

Study of Javanese Social Behavior in Java 2006 Post Disaster Housing —A Spatial- Activity Pattern Analysis Approach—

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Social behavior Dwellings Activities

1. Introduction

Post disaster housing reconstructions without sensitivity of the local culture had resulted in rejection and misuse of ill-designed dwellings. As a dwelling, the house is not merely a shelter; it is an actualization of meaning. For Javanese, a house is living environment that represent the philosophical concept of the society itself. In early stage of Java 2006 earthquake recovery, we found 'guest area' phenomena in temporary tents and house (Fig.1a and 1b) although their needs of functional room (bedroom, kitchen, etc) are not fully accomplished yet, the importance to facilitate social interaction is express and actualizes in the 'guest area'.



Fig.1a and b Guest area appearances in temporary Java post disaster dwellings

There had been studies on how social behavior influence Java traditional dwellings morphology (Tjahjono, 1989; Revianto, 1997) and present dwellings (Yoyok, 1993; Yulyta, 2008). Although there are cultural changes, apparently social behavior still have influence in Java dwellings. In present study, physical data on Java 2006 post disaster housing as well as residents' behavior are interpreted in the emphasis of personal-social interaction activities which not only forms a physical boundary in the house but also creates and reinforces psychological boundaries in human relationships.

2. Research Objective

Objectives of this research are: (1) To know whether social behavior is really an important aspect of Java dwellings and(2) To know what basic values of Javanese social behavior that need to be facilitate and how is it provided in the spaces and activities arrangements.

3. Research method

Residents' activities pattern was investigated as it can be 'the most useful entry point' for relating culture with the built environment (Rapoport, 1969). The approach used is by analyzing personal-interpersonal activities relation to the spatial development and behavioral adjustment for satisfying social interaction.

3.1 Survey Procedures

Two integrated surveys were taken within 2 years in order to see the development of temporary house to permanent house (Table 1 shows surveys details). Data obtained through questionnaires and in-depth

interview with the residents in field with Gadjah Mada University volunteers help. Each team consists of 2 people, one person was asked to sketch the house plan while the other interviews the resident.

Table 1 Details of Java 2006 post disaster field surveys

Remarks	1 st survey	2 nd survey
Area	3 sub villages (Ketonggo, Manggung and Tegalrejo) at Bantul, Yogyakarta, Indonesia	
Time	Nov.-Dec. 2006	Nov-Dec. 2008
Respondents	36 people	33 people (same people from 1 st survey, some moved)
House type	Temporary house (usually bamboo/wood structure)	Permanent house (usually concrete structure, but from 33 data, 9 residents still live in both temporary(wood) & new permanent structure (concrete)
Data achieved	a. Background b. House plan: room space, size, and connections c. Space usage - Personal activities (<i>personal needs, entertainment, work and household routines</i>) - Interpersonal activities (location and behaviors in accepting different guest) and frequency.* *only asked in 2 nd survey d. Cognition of space (front/back, hidden/seen, public/private)*	

3.2 Data analyze methods

● House plan

Temporary and permanent house plan were analyzed with the process: categorizing the space pattern; examine the size and room number expansion and examine the space modification.

● Space usage

Location and behaviors in accepting guest were asked based on interpersonal relationship level includes; stranger, acquaintance, neighbors and close friend/relatives.

● Cognition of spaces in dwelling

Residents were asked to name the spaces in their house plan and then rank it based on their cognition of public/private. Ranks were analyzed later in 0-10 point scale. Front/back and hidden/seen cognition were acquired through in-depth interview.

4. Research results and discussion

4.1 Importance of social interaction and guest area

From 2nd survey, 95% residents values traditional social behavior. Accepting guest activities in the house occurs 41% for everyday occasions and 90% residents involved in community gathering and accept large gathering guests in their house.

In the 2nd survey where both temporary and permanent structure are currently use by the residents, guest area is one of the earliest function that move to permanent structure (Fig.2). Expansion

from temporary to permanent houses indicates the need of guest room increases by 5 times its original size and 3.6 times its original total room number (Fig. 7). However, total bedroom number is the highest which indicate a high need of private space though its average size actually decreases (Fig.7).

4.2 Cognition of spaces in dwellings

Cognitions of public/private, front/back, hidden/seen space are much related with the arrangement and allocation of 'self' (personal) and 'other' (interpersonal) space (Fig.4 and 5). Space pattern development also showed the existence of these spaces in simplest condition (Fig 3).

- Accepting guest and privacy gradient

'Stranger' guest accepted in formal guest area where 'closer friend or relative' can be accepted in either guest area or lesser formal family room. This condition is relevance to resident's cognition of public/private space which indicate the closer the interpersonal level is, the more penetrate the guests to private space (Fig.4 and 6).

- Sexual Segregation

Meeting with others in the front often associated with males as house representative whereas female domain is inside and back part of house (Revianto, 1997). Results shows that woman also accept 'woman very close friends/relatives' in kitchen whereas man only in guest area. For accepting opposite sex guests, usually at formal guest area and accompanied by the partner (Fig. 6).

5. Conclusion

Spatial development from temporary to permanent housing show that guest area is an important social interaction space to be provided in the house. Cognition of spaces are related to needs for 'self (private)' and the 'others(social)' spaces and how it is interrelated in spatial arrangement. Privacy gradient of various interpersonal level and sex segregation were use to differentiate the location and behavior in accepting guests.

Social interaction is evidently important in Javanese dwellings. It is necessary that even in constraint condition such as temporary post disaster housing to consider social behavior importance as culturally sensitive design for reconstruction recovery.

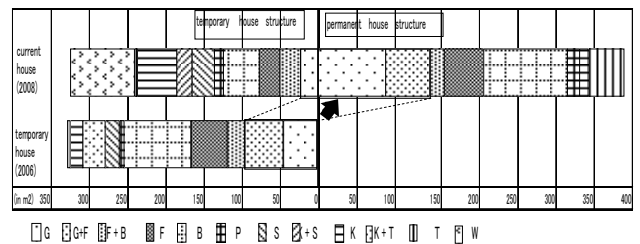


Fig.2 Size & function changes in Java temporary-permanent lived in house

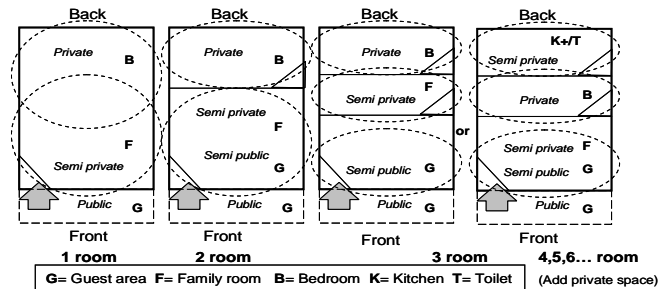


Fig.3 Development of private/public space pattern

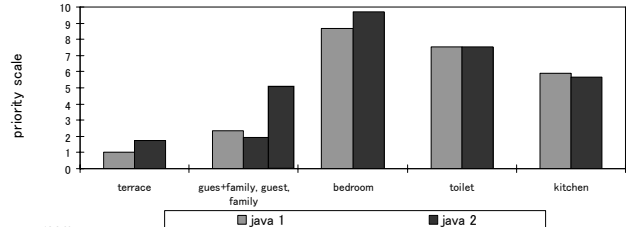


Fig.4 Private-public space cognition in Java and Japan case

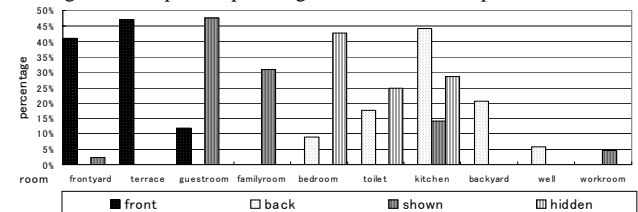


Fig.5 Spatial cognition and preferences in Java case



Fig. 6 Acceptance area of woman guest by husband and wife in Java case

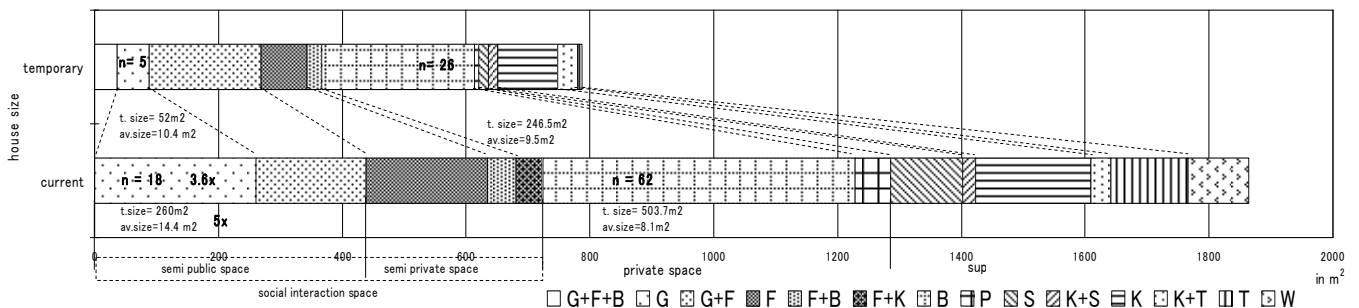


Fig. 7 Total size and room number expansion from Java post disaster temporary to permanent house

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