The Needs of Living

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ABSTRACT

As there are seen an increase of urbanization, and more and more people are living in the larger cities, there is a greater demand for dwellings. New apartments are made with significantly smaller floor space, than previously. By means of literature search, this review article seeks to investigate how the physical surroundings affect the psychology aspect of the human individual, and how the dwelling must meet the needs of the human being. It was found that the physical surroundings have a significant effect on the perception of space. It is argued that future research is necessary to provide more specific insight in the tangible space needed.

KEYWORDS: Human Needs, Personal Space, Crowding, Spatial Behavior, Territoriality, Withdrawal, Privacy, Spatial Adaption, TPD4505

1. INTRODUCTION

As seen in Norway and the rest of the world there is an ongoing urbanization.[1]This is resulting in a higher demand for housing in the larger cities. Especially there is an increasing demand for student housing in the larger cities e. g Trondheim[2] This does of course affect the availability of apartments, and also the pricing. This is resulting in higher prices for less space.
The smaller apartments offer a floor space of only 25m^2.

The human individual needs personal space to gain privacy and withdrawal in their everyday lives. The trend is turning towards more people live separately, and the urbanization increases. As technology has evolved, people tend to travel more and spend more time outside of the living environment. As telecommunication has improved and the Internet has become a significant part of our lives, there might be a thinner line between work and home staying, social and private life. The need for withdrawal and disconnecting may be more important than ever in the issue of privacy and relaxation.

Housing in the human context is very much connected to the sense of belonging both in life, and to a particular place. The space surrounding us has a power upon our perception of space, and how we relate upon it. What are the consequences of living in increasingly smaller spaces, and is this sustainable in the long term?

Small space living has become a phenomena both as initiative from individuals, and in concepts from various designers. There are several ways of tackling the issue of small space in an apartment, from collapsible furniture to roll out walls transforming the space into different living areas. Some of these solutions are dealing with the issue of space efficiency. But how do they serve the function and needs of living from the more psychological perspective?

Is there a way of designing to meet the expectations or meet the requirement of the individual in small space living?

1.1 Structure

By giving an overview of certain elements derived both from psychology literature on basic human needs and of how the perception of space is affecting the human spatial behavior the aim is to review what the literature says about this in the context of living. The congruence between the psychology of the human and the physical environment may be a reasonable insight for designing new housing. Which certain factors must be implemented in the design of dwellings.

2.   BACKGROUND

2.1 Human needs into concerns

From the literature the human being is explained to be driven by fundamental needs. Schwartz[3] is dividing the needs into three groups of human requirements; biological needs, social interaction requirements, and social institutional demands.
The two first groups are the most essential in the context of housing.
In the model by Max-Neef [4]the human needs may be defined into both existential and axiological categories. The first category contains the needs of Being, Having, Doing, and Interacting, while the latter presents the need of Subsistence, Protection, Affection, Understanding, Participation, Creation, Leisure, Identity and Freedom.
Furthermore humans seek to satisfy their needs, and by cognitive development the needs are transformed into values, by the function of satisfiers.

Max-Neef explains

'From the classification proposed it follows that, for instance, food and shelter must not be seen as needs, but as satisfiers of the fundamental need for Subsistence'

Fundamental human needs are finite and they are the same in all cultures through all historical periods, the one thing that changes is the way the needs are satisfied. (Max-Neef) The dwellings have transformed from caves to high rise buildings. But the main purpose has remained. The function of a dwelling serves both on a physical and psychological level.

From the point of human living, the axiological categories Subsistence, Protection and Affection proves to be the most appropriate subjects to be discussed with the use of living space. Not only is the living space a satisfier of Subsistence, by providing shelter, a place to eat etc. it may also provide Protection by protecting the inhabitants from the outer environment, and Affection in the way of living together in a social environment.
To a certain extent the living areal may also provide as a satisfier for Leisure, Identity and Freedom. The dwelling serves as a satisfier to the majority of subjects in Max-Neefs model.

Not only is the house providing physical shelter from the exterior environment, but it also function as a tool for the psychological part of the human individual. It provides a function of withdrawal or isolation, disconnecting and protect the ego from the threats of the outer world.

