

2010

Shaping Tokyo: Land Development and Planning Practice in the Early Modern Japanese Metropolis

Carola Hein

Bryn Mawr College, chein@brynmawr.edu

[Let us know how access to this document benefits you.](#)

Follow this and additional works at: http://repository.brynmawr.edu/cities_pubs

 Part of the [Architecture Commons](#), [History of Art, Architecture, and Archaeology Commons](#), and the [Urban Studies and Planning Commons](#)

Custom Citation

Hein, Carola. "Shaping Tokyo: Land Development and Planning Practice in the Early Modern Japanese Metropolis." *Journal of Urban History* 36, no. 4 (2010): 447-484.

This paper is posted at Scholarship, Research, and Creative Work at Bryn Mawr College. http://repository.brynmawr.edu/cities_pubs/20

For more information, please contact repository@brynmawr.edu.

Shaping Tokyo: Land Development and Planning Practice in the Early Modern Japanese Metropolis

Carola Hein

Manuscript submitted to the Journal of Urban History in August 2007, revised and resubmitted March 2008.

When German architect Bruno Taut drove in 1936 along the major road linking Tokyo and Yokohama, he criticized the inadequacy and superficiality of the modernizing Japanese built landscape. He later wrote about his revulsion:

"I in particular had heard so much about Tokyo that I had no desire to see the city on the spot. [...] In passing through the Inland Sea we had absorbed scenery of such rare beauty, had found so little of vulgar trash¹ in such buildings as could be glimpsed, that we could hardly take in the crabbed pretentiousness, the ludicrous would-be modernity of the tin façades that confronted us, could not fathom the loud hideousness of this confusion of architectural styles. What had become of the refined vision of the Japanese, whose scenery was so admirably fitted to sensitize the optical nerve?

The general impression was one of intolerable garishness. In the course of our travels we had only too often come up against civilization in decay. But this utter aimlessness, this total lack of direction even in bad taste, did more than shatter our illusions about Japan; it lacerated our finer feelings."

[...] We drove through Ueno, an unspeakably hideous quarter built up after the big earthquake of 1923. Here the miniature sky-scrapers and six story buildings became less frequent, though only to be replaced by flatter monstrosities.¹ (Fig. 1)

Visitors from Europe or America, who often lauded traditional Japanese architecture and urban form, had similarly criticized Japanese contemporary cityscapes since the mid-19th century. They deplored their lack of a clear structure, and regretted the absence of a visual relation between the infrastructure and the buildings. They could not discern any unity in the appearance of the streets, and they objected to the variety of functions and forms, materials and styles displayed in the façades. They also criticized the so-called "pencil buildings" (multi-story buildings on tiny sites), the narrow gaps between buildings (which they found more rural than urban), and the apparent lack of building control.²

Taut, like other European and American planners before and after him, tried to change the appearance of Japanese cities through projects and publications to make it more orderly and similar to European cityscapes (where—ideally—buildings punctuate and accompany streets and public spaces to provide three-dimensional

¹ The original translation has a note at the asterix: "The word "trash" is used here for every artistic expression of a sentimental, weak, sweetish, superficial and imitative kind. It is used with the same meaning as the German word "kitsch" and Japanese "ikamono" and "inchiki".

urban vistas and where building codes regulate architectural forms). He never attempted to understand the traditional Japanese city on its own terms; nor the pressures of local development; nor the main Japanese political, economic, or planning actors; nor these actors' attempts to modernize the city in harmony with its existent form and quality.³ Indeed, while foreign attempts to change Tokyo largely failed, the Japanese elite experimented with foreign planning concepts and transformed the city. This article explores how Japanese leaders responded to the demands of modernization, specifically why they established planning practices that were different from those of their foreign counterparts even though they faced similar situations, knew about established European techniques, and had large open spaces available. It explores how Japanese leaders proposed and partly adopted large-scale remodeling following the model of Haussmann's transformation of Parisian in the mid 19th century—integrating street widening, lot adjustment, and building regulations. Through the examination of case studies it shows that while many built spaces seemed random and organic to outsiders, they were the result of comprehensive planning and adaptation to local needs.

This article argues that the Japanese developed planning tools that built on the country's own urban form, particularities in land ownership, development needs, urban planning techniques, and design preferences, integrating only selected aspects of foreign ideas. As I have discussed elsewhere, Japanese traditions—of *machi* (meaning neighborhood as well as small town), local self-management, and absence of metropolitan-scale planning—influenced the ways in which modernizing Japan transformed its cities and picked up foreign concepts through the 19th and particularly in the 20th century.⁴ While the larger context of this modernization has received scholarly attention, few details are known about the transformation of individual urban units or the techniques that Japanese leaders and their planners used at this level.

This article highlights, first, key issues of land ownership, urban form, and urban development in the Edo-period (1603-1867), and provides an overview of the urban transformation of Tokyo concentrating on the era from the early Meiji period (1860s) to another moment of modernization, the reconstruction after the 1923 Great Kanto earthquake. That earthquake destroyed large parts of Tokyo and Yokohama, and became a sort of test of urban modernization, as leaders of the reconstruction only respected those changes that satisfied the requirements of the modernizing city. Allowing for trial and error, it also helped Japanese planners, businessmen, and politicians devise the planning method that has determined Japanese urban planning since the 1920s.

Second, this article provides a detailed analysis of the 1860s-1920s urban transformation. It examines the elements set up in the overview more closely through the study of three areas of Tokyo—all located in proximity of the imperial palace, a key site in the transformation of the city, but otherwise differing substantially—concentrating specifically on changes in the built environment following the construction of new or improved street infrastructure. This section showcases the particularities of Japanese urban form at a time when land ownership was not yet fully settled, and highlights the elite's pragmatic approach to urban transformation rooted in existing patterns. It discusses how planners developed techniques based on traditional

tools to help Tokyo, and other Japanese cities, quickly adapt to modernity, while selectively appropriating techniques from Europe. Finally, it underlines the importance of **land readjustment**, a planning technique characterized by a reduction in lot sizes in order to create public land, and to widen and straighten out streets, plots, and blocks.

These case studies demonstrate that even when given the opportunity for large-scale design, leaders made pragmatic decisions, concentrating their comprehensive plans on infrastructural and zoning questions, while ignoring European ideas about creating monumental urban gestures, regulating streetscapes, or imposing building guidelines. Even when Tokyo planners used **zone expropriation**, a favorite policy among Europeans for rearranging urban land (it allowed planners to adjust building lots and building frontages in conjunction with street construction, and rarely found support in Japan), the result did not differ much from less involved remodeling in other areas. Put another way, large-scale plans were rare; when leaders did attempt them they rarely proposed comprehensive urban design paired with building regulations; and even then these plans generally failed.

In conclusion, this article argues that Japanese planners developed a practice that departed from European and American design principles, but one that was and continues to be appropriate for Japanese needs and one that might even offer lessons to foreign cities and planners. Early commentators criticized the chaotic appearance of Japanese cities, but recent practitioners and scholars have come to appreciate their distinctive patterns, and the livable, multi-functional neighborhoods that include inspiring features in terms of sustainability and community planning.⁵

Traditions of landownership, urban form, and urban development in Edo/Tokyo: From the Edo period to the reconstruction period after the 1923 Great Kanto Earthquake

Tokyo's population, land use, streetscapes, and legal structures of land ownership differed significantly from European practices well into the 20th century, due to the shogunal system. In the early 1600s, Japan cut itself from outside contact, remaining isolated for more than 200 years. During this period, the shogun, the hereditary military ruler of the country, established a centralized feudal system, which he governed from the city of Edo (today's Tokyo). Meanwhile the Emperor, the official but mostly symbolic head of the country, remained in Kyoto. The shogun used innovative structures to insure obedience among the provincial lords (*daimyô*) over whom he ruled, notably the system of alternate attendance (*sankin kôtai*) that forced them to regularly travel to Edo and have part of their family live there permanently. Thus the daimyo had to maintain large domains in the capital city.

