JAPANESE COOPERATION FOR URBAN PLANNING IN THE OLD CAPITAL OF DAMASCUS

A CASE STUDY OF "RESTORATION-TYPE" FAÇADE IMPROVEMENT

Matsubara Kosuke[1],

Abstract

Historic cities are cultural achievements that are gradually created by inhabitants over the centuries. In developed countries, the conservation of historic cities seems to be generally acknowledged as a method of community development that does not depend on huge exploitation. On the other hand, no sufficient countermeasures have been taken in developing countries because most native stakeholders are still interested in development. Here we could focus on so-called "International Cooperation", but urban conservation for historic cities where inhabitants actually live is still a minor consideration except for some government-based conservation projects for monuments and isolated examples of cultural heritage.

In this paper, I take the example of a conservation project which has been carried out by JICA (Japanese International Cooperation Agency) in Damascus, the old capital of Syria. The target area for the project is "*Qanawat* South". Although the origin of "*Qanawat* South" dates back to the Roman age, efforts for urban conservation have not been well organized, partly because the area is located outside of the so-called old city registered as a World Heritage Site. For example, the master plan of 1968 indicated the redistribution of the traditional quarters, while some conservation laws have been restricting the regeneration of the area. Moreover, there is not yet any consensus among the stakeholders concerning the historical value of the quarter; they are still questioning why the area should be conserved rather than being freely sold or developed and what and how they should contribute to conservation.

Based on analysis of the actual situation of *Qasr al-Hajjaj* Street, this paper examines a method called "restoration-type" façade improvement adopted by JICA, for which the final goal is not only to maintain the appearance of the street but also to activate the life of the habitants of the street.

[1] University of Tsukuba, Tsukuba, Japan - matsub@sk.tsukuba.ac.jp

1. Introduction

Since the Japanese planner Gyoji Banshoya (1930-1998) elaborated in cooperation with Michel Ecochard the master plan of Damascus in 1968 (still active today), Japanese/international cooperation in Damascus has been ongoing as one of the rare cases in which Japanese architects and planners are working in the Middle East. The example reported here is the latest technical project named “Damascus Metropolitan Area Urban Planning and Development Project” which started in September 2009 and will be completed in August 2012. One of the principal objects of the project is to suggest conservation ideas for the local heritage area, "*Qanawat* South" (surface: 0.28 km², population: 8,870), and, in particular, those involved are suggesting a façade improvement project for a historic street called *Qasr al-Hajjaj*.

The problems with the degradation of the living environment along the *Qasr al-Hajjaj* Street are partly caused by the decrepitude of traditional houses made of woods and bricks. Although previous surveys did not aim for structural reparation, it is certainly recognized that one of the reasons for the degradation of the living environment is the fact that habitants easily abandon their houses and demand rapid re-development regardless of historical value. This is a vicious cycle that has continued for some decades but specialists participating in international cooperation projects cannot always interfere with this since the project terms are limited. What such specialists can do is give habitants an occasion or the awareness to be motivated to resolve the problems by themselves. Façade improvement is not a complete resolution of the problems but can be a first occasion to get habitants participating in the efforts. Specifically, it is expected that habitants start taking pride in their town and participate in the management of the living environment taking advantage of the apparent façade improvement. Here, specialists make proposals and contribute to this process within a limited term.

The object of this survey is to examine “restoration-type” façade improvement based on the analysis of the actual situation of *Qasr al-Hajjaj* Street. Some similar projects have been previously carried out in Syrian cities where many historic landscapes such as old city *souk* and historical road outside of city walls still exist. The difference between these previous projects and JICA projects is that they adopted drastic improvement methods such as the uniform replacement of zinc shutters and the standardization of the height of buildings, while JICA tries to re-discover and maintain the original state of the façade as far as possible, defining façade improvement as “restoration-type” façade improvement.

The methods taken in this survey are as follows: 1. Chronological survey of the reasons why restoration-type façade improvement is necessary (Chapter 2), 2. Elaboration and analysis of an integrated façade plan (Fig. 5 and 6) based on field surveys of façades in relation to spatial composition in plans and the extraction of the elements composing the façade (Chapter 3), 3. Clarification of obstructive elements in the original historic façade and analysis of their background and actual situation (Chapter 4) and 4. Suggestions to restore original façades based on the findings of this survey (Chapter 5).

2. Spatial Characteristics of the Street and the Necessity of Façade Improvement

2.1 History of the Urban Formation and Spatial Composition of the Street

The target area of "*Qanawat South*" is located in the south west of the old walled city of Damascus called "Old Damas". The fact that it is located outside the old city means that the area is not within the scope of the World Heritage Site which was registered in 1979. However, the area is still an important historic area which dates back to the Roman age and which was developed in the 16th century when the Ottoman Empire started to rule Syria.

There are two historical roads from the *Bab Srij* Gate which is the south west gate of the old city. *Bab Srij* Street was developed as a *souk* (traditional shopping street) connecting Damascus with the ports of the East Mediterranean, while *Qasr al-Hajjaj* Street, which was a transport road connecting to southern villages or even a pilgrimage to Mecca, was developed as a housing area for new residents such as Turkish bureaucrats. Nowadays the street is still a densely populated area with traditional houses with courtyards.