2.2 Personal Space

Dosey, Murray (1969) explains the term personal space and refers to the immediate space surrounding a person or individual, in which he or she feels belong to them. This buffer zone is used by the individual to stay comfortable in various situations. The personal space is considered adjusted in size depending on various factors e.g. social settings or by means of protection. [5] .

Claustrophobia, the fear of enclosed spaces is said to be constructed out of two major components, the fear of suffocating and the

fear of restriction (Rackman, 1990) [6] The lack of personal space by physical means, may influence the personal space in a way that leads to claustrophobia. A small or a crowded space may lead to a feeling of being restricted. If the living area fails to meet ones expectation of the personal space, this may trigger the sense of crowdedness or in some case claustrophobia.

2.3 Privacy

The living environment may in a larger degree materialize privacy. Where personal space is an intangible buffer zone, the dwelling offers privacy by closing out the outer environment.

Altman (1975) suggest that a major psychological and social problem facing all people is the need to regulate social contact. Though we want some people to have access to us some of the time, it is necessary to control the number of people who see us in certain context[7] In the context of needs and satisfiers, privacy may serve as a satisfier for the needs of Leisure and Freedom. In comparison to the personal space, privacy may in a bigger extent be materialized and utilized to our living areas. The living environment provides physical separation from the outside world by the use of walls. While separate rooms may provide privacy between persons living together. From the Leisure perspective living areas provides privacy in the form of intimacy, spaces of closeness and surroundings. [8]
 Private space and withdrawal from public situations provides a feeling of Freedom.

The personal space may be placed in coherence with privacy, where the personal space is adjusted to the level of perceived privacy. By combining these, it might be argued on a relationship between the physical barriers of the home e.g. the use of walls, doors and dividers, and how the personal buffer zone is adjusted to the surroundings. The physical barriers of the home environment may compliment the personal space, letting the individual relax in

their own atmosphere. But only by ensuring that the demand for the adequate space is met.

There may be argued that the living environment plays a very important role in the search for privacy for the tenant.

In the context of small space living the privacy has been given a limited amount of space to fulfil this. This may be suitable for a single tenant, compared to a couple living together.

It is stated that privacy helps the individual cope with difficult circumstances in a group or a relationship. [9]

2.4 Withdrawal

The physical barriers play a major role for achieving privacy. As individuals need to withdraw from social situation the living area may provide such a service. The walls and the doors act as physical barriers that accommodate the privacy as a satisfier. Schwartz (1968) explains

"The physical barriers of the home, made by the walls and the doors in a living space, offers the opportunity for an individual to withdraw from what is called social observation, or in an institutionalized manner; surveillance."[9]

We may speak of an individual need for isolation, when the social event reaches a point of saturation. This is seen both from a public point of view, but it may as well be from people living together. The furnishing and room separation plays a significant role in the perception of privacy and withdrawal in a living environment.

The exterior walls provide the inhabitant with separateness from the outer environment, while the rooms and the doors provide privacy between the inhabitants.

'The door closes out, the wall encloses […] The walls and the doors provide different functions. As the wall is a set perimeter for appraisal or enclosure, the door provide the user with an option of close people out or inviting them in' (Schwartz)

The use of the physical elements in a living environment shows that there are several ways to accomplish privacy; the physical environment is influencing the aspect of withdrawal, in the same way privacy is influenced by personal space.

As withdrawal proves to be a very important function of a dwelling, not only from the outer environment, but also for the co inhabitants, Smith (1971) provides a comment on the topic by stating that the principles of design provide a means of securing the ultimate autonomy of the individual. She further states that the lack of physical barrier between household territories is associated with a lack of normative autonomy. [10] Designing a household of several people without the use of walls seems therefore unsuccessful.

