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## ORIGINAL RESEARCH PAPER

### An overview of phenomenological theories and its impact on the atmosphere of architecture from the perspective of architectural thinkers and philosophers

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#### ABSTRACT

Architectural spaces are more effective than the architectural discourse would reasonably like to admit. It can even be argued that the atmospheric dimension of a built environment is the key to architectural quality. Atmosphere is one of the most important topics in conveying the sense of experience of place which has been given special attention by thinkers, philosophers and architectural thinkers in the last two decades. The type of this research is analytical and the research paradigm is interpretive up to the phenomenology approach. It has a developmental aim and has fundamental characteristics. The method of collecting information is documentary and library. First, by using the content analysis method, the main concepts have been investigated and steps have been taken in order to check the understanding of the architectural space. In the first phase, the concept of atmosphere in the architectural space is examined, and then phenomenology is explained as the main basis for knowing and understanding the atmosphere of the space. Then, in the third phase, with the ideas of other architectural theorists related to the atmosphere, and in the fourth phase, the investigation and recognition of the effective factors in the atmosphere of the space based on the theories of architectural philosophers will be discussed. In conclusion, a list of factors affecting the understanding of the atmosphere based on the theories of thinkers and architects will be provided, and a list of gaps in this field will be provided for future research.

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## INTRODUCTION

In recent years, the concept of atmosphere has been widely discussed in the fields of architecture and urban design, both as a means to understand the emotional (affective) dimension of living space and as a tool to bring about transformation and planned changes. By connecting to the previous strain of phenomenological thinking in architecture, “atmosphere” is considered as a basic category to describe the sensory and intuitive characteristics of the living space beyond the technical device and the programmatic approach of design and contemporary construction methods[1] In architectural thought, the idea that buildings can evoke an emotional response from their users has periodically emerged since classical times, highlighted in late 18th-century French theory. What is a challenging issue in identifying the atmosphere of architectural spaces is the multitude of different theories in identifying and understanding the atmosphere of the space. Because each of these theories emphasize a group of influencing factors in the space atmosphere. For this reason, it is very important to choose the right method in knowing and understanding the atmosphere of space. Therefore, in this research, we want to investigate how it is possible to identify the different dimensions of the atmosphere by using the theories and views of different architectural philosophers, and based on this, choose the best method of knowing and understanding the atmosphere of Iranian architectural buildings. In this research, in order to answer the above question, a multi-step method will be developed to identify different theories of atmospheric perception and choose the most appropriate method to identify and understand the atmosphere of Iranian spaces.

## MATERIALS AND METHODS

### *Literature review*

#### *Atmosphere in architectural space*

The atmosphere of the architectural space can be considered as the amount of emotions

perceived by the senses of a viewer from the complexities and subtleties of an architectural space. Atmospheric experience is something personal, fleeting and vague, but its definition is complicated and sometimes difficult. We are able to intuitively recognize the atmosphere, as we recognize the being-essence of weather at a glance, but we are unable to define, analyze, or understand its phenomenological origin. Although the non-experts of a society may not have specialized words to express the perceived quality of an architectural design, but expressing their feelings and impressions of an architectural building can largely reflect their intuitive understanding of the atmosphere of the mentioned spaces. That is why the atmosphere can be the final intermediary between the quality of architecture (by the designers of an architectural plan) and the quality perceived by the residents of the environment. (Van Hulst, 2018) The atmosphere of architectural space has been defined in different ways from the point of view of architectural thinkers in such a way that each of them presents their own view of the atmosphere of space. While Van Holst defines the atmosphere as a primary and momentary experience of space and accordingly considers it as a concept in understanding the quality of architecture. (De Matteis, 2020) Hermann Schmitz, from the concept of atmospheres in a place called the domain used emotions [Der Gefühlsraum], he considered emotions as an objective rather than merely subjective condition for the concept of atmosphere. (Kazig, 2016). Lyzenko has paid attention to the multifaceted concept of space atmosphere in the field of architectural space design and describes it as a set of visible and measurable energies in the surrounding space (air), substance, behavior and force, which in turn It forms our perceptual and tactile experience of the surrounding world. (Lysenko, 2017) On the other hand, in his valuable research, Böhme considers the concept of space atmosphere as the fundamental concept of a new aesthetic and argues that atmosphere is a holistic and immer-

