

Psychology and Black Architecture

Avitesh^a, Dr. Naveen Nandal^b

a- Research Scholar, School of Art & Architecture, Sushant University, Gurugram, India

b- Assistant Professor, Sushant University, Gurugram, India

aravitesh13@gmail.com , naveennandal@sushantuniversity.edu.in

Abstract

Architectural Design or architectural field and human psychology are sharing a vital relationship but it has been ignored all the time and unnoticed by the design industry. Interrelation of design and psychology is not just significant but also reciprocal. One side claims, effective design has been shown psychologically impacted and physiological effects; the other side, psychology, human experience, and the work of our neural systems all play a role in our perceptions of Successful design. This paper aims to explain how the dynamic relationship came to be and how it should function in today's era and how black architecture theory has an essential significance during the design process. It accomplishes this by first looking at the working of the human brain and how the nervous system organized with it, how our forefathers adopted this structure and function. It reviewed literature that how modern culture affects that function. The positive impacts and harmful effects with the similarities and interrelationships in-between nature, psychology, and our nervous system are examined with that context. The modern-day issue of human stress induced by poorly built buildings and spaces will be illustrated, design recommendations with the help of psychological study followed by a discussion on black architecture theory and architecture buildings.

Keywords: Black Architecture, Design, Psychology, Human interaction

Introduction

In the architectural field, styles have evolved as the general public has invested in building materials and new construction processes have witnessed new evolution and enhancements. Some of them have faded quickly, while other styles have stood for a long time and stood the test of time and been around for several decades. Some old or traditional styles are even influencing modern architecture today. The

psychological and its benefits in architectural design are beyond the mere sense of an aesthetically pleasing aspect. Nowadays, the psychological advantages of aesthetics in architecture are more frequently reorganized. A few years ago, in exchange for form, use and craft, architectural elements traditionally taught (form, use and beauty) were dropped. To a considerable degree, human behavior is governed by the environment and resources within the environment. The physical structures of human behavior have a significant effect.

Human beings spend more time inside the walls of the structures; structures that feature a natural environment and structural landscape into the human environment are valuable for design. In addition, we create or are surrounded by a particular living environment. Our environment is also a fertile basis for our individual development and assessment. In a practical sense, space also helps strengthen our sense of self-appreciation, fulfilment and introspection. Relief in this sector can be a reason for unhappiness, worry, isolation and lack of spirit.

The population has increased in demand for households and institutions over time. So, everyone's attention bubble came to the need for quicker and more efficient buildings. This led to increasing numbers of tiny, hideous one-story 'box houses,' which were not well-conceived about the floor plan, space use or aesthetics. Box housings are also in India, not just EWS but LIG housings. Due to these housing types, people are drifting out of nature. A lot of architectural characteristics affect the well-being of our minds, emotions and emotions. The main question to be answered by all the brotherhood architects and designers: what feelings, feelings and feelings do I want to spark in the building's occupants? The patterns of behavior according to the building should be clear. The healthy patterns can be selected with the help of an appropriate design. Because various patterns of awareness, personalities and cultural imprints come into play, architecture has a non-identical effect on every human being; clear measures or tips are hard to define. However, some recommendations may help each professional in different design stages. Before the planning process, it would make more sense to integrate the criteria for each project in order to create spaces (social or collective). Then the project should be

supported at the planning stage and continuously optimized so that weaknesses can be resolved and damage prevention carried out prophylactically. In order to strengthen the buildings of the residents, the analysis of the design is also a significant element in this process, which will facilitate and use details on existing buildings.

