ELECTIVE – II

RESEARCH

TOPIC: PSYCHOLOGICAL SPACES IN ARCHITECTURE

Submitted to the Kavayitribai Bahinabai Chaudhari North Maharashtra University, Jalgaon

By

Azleen Feroz Kazi

Under the guidance of

Ar. Gaurav Chordia

SE&CM's College of Architecture, Jalgaon

Kavayitribai Bahinabai Chaudhari North Maharashtra University, Jalgaon

February 2020

Certificate

I hereby certify that the work which is being presented in the Dissertation titled

"PSYCHOLOGICAL SPACES IN ARCHITECTURE "in partial fulfilment of the requirements for the **Fourth Year Bachelor of Architecture (IV B.Arch.)** submitted in SE&CM's College of Architecture, Jalgaon is an authentic record of my own work carried out during the period from **January 2020 to February 2020** under the supervision of Ar. Gaurav Chordia

I declare that the work submitted is my own research and wherever I have incorporated any information, data, maps, graphics, etc. from different sources, it has been duly acknowledged.

Azleen Feroz Kazi

This is to certify that the above statement made by the Candidate is correct to the best of our knowledge.

Ar. Prof. Gaurav Chordia

The Candidate has appeared for the examination held at the Kavayitribai Bahinabai Chaudhari North Maharashtra University, Jalgaon

Kavayitribai Bahinabai Chaudhari North Maharashtra University, Jalgaon

....

Research Guide External Examiner

TOPIC: Psychological spaces in Architecture.

AIM: Analysis and study of psychological spaces in architecture.

OBJECTIVES:

i. To study the psychological spaces in architecture.
ii. To study the impact of psychology of the structure on human.
iii. To study the pioneers of architecture and their contribution towards the development of structures.
iv. To study the role of Senses and the Nervous System, Security and Crime, personality and evolvement, use and behaviour of a human.

SCOPE:

Social and psychological research will play an increasingly important role in the future of architectural practice, not by replacing intuition and experience in the design process, but rather by supporting it. The basis for this belief is the assumption that it is in the best interest of architects, clients and building users to better understand the psychological and social dimensions of the designed environment and how design decisions influence human well-being and performance. Although it is beyond the scope of this post to address all the applications and nuances of this field of research, a brief definition of psychosocial research as it relates to architectural practice will be provided and reference will be made to a number of areas in which this research has proven to be beneficial.

For the purposes of this discussion, designed focused psychosocial research, within the context of architectural practice, will broadly be defined as an *'intentional and systematic process through which an attempt is made to determine and/or describe the influence of designed spaces on human functioning and performance.'*

With the majority of designed spaces being occupied by people, it can be assumed that a key indicator of the success of a design depends on how the space influences the human activities within that space. Since the early 1900's, researchers from various fields have attempted to study these influences. Although these efforts did not always produce findings of specific interest to designers, a number of research areas emerged as having direct bearing on design practice:

Workplace design: The effect of the designed environment on worker productivity has historically been a popular topic of study. Since the early 1900's different fields of inquiry regarding workplace performance have emerged. Today organizational psychologists and interior and industrial designers utilize human factors and ergonomics research to inform their work and help define the relationship between the physical work space, productivity and the organizational culture. The pursuit of "collaboration"

and "innovation" in the work environment has, especially in recent years, stimulated research in this field.

Learning environments: The effect of the physical environment on teaching and learning is a source of ongoing study and regular discussion. Studies focus on a wide range of physical aspects, ranging from classroom colors to furniture layout and design. Given changing pedagogies, and recent developments aimed at the digitization of teaching spaces, the psychosocial effect of designed environments on learning is undoubtedly a relevant and important topic.

Healthcare facilities: One of the most significant avenues of design focused psychosocial research addresses the effect of the physical environment on health and recovery. Although this is not a new field of research it has experienced significant growth in recent years and serves as the primary driver for many programs in evidence based design (EBD). The Center for Health Design, with the Evidence Based Design Accreditation and Certification (EDAC) program is one example. Given recent developments in healthcare policy and the anticipated impact of changing demographics on the healthcare industry, this type of research, which addresses patient and caregiver well-being, remains crucial.

Residential environments: Little doubt exists regarding the importance of the residential environment in supporting an individual's social development and psychological well-being. This is especially true in specialized housing environments such as those found in campus communities or long-term care environments where the boundary between private and public space is reduced and the physical environment directly impacts social interaction. Appropriate design decisions, considering the psychological and social opportunities of these environments, have the potential to positively impact the users of these spaces.

Retail environments: Although recognized less as a traditional field of research for architects, the psychology of consumer behaviour and the effect of the designed environment on this behaviour remains a compelling field of research with definite applications.

Findings in the above-mentioned areas of research hold the potential to impact the welfare and performance of building occupants. Design focused psychosocial research can benefit building owners and occupants in distinct ways by helping owners identifying specific shortcomings and opportunities for improved building performance. It can also help owners and occupants better understand the impact of design decisions on user performance and organizational culture and increase occupants' awareness of their own actions and preferences in regards to specific settings.The potential benefits of psychosocial research for building owners and users are well documented.

ACKNOWLEDGEMENT

I thank my God for providing me with everything that I required in completing this research.

I am highly indebted to the Teacher In-charge Ar. Gaurav Chordia Sir for his guidance and constant supervision as well as for providing necessary information regarding the research. I thank him for supporting me in completing my research.

I would like to express my gratitude towards my parents for their kind co-operation and encouragement which helped me in the completion of this research.

My thanks and appreciation also go to my group members in developing the research and to the people who have willingly helped me out with their abilities.

My special thanks goes towards my brother Mr. Zaid Kazi who is a psychologist, he has helped me in understanding the psychological behaviour of a human being. His knowledge has proven to be a boon in my research.

I would like to express my deepest gratitude and happiness towards all the individuals who has helped me in the completion of this research paper. It would not have been possible without the kind support and help of them. I would like to extend my sincere thanks to all of them.

TABLE OF CONTENTS

ABSTRACT

Every architectural intervention is constructed using physical materials but it can create unique experiences that are beyond the tangible world. Architecture, as the art of changing the environment and the space, involves a dialectic process between the physical and the intangible world of our own senses, and it is nothing more or nothing less than our perpetual effort to assign our non-physical human dimensions in space and time, by taming the first one in order to become habitable. This architectural practice, that is to say, the experiential approach to buildings, has been based on the theory of phenomenology, which we shall discuss further down, along with its connection that has been made by many theorists, with the art of transforming space, that is architecture.

The interplay between architectural design and human psychology is significant, yet it remains largely unnoticed or even ignored both in and outside the design industry. Moreover, the relationship between design and psychology is not only consequential, it is bidirectional. On the one hand, successful design has been shown to have clear psychological and physiological impacts; on the other, psychology, human experience, and the function of our neurological systems all play a significant role in what we perceive to be successful design. This research endeavors to create an understanding of how that complex relationship evolved and how it works in today's world. It does so by first exploring how the human brain and nervous system is structured and functions, how that structure and function benefited our human ancestors, and how modern society impacts that function. With that knowledge as a background, the interrelationship – both positive and negative – between design, psychology and our nervous system is explored. Successful design patterns are reviewed, including those that evoke the same sense of security sought by our human ancestors, as well as those whose specific patterns have a meaningful psychological basis. Similarly, reasons why some design forms and themes have not been successful are explored, as is the modern-day challenge of human stress that results from those poorly designed buildings and spaces. Finally, the importance of incorporating nature into the human built environment to take advantage of its positive psychological impact and restorative properties is explored.

KEYWORDS:

(Architecture, Design, Psychology, Emotion, Arousal, Cognition)

INTRODUCTION

To,

……..

Date: 28 Feb 2020

Subject: Request for the fundings required for the completion of research.

Respected Sir/Ma'am,

I am the student of architecture studying in 4th year B.Arch, Jalgaon. I am willing to do a research on the psychological spaces in architecture, this is where my interest lies to its peak. Here's a basic introduction of my research and the layers on which I am trying to work at.

Space is the core of architecture. In order to design, it is necessary to conceive and think about architectural space surrounding us by decoding the characteristics of its nature and discovering messages revealed via its built form. This is the way how an architect is aware of the spaces that surround him/her. In other words, this is a kind of a discovery process which helps the architect to construct and enrich his/her understanding of space and spatial experiences.

These recorded, collected, described and even reproduced experiences then form the core of his/her spatial knowledge and act as the activator of the design process by leading architects to decide on the principles and concepts of the space desired by. According to Kurtuncu, et al, spatial knowledge stemming from spatial experience act as a network interwoven between interrelated concepts such as body, scale, proportion, experience, perception, atmosphere, senses, time, memory, context, light, structure, materials, architectonics, spatial articulation and syntax etc. (Kurtuncu, et al, 2008).

In architecture there is a common approach in which spaces are conceived and evaluated by focusing on their physical appearances and formal characteristics and classified under a specific architectural style. This approach disregards those characteristics such as man-space relationship and their social implications which are the key elements forming architectural space and its identity.

In understanding and discovering these spatial characteristics, the key element appears as the man-space relationship. According to

Proshansky, the physical environment that we construct is more a social phenomenon than physical one, (Proshansky, 1970). Lefebvre defines space as a social product (Lefebvre, 1998). According to him, space is modified by social relations; it is not only supported by social relations but also produced by social relations. Lawson defines architectural and urban space as containers to accommodate, separate, structure and organize, facilitate, heighten and even celebrate spatial behaviour. Space creates settings which organize our lives, activities and relationships (Lawson, 2005). According to Hillier space is never simply the inert background of our material existence. It is a key aspect of how societies and cultures are constituted in the real world, and, through this constitution, structured for us as 'objective' realities. Space is more than a neutral framework for social and cultural forms. It is built into those very forms. Human behaviour does not simply happen in space. It has its own spatial forms, (Hillier, 1996). Markus implies that buildings are treated as art, technical or investment objects, rarely as social objects, (Markus, 1993). He suggested that people discover and create meaning in social relations, and that these forms and are formed by their social practices- the things they do together. Designing and producing buildings are social practices. Similar with Markus statement Hillier indicates that buildings carry social ideas within their spatial forms. Spaces are key aspects of how societies and cultures are constructed in the real world, (Hillier, 1996).