sive experience that can be created through different sensory stimuli. (Bohme, 1993). Also, he was against the theory of place and the classical concept of geometric space and emphasized the direct connection between the presence of the user and his experience of the architectural space (the atmosphere of the space). (Griffo and Tedeschini, 2019) In the continuation of Jacks in his book "Atmospheres, Expressed", he shows how multiple sensory perceptions, thoughts, feelings, metaphors and ironies together form the space. (Jacks, 2018) Therefore, even though atmosphere can have different and diverse definitions, it is valuable as a strong philosophical concept for activists in the field of architecture and interior design. (Gill, 2020) Regardless of the different theories in the definition of atmosphere, what highlights the concept of atmosphere in architectural works is the importance of knowing the atmosphere of the space and the impact of its use in the design of architectural spaces. Architectural theorist Mark Wigley, in the architectural journal *Daidalos* (a 1998 issue devoted to the "making" of atmospheres), questioned why this concept was not considered in the profession. He argued that the discussion of atmosphere in architecture, by definition, entails certain ambiguities. (Hashemnezhad et al., 2013) Although there are various theories and viewpoints in understanding the atmosphere of space, as will be explained in the next part; The use of phenomenological method is highlighted as an efficient and inclusive method among most of the thinkers in this field.

### *Phenomenology*

The phenomenologist's primary aim is to strive for a mode of openness whereby the phenomenon studied can be understood and described in an accurate, comprehensive way unencumbered by any pre-given theoretical, speculative, or common-sense points of view. One of Husserl's descriptions of phenomenology was "back to the things themselves," by which he meant setting aside personal, societal, ideological, and conceptual understandings, assumptions, and preju-

ices so that one might offer the phenomenon a supportive venue in which it can be known most clearly, appropriately, and thoroughly (Moran 2005). Most broadly, phenomenologists direct this mode of openness toward generating clear-sighted explications of concrete human experience and the lived reality of everyday life. Using the word "lived" in phrases like "lived reality" or "lived experience" may seem tautological, since, obviously, experience is always lived. For phenomenologists, however, "lived" is an integral descriptor because it "announces the intent to explore directly the originary or pre-reflective dimensions of human existence: life as we live it" (van Manen 2014). "Lived" in this sense refers to the wide-ranging spectrum of human experiences, meanings, situations, and events—the mundane or exotic, the dull or penetrating, the unquestioned or surprising. How, for example, do we experience the everyday buildings of our ordinary lives and are there moments when we experience those buildings in a deeper, more memorable way (Pallasmaa 2005) What delineates experientially the special moment when we encounter a great architectural work, and might such exhilarating moments of architectural engagement be better understood by drawing on phenomenological principles and methods (Bermudez, 2015) Phenomenologists claim that human consciousness, experience, and action are always Intentional i.e., necessarily oriented toward and finding their significance in a world of emergent meaning. Human beings are not just aware but aware of something, whether an object, living thing, idea, feeling, environmental situation, or the like.. As described by Merleau-Ponty (1962: xvii), the distinguishing feature of intentionality is that "the unity of the world, before being posited by knowledge in a specific act of identification, is 'lived' as ready-made or already there." The concept of intentionality leads to a central phenomenological claim crucial for understanding human experience: that human beings are always already inescapably immersed and entwined

in their worlds (Casey 2009; Moran 2011; van Manen 2014). How, phenomenologically, do we describe the way in which, existentially, selves and world are reciprocally related and mutually dependent? How, phenomenologically, do we locate and understand the complex, multivalent ways in which we, as human beings, are intertwined, intermeshed, entrenched and submerged in the worlds in which we find ourselves? The everyday, intentional structure through which human-immersion-in-world unfolds is what Husserl identified as the life-world—a person or group’s day-to-day world of taken-for-grantedness normally unnoticed and, therefore, concealed as a phenomenon: “As conscious beings, we always inhabit—in a pre-theoretical manner—an experiential world, given in advance, on hand, and always experienced as a unity” (Seamon 2017). Later in this chapter, I make further reference to architectural aspects of lifeworlds, but first I delineate how, beginning after World War II, phenomenology came to have significance for architects and architectural thinking. (Alexander et al. 1977); pre-reflective and symbolic languages of architectural experience and meaning (Alexander 2002–2005; Harries 1997; Janson and Tigges 2014); and the phenomenological contribution to cognitive science, particularly in relation to architectural behaviors, aesthetic sensibility, and environmental wayfinding (Hale 2017: 50–54; Malgrave 2013; Malgrave and Goodman 2011: 229–230; Robinson and Pallasmaa 2016).

