thought to be characteristically Japanese is the partial or full exposure of the building's timber structure, call *shinkabe* 真壁 (lit. "true wall"; uncovered wooden wall) (Fig. 2.4). *Shinkabe* is where structural timber is exposed and not covered by plaster. It was not a technique used exclusively in *machiya*, but what this type of Japanese architecture came to be most known for. For Kyoto *machiya*, in particular, exposed timber posts and beams are a popular aesthetic element. In figure 2.3 the *shinkabe* treatment can be seen on the majority of *machiya*.

Shinkabe was not the only aesthetic choice that could be made for a building at any time. The remainder of this section provides descriptions of various design styles for Kyoto *machiya*. there are three different popular styles for the first story and second story respectively. For the second story, the three categories are the *Shinkabe*, Exaggerated-*Shinkabe*, and Flat-Plastered, while the first story has the Flat-Lattice, Bay-Lattice, and Open-Front.[28]

Starting with the second story, the majority of existing *machiya* tend to gravitate towards the *Shinkabe* style as already mentioned (Fig. 2.4). The Exaggerated-*Shinkabe* takes the *Shinkabe* a step further by exposing extra timber (both vertical and horizontal) that may or may not have structural use, such as framing windows or lattices (Figs. 2.5). This style is usually only seen on

[28] All style names are mine unless otherwise noted.

machiya that have taller second stories. The Flat-Plastered has plaster covering all of the facade and structural timber of the second story, giving the building a flat appearance (Figs. 2.6-2.7).

For the first story, the Flat-Lattice and the Bay-Lattice both have lattices covering their facades with either wood or plaster, and sliding screens (*shōji* 障子) or sliding doors (*fusuma* 襖) behind and on the sides. The lattice work may or may not run the full length of the first story. What sets the two styles apart is that the Flat-Lattice has a flat facade, while the Bay-Lattice has rectangular projecting bay(s) (Figs. 2.7; 2.4-2.6). The Bay-Lattice may come with one to three bays with varying widths. Lattices were a common element of Edo period *machiya*, which can be found in both descriptions and paintings, as well as later photographs and examples from examples outside Kyoto. Lattices in the city of Kyoto, in particular, are well loved and are an iconic part of *machiya*. In fact, all but five *machiya* in figure 2.3 appear to incorporate lattices, both in the Bay-Lattice and Flat-Lattice styles.

The remaining five *machiya* in figure 2.3 that do not have first story lattices have the Open-Front, which is less common in Kyoto. The Open-Front does not use lattice work but instead has sliding doors that typically run the full length of the facade (Figs. 2.8). When opened, the shop space becomes completely exposed to the street. While this style is less common in these three central districts, it exists in larger numbers on the paths to Kiyomizu Temple.

2.4 – Elements Common to Residences

Beyond the exterior styles, there were other elements of *machiya* that derived from preceding and contemporary Edo period residential architecture. Timber-frame architecture in Japan generally had an open concept in which rooms were divided with movable partitions and furniture such as *fusuma* 襖 and *shōji* 障子, not with solid walls. The openness of residential

architecture during this time allowed for breezes in the summer and kept the interior from becoming dark and damp. However, this construction method meant cold winters. To heat their residences a *hibachi* 火鉢 or a *kamado* 竈 were used (Figs. 2.9; 2.10).[29] The *kamado* was often situated in a kitchen/work area called a *doma* 土間 designated by a packed earthen floor (Figs. 2.11-2.12).

Living areas were determined by the size of the *tatami* mat 畳 and the length of the timber in the foundational structure of the building creating bays.[30] The size of residences also changed from the seventeenth century to the eighteenth and nineteenth centuries, as they adapted in response to shifting lifestyles. The space per person rose alongside the increase in the overall residences and the reduction in the number of family members. In a sense more rooms were added, while the number of family members decreased. During the Edo period, living areas consisted of raised floors, commonly covered with *tatami* mats by the nineteenth century. Many elements seen in residences were previously only used by the upper classes, but during the Edo period, they had spread to the common people.

Materials often used during the Edo period include stone, plaster, and wood. Stone was often used in new construction primarily for foundation stones placed under timber posts to separate the wood from the ground. This reduced the risk of the wood rotting from absorbing moister from the ground, which allowed the buildings to last longer. Plaster was implemented

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[29] *Hibachi* are charcoal braziers and *kamado* referred to an upright stove-type tool. *Hibachi* and *kamado* became more common in urban areas by the nineteenth century due to the scarcity of fuel as these tools did not consume as much fuel.

[30] The size of *tatami* are about three feet by six feet, though this varies by region. Bays mentioned here are a unit of measurement in Japanese architecture based on the spacing between timber posts.

more as the Edo period progressed since it was used as either a sign of wealth or to prevent buildings from burning down. While wood was still the primary resource for buildings, the use of this material continued to develop in areas from structural timber to sliding doors (*fusuma*), sliding screens (*shōji*), stairs, raised floors, and more. Other materials such as bamboo, paper, and straw can also be seen in many residential constructions by the end of the Edo period and into the Meiji period.

2.5 – Elements Specific to *Machiya*

Machiya specifically had a few elements that give them their defining features commonly known today. These include their two main widths, tiled roofs and eaves, *noren*, *battari shogi*, *inuyarai*, *mushiko-mado*, *kekkai*, and accounting desks. Found in Kyoto today, as well as in the painting from the Edo period, *machiya* came in two somewhat standardized widths: narrow and wide (Figs. 2.4; 2.5). The fact that there are two widths with some *machiya* between the two shows that the regulations on townspeople's residences resulted in standard sized lots. This is not to say that there are *machiya* that reside somewhere between these two widths or have a larger size than the average townhouse. What this does show is that most *machiya* were either narrow or wide.

It can be difficult to tell based on the few records here if there was room to stand in the second story towards the back of the *machiya*. While the second story could have housed living or storage spaces, it primarily functioned for drawing heat away from the first-story rooms and out the *mushiko-mado* 虫こ窓 (Fig. 2.6). *Mushiko-mado* are ventilation slits on the second story that allow for hot air and smoke from cooking and heating elements to vent out of the *machiya*.

This was especially helpful due to the fact that *machiya* often abutted each other only allowing for a breeze to go through part of the building.

Wood shingles were the primary material for roofs during the seventeenth century, but by the end of the eighteenth century, clay tiles were often used as a sign of wealth and status or a prevention of fires. Within clay tiles they developed from the orthodox tiles (*hongawara-buki* 本瓦葺, Fig. 2.13) introduced from mainland Asia prior to the Edo period with an interlocking half circle shape, to a composite tile (*sangawara-buki* 桟瓦葺, Fig. 2.14) with an interlocking wave-like design. Clay tiles were not the only materials seen on machiya during the Edo period, nor were they the only ones to undergo development.

The lattices seen on Kyoto *machiya* have been considered to be the most refined and delicate feature across most *machiya*. Lattices are wooden slats of varying widths that are used to cover openings (i.e., windows). For lattices on Kyoto *machiya*, the spacing between the wooden slats also varies, but is typically narrower than those found in some other places of Japan. Some lattices specifically in Kyoto also present designs at the top with some of the slats featuring varying heights (Fig. 2.5). Lattices on Kyoto *machiya* also had the feature of designating a type of businesses (or residence) that was within these townhouses during both the Edo and Meiji periods. While these lattice designs have been recorded in some degree, the use of them today is not significant as existing *machiya* may have altered such designs or the use of these townhouses has changed. This results in the difficulty of pinpointing a *machiya's* earlier use today.

On the interior of *machiya*, flooring in the shop spaces in *machiya* had either a packed earthen floor, raised flooring, or a mix of both. If the floor was raised in the shop area, it consisted of wood planking or was covered with *tatami*. The shop spaces could be small to large,

even as large as to take up half of the first story (Fig. 2.11). Overall, each *machiya* was unique in its plan as seen in figure 2.12.

There are a few elements that are specific to businesses. *Noren* 暖簾 are cloth banners hung in front of the shop designating the business inside and come in three main styles: the *naga-noren*, the horizontal *noren*, and the informational *noren*. There are of course variations that exist within each of these three types. The *naga-noren* 長暖簾 or vertical *noren* is a series of long vertical cloths, typically two to four pieces wide which are hung from two wooden poles that drop-down from under the first story eave (Fig. 2.15). This type of *noren* is often placed in front of the doorway into the *machiya* and is typically taken down at night and put up in the morning signifying the closing and opening of the shop. The horizontal *noren* is a series of smaller pieces of cloth running the length of the lower eave (Fig. 2.16). Like the *naga-noren*, the horizontal *noren* also typically contains a type of logo that either signifies the type of merchandise being sold or the brand of the shop. This type of *noren* is also used to block the sun as it typically is hung close to the edge of the eave. The information *noren*, like the *naga-noren*, is a vertical cloth banner, but instead it is a single large piece of cloth (Fig. 2.16). This type of *noren* is also hung from under the first story eave, but instead the information *noren* is held down on the ground by heavy stones or a large piece of wood. As can be guessed from the name, the information *noren* contains the shops logo, or a list or description of merchandise sold in the shop. Today, *noren* can still be seen in use for many shops, not just on *machiya*. When it comes to *machiya*, there is evidence that there are still the poles under the first story eave used for *naga-noren* found in Kyoto even if they do not always hang *noren* anymore (Fig. 2.17).

During the Edo period, Kyoto shops typically kept their most valuable merchandise safely in the *kura* 蔵 (storehouse) and cheaper goods were put out on display. Storehouses were thick plastered, two to three story structures with minimal to no windows (Fig. 2.18). Although, there were *machiya* that were opened to the streets (e.g., Open-Front style) with raised floors for displaying goods, by the end of the Edo period, Kyoto *machiya* more often were closed with access only through a doorway (Figs. 2.3-2.8). The display of goods was also extended outwards from the *machiya's* structure with at least one *battari shogi* ばったり床几 (Figs. 2.3, 2.19-2.20). The *battari shogi* is a fold-down platform that extends the display area out into the street but still stays under the cover of the lower eave.

The presentation of the shopfront can also be seen in the daily routine of merchants cleaning the exterior of their *machiya*. This was not only good for business but also for sanitation due to the build-up of filth from the high traffic commercial streets of the day and night before. *Inuyarai* 犬矢来 also fulfilled this purpose as they were protective screens that shielded the building's base from street filth (Fig. 2.3, 2.21). Much like foundation stones, *inuyarai* also helped to protect the base of timber posts from debris, filth, and most water sources. The *inuyarai* are seen less often on Kyoto *machiya* today.

Found in the interior of *machiya* were two elements, the *kekkai* 結界 and the accounting desk. *Kekkai* are a small screen-like fence meant to separate shop and residential spaces (Fig. 2.22). In *machiya*, *kekkai* indicated that the customer should not cross even if they could see

beyond it.[31] The accounting desk was a small table that often had a short, railed partition (2.23). An abacus could often be seen, as well as the accompaniment of a *hibachi* in colder months.

[31] Arata Isozaki, "Floors and Internal Spaces in Japanese Vernacular Architecture: Phenomenology of Floors," *RES: Anthropology and Aesthetics*, no. 11 (1986): 73.

Chapter 3: The Case of Edo

The *machiya* from Kyoto that we think of today were not the only townhouses that existed in Japan during the Edo period. There are a few scholarship and museum installations that present Edo- to modern-period urban architecture beyond Kyoto. For example, Kazuo Nishi and Kazuo Hozumi, in their book, *What is Japanese Architecture?* (1985), discuss *machiya* from the post town of Tsumago in present-day Nagano Prefecture that sits on one of the major Edo period highways (Fig. 3.1). The Fukagawa Edo Museum reproduced a fraction of Saga town in present-day Kōtō ward, Tokyo from the 1840s, which includes a street of *machiya* (Fig. 3.2). The Edo-Tokyo Open Air Architectural Museum has collected and preserved buildings in the city from the nineteenth to twentieth century (Fig. 3.3). Just outside Tokyo, in Kawagoe, Saitama Prefecture, is an area with many buildings from 1868-1945, which have been preserved and are still used for shops (Figs. 3.4). The Osaka Museum of Housing and Living exhibits both a reproduction of a portion of Edo period Osaka from the 1830s and scale models of modern Osaka from around the 1930s (Figs. 3.5-3.6). All of these museums include *machiya* in their exhibitions. These examples reveal the diversity of styles and information on *machiya* architecture that existed outside Kyoto.

Edo city, under the rule of the Tokugawa government, was the largest metropolis that contrasted sharply with Kyoto. This chapter focuses on select examples of Edo *machiya* to expand the scholarship beyond Kyoto *machiya*. Like Chapter 2, the history of Edo is introduced utilizing the city's unique urban planning and infrastructure implemented by the Tokugawa government as they solved challenges posed to land development and rapid population growth. Compared with the Kyoto *machiya* in the Chapter 2, Edo *machiya* reveals how broad this type of architecture was at its height beyond the common perception that defined these townhouses.

3.1 – The Birth of the Edo Metropolis

During the seventeenth century population boom, the city of Edo was filled with large numbers of the warrior class who either worked directly for the Tokugawa shogunate or who traveled to the city complying with the alternate attendance system. The alternate attendance required warlords to travel to Edo (at their own expense) to seek an audience with the shogun and to fulfill their duty to the government. The warlords had to reside in Edo for set periods of time due to the distance of their domains. The alternate attendance imposed a large financial burden on warrior households to form grand processions worthy of a lord's reputation every time they traveled between their domains and Edo as well as maintaining two residences: one in their domain and one in Edo.

Those of the warrior class were not allowed to farm or craft objects themselves while they were in the city. This meant that Edo had a large number of warrior residents who relied on others to provide for their daily necessities. Merchants and artisans settled in Edo to fulfill these needs. Many other people seeking new opportunities quickly moved into the city, causing Edo's rapid population growth during the seventeenth century, which continued at a slower pace throughout the rest of the Edo period. Responding to rapid urbanization, the new Tokugawa government reclaimed swampland surrounding the city, sourcing fresh water, and developing port facilities.[32]

Map 3.1 from 1693 shows the density of Edo towards the end of the seventeenth century population boom. Following the standard defense strategy for castle towns, Edo initially planned the city with higher ranked warriors, who were loyal to the Tokugawa before they took power to reside closest to the shogun's castle, followed by warriors who swore loyalty upon their defeat,

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[32] Hall and McClain, *Early Modern Japan*, 141.

then groupings of low-ranking bureaucrats, and lesser warriors, in concentric circles spiraling away from the castle. The townspeople were relegated to concentrated areas in the city. After a great fire in 1657, the plan was changed, spreading the larger estates of the upper warrior families out to act as fire breakers. Overall, though *machiya* remained in concentrated areas such as to the east of the Tokugawa castle (the middle, right side of Map 3.1), which were still under development in 1693 when compared with later maps. Even with these maps, areas of *machiya* are difficult to pinpoint at this point in Edo's history, as the city continued to grow and adapt to sudden changes, including aspects involving the rapid population growth of the city.

3.2 – Water and Sanitation in Edo

As noted in the previous chapter with merchants' effort to maintain cleanliness with *inuyarai* and by wiping down their *machiya* shopfront, pre-modern Japanese communities generally shared an interest in sanitation compared to other cities around the world during this time. There was also a reason for the Tokugawa government to be concerned with sanitation besides the density of urban areas. Drinking water was hard to come by in Japan so the need to keep prime sources clean was critical to the life of a city, especially in metropolises like Kyoto and Edo, where the quality of water affected the health of the people. Kyoto in the eighth century was situated near the intersection of two major rivers so the city could always secure enough fresh water to sustain its population. Edo, on the other hand, did not have this luxury. The Tokugawa family was granted the land that they transformed into their political center at the beginning of the seventeenth century. They had to rework the environment to fit their needs, especially in the face of rapid urbanization, especially throughout the seventeenth century.

The city of Edo could not obtain water from Edo Bay that opened to the Pacific Ocean, nor from underground wells, since the building up of land resulted in salty underground water. This underground water was connected to the bay. The Tokugawa government needed to look elsewhere, and time was ticking due to the city's unprecedented growth. The government found their source in the Tama River to the west of the city. A monumental infrastructure project connected the Tama River to a series of over 3,600 wooden aqueducts that ran underneath the city to aboveground wells.

Fearing that their drinking water would become contaminated, the government took steps to keep the Tama River clean. This included three laws that removed any unhygienic threat from the area surrounding the river and the runoff from the streets. Two laws issued in 1649 and 1655 in particular were important in which huts and toilets near the rivers and around the city's area were removed and the disposal of garbage in the rivers was prohibited. The 1655 law also established a city dump on Eitai Island which led to the establishment of a new profession of garbage collectors. A third law involved the collection of human waste, so that it would not be dumped anywhere available including on the streets, which contained various depths and widths (based on the areas they were in) of drainage ditches for water. The human waste that was collected was then sold as high-quality fertilizer to agricultural communities, creating a symbiotic relationship between urban and rural, while also keeping these heavily populated urban centers clean. These laws in turn made Edo in particular and Japan as a whole, the cleanest in the world from about 1600 to 1800. These initiatives continued past the end of the Tokugawa political system. These acts to keep the river and the city streets clean resulted in a strong concern for the city's overall sanitation efforts.

The planning of the aqueduct system needed to work alongside urban planning, including city infrastructure and the zoning of residences and businesses, which directly impacted the lives of the common people. Wells were not implemented to one per household, but rather one per community or a grouping of residences. For this reason, residences including *machiya* had to be built close together for easier access to clean water. These groupings or communities often contained people of similar professions and classes leading to an easy establishment of districts within the city. Merchant districts benefited from locations along the canals that ran through the city, especially to the east of the Tokugawa Castle. This was due in large part to the ease of transporting goods along waterways and across the oceans rather than over mountainous land. For goods to move freely and unobstructed, waterways needed to be kept clean, another reason for sanitation efforts in the city of Edo.

3.3 – The Impact of Fires on Edo

Fires were a regular occurrence in Japan where timber was the primary building material for much of its history. Due to its density and dry winter winds, Edo received a reputation as the city of fire where major fires took place about every six years caused by natural conditions, accidents, or arsons. The densely packed wooden residences in commoner areas acted like kindling, often fueling the spread of fires. The recurring fires, which caused mass destruction and human casualties, affected everyone no matter their status, instigating policy changes in building materials, such as a shift from thatched roofs to wood shingled roofs, and in some cases to tiled roofs by the nineteenth century.[33] Fire brigades were also established during the earlier

[33] Tiled roofs, like plastered walls, were seen as a status symbol, so the Tokugawa government put restrictions on them. By the nineteenth century it was apparent that tiled roofs could help prevent fires, but they were still restricted

years of the Edo period. This force contained both hired and volunteer workers whose main job was to tear down buildings to keep the fires from spreading.[34] Tokugawa Tsunenari, a descendant of the Tokugawa family, reminisced about the first large scale fire and subsequent rebuilding in Edo, stating:

> [Tokugawa Tsunenari has] always wondered why, in the process of reconstruction, London became a city of stone buildings, whereas Edo and Kyoto remained cities of wood, particularly since Edo would suffer from fire many times more. …Japan since the Tokugawa has always enjoyed an abundance of forests. Forests were felled with abandon during the Era of Warring States, but the Tokugawa shogunate banned indiscriminate logging in 1645, leading to the rise of a more sustainable form of forestry. Wood was thus always readily available, and in the wake of major fires reconstruction work could be done with ease and relative speed.[35]

Nowhere is the rebuilding "done with ease and relative speed" more evident than with the standardization of structure and building materials, the technique of joinery, and a prep-store-and-supply system developed in anticipation of disasters. Adding to what was discussed in Chapter 2, the standardization of *machiya* architecture was not just a reaction to government policies, but also a response to the high possibility that their residences would be destroyed by a fire sooner or later. Joinery techniques that developed during the Edo period allowed buildings to be easily assembled and torn down. Combined with the standardization of architectural

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to specific classes or areas of the city deemed most hazardous to fires. This, however, did not stop the townspeople from using them on their *machiya*.

[34] The fire brigades were placed under local city and ward elders, and artisans who specialized in scaffolding and were used to being up high were hired when fires struck. These "scaffolding men" (more literally, the "kites" or *tobi* 鳶) would tear buildings down to prevent the spread of fires from one wooden building to the next. However, these fire brigades, and more specifically the scaffolding men, had over time become quite famous as undisciplined and rowdy members from the laborer class known as *abaremono* who would get into fights amongst each other during a fire, sometimes even adding to the problems.

[35] Tokugawa, *The Edo Inheritance*, 89-90.

structures, *machiya* resembled a puzzle in which there were a number of the same shaped building pieces that could easily allow the replacement of just the damaged parts. In fact, many firemen in Edo city were either carpenters or scaffolding men who had intimate knowledge of buildings contributing to the efficiency of stopping a fire and carrying out rebuilding afterwards. In the anticipation of fires, Edo *machiya* residents stocked up on wood at warehouses owned by lumber merchants.[36] In this way merchants would not lose out on business because of temporary closure due to fires and construction workers were constantly needed to mill and prep the wood for when the next fire strikes.

Fires also stimulated the construction of *kura* (storehouses), which became a common feature of many *machiya*, situated either behind or to the side for the protection and storing of excess or valuable personal and commercial goods (Fig. 2.18).[37]

Map 3.1, published 15 years after the 1657 fire in Edo, shows the result of the Tokugawa policy to scatter warrior residences (marked with red crests on larger areas of land) to act as fire breakers rather than being clustered around the castle. However, the re-clustering of townspeople's residences and businesses into specific areas never succeeded as well as one would expect. Each time a fire occurred in the seventeenth century, the government would try to reintroduce order within the layout and division of the city itself. However, this was quickly averted by the merchants who sought better places for their business, spreading throughout the city.[38] Map 3.1 (1693) shows the organic spread of the streets from the center to the outskirts, revealing both a planned and unplanned growth of the city.

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[36] Ibid., 90.

[37] Ibid., 91.

[38] Hall and McClain, *Early Modern Japan*, 540-542.

Fires were a way to reset the city throughout the Edo period, making it difficult to trace the evolution and placement of Edo *machiya*. However, the standardization of building materials, structures, and techniques that were developed to minimize the damage of fires ensured that even if merchants and carpenters made changes and improvements to *machiya* over time, the basic structural framework remained generally the same. This would have included the size and layout of rooms and the shopfront for businesses. For this reason, Edo *machiya* that still exist today, even if they do not date prior to the nineteenth century or are reproductions, provide an insight into this type of architecture.

3.4 – Maturity of Edo City

The previous sections focus on the seventeenth century, the period of rapid development for the city of Edo. This section continues with the development of Edo city from the eighteenth and first half of the nineteenth centuries to highlight the metropolis' maturity alongside its *machiya*.

Map 3.2, dated 1771, shows a denser outer area than Map 3.1 from 78 years prior. The outer city limits seem to be pushing against, if not going past, the edges of the map's border. It is also evident from these two maps that the city of Edo continued to expand in the face of a growing economy. Just like Map 3.1, the compact streets in Map 3.2 surrounding the large areas of unobstructed land owned by members of the upper warrior class indicate districts of townspeople, where streets were lined with *machiya* and other residences and businesses.[39] The

[39] Coaldrake, "Edo Architecture and Tokugawa Law," 251-252.

townspeople were also relegated to specific areas of commercial value such as the southwestern side of the city and the area of Nihonbashi (marked on Map 3.2 by a purple circle).[40]

Merchants also took the initiative to develop swampy coastal areas, including the eastern side of the city, for farmers and other business needs.[41] Map 3.3, dateable to circa 1830-1843, shows a further expansion of the physical city. The areas that were already packed appear to be filled even more, revealing that development continued in these commercial areas of the city. This map also appears to go beyond the physical edge of the paper hinting at a much larger city than what can be represented. The increase in density and expansion of this period correlated with the Tempō Famine of the 1830s and outbreaks of pestilence, measles, smallpox, and influenza, which also caused civil unrest across Japan. While the population of Japan as a whole would have decreased due to these many illnesses and famine, the loss of work for farmers would also have resulted in large migrations to the cities in search of work. The increased density and expansion of Edo seen at this point confirms the rise in population from this migration. Many of these migrants would have taken jobs as day laborers, so this did not immediately increase the number of merchants and artisans within the city of Edo. The civil unrest, on the other hand, would have caused not only damage to human lives but also to buildings both in and out of cities.

Map 3.4, dated 1857, provides evidence that the city of Edo never stopped expanding in the second half of the nineteenth century even when the Tokugawa power had almost completely waned. Around this time, many upper class warrior families abandoned Edo and moved to Kyoto. Yet, this map zooms out further than any of the maps so far, but it is still unable to

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[40] Ibid., 248.

[41] Hall and McClain, *Early Modern Japan*, 501.

encompass the whole city as newly developed areas on the periphery extend beyond the physical edge of the map. The expansion and density, at this point, may have resulted more from the contact and initial trade occurring with foreign countries when this map was published. Maps 3.2-3.4 also show the blurring of rural and urban areas that occurred as the city expanded.

These maps show the evolution of the city of Edo as it reached its maturity in the nineteenth century. The late Edo period was when *machiya* reached their maturity in architectural development. The examples of Edo *machiya* that follow come from this point in time.

3.5 – Edo *Machiya*

Edo *machiya* shows a sharp contrast to the Kyoto *machiya* from the same period. Chapter 2 already introduced the general characteristics commonly recognized today as *machiya*. Edo *machiya*, on the other hand, were distinct from Kyoto *machiya* that the differences outweigh the similarities. One of the best sources for understanding Edo *machiya* comes from the Fukagawa Edo Museum (FEM) in Kōtō ward, Tokyo, east of the former Tokugawa Castle. The FEM reproduces a portion of the town of Saga, that sat along the Sumida River in the city of Edo during the 1840s (Fig. 3.2). Saga town was an area designated for merchants during the Edo period.