Although the street seems simply to be a crowded area, there is a kind of spatial order. *Qasr al-Hajjaj* Street is a north-south axis which is almost a straight line from the *Bab Srij* Gate to the south border of the area. On the other hand, there are small alleys that cross the north-south axis from east to west - 18 alleys in total, 7 of which are on the east side of the axis and 11 on the west. There are 2 blind alleys in the east (28.6% of all east alleys) and 8 in the west (72.7% of all west alleys), showing the difference between east and west. In the south of the area where modern apartments are rarely built, traditional spatial composition of housing as a "private space"

accessed with blind alleys can still be found.

2.2 Urban District Planning System and Changes in Street Landscape

Changes in streets caused by modernization include the re-construction of traditional two storey or three storey houses into modern apartments (4 floors maximum) implemented by the district plan. The actual district plan was elaborated by the Damascus governorate from the 1970s onwards based on the principles of the master plan of 1968. In the master plan, Ecochard and Banshoya predicted the decrepitude of traditional houses made of dry brick and suggested the renewal of some historic housing areas including the target area.

The district plan shows a clear road line to be respected for the new construction, followed by a strict rule of a 2m set-back from the original lot line. As a result, the street is now regarded as an “existing-misfit”(anomaly). In fact, this district plan is a system to allow the construction of modern apartments, which is more rational from the viewpoint of land use and adjusting the road line. With this system, the streets are widened and a modern block is created, almost automatically creating a modern built-up area. It is clear that the district system is based on modernist policies originating from CIAM.

2.3 Actual Living Environment and the Necessity of Façade Improvement

There are no ideas for conservation in the district plan adopted by the Damascus Governorate but the Department of Antiquities of the Ministry of Culture (MOC) has introduced some systems for historic conservation: 11 “historic monuments” were designated in 1964 and a historic protection area was designated for most of the buildings along the street. These conservation systems are quite strict and are given precedent over the district plan. As a result, re-construction in the protected area has become almost impossible even though the houses are severely damaged and should be renewed at least from the viewpoint of the master plan. In addition, achieving the mutual agreement of the habitants is difficult in general so the implementation of the district plan is now coming to a halt. In such a situation, the decrepitude of traditional houses has become more and more serious and various problems such as room deformity, wall and roof collapse and the unsanitary state of the dried brick walls have occurred. On the whole, habitants cannot re-construct houses in the protected area but some modern apartments with incoherent set-backs can be found outside of the protected area.

Basic actual land use is for housing but some houses have small shops on the first floor (Fig. 1). The street, which is 514m in length and between 4 and 6 meters in width, is a one-way street but traffic is heavy and it is not safe for pedestrians.

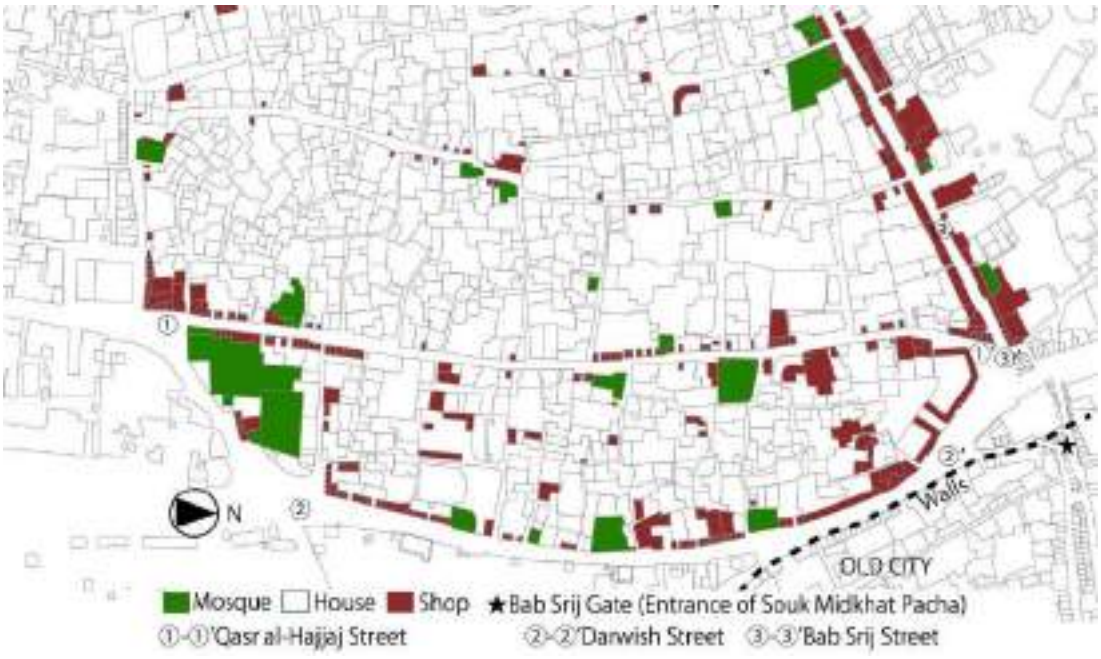

Figure 1: Actual Land Use along the Street

In fact, the situation on *Qasr al-Hajjaj* Street is quite different from that of *Souk Midkhat Pacha* which was the object of a façade improvement project in the past (Photo 1). Past projects included some radical methods such as replacing shutters with neo-traditional wooden doors or apparent unification of building heights and wall finish. However, these radical methods are still debatable since one of reasons that the old city is attractive stems from its spatial variety.

Photo 1. Case of *Souk Midkhat Pacha* (Left: Before Improvement, Right: After Improvement)

Even it is though connected with *Souk Midkhat Pacha*, *Qasr al-Hajjaj* Street is a modest curve and basically a housing area. It is not possible to neglect the small differences in houses and shops, the differences in building materials and the differences in height because these small differences are the characteristics of each building. The unification method is not appropriate for *Qasr al-Hajjaj*. It is necessary to search for a new method of authentic restoration of the original historic façades based on minor repairs conducted in the traditional manner but that also helps the habitants to improve their living environments.

