Social and Cultural Influence in Urban Shelter Design

Delphine Passaquay

1 Urban Shelter Design Development

Before the late sixties, urban shelter was more brought to provide accommodation to respond to a huge post-war demand. The consideration was more focused on the planning scale, following the zoning approach which enhanced the segregation of function at the neighborhood scale. Moreover, we could observe a great lack of concern about local context and resources especially in colonised countries where neither specific tradition nor culture were ever taken into consideration in urban design. It caused many consequences and "ignoring indigenous tradition" often generated inappropriate planning (Jenkins, 2007). Therefore, coordination between all the different fields involved is crucial.

It is only during the late sixties that urban planning and more specifically urban shelter planning became more focused on "negotiation than regulation", which marked the first step of the evolution. The communities living in informal settlements were perceived as illegal and dangerous. They revealed a fast population growth, uncontrolled and were suffering from a great lack of housing. However, according to Jenkins (2007) this perception was later influenced by John Turner and Perleman who were both able to underline the social qualities in these communities, as well as their inner organisation. "Housing was then seen as

a process more than a product" (Jenkins, 2007), which implied the involvement from different corporations and people, from the governments and housing organisation to the communities themselves. Local culture and values became to have a stronger influence in the process of urban shelter planning. According to Pugh, it was necessary to "engage more with the state, the market, the different NGOs as well as the households themselves" and view the society as a whole (Jenkins 2007).

After 1990, new considerations came up through this long-term debate. New goals and roles for urban planning and housing organisation were defined and greatly influenced by Habitat Agenda and the Millennium Development Goals. They set new targets and policies regarding both social and environmental aspects and aimed to improve living conditions within slums. Moreover, sustainability started to become a recognized issue in urban planning and urban shelter design. One should also reckon on the integration of these concerns into an economically and socially sustainable design. In the scope of urban shelter design, what would improve living conditions in a specific context? What would make an appropriate and successful design and what factors should be taken into account?

2 Factors Shaping Urban Shelter Design

Cultural and social aspects are both really strong shaping factors. As it is previously mentioned, the results are always quite disastrous when these elements were not taken into consideration in a design. Indeed, planners should always question for who they are designing, what community, in what climate and specific context, and try to identify the different resources. As a result of this, there is a real need for adaptation to a specific environment.

Vernacular architecture is quite a striking example and demonstrates how architecture can be adjusted and adapted to varied geographical and cultural contexts, often with simple and basic means. Amos Rapoport states that cultural and social forces are stronger factors than physical forces. To his eyes, dwellings and settlements are the physical expression of one given "genre de vie" and they stand for physical devices which can perpetuate this "genre de vie". He provides different examples of communities from varied cultural and geographical contexts to explain that the shape of a house is mainly influenced by people's habits and

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needs. For instance, he compares a Marquesas dwelling (figure 1) to a Samoa dwelling (figure 2), which both differ in shape and organisation according to the family structure and hierarchy influenced by the religion and climate.
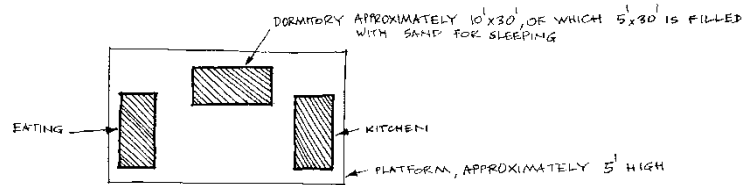
Fig 1:

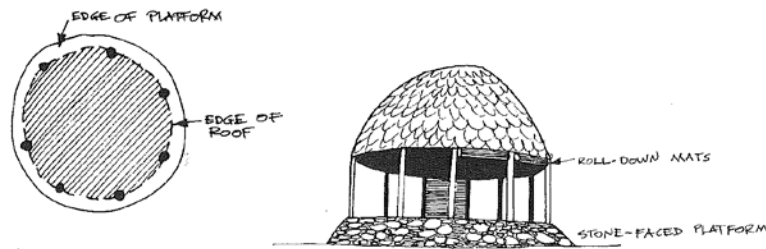FIG. 3.1. *Diagrammatic plan of Marquesas dwelling.*

Fig 2:

FIG. 3.2. *Samoa dwelling, diagrammatic plan and perspective.*

(Rapoport, 1969)

There is a differentiation of space in the first typology determined by taboo to women and the ground is elevated although in the second typology, there is a minimum need for shelter which the climate suggests and no space segregation.

