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The qualities of the Machiya

An architectural research of a traditional house in Japan

Abstract:

The Machiya, a traditional wooden house in the city of Kyoto, were demolished by thousands up to the nineties because of the lack of modern comfort these houses offer. In the last twenty years the consciousness of cultural heritage has grown and the city realizes that these old houses must have had qualities new stacked dwellings never can offer. Research programs have been started up to understand these special qualities, to learn from them, to help the existing Machiya to survive and to use the tradition for the design of new residential buildings types as well. In 2011 I was offered the opportunity to live in a Machiya and to participate in a Machiya research program. In the article I summarize the origin of the Machiya, the decline and the revival. I explain my research method and focus on the qualities of these houses. To live in a Machiya means to undergo life in a dwelling condition of ambiguity. You are inside and outside at the same moment. I will discuss some profound conclusions and transformations to new architecture which are interesting for other cultures as well. Once understood – there a several possibilities to give these houses new life.

Keywords: cultural heritage – traditions - concept of OKU - transitions - transformations

1. Introduction

The first step to come into contact with this Machiya research project was a fascination about the traditional houses in Japan. Coming from the Netherlands, where wooden residential townhouses were forbidden since the 14th century because of the fire protection, it is fascinating to see these beautiful wooden residential houses still existing in a huge amount.

The second step was the development of my PhD research at the Technical University of Delft in which I research the façade of the residential buildings in the 20th century as an interface, a border between the two conditions: the outside and the inside, the public and the private. In this research I look at the residential buildings of the last century in our Dutch cities. But to understand the development of the residential houses in our cities I had to look back to the time when our cities were formed and the residential houses (often wooden houses) developed.

The third step to come into contact with the Machiya was my theoretical study about the transitions from public to private which dwellings possess, and which can be found in different cultures. This brought me to the traditional Japanese houses and the concept of OKU, which is a profound concept of transition between public and private and which I will explain later.



Kiso Valley, Japan – Tsumago
Photo: B. Jürgenhake



Amsterdam 17th century, Merchant Houses;
Bantammerstraat
Source: Meischke R. (1995); *Huizen in Nederland, Amsterdam*;
Waanders Publishers Vereniging Hendrick de Keyser / p.48

There are some similarities between the old Dutch townhouses of the medieval and the old Japanese townhouse, the *Machiya*. Both had a working place or shop at the streetside, both had shutters, tables or temporary positioned platforms, both had stairs or small height differences in front of the house, and both had the living areas at the backside of the house. In both examples the outside and the inside border is not that clear and stays a bit vague. Both were threatened in their authentically appearance during the last centuries and changed a lot. Nowadays in some cities of the Netherlands and as well in Japan they are under protection.

The Machiya house is a very extraordinary type of house for a European architect. Therefore it is necessary to understand the origin of the house and the features of it. This understanding will be elaborated in paragraph 2.1. The houses often form a very close and private neighborhood, the *roji* which will be explained in paragraph 2.2. The Machiya houses are decreasing, demolished or changed and nowadays there is a revival of the Machiya (paragraph 2.3). The decline and revival will be explained to get a more profound understanding of the problems the Machiya's are struggling with today. The goal of the research was to understand the architectural qualities of these houses. Therefore a research method is used and this will be explained in paragraph 3. Paragraph 4 will show the qualities of the Machiya in general, categorized in several themes. As I had the opportunity to visit one protected Machiya several times I will describe this research in paragraph 5. At the end of this conference paper, in paragraph 6 the conclusions will be summarized. Understanding the qualities of the Machiya helps to understand modern Japanese houses designed with clear aspects of the Machiya concept in mind.

2 Theoretical background of the Machiya Houses

2.1 A description of the Machiya type house- origin and features of the houses

During the last years it seems that the Machiya is getting more and more attention. Research is done about the history of this townhouse, the *Kyoto Center for Communication Collaboration* (KCCC) is very active in preserving the Machiya in Kyoto and the *Machiya Machizukuri Fund* was set up to protect the Machiya as an important part of the culture of Kyoto. For a broader understanding of this special dwelling type it is necessary to look back to its origin. The goal of this paragraph is to give a brief introduction of the Machiya and to elaborate an understanding of this type of residential townhouse which only exists in Japan. The vernacular houses in Japan are known as the *Minka* and

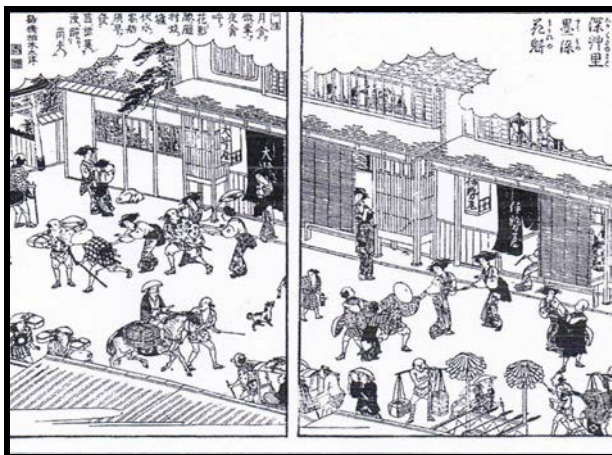
two categories of the Minka are the *Machiya* (a townhouse) and the *Noka* (a farm dwelling). *Machiya* are wooden townhouses and can be found throughout whole of Japan in different variations. The word *Machi* means “town” and *ya* means shop.