3. The Façade of *Qasr al-Hajjaj* Street

3.1 Overview of the Façade

In the project, we made various plans and maps of *Qasr al-Hajjaj* Street. Here, I have unified a floor plan and a façade plan for research purposes (Figure 5 and Figure 6). The façade plan, created from the façade photos, describes all the elements of the façade.

Before I examine these elements, let's look at an overview of the street. Existing houses of 2 or 3 floors are sharing walls and are joined with each other. The borders of these houses are plastered with *Krusa* (الكلسة) in the traditional way it is not possible to distinguish between them on the façade plan. However, there are blocks separated by alleys: 8 blocks on the east side and 12 blocks on the west side of the street. Façade analysis will be conducted for each block as a separate unit for examination.

Modern apartments, which are the highest buildings except for the *minarets* of mosques, number 2 on the east side and 3 on the west. For example, apartment A is set back from the street and moreover its ground floor houses shops with a pillared corridor whose design originally dates back to the French mandate period. From the viewpoint of conservation, it can be said that this modern apartment building detracts from the traditional façade. Because of the existence of these modern apartments, traditional-type façade improvement is not possible.

3.2 Basic Elements of the Façade

Four categories of essential elements to be analyzed have been pinpointed on the

façade plan as follows (Fig. 2): 1. doors, 2. windows, 3. Shop shutters and 4. decoration (including traditional balconies called *Shurfa* (شرفة) , revealed beams etc.). Small and optional elements such as individual tiles, materials for finishing walls that are not part of the structure, modern equipment such as electric cables or exterior parts of air conditioners and greenery are excluded from the analysis. The elements of the 4 categories are subdivided into wood/iron and 1st/2nd/3rd floor, etc. in order to understand the number, surface and percentage of the elements as essential information for façade evaluation (Table 1).

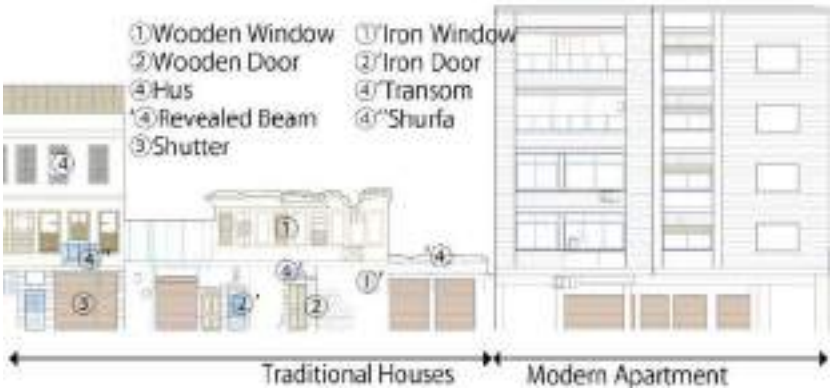

Figure 2: Examples of Façade Elements

3.3 Analysis of the Elements

Based on the essential information organized in Table 1 and Table 2, I examine the elements whether they are original or traditional elements of the façade or not. The viewpoints I take into account are the original state of the façade as an ideal goal of façade improvement and the traditional spatial composition of commercial and housing areas in relation to the floor plan. Illustrating some examples of elements in Figure 3 and Figure 4, and the overview of the façade plan in Figure.5 and Figure 6, the elements are analyzed as follows:

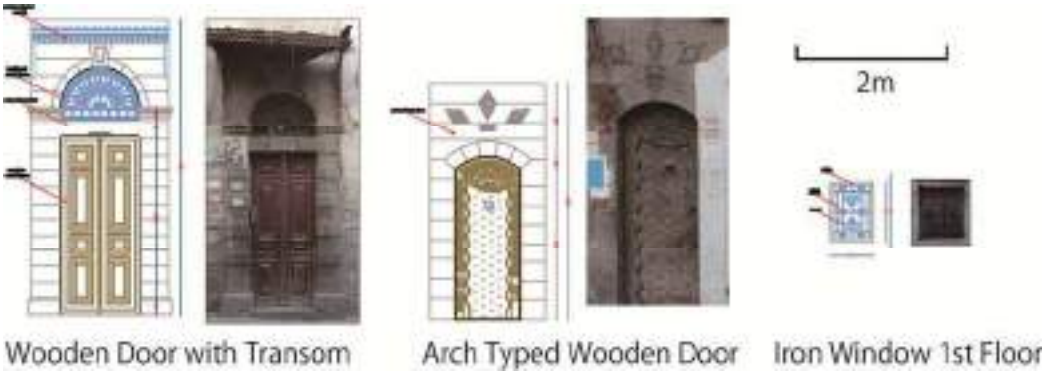

Figure 3: Examples of Elements (Doors and Windows on the 1st Floor)

3.3.1 DOORS :

The doors are openings on the first floor. There are 40 on the east side and 49 on the west side of the street. The average span of these doors is 10 - 13 meters but spans are not the same and are related to the composition of houses that have courtyards. In general, because of Islamic customs respecting privacy, the doors of a house located at the intersection of a street and a small alley tend to face on to the small alley as a private space and are not to be opened onto the street which is more a public space. Examining all the doors of the houses located at intersections today, most doors face on to the street regardless of Islamic custom, but a tendency to face doors on to alleys was observed in some cases in the south part of the street where traditional spatial composition still remains. Doors were originally made of wood but they are being replaced with new materials such as iron and over half of doors today are made from iron. Almost all doors are arched and 16.5% have arched transoms. Although there are only a few compared to the case of the old city, the arch is rarely a traditional element. On the whole, doors, which are positioned corresponding to the spatial composition of the street and traditionally decorated, are considered as an important original element to be restored.

