

Revival of Interactive Architecture

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Abstract - Architecture should captivate the senses of passer-by, and speak to them. With the world growing at such a rapid rate we are growing vertically instead of horizontally therefore this leads to the communication gap and compression of interaction in between the people accessing various places. Interactive architecture means that it will not just act on the environment but also become more responsive to human needs and activities. This paper states the architectural inferences derived from studying various spaces, their uses and aspects and how the human interaction can be introduced by the means of architecture and will bring out new creations and inventions in interactive spaces, collaborative spaces and innovative ideas to make the space more beneficial. In this paper firstly the problems that are persisting and causes decline in social interactions are discussed and then design criteria's are given in the conclusion by categorizing buildings and the types of emotions associated with them and giving the architectural inference with respect to the same. Interactive architecture will make the spaces more transparent by segregating spaces with respect to the activities and maintaining socio demographic factor.

Key Words: Interactive architecture, Architectural Spaces, Collaboration architecture, innovations.

1. INTRODUCTION

Interaction is one of the most important factors affecting our day to day life. Only because of interaction the communication between human beings is possible. We know what people wants us to do or what are they saying only through the means of interaction, thus with the rapid advancement in human life interaction should not cease to exist.

The role of an architect is to meet the needs of the people to provide the space accordingly and interaction is the need of the hour therefore an architect is responsible to keep the interaction between people alive by the means of interactive architecture.

The ambience of space we inhabit, coupled with the Interactive Architecture directly influences our psyche, playing a crucial role in the relationships with the people and environment. It helps set up a state of harmonious coordination between all elements inhabiting the space, including humans, nature and environment.

In times like today's, when the human population, full of diversities in so many aspects live together as a society,

neighborhood relationships catalysis bonding between families by social interactions, promoting amity. Architecture in ancient times was mostly inspired by art and culture which brought people together and created brand new spaces. For example during the Indus valley civilization the great baths were introduced which brought people together in terms of religious practices, also in the roman architecture the amphitheaters and circuses were being introduced as collaborative architectural spaces which also brought people together at a place and enhanced the interaction between them.

Therefore architecture has been a major influencing parameter in the development of society not just structurally but also brought the sense of togetherness, belongingness and security amongst people. Architecture should not act as a communication barrier between the people but rather emphasize more on reducing the communication gap between the people in the society.

Interactive architectural environment comprises of how the various elements like structure, spaces, situation, objects composition, necessities, response to culture, utilization of resources, etc. all together creates impact on how the human interaction takes place.

Thus to create new relationships and atmosphere between the construct and the humans various design parameters and architectural considerations are to be kept in mind while designing any architectural space.

Instead we should go back to the very beginning where the community spaces were kept to the utmost importance and were designed and keeping ourselves strictly to the point on how to bring back the essence or revive the basic interaction through architecture.

1.1 Literature Review

Indian culture is all about coming together and interacting in various means thus requires spaces which allows free interactions to take place. Now a days due to space constraints instead of growing horizontally we are growing vertically which has over the years created a communication gap and decreased the sense if belongingness amongst the people.

There are various parameters that affect the interaction taking place such as,

- 1) Spacing- Spacing is the major factor affecting the interaction. If the space is not sufficient enough or is not comforting for people to come together for any sorts of activities then the interaction will not take place. Also sufficient or ample amount of space required and is to be provided while designing for interaction based activities. After your paper has been accepted, prepare it in two-column format, including figures and tables.
- 2) Access ways- Interaction takes place when people cross each other's path. If we start providing separate access ways for each individual apartments that would define territory of each individual and will make the people grow apart from each other and eventually leading to no communication.
- 3) Aristocracy- The society has divided the people into various groups according to their income which has brought a lack in interaction between the two sections of society. Therefore while designing the apartments one should keep in mind that the various sizes of apartment should be placed together for better interaction.
- 4) Neighborhood- Place where you live has a major impact on communication and the people you meet. Therefore the neighborhood must be chosen effectively
- 5) Mental Relaxation- The state of mind of a person decides how a person will communicate or react to any situation so one must design spaces which are solely for the purpose of peace and mental relaxation. There are few more factors that influence the interaction like sense of belonging and acting system, etc. which must also be kept in mind.

Interactive architecture has now become a necessity for the urban society. This helps in defining the territory and gather social control over the part of society, also ensure the safety and wellbeing of the people living in it. Since security is the factor that is of utmost importance to every individual being therefore one must develop spaces for interaction which then develops trust amongst the neighbors in the society.