Machiya's in Kyoto: Left- Gion area; right- Nagayo-ku area; Photo's: B. Jürgenhake

Sachiko Suwa (Sachiko Suwa 2006) helped me to understand the term *Machiya* more deeply in her thesis about the preservation of the *Machiya*. *Ma* means “space” or “between” and *chi* means “road”. Literally *Machi* means space along the road. This means that the *Machiya* are spaces of shops lined on both sides of the street, as Suwa describes it. In Kyoto the *Machiya* is called *Kyo-Machiya*. Typical for a *Machiya* is the shop of working place which is orientated to the street and the living area which is orientated to the back of the house. A *Machiya* has a small front (5,40 – 6 meter) and is quiet long. It contains one or more courtyard gardens which are called *tsuboniwa* to bring light and nature into the house. The shop or working place always is orientated to the street. There are other types of vernacular houses in Japan without these street orientated working places. They are not called a *Machiya*.

A *Machiya* is build from natural materials: wood, paper, straw, earth, and stone. It has a direct contact with nature, the trees in the garden, the water, and the stones. Suwa writes: “The concept of the house is nature itself” (Sachiko Suwa 2006”. P.2). The house gets one with its garden and its environment. The *Machiya* is very much settled in the history of the vernacular houses, but most of the ones we can visit in Kyoto nowadays are built before the World War II.



Dwelling-shop type of traditional urban architecture; From: *Meisho – zu-e* illustrated Manuals of famous places, early 19th century

Source: Daidalos No. 33 15.09.1989 Günther Nitschke “en - Transactional space” p. 64

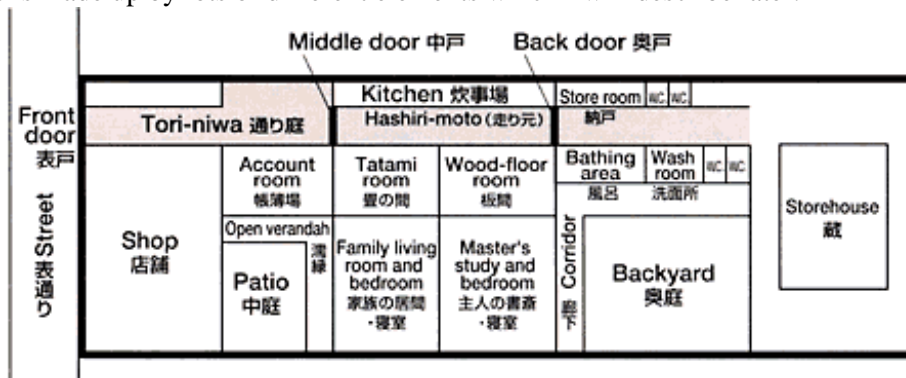
The origin of the Machiya however goes back to the *Heian period* (running from 794 to 1185) when the emperor Kanmu founded Kyoto as capital of Japan. The Kyo-Machiya was the townhouse inside the centre of the old city. Karin Lōfgren (2003) mentions that there are Machiya's painted on hand scrolls from the 11th and 12th century. In those times the city of Kyoto was divided in a *bō-jo* pattern which is a grid pattern. The streets were used for functions like a market, theatre places, and public gathering and so on. As in the inner city of Heian-kyo common people were not allowed to live, the merchants took place there and developed their houses. During day they stilled temporary tables and huts which were the birth of the Machiya house because at last the huts became small shops with outside space and a living area at the backside. In the old genre of screen paintings called *Rakuchu rakugai zu* (Scenes in and around the Capital), which captures the early capital of Kyoto from a bird's-eye-view, the type of house with platforms for the selling article standing in the street is already painted. The type of the Machiya house which we know today was formed in those times. The outside of the house was flowing into the inside and the border was vague. The tables and platforms for the products to be sold were set up as flexible elements.

In the *Muromachi period* (1338-1568) the citizens felt more unsafe and had to create their defence themselves. The *bo-jo* grid was vulnerable and therefore gates were built at the edges of each block. Such a gated block formed a community in a protected neighbourhood. The fronts officially were shops and open to the street, but there was a community space inside the house as well and the boundaries between outside and inside stayed vague. The Machiya had a kind of openness which asks for rules and they were mostly nonverbal. Small architectural elements tell the rules to the visitor and user, even today.

The development of the Machiya was abruptly stopped by the ten years lasting civil war, known as the Onin war (1467-1477) when the city burned down totally. The Machiyas were destroyed but built up again. Machiya's continued to be built through the *Edo period* (running from 1603 to 1868) and the *Meiji period* (1868 through July 1912). In 1869 Tokyo became the new capital of Japan and this again brought civil war and big fires to Kyoto. Lōfgren (2003) explains in her research that therefore the most Machiya which still exist are from the later time of the 19th and 20th century. The *bō-jo* grid still exists and the neighbourhoods are still developed to this grid. Nowadays we still can find Kyo-Machiya which are built with used burned timber wood.