Figure 4: Examples of Elements (Windows on the 2nd Floor and Decoration)

3.3.2 WINDOWS:

Windows are located on each floor but appearance between the 1st floor and other floors is different. Windows on the 1st floor (66 on the east side and 91 on the west) are relatively small and not unified in specific form. On the other hand, average height from the ground to the bottom of the window frame is about 200 cm which is quite high. This is due not only to the common custom in Damascus of raising the floor to avoid the cold, but also to the Islamic custom of privacy so that passersby cannot look in through the window.

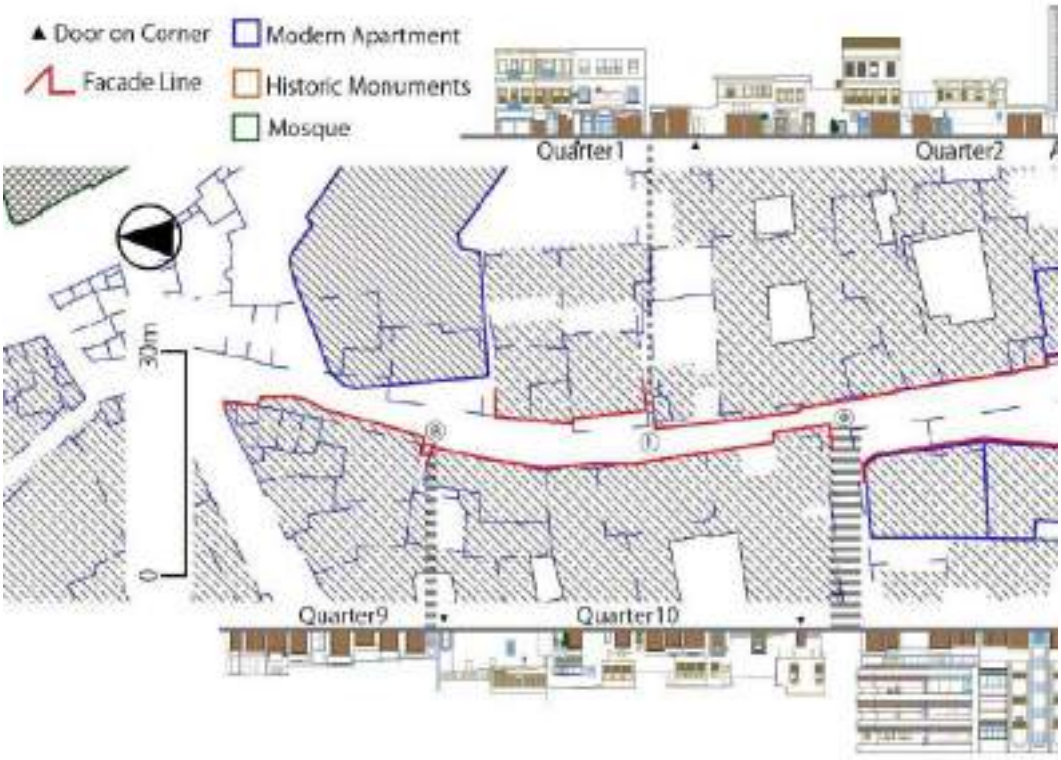

Figure 5: Integrated Façade Plan (Northern Part)