In architecture, psychology has a high value and should never be undermined. Winston Churchill said that people are shaping and then shaping their buildings. The complex layers of human ideals, aspirations and motivations are to be produced in a human-centred design. We are trying to enhance architectural design that connects emotionally. The design of any building affects the behavior of a person and changes the mood. It is possible to define black architecture in many respects, but essentially it is the relationship between emotions and architecture. People/public/crowds generally connect it to color, but dark emotions stand for black architecture. A user of that particular space cannot feel or accept the art and scientific know-how of their survival in the building and the entire architecture cannot influence the behavior of a user. In general we can call it black architecture if you visit any place or building and your experience is dark or the goal behind the building does not trigger positive vibration. The terrible episode of any room, Black Architecture comes from a field of academic psychology to investigate the impact of architecture on human beings, their feelings and behavior. Architecture psychology is dedicated to the interaction of people with space. (AAvitesh. 2020)¹².

Psychology and Evolution of Brain

It is essential to understand the process of how architectural and interior design knock humans psychologically, at least on the basic level, one should get the idea about psychological impact on the human brain. In comparison to other species, the brain of a human being used to evolve in a more refinished fashion over time. The brain is the part of the body that is active 24 hours and observe each and everything. Species to species can be different in shape and size. For example, the forebrain in humans is bigger than several other animals comparatively. It is the hub of executive thought, planning, and emotion. On the other hand, the more fundamental aspects of the brain and brain stemming work closer to most mammals, which are already designed and work so that we can enjoy living and following fun. Survival is focused on the quest for the most common means of shelter, food and filling. Since we no longer have natural predators, survival has taken on a new, less objective sense in the modern world, one that differs according to demographics, social status, and geographic position. On the other hand, pleasure has, for some 200,000 years and so, remained essentially unchanged. Pleasure is described as a sense of pleasure, pleasure or pleasure. However, the strategies for this feeling have been subjective and over time have developed, with our human desires growing and our resources changing. Two sections of the human central nervous system are the brain of that human and the spinal cord. The brain is divided into a range of treatment structures and working sections dedicated to particular tasks.

A large forebrain (cerebrum), a smaller back brain (cerebellum), and a central brain stem are part of the human brain (midbrain, pons, and

medulla). The brain stem connects the brain with the spinal cord and is responsible for unintentional functions such as breathing, swallowing, heart rate, reflexes, etc. The brainstem is also essential as it acts as a relay to inform the brain about the rest of the body. It collects and transfers sensory input to the corresponding brain areas where the peripheral nervous system is labelled satisfactory or disagreeable. Human brains were designed to combine satisfaction with things and locations, which have, over time, improve our chances of survival. All the earliest human needs have been food, water, shelter, and, above all, architecture. Despite the way the village features are encoded and determined in our minds and our tastes in today's built environment, most citizens no longer live on rural lands. Modern humans continue, although more subjectively, to match shelter with pleasure. While it is not apparent at first glance that architectural and interior design has a link between these work mechanisms and the psychological impact on human brain, they play a critical role in controlling stress in modern humans.

Stress affects modern humans in a very different way than it did our forefathers and other mammals. Predators and bad weather were the main sources of stress for our ancestors. The fact that a human being no longer has natural degradation and that shelter is readily available to shield us from this world could encourage us to progress, but it has also drastically altered our stressors. Stress can be caused by a variety of factors and varies widely from person to person. Stress can be caused by a number of factors in daily life, including traffic, jobs, and relationships; stress can also be caused by seemingly insignificant incidents. Irrespective of the cause our bodies today react to stress in the same manner they intended for

our ancestors when it was about birth and death: the anxious sympathetic division comes into play, and everything that is not critical is slowed down for immediate survival.

In contrast to the eventual pressures experienced by our ancestors, our stress is worried because the reason behind that stress does not go away or we are not able to justify the reason and even though our survival is not in jeopardy, our bodies spend far too much time in survival mode. Consistent or chronic stress can cause severe problems in physical and mental health, including permanent ones. Since stress is now so prevalent and the health impacts of stress are well understood, techniques such as psychological therapy, meditation, medicines and other approaches are used to ignore it. While it is widely accepted that stress can somewhat be diminished, there are many different viewpoints on which strategies are most effective. This is why architecture and interior design's beneficial psychological impact have become increasingly important.