First, key differences between Edo and Kyoto *machiya* need to be introduced so that the three styles seen at the FEM can be understood individually. The first noticeable difference is the lack of plaster on the exterior of the buildings, instead there is a strong use of wood. This does not mean that plaster was not used as ordinances were issued to specific areas of the city, encouraging the use of this building material since the eighteenth century to prevent fires from

spreading.[42] While it is unclear as to where these ordinances were implemented, the use of plaster was still based on the wealth of the owner and their desire to use this material. In the FEM examples, wood is seen on the *machiya's* exteriors, but the interior walls are covered with plaster in the *shinkabe* treatment (Fig. 3.7). There may be a few reasons for this limited use such as cost of materials, since plaster was more expensive than wood, or this area of Edo was not permitted to use it on the exterior.

The next significant difference is the presence of a full second story. This allowed for more living space in densely packed areas that was granted to each family, a common occurrence in the city of Edo. In fact, the FEM examples, as well as *machiya* represented in prints of Edo consist entirely of two stories, which seem to violate the Tokugawa government regulations. Because these spaces could be used for living purposes, windows were needed rather than simple ventilation slits. Windows were similar to some openings found on the first-story with the use of sliding *shōji* screens and lattices. It is unknown as to why both Kyoto and Edo *machiya* show full second stories among their buildings. It could then be inferred that the regulation to limit merchants to one-and-a-half stories was not always followed in Edo and Kyoto.

The third difference occurs with the display of goods. In Edo *machiya* the use of a *battari shogi* is nowhere to be seen. Instead, Edo *machiya* often had open fronts extending merchandise out onto the street while remaining under the *machiya's* lower eave without the use of a *battari shogi*. Of course, this is not to say that there were no *machiya* in Edo that were not closed off, only allowing access through a doorway like those in Kyoto. Instead, there were more Edo *machiya* with open fronts, a common occurrence for most *machiya* throughout the city today.

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[42] Hall and McClain, *Early Modern Japan*, 576.

The fourth difference is the design of the lattices. While both Kyoto and Edo did have lattices, the style differed between the cities. Edo's lattices, seen in the FEM *machiya*, are more rough, or rather basic showing not much variance in slat width and spacing unlike those in Kyoto. Also, unlike Kyoto, which has lattices often running the full or majority of the length of the building, Edo *machiya's* lattices range from not having any to covering the full width of the building. Lattices were a way for light to come into the buildings, and for people inside to see out, and in most cases with tighter lattices, for people to have trouble seeing inside. In the FEM examples, the lattices are wider for people to see everything going on inside and outside.

Edo-period Kyoto and Edo *machiya* commonly had eaves on the first and second stories, but the commonality ends there because the materials and depths varied. As noted by the roofing regulations and materials used in the previous chapter, the roof and first-story eave of an Edo *machiya* could have used either wood shingles or tiles.

The FEM reproduction includes three styles of *machiya*: the Panel, Simplified and Upper-Bay. The Panel style is named after the large paneling on the sides of a latticed window (Fig. 3.9). The lattice work on the second story window matches those that cover the majority of the first story. Of all three examples at the FEM, the Panel is the only one that shows a more closed up type of *machiya* with an opening in the middle with lattices on either side (one side full-length, the other half-length). For the roof, this example has both an upper roof and lower eave covered with interlocking tiles. This style of *machiya*, as it will be seen in the next chapter, was the main base for most modern *machiya* in Tokyo.

The Simplified style is named after the flat facade of the walls and the simplified latticed window that appear to blend together (3.10). The first story is an example of an open shop-front

with no lattices, providing a feeling of the inside and outside seamlessly blending together. The Simplified has no tile with only wood shingles for both the roof and eave.

The Upper-Bay style is named for its extended projecting bays with planked paneling on either side of a latticed window (3.11). Like the Panel, the Upper-Bay has a matching lattice to those on the first-story. The lattices on the first story are partially open covering only half of the facade. There appears to be no wall or screen behind the lattices allowing people to view inside. The roof and eave seen in this style are different from each other unlike the Panel and Simplified. The upper roof is covered with tiles, while the lower eave is clad with wood shingles.

The use of wood present in Edo *machiya* strongly contrasts the wood and plaster styles found in Kyoto's *machiya*. The diversity in materials extends to the rest of the *machiyas* indicating that while there may be some similarities between the examples in the city of Kyoto and the city of Edo, their differences are much greater. These differences persisted into the modern period even after *machiya* in the city of Edo built during pre-modern times sustained a devastating loss during the transition into modernity when the Ansei Edo Earthquake (Fig. 3.12; November 11-12, 1855; 7.0 magnitude) destroyed over 50,000 buildings and more than 7,000 human deaths.

Chapter 4: The Case of Tokyo

Starting in 1868, Japan shifted into the modern age with the end of the Tokugawa regime and the restoration of the imperial authority. In an act to overwrite the previous regime, Emperor Meiji (1852-1912, r. 1867-1912), moved from Kyoto to Edo, establishing a new imperial capital in this city. This move, which contained the entire imperial court, transformed the city of Edo into the "Eastern Capital" or Tokyo. Tokyo is still the capital today. Despite the common perception due to the city being heavily modern today, *machiya* did not disappear from the urban cityscape with the end of the Edo period. The *machiya* that survived the Ansei Edo Earthquake, and the regime change continued into the twentieth century. New *machiya* were also built in the Meiji period that followed the architectural styles of the Edo *machiya*.

The last chapter challenged the popular misconceptions that have defined *machiya* as exclusive to the city of Kyoto. This chapter expands the understanding that *machiya* architecture disappeared in the face of Japan's modernization during the Meiji period and onward by proving that Edo *machiya* continued to evolve into a new "modern *machiya*." While people may have adapted to the times by incorporating new materials and technology, the essence of what defined a *machiya* remained.

4.1 – The Birth of Modern Tokyo

The first major changes that occurred in the city of Tokyo (previously Edo; hereafter Tokyo) did not involve *machiya* but are important nonetheless in the overall development of the city. Map 4.1 of Tokyo dated 1879, captures the immediate actions of the early Meiji urban restructuring. After the regime change, the Meiji government abolished the Edo period social status and confiscated many former warrior residences in Tokyo, including Tokugawa Castle.

The government then sold some of these plots of land to the people in the new upper to middle class, or repurposed the land, building new Euro-American inspired institutions, like Tokyo Imperial University (present-day Tokyo University), which was built on the former warrior residence of the Maeda family in 1877. When compared to Map 3.4 from 1857, Map 4.1 shows former warrior estates transformed into condensed areas of residences and commercial buildings (marked by a purple circle on Maps 3.4 and 4.1). In Map 4.1 the city appears to have become denser and expanded even more in all directions. The increase in population was most likely due to the influx from the imperial court moving to Tokyo along with members of the former warrior class as part of the new court, and the many people who followed them.

Since the opening of Japan to Euro-American countries, western style architecture, alongside industries, technology, and knowledge, entered Japan at a fast pace in the hopes of modernizing the country. The ultimate goal was to catch up and be considered equal to the Euro-American countries. Tokyo, the site of the new imperial government, became the symbol of Japan as the new modern nation-state. Certain areas were designated by the government for reconstruction, shifting from Japanese to Western style architecture and changing the city's skyline (Figs. 3.8; 4.1, 4.8-4.9). In some cases, an entire district underwent architectural updates, while in other cases the change only occurred one building at a time. The government was mainly concerned with the most visible areas of the city, such as along major roads in the traditional commercial centers, including Ginza and Nihonbashi. Even among these major commercial centers, there was significant differences in the speed in which they developed. For example, Ginza experienced a rapid change in its streetscape, while Nihonbashi's transformation was relatively gradual (Figs. 4.1, 4.8-4.9). In addition to Euro-American inspired buildings, there were also infrastructure projects meant to improve living conditions and boost administration and

businesses. For example, communication across Japan was improved with the establishment of new postal services and the implementation of telegraph lines.

Machiya architecture was affected by different urban restructuring methods. Pre-modern shops and residences were cleared in specific districts to make room for new Western style architecture, such as in the cases of Ginza and Nihonbashi. The *machiya* that were not demolished by the modern initiatives of the Meiji government, saw the lifting of most restrictions from the previous period, allowing them to undergo further developments.[43] The biggest infrastructure project that directly impacted *machiya* was the expansion of roads that completely wiped out some buildings or cut them down in size, especially along major roads refitted to accommodate for railways (1872), automobiles (1898), and streetcars (1903).

4.2 – Electricity and the Streetcars and Railways

With the introduction of new technology came changes in Japan's infrastructure. The biggest impact on cities, buildings, and businesses was electricity. Electricity was introduced early in the 1880s, surpassing previous sources of energy such as steam, water, and gas in many commercial and industrial sectors by the 1890s. Electricity stimulated other reforms in infrastructure that had a direct impact on smaller commercial buildings such as *machiya*, which were retrofitted for this new technology. Businesses and residences came to rely on electricity, especially the lightbulb, resulting in over 90 percent of households having electricity on the main islands of Honshū, Kyūshū, and Shikoku by the 1930s. Electricity also provided new means of transportation, both for goods and people, such as railways and streetcars.

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[43] Hall and McClain, *The Nineteenth Century*, 546-547.

Streets were widened to accommodate tracks for streetcars along with automobiles and sidewalks for pedestrians, expediting the disappearance or reduction of *machiya* from urban centers (Figs. 3.6). The maps of Tokyo in this section show where and to what extent the streetcars and railways had on the streets of the city and by extension the *machiya* that often lined many of these dense commercial areas. Stations, whether for streetcars or railways also needed to be implemented, meaning small sections or large areas, needed to be dealt with respectively. This was especially so for railways as large train stations were built. For Tokyo, the major train station was built close to the area of Nihonbashi eliminating a large section of the city that would have contained some *machiya* as well as cutting through the already built-up areas of residences and businesses.

Map 4.2, dated 1911, includes red lines for the streetcar system, whereas the dotted-black lines along the bay running from the southwest to the south-southeast of the imperial palace (former site of the Tokugawa Castle) indicate the railways that became the most accessible method of transportation between cities. The expansion of streetcar and railway lines can now be used as a method for tracing the growth of Tokyo seen in Map 4.3, published nine years later. All of this was part of the first wave of modernization that began during the Meiji period and continued until the 1940s. Electricity and its by-products of streetcars and railways improved businesses and their production, but they also eliminated or reduced buildings in their paths as the city continued to grow. What can be said is that the buildings constructed after the expansion of streets contained entirely of newly built *machiya*, or a mix of Japanese and Western style buildings.

4.3 – Tokyo Continues to Modernize

Even after the restructuring of the city and the introduction of electricity, streetcars, and railways, and the disappearance or reduction of *machiya*, Tokyo continued to modernize incorporating new technologies and industries.

Dated 1892, Map 4.4 shows the new ward divisions within central Tokyo, initially implemented in 1878 and re-enforced in 1889, redefining the boundaries of the city.[44] The map records a combination of dense central areas with new larger open spaces throughout the city. A map, dated at the turn of the century (1900) continues to show the division of Tokyo wards. When the 1900 map is compared with Map 4.4, the maps reveal a shift in which areas increased or decreased in population density. The area east of present-day Ara River appears denser in the 1900 map than Map 4.4. Map 4.3, dated 1920, shows an increase in population density in the central areas of Tokyo from the 1900 map as well as a continuing sprawl.

Photographs from the Meiji period, on the other hand, continue to show streets lined with buildings similar to Edo period *machiya*. The information about these photographs is limited, making it possible that these images were taken for tourism to give a sense of nostalgia as a reaction to the rapid modernization that was affecting the city. Nevertheless, they demonstrate that change came to specific areas of the city slowly, and the Tokyo cityscape in the late nineteenth century was not completely overtaken by Western style architecture.

In a photograph from 1911 of the Fukagawa area, this image features at least one modern building amongst many *machiya* (Fig. 4.2). This shows that even in the early twentieth century the architectural shift progressed slowly, especially when compared to changes to the city's

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[44] Stephen Withervee, "The Evolution of Tokyo's Ward System," *One Hundred Scenic Spots in Shinagawa*, May 13, 2024, https://shinagawa-hyakkei.about-tokyo.com/tokyo/the-evolution-of-tokyos-ward-system/.

infrastructure. By the first decade of the twentieth century, electricity had reached the common people, evident in the power lines in this photograph. Finally, a photograph from the first year of the new Taishō period (1912-1926), presents a shift in the balance between *machiya* and Western style buildings (Fig. 4.3).

These major developments in the city of Tokyo under the modern governments tell what aspects of *machiya* were affected by modernization and how. In addition, businesses that were built on widened streets due to the introduction of electricity, streetcars, and railways were often a hybrid of *machiya* and Western style architecture.

4.4 – Modern Tokyo *Machiya*

Machiya as a result of modernization adapted, changed, or died out. The lifting of Tokugawa residential regulations gave urban people newfound freedom to choose their own style and structural designs. Today, only a few examples remain in central Tokyo, compared to nearby areas including Kawagoe, Saitama Prefecture (Fig. 3.4). A small sample of representative Meiji to Shōwa buildings can also be found in museums like the Edo-Tokyo Open Air Architectural Museum (Fig. 3.3). Although the number of examples is limited, they demonstrate that the combined shop-residence buildings did not go out of style during the modern age. In fact, many still retained characteristics of the Edo period *machiya*. It can then be argued that these new townhouses are an evolution of their Edo period predecessors as "modern *machiya*."

The modern *machiya* established in Tokyo retained the foundational styles of Edo *machiya* explored in Chapter 3. For example, modern *machiya* in Tokyo often still used the composite tiles (*sangawara-buki*, Fig. 2.14). The width of Edo *machiya* introduced in the FEM examples is also present in many modern *machiya*, indicating that the Edo period standard size

for these townhouses continued to dictate much of the cityscape. Based on the limited examples found in Tokyo, there are three type of modern *machiya*: 1) Slat-and-Lattice; 2) Side-Addition; and 3) Modern-Upper-Bay.

At first glance, the Slat-and-Lattice is similar in its second story to the Edo period Simplified style, with a flat facade as if the walls and the latticed window are blending together (Fig. 4.4). However, upon closer inspection, on the sides of the latticed window the wood is not flat but rather made of slatted horizontal planks with thin vertical strips. This treatment is used more commonly on the sides of *machiya*. The front of the first story is mostly covered with sliding panels made of lattices. This *machiya* is unique in the examples in this thesis as it the only one in which it can be accessed through a door on the right side of the building just beyond the gate seen in figure 4.4. The first story facade also shows plaster, and timber posts and beams reminiscent of the *shinkabe* treatment, but this is minimal since the lattices take up the majority of the front.

The Side-Addition features an addition to the side here used for as a covered passageway where this style gets its name (Fig. 4.5). The second story is similar to the Panel from the FEM, but at the top in this example, there is a thin strip of plaster. The first story, including the side addition are more open like the Simplified from the FEM, but here sliding glass doors are used. Similar to the Upper-Bay at the FEM, the Side-Addition has both a *doma* and a raised floor area designated specifically for the shop.

The Modern-Upper-Bay is a continuation of the Edo period Upper-Bay, which featured an extended projecting bay with planked paneling on either side of a window on the second story (Fig. 4.6). The difference lies in the open shopfront on the first story that is similar to the Simplified at the FEM. However, this *machiya*, much like the Side-Addition example, uses

sliding glass doors. The Modern-Upper-Bay is also similar to the Simplified in its plan, with a *doma* space for the entire shopfront and a raised floor for the living spaces. This *machiya* also features a *kura* (storehouse), a common feature of most of these buildings during the Edo period. This Modern-Upper-Bay is different from the Slat-and-Lattice and the Side-Addition in the fact that it has no plaster on the exterior and shop interior of the building.

While remaining examples of *machiya* are limited, the modern shop-residences carried over the legacy of Edo period *machiya*. At the same time these *machiya* were changing specific elements and materials, taking advantage of changes in the government policies and accessibility of a wider range of materials and influences. While these Tokyo examples were recognizably *machiya*, they also show a greater freedom and individualization in both the building's structure and design. Moving through the twentieth century *machiya* continue to survive through disasters that continued to restructure the city.

4.5 – Post Great Kantō Earthquake and Trans-City Changes in *Machiya* after the 1920s

One of the largest disasters to hit Tokyo was the Great Kantō Earthquake (*Kantō dai-jishin*, 関東大地震, or *Kantō daishinsai*, 関東大震災) of 1923, with a 7.9 magnitude (Fig. 4.7). The earthquake, subsequent tsunami and fires, along with civil unrest, resulted in 100,000-140,000 human deaths. The effects also included about 1.5 million (or about half the population of the city) that were left homeless and at least 30,000 square meters of the urban areas were destroyed (Map 4.5). The Great Kantō Earthquake was larger in scale than the Ansei Edo Earthquake that took place 68 years prior at a 7.0 magnitude, which had no tsunami and spanned a smaller area overall.

Following the Great Kantō Earthquake, the urban landscape of Tokyo continued to develop. Map 4.6, dated one year after the earthquake, marks the areas that survived in yellow, indicating that at least half the city continued to be in a state of recovery. Interestingly, the map shows new streetcar lines that were added as part of the rebuilding process for the city. A map, dated 1930, shows a complex network of streets and trains in post-earthquake Tokyo. Yet, the urban planning appears to not ease the population density. The 1930 map presents the area that was destroyed by the earthquake now completely rebuilt in a dense pattern, much denser, in fact, than what was planned before the earthquake. By 1940, Tokyo had a more complex network of rail lines than any other cities in Japan, and it was more densely populated than ever (Map 4.7).

The city of Tokyo prior to the Great Kantō Earthquake still retained a heavy presence of wooden buildings, which quickly caught on fire and spread. It would have been thought that with the introduction of the profession of architects in the 1870s-1880s, which caused a shift away from carpenters and specialists in the construction industry, that materials and technologies to counter fires and earthquakes would have been introduced sooner, but this was not the case. The aftermath of the Great Kantō Earthquake, which left many buildings destroyed and few modern buildings standing, initiated a reevaluation in construction materials that accelerated modernization (Fig. 4.7). The renewed push for modernization did not completely eradicate modern *machiya* but instead incorporated modern technology and materials. The result was a greater mix of old and new elements and buildings. Many residences and *machiya* incorporated combinations of Japanese and/or Western styles, but every combination involved an internal structure utilizing western technology. These developments characterize Tokyo from roughly the mid-1920s to the mid-1940s.

The new internal structure created a material shift to concrete, which was deemed more suitable for withstanding both fires and earthquakes and was more accessible. The heavier use of concrete also led to new styles of architecture. Many of the *machiya* seen today most likely have concrete internal structures hidden behind pre-war, and pre-modern styles. In order to understand how the city of Tokyo accelerated in modernization, figure 4.8, dated 1929 depicting Nihonbashi features a modern bridge, and a mix of old and new buildings when compared to figures 3.8. Figure 4.9, dated thirteen years later of the same area, shows a further progression with only modern buildings. In this woodblock print, only a small boat in the foreground shows anything of pre-modern influence.

The devastation of the Great Kantō Earthquake served as a wake-up call for the people of Japan, which initiated a widespread use of concrete across the country. However, wood continued to be used as evident in figures 4.5-4.6. Concrete was used more for internal structures behind a variety of facade styles, including wooden *machiya*, or as a foundation making buildings more resistant to earthquakes. A sense of a trans-city uniformity also began to appear primarily in the incorporation of modern materials into *machiya* starting in the mid-1920s. Beyond concrete, other modern materials include metal, stone, brick, tile, and glass (Figs. 4.10-4.11). While these modern materials may have been implemented into *machiya* prior to the Great Kantō Earthquake in 1923, it was not until the mid-1920s into the 1930s that these began to appear more often.

Metal could be used structurally or decoratively such as lattices, or bars, over windows instead of the traditional wooden lattices used previously. Stone, and sometimes tile, was added to lower portions of *machiya* in order to protect the building much like the early *inuyarai* of the Edo period. Tokyo *machiya* with these style and material changes can be found to some degree,

but there are a larger number in central Kyoto. This shows that Kyoto also did not remain static in *machiya* development following the end of the Edo period. In Kyoto, many *machiya* with stone or tile bases typically have metal bars over the windows on the first story giving a new-old look. The stone or tile either covers the lower portion of a display area, or across the whole width of the building except for the door (Fig. 4.10). At first glance, the building may not appear like an Edo period *machiya*. However, the second story and the foundational structure hark back to *machiya* architecture.

Glass had been known in Asia for a long time, but it was never developed as a craft or used widely in Japan. From the mid-1920s some buildings began incorporating glass instead of *shōji* screens where windows existed, but this was still rare until during or after the 1930s. Of course, glass can now be seen on practically all *machiya* today across Japan whether as windows, replacements for paper or wood on *fusuma* and *shōji*, or behind lattices (Fig. 4.5-4.6). Out of all the materials from the 1920s onward, glass seems to detract less from the overall look of *machiya*. This includes both Edo and modern periods *machiya* as they tend to replace materials that held similar purposes of letting light in while maintaining a light and delicate feature. Glass also allowed for more light in by replacing solid boards that had originally blocked a lot of light. In both cases, glass contributes to the brighter and lighter feel of *machiya* pulling them out of a heavier atmosphere than they might have had in the Edo period.

These adaptations from the mid-1920s to early-1930s also led to a new type of architecture called "billboard architecture" (*kaban kenchiku* 看板建築, Figs. 4.12-4.13).

Billboard architecture is a mix of new materials on the facade of the buildings and even new structures, yet they functioned the same as *machiya* as a shop-residence (Fig. 4.12). In fact, this type of architecture replaced many *machiya* that had burned down from the Great Kantō

Earthquake, giving a new look to Tokyo's cityscape.[45] In figure 4.12, the shopfront primarily uses a raised wooden floor with a *doma* area large enough for people to stand in. The mixing of Japanese and Western elements was a common practice during the twentieth century.

Some *machiya* began to incorporate a particular element of billboard architecture, a striking darkish green color that came from copper (4.14-4.15). In *machiya*, though, other materials are used including plaster, wood, stone, brick, or tile (4.16-4.17). While there is one example left in Tokyo, there are many in the Osaka area that provide a larger glimpse into the variety of this style. The dark green *machiya* still retains the foundational structure of previous and current townhouses with only the second story covered in this new color and material. The dark green may not even cover the entire second story but more often in the examples shown here, they do coat the entire upper level of the building. However, the first story is similar in style to past, as well as new *machiya*, making it evident that the second story is the only part of these buildings that has been altered.

The impact that the Great Kantō Earthquake had on *machiya* architecture in Tokyo and beyond is evident in the shift in materials used. For Tokyo, the devastation resulting from the earthquake brought about a new blank slate for the city. The earthquake instigated the people to think about how the city, and country, should build moving forward. These thoughts influenced modern *machiya,* changing their styles and generating a greater mix of old and new architectural types amongst the city of Tokyo and elsewhere. However, these modern *machiya* continued to face challenges as they developed beyond the Edo period revealing that this type of architecture was not stuck in the past.

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[45] Isamu Yoneyama, *The Japanese Architecture: Understand it with Edo-Tokyo Open-air Architectural Museum, From the Commoner's Houses in the Early Modern to the Wood-frame Modernist Architecture After the 1920s*, translated by Rintaroh Mukai (Tokyo: Edo-Tokyo Open Air Architectural Museum, 2017).

Chapter 5: Preservation and Tourism in Kyoto and Tokyo

Comparing *machiya* in Kyoto versus Edo and Tokyo so far has revealed at least six phenomena. First, although the Tokugawa government's residential policies during the Edo period affected the *machiya* of townspeople in both metropolises, they did not impact in a way that would have been expected from present-day thinking. Other differences emerge between the two cities – the presence of *battari shogi* or the design of lattices – as well as the evolution of *machiya* from Edo into Tokyo – a wider use of plaster or the introduction of electricity and concrete. This chapter brings the discussion full circle to the concept of preservation and tourism in Kyoto and Tokyo revealing a divergence of not only when they started such efforts, but also in what they chose to do. As time passed, newer modern buildings, including skyscrapers and commercial complexes, began to appear. *Machiya* either disappeared or lost their function, becoming just a shop or a residence. The discussion on tourism, in particular, also highlights how the common perception that is placed on this type of architecture came to be represented by Kyoto's *machiya*.

5.1 – Kyoto's Pre-1945 Transition from Capital to Heritage Site

Similar to Edo, Kyoto lost many of its *machiya* prior to the end of the Edo period. However, Kyoto *machiya* was not destroyed by a natural disaster like Edo *machiya* were, but rather by the Kinmon Rebellion of 1864 (*Kinmon no Hen*, 禁門の変; also known as the Hamaguri Gate Rebellion or *Hamaguri gomon no hen*, 蛤御門の変). During this rebellion, rival groups fought within the city of Kyoto resulting in devastating fires that killed over 450 people

and destroyed 28,000 buildings (Map 5.1). The fire spread throughout the city including commercial districts with *machiya*.

The biggest test for the city's survival came when the imperial rule was restored and Emperor Meiji left the ancient capital of Kyoto, moving to Tokyo in 1868. Not fully recovered from the rebellion, the city of Kyoto – which was no longer *the* capital but a prefecture under the new system implemented in in the 1870s – and its people faced a crises. With the emperor now in Tokyo, the national government had no reason to provide support to Kyoto, requiring the city to fend for itself under a new prefectural management.[46] In response, the city and its people quickly searched for its new identity. The city was reborn as the protector imperial heritage and everything traditional, cultural, and artistic of the Japanese people. The emperors supported Kyoto's earliest efforts to preserve the city's cultural heritage and its cityscape.[47]

This in turn, recovered the loss of population and crafts that was felt when the imperial court moved out of the city, with the injection of more craftsman, artists, and many others. In Map 5.2 (1902), the density of the population in commoner buildings (shaded in grey-black) practically fills the city giving a concentrated appearance and is evidence of a stable population after the loss of its imperial presence. The new prefectural government and the people of Kyoto actively began preserving the city's plan from the pre-modern period. The parts of the city under

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[46] Technically, Kyoto and Osaka are municipal centers (*fu* 府) and not a prefecture (*ken* 県), indicating that they are major urban centers distinct from other regions in Japan. However, administratively, they are equivalent to prefectures and are not equal in standing to Tokyo as the national capital.