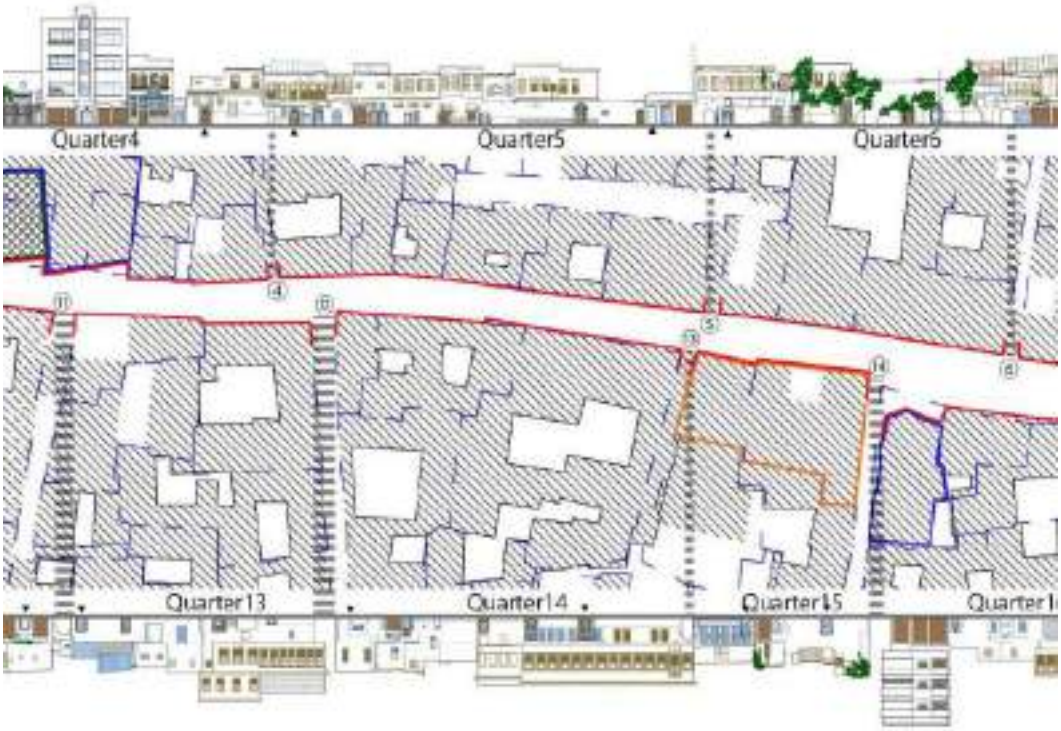

Figure 6: Integrated Façade Plan (Southern Part)

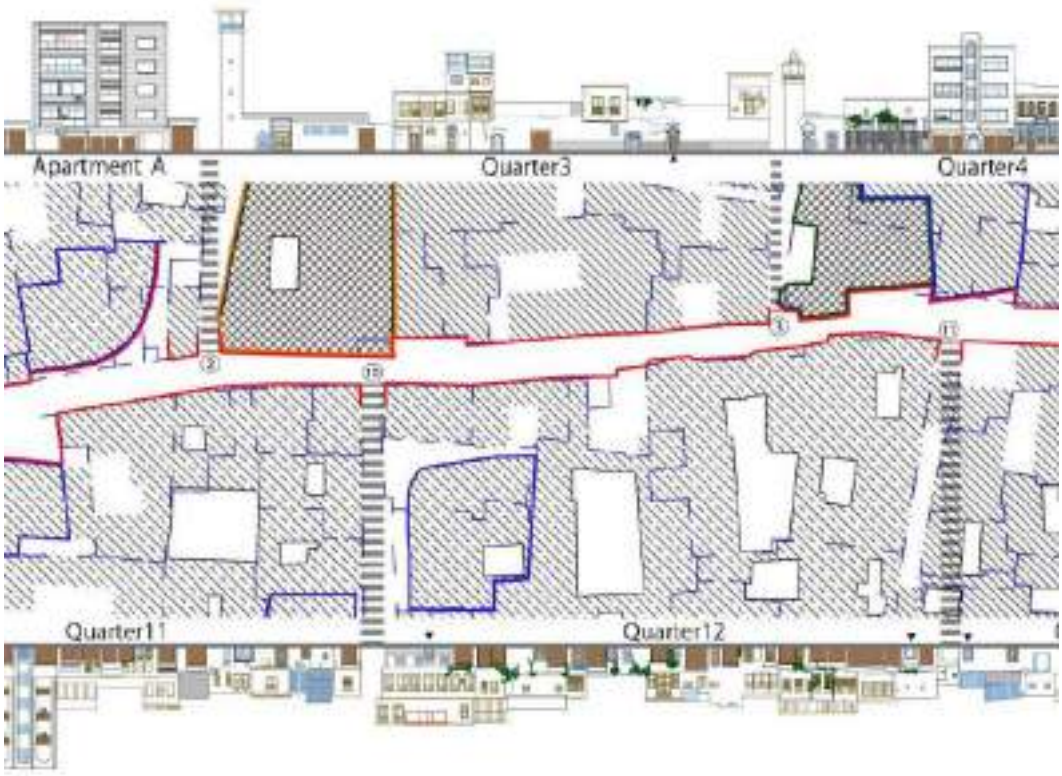

Figure 5': Integrated Façade Plan (Northern Part)

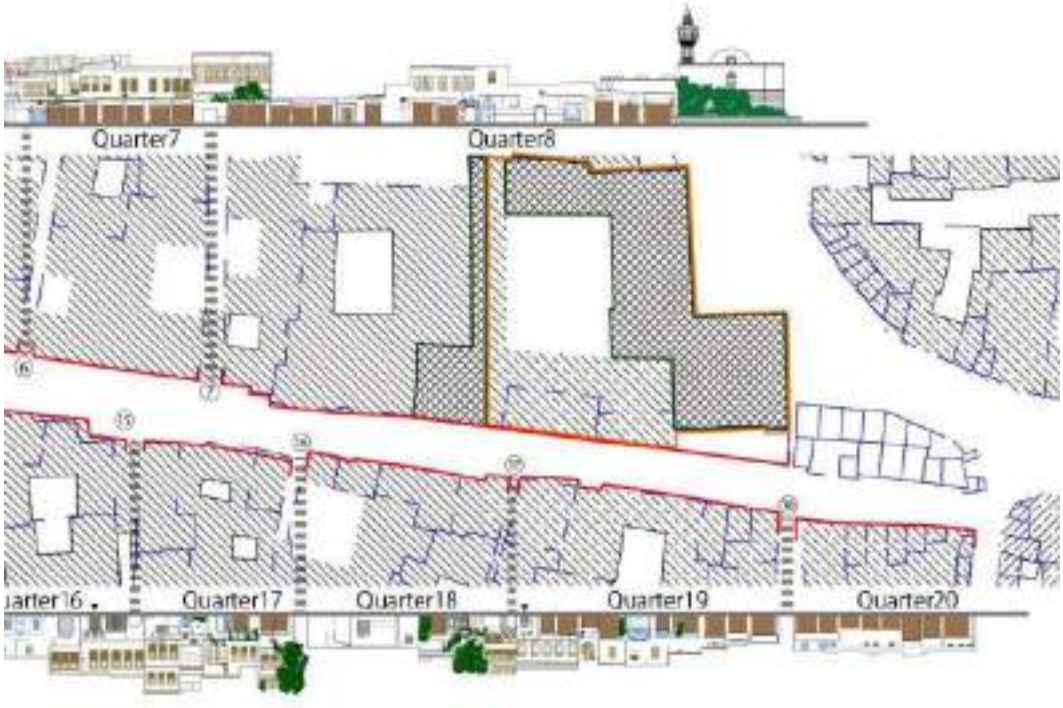

Figure 6': Integrated Façade Plan (Southern Part)