There is a very easy way in which interaction takes place i.e. approach, socialize and disperse. To match the needs for interaction, interactive architecture plays a vital role in developing bond between humans. There are various parameters which helps/ triggers interaction between various people like safety needs, physical needs, love and belongingness, belonging to a spiritual discipline, being identified in the society etc.

1.2 Important factors that influence the interactive factor in architecture

Due to the difference in the life style of the people the communication has started to decline over the last decade. People are so busy with their own life and the work culture has developed such that maximum time is occupied with the work therefore lead to a lot of influencing aspects such as:

1. **Courtesy, civic and deterioration of the community empire:** social environment is where we can express ourselves freely and the special environments leads to interaction therefore combining both social and special environments is interactive architecture. The community culture should not cease to exist thus one must design spaces which creates bond and understanding with fellow citizens to develop a socio-friendly environment and cultural experiences. A society can only be deemed successful when it has an ambiance of balance and harmony between the civil society and the state, thereby ensuring peaceful coexistence. An atmosphere where humans understand and carry out their responsibilities in a manner that marks a sense of respect and amity towards each other.
2. **Decline of socio friendly environment and declaring of private territories:** Due to security reasons people have now limited themselves and defined their own territories and does not let anyone in very easily which has acted as a huge communication gap/ barrier, therefore society must have gathering spaces which will enable people to come together for various activities catering their needs. For example a society can develop their own shopping complex where people can come together to fulfill their needs and which will eventually lead to interaction. Community gathering spaces are also main architectural element which must be kept in mind while designing a society. The spaces should be designed in a way that the comfort and the security of the private domains are not hindered. The death of public spaces can finish the public interaction hence the planning should be appropriate.
3. **From spaces to objects:** Spaces are defined by the people, how they make the activities happen there but instead with the rapid growing lifestyle people have now started to become like a robot they have started living a life which somebody else programmed for them and eventually turning them into objects in the spaces. Therefore, the spaces should be equally appealing for the people to come there and for the interaction to take place. The places can also be set up with various kinds of installation arts which will develop some interest in people and keep them engaged in conversations.
4. **New era social spaces:** With the modernization and advancement of new generation the social spaces have now a different meaning. In early days social spaces

were the public gardens or gathering spaces, theatre, etc. but now-a-days the social spaces have been divided according to the class and comfort of the people. The new social spaces like caf es and malls have replaced the traditional old spaces and have become limited to the friend circle rather than increasing the social circle and have become purpose specific.

2. HOW CAN THE INTERACTION BE INCREASED WITH VARIOUS ARCHITECTURAL SPACE?

New employment opportunities must be created since unemployment is a major factor for most of the people to cut off any connections and interactions therefore new office spaces, working opportunities with full-fledged infrastructure should be made to cater the needs of people. Environment for fun and leisure times should be created so that people do not feel trapped or bound to their territories but instead come out in their free time and meet people in those happening spaces and create a communication between them.

By implementing social sustainability interaction can be introduced in various people of the society. The resources should be properly and equally distributed and the people of various communities should come together and actively participate in social, economic and cultural activities at the gathering spaces like the local gardens or community halls, club houses.

The transparency should be maintained by providing large openings and large sky courts and sky gardens in case of high rise residential apartments and private courtyards can be given for the floor wise collaboration to take place.

Also sky bridges can be provided as interactive spaces so as to cater or fulfil various need where the people can come together and conduct various activities creating third dimensional urban spaces which encourages people for 24 hour interaction process. The places should be distinctly visible and clean because it is a human tendency that people will not go to places which are hidden and are not clearly visible due to security reasons and also dirty places tend to create a bad atmosphere and environment which will eventually cease the contact therefore the spaces should be clean, surveillance should be proper and well maintained for the people to use it on daily basis.

Interaction take place at various levels. It depends on familiarity between people and how comfortable they are with each other. Familiarity defines the relation between the people thus keeping this in mind transition spaces should be provided with seating spaces so that people can contentedly interact.

Another level at which people interact is mutual assistance. It is about how readily they help others, how willing the

people are to mutually get along with other people thus collaborative spaces should be provided like sharing kitchen gardens and solar cooking may enhance the communication. Contribution can be a major factor on bringing the people together for interaction. Places like temples where people are enthusiastically contributing to the society can be a mode of communication for various age group. Homemakers are usually interested in socializing since it is a major source of entertainment for them thus gathering spaces and community halls or club houses must be designed for such activities.