The Positive Psychology and Architecture

Architectural design has evolved from time to time with the market's changing tastes and discovering new methods and equipment for building. Such styles were urban myths that went quickly, whilst others stood the test of time for decades, shaping contemporary architecture. According to a renowned architect, shape, usage, and elegance are the three components that make a "beautiful" house. The feeling associated with the word "beautiful" is universal, even though the word "beautiful" is fundamentally subjective. We experience joy when we see something we consider to be

beautiful. Why do buildings have the potential to physiologically impact us positively if the only function of structure or place is where people can quickly assemble for specific purposes? The answer is based once again on evolution. Buildings that give us a good feeling include architectural features that our brain recognizes as similar to those that helped our ancestors survive.

Consequently, it is crucial to determine the particular features or trends of our brain and why. People were fascinated for a long time by the patterns we effectively adapted to our ability to plan for the future. There are many ways to understand patterns that the brain understands. The first is feature matching, which happens when the brain breaks up incoming pattern information and compares it to a previously stored pattern, one by one. Prototype matching is the same as matching features, but our brain tries to relate the incoming data to specific characteristics of a known prototype instead of matching the incoming pattern to the stored pattern.

The last matching pattern method is template matching, compared with the whole pattern only parts of the pattern. Patterns reflect order, continuity and lack of disturbance. The chances of survival of our ancestors increased as they could identify patterns and predict what would happen next. Patterns in our constructed environment that our mind recognizes as beneficial from nature to our ancestors produce today the same physiological response. Because insecurity or unpredictability, the polar contrast to sequence, has a physiologically negative impact on us. The human brain has been used to survive for so long as pattern identification is something that we regularly do subconsciously. While you do not know that your emotions are

the result of a pattern, the physiological system has the same sympathetic or para-sympathetic reaction as our ancestors. The significance of the pattern goes beyond the ability to identify something tangible, like a shelter or a house. It is also important because beautiful architecture has aesthetic influence.

Rhythms make the eye vary through one attention and another and allow the eyes to swing wildly from one direction and the next (for example one part of a room to the next). This not only captures your interest but also enhances the object's charm (house or room). There are four types of rhythms in architecture: Reproduction is known as alternation of a contrasting pair. Progress is the process of elevating or decreasing the dimension of an element of a pattern; repeating a single element repeatedly and using a line the eye can follow from one phase to the next is transition. Since the development of our brain equates the aesthetically pleasing patterns and rhythms with protection, safety, well-being and survival, we find buildings with patterns or rhythms that are more beautiful. As mentioned above, the perception induces the release of oxytocin, endorphins and DHEA, and a reduction in the fight or flight responses of the sympathetic nervous system, all of which lead to a sense of pleasure. This helped regenerate our physical and physical wellbeing, the immune system, telomeres and other aspects of our health.

The Negative Effects of Psychology on Architecture

Although the psychological advantages of architecture's aesthetics are now more broadly understood, historically evolved elements of different type of architecture (shape, use, ornaments and beauty) were removed according to the purpose for shape, utility and

craftsmanship. The demand for housing and institutions increased after World War II as a result of the baby boom in the population. As a result, there was a need to build faster and more efficiently. Giving less informative, tiny houses concentrated on this form, features and handicraft because of some limitations in technology available at that time. In the 1950s, this resulted in the proliferation of small, ugly or very sophisticated such as one-story 'box' houses that were poorly designed in terms of a floor plan, use of space, and aesthetics. It is currently taking place in illegal colonies and urban villages. We and others also discovered the same settlement in satellite areas, includes settlements with interminable rows of households that are primarily indiscriminate and constructed as near as practicable for more housing.