[47] The government under Emperor Taishō, who succeeded Emperor Meiji in 1912, created the Law for the Preservation of Historic Sites, Place of Scenic Beauty, and Natural Monuments (*Shiseki meishō tennenkinenbutsu hozonhō*, 史蹟名勝天然記念物保存法) in 1919. This law was one of the first preservation regulations in Japan meant for many older, pre-modern, and important buildings, as well as prominent scenic views of Kyoto's cityscape. This preservation law, however, did not include *machiya*. Alice Yu-Ting Tseng, *Modern Kyoto: Building for Ceremony and Commemoration, 1868-1940* (Honolulu: University of Hawai'i Press, 2018), 1-21.

new development adapted to the plan and architectural style appropriate for a city of history, heritage, and ceremony. This is evident in Map 5.3 (1915), which shows major expansions in all directions that try to keep to a grid pattern to some degree, matching the original plans of the city. Kyoto had always been a tourist city known for its scenic views, history, and traditional crafts. Since the start of the Meiji period this was being pushed even more. A map from 1930 features the location of tourist attractions for the city and the prefecture (Map 5.4).

The first opportunity to showcase this new identity came in 1895 with the celebration of the city's 1,100 anniversary of its founding. First, the city and prefectural government established historical and cultural nodes within the city: the former imperial palace and the new Okazaki Park.[48] In order to accommodate the processions from the newly built Kyoto Train Station in the southern edge of the city to the former imperial palace further north and Okazaki Park to the east of the Kamo River, specific streets were widened erasing or cutting back many older buildings including *machiya*. A map, dated 1881, shows in the southern end of the city (seen on the right side of the map) there is a large building, denoting the new Kyoto Train Station. Thicker black streets going from Kyoto Train Station towards the former imperial palace stop half-way showing that the process of widening the road is still in progress. The location of Kyoto Train Station is further evidenced by railway lines stemming from the building in Map 5.2 (1902). However, in this map, the widening of streets appears to have not made any progress.

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[48] Okazaki Park was established to honor the city, the imperial family, and the country's progression in the modern age through a western style park with buildings constructed in styles reminiscent of pre-modern architecture and new modern attractions. See Tseng, *Modern Kyoto*, 1-21, and Morgan Pitelka, and Alice Yu-Ting Tseng, "Introduction," *Kyoto Visual Culture in the Early Edo and Meiji Periods: The Arts of Reinvention*, edited by Morgan Pitelka, and Alice Yu-Ting Tseng, (London: Routledge Taylor & Francis Group, 2016), 1-15. Tseng, "Urban parks and imperial memory," *Kyoto Visual Culture in the Early Edo and Meiji Periods*, 91-116.

While the city of Kyoto put effort into preservation and tourism, the city also continued to develop and modernize just like Tokyo and other cities in Japan. Kyoto's infrastructure is one such venture with one of the earliest implementations of electric facilities. In Map 5.3, dated 1915, Kyoto is seen connecting its railways to other areas including Osaka in the small pop-up maps in the bottom left corner. This map also shows that the streetcar system is much more sparse compared to that of Tokyo at this time. Map 5.5, dated 1940, reveals a complex network of transportation services surrounding the central part of the city. Alongside the name of Map 5.5, the visible network of transportation may suggest the desire of the city to provide new services in areas that are in the process of construction.

Kyoto developed a heightened concern for the preservation of its cityscape faster than other cities in Japan after the loss of the imperial court in 1868. The city's preservation efforts prioritized older monuments (temples, shrines, palaces, etc.) and not common (or commoner's) buildings like *machiya*. However, *machiya* were saved as a part of the city's preservation initiatives to retain its pre-modern sceneries.

5.2 – The Pacific War, Tokyo and Kyoto, and *Machiya* (Post-1945)

Following the end of the Pacific War in 1945 Tokyo went further down the path of modernization.[49] This section focuses on the final months of the Pacific War and its aftermath involving major changes to the city of Tokyo, as well as what happened to the city's *machiya*.

[49] For Japan, World War II (WWII) is called the Pacific War because its war started with the assaults on China and the installment of a puppet government in Manchuria in 1931, followed by an expansion into Southeast Asia. Japan's Pacific War merged with WWII in the Euro-American context in 1941 when they bombed Pearl Harbor resulting in the conflict between the two nations starting a year later that ultimately led to Japan's unconditional defeat in 1945.

In the first half of 1945 some of the major cities in Japan were decimated with incendiary bombs. Tokyo was no exception, with four bombing incidents on February 25th, March 10th, May 23rd, and May 25th. The March 10th raid in particular resulted in the largest destruction with about sixteen square miles of central Tokyo destroyed leaving over one million homeless and about 300,000 dead and about 400,000 injured (Fig. 5.1). Among the areas destroyed were residences still primarily built of wood and other highly flammable materials. Large areas of the city, especially on the eastern side, were engulfed in flames and destroyed (Map 5.6). Many of these areas were older parts of the city, retaining much of their Edo period merchant district appearance at this time called *shitamachi* 下町 ("old town"). Many of the *machiya* that survived the Ansei Edo Earthquake, the turbulent transition from Edo to Meiji periods, or the Great Kantō Earthquake, were decimated during these bombings.

After being leveled, Tokyo continued to be the center of politics, undergoing a second wave of modernization. Tokyo took advantage of the clean slate to reset, rebuilding infrastructure, which now included many expressways and newer modern buildings, making the largest metropolis in the world a cutting-edge contemporary epicenter for business, technology, and industry. More businesses now took place in modern buildings including high-rises, and shopping malls. To accommodate the large population both from survivors and returnees, newly built residential architecture was either in the form of modern townhouses found more on the outer areas or multi-story apartments primarily made of concrete and asphalt. These ventures in modernization resulted in areas of older Tokyo being either covered over or erased.[50] The 1964

[50] Hidenobu Jinnai, "The Modernization of Tokyo during the Meiji Period: Typological Questions," in *Rethinking XIXth Century City*, edited by Attilio Petruccioli (Cambridge, MA: Aga Khan Program for Islamic Architecture, 1998), 29-64, last accessed May 2024, https://www.archnet.org/publications/3088.

Tokyo Olympics further propelled the city's modernization efforts, which proceeded by filling in waterways for development. The transformation reached its peak in the 1960s, labelling the city of Tokyo a "concrete jungle." This second wave of modernization quickly eradicated even more *machiya* in Tokyo.

However, modernization in Tokyo saw a turning point in 1973 when an oil crisis suspended most construction and development projects. With this stall in physically developing the city, people, especially younger generations, began to rediscover the natural environment and urban character that had gone unseen for a few decades.[51] The concept of preservation in the city reached an initial height in the 1980s with initiatives by locals and officials to recapture what still remained or could be salvaged, or built new in styles of older times.

Starting in the 1970s-1980s, the Tokyo Metropolitan Government, noticing the disappearance of the city's heritage especially represented in its pre-1945 architecture, finally took the initiative to preserve these historic buildings, including *machiya* that were not part of previous preservation laws.[52] However, these bureaucratic initiatives only applied to buildings over 150 years old, excluding most *machiya* that were built in the Meiji period. Starting in the 1970s, local individuals and communities took the lead in preserving architectural and cityscape heritage in their own neighborhoods.

In the process of preserving their cityscapes, many rediscovered the modest buildings that had been hidden by modern development, some of which were *machiya* or billboard architecture. In 1993, the Tokyo Metropolitan Government established the Edo-Tokyo Open Air Architectural

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[51] Jinnai, "The Modernization of Tokyo During the Meiji Period," 38-39, 42-44.

[52] Tseng, *Modern* Kyoto, 15-16; Christoph Brumann, "Outside the Glass Case: The Social Life of Urban Heritage in Kyoto," *American Ethnologist* 36, no. 2 (2009): 278, 284. The previous laws include the 1919 law already mentioned earlier in this chapter and another one that was established in 1897.

Museum to relocate representative pre-1945 buildings and historic residences for preservation and education. In this museum one area is solely dedicated to Tokyo's urban structures, including billboard architecture, three *machiya* from the Meiji period (Fig. 3.3, 4.4-4.6, 4.12-4.13). The museum's mission statement clarifies that:

> [The museum works] to relocate, reconstruct, preserve, and exhibit historical buildings of great cultural value that are impossible to preserve at their original location, as well as pass on these valuable cultural heritages to future generations.[53]

This statement reveals that the challenges faced by the metropolis to preserve pre-1945 buildings in their original homes, which is a clear contrast to the initiatives put forth in Kyoto discussed later.

Preservation efforts also spread to ward-level governance in the example of the Fukagawa Edo Museum, which was used to represent Edo in Chapter 3. The Kōtō City Cultural Community Foundation (est. 1982) created the Fukagawa Edo Museum (est. 1987) in the desire to experience and educate the public and its community of the district's Edo period architecture that is no longer extant (Fig. 3.2).[54]

Kyoto on the other hand became Japan's city of culture, heritage, and tradition following the end of the Pacific War in 1945 due in large part to the fact that the city was never bombed and was further saved by the end of the war that came less than a month later.[55] For this reason,

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[53] "About: Outline: Purpose," Edo-Tokyo Open Air Architectural Museum, last accessed April 13, 2025, https://www.tatemonoen.jp/english/about/overview.php.

[54] "About the Foundation," Kōtō City in Tokyo: Kōtō City Cultural Community Foundation, last accessed April 13, 2025, https://www.kcf.or.jp/outline/.

[55] Mariko Oi, "The Man Who Saved Kyoto from the Atomic Bomb," *BBC News*, August 9, 2015, https://www.bbc.com/news/world-asia-33755182.

Kyoto recovered much faster than Tokyo, especially as a popular tourist destination for both domestic and foreign visitors.

Anticipating an increase in foreign travelers, including roughly 12,000 American soldiers and officials due to the Occupation following the end of the Pacific War, the city of Kyoto strengthened its tourist industry. The Americans that came into the city often occupied Western style residences showing that the number of *machiya* had already begun to dwindle by this time. However, the number of *machiya* remained surprisingly stable compared to Tokyo, which helped to give tourists the impression that Kyoto hadn't changed much since before the war and even since the nineteenth century.[56] The increase in tourism also meant a change in the city as this venture penetrated different aspects including department stores selling souvenirs and the production of English language signs, maps, and guidebooks.

These factors allowed Kyoto to successfully solidify its status as a tourist city with its historical sites of palaces, temples, and shrines, as well as a museum city with streets retaining the feeling of old Japan, which are lined with *machiya*. To stimulate the protection, preservation, and commercialization of pre-modern and Meiji period buildings and areas, in 1950, the International Cultural Tourism Capital Construction Law was enacted in the city of Kyoto. This regulation was followed by more preservation laws to supervise and protect Kyoto's *machiya* and low-rise buildings, which in turn maintain the surrounding natural scenic views of rolling hills and riversides visible from the city. The goal was to preserve Kyoto, and by extension Japan's, cultural, physical heritage while also making these places publicly accessible. However,

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[56] Endo Eiichi, "Occupied Kyoto, 1945-1952," *Modern Kyoto Research*, last accessed April 13, 2025, https://www.modernkyotoresearch.org/occupied-kyoto-1945-1952.

this also opened the debate surrounding the balance between the preservation of a site and its use for the city's tourism.

This was further debated for the city as a whole in the need for redevelopment starting in the 1960s when Japan reached an economic boom. Certain areas were pinpointed to be tourist destinations, while the rest of the city was open to development within zoning regulations that included a building's height, so the scenic views are not disrupted. Some *machiya* received gold, silver, or bronze plaques designating them as registered and protected *kyō-machiya*, recognizing them as historical buildings of Kyoto. These post-war efforts explain why areas such as those around Kiyomizu Temple gained their reputation and special recognition for its *machiya* scenery discussed in chapter one (Fig. 1.1-1.2).

Kyoto also continues to modernize, which is more prominently seen on the wider streets that run through parts of the city resulting in an overall mix of old and new, as well as a further dwindling number of *machiya* even in this city. However, preservation efforts by groups, communities, and individuals are more strongly seen in the city of Kyoto than elsewhere with such associations as Heritage Homes (est. 2023 in Kyoto) and the Kyoto Machiya Revitalization Project supported by the World Monuments Fund, as well as many others who focus specifically on *Kyō-machiya*.[57] This fact proves that the preservation and tourism efforts to feature not just palaces, temples and shrines, but also *machiya* is much stronger in Kyoto further giving evidence of how *Kyō-machiya* came to be representative of this type of architecture.

[57] Heritage Homes, last accessed April 2025, https://heritagehomesjapan.com/about-us/; Kyoto Revitalization Project, accessed April 2025, https://kyoto-machisen.jp/wmf-machiya-project/.

Conclusion

This thesis challenged the Kyoto-centric scholarship by defining *machiya* beyond its recognizable elements, location, and time. The investigation of this type of architecture was centered around two points: 1) *machiya* existed beyond Kyoto as seen in the city of Edo, and 2) *machiya* continued to evolve into the modern periods as evidenced by the city of Tokyo and the trans-city implementation of new materials. This thesis demonstrated these points by comparing the development of *machiya* in the city of Edo and its successor Tokyo against the more familiar examples from Kyoto.

The evidence in this thesis then demonstrated that expanding the scope of scholarship beyond Kyoto to other places where commercial businesses historically existed in *machiya* is beneficial. A logical next step could be Osaka, which was historically one of the oldest ports in Japan and the third metropolis alongside Edo and Kyoto during the Edo period especially known as the center merchant activity (Fig. 3.5-3.6). The post towns along Edo period highways, including the famous Tōkaidō connecting Edo and Kyoto, and the Kisokaidō, where the town of Tsumago sits, would also be a promising subject for future research (Fig. 3.1). Furthermore, the study of these townhouses could be expanded to all the islands within the Japanese archipelago that each had their own business practices and *machiya* architecture. What would truly benefit the study of *machiya* is a trans-urban approach that will enrich and expand our understanding of this significant type of architecture that is the closest to the lives of the common people of Japan both through regional and *machiya* trends.

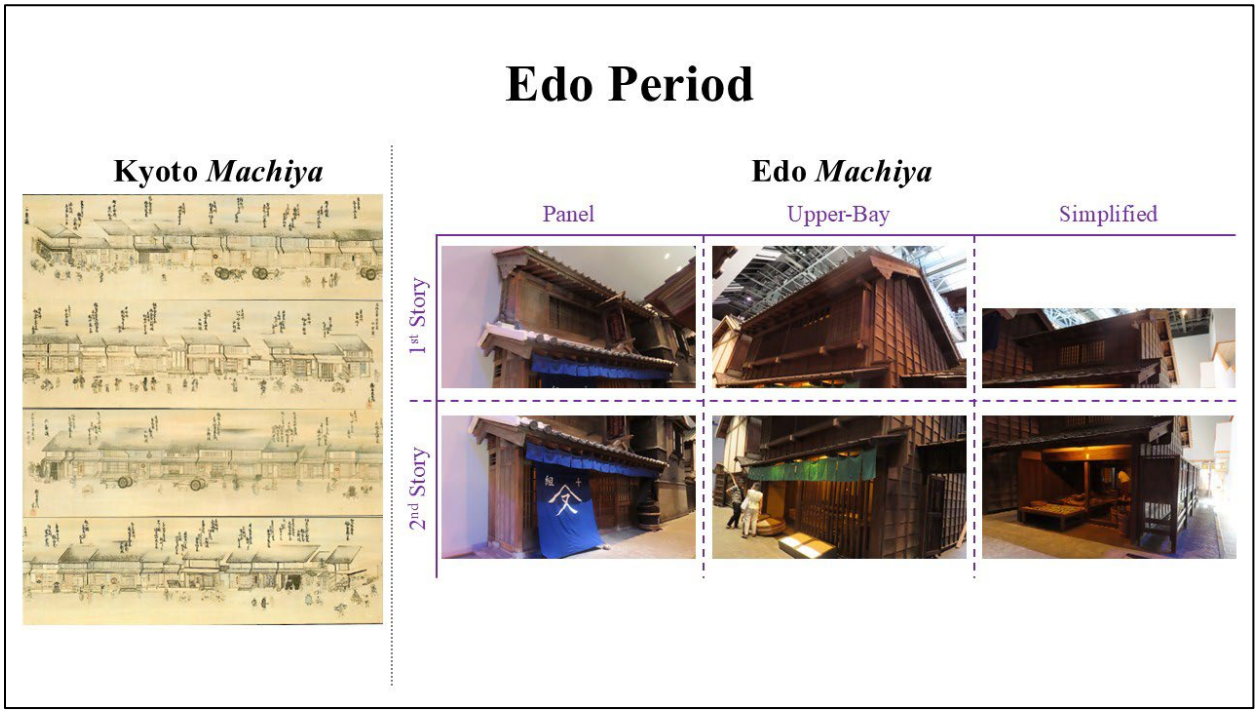
This thesis also revealed that post-1868 buildings for businesses, such as billboard architecture, functioned the same way as *machiya*. There are also the influences that *machiya* have had on other types of architecture such as modern shops seen in Japan today that have the

same open shopfronts (Fig. 6.1). This also includes some shopping streets that existed during the Edo period which still remain today but have been transformed by modern buildings (Fig. 6.2).

Finally, with the changes away from small (mostly family-owned) businesses, shop-residences, as a site of commerce, are on the brink of extinction. Although *machiya* remain, many of them no longer function as a shop-residence. For this reason, preservation efforts of *machiya* and their surrounding neighborhoods provide another avenue of research, pushing forward the concern for this type of architecture as a site for cultural heritage both in Japan and abroad.

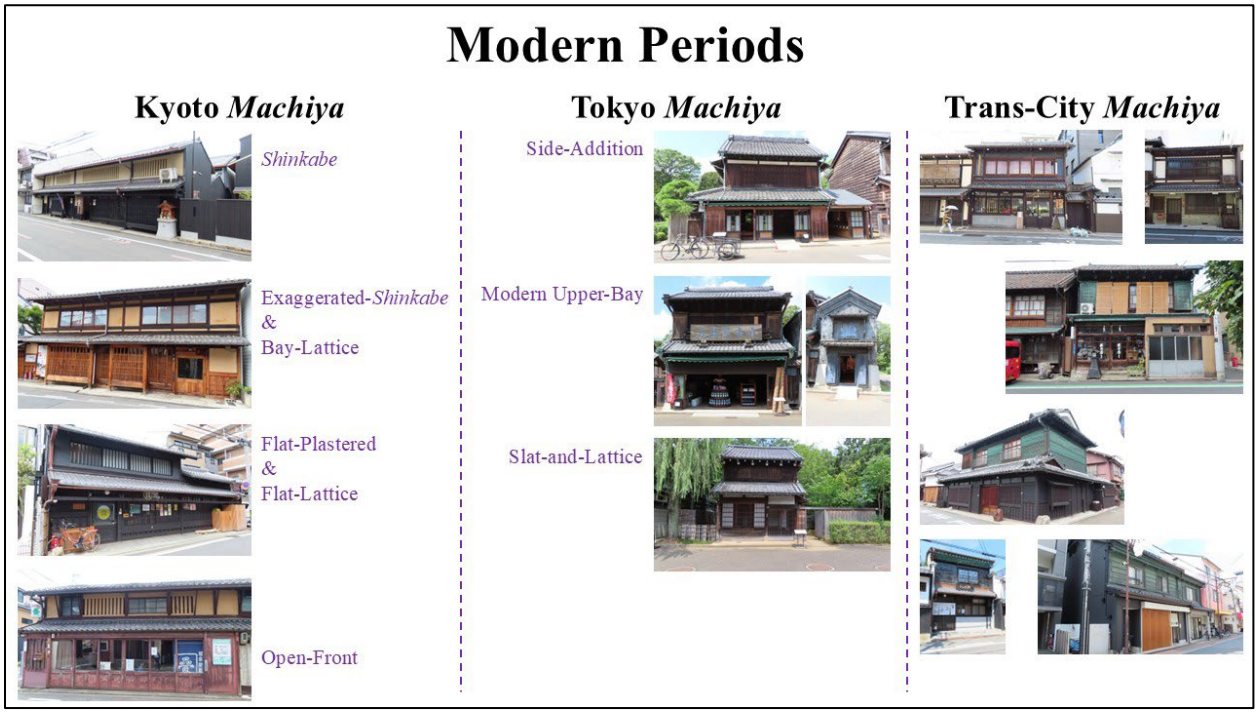
Appendix A

Edo Period: Kyoto and Edo *Machiya*



Appendix B

Modern Period: Kyoto, Tokyo, And Trans-City *Machiya*



Appendix C

Machiya: Edo And Tokyo

Figures

Note: Unless otherwise specified, all images were photographed by the author from the end of July to the beginning of September of 2024.

Fig. 1.1 – *Ninen-zaka*, Higashiyama, Kyoto

Fig. 1.2 – *Sannen-zaka*, Higashiyama, Kyoto

Fig. 2.1 – *Internal Machiya Roof Structure*, Meiji Period, Completed 1903, omoteya-zukuri, Former Konishi Residence, Chuo (this area was Doshomachi, the medicine town), Osaka

Fig. 2.2 – *Partial Shoin style room*, 1902, House of Korekiyo Takahashi, Edo -Tokyo Open Air Architectural Museum, Tokyo

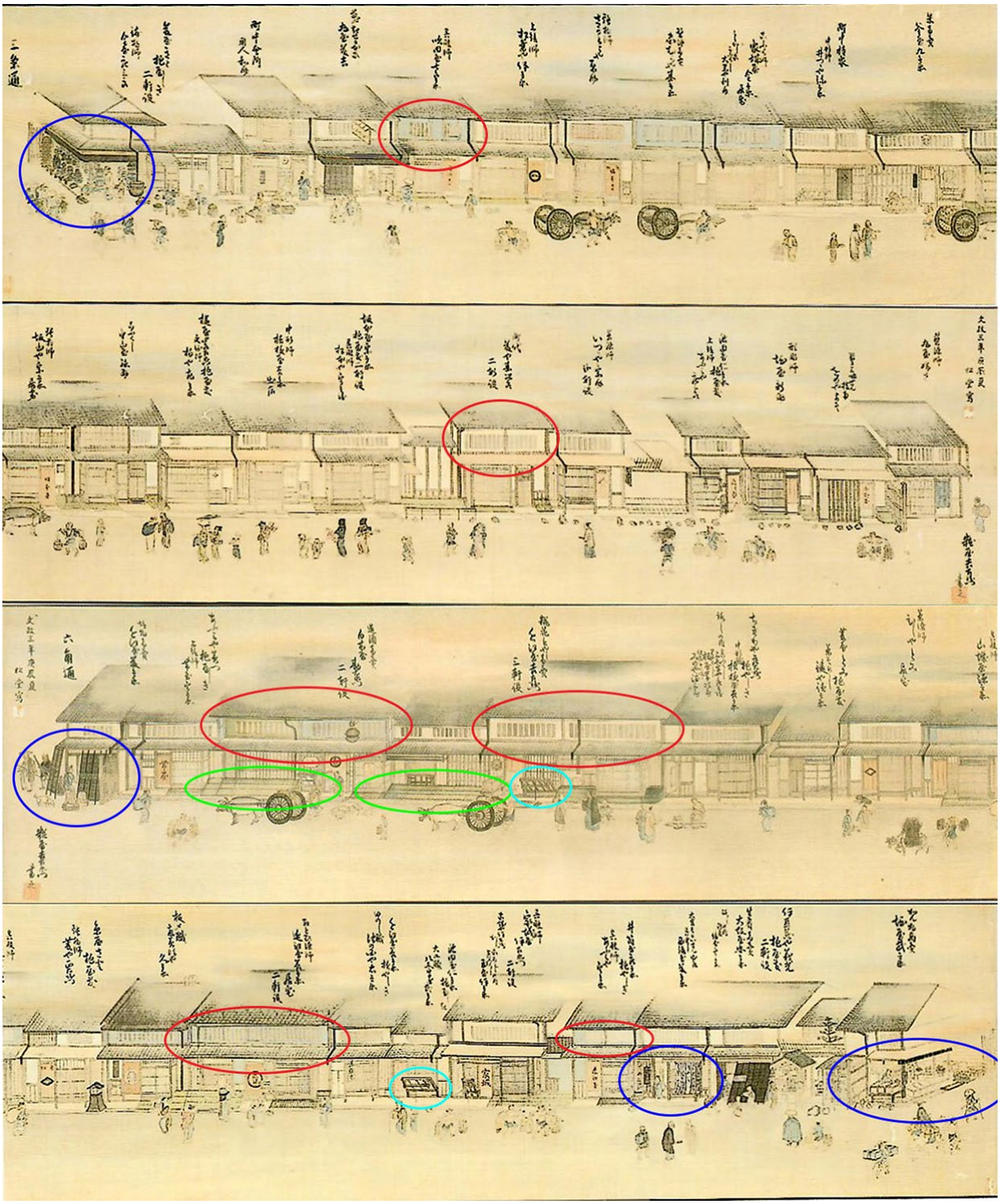


Fig. 2.3 – *Omiya Aburanokoji, showing the streetscape between Sanjo-dori and Rokkaku-dori, Omiya Kichizaemon Monjo*, 1820, in *Kyoto: Its Cityscape Traditions and Heritage*, by Yamasaki Masafumi, *Process: Architecture*, No. 166, (1994): 45-118. Red: *Shinkabe* examples where the treatment is more obvious; Blue: Open-Front; Green: *Inuyarai*; Light Blue: *Battari Shogi*

Fig. 2.4 – Upper: *Shinkabe Style*, Lower: *Bay-Lattice Style*, Muromachi Street, Nakagyō, Kyoto

Fig. 2.5 – Upper: *Exaggerated-Shinkabe Style*, Lower: *Bay-Lattice Style*, Nishijin, Kyoto