To keep the interaction alive between people from various communities we need to identify the conventional rigidities pertaining between them in various complexes. Spaces are the best measures which help in reducing such stresses. One should promote facilities more on shared basis and which improves social sustainability in the society. Focus on reducing noise pollutions because unwanted noises may hinder the communication between people. Lobbies, parking spaces, corridors, access ways, gardens, yards, pools must be introduced which will upgrade the conversation between the people.

Requirement of spaces for each age group is different, so if we categorize the public spaces according to who all have access to it are, families, old age people, children. Each and every group has its own requirements like families mostly need gathering spaces, club houses or community halls as a medium for interaction whereas, old age people need calm spaces like meditation centers, gardens for relaxation purpose. Kids need spaces which are open for playing and certain other activities therefore we can further divide the space into the category of noisy space. While designing the spaces all these constraints should be kept in mind to assist the needs more.

There are various things that are to be kept in mind such as

1. Noise producing areas (family spaces) should not be placed next to the calm places.
2. Noise sensitive parts may act as a barricade to the noise.
3. No openings should be provided near the noise source.
4. Spaces should be segregated with respect to their respective activities that are to be performed there.
5. Semi private and public spaces should be distinctly visible.
6. Invasion of personal territory may cause disputes therefore should be prohibited.
7. Transparency should be maintained for security purpose.
8. Nature should be allowed to enter the premises adequately.

3. CONCLUSIONS

With various buildings types, comes the various emotions associated with it. The emotions totally depend on a person who is accessing the building and his perspective.

Various categories buildings have a lot of emotions involved for example in a hospital one can experience emotions like anxiety, depression, excitement, grieving, happiness, hope, hurt, joy, miserable, nervous, overwhelmed relieved, sadness, trapped etc. therefore to make the environment healthy and comfortable for all we need to come up with various design measures like providing various meditation points where the patients and visitors can go and relax and get to know more people and feel more lively. Also the hospitals have very less natural ventilation which makes the environment very dull, therefore lively open spaces, cutouts for natural light and ventilation OTS for day lighting should be provided which will help in reducing various emotional stresses and makes the patients or the visitors feel less trapped. The planning can be a courtyard planning where the wheelchair bound patient can go to take a round and get freshened up, rooms should have open terraces or balconies for movement of patients and their visitors.

An office consists of emotions like security, self-consciousness, nervousness, confidence, tension, enviousness, trapped, motivation, determined, frustrated, proudness, irritation, energetic, lethargic, annoyed, etc. and there are various design solutions that can be implemented to get rid of problematic emotions such as designing iot based interactive cafeterias where people get involved in activities which acts as a stress buster also recreational areas should be provided so as to make the office staff feel relaxed. Maximum use of artificial intelligence should be made so as to keep the staff occupied and interested. Interactive booths can be installed where a person can talk to people and calm themselves up. Open terraces should be used as activity areas and also can be informal workspaces which lets the staff work in a healthy and friendly environment which will boost the interaction.

An educational institution has a varied sets of emotions associated with it like excitement, joy, happiness, optimistic, envious, indecisive, thoughtful. Determined, etc. thus to cater these emotions for promoting interaction in the students we can provide design solutions like providing niches where they can sit informally and have interaction with each other, iot based cafeterias which may provide knowledge about various things, projections for sitting spaces in a long running corridor to break the monotony and can act as interactive spaces, installation art spaces where a certain space may be used for conducting weekly/ monthly activities to bring together people of various age groups and together interact in that way or develop interactive walls which may act as a mode of communication.

Residential buildings have their own requirement and problems since there are people from various communities

together so it is difficult for them to communicate with each other therefore we can implement various measures like providing punctures throughout the building for better transparency and interactive spaces. In case of high rise buildings sky courts and sky gardens should be made for various activities to take place which will eventually increase interaction among residents, also courtyard planning is the best way to make floor wise take place or cutouts in slabs between two levels can be provided for the diagonal interaction to take place. Whereas in bungalows compound less development should be promoted and double heighted spaces should be provided so that diagonal interaction within the bungalow may take place. Movement of alternate floor plate can take place so that alternate floor plate residents can interact with each other, more club houses and community halls should be developed in a society which will enhance the interactive experience.

Interaction makes the community grow all together therefore more of interactive spaces should be incorporated and will eventually decrease the difference between the people in the society.

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