Other patterns of urban uses and landownership also differed significantly from other capitals worldwide. In fact, the military class (made up of the shogun, daimyo, and samurai (retainers of the daimyo)) occupied more than two thirds of the urban area.⁶ Edo maps show these areas as white patches without information

about the number of people living there, the number or shape of buildings, or streets or subdivisions, which makes it difficult to study them. (Fig. 2) The provincial daimyo governed these military domains, but they did not actually own the land and did not have the right to sell or trade it. It was the property of the shogun, who was free to withdraw or re-attribute it. Outside the military zones, the remainder of the land in Edo was held by Buddhist and Shintoist temples on the one hand and townsmen on the other. In contrast to the military class, the townsmen actually had some kind of landownership, certified by title deeds (*koken*).⁷ Their lots were named and subdivided and could be bought and sold to a certain extent. Renting land for construction was common. So the owner of a piece of land, the owner of a building on that land, and the user(s) of that building were often different persons.

Moreover, it was generally difficult for owners to revoke the contracts of the people who had built on the site. Even if an owner held several neighboring sites, different usage rights might attach to them. One result was that landownership and land use did not always cover the same areas, so that a building could stand on land belonging to two different owners, one of whom had rented out the land to someone else.⁸ Sometimes owners rented out even very small areas. This practice made it possible for residents to reverse traditional plot orientations in response to changes in traffic patterns without changing land ownership. Though maps and other records might show properties as long and narrow plots running north/south, for example, tenants on those properties might have built buildings facing west, adding further challenges to the interpretation of maps.⁹ (Fig. 3)

1868 brought major political, economic and social changes: the end of the shogunate and the restoration of imperial power to the Meiji Emperor, or the so-called Meiji Restoration. Under the leadership of the provincial lords and their supporters, Emperor Meiji established himself in Edo, now newly renamed “Tokyo.” The new leaders introduced a democratic government with a parliament and modern ministries. Most members of the new government came from the military caste, which was much too powerful to be abolished entirely.¹⁰ The Meiji Restoration also spurred numerous structural and functional urban transformations. It notably required the return of the domain lands—the lands distributed by the shogun to members of the military caste—to the central government. And after all, with the end of the shogunal government, the regional aristocrats no longer had to be present in Tokyo. Many of them returned to the provinces, taking their families and personnel and leaving vast abandoned spaces in the center of the capital. Tokyo’s population fell significantly.¹¹ The new Meiji government also overturned the prohibition of land transactions, thus making all land a tradable and most importantly taxable good. Landowners became more and more powerful, and land taxes became a means of financing the national government. Most members of the new government were landowners themselves, and the new Meiji policies on land favored them. Private landownership developed into a major factor in shaping Japanese urban planning, often preventing the government from making expropriations or otherwise planning on a large scale.

With all the major political and economic changes of the early years of the Meiji period, and the rapidly occurring industrialization and urbanization, the new government wanted to catch up with the then-leading countries and gain their respect as an equal partner in all regards. The Japanese elite approached the needs of the changing cities practically rather than aesthetically. That is, they laid out new, planned infrastructure (roads, railways, etc.) without transforming bordering lots or imposing regulations on the buildings alongside them; and they allowed politicians, businessmen, and planners to promote a surprisingly speedy urban transformation of selected areas, while leaving other urban units largely unchanged. As the capital city, Tokyo had to present itself as a political and economic center, capable of functioning in an international context. The new government had to erect buildings for the Diet (Japan's parliament) and the ministries, as well as other governmental functions including the military, postal, and educational services, and infrastructure. Meanwhile the private sector translated the challenges of the new political and economic environment into new industries and services, housed in new building types, such as factories, banks, and department stores. In order to do all this, the Japanese elite had to study and understand European and US political and socio-economic as well as urban and architectural structures and forms, and adapt them to their own needs and background. For their visions to become real, the government had to provide the open land.

At this time the conditions for large-scale transformation appeared ideal in Japan. The land left untenanted after the departure of the provincial lords was located centrally as well as scattered throughout the city. It was ideally suited to house the central institutions of a capital, as well as new economic functions (such as factories). Clearing them of existing buildings and sub-divisions, the government did use these sites for public functions such as ministries, foreign embassies, new political authorities, or military purposes (such as exercise grounds, ammunition factories, and military schools).¹² These changes fostered spatial and temporal discontinuity; in short, urban planning from the beginning of the Meiji period reinforced the existing patchwork character of Japanese cities. Administrative and business areas, industrial and transportation sites rose next to traditional high-density, multi-functional, socially-mixed neighborhoods with different types of residences.

Confronted with the need for rapid urban remodeling, leading politicians and planners closely examined the ongoing government-led modernization of European metropolises and the tools used in their modernization.¹³ After the opening of Japan in 1854, knowledge about European urban planning had already come to Japan through several channels. Western architects, engineers, builders and surveyors from neighboring colonies traveled to Japan and built there.¹⁴ Now the Japanese government also conducted its own investigations. From 1871 to 1873, the Iwakura mission (*Iwakura Shisetsudan*), named after its leader, Iwakura Tomomi, and including several high-ranking officials, left Japan to examine technology and culture in Europe and the US. Furthermore, the Japanese government systematically sent promising students to various places in Europe (and the United States) to collect information on numerous topics, including architecture and planning. These early Japanese visitors to Europe particularly admired Baron Eugène Haussmann's transformation for Napoleon III of Paris' medieval network of narrow streets and small housing lots into

modern centers with wide boulevards, clear-cut building blocks, and large lots allowing for multi-story, large-scale buildings.¹⁵ They were aware of the various instruments used by European planners to control the appearance of the streetscape and to harmonize buildings to improve the form and function of the city: building ordinances (especially in Paris); building lines delineating the location of buildings on a lot and regulating the distances between buildings and therewith contributing to creating continuous street frontages (especially in Germany); and most importantly zone expropriation, in which government takes land beyond that needed for street widening to create new (larger) lots alongside the street (again especially in Paris). Many of these students later shaped Japanese legislation and urban form.¹⁶ And the Japanese government actively sought to integrate Western planning concepts into Japanese thinking, inviting numerous foreigners to teach and build.

Despite the elite's admiration for the Parisian restructuring, they rejected a foreign proposal for a new city center with monumental axes and large-scale buildings for Tokyo. On the invitation of Inoue Kaoru, Minister of the Exterior, the Berlin office of Wilhelm Böckmann and Hermann Ende designed a government district in Hibiya in 1887—a rare example of a large-scale urban design vision for Tokyo that married unified streetscapes with architectural design. (Fig. 4) Inspired by Parisian axis and symmetry, the project proposed large boulevards connecting major institutions and ministries, monumental public places surrounded by large awe-inspiring buildings, and a new central train station. The government dropped this project in favor of the "First Plan for Urban Area Improvement of Tokyo" (*Tokyo shiku kaisei kyu keikaku*) of 1889. (Fig. 5) It was the first Japanese plan that considered the entire metropolitan area, but instead of creating urban beauty with monumental buildings lining majestic boulevards, the First Plan took a piecemeal approach to the improvement of Tokyo roads and parks. Thus the government ended this first phase of "grand design" in Japan in favor of a more pragmatic approach towards urban planning. In the following years, public government and private investors (such as the Mitsubishi company) did insert on a case by case basis the governmental and business functions and infrastructure that were part of the Böckmann and Ende plan into the existing city, albeit without integrating urban and architectural forms. Simultaneously, they created business districts and housing areas, transforming Tokyo into a modern metropolis and capital city.