This plain, architecturally unoriginal building trend was not limited to homes; it also had a significant impact on the industrial evaluation, which were helping in the built environment at the time. Because of the war's improved material manufacturing capacity, new construction materials could be easily manufactured in factories that had previously been committed to the war effort. Those construction materials sparked the aesthetic in modernism architecture, which dominated especially industrial structures from the 1950s to the 1990s. The materials used basically to build a modern, futuristic, space-like look were glass, concrete, aluminum, synthetics, and steel. A rare type of sensory deprivation was created by monochromatic colors, poorly positioned windows, a lack of architectural detail, and repetitive designs. Not only did this pattern lead to the lack of intellectual stimulation, it also substantially eliminated any type of human interaction, which resulted in a cold and unpleasant atmosphere that was lacking the

ability to evoke a positive sense of comfort. With the high demand for houses beginning to decline, it is no wonder that the era's style was soon removed/replaced and a new passion was born for individualistic and creative expression in architecture.

The ancient ideals of beauty that defined the Classical era started to resurface once more. A new emphasis was attached to the structure, geometry (the use of patterns such as Nine Square) and uniform grid. Classically designed columns, buildings built on foundations, and colonnades have made a comeback. This underpins the previous argument that buildings that combine elegance and patterns will withstand evolving styles and social preferences. Not only did this motion incorporate a variety of additional components of the mediaeval era, but it also returned artefacts such as terracotta, stone, and limestone used throughout that period, and it also incorporated use of artefacts produced by human beings, which imitate these resources in the architecture sector. As a consequence of the above, the houses built at this period were much larger and more costly. Poorly designed structures and settings have a major negative psychological effect on humans, just as good architecture does.

The Supreme Court has been a critical responsibility of local governments since 1926, when the public health system (identified initially as physical health) was decided to do so. As a result of this declaration, governments have been granted legal authority to control land use. The World Health Organization extended the definition of public health to include mental, social and physical health and disease absence over time. The World Health Organization. In addition, the WHO emphasized the importance of avoiding and not

just managing disease (both mental and physical). The design of the individual buildings that make up the building environment for the city is important to public health as well as city planning. Studies show that we feel vulnerable, frightening and anxious in battered homes and neighborhoods, as well as abandoned and decaying structures. These emotions stimulate our survival mechanisms and, as we already know, activate our supportive nervous system.

“Sussman and Hollander (2015)” discuss the negative psychological effect modern communities have upon people in the book *Cognitive Architecture: designing how we react to the constructed environment*. They argue that people are generally happy when their urban area has more small businesses, unique spaces and houses instead of uniform cement systems and chains. The only two who were intrigued by the phenomenon were not “Sussman and Hollander”. Neuroscientist “Colin Ellard” has taken matters a little further. He led an audience through two streets of the city while monitoring emotional enthusiasm for skin behavior and electrical dermal reaction. The first consisted of a massive, generic Whole Foods house, while the second consisted of a myriad of unique and vibrant restaurants with open doors and windows. The study's lowest arousal level was in the former setting, while the latter generated a high level of excitement. "The holy grail in urban design is to create some innovation or improvement every few seconds, otherwise, we become cognitively disengaged," Eller concluded. From a psychological standpoint, such disengagement is undesirable; research shows that many times only slight boredom may trigger stress. (Ellard C. 2011)⁵

In short, the influence of architecture and design on psychology and a person's emotions is significant. Buildings with effective patterns,

such as the Nine Square or that invoke the sense of protection felt by our ancestors in the savannah have a positive impact, and we can feel better. Stimulating our nervous system helps to nerve and make us fearless, poorly maintained buildings that are harmful to our health both mentally and physically. Many unique buildings and shops stimulate us while repeated dull buildings are tedious and scientifically stressful. In addition, protracted exposition to these negative building characteristics can cause chronic stress and damage to one's health. Fortunately, both brain science and building technologies can both be avoided and corrected. In principle, not only should new buildings and urban environments prevent those bad qualifications but also strive, by implementing the methods of beautiful architecture mentioned above, to minimize them.