The traditional Machiya, or Kyo-Machiya is made from wood construction and has *tatami* floors. A *tatami* is a rice mat (0.91 x 1.82 meter) and is used as the floor of the house. The whole house is based on the measurement of the *tatami*. The Machiya is a house with a small front façade and a narrow floor plan (20-30 meter). The Japanese invented sliding doors and sliding walls, the *shoji*. Traditional houses have heavy paper sliding partitions that separate one room from another and can be pushed wide open or removed to create a single large room. Some homes have thick winter *shoji* which can be replaced with thin summer *shoji*. Windows facing the outside are often glazed and have extra protection added (paper *shoji*, grills, bamboo roll curtains) so people can't see in". (<http://factsanddetails.com/japan>)

A Machiya can consist of one or two stories, sometimes even three stories. The most important side of the house is the street side as for a visitor the Machiya can be only seen from this side. The appearance of the house is made up by lots of different elements which I will describe later.

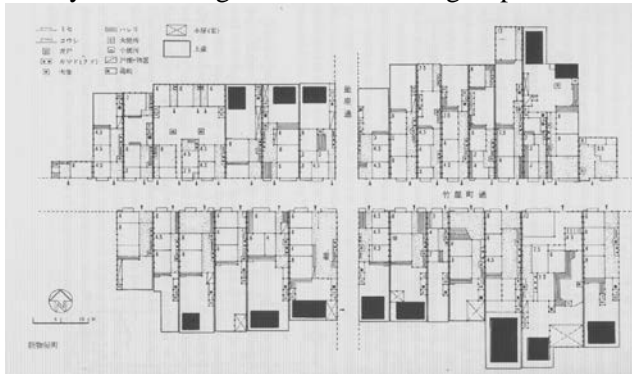


Source: <http://www.kansai.gr.jp/e/culture/build/machiya1.html>

The figure above shows the floor plan of the Yoshida Machiya in Kyoto. At the street side we see the shop with a patio and an account room. A long corridor, the *tori-niwa*, as an inner street, runs through the whole long house, but is divided into three parts by the middle and backdoor. Two private rooms that can be connected by opening sliding doors are in the middle. Then the backyard follows which consists a storehouse with some rooms. The inner corridor, the *tori-niwa*, is necessary for the function of the whole house. In a way it is a public route as people bring goods for the shop and for the private house here.

2.2 The neighborhood of Machiya

The grid of the city and the defined blocs formed a community in former days. Traditionally the areas very often were defined by the craft or product which was made in that community, for example the textile shops. The lattice work was different depending on the craft of the neighborhood. The shops were positioned on the main streets, but at the secondary streets another area began, the neighborhood of the workers which supported the shops and craftsmanship's. These backyards were formed by small streets, sometimes not broader than two meter. They are called *Roji* and the neighborhood of a roji was called *Fukuroji Community*. According to KCCC there are still more than 3000 roji in Kyoto. They are more than 200 years old, some of hem even 300 years. Nowadays the roji does no function any more like it did in the former days, the workers are gone and new people moved to the houses. Often these neighborhoods are the living areas of old people, sometimes you see younger families and sometimes artists settle down in these small streets and they open galleries. The social control of a roji neighborhood is very high. Entering a roji means that you are seen and somebody will ask you politely what you are doing. As I went with a group of students to a roji, we were signaled immediately.



Left figure: A Roji with Machiya on both sides of the street; the black parts are the storehouses at the rear of the houses; Source: Löfgren (2003) p.182

Right figure: A Roji in the area of Nagagyo-ku in Kyoto; Photo: B. Jürgehake

To renovate a roji is difficult as the path is small and you cannot enter by car. The only convenient solution is to renovate the whole street at the same time, because than everybody undergoes the same problems and the community can solve it together. During my stay I visited several roji al over Kyoto. Sometimes they have storage at the end of the street; very often they are dead ended. One roji even had a small shrine in it which was portable and used during the Gion festival once a year in July.

Still today the people care for the roji were they live, but you can see lots of places where new, high-rise buildings, set back from the main street and forming the entrance area of the former roji, totally change the character of a roji. Parking places are destroying the roji as well, some of the areas are changed to parking and the old houses are gone.

2.3 *The decline and the revival of the Machiya Houses*

With the end of WWII lots of merchant families were economically broken and did not survive. The townplanning was not aware of the historical value of the Machiya and, in those times, had other problems to solve. The Machiya, totally built from wood, were seen as a danger for the city. Fire protection programs helped to change lots of the façade elements into fire resistant ones. In the 60th and 70th of the last century a material boom from the western countries arrived in Japan. Lots of Machiya were changed to get a more “modern” appearance of the old house. People wanted to live in a fancy and modern looking house and not in an old-fashioned one. The Machiya got a “facelift”. The inside was changed as well. Modern kitchens were installed; western bathrooms and sometimes the old clay walls were changed by stone walls. In the 80th the city of Kyoto did not have any height limit for their buildings. Developers bought the old Machiya inclusive the plot and built high-rise concrete apartment buildings on it. Nowadays you will see lots of situations where an old Machiya lays in the shadow of a high-rise apartment building next to it.



Machiya in front of a high-rise apartment building in Kyoto
Photo: B. Jürgenhake



Demolishing a Machiya takes one day!
Photo: Alex de Wolf

In the 90th the attitude towards the Machiya changed. There seemed to be more attention for the cultural value of these houses and the first areas with Machiya neighbourhoods were protected. The first owners tried to restore their Machiya and started a restaurant, a gallery or a shop. Sometimes this happened very respectfully according to the original Machiya, sometimes not. The first organizations arose, craftsmen, scientists and architects started to get interested in the Machiya.