Fig. 2.6 – Upper: *Flat-Plastered Style*, Lower: *Bay-Lattice Style*, Kamanza Street, Nakagyō, Kyoto, Red Arrow: *mushiko-mado*

Fig. 2.7 – Upper: *Flat-Plastered Style*, Lower: *Flat-Lattice Style*, Nishijin, Kyoto

Fig. 2.8 – Upper: *Shinkabe Style*, Lower: *Open-Front Style*, Shinmachi Street, Nakagyō, Kyoto

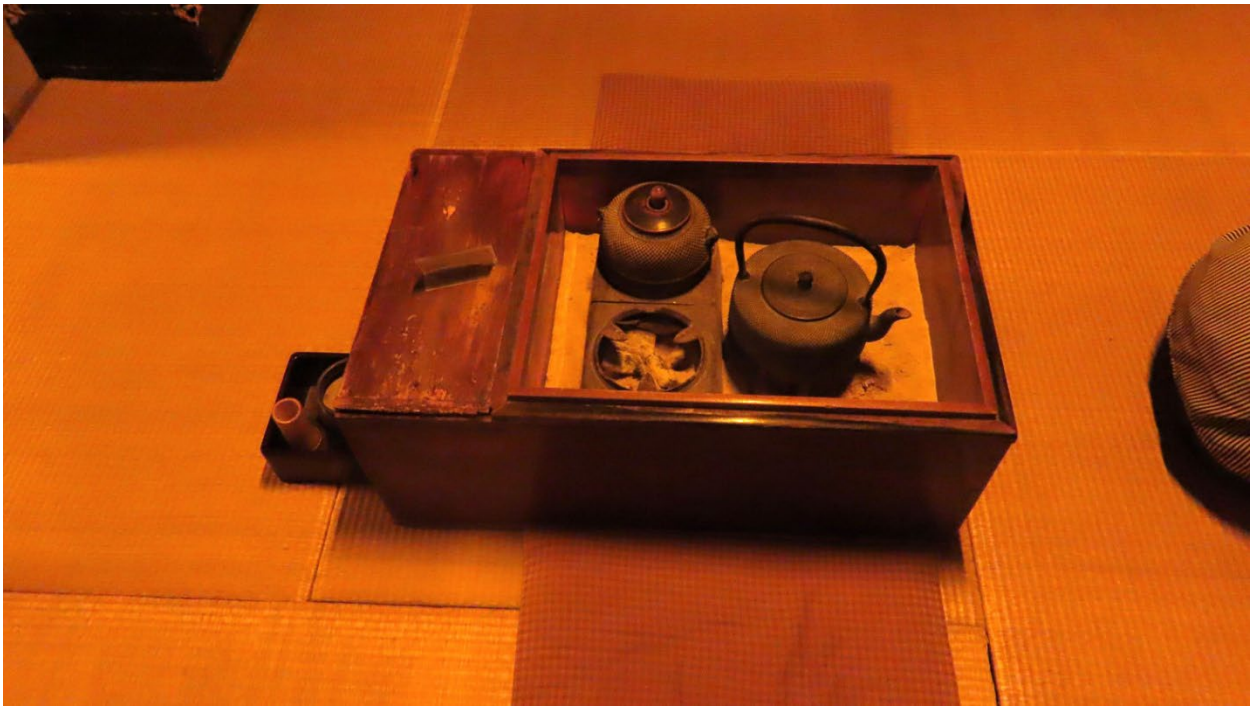


Fig. 2.9 – *Hibachi*, Fukagawa Edo Museum, Tokyo

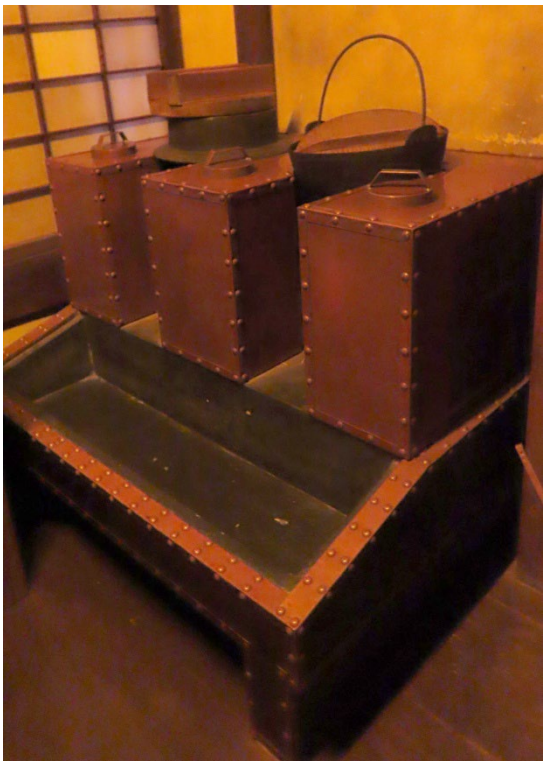
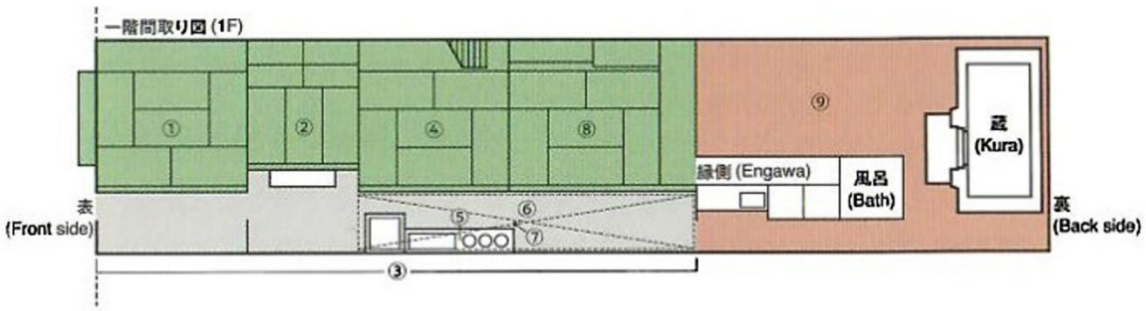


Fig. 2.10 – *Kamado*, Fukagawa Edo Museum, Tokyo



①Mise-no-ma* (shop space / omotenoma) : Shop space of machiya, used for display and business talks.
②"Genkan"* : entrance and central room (entrance room): space for business talks with customers
③Toriniwa* : Space with earthen floor between the entrance and private space
④Daidoko* : private tatami-floored room, equivalent to a dining room of today
⑤Okudosan* • Hashiri = cooking stoves • sink
⑥Hashiriniwa* : private earthen floor with a sink and others
⑦Hibukuro* : Space above hashiriniwa. In case of two-storied house, it is an open ceiling space.
⑧Inner room (zashiki) : private tatami-floored room leading to daidoko
⑨Tsuboniwa : general name for small gardens in zashiki (tatami-floored room) spaces. Different names such as zentei, nakaniwa, and okuniwa, are used according to their locations and sizes.

Fig. 2.11 – Kumilo Ishii, *Sample Floor Plan of a Kyoto Machiya*, in *Machiya: The Traditional Townhouses of Kyoto*, by Kyoto: PIE International, 2019

Fig. 2.12 – Shimamura, *Plan of town house block in Nakagyō Ward*, in Shimamura, *Kyo no Machiya*, in *Kyoto: Its Cityscape Traditions and Heritage*, by Yamasaki Masafumi, *Process: Architecture*, No. 166, (1994): 45-118.

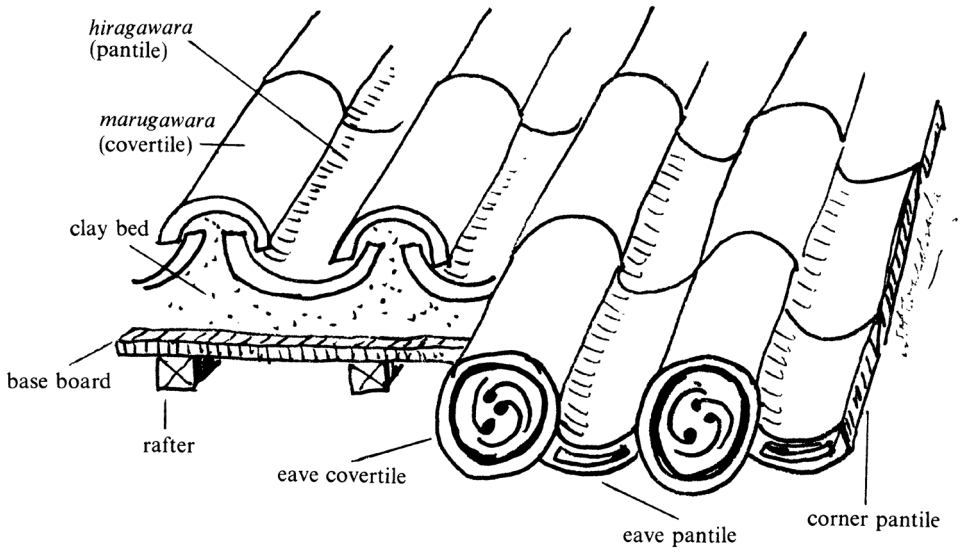


Figure 5 *Hongawarabuki* 本瓦葺 (orthodox tiling)

Fig. 2.13 – *Hongawarabuki* (orthodox tile), Image: William Coaldrake "Edo Architecture and Tokugawa Law," *Monumenta Nipponica,* 36, no. 3 (1981): 235-84.

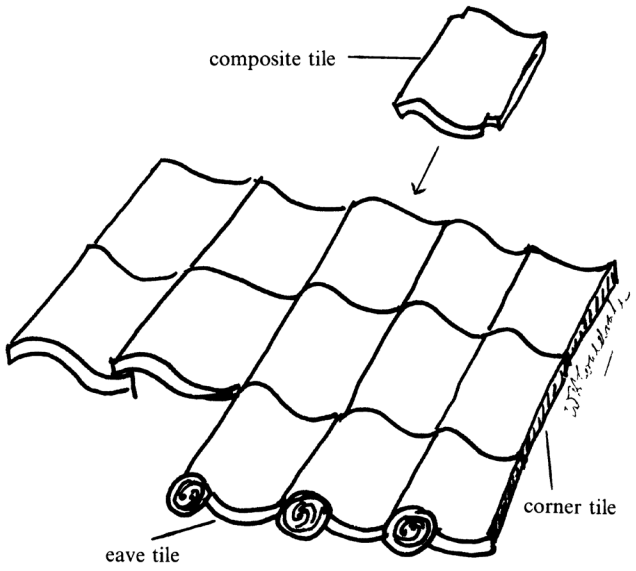


Figure 6 *Sangawarabuki* 桟瓦葺 (composite tile)

Fig. 2.14 – *Sangawarabuki* (composite tile), Image: Coaldrake "Edo Architecture and Tokugawa Law," 235-84.

Fig. 2.15 – *Naga-Noren over the doorway*, Shinmachi Street, Nakagyō, Kyoto

Fig. 2.16 – *Horizontal Noren and Vertical Information Noren*, Fukagawa Edo Museum, Tokyo

Fig. 2.17 – *Naga-Noren drop-down pieces*, Shinmachi Street, Nakagyō, Kyoto

Fig. 2.18 – *Kura*, Fukagawa Edo Museum, Tokyo

Fig. 2.19 – *Battari shogi*, Shinmachi Street, Nakagyō, Kyoto

Fig. 2.20 – *Battari shogi*, Osaka Museum of Housing and Living, Osaka

Fig. 2.21 – *Inuyarai*, Muromachi Street, Nakagyo, Kyoto

Fig. 2.22 – *Kekkai*, Fukagawa Edo Museum, Tokyo

Fig. 2.23 – *Accounting Desk*, Fukagawa Edo Museum, Tokyo

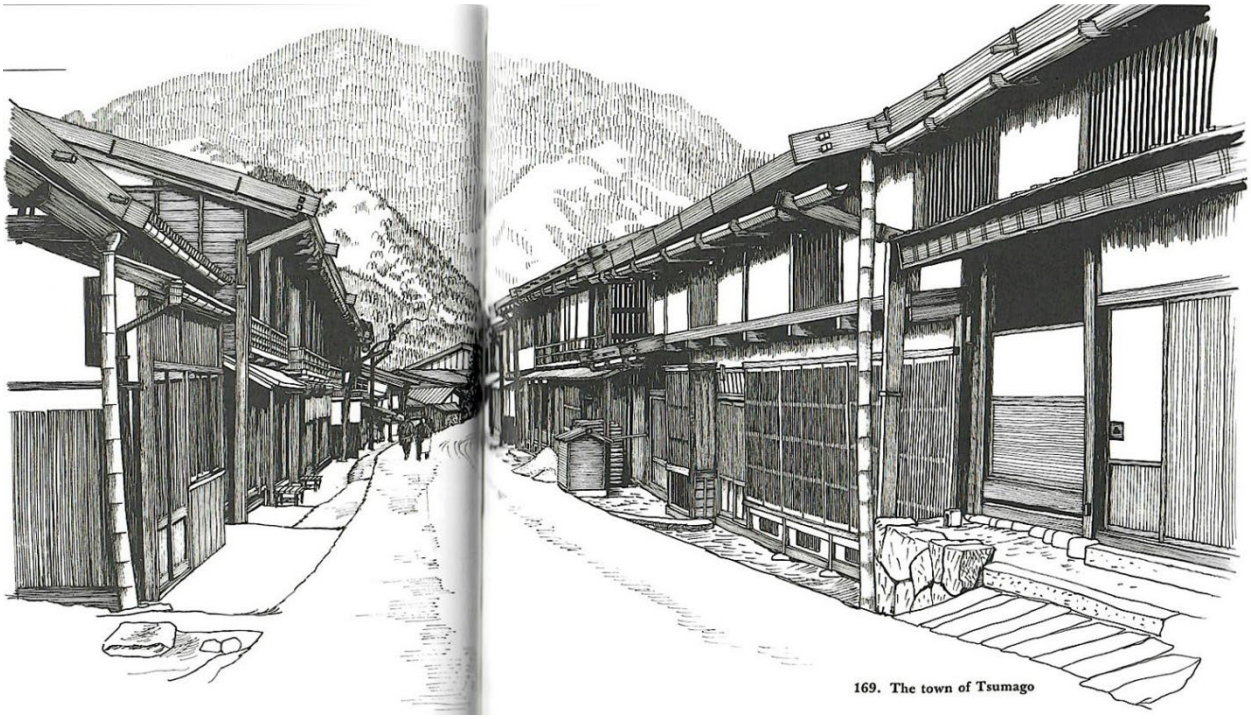


Fig. 3.1 – *Illustration of the town of Tsumago*, Image: Kazou Nishi and Kazou Hozumi, *What is Japanese Architecture?* (Tokyo and New York: Kodansha International, 1985), 86-87.

Fig. 3.2 – *Machiya Street*, Edo Period Reproduction, Fukagawa Edo Museum, Tokyo

Fig. 3.3 – *Shitamachi-naka Street*, Edo-Tokyo Open-Air Architectural Museum, Tokyo

Fig. 3.4 – Kawagoe, Saitama Prefecture


Fig. 3.5 – *Machiya Street*, Edo Period Reproduction (1830s), Osaka Museum of Housing and Living, Osaka

Fig. 3.6 – *Kitasenba, Sakai-suji Avenue,* Scale Model of Osaka (1932), Osaka Museum of Housing and Living, Osaka


Fig. 3.7 – *Upper-Bay Style Interior, Machiya Street*, Edo Period Reproduction, Fukagawa Edo Museum, Tokyo

Fig. 3.8 – Utagawa Hiroshige, *Snow Scenes of the Famous Places in Edo: Nihon Bridge, Clearing After a Snowfall*, Edo period, 1843. Ukiyo-e woodblock print, horizontal ōban format; ink and color on paper, Jordan Schnitzer Museum of Art, https://jsmacollection.uoregon.edu/mwebcgi/mweb?request=record;id=4228;type=101

Fig. 3.9 – *Panel Style, Machiya Street*, Edo Period Reproduction, Fukagawa Edo Museum, Tokyo

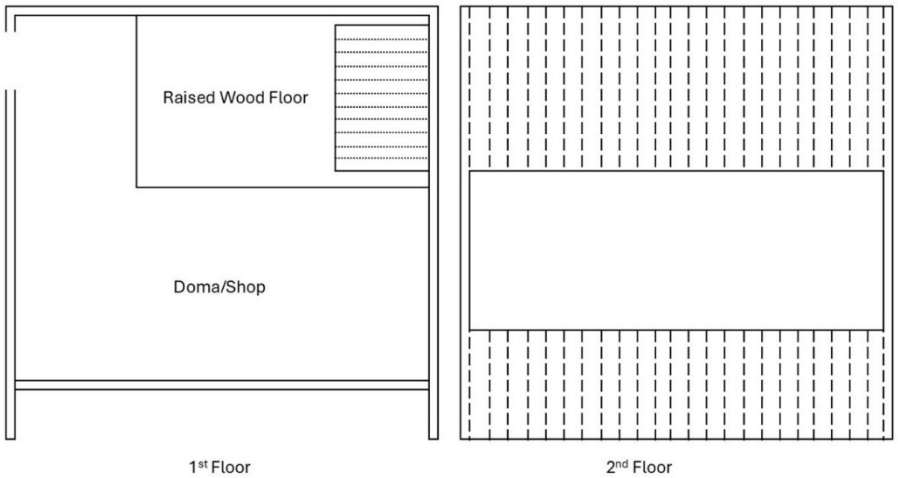


Fig. 3.10 – *Simplified Style and Floor Plan, Machiya Street*, Edo Period Reproduction, Fukagawa Edo Museum, Tokyo

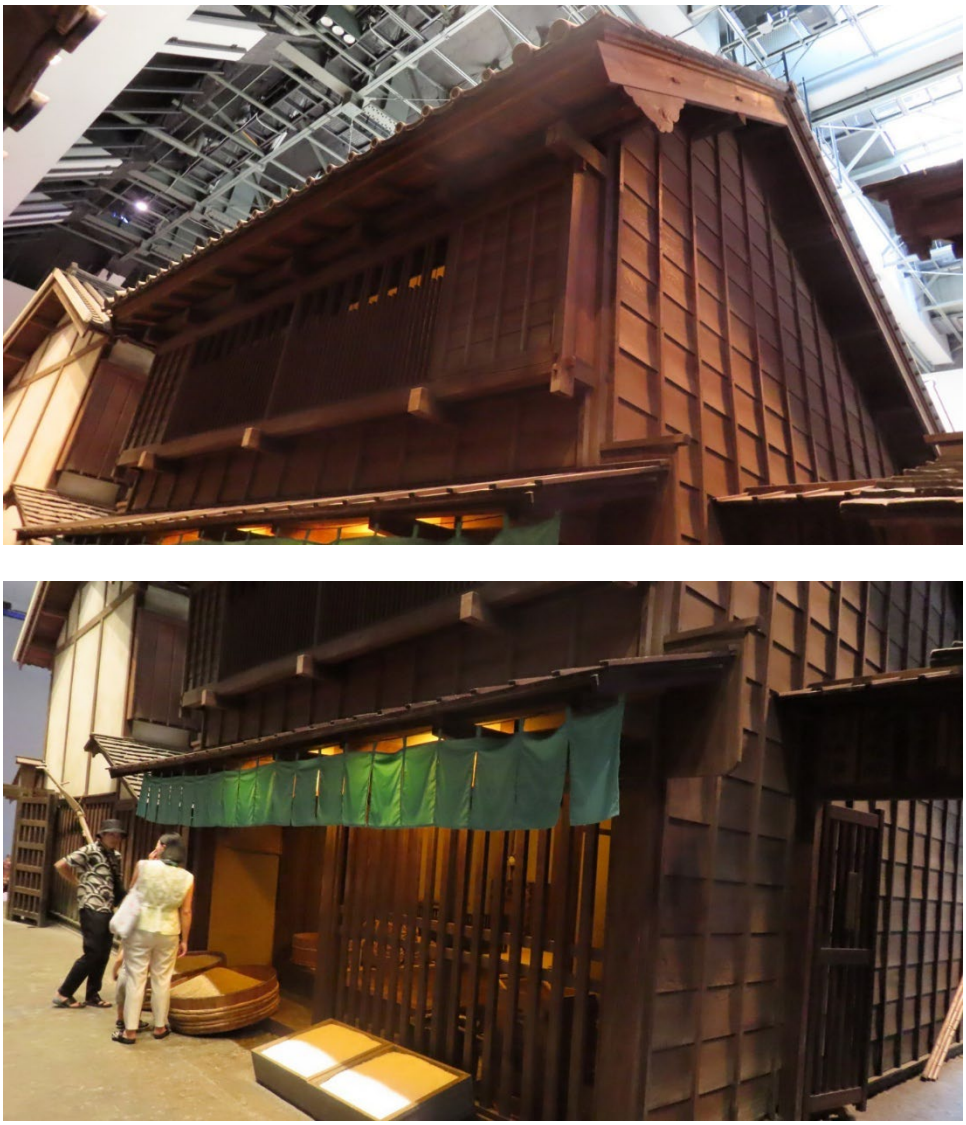


Fig. 3.11 – *Upper-Bay Style and Floor Plan, Machiya Street*, Edo Period Reproduction, Fukagawa Edo Museum, Tokyo

Fig. 3.12 – *Ansei Edo Earthquake, Edo Oojishin no zu picture scroll*, in Eos News, by Tim Hornyak, September 8, 2020, in Historiographical Institute, University of Tokyo, https://eos.org/articles/kabuki-actors-forgotten-manuscript-yields-clues-about-1855-quake-in-japan

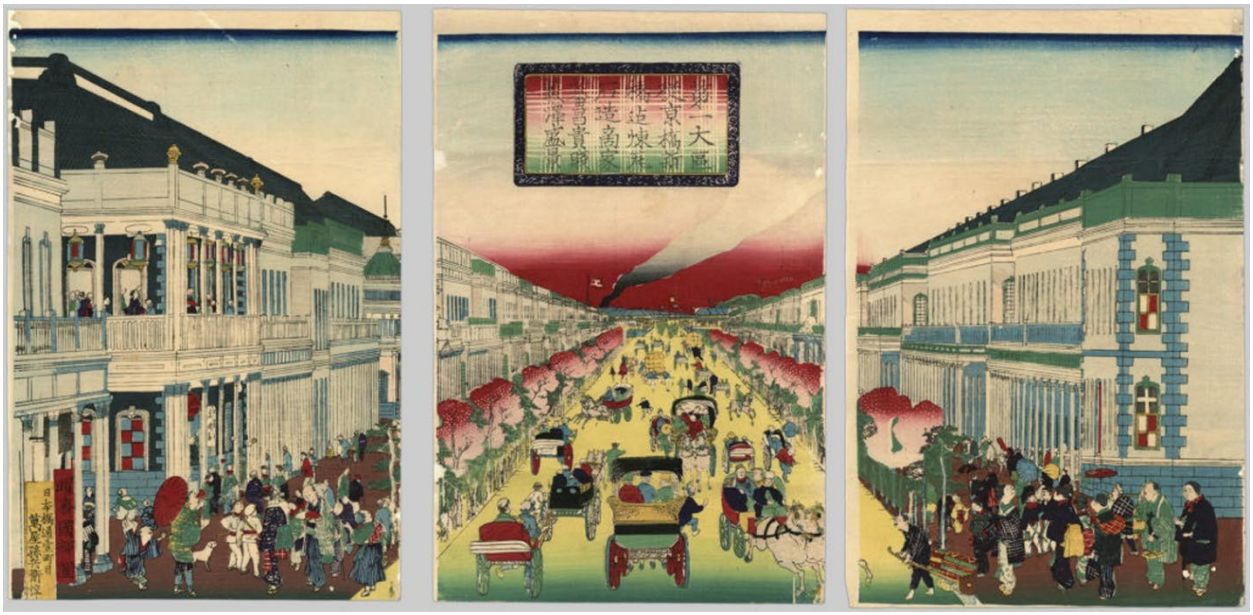


Fig. 4.1 – Utagawa Kuniteru II, *Scene of the Thriving Merchants in Brick Houses and the Blossoming of Peoples of All Classes in the First District between Kyōbashi and Shimbashi*, Meiji Period, between 1870-1874. Ukiyo-e woodblock print, vertical ōban triptych; ink and color on paper. Images: Tristan R. Grunow, "Ginza Bricktown and the Myth of Meiji Modernization," British Columbia/Yukon Pressbooks, last accessed May 10, 2025, https://pressbooks.bccampus.ca/meijiat150/chapter/ginza-bricktown-and-the-myth-of-meiji-modernization/

Fig. 4.2 – Anonymous photographer, *Festival of Hachiman Shrine at Fukagawa, Scenes in the Eastern Capital of Japan*. Meiji Period, 1911. Fukagawa-ku (present-day Koto-ku), Tokyo. Image: National Diet Library, last accessed July 2024, https://www.ndl.go.jp/scenery/e/data/483/.

Fig. 4.3 – Anonymous photographer, *Shinbashi fukin yori mitaru sigai no ichibu, Tokyo-fu Meisho Zue*, Meiji Period, 1912, Shiba-ku (present-day Minato-ku), Tokyo. Image: National Diet Library, last accessed July 2024 https://www.ndl.go.jp/scenery/data/400/.