#### *Phenomenology and Husserl’s theory*

The term “phenomenology” refers to the study of phenomena, where a phenomenon is anything that appears to someone in conscious experience[9]. Therefore, researchers in this field look for the relationship between the appearance of the things they study and the context in which they appeared (Holt & Sandberg, 2011). But from the point of view of terminology, phenomenology (or phenomenology) is taken from a Greek word meaning something that is a phenomenon itself. It means to show.

Phenomenon is defined as an object or an aspect and phenomenon recognized by the senses and not through thinking. The main goal of phenomenology is to investigate and recognize the phenomena directly and without mediation. The term phenomenology has both philosophical and non-philosophical uses. In its philosophical meaning (which is the target of this research), two old and new meanings are found. In the old sense, any type of descriptive study of a topic or field of research that describes “obvious phenomena” is referred to. But in its newer sense, which belongs to the last century, it is a philosophical-research approach resulting from the awareness of “immediately experienced phenomena” that enables the analyst to know the essential or inherent structures of these phenomena. Therefore, phenomenology in its modern sense tries to get rid of unexperienced presuppositions, freed from causal explanation and only describes intuition and discovers the veil of inherent meanings of phenomena. Although the phenomenology of architecture, in its modern concept with emphasis on human experience, considers itself free of context, intention and historical reflections in the interpretation of the atmosphere, but this concept is historically incomplete and is in conflict with the historicism of modernism. Because in its post-modern sense, poetic and moral interpretation and consideration of phenomena is not independent from historical events and in a way the culture and art of nations is affected by their history and this concept affects the aesthetics of different nations and ethnicities. Therefore, in understanding the concepts of phenomenology (in its postmodern sense), it is better to pay attention to the orientations made in the recognition and understanding of phenomenological structures. Therefore, phenomenology in architecture can be seen as a “realistic” discursive attempt to understand and embody the philosophical insights of phenomenology. (Zhu, 2021) Regardless of the traditional, modern, or postmodern concepts of phenomenology, this

method of experience is considered a necessary and inseparable part of architecture, and for this reason, phenomenology, as a method based on experience and conventional among architectural atmosphere thinkers, has a great place. It is important and prominent. Phenomenology in architecture started in the 1950s and continues to this day. Phenomenology as a philosophy was seriously proposed from the beginning of the 20th century by the philosophers of that period, including: Husserl, Heidegger and other pioneers of this school, and then in the field of art, especially architecture, by theorists such as: Schultz, Pallasma, Hall and Perezgomez and other theorists in this field expanded and expanded [9]. Since different philosophers and thinkers have introduced phenomenology in different fields, they have also changed the meaning of phenomenology, so there is no single definition that includes all the different types of phe-

nomenology from the 20th century until now. (Norberg-Schulz, 2019). Figure two represents the two main areas of phenomenology from the perspective of philosophers and architectural thinkers. (Fig. 1)

*ideas of philosophers and architectural thinkers in phenomenology and knowledge of space atmosphere*  
While the concepts of phenomenology are rooted in the works of ancient Greek philosophers such as Socrates, Plato and Aristotle, Edmund Husserl can be considered as the origin and founder of the modern school of phenomenology (Rush, 2008). After him, great philosophers such as Martin Heidegger, Gaston Bachaler and Maurice Merleau-Ponty expanded his phenomenological concepts. In the field of architecture, architects such as Christian Norberg Schulz, Alberto Pérez Gomez, Johanni Plasma, Steven Hall and Peter Zumthor have taken steps around the approximation of subjectivity