The windows on the second floor are many and huge; their total surface is the second largest element of the whole façade. There is unity of size and form and window frames are traditionally decorated. Movable wooden window covers called *Hus* (حص), which means "wooden sculpture", covers the windows. There are also bay windows which give the impression of three-dimensionality to the street landscape. Not so much difference is found between the windows of the 2nd floors and those of the 3rd floors. From the viewpoint of window frame materials, the number of wooden and iron windows are almost equal on the 1st floors, while there are many more wooden windows than iron windows on the 2nd floors. For this reason, it is assumed that people don't hesitate to replace wooden frames with iron frames for windows on the 1st floors (these being small and not unified) while they tend to conserve traditional style and materials on the 2nd floors. On the whole, windows, especially those on 2nd floor and above, are regarded as important original elements to be restored.

3.3.3 SHOP SHUTTERS:

Almost all the shops have shutters on their frontage and their total surface are is the largest in the whole façade. Although the number of shutters is lower than that of *Bab Srij* Street, the ratio of shutters on façades on *Qasr al-Hajjaj* Street is 6.9% on the east side and 9.9% on the west side. Shutters are found frequently in the south part of the street. All modern apartments have shutters on their frontage on the 1st floor. The shutters are made of zinc and their form is not traditional. Although the function of the shutters today cannot be ignored, it is difficult to evaluate them as an original element.

Table 1: Elements of the East Façade:m^2

		Quarter1			Quarter2			Quarter3			Quarter4			Quarter5			Quarter6			Quarter7			Quarter8			Total		
Surface of Façade		253.2			782.1			627.6			484.9			431.4			325.5			222.6			435.9			3563.2		
Number・Surface・%		N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%
1st Floor	① Wooden Door	0	0	0	4	8.6	1	4	11.9	2	2	4.2	1	7	11.4	3	4	7.7	2	0	0	0	1	2.9	1	22	46.7	1%
	① Iron Door	2	5.23	2	4	7.0	1	2	4	1	4	9.9	2	6	9.9	2	2	3.3	1	0	0	0	3	11	3	23	50.3	1%
	② Wooden Window	0	0	0	6	5.4	1	4	2.5	0	7	12.3	3	12	10.6	2	0	0	0	0	0	0	0	0	0	29	30.8	1%
	② Iron Window	3	14.0	6	6	3.1	0	6	14	2	***9***	15.8	3	7	6.4	2	5	2.4	1	0	0	0	1	4.7	1	37	60.4	2%
	③ Shutter	3	15.3	6	15	***81.7***	***10***	2	13.2	2	4	13.19	3	4	11.2	3	0	0	0	7	***39.4***	***18***	12	***73.2***	***17***	47	***247.2***	***7%***
	④ Wooden Decor	--	0	0	--	5.4	1	--	3.7	1	--	0.2	0	--	2.6	1	--	0	0	--	2.4	1	--	0.9	0	--	15.2	0%
	④ Iron Decor	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	4.2	2	--	0	0	--	4.2	0%
2nd Floor	② b : Wooden Window	***7***	***21.5***	***9***	***26***	48.9	6	***12***	***34.7***	***6***	**8**	14.9	3	***25***	***56.9***	***13***	***10***	***24.9***	***8***	***14***	**30.8**	**14**	**14**	32.8	8	***116***	***265.4***	***7%***
	② e : Iron Window	2	4.2	2	3	12.7	2	0	0	0	6	16.3	3	1	1.1	0	5	2.4	1	0	0	0	0	0	0	17	36.7	1%
	④ d : Wooden Decor	--	1.3	1	--	1.4	0	--	1.66	0	--	0.4	0	--	2.3	1	--	0	0	--	0.4	0	--	0.6	0	--	8.06	0%
	④ g : Iron Decor	--	2.1	1	--	10.9	1	--	0	0	--	1.7	0	--	0	0	--	0	0	--	0	0	--	0	0	--	14.7	0%
3rd Floor+	② b : Wooden Window	0	0	0	7	14.8	2	2	2	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	9	16.8	0%
	② e : Iron Window	0	0	0	7	28.8	4	3	12.4	2	7	***30.7***	***6***	--	--	--	--	--	--	--	--	--	--	--	--	17	71.9	2%
	④ d : Wooden Decor	--	7.1	3	--	15	2	--	11.7	2	--	3.3	1	--	--	--	--	--	--	--	--	--	--	--	--	--	37.1	1%
	④ g : Iron Decor	--	4.1	2	--	0	0	--	2.8	0	--	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	6.9	0%
	Total	17	74.8	32	78	243.7	31	35	114.6	18	47	122.9	25	62	112.4	27	26	40.7	13	21	77.2	35	31	126.1	30	317	912.4	26%

3.3.4 DECORATION:

Traditional decoration includes *Shurfa*, which are wooden window covers, *Hus* which are bay windows that allow people to see the street while being hidden themselves and *Hujur* (الحجر), which are traditional stone tiles that decorate the rims of doors. Some of these decorations have been replaced by iron materials. The bay windows of the 2nd floors and above give an impression of three-dimensionality to the landscape. The existence of revealed beams supporting bay windows and of wooden eaves also modulates the landscape. These elements are the result of extensions by the habitants and are a typical traditional townscape. Due to their delicateness and the vagueness of boundaries, it is difficult to grasp the exact number of these decorations. However, traditional decoration is certainly considered as an original element to be restored.