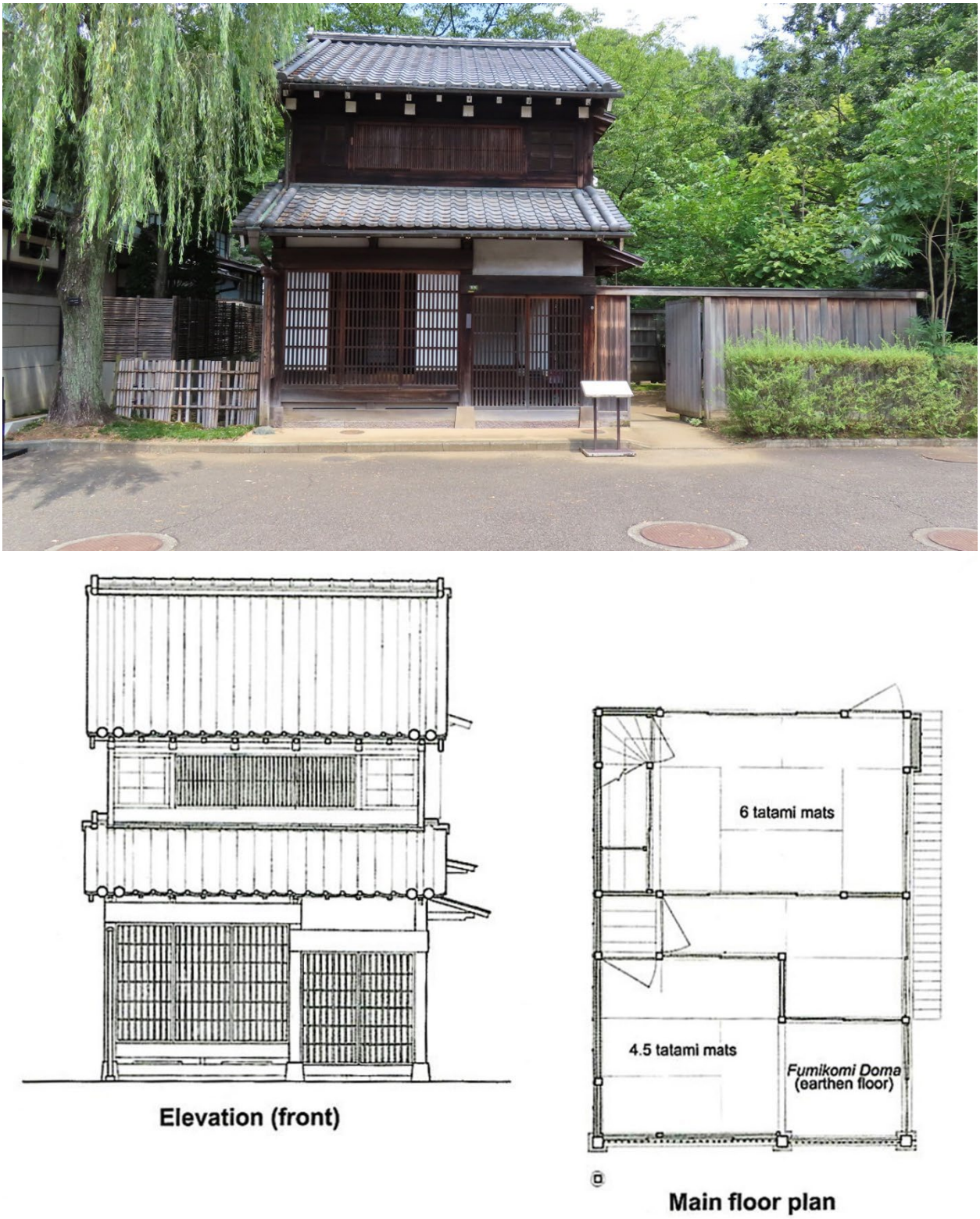


Fig. 4.4 – *Tailor's Workshop (Slat-and-Lattice Style) and Floor Plan*, Meiji Period, Built 1879, Restored 1994, Open Air Architectural Museum (formerly Bunkyō ward), Tokyo

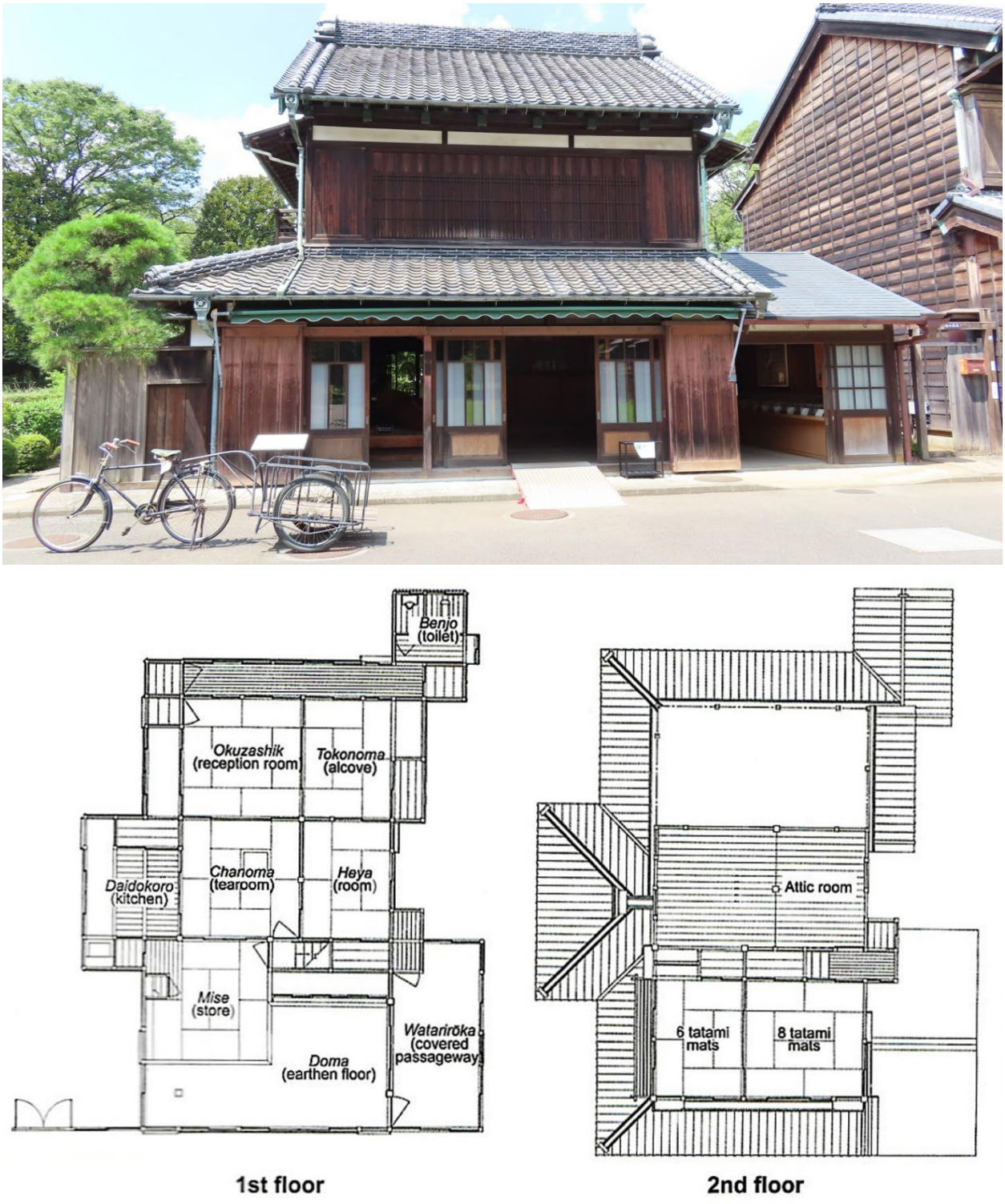


Fig. 4.5 – *"Kawano Shoten" Oil-paper Umbrella Wholesale Store (Side-Addition Style) and Floor Plan*, Taishō-Early Shōwa Period, 1926, restored 2000, Edo-Tokyo Open-Air Architectural Museum (formerly located in Edogawa ward), Tokyo

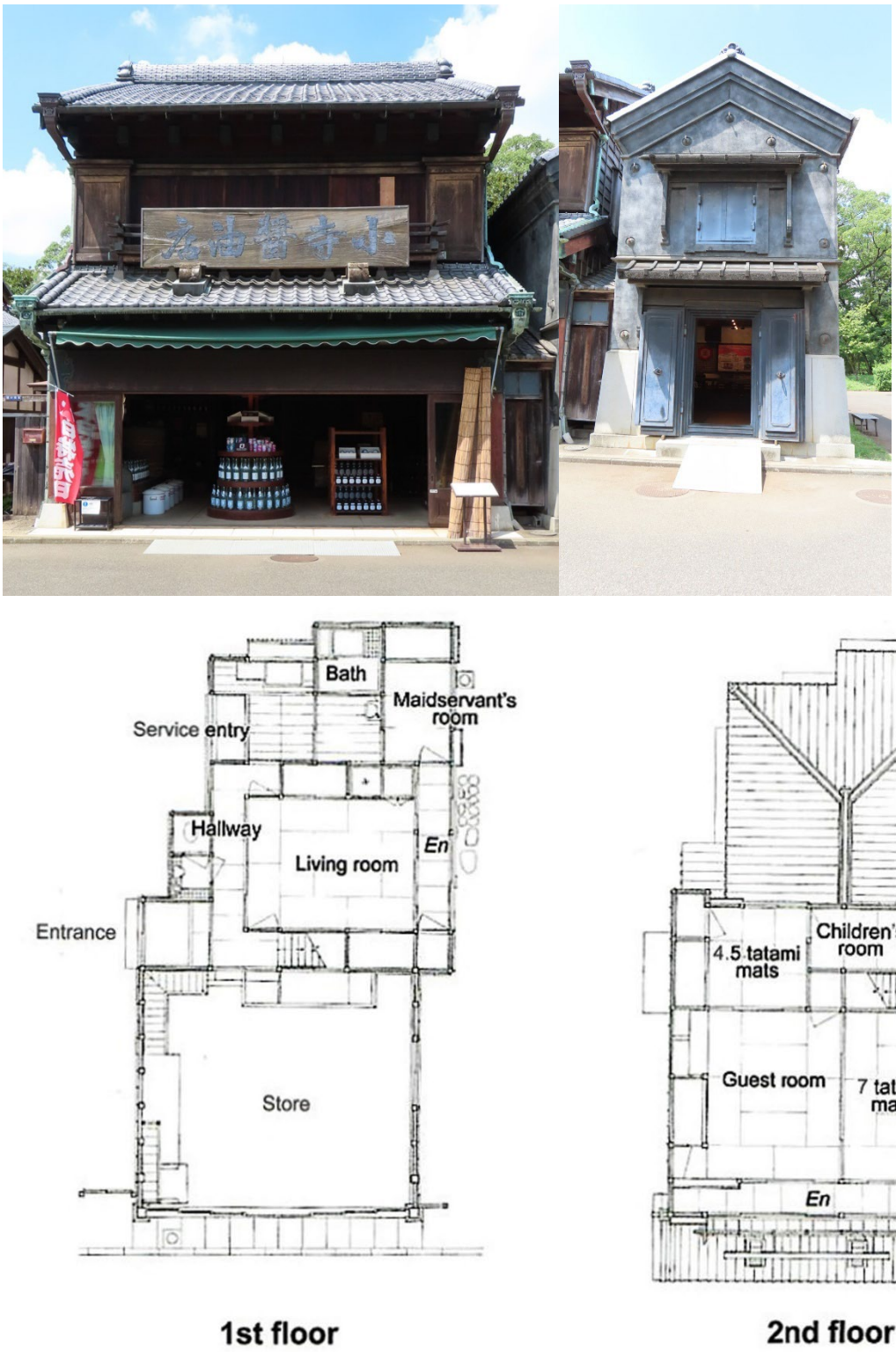


Fig. 4.6 – *"Kodera" Soy Sauce Shop (Modern-Upper-Bay Style) and Floor Plan*, Early Shōwa Period, 1933, Restored 1993, Edo-Tokyo Open-Air Architectural Museum (formerly located in Minato ward), Tokyo

Fig. 4.7 – Anonymous photographer for Mainichi Newspaper. Tokyo's Asakusa area near the Ryounkaku building after the Great Kantō Earthquake in September 1923. Images:Osaka Mainichi Shimbun reporters and others. ((C) Mainichi Productions). https://mainichi.jp/english/articles/20230902/p2a/00m/0na/018000c


Fig. 4.8 – Hiratsuka Un'ichi, *Nihonbashi*, Shōwa period, 1929. Sōsaku hanga, woodblock print; chūban, sheet; ink and color on paper. Image: The Lavenberg Collection of Japanese Prints of Oriental Art at the Jordan Schnitzer Museum of Art. Courtesy of Mr. Irwin Lavenberg

Fig. 4.9 – Tokuriki Tomikichirō, *Nihonbashi*, *(as printed on the print)*, *Note: The insert in the portfolio Four Seasons of Tokyo lists this print's full as "Winter A Snowy Scene of Nihonbashi Bridge*, Shōwa period, 1942. Shin hanga, woodblock print; chūban; ink and color on paper. Image: The Lavenberg Collection of Japanese Prints of Oriental Art at the Jordan Schnitzer Museum of Art. Courtesy of Mr. Irwin Lavenberg

Fig. 4.10 – *Exaggerated-Shinkabe Style with stone base and metal bars on first story windows*, Kamanza Street, Nakagyō, Kyoto

Fig. 4.11 – *Exaggerated-Shinkabe Style with brick first story*, Kamanza Street, Nakagyō, Kyoto

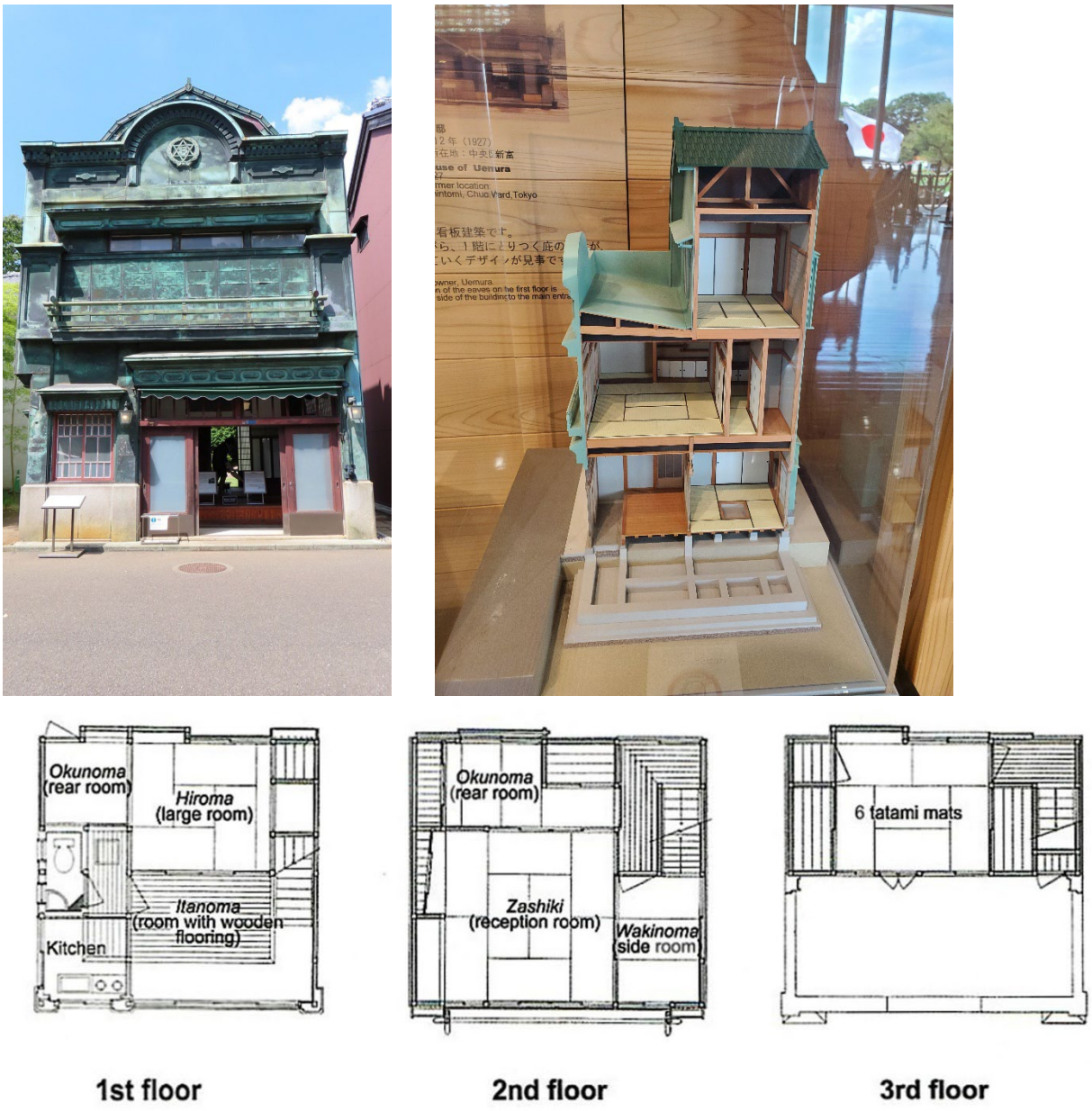


Fig. 4.12 – *House of Uemura, Scale Model, and Floor Plan (Billboard Architecture; kaban kenchiku)*. Originally built: Shōwa period, 1927. Restored: Heisei period, 1998. Edo-Tokyo Open-Air Architectural Museum (formerly located in Chuo ward), Tokyo.

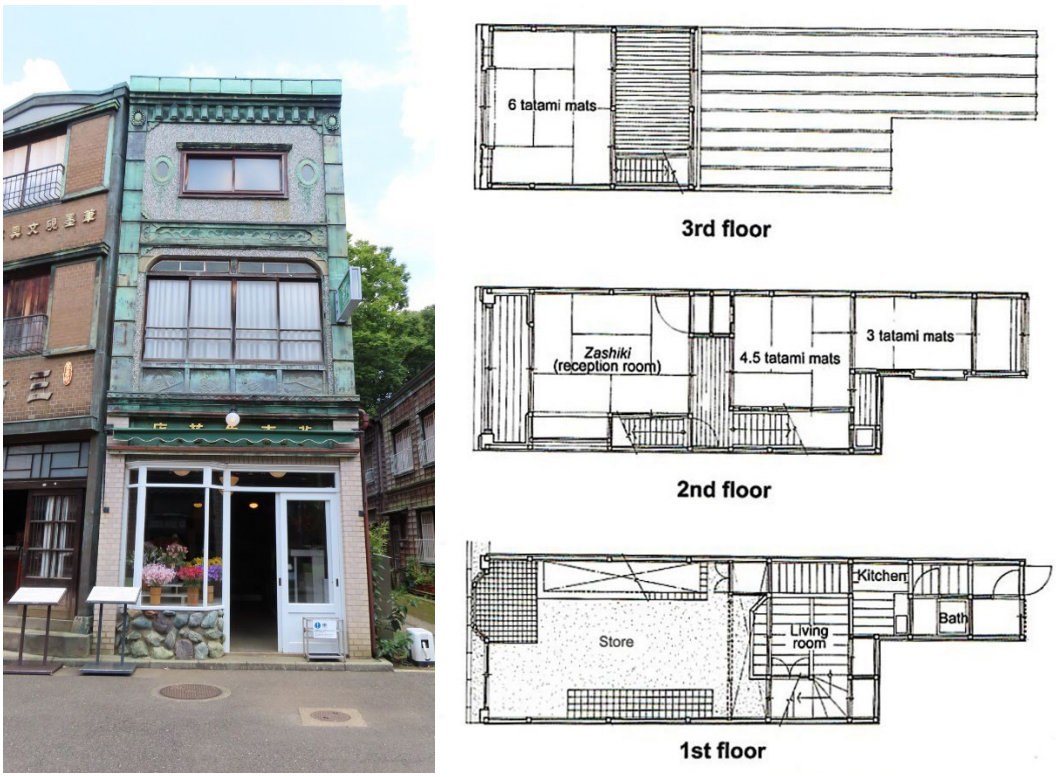


Fig. 4.13 – *"Hanaichi," Flower Shop and Floor Plan (Billboard Architecture, kaban kenchiku).* Originally built: Shōwa period, 1927. Restored: Heisei period, 1994. Edo-Tokyo Open-Air Architectural Museum (formerly located in Chiyoda ward), Tokyo

Fig. 4.14 – Yanaka, Taitō City, Tokyo

Fig. 4.15 – Jinaimachi, Tondabayashi, Osaka

Fig. 4.16 – *Karahori Shopping Street Area*, Chuo, Osaka

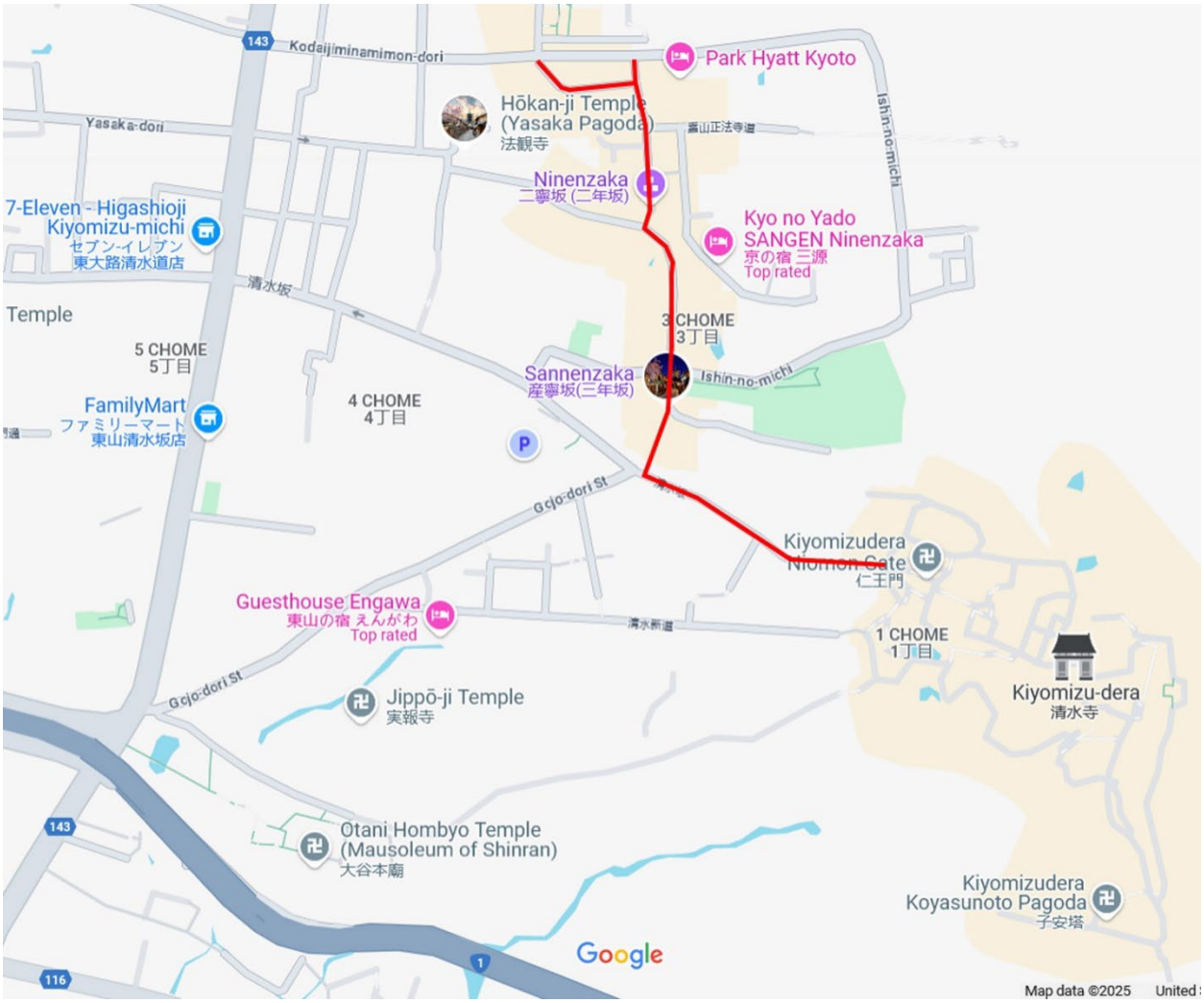
Fig. 4.17 – *Remains of the Enamiya and Shibatsuji Residences*, Sakai, Osaka


Fig. 5.1 – Anonymous photographer, "An aerial view of Tokyo after it was firebombed by U.S. Army Air Forces on March 10, 1945," *The New York Times Magazine*, last accessed March 2020, https://www.nytimes.com/2020/03/09/magazine/we-hated-what-we-were-doing-veterans-recall-firebombing-japan.html