I argue that the monumental order proposed in the Böckmann and Ende plan and its inherent Haussmann-like approach were not viable in the Japanese context. The country did not have a history of monumental urban design or the use of architecture to highlight and complement urban form, and never attempted to transform existing land ownership structures. The Japanese considered these models, but slowly rejected their advice for more locally "appropriate" ways.¹⁷ Moreover, traditional building laws did not provide the necessary tools for the large-scale urban changes or streetscape unification of modernization: the earliest building laws, from the mid 19th century, concerned mainly safety issues such as fire- and earthquake proofing or building heights. Japanese regulators did not adopt building ordinances at the time of the First Plan for Urban Improvement of Tokyo (1889). This was at least partially due to the influence of the architects, who considered that they were capable of designing and did not need strong control. Planners knew about the use

of building lines to unify building frontages and introduced the concept in the building law of 1919.¹⁸ They nonetheless deployed it in ways very different from its framers' original intent: As the Japanese urban historian, Ishida Yorifusa, has shown, by drawing building lines in the interior of blocks, administrators created virtual access routes to lots at the interior of deep blocks, thus providing a means to continuously use these areas and maintain high population density after the 1923 earthquake. (Fig. 6) Often enough these lines existed only on paper, but that was enough to allow construction in the block interior. Japanese planners thus transformed a planning instrument designed to unify urban landscapes and made it into a tool to preserve a particular Japanese status quo instead of transforming it.

Numerous occasions for big changes in urban form existed and, with zone expropriation, central authorities had an instrument to create plots for new usages and identical streetscapes on both sides of the street. Parisian planners had used zone expropriation to combine land alongside streets in order to make it ready for new building types that needed large lots, such as the apartment house and the department store. This technique had existed in Japan in a simple form since 1888, and the 1919 laws reaffirmed it. Yet during the more than 30 years of its existence, Japanese leaders had used this tool only a few times. The mayor of Osaka, Seki Hajime did not even use it to unify the appearance of the Midosuji boulevard in Osaka (completed in 1937).¹⁹ This was one of the rare Japanese examples of a plan integrating the design of the street with that of the buildings alongside it, in which administrators required a uniform height of the bordering buildings. Instead of adding zone expropriation to this plan, planners designated it an aesthetic area (*bikan-chiku*) with low height regulations, (possibly because this tool did not entail strong intervention in land ownership).

In most cases, planners building new infrastructure to modernize the city made no attempt to regulate the adjoining lots or the architectural design. A 1909 photo of the Nihonbashi ôdôri boulevard after its widening based on the 1889 plan shows that three- or four-story houses occupied the same small building sites as their wooden two-story predecessors.²⁰ (Fig. 7) While the earlier buildings were more or less uniform in their height, style, and building materials, the new constructions displayed a great variety of styles, forms, and heights.²¹ The architectural historian Hatsuda Tôru has examined how shop owners used Western forms in spaces used for commercial purposes, notably the facades and the showrooms, while the attached living rooms retained traditional forms.²² (Fig. 8) A similar mixture of Western and traditional forms characterized the relationship under modernization between the building and the land, as old land divisions restrained the new constructions that featured Western architectural forms and materials.

Another planning instrument did offer planners a way to modernize in keeping with existing Japanese practices: land readjustment. Japanese landowner associations had used early forms of land readjustment for the urbanization of rural areas, dividing even large areas into tiny building sites in order to maximize their profits. The 1919 urban planning laws systematized land readjustment, notably for use in rural areas and the layout of new developments. It was the huge damage of the Great Kanto Earthquake of 1923 that made Japanese planners turn to land readjustment as their main instrument of urban planning. Other instruments and

comprehensive plans for consolidating large areas failed because they needed longer periods of intervention when people wanted and needed to rapidly rebuild their homes and businesses. Land readjustment let people stay on the sites they had formerly occupied and introduced only minor changes to the site layout for the construction of streets without the reorganization of the bordering zone. It is important to note that leaders deployed land readjustment to create infrastructure, not building space. While creating new thoroughfares, land readjustment left the city largely with the old land division.²³ (Fig. 9) In doing so, it reduced the size of the building sites, produced irregular and often tiny lots, and pushed the buildings further up in height.

Even after the 1923 earthquake and the general acceptance of land readjustment as the main planning technique, planners occasionally attempted but failed to redesign the city's lot structures and to impose architectural guidelines. Major figures of Japanese planning supported zone expropriation and tried to implement it, as the example of Yaesu dōri (to the east of the Marunouchi area) shows, but with very limited success. Notably the creation of open public spaces in front of train stations, such as in the case of the Shinbashi station (discussed in the context of the Marunouchi case study), offered opportunities for planning intervention. In the 1930s, the creation of the Shinjuku station plaza on the Tokyo Yamanote line (to the west of the center) deserves to be highlighted as the one case of successful zone expropriation in Japan, and thus of major importance in Japanese planning history: the sale of building sites financed the construction of streets and other public spaces at market price. This example is particularly important, because it demonstrates that what appears to be an irregular, unplanned plaza was actually a carefully designed project.

The 1923 earthquake had boosted the development of Shinjuku. To serve the expanding suburbs and to accommodate growing traffic needs, public and private forces built new roads and railways as well as new plazas in front of major stations.²⁴ Though planners drew up detailed urban plans for several station plazas (Shinjuku in 1934, Shibuya, Ikebukuro, Otsuka in 1939), they developed only the urban form of the Shinjuku station plaza before the war. (Fig. 10) Overall planning applied to the entire station plaza: planners imposed restrictions on further sale or division, a three-year construction deadline, and architectural conditions at a time when only four examples of height control existed in all of Japan.²⁵ It is also the only example in Japan where planners used “excess condemnation” in its complete sense—that is when the construction costs were brought in by the sale of the redesigned land. This was possible only because large areas of land were owned publicly or by railway companies, both of which were interested in the rebuilding and the creation of a plaza. Yet even with all these conditions of possibility, the planners still did not move to create an architecturally unified streetscape.²⁶

The following three examples show concretely what leaders did more typically do, and how traditional patterns interacted with the new forces and needs of the Meiji era to affect urban change in Tokyo in the areas formerly occupied by townsmen and the military caste. (fig. 2) (Among the three groups that had held land in the Edo-time city, the temple districts changed the least. Modernization surrounded them but rarely touched them.) Specifically, they illustrate in detail how land readjustment emerged as the main Japanese planning

instrument. Each area might have been a candidate for large scale remodeling and urban design, as disaster or other forces had cleared large areas of land and as pressures of modernization provided the incentive for transformation. But in each case, the people in charge chose a solution that responded to practical needs and local interests, giving little attention to issues of aesthetics or unified streetscapes.²⁷ First, the rebuilding of the Ginza townsmen district (to the south-east of the Palace and separated from it only by moats and the Marunouchi-Yûrakuchô area) after a fire in 1872 illustrates the particularities of urban change in an area with small lots and some degree of landownership. Second, the government-led construction to the east of the Palace (notably the Marunouchi area) starting in the 1880s, highlights the rapid and functional transformation of the city on land owned largely by the government and one private landowner, Mitsubishi. The third case study is the Kanda-Misaki-chô area, located to the north of the Palace on the south side of the Kanda River, a smaller daimyo district that had been cleared of all construction. Redesigned (also by the Mitsubishi company) from scratch after the purchase of the land in 1890 as a new urban neighborhood, this area improved on traditional urban forms, but adapted to its surrounding and location.