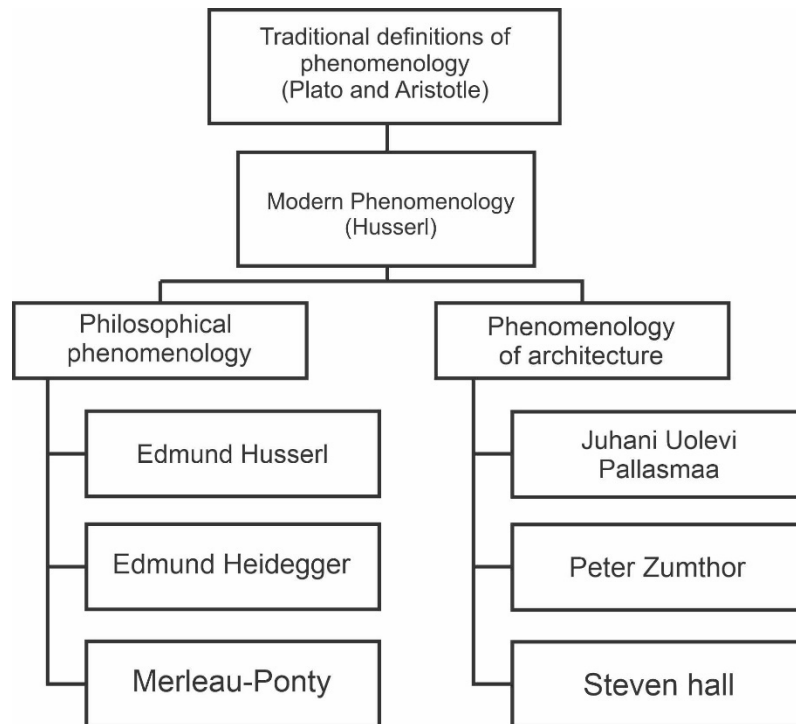


Figure 1: The two main areas of phenomenology from the perspective of philosophers and architectural thinkers

and objectivity and paying attention to human senses and returning to objects and empiricism (NorbergSchulz, 1985). Paying attention to the fact that the expansion of phenomenological concepts in the science of architecture leads to the reacquaintance of architects with the native identity and paying attention to it again, this branch of science has had a significant reflection in the international arena [14]. But what can be considered as a commonality among most phenomenological thinkers in different nations; The use of phenomenological concepts founded by Edmund Husserl has a great influence on the creation and expansion of future philosophical schools based on phenomenology (such as Martin Heidegger) and architectural schools created by prominent architects who have focused on this field. (Sharr, 2007) During the last two centuries (after the birth of the theory of phenomenology by Edmund Husserl in the year...), the existence of different views of architectural thinkers and philosophers led to the formation of different phenomenological schools, each of which focuses on the issue of space atmosphere from a specific point of view. . In the following, the main schools of phenomenology will be examined, and the most important constituent elements of each school, the theories and views of that school will be specifically examined. The purpose of this section is to identify different phenomenological schools in order to be able to identify effective factors in the atmosphere of space and by examining and matching these concepts with the elements in Iranian architectural buildings, the most appropriate method (or combined methods) based on phenomenology to understand The atmosphere of space chose Iranian architectural monuments.

#### *Phenomenology and theories of philosophers*

From the point of view of philosophy, there are three types of phenomenology. The first philosophy related to the concept of phenomenology originated from Husserl's point of view (Husserlian Phenomenology), about "I think, therefore I am". Husserl believed that the ratio-

nal-empirical mind of Descartes, based on certain knowledge through human thoughts and mentality, has neglected the "phenomenological self" based on the surrounding phenomenal world, and this causes human neglect of sensory experience and primary sensory data from the world. This means that unlike Descartes who explained real phenomena through thoughts and reason by relying on the two elements of doubt and logic (idealism model); Edmund Husserl believed that peripheral knowledge is obtained through sensory experience, which seeks to describe how the world is constructed and experienced through consciousness. The phenomenological method that Husserl proposed helped free our thoughts from biased conclusions so that the knowledge and nature of objective and original phenomena can be achieved. Perhaps more than any other philosopher, Husserl focused on the relationship between philosophy and psychology. Freeing philosophy from naturalism, he developed fundamental methods and concepts for understanding consciousness in its distinct world that constitutes its constitutive function (Wertz, 2016). Phenomenology in its modern form challenged some of the most fundamental principles in the history of Western philosophy. including the long gap between mind and body that was common since Plato's time. This theory focuses on the clarity and certainty of experience. Husserl believes that the correct understanding of the world is possible only through direct and personal experiences.