Today the Machiya houses are still disappearing. An interview held under people of the centre of Kyoto showed that the Machiya is appreciated very much and people would like to keep them. The Machiya Machizukuri Fund and KCCC work on the restoration of Machiya. A group of architects organize meetings, discuss the possibilities for further restorations and negotiate with the government. The biggest problem seems to be the money for the restoration, but this is not the only problem. In the interview I held with the architect Kinoshita Ryoichi it got clear what the problems are: The taxes for owners of a plot in Kyoto city is related to a 10 story house on the plot. This makes it impossible for a private man to keep a Machiya. There is a big parking problem in the city and you have to solve this before buying a car. A parking place in a garage is expensive. When I walked through my own neighbourhood I saw lots of houses where the former shop, the *mise*, was transformed into a garage nowadays. Another problem is the lack of comfort these houses have. There is no heating system in these houses, no bathroom or a very small one, no modern kitchen. If you want a modern standard, you have to change this. Kyoto has lots of small Machiya with private owners who cannot afford such an investment.

Neighbourhoods in Kyoto which still have a high percentage of Machiya

- Kamigyo-ku
- The area of Nijo-Dori district; Roji's with nice small Machiya
- The Micano roji north of Kamigyo-ku
- The area of Nagagyo-ku
- The restaurants and cafes in Shimbasi Dori, neighbourhood Gion

3 Method to research architectural qualities of the Machiya

In my PhD research I am interested in the facade as a *social filter* – as a transition from public to private. I try to understand the design approach for the façade during the last century in the Netherlands and possible shifts in the approach. This calls for investigation of built precedents. Therefore I elaborated upon an applicable research method that clarifies my search for the meaning of the façade in its total complexity as an interface between public and private, between outside and inside.

From the public space to the protected place of the home, there are various and culturally dependent transitions, boundaries and borders. Transition is meant as an alteration (of a physical system from one state, or condition, to another) of material, space or measures (height, breadth, level) and even spheres – for example, lighting effects. Transitions are oriented towards the mechanism man has developed to create and regulate privacy in a conscious and unconscious way.

Research about privacy and the tools to create it can be described from very different points of view and approaches. Examined from the point of view of an architect, the approach is oriented toward: functions and spaces within a house or the immediate surroundings; flexibility and changeability of spaces; generic spaces and elements that could be interpreted by the user, etc.

Researchers and architects focussing on the transition and hierarchies between outside and inside, between one condition and another, describe the concept of public versus private. They examine architectural means, zones and spaces to order these different conditions. Some researchers categorise the various transitions and try to define terms (Christopher Alexander and Serge Chermayeff 1960). Herman Hertzberger always searched for space that offers choices to the dweller. He is not defining categories of space (public, collective and private). What matters to him is the generic. A 50cm-high wall, if wide enough, can evoke the association with a bench and can be interpreted as a bench. Hertzberger searches for those generic elements inside the building, as well as transitions from the outside to the inside. *“A gradual succession of indications in architectural means allows us to enter and leave in the same way. Thereby, the whole complex of experiences participates as is evoked by architecture: change of height, breadth, fall of the light, illumination, material, floor level”* (Hertzberger H. 1996 p.86).

When and how do you know you are inside a boundary? This was exactly the question that was posed by the sociologist Bourdieu in researching about the Berber House (1973). In a very empirical way he described with incomparable care the interior of the Kabyle House to find out how this division of the house into two parts has been achieved, where the borders are and which part is used by the women and which by the men. (In: Setha M.Low 2003 p. 131-141) To be able to answer his question Bourdieu worked carefully with observation, photography, notes of everything and drawings. He realizes that the movement from outside to inside and the attributes passing while moving are very important. In my point of view, he confirms the use of photography as a valid tool within research.

Transition zones and borders are not always very clear. Space can be used simultaneously for two different systems. For example a veranda can be part of the room and by changing some wall or window elements as well part of the outside space. Such a space belongs to two systems, flows from one system to the other without clear boundaries (Colin Rowe en Norbert Slutzky, studied spaces in order to determine whether they simultaneously belong to different systems -Rowe 1997 p.61).

The different approaches show how the transition from one condition (outside) and the other (inside) can be researched. In some case-studies the different steps of transition will be noted and photographed to answer the question: When and how do you know you are inside a boundary?

Due to my Phd research about the filter of a house I offered the organization of KCCC to look at the Machiya in the same way that I do within my case-studies in the Netherlands. I wanted to focus on the transitions between outside and inside and between public and private. As the Japanese traditional house is developed by the concept of *Oku*, my approach was fitting perfectly to these houses.

Zeami Motokiyo (世阿弥 元清; c. 1363 – c. 1443) once had written: “It’s more beautiful when it is hidden”. Japanese follow *the concept of Oku*, which means depth and hidden behind layers, he explained. Maki Fumihiko (born 1928) had explained this concept which hides the inner space and which works with layering and depth. “The architect Maki Fumihiko advanced new city planning ideas based on the principle of layering or cocooning around an inner space (Oku), a Japanese spatial concept” . (<http://countrystudies.us/japan/82.htm>)

As a starting point of the research it was very important to understand this phenomenon.