1st case study. Ginza – Early attempts at a unified cityscape

The Ginza, a traditional "shitamachi" or townsmen area outside of the castle, had been built on a grid layout on land reclaimed from the sea with views of Mount Fuji and the castle. (Fig. 11) One of the most important Japanese highways, the Tokaido, ran through the center of the area, connecting the west of the country with the north. A moat separated the Ginza from the group of daimyo residences in the Marunouchi and Yûrakuchô area east of the fortress.²⁸ (Fig. 12) The destruction by fire of 3000 houses in the Ginza area in 1872 seemed to provide the occasion for a reconstruction on a new urban plan and with a new building style.

The rebuilders of the Ginza confronted small lots and numerous people who had quasi-landownership. This small-scale structure could not host the new institutions of a growing metropolis, such as government buildings or department stores. In similar situations, public and private leaders in European cities opted to demolish their medieval centers to make room for new government buildings and infrastructure, or to establish new large-scale structures such as train stations on the outskirts of the existing city. In Japan, leaders could have used recurring destruction, as in the case of the Ginza, as an incentive for land consolidation and the creation of large lots.

And indeed, under the leadership of the British engineer Thomas J. Waters, the city rebuilt the area after the fire as a brick district, with a new major thoroughfare lined with sidewalks, gaslights, and two story buildings with arcades.²⁹ Projected as the new entry Tokyo and its modern boulevard, this new road linked the new train station at Shinbashi with the European settlement in Tsukiji. But the planning of the area was less striking than its architectural transformation—the new design as well as the new materials.³⁰ (Fig. 13+14) The government projected a reconstruction of the area in the monumental manner of European cities, but it did not

fully realize these early plans to transform the city and to create a unified streetscape in the early 1870s.³¹ Only in few cases did the government actually create new roads, combine blocks, or change the directions of streets. Further archival research is necessary to examine the details on the changes in land plots and the exact techniques used to obtain them, but important understanding can be gained from an investigation of the area through maps that show the size and orientation of building lots. Even though the maps made in this period of major political upheaval may include earlier or erroneous information, they show irregularities in regard to land ownership and the reversal of earlier urban transformations. The grid layout of the area changed only in minor ways, but the changes captured in maps from 1876 (Meiji 9), 1886-88 (Meiji 19-21), 1895 (Meiji 28), and 1932 (Showa 7) raise questions about how the government implemented its plans for the Ginza.³² (Fig. 11, 12, 15, 16, 17) The maps indicate a piecemeal approach to the transformation, and a partial return to an earlier urban layout during the rebuilding of 1923, suggesting that no large-scale expropriation project was feasible.

Reading these maps closely, it appears that the government's actual urban planning intervention concentrated on block and lot reduction, the creation of new streets, and street-widening, while using public land alongside the moats for partial compensation. (Fig. 18) These changes resemble more modern land readjustment techniques, which are also characterized by a reduction in lot sizes in order to create public land, and to widen and straighten out streets, plots, and blocks.³³ It appears, however, that the land readjustment system used in the Ginza was still relatively simple. For example, after the rebuilding, the maps still show some extremely tiny lots. This suggests that all the lots alongside a street that was widened suffered the same land readjustment, without any planning attempt to prevent the creation of very small and unbuildable plots or to distribute the land reduction equitably to all owners in the area. And in other nearby areas in the Ginza, the people in charge did not reduce any lots at all. The maps also suggest that when planners designated new lots, they replaced small passageways that were probably private property (and therefore not shown on all maps of the time) with small public roads. Thus, while they conserved the area's street system they changed land ownership and therewith the long-term structure of the city.

Focusing on one part of the reconstruction provides a better understanding of the types of decisions that planners made in the early Meiji period and their effect on urban form. The Yamashita-chô (two groups of 9 lots facing each other across a street) and the neighboring two blocks of Sukiya-chô, in the southwestern part of Ginza are situated in a curve of the palace moat. The area provides access via bridges to two gates of the larger palace fortification (the Yamashita gomon gate leading towards the Hibiya area of the city and the Sukiya-chô gomon gate) with streets leading towards them crossing at more than a 90 degree angle. (Fig. 19). The existing slight asymmetry in the grid and the orientation of the streets towards the bridges reflected practical needs. During the reconstruction that followed the 1872 fire, planners did straighten the street grid, but they maintained the outline of the Yamashita-chô in its earlier form, (as indicated by the broken line in the map), leaving the street the center of the block.

As planners relocated and widened this central street, a small street that separated the Yamashita-chô from the Sukiya-chô disappeared, and the new Yamashita-chô street was no longer oriented towards the bridge. Instead it fed into a street that ran along the moat. (Fig. 19, 20) Those charged with the transformation of the Ginza evidently believed that traffic would flow primarily in North-South direction, as changes in street pattern around the Yamashita and Sukiya bridges suggest. They reorganized lots of Yamashita-chô with frontages towards the canal, and the newly created inner street thereafter led to Sukiya bridge. Only the lot numbers 1-5 on the North side, which became extremely small, and 6-13 on the South side still faced the street. They were, however, separated by the newly created street leading to the Sukiya bridge.³⁴ In the Sukiya-chô block, the Tamei elementary school rose on a lot bordering the moat (around 1878) while planners changed lot orientation from north-south to east-west on both sides of a newly created street that conforms to the adapted grid and starting around 1878.

This set of changes may not have worked very well, for in 1923, when the Great Kanto Earthquake again destroyed the Ginza area, planners partially restored the old street to the center of the Yamashita-chô. (Fig. 21) It is possible that they had made the first change after 1872 fire without changing land ownership, and that this continuity facilitated the restoration of the street after 1923. If so, it suggests that it took several years to firmly establish individual landownership. The re-established direction clearly served the transforming city. The construction of a highway over the former moat area allowed for two crossings in the approximate location of the earlier bridges. Again, the triangular site, created by the two crossing streets that lead to the former bridges, housed the expanded Tamei elementary school. (Fig. 21) A similar insertion of public functions into the urban tissue is today done through land readjustment.

The Meiji restoration did not bring major changes to the townsmen areas, where small lots and long-standing land ownership practices dominated. Not land readjustment through the government, but individual purchases by private landowners created the large lots on which the department stores rose in the Ginza area in later years. Local adjustments corresponded to issues of practicality and accessibility rather than aesthetics or an ill-advised comprehensive grid pattern as illustrated by the Yamashita-chô case, where the first remodeling seems to have ignored travel patterns. The needs of local land-owners finally shaped the neighborhood.

2nd case study. Marunouchi—Remodeling the old layout for new uses

Modernization introduced varied new functions to Japan, many of which were best located in the urban center and could thus be located on the land by the Imperial Palace formerly used by the military caste. Even in these government-owned areas, where large lots existed at the outset, Japan did not opt for wholesale transformation or comprehensive urban design paired with building regulations, but rather opted to rearrange the existing urban patterns to satisfy new needs. As a comparison of maps in the Marunouchi area highlights, the government often preserved the large lots, using them for new large-scale uses, introducing only a few new streets.

The Marunouchi area, just outside the castle gates and surrounded by an extended system of moats and canals for the protection of the shogun, was a central element in the transformation of Edo into Tokyo. It provided space outside the densely built and privately owned townsmen areas for all the elements Böckmann and Ende had proposed in this area (Fig. 4): a political center, a major park, a business district, a central train station, and other infrastructure. Instead of building the monumental structures suggested by the foreign visitors, however, the Japanese elite took a more pragmatic approach. The new government initially transformed the single properties in the Marunouchi area by clearing them of buildings and using them for military and government purposes, erecting new buildings and using some daimyo residences for official purposes, as the plans of 1876 to 1927 show. (Fig. 22) Overall the government maintained the existing street layout and left attempts at unifying streetscapes to individual initiatives on single properties. Unfortunately, the plan's labeling of the occupants is not systematic enough to provide a good source for the analysis of locations and their shifts.³⁵

As noted above, the government laid out its overall ideas for Tokyo in the 1889 "First Plan for Urban Area Improvement of Tokyo." (Fig. 5) For the Marunouchi area, the Plan preserved the existing layout, but suggested the insertion of urban improvement projects. In particular, it prescribed the layout of the new railway line connecting the two existing railway terminals, Shinbashi in the South and Ueno in the North, on opposing sides of the outskirts of the Marunouchi area. Railway companies in Tokyo and other Japanese cities had built most of their early lines on agricultural land, but the connections between these terminals ran through the heart of the city, and had to be made within built-up areas.

