
Reflections on the social component within housing.

1. What is meant with 'the social system within housing'.

The social system refers to the social unit a home shelters, ranging from a single person to an extended family or even an assembly of several smaller groups, all living under the same roof. This social unit is embedded in a larger community, either within a group of people, sharing the same boundaries of a local neighborhood or, more recently, encompassing a widespread range of social networks, connected through ties of kinship and shared interest.

If we are to build truly sustainable housing, the social component needs to be reintroduced into the design process. Rather than focusing solely on green technologies, construction should follow social requirements. Basic human needs for social interaction with the neighborhood and the possibility for retreat within the home should drive the design process rather than being perceived as an afterthought. The aim is to create buildings that act as social hardware, balancing public and private spaces and fostering interrelations with their direct environment. How can we integrate communication technologies in terms of social software, tools that stimulate face-to-face relationships on a local basis, rather than replacing them?

2. Historical Analysis

In the earliest days, the social unit was a reflection of how food was procured.

Hunter-gatherers lived in bands where the interest of the community prevailed over the interest of the individual for survival. Several tribes lived in communal houses.

The domestication of animals and plants allowed people to obtain a sedentary lifestyle and gradually caused houses to cluster into small villages. The size of these communities was still determined by the amount of people needed to cultivate the land.

Increasing food surpluses made it possible for some people to specialize in tasks other than food production. This started to shape political structures and early urbanization processes. Community was still found in groups of people who shared location and ancestry. They were spatially compact, close-knit and tightly bounded. People walked to visit each other, which offered multiple occasions for accidental encounters. Social activity centered around easily observed public spaces and within neighborhoods.

The social unit was mainly shaped around the extended family, a very broad unit that did not only sheltered multi-

generational families but in many cases also included workers and servants.

With the introduction of more efficient transportation and communication systems (as early as railways and telegraphs) contact could be maintained with greater ease and over longer distances. Community started to shift from locally based groups to interest shared networks. This had major implications on the nature of a community. It became more fragmented and loosely woven. Networks of specialized ties (centered around work, hobbies etc.) started to take shape, social activity gravitated towards less-accessible private homes and no longer took place within the context of the local neighborhood. The social unit reacted by shrinking into nuclear families consisting of just two parents and their offspring. With the absence of local group dynamics, social ties and relationships now had to be maintained over distances and across physical barriers.

Portable communication technologies (like mobile phones and laptops with wireless connections) are introducing a new shift within the social unit. Communication is now again detached from the home and is no longer connecting households (as fixed phones used to do) but is fully targeting the individual. Each person within a family has the opportunity to build up his own personal network in total independence from the other members. Community is no longer defined spatially, but rather virtually, wrapped around the individual.

3. Forward Thinking

Paradox

Recently, the social unit, as well as its given community, have been challenged in numerous ways by technological innovations, finding itself in a constant state of adaptation. In developed countries in particular, the social unit has become notably smaller and fragmented. We observe that social activity is no longer centered around public spaces but has shifted towards the private home and is now zooming in on the individual through portable technologies, allowing each person within a family to construct their own network independently. These shifts have on the one hand increased the diversity of opportunity for the individual, offering him or her a wider range of people to pick from as well as freeing him or her from a single group's restrictive control.

Yet it has also caused the loss of a tangible local community that provided a strong sense of identity and belonging. The lack of neighborhood community can no longer guarantee local safety, and watchful neighbours are being replaced by fenced gates

and surveillance cameras. Living in a low-crime area is getting increasingly important, fostering a segregation of classes within the urban tissue.

Despite all these technological innovations and new opportunities, the general need for a tightly knit neighborhood has never been lost. People still enjoy to chatting with neighbours, visiting relatives, and helping each other out, and object to loud parties or other disturbances next door. Physical proximity continues to affect the frequency with which people see one another and provide material aid (Wellman). Neighborhoods remain as refuges from outside pressures, sources of interpersonal aid in dealing with large bureaucracies, and useful means to keep the streets safe. (Wellman)

But rather than polarizing the information technology debate around making stronger or weaker communities we want to focus on how information technology is transforming communities and determining which new range of options it brings for people. How can these technologies be used as tools to reinforce the social cohesion within a given social unit or local community?

Recent studies have shown that online interactions are mostly used for filling in communication gaps between face-to-face meetings and are therefore in service of physical encounters rather than substituting them. Also, with the introduction of portable devices, communication (and in some cases work) is no longer attached to the home and social activity is now again shifting outside of the private sphere, gravitating again towards public 'in between' places that favor light, air and sociability (like coffee bars or public lawns).

Proposals

If we are to tackle the social system within the house we have to consider both the composition and spatial arrangements of the social unit within the home as well as the relation of the house with its direct surroundings.

This can be materialized partly through reintroducing ancient but successful planning- and building principles into the design process (and translating them into a contemporary context) as well as by integrating social software as a facilitator in recomposing local communities into pockets of subcultures, based on shared values and interests within the urban fabric.

The social unit within the home towards the 'voluntary' family

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Until recently we considered the nuclear family as the standard social unit in most developed countries. Unfortunately, it seems very likely that the nuclear family is not a viable social form. It is too small. Each person in a nuclear family is too tightly linked to the other members of the family; any one relation that goes sour, even for a few hours, becomes critical; people cannot simply turn away towards uncles, aunts, grandchildren, cousins and brothers. Instead, each difficulty twists the family unit into even tighter spirals of discomfort. Children become prey to all kinds of dependencies and oedipal neuroses, the parents are so dependent on each other that they are finally forced to separate (A Pattern Language). It seems essential that the people in a household have at least a dozen of people around them so that they can find the comfort and relationships they need to sustain them during their ups and downs (A Pattern Language).

However, since we observed that the extended family – the multigenerational unit that was standard until the 1960s – is

gone and is not likely to return soon due to the increased social opportunities among its members, we might see the emergence of a social unit with a more dynamic nature, offering a firm base for a number of core members but also providing room for occasional passersby. This would be an interdependent group based on shared interest rather than shared ancestry, shaped and facilitated by social infrastructures like the Internet.

This assembled family could give body to this dynamic nature by attaching multifunctional 'hub' spaces to their dwellings, offering the possibility to enlarge and enrich the social unit for limited periods of time. Online collaborative filtering could facilitate this process by synchronizing wants and needs within the social unit. If one or more persons happen to leave the house for a certain period of time, this vacancy can be filled in through 'personal agents' (MySpace meets Craigslist) hooking up like-minded others that can complement the unit for the time being.

However, if we want this new assembled unit to be successful, we have to create a social setting of spaces within the house that respect both the needs of every individual for retreat, but also offer common areas at the heart of the home where people can meet.

The social settings within the home towards a balance of private and public

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Every successful dwelling is a delicate assembly of public and private spaces that encourages social activity at the heart but also offers personal retreat at its periphery. When taking a closer look at these spatial arrangements we find that they are submitted to some very basic principles that can be found back in the traditional floor plans of most cultures.

The first principle to highlight is the occurrence of an intimacy gradient of spaces within a home. The intimacy gradient implies a gradual hierarchy of spaces in a building, ranging from the most public spaces at the front and the very private at the back, allowing the host to give different shades of meaning, through the space of reception, when inviting guests. Casual friends are received at the front, more personal friends are allowed into the more private realms at the back. The bedroom is considered to be the most intimate, a back sitting room or study less so; a common room or kitchen more public still; a front porch or entrance room most public of all. When a building lacks these clearly defined degrees of intimacy, the possible subtlety of social interaction in the building will be diminished or even erased entirely.

A second principle that manages the social liability in a dwelling is found within the non-public areas of the home and deals with the balance between common areas and private realms. Given the needs of every individual for both social interaction as well as personal privacy, the house has to be partitioned into distinct parts: a private realm for each dweller, where they can find some rest, next to a common area to meet each other. Both areas should be given roughly the similar in size, with the commons slightly larger. When laying out both spaces we should make sure that the common areas are found at the heart and soul of the activity and that the paths between more private rooms cross this common area so that a steady flow of people throughout the shared space is insured.

A last point of observation will touch on the relation of the house with the street.

Until recently the relation of the home towards the street was perceived very differently within Eastern and Western cultures. Eastern cultures, (ranging from the earliest settlements along the

Tigris and the Euphrates all the way to the ancient urban houses in India and China) developed an inward-looking housing type that enclosed a central courtyard. Western civilizations, on the other hand, favored an outward-looking model.

Norbert Shoenauer states in his book '6000 years of housing' that this inward orientation of Eastern urban houses had profound social implications on both the social life within the home as well as the positioning of the home towards its surroundings. He argues that the limited contact with the street offered privacy from neighbors and passersby, in respect to both household activities and material possessions, and that the absence of public display of both wealth and personal status towards the street allowed for smaller and bigger houses, rich and poor, to live next to one another within the same neighborhood. The Western outward-looking model on the other hand, favoring larger windows that faced the street, increased our concern about who was living next to us as well as how we were perceived by them. This made it harder to share the same streets and in some cases favored segregation of income groups between neighborhoods.

This is not to say that contact with the street within residential areas should be avoided. However this relation should be handled with care and sculpted according to the cultural preferences and value sets of its environment. In places where interaction with the street is wanted, either by the residents or for commercial activities, an introduction to the building of an in between place that mediates between the house and the street is favorable. Porches in residential homes as well as arcades in public streets have facilitated this function very well, and there are many other ways in which people have addressed this issue successfully in the past.

The position of the home within the neighborhood towards a maximum of variety within the boundaries of a well defined subculture.

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In order to understand the nature of the social unit in relation to its community it is useful to observe how evolution has sculptured successful communities in nature over time.

One of the most fascinating examples of dynamic communities is to be found within the composition of a fertile soil. Similar to a balanced community, a healthy soil breathes diversity within the framework of necessity. It embodies a variety of generations, intermingles life and death and provides the opportunity for growth and decay. Both the roots of a plant as well as the earthworm have distinct contributions to make within the life cycle of a soil community in order to ensure its fertility.

It is known that monocultures will erode a soil and that disruption will demand considerable time to recover. However, well-managed (but undisrupted) soils are able to balance healthy crops and fertile ground. In these soils, the roots of human-planted, perennial staples will interact with the existing mass of organic material and organisms, forming closely knit and interdependent tissues that can ensure fertility.

We can build off this example when shaping our neighborhoods, starting with setting up a solid framework of human-scaled structures that can shelter pockets of households at considerable density, to then create the opportunity for diversity through the introduction of various activities and a mixed-income population.

The first element to consider when looking at neighborhoods is density. Either when considering a cluster of houses in a rural environment or a neighborhood within a larger urban area, it is widely accepted that dense environments enrich the social fabric and improve safety within a neighborhood (next to the obvious benefits of sharing costly urban infrastructure and municipal

services). When looking at the dense environments of earlier societies, we notice that a lot of them grew out of necessity. People were restricted to closely-knit communities for reasons of policy restriction, security, or a lack of efficient means of transportation and communication.

For example, Greek and Chinese city-states, directed by growth control policies, were conceived as coherent wholes that would not expand beyond their initial boundaries but would establish new cities at considerable distance when maximum capacity within its city limits was reached. Similar developments were unfolded later on in West-European Medieval times where dense and organic urban neighborhoods were restricted and enclosed by the walls of a fortified city to protect them from hostile invasions. Although we mostly associate these early urban developments with the diseases and filth they produced, it is important to add that they also produced vibrant urban fabrics within their walls and maintained an ecological balance with their hinterlands; the countryside offered the produce, the city offered a marketplace.

Much later, when fortification walls lost their military importance and urban areas emerged outside of the city walls, restrictions in transportation continued to shape many European cities into dense areas. Because many of them were built before the arrival of the car, commuting distances were limited, and city dwellers were therefore forced to build their residential neighborhoods within close range of the inner city, resulting in vertical expansions rather than horizontal ones.

In their initial stages of development, and later spurred by the Industrial revolution, many of these early urban areas were confronted with problems the world had never seen before. The lack of sanitation and a growing inequity among its citizens lead to several outbreaks of epidemics and social unrest. With the gradual introduction of a proper infrastructure and social reforms some of these early urban developments are now considered to be marvels of closely-knit urban tissues, offering fertile soils for social cohesion. As in nature, these areas were allowed to fail, and that is what made them what they are today. They were allowed to grow and adapt, through various stages of trial and error, into new and exciting forms of human habitat. They were engaged in a process of evolution that was driven by and restricted to frameworks of necessity, a process of needs rather than wants.

Although density must be considered at all times when planning communities, a large body of research shows that successful implementation will dramatically increase when density manifests itself in mid-rise rather than high-rise developments. Not only does the infrastructure of high-rise developments appears to be more costly, the large mass of the building is responsible for several negative micro-climatic conditions on a pedestrian level and these developments produce several social problems for their occupants. Inhabitants tend to become alienated from what is happening on the streets when living on higher levels, and poorly lit corridors and elevators hinder them from having accidental encounters with the other residents. Mid-rise housing developments tend to be more suitable in providing affordable dwellings to a wider range of income levels and households, ranging from single persons to families with children. Because self-policing is more effective in these buildings, they provide a feeling of security for their occupants, and, since no dwelling is at a higher level than mature treetops, each dwelling can easily maintain a visual connection with the street.

Still, within mid-rise developments, scale must be considered. If a mid-rise development encompasses too many units at once it will be received as 'instant' and unreal.

The opportunity for growth and mass customization within a development has to be offered through the elaboration of flexible

frameworks that will allow time to sculpt it in the image of its community. Opportunities for individual adaptations must be embraced and cultivated within the master plan rather than shunned to match the perfect architectural picture. Mass customization will not only add colour and vibrancy to a neighborhood and make visual its history, it will also enable more adaptation over time, suitable for an ever changing context.

When adding functions to this built hardware we have to consider diversity and aim for a mixture of commercial, residential and even industrial land-use, all operating in an interdependent fashion. Diversity in land-use will prevent monotonous urban environments and ensure a more balanced continuity of development. Again, mixed-use developments make public transport systems more viable and economical, since the flow is more even in these areas with an around-the-clock occupancy of buildings. The concept of a balanced and conjoined land use has served cities well in the past and there is no reason to believe that it will not continue to do so in the future.

Within a community we observed that local social cohesion benefited when its members shared certain values and lifestyles. Motivated by others in their behaviour, people will be encouraged to open up and share experiences. Houses ought to cluster around shared interest, rather than shared income levels, in order to form vibrant subcultures that can feed off to each other.

This framework of social hardware, brought to life with the introduction of people and activities, can now be fertilized with social traffic. Against all odds, recent papers show that new means of information technology are well suited to support families that have different schedules and agendas. Although being unable to reverse the trend of fragmentation within households and communities, information technologies can transform, enrich and complement relationships between the different members of a household, filling in the gaps that earlier communication means had left open. A stream of new messaging media ranging from mobile phone conversations, e-mail, blog postings and instant messaging can reinforce loosened ties because they allow for quick, asynchronous messages, giving the receiver the time to answer and offering both parties the possibility to move around independently while still being connected.

After connecting people on a global level we can start focusing on how online software can reconnect people within their local context (see: i-neighbors.org).

4. Conclusions

Increased opportunities will allow the individual to become even more independent, and will further transform our social units into fragmented and dynamic entities. We can respond to this reality by incorporating flexible spaces within our home that function as temporary attachments for occasional visitors that are managed by social software. This dynamic space will enlarge the social unit, making it a more vibrant and balanced entity. Furthermore, we have to balance spaces that favor sociability against spaces that offer individual privacy within the home. We have to consider the layout of a distinctive intimacy gradient within our home that will inform guests on the nature of their visit while at the same time establishing a gradual connection with the street.

We must design with time in mind when retrofitting our suburbs and planning the neighborhoods of tomorrow. We have to allow our neighborhoods to fail by putting up flexible frameworks that welcome personal adaptation and organic growth; frameworks that allow for children to be born and parents to grow old; neighborhoods that orchestrate the evolution of their population by

capitalizing on diversity. We have to aim for communities that act interdependently and become largely self-sufficient, sculptured by a framework of flexible buildings, driven by a community of diversity and fertilized by a range of wireless interactions.

5. Samples of homes

Traditional Home Eastern courtyard home

We can find multiple variations of the courtyard model in most Eastern cultures, dating from the earliest urban settlements along the banks of the Tigris and the Euphrates all the way to the ancient Hutongs of Beijing. Having survived a lifespan of nearly 6000 years, this inward-oriented setting has proved its value for many generations and was favored for multiple reasons. Next to favorable microclimatic conditions the courtyard home also offered an interesting social setting. The inward-oriented house covered both household activities and material possessions from the street. It insulated the family against the bustle of the street and focused on a short-range view on private space. The courtyard welcomed social activity and braided community around it. The resulting streetscape revealed little about the status or wealth of its occupants, which largely contributed to an integration of different social classes within one community.

Common Home Montreal Multiplex

The duplex or multiplex represents the typical multifamily urban housing type that is indigenous to Quebec cities in Canada. First built in 1852 by the Grand Trunk Railway Company, these homes provided urban, fairly dense and, above all, highly affordable housing for their workers.

In the first duplexes, one family occupied the lower floor, another the upper. Over the decades it evolved into a triplex and even a quadraplex, when a basement suite was included. This allowed for a steady rotation of occupants and gave substantial density to the neighborhood. Originally, some of these houses operated as co-housing models. Different households bought a share in the house rather than a specific floor. This resulted in shared maintenance costs, provided common garden space and kept prices low. Over time, residents discovered the concept of rental property and started to live on one floor while renting out the others, spurring speculation and eliminating the common interest in the property.

The generic ground plan allowed easy adaptation to successive generations of occupants. It consisted mainly out of rooms of equal dimensions, permitting their use as bedrooms, living rooms or dining rooms over time. The external staircases supported this generic ground plan by freeing up space inside the envelope and giving each occupant a private entry. They also contributed to the social viability of the dwelling by extending the street and introducing the home. Up until recently, these staircases function as tiered seats of a viewing platform from which the street could be observed and accidental meetings could take place.

A last aspect to mention is the variety these houses were able to create. Little adjustments at the front side of the buildings bring welcoming distractions while preserving their overall democratic look. This in contrast to the accumulation of semi-attached, 'homegrown' shacks, connected through a web of staircases and bridges, that vitalize the back alleys of these homes.

Innovative Home
The Craigslist home

The 'Craigslist home' refers to a recent development in the occupation of housing. It links up wants and needs and connects people through online platforms that display both spaces for rent as well as individual inquiries for temporary stays.

Empty apartments are reviewed online and eventually rented when a user goes on holiday; well hidden bed and breakfast addresses float from mouth to mouth (or inbox-to-inbox); contacts in far destinations are shared and exchanged. People are becoming increasingly skilled in bypassing traditional specialized housing infrastructures, like hotels, and prefer to reside in more personal settings when abroad.

Both the emergence of online tools (Craigslist meets MySpace), as well as the increased flexibility that people experience today, allow this development to gain momentum.

This shift stimulates households to become more dynamically assembled and interest based, and has the ability to synchronize occupation levels within our existing houses. Elderly individuals with large empty homes can enjoy an extra income by renting out one or more rooms, unused empty space for some can be the perfect temporary workspace for others, and friends of friends can host other friends of friends after brief online introductions.

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