This paper tries to generate an understanding of how architects conceive and decode architectural space and clarify their tools in talking about space. Phenomenology of architecture is theoretically constructed on the paradigm of observed and interpreted human experiences and behaviours towards physical sites through the analysis of sensory influences. As a scholarly discipline, this is significantly different from research based on studying design functionality, efficiency and performance of buildings as principled on rationalist and socioeconomic contexts.

Phenomenology's approach acknowledges the complexity of double-fold levels of knowledge: ontological or objective, foundational characteristics of the life-world, and epistemological, where lived experiences become a primary source of self-knowing, developing richer, authentic perspectives through our emotions, sentiments and memories.

Alberto Perez-Gomez relates the role of modern architecture itself as a lived experience at the epistemological level; affirming the belief by architectural academics like Joseph Rykwert that built structures are theatres of our memories and meaning-making, since geometrical arrangements are similar to human experiences with spatiality and temporality.

This researchgives insights on how phenomenology influences the philosophic intent behind architecture, through a critical discourse on **Steven Holl's and Peter Zumthor's** phenomenological approach as the intertwining of the sensorial and experiential, and argues for his discernment of the spirit of modernist structural design that leads to existential revelation of the resulting work.

My research will help the entire industry of architects to analyse the psychology of human being and accordingly design the structures considering them. Kindly grant me the necessary funding to complete my reseach. The funding will include my fees, the places I need to travel, my accommodation and traveling fares. I will be highly obliged if I get this opportunity to do my research and necessary funds for it.

Thanking you

Yours Sincerely,

Azleen Kazi

METHODOLOGY

The key interpretive ideas that will be used in this research and will also provide the structure of this research are based on the theory of phenomenology in architecture, that is to say, the theoretical background, combined with more practical elements: the structure of the building, its materials, its location, the interior and exterior, the light and its use, an incorporated personal description along with information and material provided by others as well. So, except from the actual personal description of the building, the work of other authors will be combined in order to cover more extensively and substantially, the subject.

The method used to analyze the above ideas will be based on the structure analysis of the building itself. We will dwell in the rooms, we will feel the architecture, and we will observe the space, integrating the personal description with the theoretical framework of authors and theorists who have explored architectural interventions through the philosophical prism of phenomenology. Phenomenology itself has a unique academic ground, so in order to grasp its concept, we have to look first at its meaning and then its connection with what Pallasmaa, Zumthor and Steven Holl proclaims as **sensory architecture**.

If we accept design as a kind of sophisticated mental process capable of manipulating various kinds of information (Lawson, 2003), and space as key element of this process or a laboratory which contains the base of such an information, critical questions arise: **How** do architects perceive and conceptualise architectural space? **How** do architects understand and decode space? **How** do they think and talk about space?

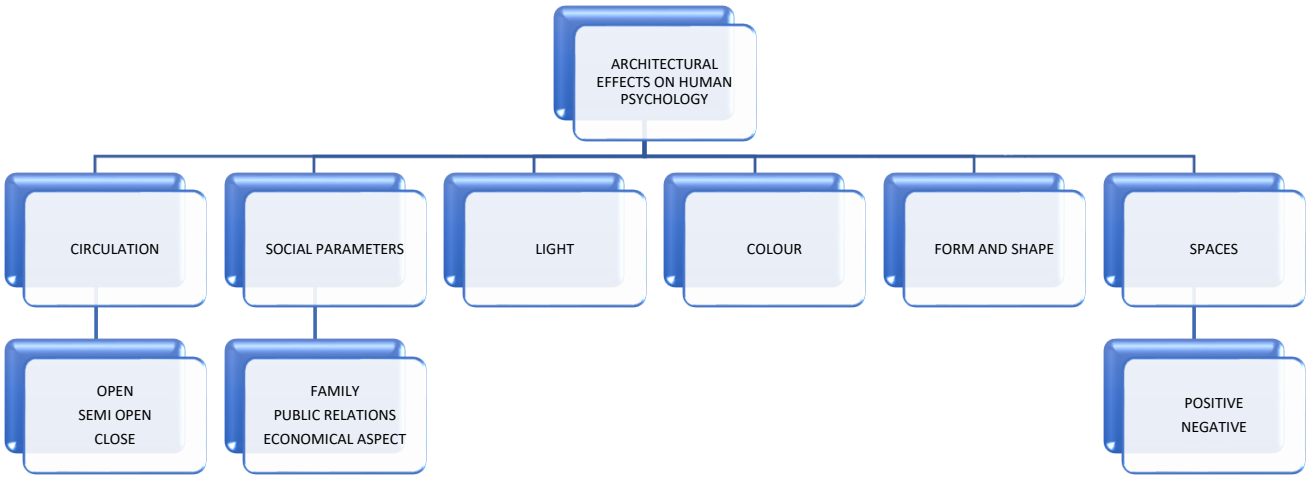

ARCHITECTURAL EFFECTS ON HUMAN PSYCHOLOGY
CIRCULATION
SOCIAL PARAMETERS
LIGHT
COLOUR
FORM AND SHAPE
SPACES
OPEN
SEMI OPEN
CLOSE
FAMILY
PUBLIC RELATIONS
ECONOMICAL ASPECT
POSITIVE
NEGATIVE

FIG 1

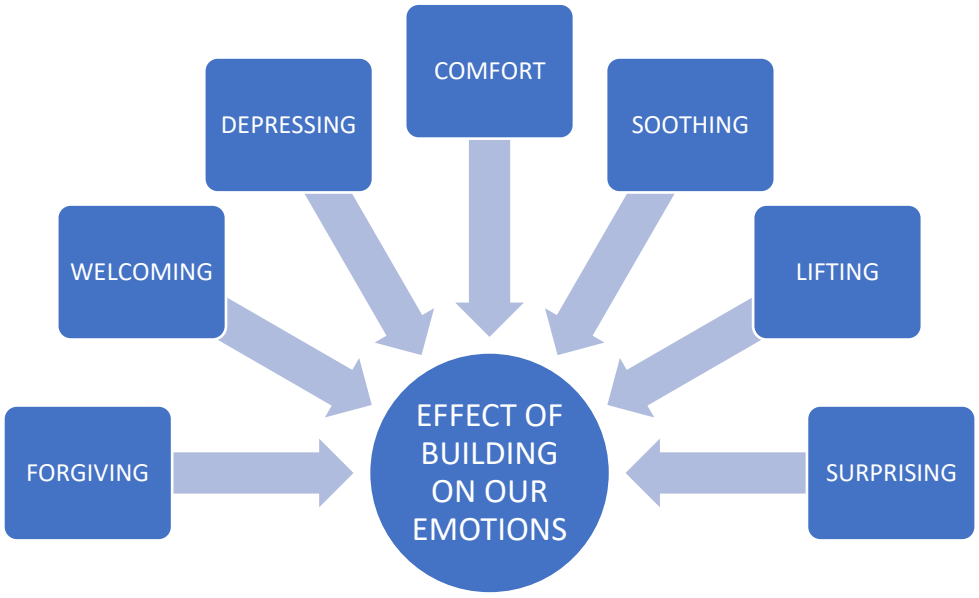

COMFORT
DEPRESSING
SOOTHING
WELCOMING
LIFTING
FORGIVING
SURPRISING
EFFECT OF BUILDING ON OUR EMOTIONS

FIG 2

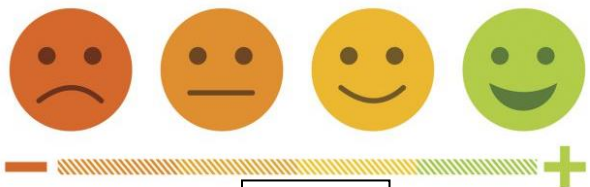
CHAPTER 1: EMOTIONS

Complex, Episodic, Dynamic, Structured Trying to define emotion is not an easy task. In fact, psychologists, philosophers, and researchers have all attempted to create and agree upon an exact definition of emotion. The definition of emotion refers to a feeling state involving thoughts, physiological changes and an outward expression or behaviour. The process and relationship between these elements are of debate among theorists. "The only common ground among a myriad of writers is the conclusion that emotion is not easy to define."

By the end of the 19th century, emotion was identified as differing from cognition (reasoning) and volition(willing). Presently, according to Douglas Candland,we retain this analysis in our conception of emotion, "Emotion is commonly thought to be the obverse of reason, a separate faculty, usually one to be guarded lest it interfere with the rational aspects of the mind and thereby subvert motivation or values."2

Contemporary definitions of emotion include that given by Kleinginna and Kleinginna (1981) in an effort to provide a comprehensive, inclusive definition of emotion: Emotion is a complex set of interactions among subjective and objective factors, mediated by neural/hormonal systems, which can:

- ✓ Give rise to affective experiences such as feelings of arousal, pleasure/displeasure
- ✓ Generate cognitive processes such as emotionally relevant perceptual effects, appraisals, labelling processes
- ✓ Activate widespread physiological adjustments to the arousing conditions
- ✓ Lead to behaviour that is often, but not always, expressive, goal directed and adaptive



IMG 1

Although there is no single definition of emotion, as described by Peter Goldie, an emotion is typically complex, episodic, dynamic, and structured. "An emotion is complex in that it will typically involve many different elements: it involves episodes of emotional experience, including perceptions, thoughts, and feelings of various kinds, and bodily changes of various kinds; and it involves dispositions, including dispositions to experience further emotional episodes, to have further thoughts and feelings, and to behave in certain ways. Emotions are episodic and dynamic, in that, over time, the elements come and go, and wax and wane, depending on all sorts of factors, including the way in which the

episodes and dispositions interweave and interact with each other and with other aspects of the person's life. And an emotion is structured in that it constitutes part of a narrative roughly, an unfolding sequence of actions and events, thoughts and feelings- in which the emotion itself is embedded."

To summarize Goldie's explanation, emotions are complex in the number of elements, which must be choreographed, episodic and dynamic because emotions come and go with varying degrees of temporality, and also typically structured as part of a narrative, part of a sequence of dependent events

Another approach to understanding the definition of emotion is to discriminate between the similar concepts of motivation, affect and mood. To explain the difference between emotion and motivation, it is suggested that emotions are a series of reactions to a situation, an external situation, while motivation is an internal, action-oriented function. The difference between emotion and affect is less clear, and as explained by Joseph Fell, if the intensity is mild, it is considered to be an affect, if the stimulus is intense, then it is an emotion. Fell describes the difference between mood and emotion as the former having a longer span and a vague source of cause, while emotion has a short-term effect and a more identifiable cause.