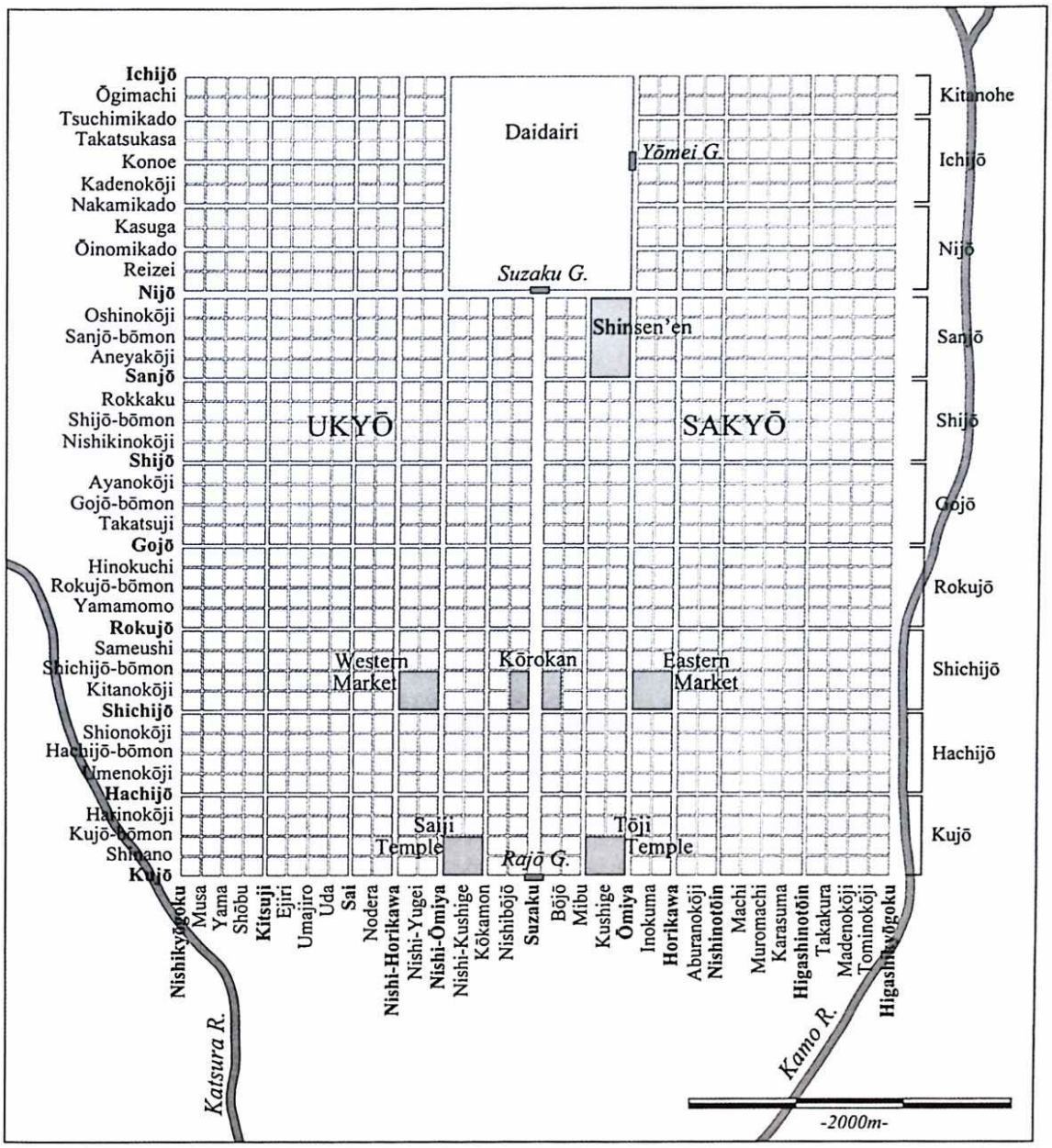
Fig. 6.1 – *Kumazawa Book Store,* Sunshine Complex, Toshima City, Tokyo

Fig. 6.2 – *Shinkyogoku Street*, Nakagyō, Kyoto

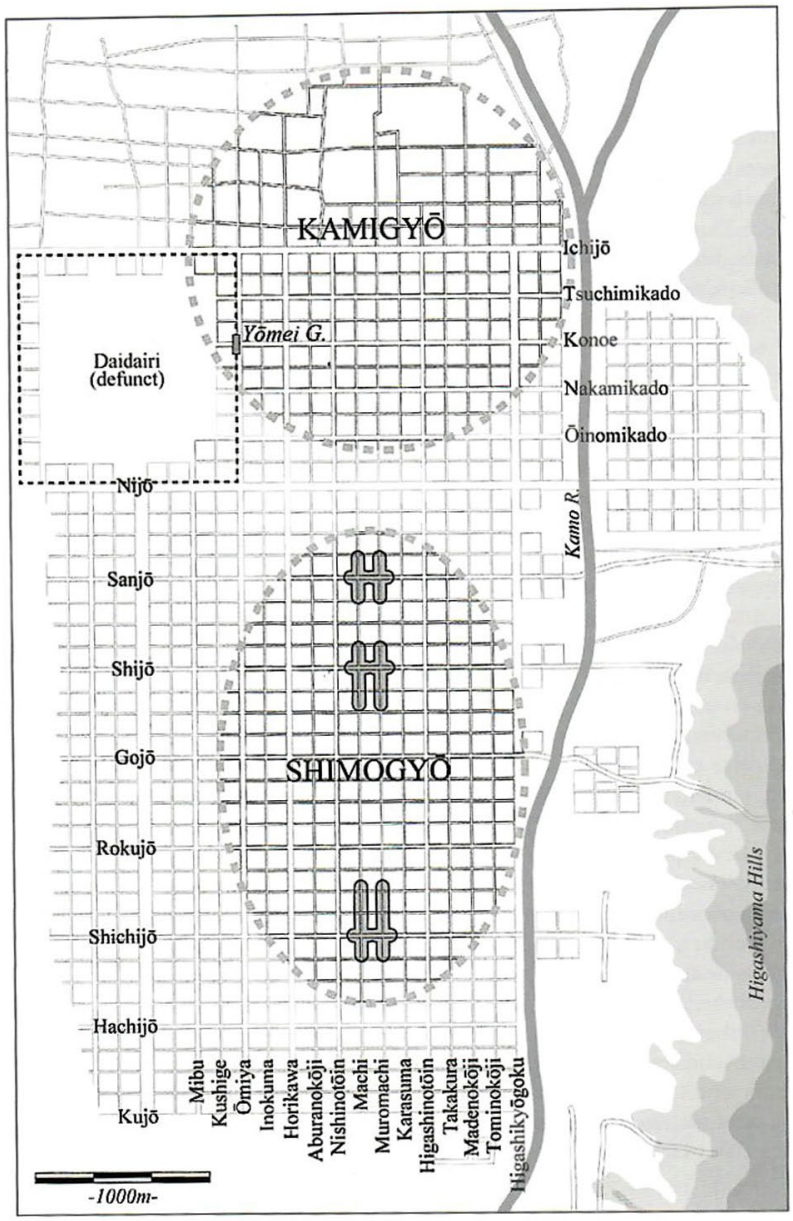
Maps



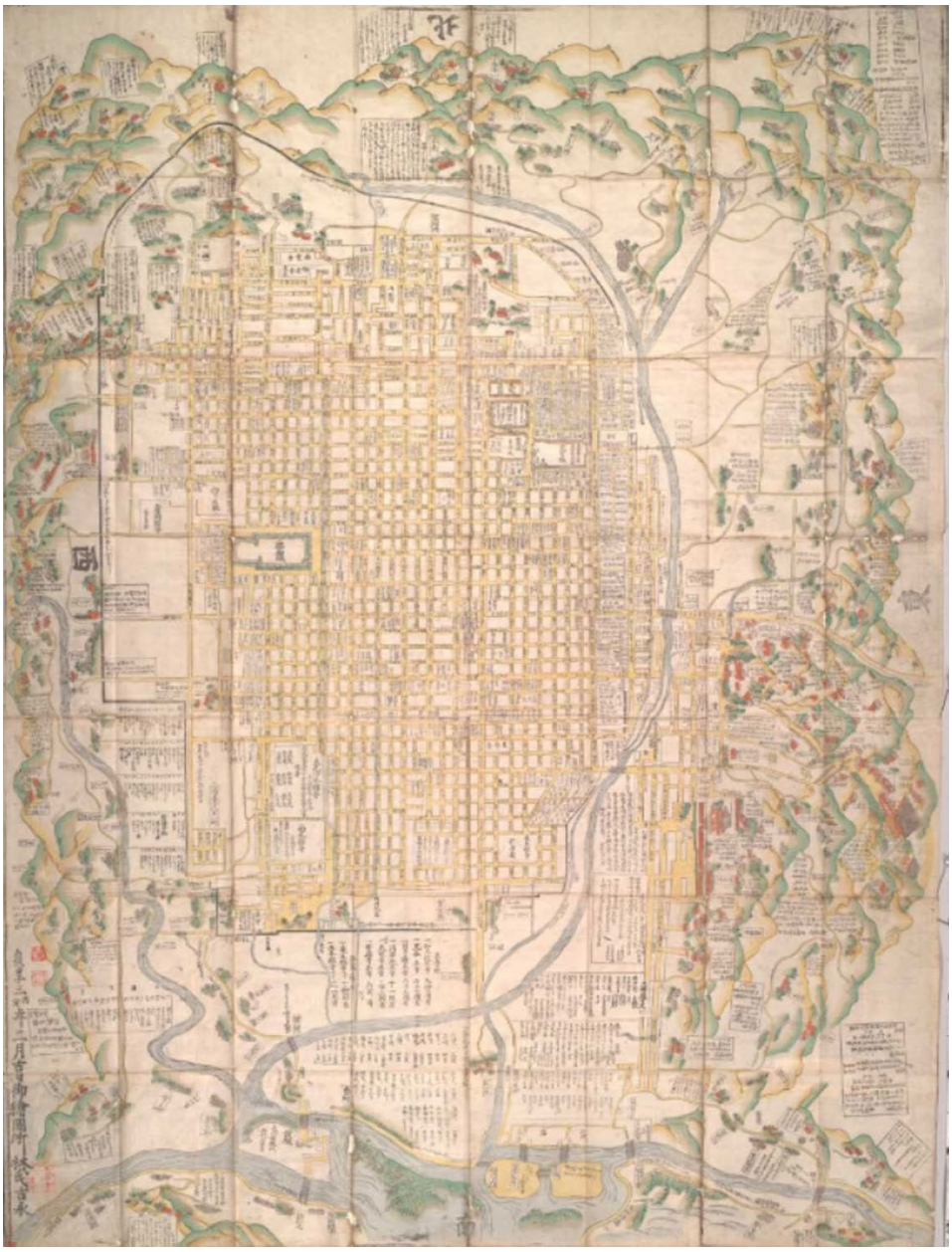
Map 1.1 – *Paths to Kiyomizu Temple*, Google/Photoshop, last accessed March 24, 2025



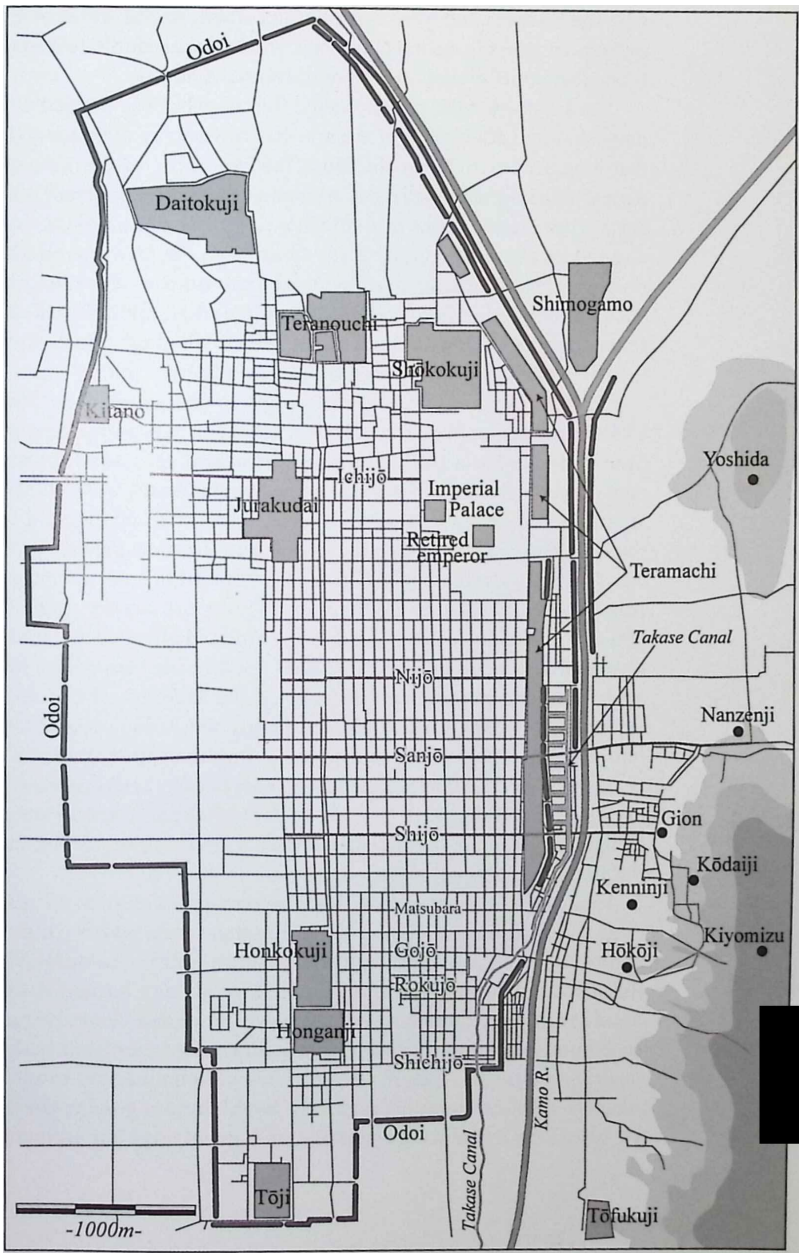
Map 2.1 – *Heian-Kyō Grid Plan*. Image: Matthew Stavros, *Kyoto: An Urban History of Japan's Premodern Capital.* Spatial Habitus Making & Meaning in Asia's Architecture, Honolulu: University of Hawai'i Press, 2014.



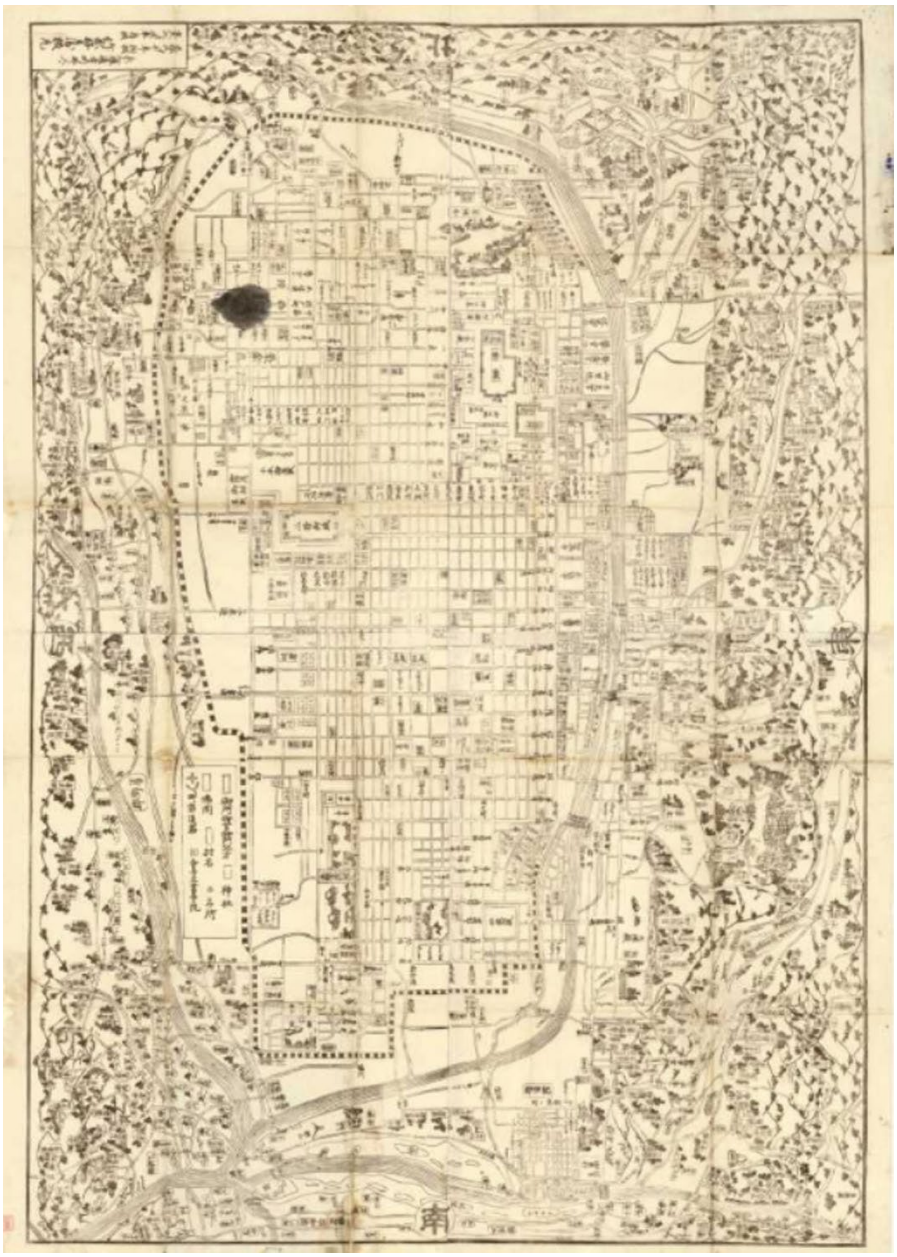
Map 2.2 – *Medieval Kyoto Plan*. Image: Stavros, *Kyoto: An Urban History of Japan's Premodern Capital.* 2014.



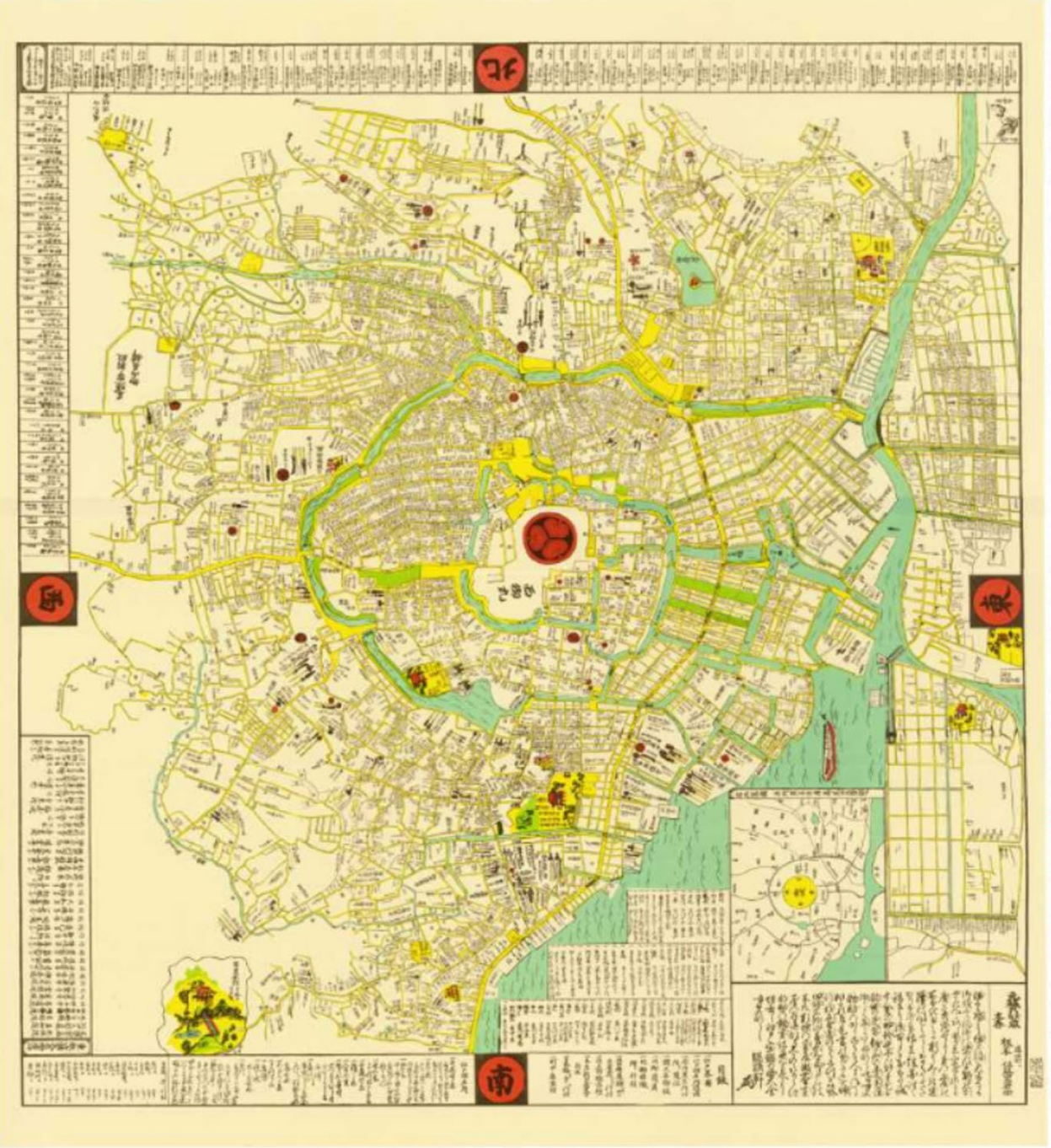
Map 2.3 – *Kyoto University Picture Books: Newly Selected and Supplemented*. Image: Edo period, 1686. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=002344331.



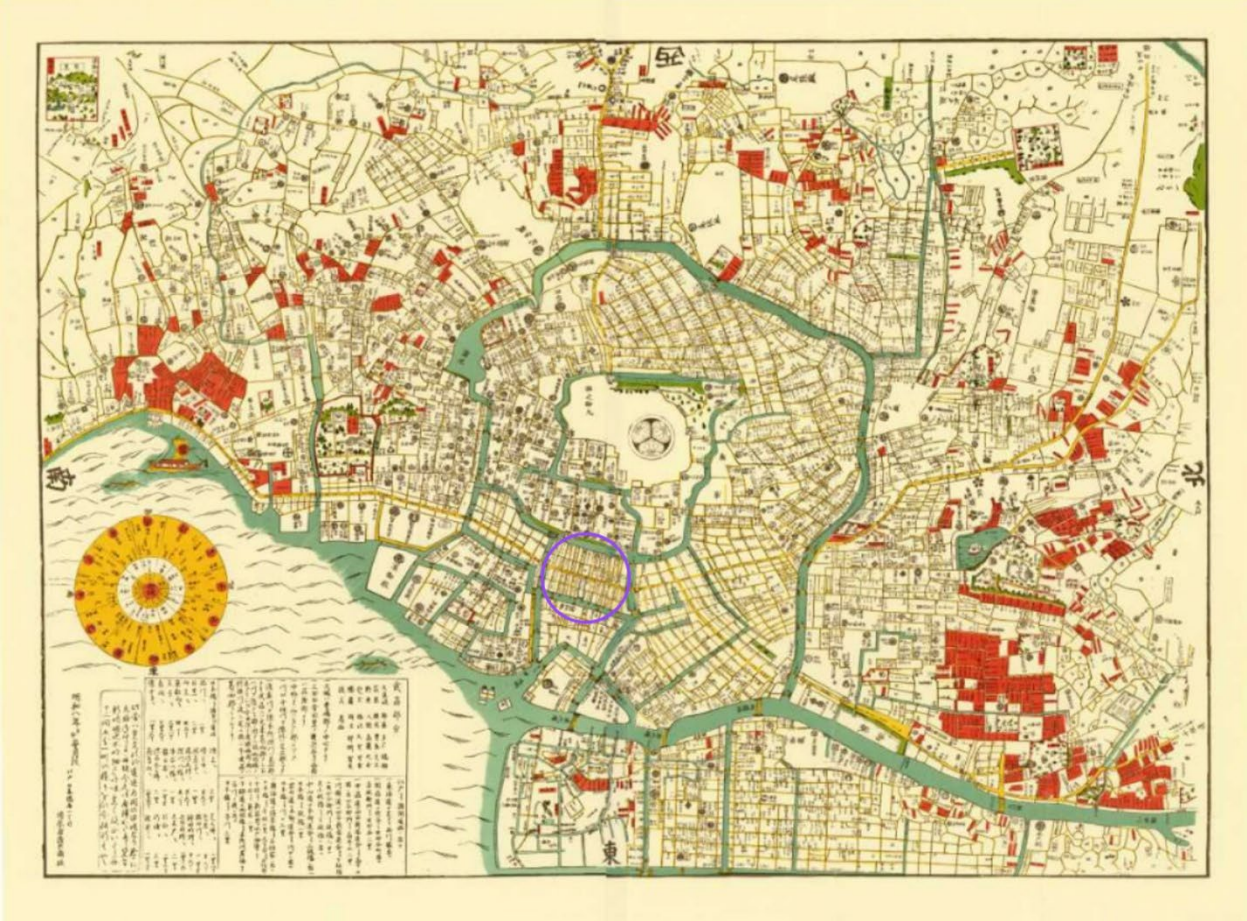
Map 2.4 – *Toyotomi Hideyoshi's Kyoto, late sixteenth century*. Image: Stavros, *Kyoto: An Urban History of Japan's Premodern Capital.* 2014.