This following example also shows how the family structure influences the house organisation:
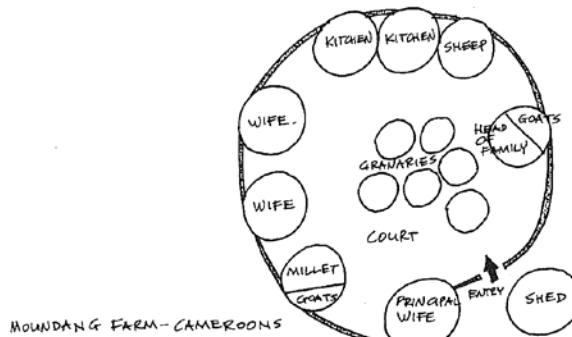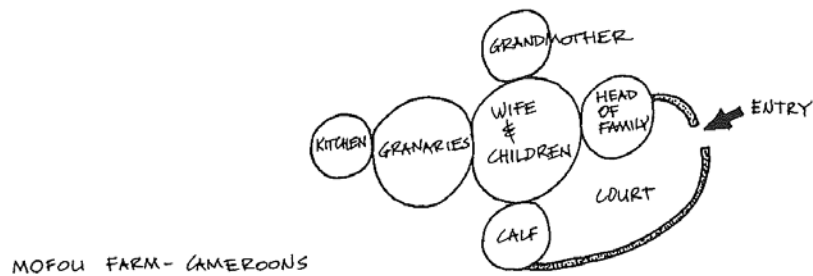
Fig 3:

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Fig 4:

MOFOU FARM - CAMEROONS

(Rapoport, 1969)

    Furthermore, Rapoport states that some aspects defining each "genre de vie" have a strong influence on the built form:

- ⚞ Basic needs
- ⚞ Family
- ⚞ Position of women
- ⚞ Privacy
- ⚞ Social intercourse

These five aspects are influencing shaping factors which might even be used as characteristic criteria according to their own expression. In fact, one should be able to consider these basic points at a larger scale and not only regarding vernacular architecture. It could be used as a tool for designers and planners during the field study phase and while defining who they would be designing for. This is particularly interesting in the case of Manila and urban shelter design. The Filipino culture is indeed specific and requires appropriate consideration, and this idea of using cultural criteria could be used as a really useful guideline. All in all, vernacular architecture provides a very rich source of inspiration and lines of thought.

    Beyond Amos Rapoport's idea, shaping factors are also depending on technical facts such as construction methods, available materials and resources especially in contexts where economy is a strong issue. One should then question who will build, in which climate and how the materials would be used. In the field of urban shelter design, it is quite essential to propose local materials that people could use to build their house themselves. Self-help construction as well as incremental construction should be considered more by architects and planners and they are in fact successful methods in many ways: they reduce the construction and

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production cost, the labor cost and also generate better social environments by strengthening the community spirit during the construction phases. One of the projects helped by Habitat for Humanity in Manila, the Philippines turned out to be particularly successful and inspiring. St- Hannibal is located in Pasig City, Metro Manila and remains as an exemplary study case for self-help construction of housing. The relocated community started the self-help construction thanks to the NGOs initiative that launched the process by a monitoring phase. They used models, drawings and explained them how to use really basic materials with simple construction methods. It took them three years all in all to complete the whole new neighborhood and they managed to develop a rich community spirit as well as a strong organisation. This type of organization will also allow them to perpetuate more care for their own environment since they have been entirely responsible for it. In this way, St-Hannibal is a really economically and socially sustainable project.

The last case study is located in Tunisia and was built in 1979. The initiative was taken by the government and lead by the Société Nationale Immobilière Tunisienne (SNIT), the national construction organisation. More than a thousand units were built although almost 70% remained unoccupied for a very long time. The design adopted did not match with the local tradition and culture therefore people were not willing to move into such dwellings (SADEL, 1979). This also underlines the influence of architects and questions their role and responsibilities.

3 The Role of Architects

In urban shelter design, an architect should above all be a coordinator operating in between all different members involved in the construction process. In some context, this is sometimes really hard to reach and the social and political situations might be obstacles. Involving people in housing projects in crucial. The following interview reports Faith Varona's opinion about the role of an architect in the specific context of the Philippines. She is an architect and works as a teacher at the college of architecture at the UP (University of the Philippines) and at TAO Pilipinas.

"From my experience in development work and seeing how shelter provision is being done for low-income groups, architects are not really that conscious about how they affect urban shelter design. Especially for government architects where the main goal is to produce housing units in the amount allocated. In recent years, shelter agencies tried to consult target beneficiaries, involve then but these often end up as an information dissemination activity with no real decision-making from the target group regarding the house design.(...)

We have urban planners and architects, but they do not always work together. We have city planning officers that are appointed politically and often also not trained as planners (some are even in the medical profession). Architects are working mainly as individuals, concentrating on projects as commissioned by the owners (thus you see Asian and European-themed subdivisions Bali-style, Swiss Chalets, Mediterranean-inspired, French/Italian/Spanish Villas, etc.).

I think Filipino culture needs to be articulated more but our economy is very dependent on remittances from overseas Filipino workers who also want foreign housing styles and architects and real estate developers, if they want to sell or get a project, they have to keep the clients happy to ensure profit." (Manila, March 2012)

Architects should be more involved. Their work often remains too theoretical instead of being empirical. Indeed, investigating the site, spending time on the field and meeting the communities they would be designing for is quite essential to gain an optimal understanding of the specific context and needs, but also to gain a better knowledge of the local means and resources which would be then integrated into a efficient planning and appropriate design. The women-led NGO TAO-Pilipinas has taken part in many housing projects in Manila, the Philippines and shows exemplary involvement within the communities. In the case of Masantol, they worked on a relocation project after a disastrous flood which decimated the local population. They implemented a very innovative and successful technique, so-called participatory 3D mapping, in collaboration with the affected community and managed to get people involved in the construction of new houses, thus on a community-based planning (TAO, 2010).

The architect's involvement is also related to the response to people's needs. Considering the influencing cultural and social factors mentioned previously is

also an important responsibility. Architects should integrate these concerns into an appropriate design to improve people's living conditions and provide them with a better livelihood. As Faith Varona explained, the lack of consideration for these influencing factors can lead to a disastrous denial of the local character and culture.

Finally, architects should always remain critical about their own work but also about what has been done. By designing homes, they are responsible for certain human behaviors. By giving shape to houses and neighborhoods, architects can in fact influence people's attitudes although this role is sometimes underestimated or neglected. This implies a long-term vision, which needs to be envisioned in urban shelter design as well as in urban design in general.

4 Design of Sustainable Shelter and Neighbourhoods

After investigating the influencing factors shaping urban design and defining the role of architects, the last part condenses the information and describes what could the design criteria for urban shelter planning consist of. What makes urban shelter design sustainable?

First of all, some criteria regarding cultural and social aspects should be stated. One should consider the influencing factors mentioned previously and integrate them into a proposal. The five points stressed out by Amos Rapoport could be used as a tool to design the organisation of a house or a whole neighborhood but also the interaction between the dwellings and public spaces. The limit between private and public should be clearly defined in order to avoid harmful and undesirable invasions or abuses and thus ensure a sense of security. Moreover, lifecycle and family structure should be taken into account to provide flexible dwellings, which could either be extended or modified. The involvement of inhabitants is also crucial in the community life as well as in the construction since this is how they would gain new habits, and perpetuate them. This is how social sustainability would be achieved.

Furthermore, the economical sustainability relies on the use of local resources, construction techniques and materials. Self-construction should be implemented in order to reduce the costs as well as in order to generate a better social

environment as stated previously. The design of a sustainable neighborhood should also include spaces for inhabitants to develop extra sources of income and thus gradually evolve their financial situation.

Finally, the design should incorporate low-tech and efficient means to optimize climate considerations and provide a satisfying living environment. This was considerably successful in the work of Charles Correa in India, notably in the Cablenagar Township project. He designed the house according the specific Indian climate to generate convection currents and used the roof detailing to decrease the amount of heat stored along the day.
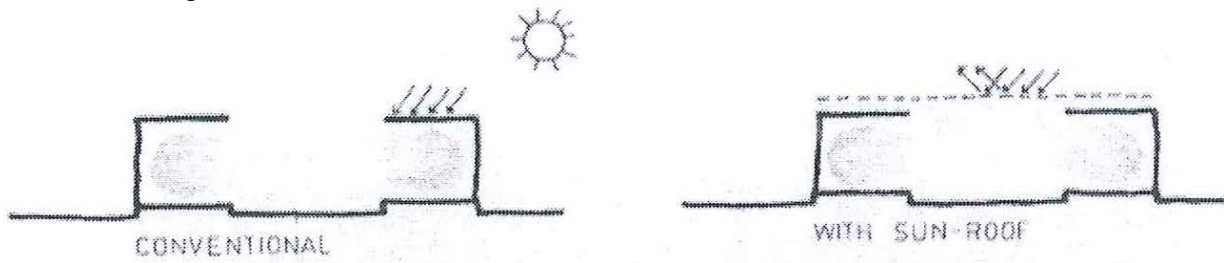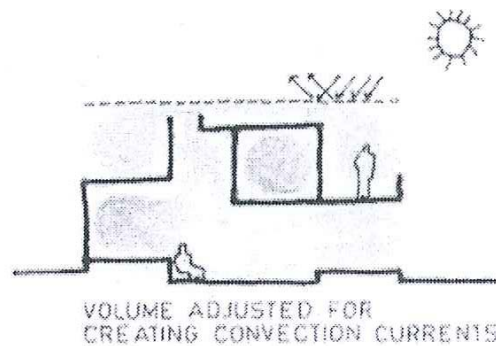
Fig 5:

CONVENTIONAL   WITH SUN-ROOF

Fig 6:

VOLUME ADJUSTED FOR
CREATING CONVECTION CURRENTS

(Charles Correa, 2000)

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