Because the meanings of the term emotion continue to evolve, Candland suggests that, "it is of little concern how we define emotions," rather he suggests, "what is important… is to determine the logical structures given emotion in theory." In relation to an emotional response and for the purposes of this thesis, it will be assumed that the definition of emotion is flexible.

CHAPTER 2: ACTION AND EXPERIENCE THEORIES

The study of emotion can be traced from early developments inspired by Aristotle to a wealth of approaches in the last century, including biological, behavioural, and cognitive approaches. Common themes between these varying historical and contemporary theories include the, "belief that emotion is a system which affects and is affected by other systems." As well, common conceptualizations include elements of intensity, arousal and cognition. Diagrammed below are five theoretical explanations of why we experience emotion.

2.1 James-Lange Theory:

The James-Lange theory of emotion was proposed by psychologists William James and Carl Lange. According to this theory, as we experience different events, our nervous system

develops physical reactions to these events. Examples of these reactions include increased heart rate, trembling, upset stomach, etc. These physical reactions in turn create emotional reactions such as anger, fear and sadness.

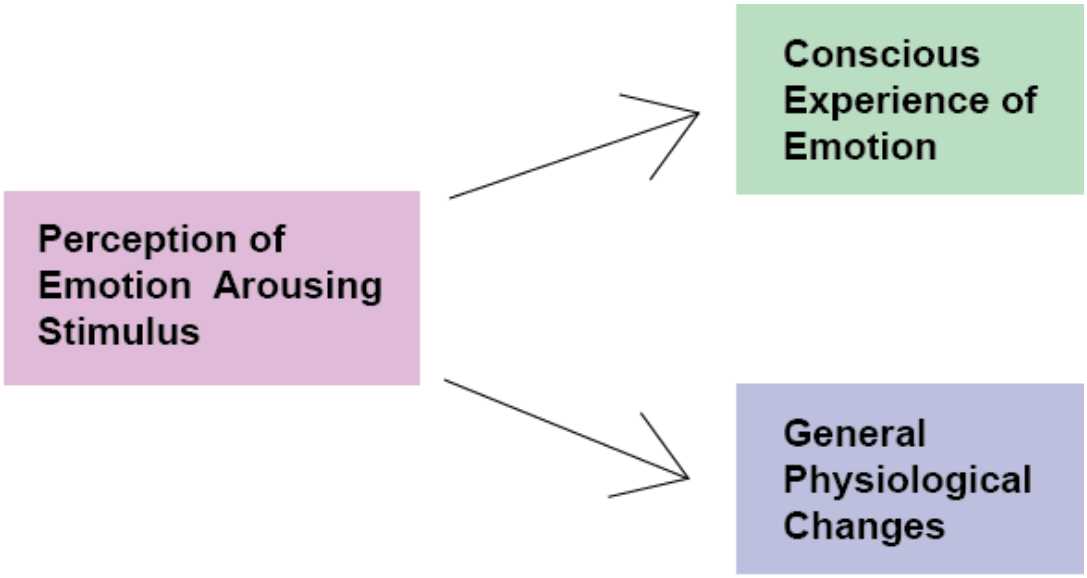
For example, imagine sitting in a dark room all by yourself. Suddenly you hear breathing sound behind you. Your heart rate increases and you may even begin to tremble. You interpret these physical responses as you are scared and so you experience fear.

2.2 Cannon-Bard Theory:

The Cannon-Bard theory of emotion was developed by physiologists Walter Cannon and Philip Bard. According to this theory, we feel the emotions and experience the physiological reactions such as sweating, trembling and muscle tension simultaneously. For example, you are in a dark room all by yourself and suddenly you hear breathing sound nearby. According to the Cannon-Bard theory, your heart rate increases and you begin to tremble. While you are experiencing these physical reactions, you also experience the emotion of fear.

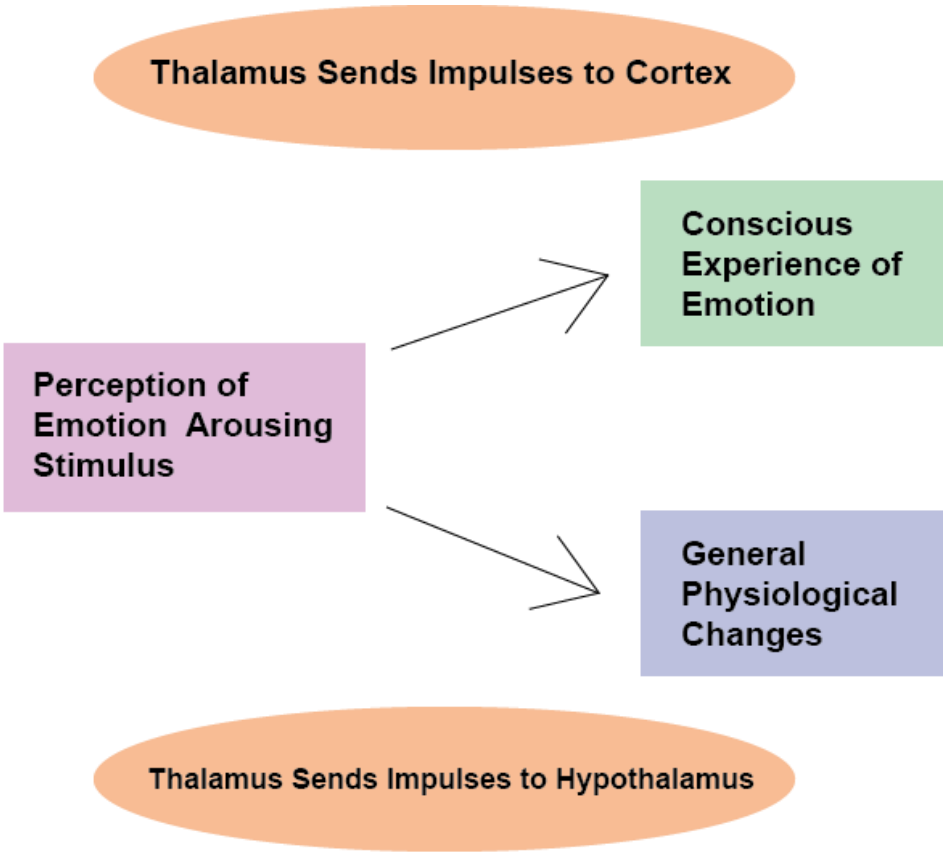
- ✓ EVENT
- ✓ EMOTION
- ✓ AROUSAL
- ✓ EVENT AROUSAL INTERPRETATION EMOTION

.



(C) The Psychology Notes HQ - www.PsychologyNotesHQ.com

FIG 3



(C) The Psychology Notes HQ - www.PsychologyNotesHQ.com

FIG 4

2.3 Schaster-Singer Theory:

The Schachter-Singer theory of emotion was developed by Stanley Schachter and Jerome E. Singer. According to this theory, the element of reasoning plays an important role in how we experience emotions.

The Schachter-Singer theory suggests that when an event causes physiological arousal, we try to find a reason for this arousal. Then we experience and label the emotion.

For example, you are sitting in a dark room all by yourself and all of a sudden you hear breathing sound behind you. Your heart rate increases and you begin to tremble. Upon noticing these physical reactions, you realize that they come from the fact that you are all alone in a dark room. You think that you may be in danger, and you feel the emotion of fear.

2.4 Schachter-Singer's Two-Factor Theory

This theory focuses on the role of physiological arousal as a primary factor in emotions. However, it also suggests that physical arousals alone cannot be responsible for all the emotional responses. Therefore, it takes into account the cognitive aspect of the emotional reaction.
For example, you are sitting in a dark room all by yourself and all of a sudden you hear breathing sound behind you. Your heart rate increases and you begin to tremble. You notice the increased heart rate and realize that it is caused by fear. Therefore, you feel frightened.
The whole process begins with an external stimulus (breathing sound in a dark room), followed by the physiological arousal (increased heart rate and trembling). The cognitive labels come into action when we associate the physiological arousals to fear, which is immediately followed by the conscious experience of the emotion of fear.

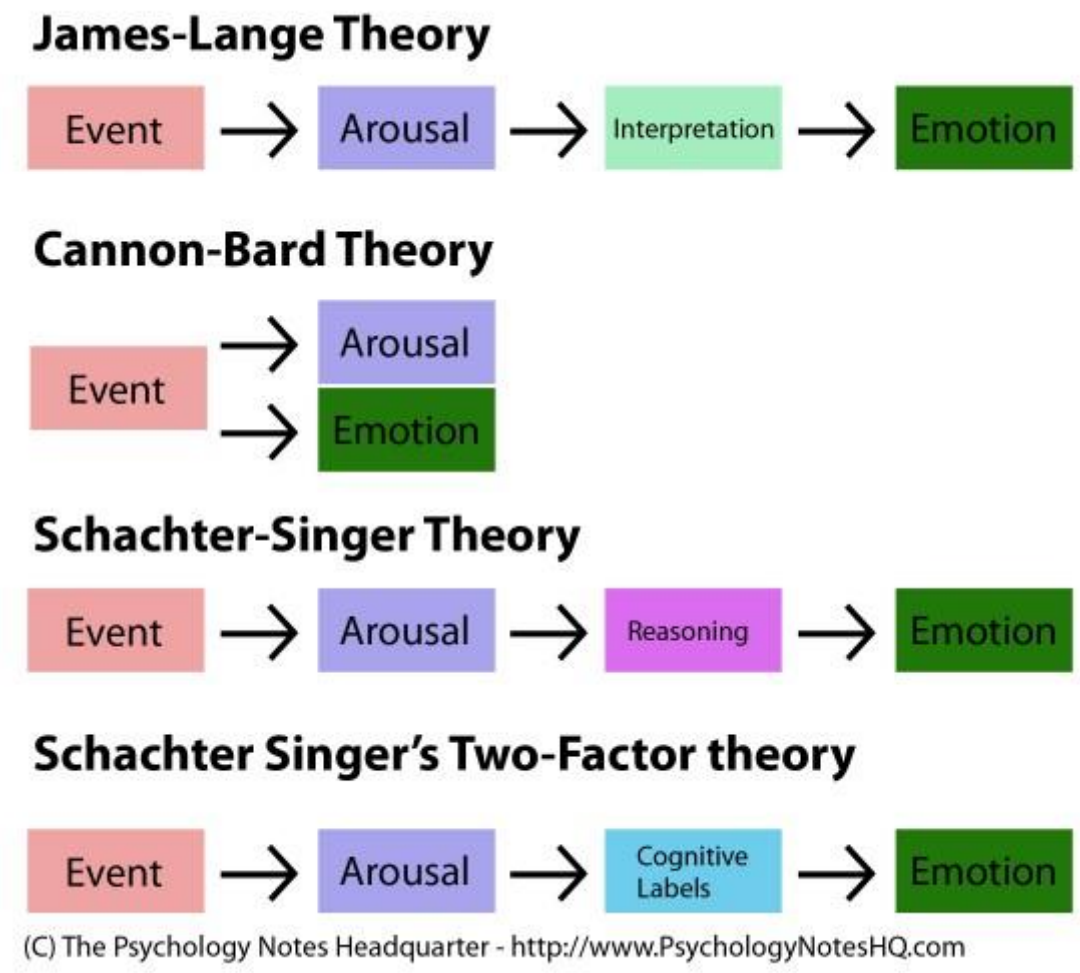


FIG 5

Similarities between the sequences are

(1) that the emotion begins with perception or an event and

(2) that emotion resides in the cognitive state.

Differences exemplify two views, the centralist and the peripheralist view. The centralist approach recognizes cognition as a filter of perception, selecting the sequential behaviour. The peripheralist view relies on peripheral receptors of behaviour that lead to cognition.

The following two diagrams represent such sequences:

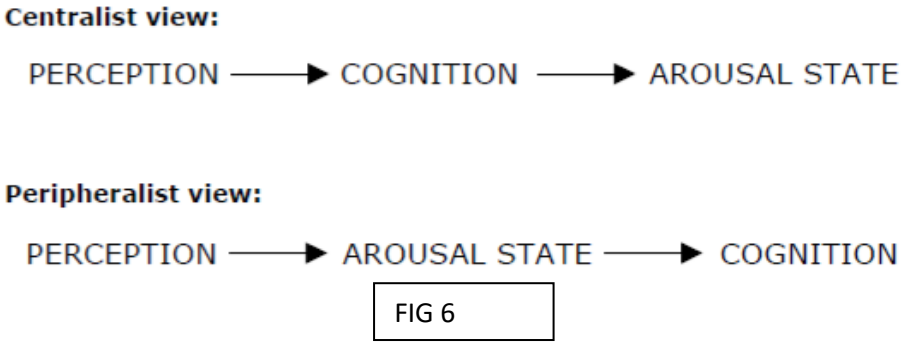


FIG 6

- ✓ PERCEPTION AROUSAL STATE COGNITION
- ✓ EVENT FACIAL CHANGES EMOTION
- ✓ EVENT THOUGHT
- ✓ EMOTION
- ✓ AROUSAL
- ✓ PERCEPTION COGNITION AROUSAL STATE

Now, with a focus towards emotion within the design field, questions arise such as:
Do the ideas direct bodily activity and do cognitions govern feelings?
Does the body awaken the mind to memories and symbolically meaningful experiences?

Chapter 3: Architecture and Experience

Perspectives:

The perspective of emotional theories and history has led us to the question, **how** does the body awaken the mind to memories and symbolically meaningful experiences? **What** are these implications in architecture? This section will focus on the perspectives of three architects, Juhani Pallasmaa, Steven Holl and Peter Zumthor. These theorists and architects approach architecture from the consciousness of feeling it, or through the experiential qualities, which help define phenomenology. The focus is on the human body, not as a source for representation, but rather, as an experience of the human body in a spatial environment. It is through this analysis that the thesis will gain insight for application to the design case study investigation of a Center for Well-Being.

Chapter 4: Place and Placelessness

In Place and Placelessness (1976), Edward Relph focuses on the diversity and intensity of our experiences of place. "Perhaps the most successful attempt," according to David Seamon in response to Place and Placelessness, "by a social scientist to reinterpret the person-environment relationship phenomenologically is Relph's effort to establish a phenomenology of place." In defining place, Relph begins with the human experience as the foundation,

defining places experientially as, "fusions of human and natural order," and then continues, "(places) are the significant centres of our immediate experiences of the world." The core of Relph's definition of place rests in the inside-outsideness continuum. "It is possible to distinguish several levels of experience of the insideness of places, and it is perhaps these that tell us most about the nature of the phenomenon of place." Relph continues, "At the deepest levels, there is an unselfconscious, perhaps even subconscious, association with place." It is insideness, Relph demonstrates, that transforms space into place and sustains the deepest sense of dwelling. In the words of Seamon, "Relph argues that the relationship between insideness and its experiential opposite, outsideness, is a fundamental dialectic of human environmental experience and behavior. Through different degrees of insideness and outsideness, different places take on different identities for different people, and human experiences take on different qualities of meaning and feeling."

The following part of this section shall describe in greater depth the inside-outsideness continuum defined by Relph.

"The essence of place lies not so much in these (geographies, landscapes, cities and homes) as in the experience of an 'inside' that is distinct from an 'outside'; more than anything else, this is what sets places apart in space and defines a particular system of physical features, activities, and meanings. To be inside a place is to belong to it and to identify with it, and the more profoundly inside you are the stronger is this identity with the place."

Relph describes the inside-outside relationship as a 'basic dualism.' This 'basic dualism' is the difference between "safety and danger, cosmos and chaos, enclosure and exposure, or simply here and there." Because, "we are always at the centre of our perceptual space and hence in a place," Relph considers an egocentric structuring of personal space. "As our intentions vary, so the boundary between inside and outside moves." It is at this point where similarity is drawn between the dialectic intimacy of outside and inside as defined by Gaston Bachelard.

The Poetics of Space, the chapter "The Dialectics of Outside and Inside," Bachelard takes a metaphysical look at how the geometrical opposition of inside and outside shapes and restricts our experience of place. "Outside and inside form a dialectic of division, the obvious geometry of which blinds us as soon as we bring it into play in metaphorical domains. It has the sharpness of the dialectics of yes and no, which decides everything. Unless one is careful, it is made into a basis of images that govern all thoughts of positive and negative."

Relph reinforces Bachelard's concepts of the reversible and delicate relationship between inside and outside. It is then the fading between a

defined inside and outside where Relph introduces defined levels of "intensity with which we experience outsideness and insideness." The levels of intensity are existential outsideness, objective outsideness, incidental outsideness, vicarious insideness, behavioural insideness, empathetic insideness, and existential insideness. The levels vary from complete alienation from all places to a "complete and unselfconscious commitment to a place." In the words of other phenomenologist, the descriptions vary from homelessness to at-homeness.

"In existential outsideness all places assume the same meaningless identity and are distinguishable only by their superficial qualities." Existential outsideness involves a self-conscious detachment from the surround. Places become a background, beyond care of periphery, into a state of void. It is this relationship of alienation that characterizes homelessness. Objective outsideness is a, "deliberately adopted intellectual attitude," which describes places as, "spaces where objects and activities are located." This type of involvement, which is similarly assumed in academic geography, self-consciously creates distance from the place in order to perceive systematically. The place becomes objects "having certain attributes, within systems of locations." The person does not attain any relationship with the place. Instead, they exist in separate domains.

Incidental outsideness, "describes a largely unselfconscious attitude in which places are experienced as little more than the background or setting for activities and are quite incidental to those activities." As a visitor, it is part of everyone's experience that the activity "overshadows where we are doing it." Places exist in the periphery, but attain no conceptual response. It is a part of the activity, but of no attributable forces. Vicarious insideness remains a secondhand experience. It is the level of insideness without actually being in the place, although it retains a, "deeply felt involvement." As quoted by Relph, David McCord writes, "Poets, painters, and musicians sometimes choose to live, and strictly operate, within a very special world defined by very special boundaries selfimposed.

They do not set out to discover these worlds: they appear to be born within them… When we read, inspect, or listen to their work we enter into their domain…" We make internal this second hand experience. The level of involvement is made personal without direct experience. Behavioural insideness involves the realization of being in a place and absorbing its characteristics. "…It is the patterns, structures and content of this inside that tell us we are here rather than somewhere else." Through observation, the place is seen as, "a set of objects, views, and activities." It is through a direct association with this place that the items are given significance and experiences are articulated.

One more level beyond is empathetic insideness. The transition from behavioral insideness to empathetic insideness, "demands a willingness to be open to significances of a place, to feel it, to know and respect its symbols." The step between behavioral and empathetic insideness, as Relph asserts is the difference between looking and seeing. The former involves "appreciating the essential elements of its identity." It is a "fading from the concern with the qualities of appearance to emotional and empathetic involvement in a place." Empathetic insideness allows for an identity with the place, involving one's own experiences and associations as well as the associations held already by such a place. Beyond empathetic insideness is existential insideness. "The most fundamental form of insideness is that in which a place is experienced without deliberate and selfconscious reflection yet is full with significance." Existential insideness involves a deep form of identity with the place, most common and most easily identified with home. It is the place of sincere bond, where the place is a part of the person, the person a part of that place.

Assuming an effort of perception, one can reach a certain level of connection with the environment. By extending through a level of incidental outsideness into behavioral insideness and perhaps reaching the level of empathetic insideness, concern fades from the qualities of a space to an emotional and empathetic involvement. Through what intentions then, can we transform an architectural experience into an emotional experience of architecture? The next section of the thesis aims to gain insight into the theoretical world of emotion in order to proceed towards the contemporary phenomenological investigations of architecture. The objective is to provide insight into the design of space that reaches beyond the level of incidental outsideness into empathetic insideless

CHAPTER 4: A CASE STUDY ON AR. PETER ZUMTHOR

Swiss architect, Peter Zumthor approaches architecture from a unique source that is solely his, a unique source that is constantly morphing, constantly fluctuating- this unique source is his own experience. Although it is an obvious statement, the realization is overlooked. It is through his own experiences that he is able to think forward, towards experiences in spaces, yet concrete. We all have acquired such experiences. "…I frequently find myself sinking into old, half-forgotten memories, and then I try to recollect what the remembered architectural situation was really like, what it had meant to me at the time, and I try to think how it could help me now to revive that vibrant atmosphere pervaded by the simple presence of things, in which everything had its own specific place and form."