In 1908, railway companies started work on the Tokyo Central station, located in the Marunouchi area across from the entrance to the Palace. Decision-makers had considered several options for the location of this station, and had finally opted for a site that allowed for the creation of an axis linking its major exit with the Palace. This axis, although it respects the grid, does not seem to follow a former road and seems to have been created to establish a visual connection with the palace. Such an urban design concern is not surprising as Tokyo Central station is one of the few stations designed by an architect, in this case by Tatsuno Kingo. (Fig. 23)

Construction of the railway line from the South on government land, also in Marunouchi, was finished by 1909, extending from a stop at Yûrakuchô to Ôtemachi in the North without a central halt. (Fig. 24) The rapidity of this part of the work becomes even more evident in comparison with the slow progress in the construction of the Shinbashi station complex in an existing neighborhood south of the Marunouchi area. As documented in the maps of 1916 and 1932, it took many years to carve a station plaza out of the dense surrounding urban fabric.

By 1917, the new lots had taken their form, largely reflecting the block structure of former daimyo sites. A short but wide axis connected the station to the Palace gate, the only newly introduced and somewhat monumental gesture. The station thus did not have any access to the Ginza area. More important than the exact positioning of the station is the fact that the station's only gate looked towards the palace and that the station's construction became the key element in the siting of Tokyo's first business center.

To make room for the connection with the Ochanomizu and Kanda area to the northwest, planners had to cut through the existing urban tissue in the 1920s. Although the new train-line did not yet connect straight north to Akihabara, the company extended it in that direction to allow for later railway construction. Construction of the railroad completely changed the area. Although land readjustment and expropriation techniques existed at that time and planners used them, they apparently saw no need for the integration of the new infrastructure into the old urban fabric or for rearrangement of awkwardly shaped lot remnants.

Paralleling the construction of the railroad was the development of the business center. In 1890, with the decision for the future Tokyo Central station made, the government offered 27,9 hectares of the former daimyo area for sale, keeping only the railroad and station sites as well as the eastern part for public use.³⁶ Inspired by the Central Business District in London, the leadership of the Mitsubishi company—originally a shipping company, which had a history of acquiring land for warehouses and residences, and took part in the redevelopment of several sites starting in the early Meiji period—was keen on buying the area. Development, however, proceeded very slowly. Construction started in 1890 (Meiji 23), but almost twenty years later, by 1909 (Meiji 44)—that is, before the railway opening—the company had built only a few buildings (including Mitsubishi 1 (Josiah Conder) and 2). These first buildings, which imitated London brick architecture, became known as London *ichōme*, and the area later developed into the Marunouchi business district. (Fig. 25) The Mitsubishi company had made an excellent site selection and even today—in an internationally unique case—owns much of what is now Tokyo's central business district. But, as in the original Ginza project, the architectural forms did not have a long life-span.

Mitsubishi's rebuilding of the Marunouchi area in the immediate vicinity of the castle was a special case in regard to the functions and scale of the buildings introduced, the financing available, and the people involved. The area's transformation from daimyo use to a government and private office district is also a singular and special event in Japanese urban history due to its unique location outside the palace gates. It is true that the transformation of each former daimyo area was in some sense a special case. Indeed, most of the time, the development was not so straightforward as in the Marunouchi case. The government often sold large-scale former daimyo sites around the city, particularly those retained by former daimyos, in bits and pieces. Only a few of these have been studied so far. Hasegawa Tokunosuke, in his analysis of the ARC-Hills development, recounts the story of a single individual buying up the pieces of one former daimyo site in order to create a new development in the area.³⁷ Detailed research on the individual transformation of building lots and the survival of original urban layouts in the actual townscape is still necessary.³⁸

After the 1923 Great Kanto earthquake destroyed large parts of Tokyo and Yokohama, the former Tokyo mayor Goto Shinpei, then Home Minister and president of the Imperial City Restoration Department, established large-scale plans for an overall rebuilding and replotting of the city. These plans did not gain support. Instead, land readjustment became the principal means for the reconstruction of the area. The 1923 Imperial Reconstruction Plan by the City of Tokyo proposed widening existing streets and creating better connections to enviroining areas. East of Tokyo station and the Marunouchi area, it projected a new avenue that would run alongside the moat and cross through the densely built Nihonbashi area diagonally, and also the widening of several other streets. (Fig. 26) The version actually built, however, shows notably the construction of Yaesu dôri avenue (formerly Makichôsen-street), which leads East from Tokyo station (on the border between the Kyôbashi and Nihonbashi areas) and crosses the North-South Showa dôri Avenue, which then runs through Ginza. (Fig. 27)

The construction of Yaesu dôri highlights the difficulties of street creation in built up areas and the difficulties of tying urban to built form as well as the particularities of Japanese urban transformation. Already in 1919 the minister of the Interior Gotô Shinpei and his director of urban planning Ikeda Hiroshi had proposed large-scale zone expropriation as a means to create the Makichôsen-street at Tokyo's Central Station. Both men were involved in the preparation of building and urban planning laws, which included this form of expropriation. Nevertheless, they were not able to convince the metropolitan government or the landowners of their ideas, and despite being appointed respectively mayor and vice-mayor of Tokyo, they had to abandon their ideas. They built the Yaesudôri only after the great Kanto earthquake of 1923, and they did it through land readjustment.³⁹ Showa-dôri was continued towards Akihabara station over the site of a former castle moat and then connected to an existing street. The use of existing public land (moats and streets) allowed this construction to go forward with few conflicts. The two moats east of Tokyo station remained until the 1960s, when they were covered with urban highways.

The developer of the business district, Mitsubishi, thus chose to implant new central functions near the palace, based on the old layout of the land. The company designed office buildings appropriate for the large lots, but did not hesitate to replace them in later years. In their transformation of the Kanda-Misaki-chô, another daimyo area Mitsubishi bought at the same time, the company had the opportunity to create an urban neighborhood from scratch, but opted for improving on traditional patterns while integrating new construction into the local environment.

3rd case study. Kanda Misaki-chô—Improving on and adapting to traditional urban structures

In the Edo era, the Matsudaira clan occupied a large part of the Kanda Misaki-chô area to the north of the palace.⁴⁰ Their land bordered both sides of the gate guarding the bridge over the Kanda river and facing another large daimyo site. East of the daimyo estates of Kanda-Misaki-chô adjoined a large military training

ground. The remaining area in the south and the west consisted of smaller parcels used by hatamoto (retainers of the shogun) and shogunal offices. (Fig. 28) The land fell to the government with the Meiji restoration, which dedicated all of the land to a military training ground. By Meiji 9 (1876), no buildings existed on the site and a 1884 map shows the site as vacant. (Fig. 29) As for the daimyo site north of the Kanda river, the government used it as an ammunition factory, with typical Meiji-time buildings. The emergence of military training grounds here and all over the city was probably the result of a 1873 conscription law requiring three years of active military service from all men. (This also effectively abolished the class differences between samurai and commoners.⁴¹) Situated near an important railway station, Iidabashi, at that time the eastern end of the Chuo line, the area was well-connected to other areas of the city.