#### *Phenomenology from the perspective of architectural thinkers*

In this first part, we will provide a relatively comprehensive definition of the concept of architectural phenomenology. Then, the main phenomenological views of architecture will be examined from the perspective of leading architects in the science of phenomenology. When examining any phenomenological view of architecture, the main theory or ideas of the philosophers from which the said view is derived will be examined. Then the main elements

emphasized in that view (from the point of view of prominent architects following that view) will be examined in detail. The term architectural phenomenology emerged in the middle of the 20th century, in response to modernist architecture that emphasized form and function (reference). Architectural phenomenology, which seeks to discover a certain phenomenon through people's biological experiences, is based on human-centered design with an emphasis on human experiences and perceptions, and for this purpose, through identifying the needs, feelings, memories and experiences of humans, to present valuable designs based on It deals with human findings. What highlights the phenomenology of architecture is the emphasis on the interaction between physical elements of the building (such as form, materials and structure) with non-physical elements (such as light, sound and atmosphere of space) and the combination of these two with human-centered design based on biological experiences and perceptions. In the following, we examine the opinions of some architects and researchers who are related to the phenomenology of architecture, such as Christian Norberg-Scholz, Peter Zumthor, Steven Hall, Johani Pallasma.

#### *Methodology*

The type of this research is analytical and the research paradigm is interpretive. It has a developmental goal and has fundamental characteristics. The method of collecting information is documentary and library. First, by using the content analysis method, the main concepts have been investigated and steps have been taken in order to check the understanding of the architectural space. In the first phase, the concept of atmosphere in the architectural space is examined, and then phenomenology is explained as the main basis for knowing and understanding the atmosphere of the space (second phase). Then, in the third phase, with the ideas of other architectural theorists related to the atmosphere, and in the fourth phase, the investigation and recognition of the effective factors in the atmosphere of the space based on

the theories of architectural philosophers will be discussed. (factor detection stage) which includes the extraction of factors and components related to the architectural space. In the following, we will examine the effective elements and factors in Iran's architectural buildings (the fifth phase) and then explain the most appropriate building phenomenology method with a list of findings and results. And finally, by using the general principles and research findings, the general framework is presented.

#### *Christian Norberg-Schultz and Genius Loci perspective*

The initial link between phenomenology and architectural theory came through the work of the Norwegian architect, architectural theorist and writer Christian Norberg-Scholz. Undoubtedly, Alfred Schutz is one of the phenomenologists who contributed the most to the reflection on how to apply the insights of phenomenological philosophy in experimental and theoretical, human and social sciences. (Anderson, 2020) Schultz mentioned an inspiring idea, derived from Heidegger's philosophical school, as the spirit of place in phenomenology, in his valuable research entitled "Maskan thinking". Based on this, he emphasizes on the study of a conscious experience by examining the cause and effect relationships between architectural design and human experiences. (Champion, 2018) For this purpose, Schultz talks about a word called Genius Loci, which in phenomenological literature means the spirit of a place and refers to the special nature of a place or a space. He believes that architecture should pay attention to the spirit of the place and the building, not just the form and appearance of the building [23, 24]. In addition, in addition to being practical, architecture should create an experience in the viewer through the stimulation of human emotions through senses and emotions, what he calls existential space[25]. In further describing the spirit of the place, Schultz has investigated some of its constituent elements: topophilia, symbolic form, existential space, and architectural form, each of which will be discussed below:

- Topophilia: It was one of the elements emphasized by Schultz, which refers to people's love or emotional attachment to certain places. Love for a place is the same feeling that people feel when facing a favorite place. For example, when you return to your childhood neighborhood, the emotional feeling you get is a sense of place or topophilia. The sense of place can be interpreted from two points of view: dependence and attachment. What is your dependence on a place is the continued presence of a person in that place, which causes care and protection of that place; But attachment is a deeper word and it means a person's inherent dedication to that place, which can even cause a person to sacrifice for that place, just like the feeling of dedication to one's homeland. (Tveit et al., 2018)
- The language of architectural form and symbolic form (archetype): Schultz mentions a concept called placelessness, the main philosophy of this attitude was to ignore values and pay attention to the quantity of architecture in the modern era. Schultz believed that what gives personality to a place is the meaning and values hidden in the cultural identity of that society and the relationship between language, thought and human feeling. For this reason, architects should include the symbolic forms and archetypes of each culture with the basic elements of architecture (such as the use of lines, plates and volumes in patterns of central courtyards, Chinese knots and Persian arches) in their designs in order to be able to design architecture. convey the meaning with these symbolic forms. (Brem, 2020)
- Existential space: In his studies, Schultz refers to a word called existential space, based on which the viewer can understand different meanings of different architectural buildings in different historical periods. (Saragih et al., 2020)