2.5 Territoriality

Making a space is stated not only to express the ego; it might as well be a need for claiming ownership of a physical place. Norgberg-Schultz (1971) states that the enclosure, in fact, may be considered man's first real attempt to take possession of the environment. [6]
Kopec (2006) describes personalisation as a physical marker used to identify personal identity, to mark territories and hence regulate social interaction. [11]
Personalization or territoriality is a means of altering the physical surrounding space to make it distinctly their own. Theory remarks that territory is an important psychological factor with respect to self-identity.[12] Personalization of a space may be seen as a way of materializing personal space of an individual. By placing out personal items, putting up a fence or wall, this will functions as a non-verbal communication of ownership.
The territoriality or personalization of a space is a way to extend or express ourselves, our identity through material things. As Georg Simmel (Belk ,1988) observes, 'material properties is, so to speak, an extension of the ego' [13]

Territoriality may be a satisfier for the need of Identity. Through objects we may communicate our own values. Fernandez (2007) states, 'In general, people personalise their homes to suit their own personal needs. Personalisation is an important factor in creating a home' [11]
According to Oulasvirta & Blom (2007), personalisation is a normal behavior in human activity such as decorating or beautifying, altering, modifying and adapting. [11]
This is a highly personal and individual act that not only articulates the person. Personalization is an important factor of the well being in a living environment. Our physical items do not only decorate the environment, they also contribute for the individual to thrive. The home serves not only as a satisfier for privacy, it may be pointed out that the need for making it personal is highly present.

Balance between privacy, territoriality, withdrawal and crowding, may have different demands for physical space. While territoriality claims the surrounding walls to be wider apart to make sufficient space, privacy or withdrawal need smaller spaces to meet the demand. Finding the balance between these to prevent claustrophobia or crowding presents a dilemma in small space living. As mentioned, the privacy and withdrawal is met by internal walls and doors in the living environment of larger houses. This seems as poor solutions for small space apartments as it would result in insufficient size in space and may lead to claustrophobia.

3. SPATIAL BEHAVIOR

The spatial behavior of the human being is a key issue in the context of small space living. The perception of the surrounding space is both influenced by the physical surrounding and our attitude on it. This may affect our behavior and our psychological experience of the environment. The human ability of perceiving space is put together by several different factors. Preliminary

research states that the human spatial behavior is concentrated on three casual factors, biological cultural and environmental.[4] The biological perspective has a lot in common with territoriality. The most comprehensive perspective in the need of living is of the Environmental perspective. This view directly links our environment we are living in, particularly the buildings we live in, to our feelings and behaviors. It is assumed that the perception of space is highly controlled by the physical characteristics, and has per se a large influence and our attitudes and actions. (G1 35) [7] This is an interesting statement in the means of small space living, since small space may cause limitatons on the activities in the living environment.

The social context may be seen in coherence with the terms of privacy. The living space is a place for several different actions, some craving more privacy than other, e.g. the toilet and bathrooms. The literature places a major emphasis on the social situation when it comes to spatial behavior. It forces us to consider what kind of activities which are designated for a particular space. The social meanings that people attach to environments through their interactions and ongoing socialization would play an important role in determining human spatial responses [14] This outlines the important role of the living area serving the functions of the human needs and actions.

3.1 Spatial Adaption

The living environment must not necessary be designed for a specific function or need. For a dwelling, the space available is just a factor the tenant has to relate and adapt to, in order to meet their needs. As discussed by Baldassare (1978) he suggests that spatial variables are systematically and sequentially related to an assortment of nonspatial factors. He states this as "equilibrium theories" because of the description of the development of adaptations that help the human organism function within the given spatial circumstances. [7]

This means that certain living environments with special attributes such as small space, poor lighting and the like, is a highly manageable obstacle for the tenant, this by adapting the spatial perception of the available space, Amerigo (1997) points out that each individual has a set standard for residential quality, which is put in comparison to the actual environment [15] One may not underestimate the power of the human ability to adapt, but it is believed that one may only adapt to a certain degree. One may find it easier to adapt when living alone, but it becomes more difficult living with cohabitants.

There may be discussed what kind of design actions one could take to counteract the influence of small space. Norberg-Schultz adds that 'the closure of a space may also be emphasized of loosened through the use of light, color, and texture in relation to the boundary surfaces' [6]. Take actions in the physical layout of the apartment, with the use of e.g. windows may make the room more spacious. The extended use of artificial lightning may be one solution. A well lit apartment may be used to illustrate daylight and make the room appear larger. Acquiring suitable space saving furniture or the arrangement of it may be a solution, as many interior design projects are an example of. Clever solutions in space saving furniture are making a contribution of making the most out of the space available. The use of screens and movable room dividers could serve as a solution. As for the non physical approaches there is mentioned therapy using Virtual Reality to deal with claustrophobia trough exposure therapy [16] The last solution becomes a question about feasibility based on common use and accessibility.