Once understanding this concept of Oku you can understand the architecture of the Japanese traditional houses, temples and villas much better. The most private and the most important always will be hidden at the inner side or at the rear of the house.

What I did in this research of the Machiya was searching for the transitions from outside to inside by photograph en drawing, even measuring them. Elements which were added by the inhabitant like a stone next to the entrance of course needed explanation. This happened in short interviews which I did together with a talk.

During my research preparations I realized that my research approach, the transitions between different conditions like outside and inside, was not enough. I needed some profound study of the houses to get all of the architectural qualities. One method to get more information about the qualities of the Machiya was an interview with architect Kinoshita Ryoichi who dealt with the restoration of Machiya’s for about 25 years.

Another method to understand the qualities of the Machiya was to live in one small Machiya for more than one month and to visit another quiet huge Machiya as often as possible (in total 6 times) and stay in it the whole day. This was a kind of experiment. I prepared the research time in Japan which would be short by studying literature about the traditional Japanese houses. Junichiro Tanizaki’s book:”In praise of shadows” went out to be the most important book to understand the qualities of the traditional Japanese houses theoretically. In his book he describes how the traditional houses manage to get very special light and shadow effects in their houses by using rice paper walls in wooden frames, lattice work, bamboo and wooden sliding doors, protecting roofs and more elements. Tanizaki explains the heating and cooling system of the houses and the use of the materials. The different research approaches, the focus on transition elements from outside to inside and vice versa, the interview with an architect who is specialized in these type of house and to life in one of them led to conclusions about the quality of the Machiya which I will explain in the next paragraph.

4 The qualities of the Machiya

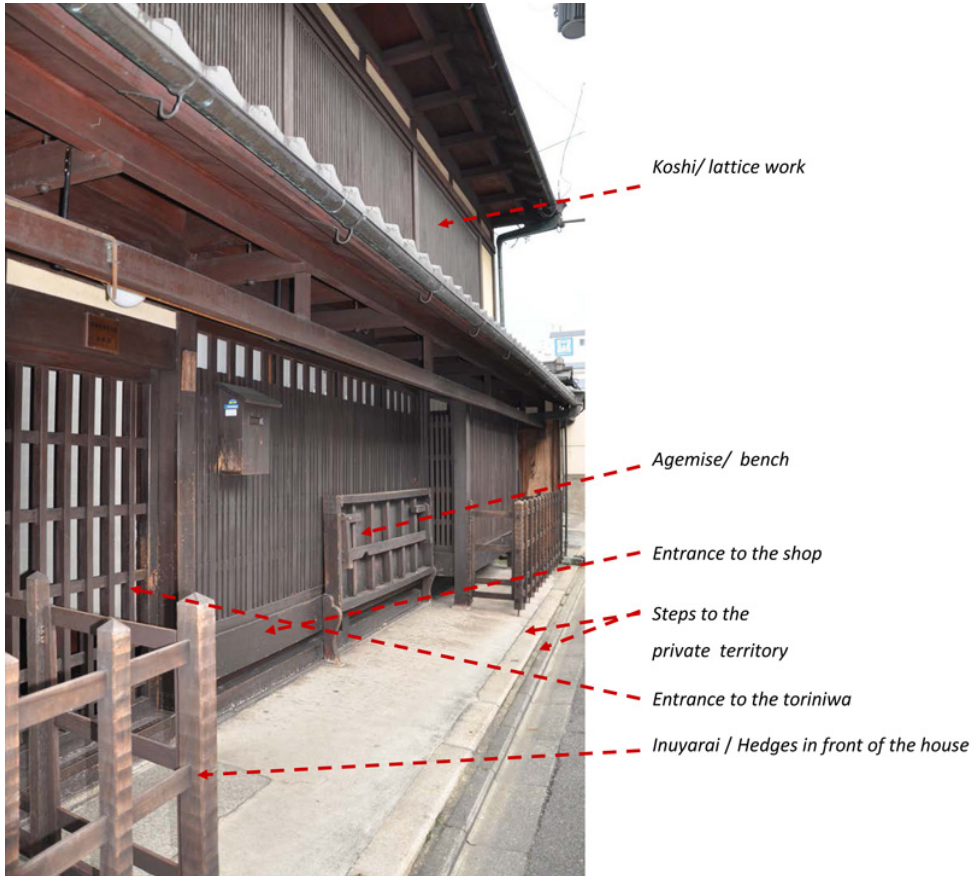
A strong neighborhood:

The quality of the Machiya house begins with the scale of the environment. By this townhouse with its combination of living, working and nature whole districts were organized. The district functioned very well in former times. The main merchant Machiya supported the smaller ones (as the dwellers often worked for them) and lots of small ones supported the main handcraft centre as well. People knew each other and knew the rules of living together. Today there is still a strong neighborhood in these areas which can be felt when you enter a neighborhood or when you live there for a while.