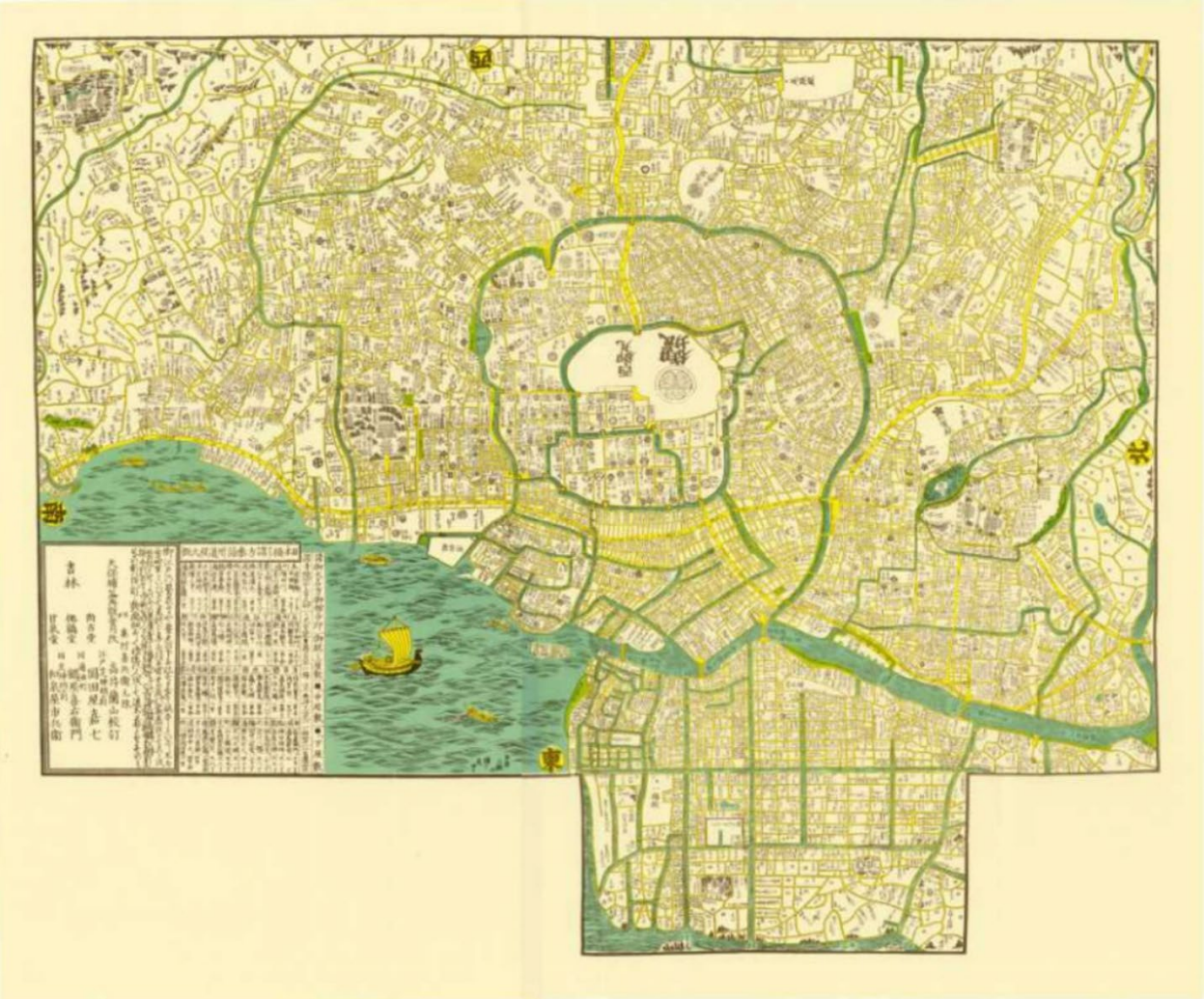
Map 2.5 – *Revised and Expanded Collection of Kyoto Paintings*. Image: Meiji period, 1862, Publisher: Takehara Kohei. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=002813442.



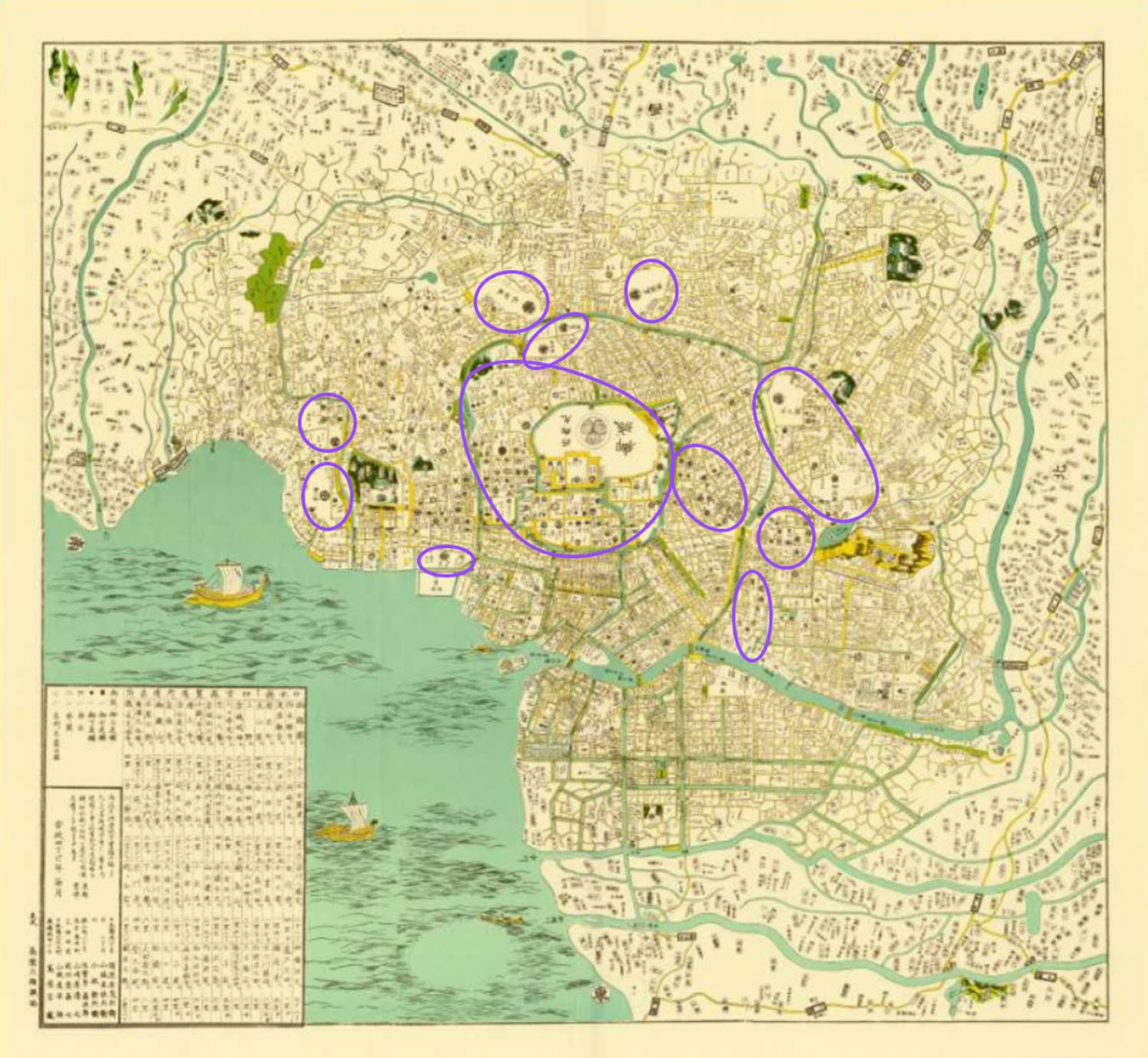
Map 3.1 – *Edo Square Book*. Image: Edo period, 1693, Publisher: Sato Shiroue. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=000904243.



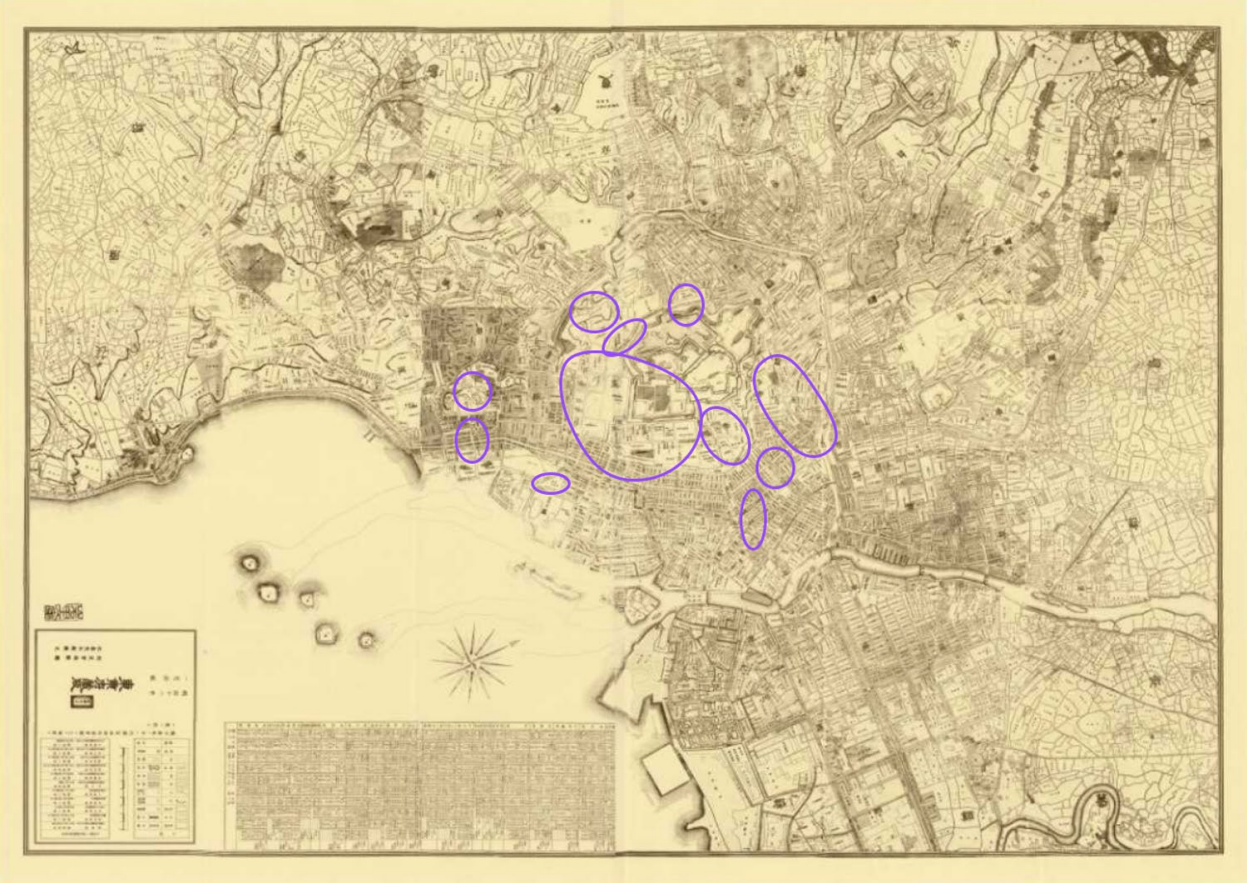
Map 3.2 – *Meiwa Edo Map*. Image: Edo period, 1771, Publisher: Subaraya Mohei. Purple Circle: Nihonbashi. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=000904037.



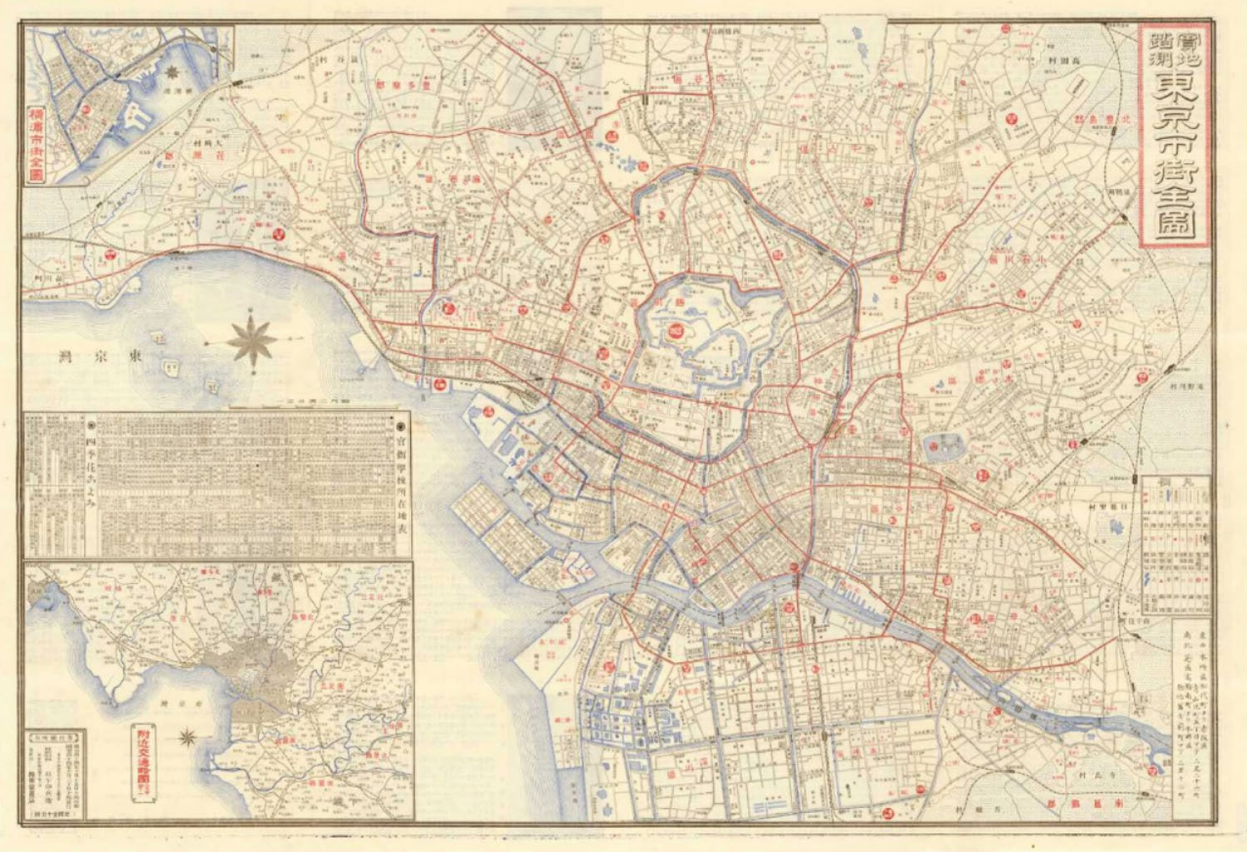
Map 3.3 – *Tempo Edo Map*. Image: Edo period, 1830-1843, Artist: Ranzan Takai, Publisher: Okadaya Kasshichi, Tsuruya Kiemon, Izumiya Ichibei. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=000904250.



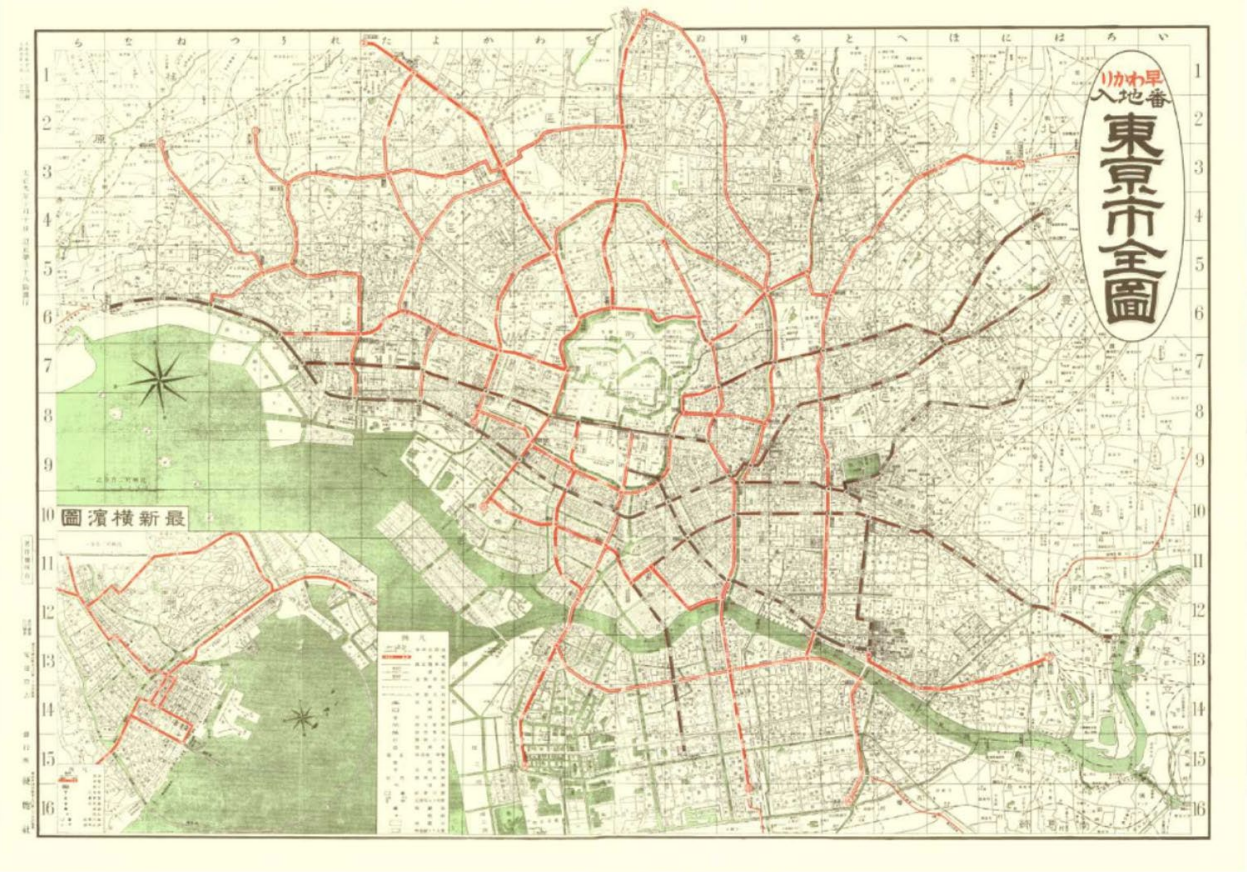
Map 3.4 – *Map of the suburbs of Edo during the Ansei Period*. Image: Edo period, 1857, Artist: Takashiba, Publishers: Kichizo Tsutaya and seven others. Purple: marks where warlord (*daimyo*) residences were. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=000904268.



Map 4.1 – *Complete Map of Tokyo*. Image: Meiji period, 1879, Artist: Tsuneo Sagara, Publisher: Kitabatake Mohei. Purple: marks where warlord (*daimyo*) residences were. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=000903690.

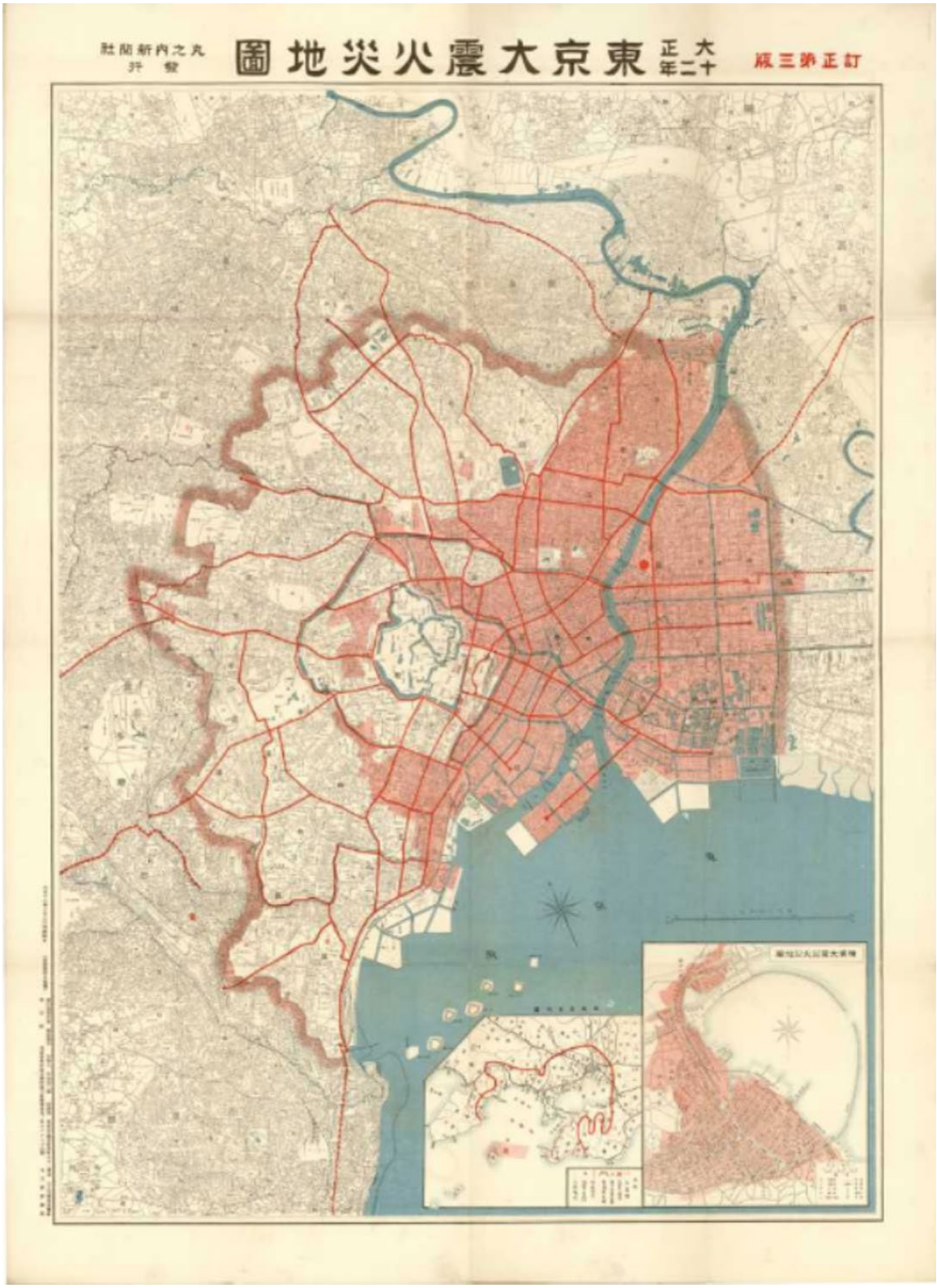


Map 4.2 – *Entire Area of Tokyo: Actual Ground Survey*. Image: Meiji period, 1911, Artist: Ihei Kusaka, Publisher: Seikado Bookstore. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=002464857.

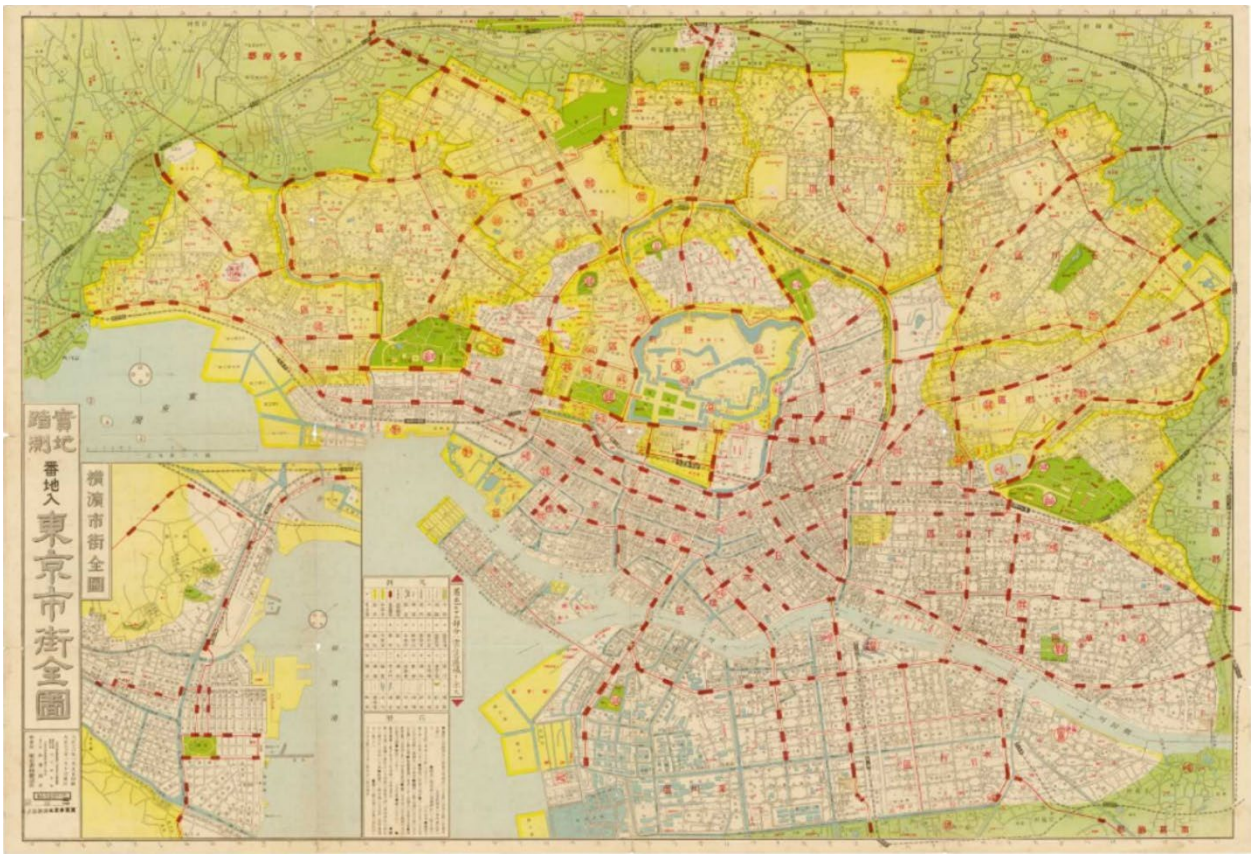


Map 4.3 – *Complete Map of Tokyo*. Image: Taishō Period, 1920, Artist: Toyokichi Adachi, Publisher: Benransha. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=000903310.