Therefore, according to the issues raised in Schultz's phenomenological perspective, the spirit of place can be considered as one of the

main elements influencing architectural phenomenology, which includes sub-sets such as belonging, dependence and attachment, cultural identity. He has also emphasized on other elements such as physical senses and emotions and the language of form.

*Peter Zumthor and the view of feelings, physical senses and the materiality of phenomena*

Peter Zumthor was a Swiss architect of the 20th century, who is particularly famous for his phenomenological approach to architecture. Known as the architect of the atmosphere, he followed Martin Heidegger's phenomenological philosophical ideas and was influenced by Schultz's thoughts. (Labbe, 2019) From Zumthor's point of view, phenomenology is based on the study of conscious experience; Therefore, he believed that by examining how a person's biological experience through his body and senses from the surrounding environment and understanding the world, one can also understand literature and architecture. From his point of view, just as literature is not just a text, but it is the reader who gives life to that work with his imagination and mental creativity, knowing an architectural work through the sensory and emotional experience of architecture also gives life to the architectural work. Zumthor believed that the science of architecture has the ability to create spaces that evoke certain emotions and memories in the viewer. This is the concept of atmosphere in the philosophy of architecture. Zumthor argued that architectural spaces are not the result of the physical form of a building, but the result of an interaction between the structure and the materials used with its surrounding environment and subsequently how the experience of those spaces is formed by the users of those spaces. As a result, his argument of the experience of architectural monuments by the viewer's senses (and not just the eyes), induces his emphasis on human senses. Therefore, it can be argued that Zumtour emphasized the use of sensory factors in understanding the atmosphere of space. In addition, the examination of the works created

by Zumthor (such as Terme and Columba) shows that this outstanding architect, when creating his architectural works, paid special attention to key elements such as the materiality of the structure, the importance of proportion, and also the influence of light and sound elements on the experience of space. It has been specially emphasized. He also believed that natural materials such as wood and stone (as opposed to man-made artifacts) have unique characteristics that enable them to convey the feeling of warmth, comfort and connection with the natural world more effectively to the viewer. (Jung et al., 2021) Countless architects have benefited from Peter Zumthor's phenomenological perspective in researching or creating their architectural works. In his article, Langi discusses 9 very important factors in the atmosphere of architectural design space, which are modeled after Peter Zumthor, which are: architectural body, compatibility of materials, sound of a space, temperature of space, surrounding objects, tension Between inside and outside, levels of intimacy, and light on objects. . These nine aspects of design are the parameters that Peter Zumthor uses in the design of architectural spaces and buildings. (Langi et al., 2012) Here are some of the key elements that Zumtour considers when creating atmosphere in the design of its architectural monuments:

- Materiality: using natural materials such as wood, stone instead of human artifacts to convey the desired feeling of the architect to the viewer of the work.
- Proportion: Zumtor's belief in the proportions of a space that creates a sense of harmony and balance can lead to a pleasant feeling in the viewer of the work.
- Light and shadow: Zumtor believed that light can be used optimally to create the atmosphere of architectural spaces. This thinking, along with his belief in materiality, causes him to consider natural light to create a feeling of openness and air in his works; While he uses artificial light to create a sense of mystery.

- Sound and silence: Zumthor believed that the element of sound can directly affect our experience of space. For this reason, he often uses natural sounds such as the sound of water, wind, or the rustling of leaves to create a feeling of relaxation, and on the other hand, he uses man-made sounds to convey a sense of excitement (and to a lesser extent than natural sounds). (VonderBrink, 2007)

Therefore, what emerges from Peter Zumthor's phenomenological approach is to focus on the use of emotions, perceptions and physical senses of the viewer, the appropriateness of the constituent parts of the work, and also the use of natural elements (materials) in the creation of architectural works.