IMG 4.1

Zumthor focuses on the 'primary experiences' of architecture. The body and mind are in a constant dialogue with the surrounding materials, a dialogue that communicates memories, passing time, and ambitions. Zumthor is concerned with not the form, not the techniques, not the specific materials, but rather with the perception of the form, the perception of the details, and the perception of the materials. The "poetic quality" comes from the ability of the architect to create a "meaningful situation for (the materials) since materials in themselves are not poetic."

IMG 4.2

Evidence of Zumthor's approach can be seen in the Thermal Baths in Vals, Switzerland. The bath, in the words of Zumthor, "relies on the silent, primary experiences of bathing, cleansing oneself, relaxing in the water; on the body's contact with water at different temperatures and in different kinds of spaces; on touching stone."3 The project focuses on the subject's perspective as they transition through the space; the touch of the stone, the coolness of the cavernous earth, the sequence of spaces, the chance meander, the light caught in the instance. The **'stillness'** allows the perspective moments of realization. Essential to the architecture of Peter Zumthor is the **inclusion of a silence**, "which allows people to inhabit space in an undisturbed way." Relationships are formed between the user and the architecture, the site and the material, the material and the connections. The relationships are based on the implication as recalled by Heidegger that "the process of thinking is never really abstracted but is connected to things."

The essence of the project at Vals resides in its materials. The local stone was replaced within the earth in cavernous configurations. The companion material, water, runs delicately through the spaces reinforcing the stone's firm, static role in the space.

The materials serve to "**mediate**" between purpose and site, while establishing subtle temporal qualities. The space waits for the "actuality of its everyday performance."

Peter Zumthor celebrated Heidegger's approach that **experience and emotion** should be the measuring tools for buildings where people will be able to dwell and emphasized the sensory aspects of the architectural experience. As stadiums, bridges and public buildings are just buildings and not a place for a human being dwell, as modern civilization is deprived of stimuli for all senses, echoing Pallasmaa's argument, that in a world where technologies operate so fast, **sight is the only human sense** which remains more immediately resonant, Zumthor sought to please and appeal to all the senses and he consciously accomplished to produce experiences beyond the tangible world. In his writings, Zumthor expresses his motivation to design buildings that speak to our feelings and understanding and buildings that possess a powerful presence and personality.

IMG 4.3

"*To me, buildings can have a beautiful silence that I associate with attributes such as composure, self-evidence, durability, presence, and integrity, and with warmth and sensuousness as well; a building that is being itself, being a building, not representing anything, just being. The sense that I try to instil into materials is beyond all rules of composition, and their tangibility, smell, and acoustic qualities are merely elements of the language we are obliged to use. Sense emerges when I succeed in bringing out the specific meanings of certain materials in my buildings, meanings that can only be perceived in just this way in this one building. When I concentrate on a specific site or place for which I am going to design a building, when I try to plumb its depths, its form, its history, and its sensuous qualities, images of other places start to invade this process of precise observation: images of places I know and that once impressed me, images of ordinary or special places that I carry with me as inner visions of specific moods and qualities; images of architectural situations, which emanate from the world of art, or films, theatre or literature."* (Zumthor, 1999:13).

IMG 4.4

The spa building embraces many natural elements, such as heat, light, water, stone, sound in distributions and combination beyond conventionality while comprising an environment of the senses. As he describes it, he writes:

"*The building takes the form of a large, grass-covered stone object set deep into the mountain and dovetailed into its flanks. It is a*

solitary building, which resists formal integration with the existing structure in order to evoke more clearly- and achieve more fully- what seemed to us a more important role: the establishing of a special relationship with the mountain landscape" (Zumthor, 2007:7).
The concept of public bath itself is intriguing, since it can connote the ideas of **baptism and purity**, since baths were a Roman tradition that survived through mythology, in order to take other dimensions in Zumthor's hands. Therme Vals became an icon of contemporary architecture right after its opening in 1996. Inspired by the majestic surroundings, Zumthor built the structure on the sharp grade of an Alpine mountain slope with grass-topped roofs to mimic Swiss meadows. He insisted on using the locally quarried stone while he used an architectonic language much different to the design of the existing hotel complex.

4.1 STRUCTURE OF THE EXTERIOR & INTERIOR

APPROACHING THE BUILDING

Zumthor designed the spa complex in the existing area of the hotel, and the idea was to create a form of a cave, that would engulf the baths, as if they were a natural continuation of the mountain itself. He had to respect the surrounding environment and work with it, replace older structures with new ones, and materialize his philosophy into a physical entity, a building.

IMG 4.1.2

IMG 4.1.1

As he was not allowed to build outwards, he sunk the building into the hillside roofing his structure with flat units of roof that match the scenery perfectly, and **only the geometrical shapes on them reveal its presence**. Even though he had to present a natural continuation of the hotel as well, he chose to build a structure that would give the idea that it was there before anything else, thus including the history of not only the area, but of the hot springs as a natural procedure lasting for thousands of years.

IMG 4.1.3

While approaching the hillside, the building appears very **avant-garde and gleam**, placed on the side of the mountain, having an open dialogue with the scenery, by the small village of Vals. **The simplicity it shows from the outside blends in with the environment and as you go closer, your attention is drawn by the stunning pattern of 60,000 stone slabs of Valzer quartzite.**

IMG 4.1.4

It is the same material used for the roofs of the Vals village houses and it comes straight from the mountain. These slabs make the building look strong, resistant, even violent and rough, just like the alpine landscape. They also create a **special relationship between the building and the primordial forces of nature and the geology of the mountain landscape,**

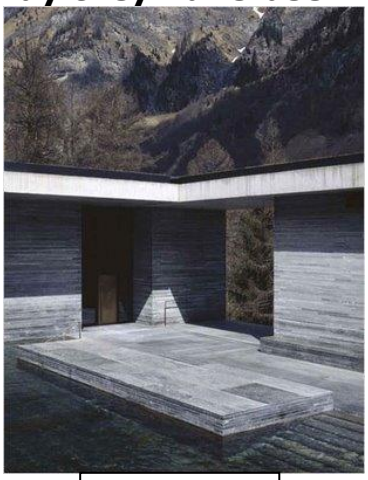
IMG 4.1.5

IMG 4.1.6

reacting to the impressive topography of the valley and the position of the warm spring, which rises out of the primeval mountain just behind the new spa.

The only façade the building has, is made out of these stones and interrupted by wide openings and windows. **When you approach and touch the stones, you become amazed by the way they have been connected together**.

The symmetry of the exposed façade with the environment is unique but what is also amazing is the fact that there are no doors in this façade! The texture of the stone creates a hard and cold surface but they connect very well to the natural environment and the concept of natural spaces under the earth's surface, underground baths and lakes. The concrete shell and the clean lines of the volume come out of the alpine landscape and the green valley, creating equally natural and impressive textures.



IMG 4.1.7

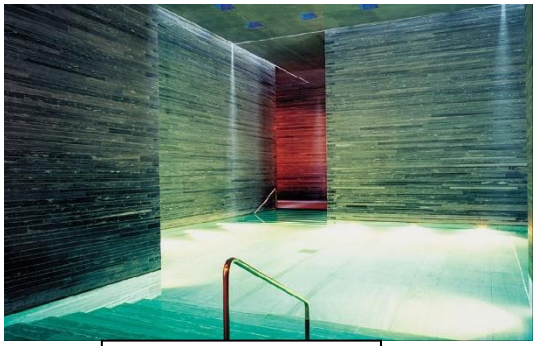
What can also be seen from the exterior is the outdoors pool. The mixture of aromatic steam and snowy mountains was outstanding. **You can have access to this outdoor pool from the inside, by following a narrow water corridor, which makes it quite delicate**. This outer pool has high walls and seems to be curved out of the mountain, like a natural pool, while it maintains the same temperature to the indoor pool. You can move from the outdoor pool into the interior pool and it is like passing from a **more public to a more intimate space**, as the narrow water corridor starts playing a game with shadow and light.

IMG 4.1.8

4.2 ENTERING THE BUILDING

As there is no door in the façade and the access to the outdoors pool is from the inside of the building, we realize that all the above impressions were imprinted while being on the outside of the building. So, in order to enter the spa, the only way was from the nearby hotel complex, using a corridor through the mountain. This corridor really did the trick. **After the dark corridor, a unique experience awaited us**. **The sounds, feelings, smell and tastes that come out of there amazed the senses**. In order to understand, we shall look closer to the actual design of the spa.

IMG 4.2.1



IMG 4.2.2

The complex is divided into 15 split units and Zumthor designed each unit to mirror the state of the water within it. So in the baths where the water is hot, calm red lighting is used and the concrete walls are **tinted red**; while where the water is cold, the lighting is **blue**. The spa area revolves around two large pools, with irregular shape, one of which is the outdoors one.

IMG 4.2.3

The smaller pools in each unit vary in size, temperature and, of course, atmosphere. The cave like experience, as was his initial purpose, was accomplished and what is truly amazing is that you have to have your own itinerary; **you are forced to walk and find your way**, as there is no clear way of which room you should visit first. The different rectangular units reveal what is revealed from the exterior: the naïve and childish design of different rectangular and other shapes that brick together like a **puzzle**, better, like a Tetris game!
There are also **gaps between the roof units that allow lines of light, making the feeling of the heavy roof even lighter**. As the natural light is filtered through these small gaps, **it creates the illusion that these massive concrete ceilings are floating in mid-air**. The scale of the spa units is better measured with the mountain model rather than the human model. The walls are five meters high, and being such large volumes, they create a **gigantic scale to the human body**, **giving you the impression that there is no one there**. There is **continuity with the exterior and while there is an illusion that there is asymmetry, if you go closer to the slabs, you realize that they are of equal proportions, providing thus visual variety without complicating the construction.**

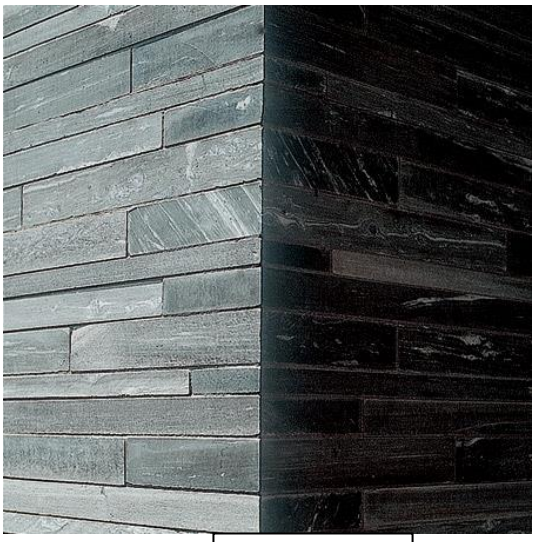
IMG 4.2.4

4.3 THE MATERIALS

NATURAL MATERIALS

Materials react with one another and have their radiance, so that the material composition gives rise to something unique. Material is endless" (Zumthor, 1997:55). In the Therme Spa complex, the structure materials are natural: stone, water, metal and even natural light penetrates the structure. Natural materials allow the gaze to penetrate the surface and enable us to become conceived of the veracity of matter (Holl & al, 1994:29). **The natural materials tend to express the age and history of the place**. The façade gives the impression that he building has been built stone by stone, and you can even feel it by touching the perfectly joined slabs of stone. The structure, appearing like an enormous geometric rock carved within the hillside, is made from local quartz and concrete. The way materials were crafted and joined together suppresses their apparent mass while stone, and water, are not only considered materials, they are also phenomena in nature, they bring up many stories, they have a certain history.