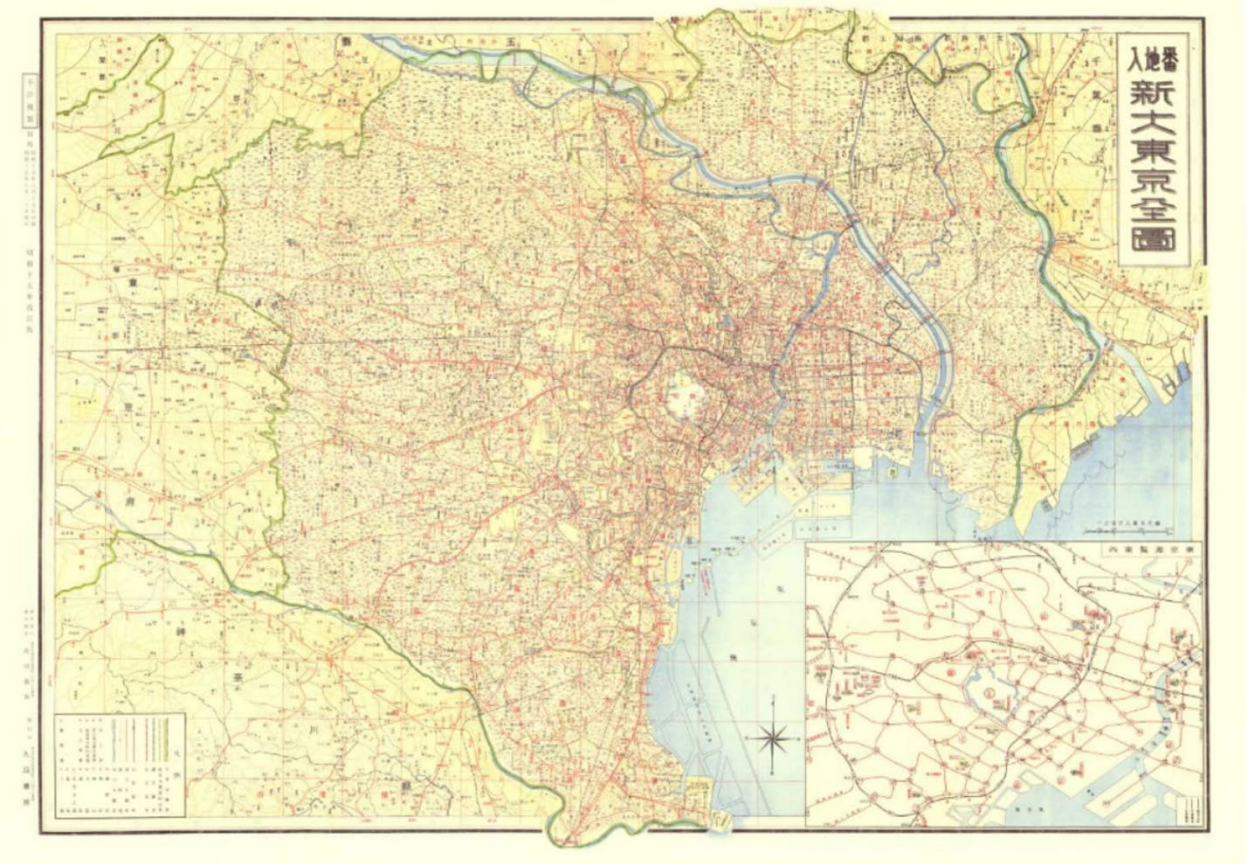
Map 4.4 – *Complete Map of Tokyo*. Image: Meiji period, 1892, Artist: Ryota Kanazawa, Publisher: Yasugoro Okura, Okura Shoten. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=000903708.



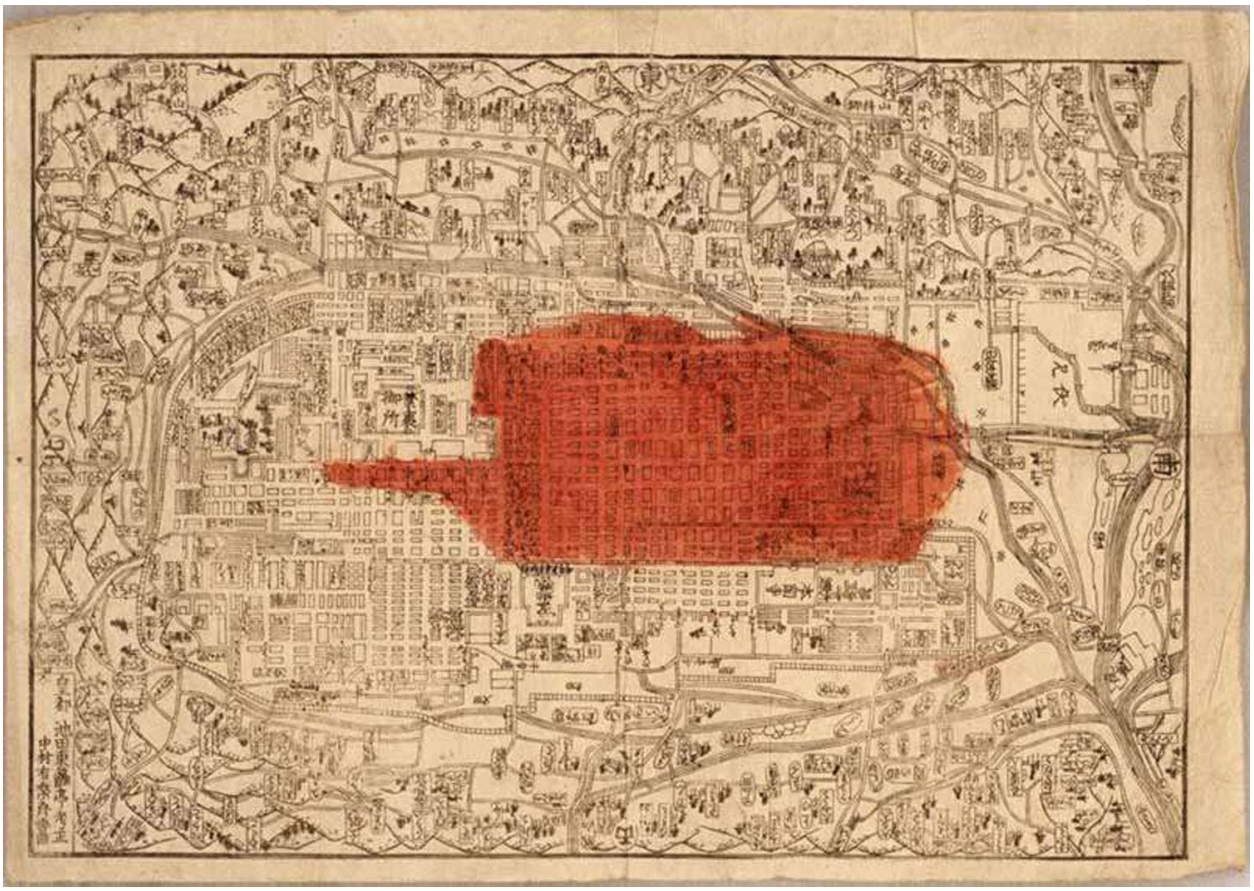
Map 4.5 – *Fire Map of the Great Tokyo Earthquake of Taishō 12*. Image: Taishō period, 1923, Artist: Shunsuke Shindo, Publisher: Kisaburo Nakayama, Oe Printing Co., Ltd., Marunouchi Shimbun. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=001813245.



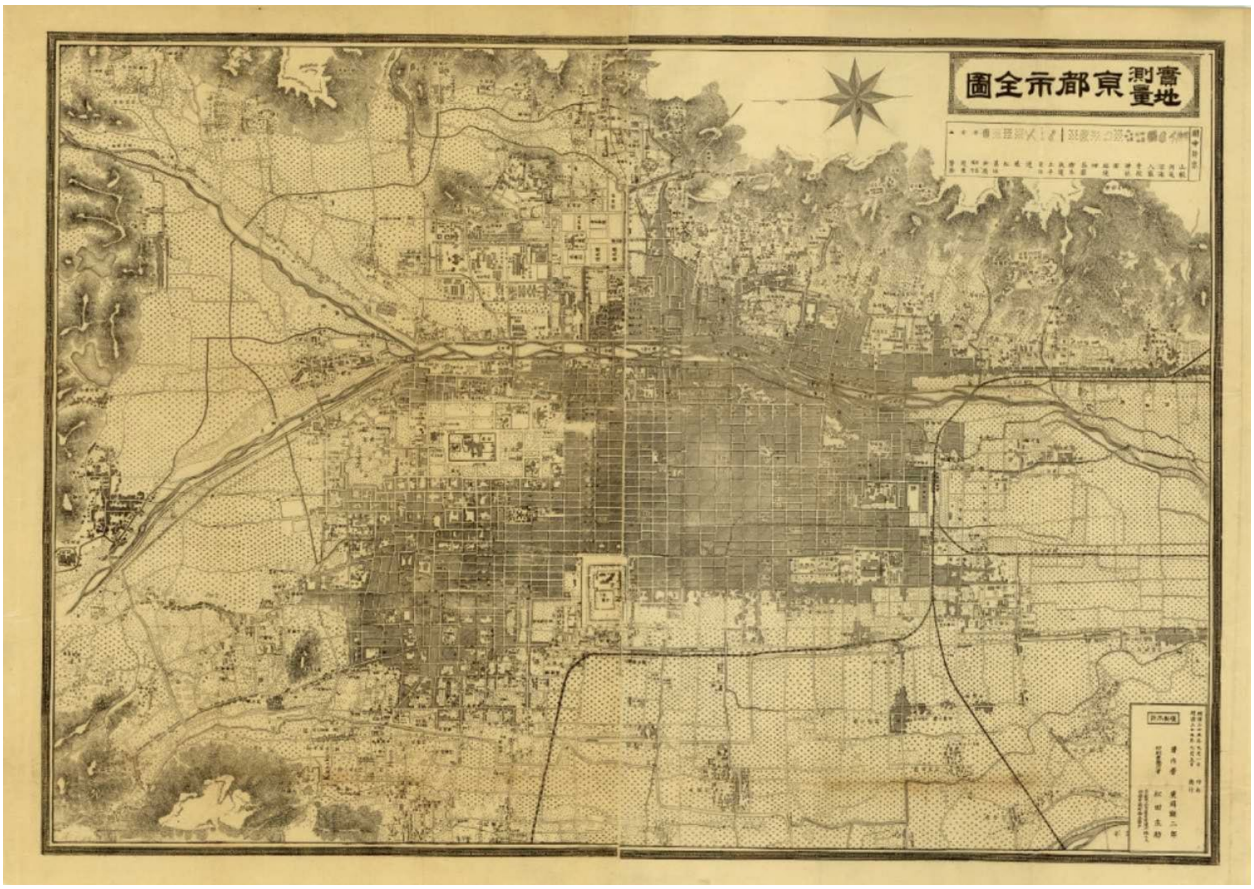
Map 4.6 – *A Complete Map of Tokyo with Actual Addresses*. Image: Taishō period, 1924, Artist: Kusaka Ihei, Publisher: Warakujiya, Tokyo Shorin Magazine Store. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=001813369.



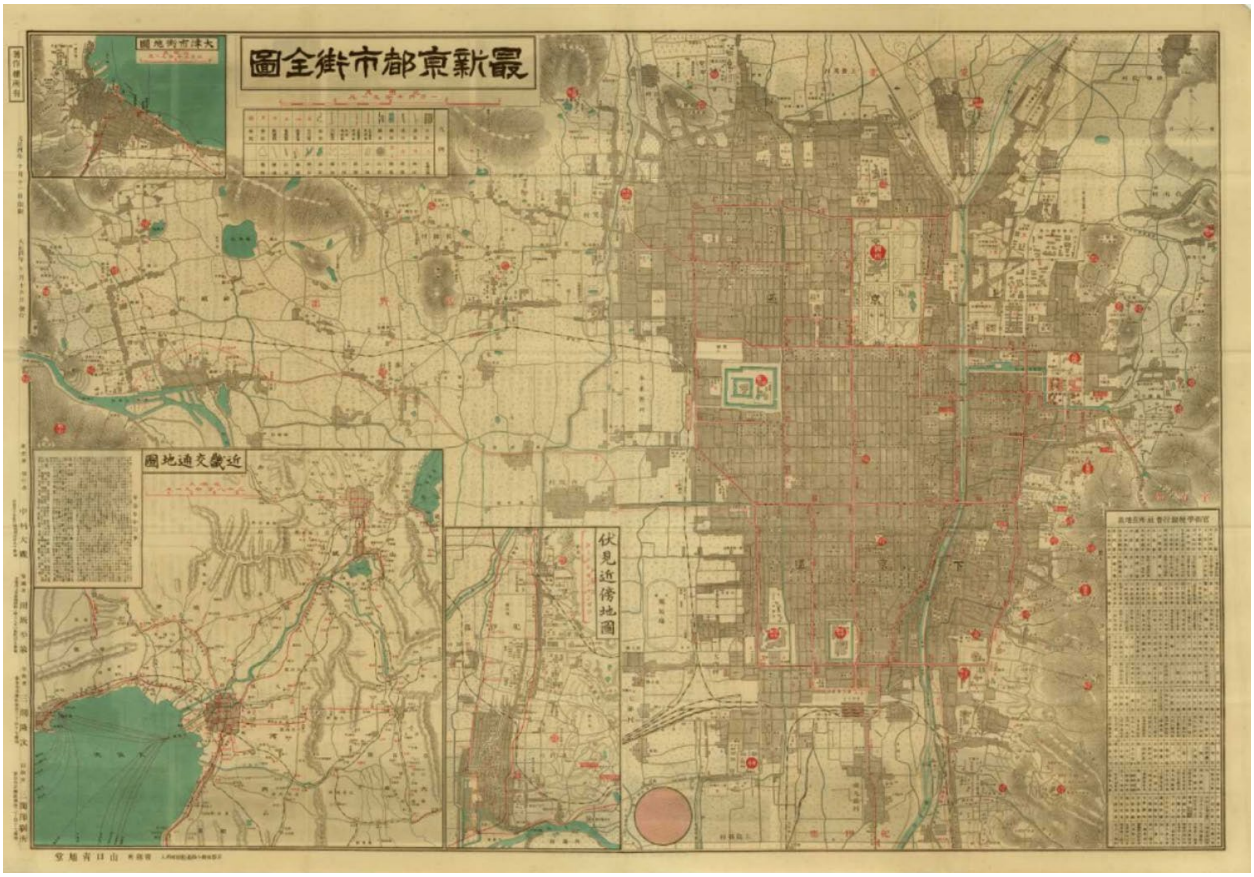
Map 4.7 – *Complete Map of Tokyo*. Image: Shōwa period, 1940, Artist: Yoshihiko Morita, Publisher: Kudan Shobo. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=000903351.



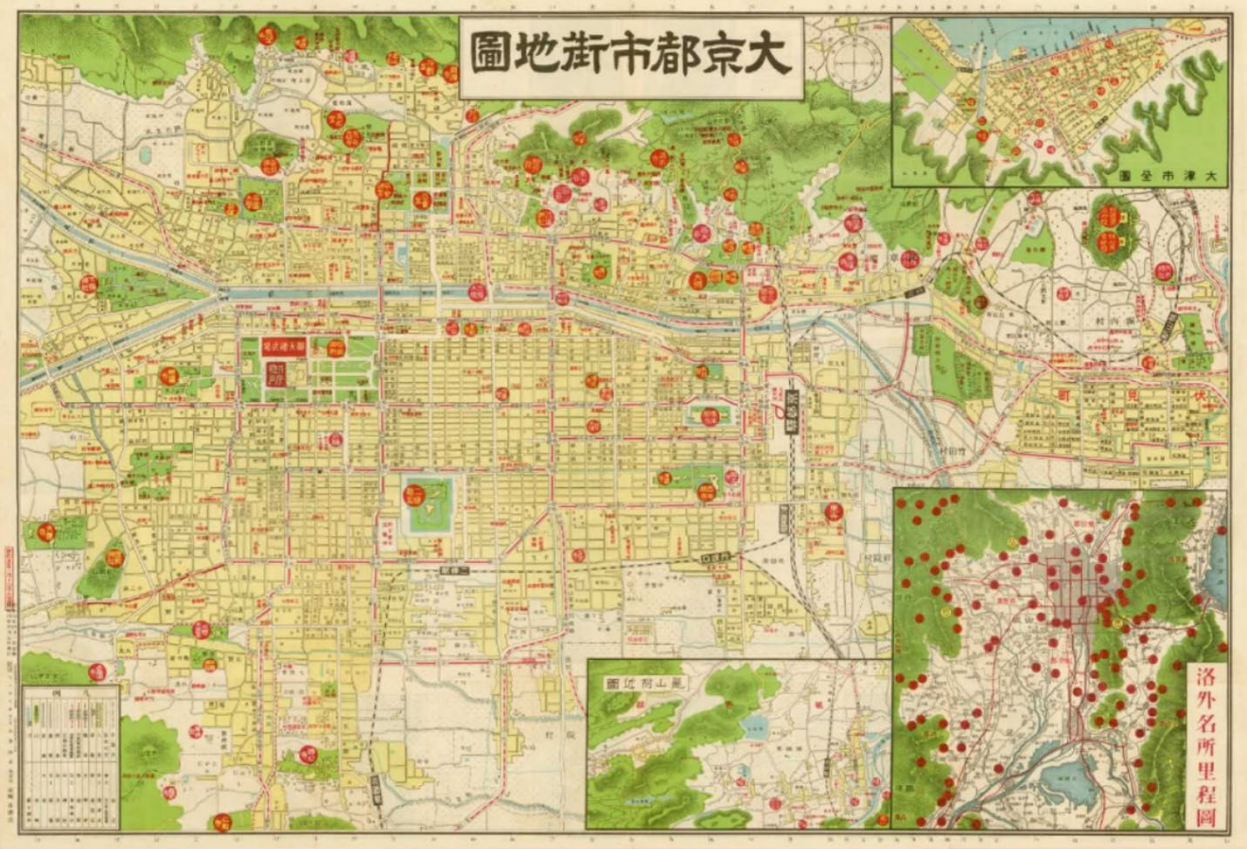
Map 5.1 – *Map of Kyoto destroyed in the Kinmon Rebellion*. Image: Uploaded June 2007, SamuraiWiki, http://samurai-archives.com/wiki/File:Kinmon1.jpg#filehistory



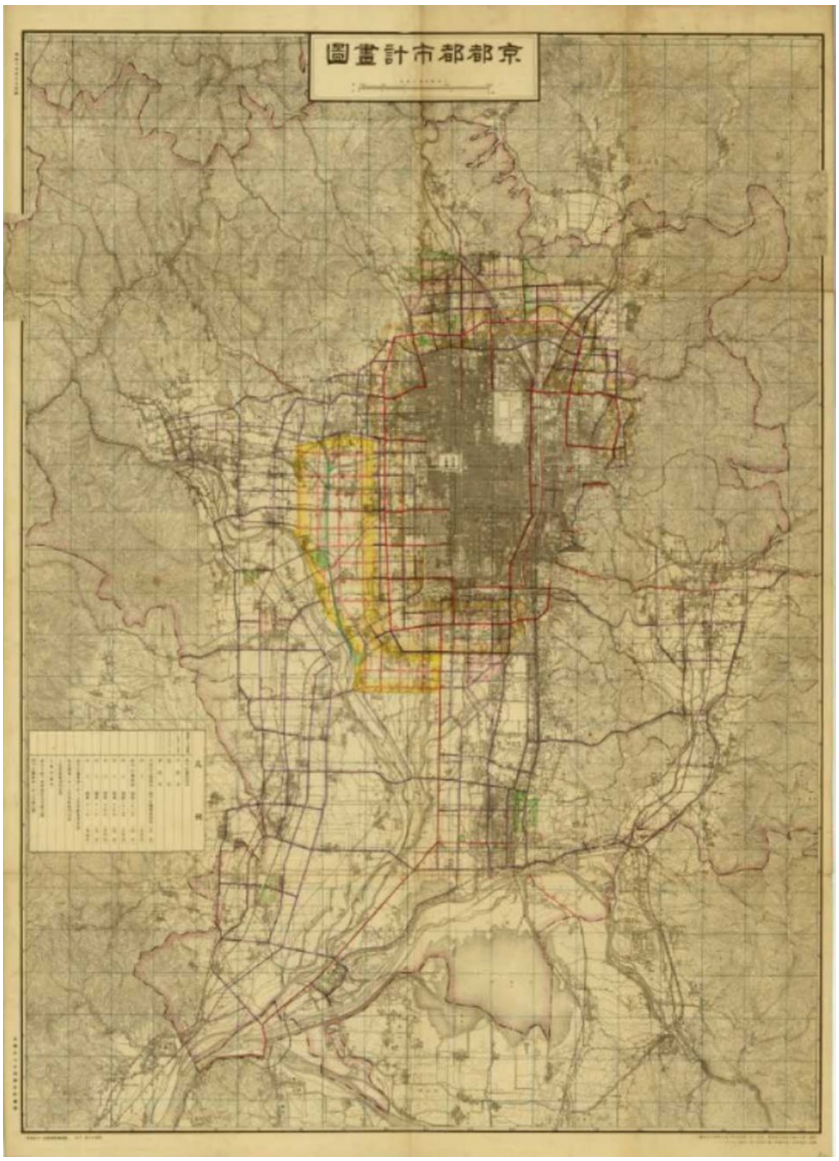
Map 5.2 – *Survey of Kyoto City*. Image: Meiji period, 1902, Artist: Kenjiro Hirooka, Publisher: Shosuke Matsuda. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=002863025.



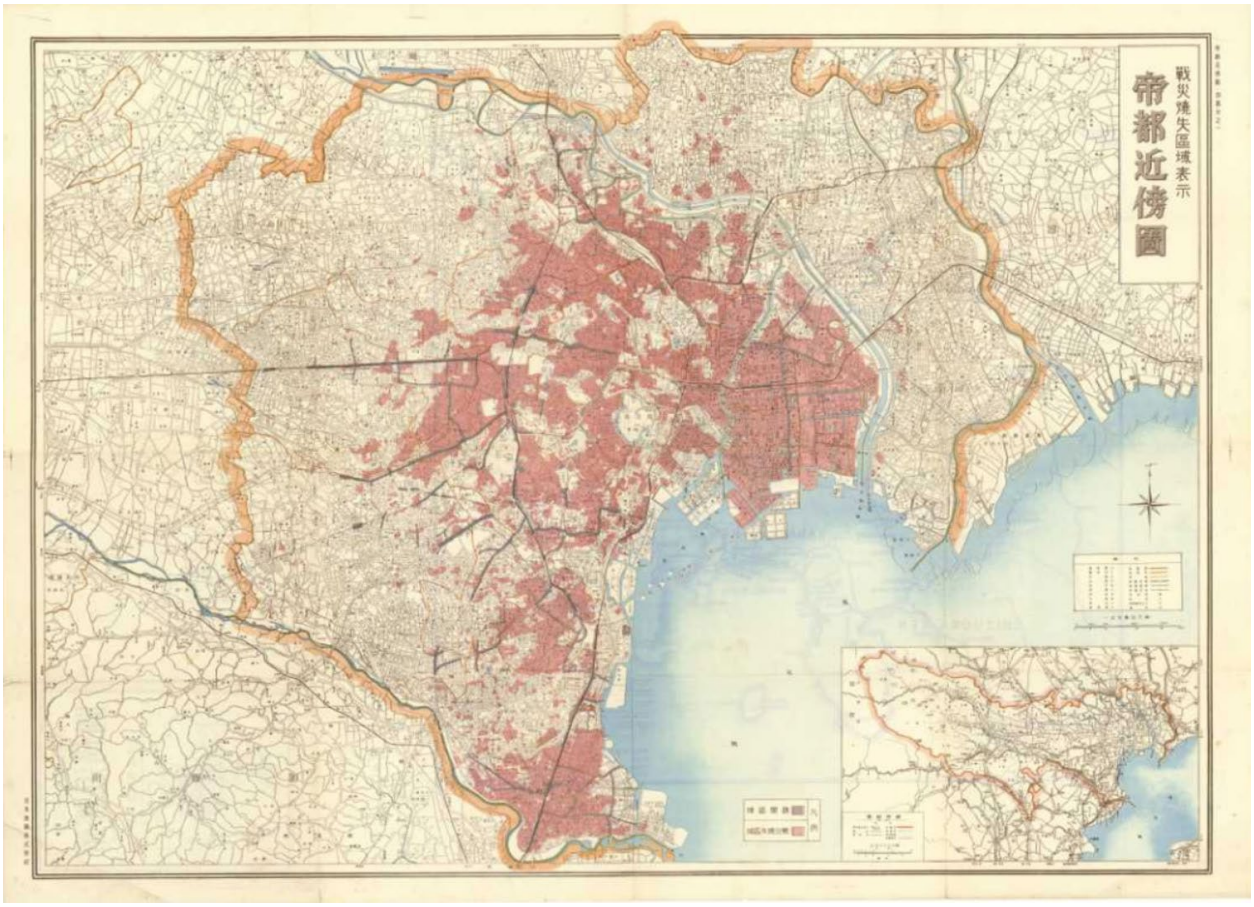
Map 5.3 – *Latest Kyoto City Map*. Image: Taishō period, 1915, Artist: Nakamura Taikan, Tasaka Heisaku, Publisher: Nakamura Taikan, Mima Ryuji, Mima Printing Company, Yamaguchi Seikyodo. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=002464956.



Map 5.4. – *Kyoto City Map*. Image: Shōwa period, 1930, Artist: Ihei Kusaka, Publisher: Ihei Kusaka, Warakuroya. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=002812923.



Map 5.5 – *Kyoto City Planning Map*. Image: Shōwa period, 1940, Creator: Kyoto City Civil Engineering Bureau, Urban Planning Division, Publisher: Ordinance Survey Department. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=002472066.



Map 5.6 – *Area of the Imperial Capital Showing Area Destroyed by War*. Image: Shōwa period, 1946, Artist: Toyoji Kamei, Publisher: Keiichi Kumagai, Nihon Chizu Co., Ltd. International Research Center for Japanese Studies, https://lapis.nichibun.ac.jp/chizu/map_detail.php?id=001815885.

Abbreviation

J Mary Neighbor Parent. *Japanese Architecture and Art Net Users System*, 2001, https://www.aisf.or.jp/%7Ejaanus/.

U *Unabridged Dictionary of the Japanese Language*, Shōgakukan, 2000-2002. Through JapanKnowledge at https://japanknowledge-com.uoregon.idm.oclc.org/lib/search/basic/.

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