*Steven Hall and the issue of light and shadow, perception of space in phenomenology*

Steven Hall, an American architect and theoretician of the 20th century, is one of the prominent figures of the phenomenological theory of architecture. His phenomenological point of view, which is more consistent with Heidegger's ideas and Merleau-Ponty's thoughts (sees the body as a tool to connect to the world), is based on the principle of attention to light and shadow, perception while moving in space, the effect of space-time and human experiences. (Edensor, 2015) The main important aspect in Stonehall's phenomenological view is his special attention to the issue of understanding light and the formation of shadows in the issue of formatting forms and volumes. Examining the works created by Steven Hall (such as the Nelson Atkins Museum of Art in Kansas City) shows that this architect paid special attention to key elements such as the use of natural light, organic forms and natural materials when creating his architectural works. These elements have a deep impact on the emotions of the audience. Further, considering the effect of light and shadow in creating the perceived effect of the atmosphere of spaces, Steven Hall has paid special attention to spatial perceptions. He uses light as a tool to define volumes, shapes and textures and

creates dynamic spatial experiences. The next influential aspect from Hall's phenomenological point of view is the effect of combining time and movement in architectural spaces. His designs often encourage movement and exploration, engaging users in a continuous experience through architecture. Therefore, some of the key atmospheric elements that Steven Hall considers in his designs are briefly presented as follows:

- Light and shadow: Hall believes that light shapes how people perceive and experience architecture. He focuses on manipulating light to create specific atmospheres and evoke emotional responses in spaces.
- Perceptions of space: To understand and recognize an architectural space, Hall believed that various elements such as curved and irregular forms, along with complex connections between spaces, local materials and innovative structures can influence the atmosphere of that space and spatial experiences. create a unique [36].

The effect of the combination of time and movement: it means the presence of man in space and time and interaction with it, and unlike physical time is one-dimensional, it is a multifaceted factor. This category is a phenomenological experience that is related to multi-sensory perception (multi-sensory space) and corporeality, which can create a phenomenological experience of time through elements such as light, smell, sound, color, form, geometry, material, texture and creating a phenomenological experience of time. architectural space. (Spence, 2020). Conscious experience: according to Hall's opinion, the five senses of sight, hearing, touch, smell and taste are formed through experience. Therefore, what emerges from Steven Hall's phenomenological perspective, considering the elements of light and shadow, understanding the environment and architectural space, paying attention to human experiences, as well as combining time-space and conscious experience in examining the atmosphere of architectural works in the next parts of this research. At-

tention to the context of the site: For Hall, the geographical and cultural context is also very important, and in his designs, a strong connection between the building and the location of the site can be seen.

#### *Johanni Pallasmaa and the role of memory and imagination in phenomenology*

Johanni Pallasmaa is a Finnish architect, professor, writer, and also one of the critics of architecture and art of the 20th century, who paid special attention to psychology, culture, and phenomenology in architecture. In his phenomenological works, he followed Heidegger's principles and theories based on the concept of human existence and sensory experience and his relationship with the environment and the surrounding world. In particular, we can mention his important work called "Eyes of the Skin - Architecture and Senses" (1996), which emphasizes the presence of humans in space and brings the sensory and unpleasant perceptions of humans into the ideas and theories of architecture. Pallasmaa believes that architecture can be experienced with one's emotions, feelings and senses and points out how the physical environment can affect the emotions, perception and mental image of the audience. (Pallasmaa, 2014) What distinguishes Pallasmaa's phenomenological perspective from others is the role of memory and imagination in the perception of architecture. He believes that architecture can have a direct impact on a person's memories and his imagination, and he does not know the interaction of people with the built environment only through immediate feelings and experiences, therefore, in his phenomenological approach, the temporal dimension is also considered. Also, in his opinion, architecture should go beyond mere aesthetic or functional aspects and should have the ability to create special feelings and memories. He believes that we communicate with architecture through our senses and that the physical environment can have a significant impact on our emotions and perceptions. Pallasmaa believes that architecture should not only deal with aes-

thetic and formal values but should go beyond functionalism. He has introduced the concept of atmosphere as one of the main characteristics of architecture and believes that the atmosphere of an architectural space creates the sensory and emotional experience of that space. He states that the atmosphere of a space can be created by various factors such as light, materials, sound and even smells[39]. While modern technology and digital images weaken this multi-sensory human experience, and this issue even includes the difference between designing by human hands and using computer tools. For this purpose, he discusses the role and importance of using the hand in design in the book *Dost Fakar: (Existential and physical wisdom in architecture)*. (Tamari, 2017)