At the same time that it purchased the Marunouchi land, in 1890, Mitsubishi also bought a smaller area in Kanda-Misaki-chô (7,5 ha).⁴² The company actually completed urban redevelopment in this area first, gaining knowledge of urban redevelopment for the larger Marunouchi project. Working from scratch it introduced completely new street divisions in Kanda Misaki-chô by 1894 (Meiji 27) (whereas it maintained the general pattern of the earlier daimyo area in the Marunouchi development. (Fig. 30)). Here, the company created a new network of large and small streets and introduced sewerage and gas lamps. The new street layout featured a grid system, with one major street crossing the Kanda river and extending into the neighborhood to the south. Its most striking feature was a diagonal street called Suidobashi dôri, which cut through the grid from the southwestern corner of the area to the northeastern corner, where it met the street that formed the eastern border of the site, called Eastern street (*Higashi dôri* today *Hakusan dôri*). It thus created numerous difficult-to-use triangular sites, but it did provide a short cut to the Suidobashi bridge. The diagonal crossed another street, called *Ishikawabashi dôri*, at a right angle, which led to the bridge at the Western end of the side. This first diagonal street was the heart of the new development. Along it, Mitsubishi erected so called "renganagaya" (brick row-houses-- actually wooden row-houses with a brick wall separating every four or five of them for fire protection purposes), and rented them out. (Meiji 30) Other institutions such as the Salvation Army and a beer-hall had settled in the area, which was still not completely developed. Mitsubishi built blocks occupied primarily with housing as well as some other facilities such as theaters and a panorama hall. Until 1900 (Meiji 33) Mitsubishi rented out large parts of the remaining land for people to build following their own plans. In the early years of the development (Meiji 38), the Mitsubishi-built buildings on the major cross-roads brought the highest prices in the area. While the company introduced a comprehensive plan and partly influenced the appearance of the buildings, the character of the area does not differ from adjoining areas. By 1917, after the opening of the Yamanote line and the establishment of the subway as a major means to transport people (Taisho 6), the Suidobashi train station at the end of the diagonal Suidobashi dôri had become a major attraction in the area, and land prices increased close to the station.⁴³

Mitsubishi had laid out the Kanda Misaki-chô area on a scale large enough to accommodate future needs. Later construction—even after the devastating 1923 Great Kanto Earthquake—included only minor adjustments. This was in contrast to a neighboring area to the south, where the very deep building blocks

necessitated the widening of existing streets and the creation of new ones, and also in contrast to the Ginza where later developments included a return to the original state. Even the creation of a new street that connected Tokyo to its rapidly growing suburbs, *Hakusan dôri*, in accordance with the 1923 post-earthquake reconstruction plan, did not necessitate a remodeling of Kanda Misaki-chô. Mitsubishi's success in the Kanda Misaki-cho area also contrasted with experiences in other parts of Tokyo, where—as indicated in the introduction and shown in the figure—the insertion of similar new infrastructure created irregular and often tiny lots. (Fig. 31)

As the examples of the Marunouchi district and Kanda Misaki-chô show, the former daimyo residences had very different fates after the Meiji restoration.⁴⁴ Even though Mitsubishi owned both of these sites, it made them dissimilar urban districts, adapting each to its surrounding area and its location within the urban area. Mitsubishi designed Marunouchi as a combination of a business district (hosting the company's own headquarters), and a monumental district. In contrast, the company projected Kanda Misaki-chô as a mixed-use urban district with rental land for shops and housing. While the Marunouchi business district continued the large estate division of the daimyo era, Kanda Misaki-chô completely lost its original layout.

These three examples—Ginza, Marunouchi, and Kanda Misaki-chô—illustrate urban development in Tokyo at a time when land ownership and urban planning were still in flux. This process of instability and change lasted until the 1923 reconstruction after the Great Kanto Earthquake. They indicate that planners tested new planning tools to adapt the city to new modern needs through the creation of streets and large buildings. This analysis shows that Japanese politicians and planners rejected aesthetic approaches to urban form, while adopting foreign techniques, notably land readjustment, aimed at creating a more functional layout of the land as long as they allowed for small-scale piecemeal interventions.

Conclusion: Tokyo as a model?

Although land ownership is clearly established in Japan today, one of the most important obstacles to assembling several building sites for large-scale new construction are the numerous rights attached to each site. The roots of this situation are in the Meiji period, when owners often lent land for construction, and the builder then rented out the resulting building for further use. The technique of "saikaihatsu" (land redevelopment), introduced in the 1960s, has created in fact an even more intricate network of small-scale ownership,⁴⁵ as it introduces a three-dimensional reorganization in which planners pool together small parcels and build a common multi-story building where each of the former owners gets space in the new construction and maintains a partial ownership of a part of the soil.

This examination of selected early attempts at urban planning in Japan shows that regardless of ownership arrangements—whether areas had small sites and some landownership, whether they were in a single hand and divided only in large blocks, or whether they had even been cleared of all prior construction—in all cases,

planner and elites elevated local interests and functional two-dimensional street layouts over three-dimensional design and aesthetic concerns about unified streetscapes. Even implemented designs such as the Ginza or the Marunouchi "London" areas quickly reverted to a more diversified streetscape. Land ownership—more than public planning, private enterprise, or individual concerns—“designed” the city, a structure that allowed for both rapid modernization and individual initiatives.⁴⁶ The relatively recent establishment of personal land ownership, and the dominance of large landowners within the government, may partly explain the Japanese desire to have full control over their land. The late establishment of the urban planning profession and its early rift from architects further separated treatment of buildings from that of urban space. Foreign practices that had equivalents in Japan, such as land readjustment, became pillars of the Japanese planning system, while others failed, such as monumental representation, because they did not have any roots in Japanese tradition. Meanwhile, social space and not built space dominated cities, and urban planning therewith became a pragmatic instrument for adapting cities to new functions, techniques, materials, and uses.

As we have seen, the particularities of Japanese urban planning, planners' preference for a pragmatic small-scale approach to functional changes, and the dissociation of street layout from built form were clearly visible by the time Bruno Taut came to Japan in 1933. Taut himself had designed major housing complexes in Germany, including the famous "horseshoe" in Berlin, characterized by a detailed urban design and a careful association of public space and buildings. From his point of view, the apparently uncontrolled development of Japanese cities merited only criticism. Japanese planners rejected Taut's very direct and arrogant criticism, arguing for the Japanese need for rapid modernization and attempting to disqualify Taut through hints at his earlier unrealistic urban visions.⁴⁷ Ironically, today, Western planners are rediscovering the Japanese city as a model for a highly adaptable, livable, and sustainable city, a city illustrating chaos theory.⁴⁸ The modernization of Tokyo through the early Meiji period and the use of specific planning techniques in the Japanese capital was idiosyncratic and tied to specific histories and structures. This situation can not be recreated elsewhere, but this analysis of Tokyo may be a model for syncretism, showing planners in other cities how to adapt, combine, and invent techniques appropriate to their own urban histories and structures.

Endnotes

¹ Bruno Taut, *Houses and People of Japan*, second edition ed. (Tokyo: Sanseido Press, 1958 (1937)). :2-3.

² Paul Waley provides a good overview of commentator's views of the Japanese city: Paul Waley, "Re-scripting the city: Tokyo from ugly duckling to cool cat," *Japan Forum* 18, no. 3 (2006).

³ See also: Carola Hein, "The Transformation of Planning Ideas in Japan and Its Colonies," in *Urbanism – Impired or Exported? Foreign Plans and Native Aspirations*, ed. Joe Nasr and Mercedes Volait (Chichester: Wiley, 2003).