4. Obstructive Elements in the Original Construction

Shutters were not included in the original construction. Shutters were already regarded as obstacles in previous projects and they were uniformly replaced with wooden doors. However, this is not applicable to *Qasr al-Hajjaj* Street because of differences in the situation. In addition, there are some other obstructive elements such as those that were originally made from wooden materials but that were replaced by iron. It is necessary to take measurements for each obstructive element based on detailed examination.

Table2.Elements of the West Façade:m^2

Quarter9			Quarter10			Quarter11			Quarter12			Quarter13			Quarter14			Quarter15			Quarter16			Quarter17			Quarter18			Quarter19			Quarter20			Total		
155.6			447.5			859.4			680.6			324.3			433.8			173			323.1			216.1			173.8			233.8			129.6			4150.6		
N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%
0	0	0	3	6.9	2	3	5.2	1	6	11.8	2	2	2.8	1	3	5.7	1	0	0	0	1	2.3	1	0	0	0	1	1.9	1	2	3.5	2	0	0	0	21	40.1	1%
2	8.3	5	2	3.9	1	4	11.8	1	5	9.3	1	1	1.6	0	4	4.9	1	3	5.8	3	2	4.7	1	2	3.9	2	1	1.3	1	1	10	4	0	0	0	27	65.5	2%
0	0	0	6	6.1	1	11	13.3	2	4	4.5	1	1	0.9	0	13	19	4	0	0	0	7	6.3	2	3	3.9	2	0	0	0	1	0.3	0	0	0	0	46	54.3	1%
0	0	0	3	2.8	1	7	15.7	2	7	5	1	3	8.5	3	9	11.6	3	5	7.1	4	4	3.4	1	1	0.9	0	2	1.44	1	2	1.4	1	2	2.3	2	45	60.14	1%
8	***57.7***	***37***	**6**	**33.9**	**8**	***18***	***88.3***	***10***	***16***	***83.9***	***12***	0	0	0	1	2.9	1	**1**	**4.5**	**3**	**3**	**21.7**	**7**	3	11.5	5	1	4.8	3	***10***	***52.7***	***23***	***8***	***51.3***	***40***	***75***	***413.2***	***10%***
--	0	0	--	1.4	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0.1	0	--	0.1	0	--	0	0	--	1.6	0%
--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0%
1	1.1	1	***17***	***41.4***	***9***	13	29.6	3	***35***	***83.5***	***12***	***13***	***30***	***9***	***23***	***70.7***	***16***	***5***	***5.8***	***3.***	***8***	***26.8***	***8***	***12***	***28.5***	***13***	**6**	**6.2**	**4**	11	17	7	0	0	0	**144**	**340.6**	**8%**
0	0	0	4	4.4	1	6	27.6	3	3	2.3	0	0	0	0	1	0.5	0	0	0	0	2	3.8	1	0	0	0	0	0	0	0	0	0	0	0	0	16	38.6	1%
--	0.7	1	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	--	0	--	0.1	0	--	5.2	2	--	0	0	--	6	0%
--	0	0	--	0	0	--	0	0	--	1.7	0	--	0	0	--	0	0	--	0	0	--	0	0	--	--	0	--	0	0	--	0	0	--	0	0	--	1.7	0%
--	--	--	--	--	--	0	0	0	3	8.2	1	4	8.3	3	--	--	--	--	--	--	4	7.7	2	3	5.9	3	4	6.6	4	--	--	--	--	--	--	18	36.7	1%
--	--	--	--	--	--	5	46.3	5	0	0	0	0	0	0	--	--	--	--	--	--	0	0	0	0	0	0	0	0	0	--	--	--	--	--	--	5	46.3	1%
--	--	--	--	--	--	--	0	0	--	0	0	--	0	0	--	--	--	--	--	--	--	0	0	--	3.9	2	--	0	0	--	--	--	--	--	--	--	3.9	0%
--	--	--	--	--	--	--	0	0	--	0	0	--	0	0	--	--	--	--	--	--	--	0	0	--	0	0	--	0	0	--	--	--	--	--	--	--	0	0%
11	67.8	44	41	100.8	23	67	237.8	27	79	210.2	30	24	52.1	16	54	115.3	26	14	23.2	13	31	76.7	23	24	58.5	27	15	22.4	14	27	90.2	39	10	53.6	42	397	1108.6	27%

4.1 Shutter Obstruction

Historically speaking, the frontage of shops was equipped with folding wooden doors. Although it is unknown when the wooden doors started to be replaced by shutters, there is photographic evidence from around 1860 showing shutters in *Souk al-Taweel* which are assumed to be the first shutters used in the old city (Photo 2). The use of shutters, which are superior to traditional wooden doors in terms of safety and ease of maintenance, rapidly spread throughout Damascus. It was accelerated by the introduction of modern apartments.

