

"Omote" and streets: Spatial Affordance or Space Syntax?

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Fig.1 A bird's eye view of Shioiri



Fig.2 An old landowner's house in Shioiri

Density sometimes causes slight differences from established theories of activity in the built environment. We might be able to find some of them if we carefully observe long-lived cultures. Here, Shioiri, an old town in Tokyo, is the subject of the study.

Shioiri – location and history

Shioiri** was located in the outskirts of Tokyo downtown area with the density about 200 people / ha, i.e. 20 thousands people / km², and, as is usual for the kind of location, comprised with 2 storied wooden houses

standing close roof by roof (Fig.1). Shioiri settlement originated from a village of the Edo period more than 300 years ago. In the 10-20 years right after 1923 Kanto Earthquake, Shioiri, and Tokyo, showed rapid expansion according to a survey of the land ownerships¹⁾.

During the rapid construction of Shioiri, former village paths were made into main streets of the settlement, and the 28 landowners individually developed their own pieces of land in each block so that they made up a patchwork of small groups of houses, with irregular narrow alleys and access-ways between and within each property²⁾. Most had been built in order to accommodate incoming workers' families from the central Tokyo, and some were sold to their residents afterward when the landowners wanted to do so. When we visited there, almost 90% of the houses stood on rented ground, and about a half of the houses were owned by the residents and the rest were rented.

Shioiri – observational description

Stepping into Shioiri settlement, one came across the local shrine at its west end. Careful observation on the settlement revealed some old landowners' houses (Fig.2) embedded into blocks of small houses, with barely any remaining green space. Though those small houses looked worn down and sometimes even ramshackle, Shioiri still had some characteristics reminiscent of its high time from about 100 years ago to several decades ago, when it had continued to be full of life after having rapidly grown from a small rural farming village to a densely populated town.

Walking through the settlement meant, for the most part, walking between tenants' houses, and coming across the tenant residents talking and doing various activities on the streets (Fig.3). It was difficult to walk through Shioiri town without getting the smells and sounds of life lived, or without witnessing residents talking or doing daily activities in the streets. These brought a feeling of intimacy that had been repeatedly mentioned in literature. As Kobayashi (1988) suggested of *Shitamachi* area in Tokyo, it might be the layout of the houses where kitchen and living-dining were set in front near the streets and the open doors, that made one feel intimate community atmosphere in the streets and, at the same time, recognize who occupied the area³⁾. Yet, some may be derived from how often people could be encountered in the streets and paths, and how often they started to talk.

The Shioiri study

On an ordinary sunny summer weekend with no special community event, with the help of the members of Shioiri Study Group, I decided to record where we encountered



Fig.3 Examples of activities encountered in streets of Shioiri



Fig.4 Encounter map of Shioiri



Fig.5 An example of integrated and narrow streets in Shioiri

people in Shioiri. We walked down and up the streets and paths in the morning and in the afternoon, in order to count the people we met and record what they did there (Fig.4).

Every 100 meters, we encountered 2-3 persons on average. That seemed quite frequent compared to what we noted in the residential areas in suburbs consisting of 2 storied houses but with less density.

Using space syntax as a test

In the theory of space syntax, Hillier (1988: 71) claimed that "the relation between the pattern of integration", i.e. of the street space, "and the pattern of movement", i.e. observed as the quantity of encounter, "is fundamental to understanding how towns and urban areas work as mechanisms for generating contact". He showed how they relate each other through a survey executed in London, where in street-based-urban areas, integration values were strong predictors of the encounter rates of individual street spaces, and the correlation coefficient he reported between them was very high ($r=.80$).

In order to know how these were related in Shioiri, we conducted space syntax analysis. The correlation coefficient between 'integration value' and 'encounter rate' ($r=.67$) of each segment of a street was high but lower than that of London⁵⁾. This result led us to investigate whether the difference might be attributable to some physical difference between streets in London and Tokyo.

We then analyzed the width of streets, the other physical dimension that indicates spaciousness of each segment of a street. The measurement of the width of the streets

revealed considerable variation from segment to segment. Some of the most integrated streets were found to be quite narrow, at less than 2m (Fig.5). Their narrowness made people hesitant to use them for through traffic, though they offered convenient ways to reach the core of the settlement. On the other hand, some of the least integrated streets were fairly wide, at more than 3.5m. Because they had ample width, they afforded places for middle aged women to meet and catch up on the latest news and gossip, and also afforded play areas for local children in Shioiri, which otherwise had very little open space. The width was included as the second hypothetical significant value, and multiple correlation study showed the correlation be as strong as $r=.78$, almost the same level as London.

Reflecting on the variety of the activities encountered in the segments of the streets that made for the differences, reminded me of the word 'omote'. 'Omote' literally means in front and outside, but it is sometimes used in other ways: "there are your mates chatting in 'omote', or 'do play in 'omote', children." Here, 'omote' often means neither just in front of a house where the speaker is, nor the outside world. In these cases, 'omote' is a segment of street in front that is connected to the public world, but defined not only by a house but also by neighboring frontage. To be called as 'omote', the street segment should be spacious enough and afford various activities, not just be a place for movement.

Many of the streets and paths in Shioiri had come into existence not as master planned totality but through a process determined by the landowners. This led to

narrower streets closer to the core and wider roads in the isolated parts of Shioiri. This incongruity does not exactly conform to Hillier's correlation between street network integration and number of people encountered. Yet at the same time, the nature of streets in Shioiri might be recognized as a significant characteristic that brings residents various spatial affordances for their everyday activities, especially in densely lived areas where people recognize a segment of street as 'omote'.

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** This survey was done before the demolition of Shioiri settlement in 2000. Shioiri is now redeveloped and included in Minami-senju 8 chome.

References

- 1 Shioiri Study Group. Shioiri '95-'96, an intricate space-time (Shioiri '95-'96 kosaku suru jiku). *JUTAKU KENCHIKU*, 255, pp.18-63, June, 1996.
- 2 Shioiri Study Group. *An Interdisciplinary Study of Architectural History and Architectural Planning on Formation and Transformation of a Residential Area in the Outskirts of Tokyo – A Record of Shioiri Town* (Tokyo Shuen no Jutakuchi Keisei to Henyo ni Kansuru Rekishi Keikakugakuteki Kenkyu- Shioiri no Machi no Kiroku). Maruzen Co Ltd, 1999.
- 3 Hideki Kobayashi. *Territoriality in Housing*(Nawabari no Shuju-gaku). Shokoku-Sha, Co.ltd. 1988.
- 4 Bill Hillier. Against enclosure. In N Teymur T Markus and T Woolley eds., *Rehumanizing Housing*, Butterworth, pp.63-88, 1988.
- 5 Yurika Yokoyama. Street structure and human contact in urban residential area – A case study of Shioiri in Tokyo, *MEIRA Journal*, Vol 6 No 1, pp.9-17, 2000.
- 6 Yurika Yokoyama. Human contact and structure of streets in a town. In T Takahashi and Team EBS eds., *Environment-Behavior Studies 'Data – Tools for Spatial Design*, Shokoku-Sha Co.ltd, pp.100-102, 2003.