The approach of a Machiya:

Approaching the Machiya, there is one striking difference with the approach of the houses in my country and that is the treatment of the outer walls which are not solid and permanent like our houses are. The street façade of the Machiya consists of different wooden parts which can be more or less transparent. The street front can be opened so that the shop is in direct contact with the street. As the Machiya has a kind of zone where the visitor is protected by a roof, but not inside the house yet, there is certain depth in the street façade. **The first step** you have to make by approaching the Machiya is a change in the pavement materialization and a little step. The wall towards the street is formed by lattice windows. They cantilever or protrude from the house. They provide shade, ventilation and protection. You cannot look through them. Behind the wooden lattice are *shoji* – sliding elements

made from wood and filled with paper. The small roof directly above the lattice walls and the sliding doors gives protections against the rain. **The entrance** door very often is hidden by *noren*, a kind of curtain which shows the name of the family and/or the shop owner. The *noren* covers the entrance and functions like a veil does to a human face. You get a suggestion of the inside but you cannot see further. The zone in front of the shop is an intermediary. You are still outside, if the shop is open you can decide to step in. This is a very nicely elaborated transition from the street to the inside with space for the extension of the shop. Small roofs protect the front area – this makes it very convenient to use the zone for different purposes.



The street façade and its elements;



A half open mise of a Machiya in Tsumago, Kiso Valley

Photo's : B. Jürgenhake

A smooth transition from street to the inside:

Already from the street to the entrance there are several borders which I mentioned above. The outside – inside transition is marked. Several steps make clear that you are starting to enter a private territory. Sometimes you see a stone lying in this area, mostly at one of the corners or next to the entrance. This stone means that this is private and you are not allowed to come in (unless you have asked or are invited). Between street and the facade of the Machiya there is a world of elements which mark this zone of ambiguity between public and the entrance and the shop as well.



Different Machiya's in Kyoto and their elements between street and entrance
Photo's: B. Jürgehake

The Genkan-niwa – a place full of ambiguity inside the house:

Once entered the lattice sliding door of the entrance to the Machiya, a world of transitions and ambiguous spaces will occur. The **hallway** is the next step into the private house, which is already behind the entrance door. It brings you to the *Genkan-niwa*, which is a part of the *toriniwa*, a small garden in the entryway.

The different steps in the entrance way a guest will pass are:

1. Entrance–area in front of the house as first border, protected by the roof (*Hisashi*) and bordered by hedges and the bench (*agemise*).
2. Threshold of the first door with often a *noren*, the *toriniwa* starts, the long “street” through the house
3. Often a first hallway, mostly dark and next to the *Mise* (shop)
4. Second door with often a *noren* that leads to the *Genkan-niwa*, an open place where the first contact with nature is made and where the guest has to wait. In high Machiya there can be a bench to wait. In small Machiya's there can be a plant. This is a place of ambiguity as you feel that you are not allowed to go further, but the bench or the nature invites you to stay and tells you that you are welcome.
5. The following sequences of the *toriniwa* lead to private area. Here are the kitchen and the backstage (bathroom, toilet) and the storage. The entrance to the kitchen again has a small roof; possibly there is a *noren* or something likewise to mark the border. Often some elements like water tubes or flowers are placed here as well. Next to the *toriniwa* tatami-rooms will start.

6. A wooden step (*Shikidai*) to enter the tatami area, the more private rooms
7. A decorative element in the first tatami room (*Moriki*)
8. From the first tatami room onwards the Machiya's differ. Sometimes you see the first garden which works as a threshold and invitation at the same time.



The transition from entrance to the Genkan-niwa of the Joshida House; see as well description in paragraph 5
Photo's: B. Jürgehake

The sense of nature:

As you are moving between outside and inside meanwhile you live in the Machiya there is a strong relationship with the nature through the different patio's of the house. You have permanently a view to one of the patio's. In the heart of a city this direct contact with nature is very extraordinary and offers places of silence and contemplation. I will explain this inside-outside concept more deeply in the following paragraph.

The sense of light:

The different layers of sliding doors, bamboo roll-curtains and lattice works introduce lots of levels of half-shadow and shadow. The Machiya is a house of light contrasts which are changing very often. By this the Machiya is a house full of atmospheres which I will explain in the following paragraph.

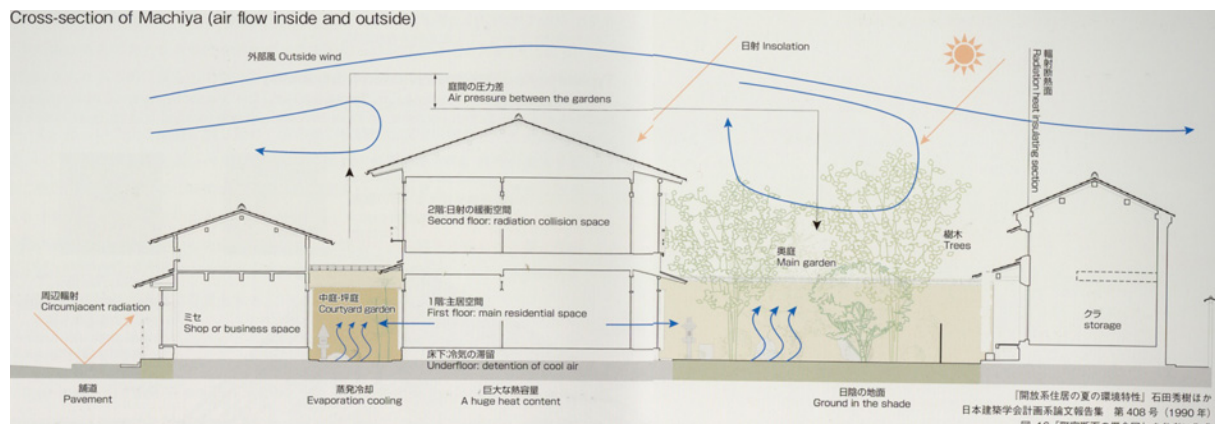
Natural materials:

Almost all material that is used in a Machiya is natural. The only exception I found in the Machiya was the copper rainwater drain and some new toilet elements. The main material is wood for the whole construction, for some floors, some walls, the ceiling. Natural stone is used for the inner street and

some elements in the patio's, tatami which is a 5 cm thick rice matt, bamboo everywhere - as beams, as ceiling material, as shoji, walls made of clay, paper for the shoji and ceramics for the roof covering. All the material has a bit rough surface which makes the light and shadow effects very soft.

Natural air-conditioning:

The Machiya has an intelligent climate system. Through the patios the climate is soft in the winter and cool in the summer. In summertime the temperature in Kyoto is high. If you humidify (mostly there are small water basins) the temperature will sink and a natural draft will be created from this garden to the other. The tatami rooms are 20-25 cm above the ground and the summer shoji are open like a mesh. This gives space for circulation of the air and cools the rooms in summertime.



The eco system of the Machiya

Source of the figure: Mitsumura Suiko Shoin (2009) p.12 & 13

Privacy – respect for each other:

During my observations of the Machiya and especially by looking at the transitions from the public to the private, I realized an elaborated system of transitions to the private which is almost the same in all the Machiya. To enter the house you have to pass a sequence of spaces with elements that are clear in this culture. This respect for each other was, in a way, an essence which I realized during my stay not only in architecture, but as well by observation in daily life. Interviews tell that people on the one hand complain about the Machiya as it offers less privacy inside, but at the same time you learn how to respect each other.

5 The Yoshida Machiya and its qualities – a sensitive case study

During my stay in Kyoto I visited the Yoshida house several times. The Yoshida house is an old Machiya in the center of Kyoto. It is a monument and therefore very authentically. The owner, Koujiro Yoshida takes care of the house and maintained it over years already. He and his wife are living in de storage houses at the backside of the Machiya. To visit such a house several times gave me the chance to get into a more sensitive understanding of the house. The organization of the house is quiet clear. It depends on the owner how fare you are allowed to get inside. For me the boundary of the second door in the toriniwa was the end of the formal Machiya, the storehouse was the private domain of Mr. and Mrs. Yoshida.

Every time I came to the house, the house seemed to have undergone changes, and indeed that was partly true. The first time the summer shoji were still installed. Mr. Yoshida had waited with the change to winter shoji because I surely would like to see them. But this change into winter shoji was not the only thing that made the Machiya look different the second time when I came. The light was different, the colors as well and when I came the third time I realized that the changes were there even every hour. During my stay in the Yoshida house I elaborated three main themes:

1. The transition from the street to the private step by step
2. The transition from inside to the nature, the private gardens of the house.
3. The sense of nature - The relation of material, light, shadow

1. The transition from street to the inside, the private

The first impression of the house is a very formal and closed facade. It is almost impossible to see the inside. The front door is the only place where you get a view of the inside as the lattice work of the entrance door is more open and transparent. But as the entrance door has a closed element as well, I realized that it depends on the situation, whether this second door is open or closed.

Already from the street to the entrance door there are several borders which I found at all Machiya's I visited. These borders are mentioned in paragraph 4 already. The edge of the street is a small stripe of concrete stones without any change in height. To this stripe a small, 5 cm higher one of small natural stones follows. Here you will find the official mark from the city for the private area, an arrow shows where it begins. From now on you have to care for the outside. An again 5 cm higher step of natural stone, 15 cm broad is the first threshold to get into the house. From here an earthen/ cement like floor in which a nice step stone is integrated. The step stone pattern continues in the toriniwa. You step into a low and dark hall, the *toriniwa* which is, again by a threshold of a door, followed by the *genkan-niwa*, the open entrance hall. A bench invites you to sit down and wait for the owner. He will ask you to come further, without shoes of course as you will enter the first tatami room, which is an account room and offers a beautiful view into the patio. There are small roofs above both doors of the *genkan-niwa* and a *noren* hinders the view into the kitchen. Entrance, *genkan* and kitchen have an earthen/cement floor. It reminds me on an old roman street with big stones in it. Under this street lies an open water channel which brings water from this street and the kitchen to the main canalization. The whole way from street to the *genkan* is about 5 meters long, but already full of elements. The pavement is filled with hedges, one to protect the former well, one in front of a bay window. A bench stands as an extra place for the shop when it is open, now not used any more. A horizontal beam runs along the whole facade. It is for the *noren*. The owner has placed extra elements at the places of border, like ceramics or a pan for water. All the doors from the first entrance, the door to the *genkan*, the door to the kitchen have thresholds, but in former time they were taken away frequently so that the whole zone got an inner street, where small cars could come in and out (For example: in former times the water for a bath had to be carried outside after taking a bath and this happened by cars).