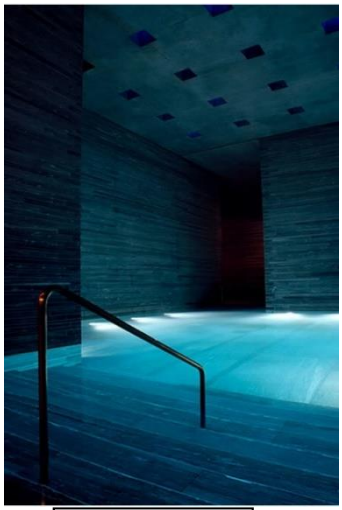
What is more is the element of hardness and smoothness arising by the natural material of stone slabs. This material makes architecture even more experiential while all the other textual effects, the orientation of the rooms and the use of windows and sunlight, make the visit to the spa, a very **sensual experience**. Also, the very austere geometrical shapes and the innovative use of them have a direct appeal to the senses, **creating a feeling of a sensitive balance between the static material and the underlining representation of this material**. The energy of the



IMG 4.3.1

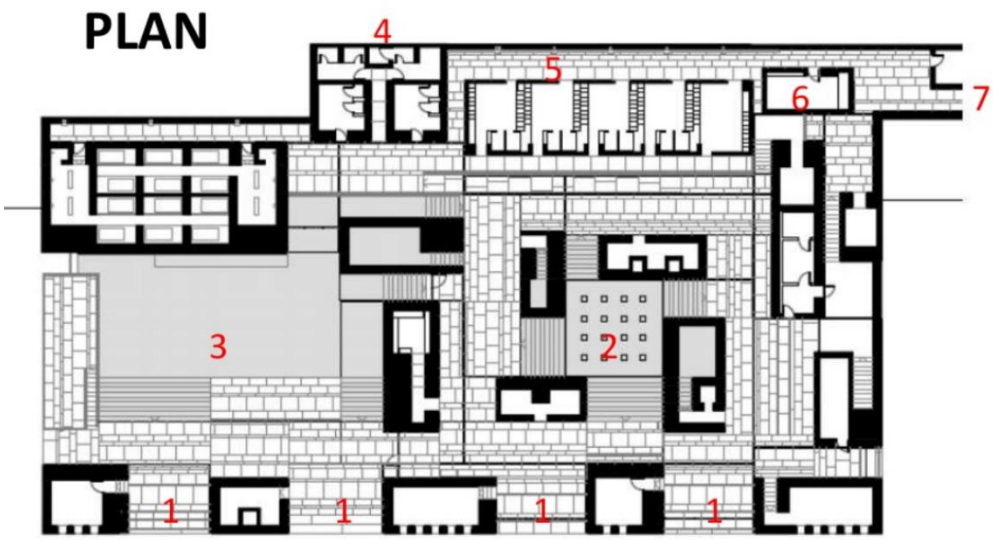
place is very strong, not allowing its users to be very obvious, leaving them in a 'sleep' mode, and at the same time, ready to be alert. His design does not force any rules, but puts the visitors into tests, **it makes them question all the time their position and the space around them**.

As we enter dramatically the interior through the dark tunnel, the materials remain the same with the granite exterior, only this time water interrupts and interacts with the structure. Zumthor seems to have used water in its maximum advantage. **Water, apart from being a means to enjoy this building, can also become a more sentimental partner to look inside someone's feelings, since its reflective qualities can function as such**. **The feeling of hardness continues to be the same; only this time we experience it through our feet as our naked soles touch the floor.**



IMG 4.3.2

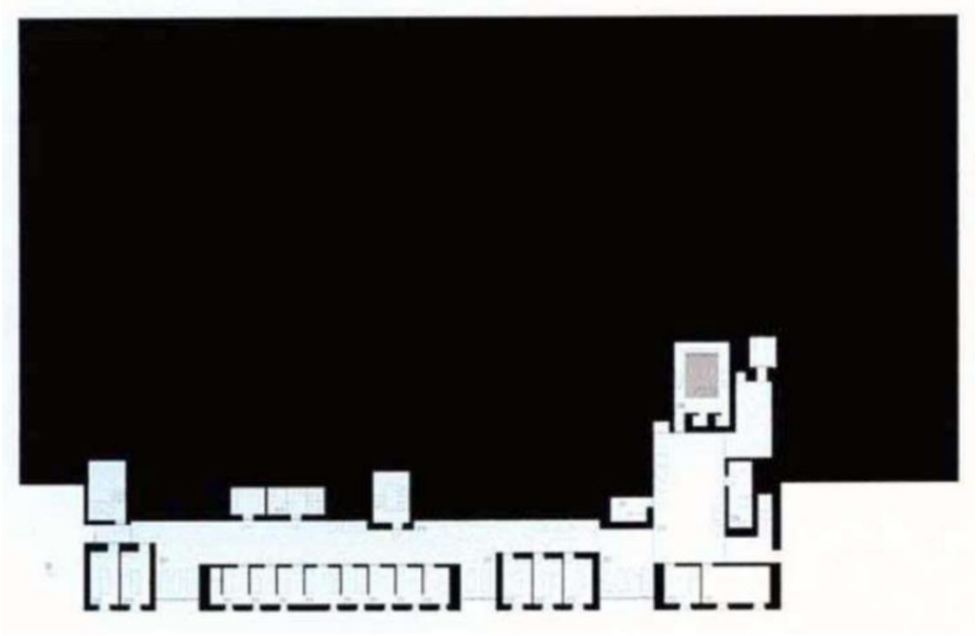
But it is not only the materials use, it is also the way they were used, or, as Sharr suggests, they way they were orchestrated: *"Flamed and polished stone, chrome, brass, leather and velvet were deployed with care, to enhance the inhabitants' sense of embodiment when clothed and naked"* (Sharr, 2007:94). Zumthor takes the choreography of experience and materials very seriously and he created edges, surfaces, light and shadow, transforming the space through light, mist, water, sound, silence, etc.



1-Terraces
2-Indoor pool
3-Outdoor pool
4-Showers
5-Changing rooms
6-Make up room
7-Entrance from the hotel

Plan at upper level

PLAN OF THERMAL VALS AT UPPER LEVEL



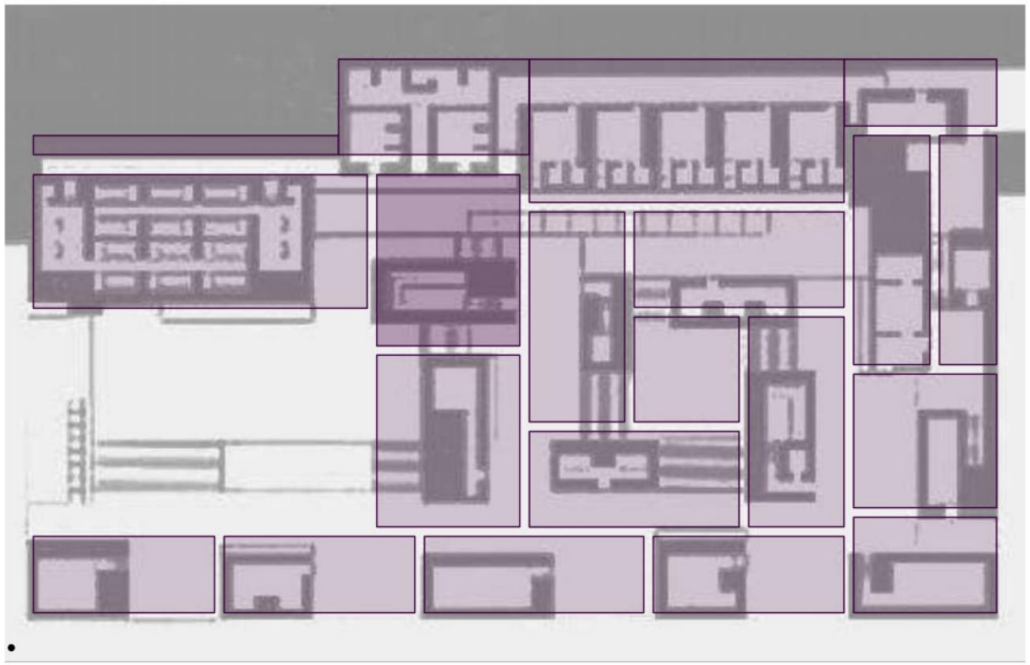
Plan at Lower level

Functions: Massage room, Rest space.

PLAN OF THERMAL VALS AT LOWER LEVEL

SECTIONS OF THERMAL VALS

ROOF ASSEMBLY



The overhanging roof of the each units doesn't coincide with each other it creates a beautiful natural light effect in the building.