The concepts and elements of phenomenology that are of interest in his works are:

1. Human presence: He believes that humans should be at the center of attention in architecture and architecture should be aware of how humans are present in spaces and interact with them.
2. Sensory experience: Pallasma, as a phenomenologist and architect, believes that architecture should consider the emotions and all sensory experiences of its audience in designed spaces and create a rich sensory experience for people. He believes that this perception is not only specific to visual perception, but it is multi-sensory, including vision, touch, hearing and even smell, which can have a more effective experience of architecture for humans.
3. Physicality and physical phenomenology: He believes that architecture should be able to communicate with human physicality, and in addition to understanding the space and environment around him with his mind, he should be able to touch and understand it with his whole physical being. and the designer should pay due attention to this issue in creating space and architecture.
4. Phenomenological pragmatism: It does not see architecture only as a visual and external phenomenon and does not deal with it from an aesthetic point of view, but examines it as a sensory, social and cultural experience.
5. Cognition and perception: He examines human sensory senses and their relationship with human perceptions and knowledge of architecture, as well as the positive and negative effects of sensory experiences on perception and cognition.

Generally, according to the phenomenology angle, Pallasma emphasizes on human sensory and physical experience in spaces and examines these effects on architecture. It emphasizes that architecture should have the ability to create a deep sensory experience and a close relationship with humans. Therefore, what emerges from Yohani Pallasma's phenomenological perspective is the emphasis on the human presence, attention to the body, physical feelings and senses, human sensory and physical experience, and perceptions and knowledge through his experience and presence in the architectural space, which in examining the atmosphere of architectural works It will be used in the next sections of this research

**Table 1:** Examining the philosophical symmetry of the phenomenology of philosophers with the phenomenological perspective of architects

Philosophical symmetry-architectural perspective	Edmund Husserl	Heidegger	Merleau-Ponty
Christian Norberg-Schultz	Schultz was a follower of Husserl's theory, which focused on the study of human consciousness and subjective experience.	-	-
Peter Zumthor	-	Zumthor uses Heidegger's philosophical theory of existential phenomenology and emphasis on lived experience, the importance of place and Heidegger's poetic nature in her architectural works.	-
Steven Hall	-	Steven Hall is influenced by the phenomenological philosophy of Martin Heidegger, which emphasizes the concepts of being experienced in the world, the importance of place, and the poetic nature of architecture. Hall's emphasis on creating architecture that responds to its context and evokes a sense of place	Maurice Merleau-Ponty's embodied phenomenology, which examines the role of the body in perception and experience, and his ideas about the intertwining of perception, body, and space have been influenced by Hall's interest in creating architecture that engages with the sensory and bodily experiences of users. .
Juhani Uolevi Pallasmaa	-	Heidegger's theories are based on the concept of existence and sensory experience of man and his relationship with his environment and surrounding world.	-

**Table 2:** Review of the highlights of phenomenology emphasized by the leading architects of phenomenology

Leading architects of phenomenology	Emphasized phenomenological highlights	Outstanding works of the architect	Outstanding designs provided
Christian Norberg-Schultz	The genius loci is one of the main elements influencing the phenomenology of architecture, which includes sub-sets such as belonging, dependence and attachment, cultural identity. He has also emphasized on other elements such as physical senses and emotions and the language of form.	"The Place of Genius: Towards a Phenomenology of Architecture" (1980): He explores the relationship between architecture and the spirit of a place, drawn from phenomenological ideas. The concept of "genius aspects" or the soul of a place became central to his discussions of architecture and the importance of creating spaces that resonate with human experience.	
Peter Zumthor	The focus is on the use of emotions, perceptions and physical senses of the viewer, the appropriateness of the components of the work, as well as the use of natural elements (materials) in the creation of architectural works.	2018 - A Feeling of History 2006 - Atmospheres (Atmosphären: architektonische Umgebungen - die Dinge um mich herum) 1998 - Peter Zumthor Works: Buildings and Projects 1979-1997 (Peter Zumthor Works: Buildings and Projects 1979-1997) 1998 - Architektur Denken (The path of phenomenology in Peter Zumthor's thought, translated by Morteza Nik Fitrat, