

Capturing from Human Activities: the Multiscale Formation Mechanisms of Dwelt Environments

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I have done research on colonial and post-national formation of cities and its dwelt environment in Colombo since 2004. In 2011, I had a chance to join some local dwelt environment's design project which tried to open a local tutoring school. Through this experience I realized that the perspective and the knowledge of practitioners is quite different from that of observers. But the necessity of practitioner's knowledge is rarely recognized and its theorization is rare. Since then, as a part of practitioner's perspective, I began to theorize and model dwelt environments. This is an idea that is being developed and any comments or suggestions are welcome.

First let me explain the context of Colombo (Fig.1). The city has a long colonial history from the XVI century, when Portuguese first arrived there. Later the Dutch and then the British came. The present nation state of Sri Lanka was shaped after that. As a result this city retains two types of modernities: one is an early modernity and the other is a later modernity. At first, the early modernity created groups according to religion, within an ethnically divided settlement. Major groups of dwellers were Christian, Hindu and Muslim. Having several religions at the same time, belonging to several ethnic groups at the same time, and intermarriage crossing ethnicity was quite common. This was the first moment of civil society formation.

Later from the XIX century the situation largely changed. Ethnical and racial idea strongly affected the group formation. People had to belong to only one ethnic group which was supposed to be quite different from other groups. Sinhalese people who were mainly Buddhist became the majority at this stage and they changed the city into a Buddhist city (Fig.2).

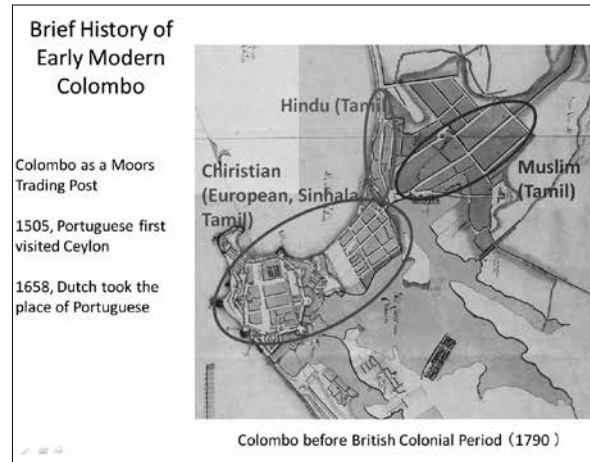


Fig.1 Early Modern Colombo

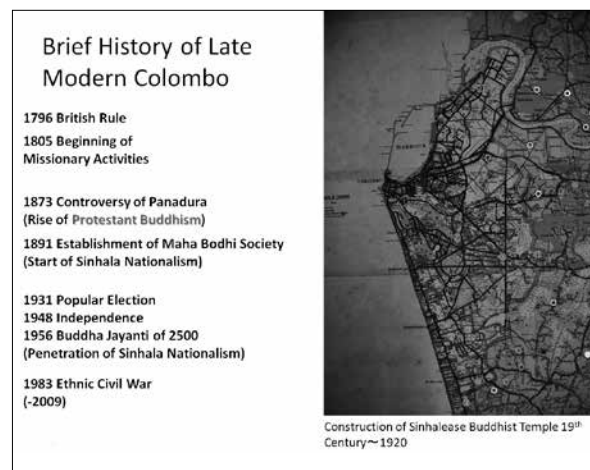


Fig.2 Late Modern Colombo

This early and late modernities coexist in Colombo city today. Early modernity has been maintained through a very broad Indian Ocean network. The historic area which was formed before the XIX century used to be the center of the world during the early modernity period. Late modernity is based on the Nation State power and based on the national territory. The urban area which was newly formed and where the spread of southern words occurred after the XIX century is the domain of the late modernity period.

Late modernity offered the basis for the XX century Nation State building. At pre-independence period, three major ethno-religious groups, Sinhalese (Buddhist), Tamil (Hindu and Catholic), and Moor (Muslim), were shaped and fought each other

for the share of the profit of new Nation State. After independence, conflicts between two major groups, Sinhalese and Tamil escalated and in 1983 led to civil war between these two groups.

But in the historic area of Colombo, people still maintained early modern trans-ethnic relations between the two opposite groups. These relations had to go underground under the officially manifested framework of ethnic collision. Through these underground relationships, trade and some informal activities which were labeled as “smuggling” have flourished in the historic area where I have been doing my fieldwork. These underground relationships offered very good business chances but at same time very risky ones, because through this underground trade arms and drugs have been flowing back into the historic area. As a result, the dwelt environment of the historic area was completely devastated. Under this situation, one dweller and I started this local dwelt environment design project.

To understand, describe and interact with historic area of Colombo, the concept of dwelt environment (also called as dwelling or living environment) which is different from homogeneous universal space is essential. It has a historic and local character and a very concrete shape and dynamism. The dwelt environment is organized through dwellers’ daily activities and at the same time supports dwellers’ daily activities and offers the basis for dwellers’ lives. Turner’s *Urban Dwelling Environments* written in 1969 was a pioneer work about dwelt environments.

But there are also problems. We cannot see the dwellers whose activities make the dynamism of dwelt environment. We cannot see what kind of relations and interactions are there between physical aspects and social aspects which Turner showed as major elements configuring dwelt environment. And Turner only treated dwellings. We have to treat a system of lives of people totally. Then we can find and incorporate adequate activities or facilities into the system. Today we first need to theorize dwelt environment in a contemporary way. Since a human and his/her activities are the organizing and driving force of dwelt environment, we would better situate a human as a basic unit and a starting point of dwelt environment. And we would better go back and start from human environments because the dwelt environment is some specially organized type of human environment. This is my provisional definition of human environment which prepares a path to the definition of dwelt environment. Human environment is a system where human and world’s interaction occurs. It consists of human, things and words (symbols). Krippendorff, 2005 and Latour,

1999 are quite helpful in expanding human environment understanding to dwelt environment.

When we see that one of the needs for thinking about the idea of human environment and dwelt environment came from reflections of urban development practices, we need to put the provisional definition to practice, check its behavior and refine it in comparison with our experience. From now, sharing my field observations and participations, let us see how this interactive system between humans, things and words, namely human environment, can flexibly grip the complexity and dynamism of our world.

When we focus on this human environment which is organized by human activities, in the historic area of Colombo, we can observe specific spatial hotspots where people gather and happenings concentrate. Hereinafter we will call these hotspots “places”. We can observe places of work which are “wholesale markets”, places of belief and prayer which are “mosques”, places of dwelling which are “lanes”, and places of adjustment of various activities which are “teashops” and “sets” which shaped around teashops (Fig.3 and 4). Characteristics of places are different from one to another. Each place has its own historical trail, criterion and function. Places had changed together with changes of dwellers’ activities.

These four kinds of places have their own central activities and criteria. Each kind of place also has its own local, Colombo-wide, Sri Lanka-wide, and Indian Ocean-wide network based pattern. Due to differences of activity, criteria and network pattern, each kind of place has got influences from not the same political, economical, religious, cultural or technological elements in not the same timing and has changed tracing different historical paths. At the same time these four kinds of places are loosely connected and interacting with each other. Assembly of places generates locality of urban landscape. Urban landscape transits with these places’ connections and collective changes.

At places, many persons gather and bring many topics on happenings from various places to converse with each other. We can find that dwellers come and go or stay some time, like in this teashop, and have small conversations. Through a conversation on a topic between persons, different recognitions are exchanged and coordinated. Socialized recognitions appear from conversation, and are brought out to other places. Topics that people bring, converse and bring out differ from one kind of place to another kind of place owing to its activity, and network.

These four kinds of places correspond to ma-

major activities which comprise dwellers' everyday lives. Adjacent particular places of four kinds are forming one set (Fig.5). Dwellers' everyday lives are maintained by this set of four kinds of places. Persons come and go between places. Each person spends one's all time of the day as a succession of staying at places and movements from one place to another. A set of four kinds of places comes to be interconnected through persons' constant movement and forms a relative stable network between these places. Through this relative stable network of four kinds of places, interconnected transition of different kinds of places occurs. The extent of the network of four kinds of places corresponds to the specific extent of several blocks. This is the extent of the dwelt environment. Among four kinds of places, a teashop has remarkably concentrated numerous coming and going of persons. Additionally, different from other places, all kinds of topics are brought to a teashop. Through dwellers' movement between one teashop and another teashop situated in another dwelt environment, a network of teashops that connects neighboring several dwelt environments is formed. Topics and their recognitions fluctuate through this network.



Fig.3 Places inside dwelt environments



Fig.4 Places inside dwelt environments

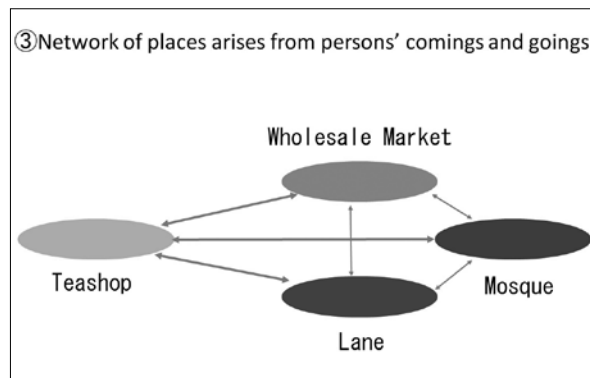


Fig.5 Set of interconnected places

In addition to short-term connections of persons intermediated by places, there also are invisible but more stable network of human relations that arose from personal or family long-term accumulation, selection and enhancement of short-term connections between persons. The term spans several years, decades, lifetime or several generations. For example, this is a genealogical network of one family (Fig.6). Some families keep this kind of genealogical charts called "Paranbalym". This kind of long-term human relations which accumulated inside a person or a family is popular and existing everywhere. Here after, we call this "縁 En".

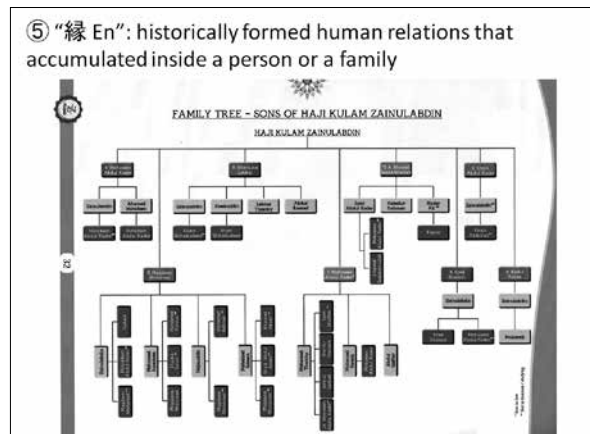


Fig.6 Historical accumulation of human relations

Family genealogies emerge from lanes which are the major seats of families but not bonded to particular places. Once shaped, it is rather free from the spatial order.

Not only families but also rather tightly networked organizations such as mosques or business associations are also keeping this kind of stable human relation networks. And this kind of relationship has also been influencing the dwelt environment formation. The expanse of "縁 En" is usually wider than that of gatherings of neighboring dwelt environments and often as wide as South Asia, Indian Ocean, or the globe.

If we consider this understanding that the dwelt

environment is a network of places of mutual influence which is augmented by human relation networks free from specific places, we can imagine that when we add one new place to the environment, a new network, and a new system of places let a new dwelt environment appear (Fig.7). So if we can manage this process we can offer new bases of lives for dwellers. This must be one practical way for influencing local dwelt environment formation.

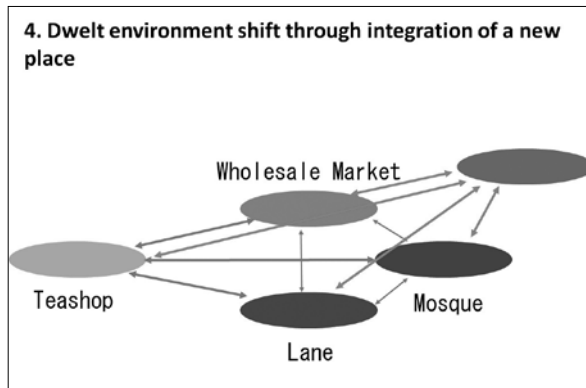


Fig.7 Emergence of new dwelt environments

By happening, I came to start this local dwelt environment design project with one dweller Z.

Once I participate in the area as a practitioner who lives his daily life here, local dwelt environment appears as fluctuating existence which has many possible shapes at one time and dynamically unfolds with practitioner's action and choice. Based on this experience, I will describe intertwined unfolding of design activities and local dwelt environment.

Local dwelt environment history offered an useful starting point for local dwelt environment design. First, based on our research on local dwelt environment history, we extracted resources and problems to verify the present situation and discussed what kind of activities and facilities are desirable for the area. Then we decided to open a local tutoring school which supports children's school education and at the same time transmits the local memories to the next generation.

In 2011, connecting Colombo and my place Kyoto by social media and international calls, we started to discuss the tutoring school project.

Z offered his house in a lane as a site for the project. This lane was formed by squatting. We can see several groups of relative dwellers' houses. These house groups are shaped by matrilineal inheritance. Cooperation between relatives has supported their lives (Fig. 8).

I could use a plan of his house drawn during previous research for starting point. Using the plan,

my work started from checking physical situations which relate to the project.

As the picture, the house where Z lives is a very small brick house with only one floor. Three rooms form a line. Front room faces 2m wide narrow way. Z and his wife Fr and two children lived in a second room and 4 members of family of R who is the elder brother of Fr and C who is the auntie of Fr lived in the front room. The owner of the house was the mother of Fr. As a rule, Fr was the future successor of the house. R family and C who were borrowing a front room would live here again after renovation.