TERRACE PLAN OF THERMAL VALS

4.4 COLORS

Another important factor in Zumthor's design is the use of colors. Colors are **symbolic, signaling, warning, welcoming, relaxing**, even though it is difficult to fathom how we came to associate colors with certain

IMG 4.4.1

IMG 4.4.2

things. Colors may have generally recognized psychological effects and may differ from culture to culture. Each room have its own color code, telling us what this color suggests, what is the function of the room, etc. The game between hot and cold, either in terms of materials or colors, in very dominant in the spa, as it is in our lives, expressing very **different mood and feelings.**

4.5 THE ATMOSPHERE AND THE LIGHT

IMG 4.5.1

The measuring tools for the construction are definitely experience since all details and concepts of the spa design and construction are evolving around experience with a unique and stimulant way, creating a unique atmosphere. The **eye is stimulated by the shape and texture of the structure materials**, **the space, the colors, the shadow and the darkness, the natural and artificial lighting, while the aroma in the water evokes the taste in mouth and nose**. The hand can touch the surfaces and **feel different feelings, from rough to smooth, from cold to hot.** The ear listens to the sounds of the **water bubbling, steaming and the silence inside the heart of the mountain.**

4.6 THE MYSTERIOUS ATMOSPHERE

IMG 4.6.1

As you enter, **you feel the theatrical and dramatic atmosphere**, expecting Marlene Dietrich to come down the flight of stairs, through the dark corridor. This **dark corridor creates a mystical atmosphere,** even before entering the actual spa. This peculiar way of entering functions as sign of entry into a world of **different moods and smells**. As Zumthor wants us to experience architecture without thinking, all our senses were then stimulated. **The sound of feet on the concrete floor, the gleam of the water on the stones, the heavy doors closing behind me, the dark corridor and then the entrance into the shadow-light game**. As he suggested, when he designed it, he searched into his reservoirs of architectural atmosphere and sought to revive this atmosphere.

IMG 4.6.2

I felt the very same atmosphere when entered the building, so **dazzlingly and so quite.** The only thing you could hear were the **different sounds the water made in each different room** inside the building. The sounds created a different sense as you went by the rooms and the eyes were equally pleased by the show: each was different; it had different sounds and colors. **The room with the hot water was red, to represent the heat, while the sounds, smells and images from the other rooms with swirling water, steam bath, cold water, water with rose petals, made it possible to the visitor to feel it, smell and taste the water, listen to the music of the stones, feel the temperature before testing the water.**

IMG 4.6.3

The series of the cubic spaces along with the semi-naked human bodies create a mysterious atmosphere, and **you feel like watching the figures of a film without sound, where the subtle sound of water is enough to help you make sense of the plot**. Zumthor has worked with the form and the mass like a sculptor,

making it functional at the same time. The light sounds and light itself are reflected on the water surface and the stone surface. The figures seem to **appear and disappear** among the horizontal walls or appear in front of the backdrop of the marvelous mountain view that frame the surrounding space without haste, while at the same time, this view is the one that transforms this space. It is very impressive and at the same time esoteric.

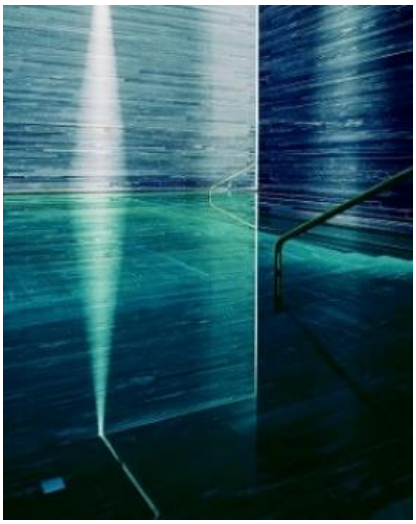
Zumthor always has atmosphere in mind when he designs buildings. He is inspired by atmosphere and for this atmosphere he used the materials he uses, while bearing in mind the composition as a whole, the proportions, the light and shadows, the sounds, the temperature and the feeling of heat and cold, the surrounding objects, the lighting. Even the fact that you enter this building without clothes creates an even more intimate and sensual atmosphere. As you are naked, you become more sensitive to the above mentioned factors in the creation on atmosphere, resulting in this building not only appealing to your senses but to your instincts as well. Sound is a very important element as well, since anyone who has become entranced by the sound of water drops in the darkness of a ruin can attest to the extraordinary capacity of the ear to carve a volume into the void of darkness (Rasmussen, 1964:30).

IMG 4.6.4

4.7 APPEALING TO MEMORY

As Zumthor wants to appeal to memory and create experiences that will be remembered –beyond the tangible world- he includes aspects that give the feeling of "rites and routines longer than life" (Sharr, 2007:96). The staircase, the dark corridor and the fountain can be thought as these aspects. The fact that there is no designated way of exploring the building makes us feel that it is like a walk in the woods, where you do not have a specific path, but you wander and discover.

IMG 4.7.1



IMG 4.7.2

The mysticism is common with Heidegger and it is presented through the mythological and memorable qualities of the spa. The cave-like atmosphere given to the building encourages this mysticism: the engulfment in the mountain and the total blend in the landscape. The "cave-game" as Rasmussen suggests (1964:34) can be varied in a thousand ways either by the need to create its own space or the digging of a hole for an animal to find shelter. This feeling is reinforced by the fact that the building looks like a typical livestock shelter that can be found on the mountains. Here we can find the clear association with the term dwelling that Heidegger used: this building is designed to allow its visitors to identify places and associate it with memories: memories of a trip to the mountain, memories of the ritual of bathing and a visit to the heart of the mountain.

4.8 THE GAME OF LIGHT AND SHADOW

What is also dominant in the spa is the game of light and shadow. Light is *"of decisive importance in experiencing architecture. The same room can be made to give a very different spatial impression by the simple expedient of changing the size and location of lighting"* (Rasmussen, 1964:187). Zumthor makes use of light, not in terms of quantity, but in terms of quality. So in the spa, light creates character and the concentrated light towards several directions helps us see and feel the texture and forms. As Zumthor testifies, light, either artificial or daylight, can help us feel a spiritual quality. *"I don't understand light. It gives me the feeling there's something beyond me, something beyond all understanding. And I am very glad, very grateful that there is such a thing.*(Zumthor, 1998:55).

IMG 4.9.1

4.9 CRITICAL CONCLUSIONS AND FURTHER THINKING

The visit to the spa was a playful discovery of architectural ideals. The fascination for the mystic qualities of a world of stone within the mountain, the darkness

and light, the light reflections on the water or in the steam saturated air, the pleasure in the unique acoustics of bubbling water in a world of stone, a feeling for warm stones and naked skin, the ritual of bathing – all the above guided me to understand deeper not only the notion of phenomenology in architecture, but to realize the boundaries of such and approach.

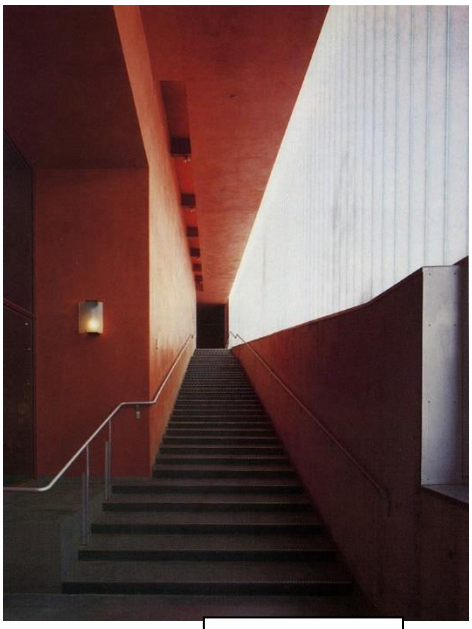
Zumthor's Vals definitely appeals to all the senses. The architect choreographs materials according to their evocative qualities. By analyzing Therme Spa, we were able to understand how architecture can on the one hand refer to a philosophy and on the other hand, how it can become a philosophical experience herself. The limits of phenomenology might not be clear, since our emotions and senses do not know how to produce boundaries, unless stimulated to do so. And Zumthor's building does not stimulate us to a certain degree and then leaves us empty. It is a well organized, well choreographed experience for al the levels of senses, whether tangible or not. It is not thus due to luck, that he became famous after building the spa and also received internationally recognized architectural prizes. His mastery in concepts and materials is obvious.

What however distances him from the original approach of Heidegger is the fact that the construction is based on mathematical, structural, mechanical and electrical calculations and formal procedures. Perhaps it would be too risky not to calculate these factors but Heidegger consider these calculations as obstructions. In other words, for Heidegger, Zumthor would be part of the problem, not the solution (Sharr, 2007:98). But as Zumthor wants to get over this architectural culture, that sees him as an obstacle, he tries to make these professional calculations more human and meaningful. The use of materials, the structure, the contrasting effects, the scale inside and outside the building, the light and the atmosphere, all count as his effort to produce architecture that will create experience beyond the tangible world.

Perhaps some of his critics will suggest that the spa is an overworked project that praises orthogonal and not organic and natural shapes. Another point of criticism would be the politics behind Heidegger but this criticism can only be done within the chronology framework, that is to say the time and place he was active then. There are also issues raised concerning architectural perception and whether it is guided or not inside this building. Zumthor has indeed to accept that there is intention in all his design, he is not guided only by the fact that he wants to build a dwelling, but also by the fact that he wants to create experience. In this course of action, he guides the visitor in the experience but every visitor undoubtedly will make his own sense in meaning.

What is also impressive is the fact that Zumthor has put effort in order to produce architecture that is comprehensible to all people. He has based his design and details on a number of human instincts, on discoveries and experiences that are common to all people while some of these experiences, we feel them at a very early stage in our lives, materializing

thus the initial hypothesis: that architecture, even though is made of physical materials, it can create intangible experiences. And this building is able to incorporate the concept of phenomenology, since it is not an end in itself, *"it frames, articulates, restructures, gives significance, relates, separates, unites, facilitates and prohibits"* (Rasmussen, 1964:35).
In other words, the structure in Therme Vals, leaves behind the simple pleasure of the eye, it allows for it to become a dwelling and advances towards more hidden experiences our other senses can gives when stimulated by architecture. As Zumthor himself suggests, "*architecture has its own realm. It has a special physical relationship with life. I do not think of it primarily as either a message or a symbol, but as an envelope and background for life which goes on in and around it, a sensitive container for the rhythm of footsteps on the floor, for the concentration of work, for the silence of sleep*" (Zumthor:1998:13). It is like architecture wanting to 'reunite' us with our inner selves; our essential being that is deep down in our existence.



IMG 5.1

CHAPTER 5: A CASE STUDY ON AR. STEVEN HOLL

"The challenge for architecture is to stimulate both inner and outer perception; to heighten phenomenal experience while simultaneously expressing meaning; and to develop this duality in response to the particularities of site and circumstance."12 Architecture, according to Steven Holl, can be understood as a series of partial experiences. In many of his essays, including the essay on Phenomenal Zones, Holl explores these partial experiences, which correspond to the perceptual phenomena of the senses. Dimensions of his exploration of perception include the 'unmeshed experience,' color, light, sound, time, detail and proportion.

Concerning the unmeshed experience, Holl describes it as the merging of object and field. "Beyond the physicality of architectural objects and the necessities of programmatic content, unmeshed experience is not merely a place of events, things, and activities, but a more tangible condition that emerges from the continuous unfolding of overlapping spaces, materials, and detail."13 Argued to be a critical element in architecture, the elements of space, light, color geometry, detail, and material constitute this "experiential continuum." It is within this merged fieldthat contains the geometries, activities and sensations of architecture.

Of importance to Holl's approach is the sensuous experience of architecture. "The essences of material, smell, texture, temperature, and touch vitalize everyday existence. Phenomenology is a discipline that puts essences into experience. The complete perception of architecture depends on the material and detail of the haptic realm, as the taste of a meal depends on the flavors of its ingredients."14 Similar to Pallasmaa, Holl is concerned with the haptic experience. "As a catalyst for change, architecture's ability to shape our daily experiences in material and detail is subtle yet powerful. When sensory experience is intensified, psychological dimensions are engaged."15 Strength of an architectural project lies in the ability to explore the experience and perception ofthe material and detail.

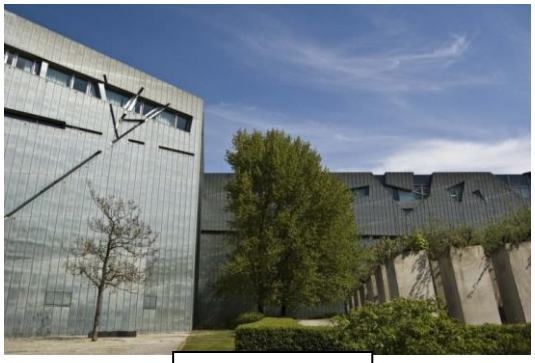
IMG 5.2

CHAPTER 6: THE BODY, EMOTION AND ARCHITECTURE

This section will focus on the experience of architecture. Arousal, which suggests an interaction of the **mind and body** and therefore an emotional experience, can result in an architecture that has the ability to 'move us.' Although it is clear that all individuals are not likely to experience the same reaction to an environment, there are certain spaces that can connect emotionally with many users. With a focus on the body-mind experience, this last section looks at examples of architecture, which have the ability to create an emotional response. It provides precedents with respect to exemplars of experience rather than representation, emotion rather than techniques, feelings rather than plans. These examples explore the formerly determined concepts.

They help establish a framework of design that has the capability to support an emotional experience. Daniel Libeskind's extension to the Berlin Museum, in the form of the new Jewish Museum in Berlin both spiritually and physically renders an experience of the persecution and emigration, which are central parts to Jewish history. It is through a full body experience of memory recall that the designer attempts and succeeds to make an impression. A physical and phenomenological experience, Vidler describes the architecture: "…When confronted by the withdrawn exteriors and disturbing interiors of the Jewish Museum… we find ourselves in a phenomenological world in which both Heidegger and Sartre would find themselves, if not exactly 'at home' (for that

was not their preferred place), certainly in bodily and mental crisis, with any trite classical homologies between the body and the building upset by unstable axes, walls and skins torn, ripped and dangerously slashed, rooms empty of content and with uncertain or no exits or entrances. What Heidegger liked to call 'falling into' the uncanny, and what for Sartre was the dangerous instrumentality of objects in the world as they threatened the body and its extensions, is for Libeskind the stuff of architectural experience.



IMG 6.1

The Jewish Museum, Berlin.

The museum serves not just as a traditional space preserving artifacts within cases, but rather engages the user in an active memory of consciousness. It is through such an experience that the user is left vulnerable to the intimacy of the architecture. The first concept, which emphasizes the body, can be explored through the use of light, material, spatial contraction and expansion, the sharp, inclined forms, and sounds in the Jewish Museum. These elements engage the participant directly in order to evoke personal feelings derived from experience and memory.

Specifically, the use of spatial expansion and contraction elicits emotional emptiness and intimacy respectively. There is an intentional creation of "voids," or "negative spaces," which are arranged in a perfect line throughout the entire building Symbolically, the voids represent the "gap that evolved in German and European culture and history by the destruction of Jewish lives." Through the absence of material, insecurities are aroused. This absence is contrasted to the experience of the angular architecture, which contracts to provide intimate moments.

The second concept, which emphasizes the mind through which emotion is processed, can be explored through the qualities of symbolism and representation within the Jewish Museum. The heterogeneous order, the roses, the fragments, the voids are all elements which stimulate memorial and reflection. It is through a cognitive process that the participant is able to understand and personalize these design implications. The rose arbor for example, has many experiential intentions. "The thorny rose, a symbol of life, can both injure and reconcile. Roses were the only plants permitted in the ancient city of Jerusalem.

Although not visually evident in the museum, according to Bernhard Schneider, Libeskind alluded to a fragmented Star of David in the design of the floor plan. Beyond this representational role of the designer's intentions, the museum design "blends and distils a number of ideas from earlier, non-

architectural projects.” One translation of personal theoretical work into the design is manifested in Libeskind’s definition of the line. “In architecture as in life, lines define the relationship between material and immaterial reality. Any two lines on the paper of an architectural plan will shape and delimit the empty space between them, and at the same time configure the solid, impenetrable masses of the projected structure.” As interpreted, some insight can be seen into the translation of the designer’s personal experience as a source for emotional intent.

INFERENCES :

A consciousness of time passing and an awareness of the human lives that has been acted out in these places. At these moments, Architectural aesthetic and practical values, stylistic and historical significance are of secondary importance. What matters now is only the feel and melancholy. Architecture is exposed to life.

Despite the fact that emotions impact every decision we make and the way we see the world, there is still a lot of mystery surrounding why we have emotions. Research on emotions continues to explore what causes feelings and how these feelings affect us.

For the purposes of this discussion, designed focused psychosocial research, within the context of architectural practice, will broadly be defined as an *'intentional and systematic process through which an attempt is made to determine and/or describe the influence of designed spaces on human functioning and performance.'*

With the majority of designed spaces being occupied by people, it can be assumed that a key indicator of the success of a design depends on how the space influences the human activities within that space. Since the early 1900's, researchers from various fields have attempted to study these influences, although these efforts did not always produce findings of specific interest to designers, a number of research areas emerged as having direct bearing on design practice as workplace, residential, learning, healthcare facilities and environment.

LIST OF IMAGES

IMG 4.3.1 STONE SLABS	29	https://www.archdaily.com/13358/the-therme-vals/500f244528ba0d0cc7001d3a-the-therme-vals-image?next_project=no
NAME OF IMAGE	**PAGE NO.**	**SOURCE**
IMG 4.3.2	31	https://fall2017.thedude.oucreate.com/uncategorized/blog-post-7-the-therme-vals-switzerland/
IMG 4.4.1 STONE LIGHT TEXTURE	31	https://www.arch2o.com/the-therme-vals-peter-zumthor/
IMG 4.4.2 COLOURS IN EVERY ROOM	31	https://www.archdaily.com/13358/the-therme-vals/500f245228ba0d0cc7001d3d-the-therme-vals-image
IMG 4.5.1	32	https://www.archdaily.com/13358/the-therme-vals/500f244528ba0d0cc7001d3a-the-therme-vals-image?next_project=no
IMG 4.6.2 DRAMATIC STAIRCASE	33	https://www.archdaily.com/13358/the-therme-vals/500f245228ba0d0cc7001d3d-the-therme-vals-image
IMG 4.6.3 THE MOUNTAIN AS BACKDROP	33	https://www.archilovers.com/projects/70375/therme-vals.html
IMG 4.6.4	34	https://talesalongtheway.com/2014/05/28/vals-collision-at-the-thermal-baths-of-the-architect-businessman-politics-and-minimalism/
IMG 4.7.1	34	https://talesalongtheway.com/2014/05/28/vals-collision-at-the-thermal-baths-of-the-architect-businessman-politics-and-minimalism/
IMG 4.7.2 NO SPECIFIC PATH TO WONDER	36	https://www.archdaily.com/13358/the-therme-vals/500f245228ba0d0cc7001d3d-the-therme-vals-image
IMG 4.9.1 NATURAL AND ARTIFICIAL LIGHT	36	https://www.archdaily.com/13358/the-therme-vals/500f245228ba0d0cc7001d3d-the-therme-vals-image
CHAPTER 5		
IMG 5.1 CRANBOOK INSTITUTE OF SCIENCE	37	https://www.arch2o.com/jewish-museum-berlin-studio-libeskind/
IMG 5.2 CRANBOOK INSTITUTE OF SCIENCE	38	https://www.arch2o.com/jewish-museum-berlin-studio-libeskind/
CHAPTER 6		
IMG 6.1	39	https://www.arch2o.com/jewish-museum-berlin-studio-libeskind/

LIST OF FIGURES

SOURCES AND BIBLIOGRAPHY:

https://www.psychologynoteshq.com/theoriesofemotion/

https://www.psychologicalscience.org/news/releases/the-emotions-we-feel-may-shape-what-we-see.html

https://www.psychologytoday.com/us/blog/in-flux/201803/5-ways-take-care-yourself-emotionally

https://www.psychologynoteshq.com/theoriesofemotion/

https://www.bbc.com/future/article/20170605-the-psychology-behind-your-citys-design

https://www.archdaily.com/13358/the-therme-vals/500f244f28ba0d0cc7001d3c-the-therme-vals-image?next_project=no

https://www.arch2o.com/jewish-museum-berlin-studio-libeskind/

http://www.therme-vals.ch/

http://en.wikipedia.org/wiki/Peter_Zumthor

http://en.wikipedia.org/wiki/Therme_Vals

http://www.nickkane.co.uk/

http://www.creativeclass.com/

http://www.dailyicon.net/

http://www.design-crisis.com

http://dimscale.blogspot.com/2013/03/architecture-references-therme-vals-by.html

https://www.payette.com/research-innovation/why-does-psychological-research-in-architectural-practice-matter/