⁴ On the importance of the concept of *machi* (meaning “neighborhood” as well as “small town”) in the transformation of Japanese cities see also: Carola Hein, "Machi: Neighborhood and Small Town. The foundation for Urban Transformation in Japan," *Journal of Urban History*, no. Decentering Urban History: Peripheral Cities in the Modern World (forthcoming).

⁵ On the evolution from commentator’s criticism to praise on Tokyo: Waley, "Re-scripting the city." Recent English-language publications on the Japanese city include: Nicolas Fiévé and Paul Waley, *Japanese Capitals in Historical Perspective* (London, New York: RoutledgeCurzon, 2003), P.P. Karan and Kristin Stapleton, eds., *The Japanese City* (Kentucky: Kentucky University Press, 1998), Barrie Shelton, *Learning from the Japanese City. West Meets East in Urban Design* (London and New York: E and FN Spon, 1999), André Sorensen, *The Making of Urban Japan. Cities and planning from Edo to the twenty-first century* (London and New York: Nissan Institute/Routledge Japan Studies Series, 2002), Andre Sorensen and Carolin Funck, *Living Cities in Japan: Citizens' Movements, Machizukuri and Local Environments* (London, New York: Nissan Institute Routledge Japanese Studies Series, 2007).

⁶ The numbers given by different authors vary, but it is clear that the land used by warriors was over 60% of the urban land, while townsmen used less than 30%. See, for example: Akira Naitô, *Edo to Edo-jô (Edo and Edo Castle)* (Tokyo: Kashima Shuppankai, 1966). André Sorensen has published a map highlighting the structure of Edo in 1859 based on an original map by Okata Junichiro drawn in 1981 using the Bungan Edo Oezu published by Subaru Mohei Publishers in 1859 (Ansei 6), see: André Sorensen, *The Making of Urban Japan. Cities and planning from Edo to the 21st Century* (London: Routledge, 2002), 26.

For English-language discussion of urban form and development in Edo/Tokyo see also: Roman Cybriwsky, *Tokyo, The Shogun's City at the Twenty-first Century* (Chichester, New York, Weinheim, Brisbane, Singapore, Toronto: John Wiley and Sons, 1998), Hiromichi Ishizuka and Yorifusa Ishida, *Tokyo: Urban Growth and Planning* (Tokyo: Center for Urban Studies, Tokyo Metropolitan University, 1988), Gilbert Rozman, "Castle Towns in Transition," in *Japan in Transition: From Tokugawa to Meiji*, ed. Marius B. Jansen and Gilbert Rozman (Princeton: Princeton University Press, 1986), Sorensen, *The Making of Urban Japan*.

⁷ On Edo time land ownership see: Interview with Tamai Tetsuo and Tetsuo Tamai, *Edo, ushinawareta toshikûkan wo yomu* (Tokyo: Heibonsha, 1986).

⁸ Yorifusa Ishida, *Nihon kindai toshi keikaku shi no kenkyû [Studies on the History of Japanese Urban Planning]* (Tokyo: Kashiwa Shobô, 1987).

⁹ I would like to thank Ishida Yorifusa for providing me with information on this issue, as well as for his generous general support.

¹⁰ See also: Edwin O. Reischauer and Albert M. Craig, *Japan. Tradition and Transformation*, Revised ed. (Boston: Houghton Mifflin Company, 1989).

¹¹ See also: Cybriwsky, *Tokyo*.

¹² Many of these large estates were ultimately redeveloped for new large building complexes - including the 1964 Olympic buildings by Tange Kenzo - or transformed into parks and opened for public - such as Ueno or Hamarikyu kôen

¹³ Jinnai Hidenobu, in particular, has shown how Tokyo adopted the basic patterns from Edo, see: Hidenobu Jinnai, *Tokyo. A Spatial Anthropology* (Berkeley, Los Angeles, London: University of California Press, 1995).

¹⁴ See also: David B. Stewart, *The Making of a Modern Japanese Architecture, 1868 to the present* (Tokyo and New York: Kondansha International, 1987).

¹⁵ For more information on the transformation of Paris under Haussmann, see for example: Jean des Cars and Pierre Pinon, *Paris-Haussmann* (Paris: Editions de l’Arsenal 1981).

¹⁶ Mori Ougai went to Germany from 1884/1885 to 1889, where he studied issues of hygiene and topics such as zoning, building lines and green spaces. As Ishida Yorifusa has shown, the knowledge that Mori gained in Europe has become part of his proposals for a Japanese building ordinance. See: Yorifusa Ishida, "Mori Ougai no "okusei shingi" to tôkyô shi kenchiku jôrei (Mori Ougais "Neue Diskussionen zur Bauordnung" und die Tokyoter Bauordnung)," in *Tôkyô: seichô to keikaku 1868 - 1988*, ed. H. Ichizuka and Yorifusa Ishida (Tokyo: Tôkyô toritsu daigaku toshikenkyû senta, 1988).

¹⁷ See: Carola Hein and Yorifusa Ishida, "Japanische Stadtplanung und ihre deutschen Wurzeln," *Die Alte Stadt* 25, no. 3 (1998).

¹⁸ See: Ibid, Yorifusa Ishida and Kôshi Ikeda, "*Kenchiku sen" keikaku kara chiku keikaku he no tenkai* (Tokyo: Tokyo-toritsu daigaku toshi kenkyu sentaa, 1984).

¹⁹ On the transformation of Osaka see also: Jeffrey Eldon Hanes, "Seki Hajime and the Making of Modern Osaka" (University of California, 1989).

²⁰ Mitsuo Okawa et al., *Kindai kenchiku no keifu [A Genealogy of Modern Architecture]* (Tokyo: Shôkokusha, 1997), 63.

²¹ See: Ibid.

²² See also: Tôru Hatsuda, "Commercial Architecture in Early 20th-Century Tokyo/20 seki shotô no Tôkyô no shôgyô kenchiku" (paper presented at the Symposium Architecture and Modern Japan, Columbia University, October 21, 2000).

²³ Japanese landowner associations had used early forms of land readjustment for the urbanization of rural areas, dividing even large areas into tiny building sites in order to maximize their profits. The 1919 urban planning laws systematized land readjustment, notably for use in rural areas and the layout of new developments. Expansive fires that swept through urban areas made clear the need for such an instrument in urban areas (Waseda Tsurumaki cho, 1920; Shinjuku 3 chome, 1921, etc.). The destruction by fire of the Shinjuku 3 chome neighborhood, north of the Shinjuku gyôen park, was an early example for the application of land readjustment in a built-up area. It was, once again, the huge damage of the Great Kanto Earthquake of 1923 that made Japanese planners turn to land readjustment as their main instrument of urban planning. Land readjustment, a means to bring together a group of owners in order to ameliorate the urban layout through minor, pragmatic changes, worked because it was based on the concept of changing the pattern of the land while maintaining ownership. (This practice is contrary to the European forms of land readjustment that are based on the idea of expropriation and re-attribution of the land.). For an analysis and examples of land readjustment, see also: Yorifusa Ishida, *Nihon kindai toshikeikaku no hyakunen [The last 100 years of Japanese Urban Planning]* (Tokyo: Jichitai Kenkyusha, 1987).

²⁴ Akira Koshizawa, *Tôkyô no toshi-keikaku* (Tokyo: Iwanami-shinsho, 1991), Akira Koshizawa, *Tôkyô toshi keikaku monogatari [Stories of Urban Planning Projects in Tokyo]* (Tokyo: Nihon Keizai Hyôronsha, 1991).

²⁵ For example, the height of the buildings was imposed: 17 meters on the outside, 11 meters on the inside and on the station side.

²⁶ On the West side of the station the Yodobashi water purification plant occupied a large extent of land, redeveloped after 1960 into the contemporary highrise Shinjuku business district.

