

SHORT ESSAY

THE CASE FOR OBJECTIVE SOCIO – SPATIAL STUDIES IN THE MALAY KAMPONG HOUSE

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Social and spatial studies have tended to be investigated in isolation. Just as anthropological studies discuss the interaction of society in space from a sociologists perspective and urban morphological studies consider the physical characteristics of urbanity from an architect or planners perspective, the ability to understand the correlation between space and society (and vice versa) is a field of research that Bill Hillier and Julienne Hanson of the University College London deem to have warranted further consideration. They have found that the *spatial measure of how integrated or segregated a particular space is within a building or a settlement is a powerful predictor of how lively or quiet it is likely to be* (Hanson, 1998). Their more objective means of assessing the built environment through the likes of justified access graphs and axial maps by way of example have revealed quantifiable social patterns and behavioural characteristics encoded within the urban fabric and have thus provided a certain predictive theory as to a place's successful social and spatial integration. In an age of accountability and justification, this is particularly important. The creation of *successful places* is a relatively intangible concept – a qualitative approach that could be deemed subjective and reflective of an individual's experience either as an *actor* or *spectator* within space (Sennett, 1976). The design of interior and exterior spaces can however be further defined and substantiated by using Space syntax as a quantitative means of predicting patterns of pedestrian movement, from urban and architectural morphology.

Space syntax has proven that spatial configuration correlates powerfully with aggregate pedestrian movement and can explain its variance in different locations, be that in urban or building spaces (Hillier et al 1993, 1987, 1983; Peponis et al, 1989; Read, 1999). It quantifies aspects of social pattern without reference to the individual's motivation, origin / destination, land use or density, scale, height and massing or other prompts that may bear influence. In so doing, it provides a mechanism for a predictive theory of mass movement based on rational choices of the individuals' spatial cognition. Pedestrian movement has similarly been found to correlate with spatial integration (i.e an area's predictability through one's perception of space), which in itself is correlated to the degree of *intelligibility* of an area. Hillier identified the intelligibility of space as the correlation between global and local spatial measures (i.e the integration of primary and secondary

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routes and the pedestrians' cognitive understanding of the space). The greater the spatial integration, the greater the potential for main integrating axes to be frequented by pedestrians; and in turn the more intelligible the spaces / axes. Conversely, as spaces / axes become less intelligible; the correlation between spatial integration and movement is compromised, resulting in the axes potentially being sparsely frequented by pedestrians.

Axial maps and justified access graphs are the tools of space syntax from which integration and intelligibility of space can be measured, and in so doing highlight the effectiveness of how quiet or busy / passive or active a place may be. We can thus start to glean an insight into social behavioural patterns that are supported by more objectivity that would potentially have been otherwise exposed to a certain amount of conjecture and subjective interpretations fettered by socio- cultural influences or historical (mis)representation.

Hanson's studies of English farm houses between the 17 -18th centuries aptly demonstrate how such an objective approach to what has historically been within the realms of more subjective analysis can highlight how the building typologies physical similarities do not reflect encoded socio-cultural patterns. Hanson was able to demonstrate that, through justified access graphs analysis, the parlour's changing spatial measures of integration within the farmhouse reflected fundamental social changes in the role of the Woman within the household over a 200 year period. When the parlour was at its most integrated, it spatially demonstrated its greater level of connectivity to the other parts of the house and consequently its greater usage. It also demonstrated the Woman's more integrated social role within society, particularly as the parlour's adjacency to the living area allowed the Woman of the house to entertain. However, political change and puritanical attitudes of the 17th century saw the parlour re-positioned to a more spatially isolated part of the house. Such a degree of spatial isolation resulted in lower measures of integration and therefore connectivity to the rest of the house. In the same instance, it demonstrated the explicit and implicit social control of the Woman within the household and within society respectively. Such a study demonstrates how *many cultures' dwellings take on a dynamic aspect, growing, partitioning and eventually fissioning and re-forming, in a cyclical pattern dictated by the evolving composition of domestic groups...as the compositions of the dwelling group changes, the use of rooms may change, or rooms are added or demolished accordingly* (Hanson, 1998).

The ability to draw a correlation between spatial configuration and social behaviour and in turn movement can thus provide a starting point of firstly understanding the spatial programme of historical residential typologies and their adaptation to changing societal need; and secondly act as a design tool in optimising spatial layouts that respond to present and future societal

needs. Such socio-spatial analysis through justified access graphs has allowed us to balance the environmental design parameters with these social aspects within the design of the Idea House – the first carbon neutral house in South East Asia. Basing the design on the traditional Kampong house necessitated studies of the traditional Malay *Kampong*, through to the modern day Malaysian house. These were made to assess spatial configuration and therefore the social implications of room programming in order to quantify social needs of the typical Malaysian family within the end built product.

The Idea House's primary objective however is the creation of a prototypical house geared toward zero carbon tropical living. To this end, the social - spatial research into the traditional Malay house can take this further. KALAM's data base of Kampong houses could facilitate further socio-spatial analyses in a vein not dissimilar to that undertaken by Hanson in the study of English farmhouses. Perhaps the findings will be able to confirm social intricacies within the fabric of the structures that would have otherwise been left unnoticed and pave the way to creating more socially responsive dwellings in Malaysia.

References

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Biography

Jason Pomeroy is a Director of International multi-disciplinary design practice, Broadway Malyan. He joined in 2005 to support the cause of sustainable tall building design and vertical urbanism and employs these skills in both practice and the lecture theatre. His research at Cambridge considered the notion of the tall building as a vertical city and the sky court as an alternative civic space for the 21st century, within the sustainable mixed use tall building typology. He continues to pursue this vein of PhD research. In addition to co-directing the Singapore office, he lectures and publishes widely, and is adjunct research fellow of Institut Sultan Iskandar; adjunct associate professor of Institut Teknologi Malaysia, Mapua Institute of Technology, and Nottingham University as well as being on the editorial board of the Council on Tall Buildings and Urban Habitat.