3.2 Crowding

'Crowding is perceived as such by an individual, when the individual's demand for space exceeds the available supply of such space' [14]

At individual level the experience of crowding induces psychological stress leading to behavioral, cognitive, perceptual, and affective responses to crowding stimuli claims Stokols (1972)[17]

One may feel discomfort both in crowded situations and uncrowded situation. The latter is an example when the situation is located in a space that is perceived too large, alias Agoraphobia. [16] In this situation the individual tend to experience a need for enclosure and affiliation with others.

Crowding may be a cause due to several factors. The physical condition, density, and the psychological experience are examples of crowding as a phenomenon [14]

We may talk of two types of crowding, social and non-social. The first is linked to social situations, while the second is purely physical. Crowding may take place on several levels; we may speak of a crowded home, neighbourhood, or city.

The social crowding aspect is directly related to the presence of other persons and their relationship to them. One may feel crowded in a group of strangers, but comfortable in an equal group of friends. This may show that crowding is highly context dependent. Hall (1966) states that since the perception is a subjective process, the crowding may have different meaning to different people.

As for the nonsocial crowding, the space may be perceived as too little or to big.

Nonsocial crowding is described as an individuals supply of usable space is restricted at what he perceives to be an inadequate level by purely physical factors. [14]

As for the social, the non social is dependent on the context of the situation. It is related to what kind of activity the individual seeks to conduct.

The different need of space for work and relaxation and social context is dependent on crowding. Both working and relaxing may take place in a more confined space than social engagements. In a working situation one may need to concentrate and immerse oneself to a certain task. Confined spaces tent to have the desired effect.

3.3 The influense of space

It is much discussed if design of a living space has something to say on the behavior of the tenant.

Baldassare believes that The belief that "good" design can lead to healthy tenants versus "bad" design have a disastrous effect on residents [14]

As Osmond (1957) [14] points out that interior design can either support or destroy a group formation. Smith (1971) say that a given arrangement of rooms, doors, and windows will constitute the physical conditions of the household, where there are indefinite possibilities of individual household adaption. [10]

This points out that the needs of living are highly related to the surroundings, and the habitants of the dwelling. Theory explains that the physical surroundings do affect the individual, and the perception of the surroundings may have a psychological influence on the individual.

The need is highly dependent on how many habitants living together. It seems that the larger amount of people living together the greater becomes the need for privacy and withdrawal.

4. DISCUSSION

As it has been uncovered by the literature the amount of space have a psychological effect on the human individual. The size of the housing seems to have a lesser effect on the existential categories of human need, but may affect the axiological categories on a much greater way. The latter seems to be much more connected to

the psychological aspect of the human individual, therefore the smaller size apartments may strive to meet this type of needs.

Privacy is strongly connected to the function of withdrawal. Withdrawal may be said to depend on the use of walls to separate one another. This may be proven difficult when the amount of space is becoming too small. This again affects the axiological categories of needs. People living together have a higher demand of personal space, than people living alone. As mentioned in the Territoriality paragraph the use of walls in smaller apartments cause an undesired effect n the inhabitants by extreme enclosure.

If the physical environment fails to meet the personal requirements of the individual e.g the lack of walls for enclosure, the ability to adapt seems as an option. The question remains on where the line is drawn considered what is considered the sufficient amount of space. If the environment exceeds this in a way that can not be tolerated in the long term, one would demand change. This means one should seek solutions where the spatial adoption is utilized only to a certain extent.

Space efficiency may be said to be more applicable in a single person apartment, than in a larger household.

One may ask what the minimum sufficient space requirement for an apartment is. This is obvious user dependent, but one may assume that the space is too small if it prevents the user accomplishing the activities they want or need to perform. Space efficiency is one way of getting the most out of the available space, but does this actually solve the issue or will it cause cluttering and a crowding effect of the inhabitant. Maximum space efficiency may be the worst enemy of the feeling of spaciousness.

Further research should seek insight in the tangible spatial surroundings. What size of space provokes the different situations described in this paper?

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