²⁷ While urban disasters brought about some opportunities for changes in the built environment, they did not induce innovation *per se*. See, for example the argument by Geneviève Massard-Guilbaud that catastrophes often serve as catalysts for change: Geneviève Massard-Guilbaud, "Introduction: the Urban Catastrophe—Challenge to the social, economic, and cultural order of the city," in *Cities and Catastrophes. Villes et Catastrophes*, ed. Geneviève Massard-Guilbaud, Harold L. Platt, and Dieter Schott (Frankfurt am Main: Peter Lang, 2002), 38. The political and economic leadership sponsored urban change at times of ongoing political, economic, and social transformation such as the modernization of Japan after the Meiji restoration independently of urban destruction through disasters. See also: Carola Hein, "Resilient Tokyo: Disaster and Transformation in the Japanese City," in *The Resilient City*, ed. Lawrence Vale and Thomas Campanella (New York: Oxford University Press, 2005).

²⁸ See also: Yasuo Takahashi, *Zûshû nihon toshishi (An Illustrated History of Japanese Cities)* (Tokyo: Tokyo Daigaku Shuppansha, 1993).

²⁹ See: Ishizuka and Ishida, *Tokyo*.

³⁰ For research on the architectural and urban transformation on the Ginza see notably the work by the Japanese architectural historian Fujimori Terunobu. He did not, however, examine the lot structure. See: Terunobu Fujimori, *Meiji no Tôkyô keikaku [Plans for Tokyo in the Meiji Era]* (Tokyo: Iwanami shôten, 1982).

³¹ Satoshi Okamoto, "Destruction and Reconstruction of Ginza town," in *Destruction and Rebirth of Urban Environment*, ed. Norihiko Fukui and Hidenobu Jinnai (Tokyo: Sagami Shobo, 2000).

³² Chizu Shiryo Hensankai, *Gosenbun no ichi: Edo-Tokyo shigai chizu shûsei (Historical maps of Edo-Tokyo, 1657-1895)* (Tokyo: Kashiwa Shobo, 1988), Tozo Suzuki and Haruhiko Asakura, *Edo kiriezu shu* (Tokyo: Kadokawa Shoten, 1968), Keiichiro Yamaguchi, *Nihon zûshi taikai* (Tokyo: Asakura Shoten, 1972-1980).

³³ Beyond a basic level of lot reduction (considered improvement), land readjustment usually goes hand in hand with financial compensation, but whether that was the case in the Ginza is not known. Also, for example, planners might replace lots that had street access on opposite sides of a block with lots having only one street frontage, giving more lots direct street access. On land readjustment in general see for example: Gerhard

Larsson, *Land Readjustment: a modern approach to urbanization* (Brookfield, USA : Avebury: Aldershot, 1993), Luciano Minerbi et al., *Land Readjustment, The Japanese System* (Boston, Mass.: Lincoln Institute of Land Policy, Oelgeschlager, Gunn + Hain, 1986).

³⁴ From West to East, lots 5 and 10, 4 and 9 face each other. They are located west of the newly created access to the Sukiya bridge. Lots 3 and 8, 2 and 7, 1 and 6 also face each other to the East of the new Sukiya bridge access. The maps do not tell whether the owners of lots 1-5 located on the North side after the transformation are those of former lots 10-15 located on the North side, or whether the lot numbers reflect ownership and thus correspond to the former lots 1-5, located on the South side along the street close to the Yamashita bridge. However, lots 1-5 and 6-10 face each other across the street, suggesting that the new street cut through the lots separating two pieces of property, possibly without changing land ownership and that these received separate lot numbers, bringing the total number to 23. (The five new lots could also be newly created lots that were sold off to pay for of transformation; but the smallness of the remaining lots on the North-side, and the difficulty in using them, makes this improbable.)

³⁵ Choices in land attribution made at that time, however, had long-lasting impact. The awkwardly shaped site of the current Tokyo International Forum built by Rafael Vinoly on a lot neighboring the Yamanote ring line goes back to the first establishment of the Tokyo government prefectural offices on land in the South-West of Kajibashi on its North-Western corner (completed in 1893; arch: Tsumaki, Yorinaka). Cut in half by the construction of the railway line towards Tokyo station, the remaining land became the place of the Tokyo Municipal Government (TMG), until the administration left for Shinjuku, freeing up the site for the Tokyo International Forum today. See also Fig. 28

³⁶ See also: Ishizuka and Ishida, *Tokyo*.

³⁷ See: Tokunosuke Hasegawa, *Tôkyô no takuchi keisei shi* (Tokyo: Sumai no Toshokan Shuppanyoku, 1988), Mitsubishi Chisho kabushigigaisha shashiron senshitsu, *Marunouchi Hyakunen no ayumi, Mitsubishi Chishoshashi*, 3 vols. (Tokyo: Mitsubishi Estate Company, 1993).

³⁸ More study is still necessary in regard to former land of the military which townsmen took over for agricultural purposes, such as export-oriented tea and silk farming. Even if these enterprises failed, the land often became the property of townsmen. See also: Hiroyuki Suzuki, *Tokyo he* (Tokyo: Chûôkôronshinsha, 1999).

³⁹ See: Hein and Ishida, "Japanische Stadtplanung.", Eiki Suzuki, "Senzen ni okeru "kenchiku shikichi sôsei tochi kukaku seiri" no jittai to sono kôsatsu (Case Study on Application of the Article about Land Readjustment System for Sites Adjacent to Public Facilities in the City Planning Act of 1919) " *Toshikeikaku* 151 (1988).

⁴⁰ On Kanda Misaki-chô see: Masao Suzuki, *Meiji umare no machi, Kanda Misaki-chô* (Tokyo: Seibô, 1978).

⁴¹ A photo taken from the Nicolai church tower—under construction at that time—shows the large void of the Kanda Misaki-chô military training site that had come into the hand of the army under the Meiji government.

⁴² Ishida, *Nihon kindai toshi keikaku shi no kenkyû [Studies on the History of Japanese Urban Planning]*, Suzuki, *Meiji umare no machi, Kanda Misaki-chô*.

⁴³ Suzuki, *Meiji umare no machi, Kanda Misaki-chô*.

⁴⁴ As for the Daimyo site located opposite of Kanda Misaki-chô to the North of the Kanda river, in spite of being used for a munition factory, part of it continues to exist it as the Kôrakuen garden, the Tokyo Dome, used for baseball, occupies the other half. In that case, the existence of a large military site provided the opportunity for creating a huge hall and open space around it in the middle of Tokyo.

⁴⁵ See also: Carola Hein, "Toshikeikaku and Machizukuri in Japanese Urban Planning - the Reconstruction of Inner City Neighborhoods in Kobe," *Japanstudien*, no. 13 (2001).

⁴⁶ Preserving the land ownership and the right to use this land have been central concerns for Japanese landowners; as Japanese land owners cling to their land and will use even areas that Westerners consider unbuildable, such tiny parcels won't disappear in the near future. Some examples of such minimum lots, such as the Tower House by Azuma Takamitsu, have even become highlights of the Japanese urban architecture and particularly of Tokyo.

⁴⁷ See also: Carola Hein, "Nishiyama Uzô and the Spread of Western Concepts in Japan," *10+1*, no. 20 (2000), Hideaki Ishikawa, "100 nengo no toshi (Die Stadt in 100 Jahren)," in *toshi no seitai* (Shinjû-sha, 1943), Bruno Taut, *Die Auflösung der Städte" oder "Die Erde eine gute Wohnung" oder auch "Der Weg zur Alpinen Architektur"*, Folkwang Verlag, Essen, 1920 (Essen: Folkwang Verlag, 1920).

⁴⁸ Shelton, *Learning from the Japanese City. West Meets East in Urban Design*.