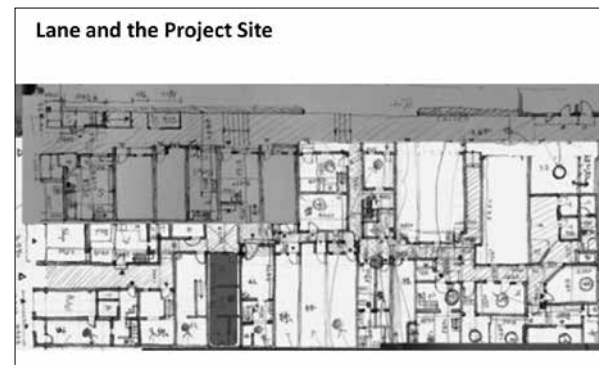


Fig.8 Lane and the project site

We decided to add minimum alteration to existing lives of these three families. So I started to seek ways to add a new upper floor for tutoring school while keeping the ground floor with minimum alternation. For trial, I applied Reinforced Concrete (here after RC) structure which is popular in Colombo for the upper floor. But the plan at this moment had less relation with the actual situation of Colombo. It was no more than a set of tentatively drawn lines.

Next year when I arrived at Colombo, Z and I immediately made complementary researches.

Then, I drew a new plan for the tuition school reflecting the accumulated knowledge from these researches (Fig. 9). In this revised plan, we can see RC pillars standing adjacent to existing walls at intervals of carpenter's usual scale (Type 1, GF Plan of Fig. 9). I also drew other various plans and checked impacts of each plan type on existing activities and upper floor usage (Type 2-A~C of Fig. 9). In parallel, Z and I visited local schools and other places and consulted about our concept, education program, management system, and etc. Possible shape of the tuition school which was connected to certain physical situation, local construction method and educational conditions were made through these works.

I shared the plan with Z and Fr who would be the future owner of the house and exchanged our views on the tutoring school. Through discussion

their dreams participated into and intertwined with the tuition school project. In short, a private toilet and a ventilation void for the kitchen were added (Fig. 10).

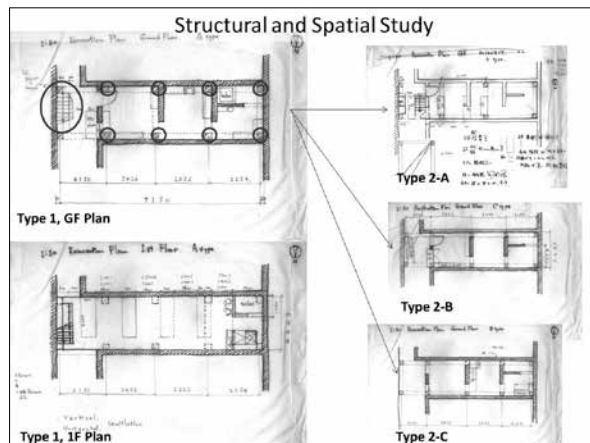


Fig.9 Structural and spatial study of the project

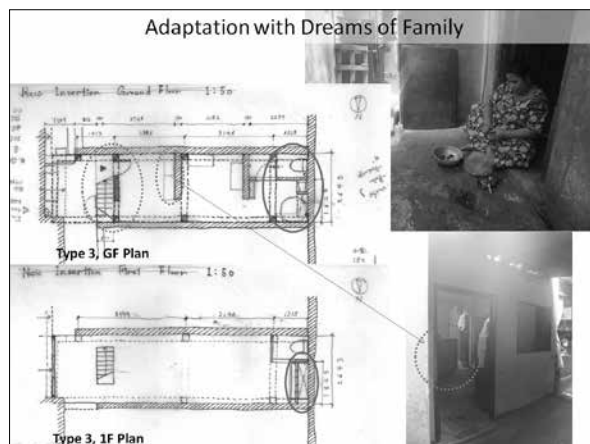


Fig.10 Adaptation of the project after discussion with the related family

I got a quite valuable recognition on dwelt environment here through this design practice. Z said he can move the front wall to inside and put the staircase there in exchange for his cupboard. There was a large cupboard on the backside wall of the front room put by Z family. He said the cupboard's space is belonging to him and is exchangeable. "Occupation" of a place by thing is one of the basic strategies for life in the lane. When we turn our eyes, we can find this occupation everywhere. These are a clothesline on the wall, a roadside chair, stall and etc. Occupation was widely practiced around here for generations. Everything which configures the lane is not mere physical object but it has its own history and tale. Through arrangement and manipulation of things which come together with their own histories and tales, relationships between families are negotiated and adjusted in and around houses. They are physical elements and at the same time

elements which generate local social order.

At this moment, the situation around tuition school became rather clear and only staircase location was left as a withheld matter. We studied several possible positions. At the same time, since it had relation with R family's life and the C's life, we consulted with R family and C.

Z thought that other than the tuition school, installation of private toilet is also profitable for R family and C too. But here emerged one problem. R and his wife A never objected to the tuition school. But on location of the staircase, R and A assigned opposite side of the narrow way as the only one possible site. It was a site where a kitchen put by A existed (Fig.11). Because of the narrowness of the way, putting a staircase was impossible without shifting the kitchen. R and A suggested that to shift the kitchen represented more rewards than the real need of a private toilet.

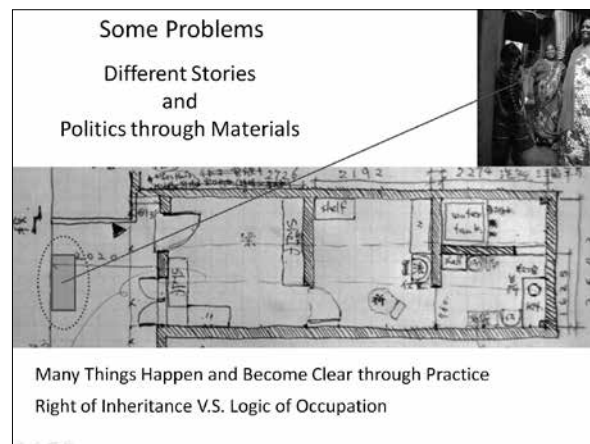


Fig.11 Problems that emerged after negotiation

Z and also I felt it is not reasonable and asked mediation to other relatives, mosques and "savan" where local influential persons gathers and have dishes to maintain long term network. We also visited teashops. But the kitchen matter was never solved. Now, the kitchen and its land became the focal point and a schema in which A's right for occupation and Fr's custom of matrilineal inheritance conflict suddenly emerged. The tutoring school which needs a staircase for the upper floor was wafting in the air. The tuition school project seemed completely got into a blind alley.

At that time, firmly anchored kitchen matter unexpectedly solved. Rz who is the close friend of Z approved the tuition school project and offered to lease upper space of his house for some years (Fig. 12).

Luckily, Rz's house was in front of the Fr and Z's house. Z and I could make a plan which connect upper floor of Rz's house and Fr and Z's house and

situate a staircase at RZ's house side. So now we could physically avoid the Kitchen matter. A physical path also became the path to realize the project (Fig. 13).

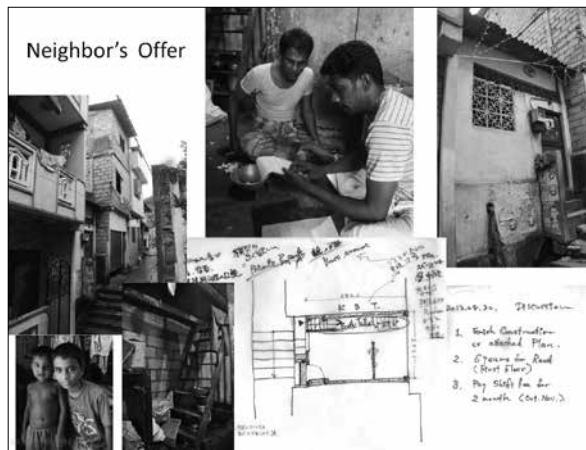


Fig.12 Alternative solution to the original proposal

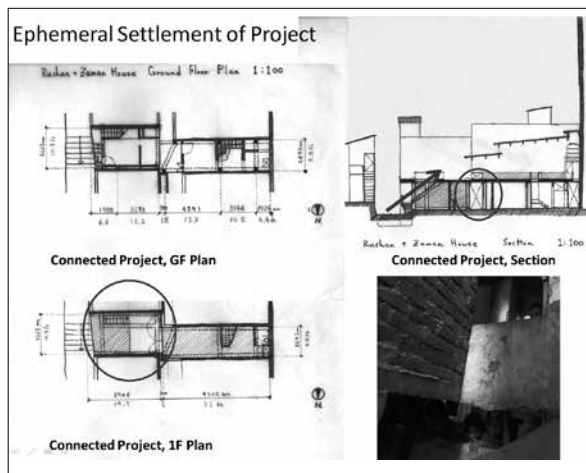


Fig.13 Revised proposal

At this time, dwellers of the lane accept our project and started to say their wishes. Because of the kitchen problem when we had to visit many places the tutoring school idea gained acceptance. Although the tutoring school was still not realized it seems that in the imagination of dwellers as an emerging new place.

In conclusion, this cooperation between RZ and Z and I was not realized. Then we again had to return to the kitchen matter and we suspended the project.

The kitchen matter was solved after more than two years. Z and Fr kept negotiating with R and A and they somehow reached to an agreeable conclusion. So this tutoring school project is still ongoing and from now we are going to start construction work.

Through this experience, I am provisionally assuming that addition of a new place to existing set

of places and integration of the place into existing network of places progress through the five phases as written in my paper.

Then what kinds of relations are there between the plan of the project and dwelt environment? As conversation with dwellers proceeded and the plan of the project was revised, the plan came to be intertwined with dweller's realities. And at some moment, a shareable image of the new dwelt environment emerges. So, this plan is just part of the imagination but we can say it has existence, it is not materialized but exists. From this moment new dwelt environment start to emerge (Fig.14). Transition of the plan and dwelt environment progresses interactively as long as the dwellers' imaginations and practices persist. Not only one but other plans are also keeping possibilities of emerging. During a design process the dwelt environment is fluctuating and having several possible figures.

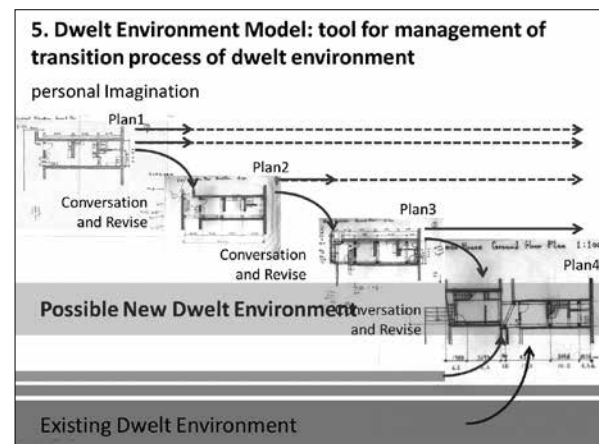


Fig.14 Dwelt environment transition through design activity

In the process of change of a project, there are also influences from and over long term human relation networks.

I would like to clarify the interactions between projects, physical places, network of places, and non physical human relations (Fig. 15). This will offer a transition model of dwelt environment through a design project. The dwelt environment transition model is useful for ongoing dwelt environment design. It is also useful for an assessment of the project. A view point of promoters of the project on dwelt environment transition is one-sided. And in the world of practice, as in my case, some happenings or problems occur without exception. We could have make better relationship with R and A family by other way. No project can be perfect. It must be more so in dense and fluctuating informal condition. Checking the project critically from diverse dwellers viewpoints is needed at every moment. Finally, The model also offers a case

of dwelt environment design from which we can extract transferable methods for environmental design. This should be discussed in trans-disciplinary manner.

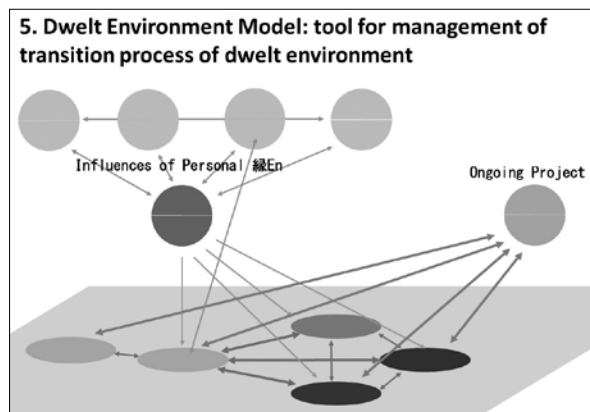


Fig.15 Dwelt environment model

Questions and Comments

(Sacko OUSSOUBY) I have two questions. You were discussing the human relations there with reference to this Japanese word “En”. I think it might be better to use their own words. Because I think that human relations have been already defined in culture, and might be different from what you calling “En”. So what I would like to know is how they call it and how they define it there. The second question, in your presentation you have mentioned in several occasions the mosques. I guess a large number of them are muslim, right? I think in their process of building mutual support, religion has an influential role, even in terms of neighborhood formation. So, among the activities and places you mention, I think the mosque play a very important role. How do you see the role of religion on building these relations?

(Kyota YAMADA) Your first point is very important, and I completely agree with you. In Sri-Lanka, Sinhalese people call it “Karma”, a Buddhist word. I use “En” because this kind of concept is broadly shared in South Asia, Southeast Asia and East Asia, through the historical interactions occurring in that area. I tried to extract a bit more general concept. But I agree with you that it might be better to use the local word from their viewpoint. About the mosques, indeed they are quite important. Actually the kitchen matter was solved through the Islamic channel in some sense. After many discussions, finally Z, Fr, R and A agreed to close the problem by paying money and removing the kitchen. But they don’t have money because it is not a rich place. At that time, through Islamic relation-

ship and the relationship with relatives working in Gulf countries who kept contact with local people, they have found a channel to collect *Zakat* (donation) that would allow the removal of the kitchen. Mosques are very important for muslims. At the same time there is also a daily muslim or vernacular Islamic world. Through this latter channel this project progressed. Initially, we also tried to consult with some *imam*, an Islamic teacher. But here the situation is complicated because the dwellers mainly came in from South India and they have a custom of matrilineal inheritance. But in Islamic law male inheritance gets more importance than female. We chose the safe side and abandoned this channel. This is a squattered area, thus, there is no official or formal law on the right for land. The rights are historically decided, who came first and occupied the area is important. In the physical organization there exists this one rule. Another rule is that in South India inheritances, female have rights. When conflict between these two rights happens, like this kitchen case, unpredictable negotiations are needed to solve the problem. I don’t know how this type of case progress through formal Islamic channel. But conclusion seems similar. This type of cases that I know all closed by paying money.

(Sacko OUSSOUBY) Thank you. That is why it is very important to use the local word. And it is very interesting what you say that they are using a Buddhist word to define the relationships at the same time that they act like a Muslim community. So as you say of course like, even in my country, a lot of Muslim communities are not mainstream, as you say. I do not know if we can use that word, but so as you say it is vernacular. I don’t know if vernacular Muslims exist but you can perhaps use that expression. But it’s very important to point out the different habit’s rules. For example if you go to Mauritania or even in Mali, in the Tuareg people, women are the center of the house, of the family, because men are considered to be outside people. So the kitchen belong to women. In a lot of societies not only there in Sri Lanka, but even in African societies it is like that. So even in Japan, I don’t know if the kitchen belongs to women, but somehow they control it. Also in your kind of research, as you are saying what is formal or informal? If it is not formal, just an occupied area, as far as they occupied there it is better to leave them administrate that by themselves. But in this kind of context maybe although it might be informal, maybe for the dwellers themselves as far as they are living there they are formal for themselves. And perhaps you could analyze the situation within that context.

(Kyota YAMADA) Yes, I almost agree with you. And I apologize to use that word. I may should consider other word. On informal, I just use the term to describe legal or institutional situation. It has no relation with value judgement. If something is existing inside of the scope of present legal or institutional system, I call it formal. If something is existing outside, I call it informal. Anyway, I think we have to think again back if that decision to move the kitchen was good or not. So for that purpose to make a model of the dwelt environment is very important at this time, as we can trace back how the dwelt environment changed in relation to that project. Some practices are very complicated with good points and problems. If we see the same situation at another time or from another position the good points may change into problems and the problematic points into new possibilities. I want to make another proposition that consider this kind of changes. As a practitioner sometimes we keep only one strong viewpoint but there are many people and viewpoints involved, and many different interests. So my aim is to search for the possibility to have multidimensional viewpoints of dwelt environments.

(Sacko OUSSOUBY) Sorry again, but just a last one. So how do they call kitchen in their language?

(Kyota YAMADA) Um, sorry I cannot remember now.

(Sacko Oussouby) Because I did almost the same. I did research of informal sectors in Mali and then I based my research on the kitchen because the kitchen for them means family establishment. So I started from the kitchen. Once they make two or three kitchens it means that the family split and became a multi-family dwelling. So it is very important to know the name of that kitchen, as far as, you have to remove it. I think you have to see what is that name and which meaning it has for that society.

(Kyota YAMADA) I have to check the name, but one very interesting thing is that we can question: was it a kitchen? I mean it was just a small “cup-board”. But they found the chance on a thing they put there: “Oh it is a very good chance to get some reward”. They started to use that place as kitchen because kitchens are very important. In this society people can not touch other people’s kitchen too. So they turned that into a kitchen, after this discussion began. This situation is very interesting and complicated. That process I also want to record for future learning.

(Sacko OUSSOUBY) It is very important that you define kitchen “maybe it is a kitchen”. That is a very important point because we don’t have to define things in the same way that they want us to learn as modern architects. In Mali I did the same, in my definition once they put things to make food or if they use that space to cook it becomes a kitchen. So it doesn’t matter if it has walls or not but it could be a kitchen.

(Kyota YAMADA) Yes, in the beginning it was not a cooking place, but the place where they kept some cups and plates. But later a gas table came and then they started to make some tea for selling and then suddenly it became a kitchen. This case can be understood as you mentioned. I think there can be another possibility for this case. Dwellers of metropolis Colombo are experienced and tough. Dwellers sometimes use even the most basic thing like kitchen for negotiation. In my case, a series of actions systematically made to construct one of the typical local stories which can derive rewards. This kind of negotiation at semantic level is not uncommon. There is no one who can set a clear and absolute ethical answer. I think we have to create relative and sharable measure of ethics through interactions. I agree that we need to know the name and ordinary position of kitchen in the society. But instead of giving unchanging character to something by giving name, I understand the name, kitchen, as a temporal label for some event whose actual situation is always changing through participants’ practices. By interactions with humans, things and words through participants’ practices, participants find and create many things. Ongoing events are dynamically changing with these new findings and creations.

If we can describe this ongoing transition process of event beyond ordinary meaning of given label, our description will be a reliable starting point for people who live with practice. Even though, practitioner’s view point cannot be sufficient. To comprehend, make shift and evaluate the local dwelt environment, we have to understand A’s own perspective with the same.

(Ana TOSTOES) Concerning the kitchen, I would like to know if you think that kitchen is connected to fire or not? You know in memorial times all around the world the place of cooking was the fire and in the Mediterranean culture, it is related to a God “Lar” (Roman God), which relates to the house, kitchen, home and the place where is the fire. So it means that there is a community around the fire who can survive. I would like to know if in

your research concerning the dwelling in Sri Lanka is there this relationship with fire and with your knowledge also if you have an idea concerning this element?

(Kyota YAMADA) Yes the fire is very important because we have to eat everyday so of course the fire is situated at the center of people's lives. Without fire, you cannot make a house. In the world of occupation, people start from putting small chairs, tables or other private things. After chairs, things which can cover human body like a chicken house or a shed appear. They gradually develop their environment. This is a trial period. They look how the state goes while increasing the use of time and stabilizing the situation. During this trial period, neighbors recognize their occupation. These things are relating to secondary and temporal activities of life so they are sending tacit message for an excuse that period of their occupation is a little while. So these structures are not a house at this moment. But situation drastically change at the time they bring a portable cooking stove into their temporal structure. This activity itself is not noticeable so quietly completed. But this place changes to become their base and a tacit message on the condition of occupation turns to permanent from this moment. So I agree with you that fire is a critical element when we see the transformation of a place that changes into a house.

(Akiko OKABE) We worked in another project together and today I was quite surprised because we have a very similar approach in informal areas. I didn't know that during the five years we were together. Thus, I would like to make only a simple question: you mentioned about teashop, lane, mosque and the wholesale market and about their mutual relation. Is there any hierarchy among these four points? And the location of teashop is related to some kind of specific conditions?

(Kyota YAMADA) They share no hierarchy. Each place is very different, and carries on rather independent activities. People's going and coming are connecting these four places. But when connections become weak those places start to develop their own way and change their direction. Teashop can be mainly found at junctions or some places where people frequently come and go because the flow of people provide a chance, or opportunity to start tea selling business. Then that small business becomes a teashop, so first they read environment to find the best possible place which is good for business. So

yes the teashops have specific locations.

(Akiko OKABE) Is there any relation with the house behind? Because I imagine that the house behind is important or maybe is the origin house of the family?

(Kyota YAMADA) Some places like a lane have many family members. That kind of place frequently have teashops in front of it. In this sense there is a relation. When we see who is doing business or who is owner, the person in the back side building has relation in some cases. But it is not always. Since the right of occupation belongs to the first comer. People who first found a possibility of the land become a occupant. Of course neighbors have advantage because they know their surrounding environment better than others.

1.This topic is first presented at "Islam and Multiculturalism: A Fundamental Research Project for Constructing Symbiosis with Islam", Asia-Europe Institute (University of Malaya) and Organization for Islamic Area Studies (Waseda University), Kuala Lumpur, Malaysia, Dec. 2013 under the title "Connective Architecture Project in Colombo, Sri Lanka: Tution Construction and Dynamisms of Living World". For further reading, please see山田協太 2016. 「コロンボ(スリランカ)下町での地域学習施設開設プロジェクト—日常のデザイン行為から地域居住環境を考える」, 谷川竜一, 原正一郎他編, 『相関地域研究 第3巻 協奏するジャスティス』, 青弓社, pp.186-211. and Kyota, Yamada 2017. Vernacularization of Architecture Planning: Towards Basic Theory for Dwelt Environment Design, in Rajapaksha.Upendra, et al (eds), Proceedings of the 10thInternational Conference of Faculty of Architecture Research Unit (FARU), 2017, University of Moratuwa, Sri Lanka.

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