2. The transition from inside to the private outside, the garden

The *genkan* and the gardens of the Machiya form the visual and physical contact with the outside. Coming from the first tatami room and walking to the first living rooms means in the Yoshida house to step on the *engawa*, which is outside, and to walk on it to the next room. You are protected by a roof, but you are outside. Walking from the second living room to the bath or the storage, again means to walk outside protected by a roof. In the winter this can be pretty cold. Therefore the *engawa* can be closed by wooden shutters which are waiting to be used, but you have to close the *engawa* element by hands. The main routes have this protection possibility, but not all of them. The house has an elaborated system of *shoji*, sliding doors made of wood, paper and bamboo. The summer *shoji* offer shadow and darkness (they have no glass infill at all). You can look through them they form a thin veil. The winter *shoji* are more complex. They are made by wood with rice paper infill, but to offer the possibility to look outside, there are extra moving parts in the *shoji* and behind them there are glazed elements. You can open window parts and look out. When everything is closed, you cannot view the garden but the sunlight and the shadow will let you know and keep aware of the outside in a different way, a more sensitive way. At that moment you feel a sense of nature which is on a deeper level, more than visually contact with nature.



Photographs of the transitions inside – outside in the Yoshida Machiya, Kyoto; Photo's: B. Jürgenhake

3. The sense of nature in the Yoshida house – a mystery

Being in this house gives you a feeling of being in the nature environment as well. In the *mise*, the shop to the street, you definitely hear the outside, the noise of the outside is constantly around you and you feel part of the street. But when you pass to the backside, the *tatami* rooms, silence comes. A feeling of peace and silence overwhelms you. Sitting on a *tatami* you feel the wind, just a small breath of wind, you get the feeling that the house is living! It is definitely not the same as our open windows and the draft we feel and often dislike! This breath is much more natural. When I came for the first time to this house, it was hot outside, but entering the Machiya was fine, a cool feeling inside. The summer *shori* were still there and would be changed the next week. When I came another time, weeks later, it was cold outside and inside I felt this as well, but in the living rooms where the paper *shoji* and the glass protected the rooms, the temperature was okay. Not comparable with our heating system and our comfortable warm rooms in which you do not know what the temperature outside is like. When it started to rain I immediately was confronted with it by passing the *genkan* and by passing the *engawa* of a patio. But for me the most striking was the change of the light in this house. I decided to make photos of the light conditions, but I realized that what I saw was the shadow! This shadow changes continuously. It was almost impossible for me to capture it. The colors changed and some irregularity of the paper of the *shoji* gave their pattern to the wall. Very special was the most dark corner, a dark small barrel was standing on the floor with a golden pattern on it. The gold was reflected by the little light and it began shining.



Photo's : B. Jürgehake

6 Conclusions

The Machiya is, like the Dutch traditional channel house, a merchant house which has transitions and layers from outside to inside. The Machiya has to be protected as it is an important part of the culture of Kyoto. There are similarities between the Machiya and the Dutch merchant house. One is the transition zone between outside and inside. The Dutch Dwelling had such a zone in former times. The façade was altered by the outdoor arrangement of tables, shutters and baldachins used for conducting business. This served as a transition area for the people who lived there. It created distance from the public and introduced a space in-between. From a street perspective, there were anything but clear borders.

The Machiya are totally different from the Dutch houses in the approach to the nature. The Dutch old merchant house is normally orientated to the channel in front of the street. There is no contact at all with nature inside the house, not even a metaphor of it. The small patio or backyard has a stone pavement and no green, it is a daily outside working place. It is not meant to enjoy the nature. The nature of the Machiya is something very special the old Dutch House does not offer.

It is worth to compare residential architecture of different cultures. In this special case both, the Machiya and the Dutch merchant house had a shop in the front and dwelling at the back, both had to present and to filter. But the Machiya offers something more, which we really can learn from – this is the sense of nature which makes it even more interesting to study.

In this perspective the research program to live in a Machiya for one month and the frequent visits of the Yoshida house were a new research method for me. The matter of fact that I could just “be” in a Machiya is an absolutely interesting way to study architecture.

By living in another culture and dealing with the neighbourhood one gets a totally different picture of the Machiya. To live in a Machiya means to have less comfort in your house. There is no central heating, no modern kitchen, perhaps only a minimal bath. It means as well living in a community with shared facilities. It means living next to one or more gardens inside your Machiya, living in a house

with only natural materials. You can experience the change of light – sometimes very often during the day. Living in a Machiya means to arrange the shoji time by time. From summer to winter, from open to half open or closed - you always have several choices. Closed shoji mean that you cannot look outside any more but the light comes through the shoji smoothly.

Concluding my experience with this research program, there is no better way to learn about architecture than to undergo it! The way of dealing with the nature in the house on different levels, the way of using light and shadow and the concept of Oku are very important issue to take back with me. Discovering the qualities of the Machiya was necessary to understand the renovation programs of them. They go from conservation up to destroying and building new ones. Understanding the qualities helps to understand modern architecture in Japan. Architects nowadays learn from the Machiya and develop new dwelling types like the ‘Engawa House’ or the ‘Machiya House’ by Tezuka architects. The engawa house consists of one extensive engawa which combines the house with the garden and another house on the same plot. The ‘Tread Machiya House’ designed bij Bow&Wow architects used the concept of the toriniwa (the inner street), but transformed vertically. These example show that the deep understanding of the Machiya is a starting point for modern architectural design and for further research.

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