Shutters are hand-operated and rolled into boxes at the top of the frontage when the shops open. The boxes double as signs for the shops (Photo 3). The boxes are made of iron and there is no unity of form, color or size. However, they have the capacity to store a rolled shutter and this makes them protrude around 1m into the street. These boxes hide the arches or arch-type transoms recognized as original factors and as a result, the percentage of transoms is only 4.1 % of the number of all the shop frontages in the street. Moreover, the row of boxes, which are gaudy and not unified, also hide the revealed beams and eaves and spoil the three-dimensionality of the street landscape. These are the most serious obstructive elements in the original façades (Photo 4).

Photo 2: *Souk Al-Taweel* in 1860

Photo 3: Boxes as Signs

Photo 4: Boxes hiding Arches

Photo 5: Iron Door (right)

4.2 Obstruction from Iron Materials and Other Devices

Decrepitude causes materials to change. Doors and window frames that were originally made of wood tend to be replaced by iron (Photo 5). Makeshift repairs of collapsed walls using zinc or haphazard brick-laying is also regarded as an obstruction to the original façade. Even some traditional elements such as *Shurfa* and *Hus* have been replaced with iron or concrete materials. This change of materials must be based on demands for strength because these decorations have an aspect of practical use. However, these synthetic materials are an obstruction that do not match the wooden elements.

There are other obstructions excluded from the analysis in Chapter 3: the jumble of electricity cables on the walls of houses (Photo 6) and electricity boxes and exterior parts of air conditioners. Thick ducts on the walls of bakeries also obstruct the original façades (Photo 7).

Photo 6: Electricity Cables on *Hus*

Photo 7: Duct on Bay Window

In general, it has been necessary to take measures against the strong sunshine in Damascus. Today, people use zinc or even vinyl without hesitation as a material for eaves or arcade roofs. Sometimes advertisements are painted directly on to the walls.

5. Conclusion

The restoration of the original façade of *Qasr al-Hajjaj* Street is composed of the following elements: doors positioned in relation to spatial composition in the floor plan, decorated windows corresponding to the raised floor and reflecting Islamic customs, bay windows as a result of extensions by habitants giving an impression of three-dimensionality to the landscape of the street, and some small decorative and structural elements such as revealed beams or eaves, *Shurfa* and *Hus*. On the other hand, there are some obstructive elements such as shop shutters, iron materials and devices related to equipment used in the shops/houses.

The issue is that these obstructive elements (shutters/iron materials) are so important from the viewpoint of daily use that they cannot be easily removed. Restoring the original façade should be limited to the restoration of appearance in order to balance with the functions that are necessary today. The façade of modern apartments can also be improved using traditional style. What it is important to realize is that the principle is to provide wooden elements which have the same strength and ease of maintenance as iron elements and to prepare individual materials to suit the situation of the façade without just relying on uniform standards. We will need to resolve the issues surrounding budgets and staff. Fusion of traditional craftsmanship and new techniques and materials is also important. These efforts will contribute to habitants improving their living environments by themselves.

6. References

1) Institut Français d'Architecture, *Architectes Français au Sud et à l'Est de la Méditerrannée*, Paris, 2003.
2) Japan International Cooperation Agency (JICA), *The study on urban transportation planning of Damascus city in the Syrian Arab Republic*, Final Report, 1999.
3) Japan International Cooperation Agency (JICA), Ministry of Local Administration and Environment (MLAE), Damascus Governorate and Rural Damascus Governorate, *The study on urban planning for sustainable development Damascus metropolitan area in the Syrian Arab Republic*, 4 vols., Recs International Inc. and Yachiyo Engineering Co.Ltd.,2008.
4) Japan International Cooperation Agency (JICA), Ministry of Local Administration

(MoLA), *The Project for Urban Planning and Development in Damascus Metropolitan Area in the Syrian Arab Republic*, Project Progress Report, 3 Vols., 2010-12.
5) Joan Basquets (ed.), *Aleppo -Rehabilitation of the old city-*, The Eighth Veronica Rudge Green Prize in Urban Design, Harvard Design School, 2005.
6) Kosuke Matsubara, Urban Conservation based on the International Cooperation-A case study of the Qanawat South area, Damascus-, The proceedings of the International Symposium on Urban Planning 2011, Gyeongju, 2011.
7) Kosuke Matsubara, The Works of Gyoji Banshoya in the Middle East and North Africa, Journal of City Planning Institute of Japan, No.43-3, 2008, pp.163-168.
8) Kosuke Matsubara, A study on a Restoration Typed Façade Improvement for the *Qasr Al-Hajjaj* Street, Journal of City Planning Institute of Japan, No.46-3, 2011, pp.691-696.
9) MAM project, *Integrated Conservation & Development- Plan for Damascus Old City-*, MAM, 2010.
10) Marianne Boqvist, *Architecture et développement urbain à Damas de la conquête Ottomane (922 H./1516-17) à la fondation du waqf de Murad Pasha (1017 H./1607-08)*, Thèse de doctorat à l'Université Paris IV, 2006.
11) Michel Ecochard et Gyoji Banshoya, *Plan Directeur de Damas*, Damascus, 1968.
12) Michel Ecochard et Gyoji Banshoya, <Rénovation du centre de Damas>, *L'architecture d'aujourd'hui*, 169 (septembre-octobre 1973) , pp. 54-57, 1973.
13) Nabil.M Quwatly, *Memoire de Damas –photos et commentaires 1850-1950-*, Dar Al-Bashaer, 2008.
14) The City of Aleppo and GTZ, *The Rehabilitation of the Old City of Aleppo*, GTZ, 2006.
15) Ross Burns, *Damascus -a history-*, Routledge, 2005.