Conclusion

There is now significant evidence of good architectural design's psychological solid and physiological advantages that exceed atheism. We also learned that architectural design that is poorly designed in spaces and execution is associated with adverse problems in physical health and mental health. Finally, many of those psychological and physiological reactions to design are now clearer to us as a result of human evolution. We are able to build an architecture that, combining experience with technical resources, is not just aesthetically pleasing, but also psychologically advantageous. It is also critical that we rethink the cultural constructs that have incorrectly branded architectural design as merely an art form, depriving it of the substantive credibility it truly deserves as a profession with real societal gain potential. Suppose only

psychologists and architects understand architecture's positive psychological and restorative effects. In that case, the psychological implications of thoughtless design will never be entertained or discussed, which a critical prospectus is and the discipline will continue to lack the tools required to change the environment we live in. This study focused on the relation of psychology and architecture, this must be recognized as a social problem that is both pressing and very important.

Bibliography

1. American Psychology Association. (n.d.). Understanding Chronic stress. Retrieved September 01, 2017, from <http://www.apa.org/helpcenter/understanding-chronicstress.aspx>
2. Russell, J. A., & Lanius, U. F. (1984). Adaptation level and the affective appraisal of environments. *Journal of Environmental Psychology*, 4(2), 119-135. doi:10.1016/s0272-4944(84)80029-8
3. Could bad buildings damage your mental health? (2016, September 16). Retrieved October 03, 2017, from <https://www.architecturelab.net/bad-buildings-damage-mental-health/>
4. Douglass, M. (2015, September 16). Earth - Nine incredible buildings inspired by nature. Retrieved October 02, 2017, from <http://www.bbc.com/earth/story/20150913nine-incredible-buildings-inspired-by-nature>
5. Ellard, C., & Montgomery, C. (2011). Testing! Testing! A psychological study on city spaces and how they affect our bodies and minds. Retrieved October 3, 2017, from

- http://cdn.bmwguggenheimlab.org/TESTING_TESTING_BMW_GUGGENHEIM_LAB_2013_2.pdf
6. Jackson, R. J., & Kochtitzky, C. (n.d.). Creating A Healthy Environment: The Impact of the Built Environment on Public Health. Sprawl Watch. Retrieved October 2, 2017, from <http://www.sprawlwatch.org/health.pdf>
 7. Lost in Space? Architectural Psychology - Past, Present, Future by Alexander G. Keul
<http://papers.cumincad.org/data/works/att/06e1.content.07509.pdf>
 8. A THEORY OF ARCHITECTURE by NIKOS A. SALINGAROS
<https://zeta.math.utsa.edu/~yxk833/ATOA-online.html>
 9. Ricci, Natalie, "The Psychological Impact of Architectural Design" (2018). *CMC Senior Theses*. 1767.
 10. https://scholarship.claremont.edu/cmc_theses/1767
 11. Sussman, A., & Hollander, J. B. (2015). Cognitive architecture: designing for how we respond to the built environment. New York: Routledge
 12. 'Sensation of Space and Modern Architecture': psychology of architecture by Franz Löwitsch
<https://www.tandfonline.com/doi/abs/10.1080/13602365.2012.678645>
 13. <http://architecture.journalspub.info/index.php?journal=JAIP&page=article&op=view&path%5B%5D=663> Black Architecture – ArAvitesh 2020.
 14. Improvising Vernacular Ecological Sustenance: An approach towards reviving the Sinking Cities - Studies in Indian Place Names (UGC Care Journal) ISSN 2394-3114 Vol. 40, Issue 10. Febrary 2020 – Pooja Lalit Kumar
 15. http://urbanisationjournal.com/_housing_and_cities_by_NidhiDandona_2020
 16. A Discussion on Cultural Transformation in the Contemporary World (Case – Goa) - NATIONAL CONFERENCE; CIMA 2020 by ArAvitesh
 17. Leaving the city Behind: Case of srinagar city - Academicsera – 691st International Conference on Human Rights (ICHR) by Deepika Raina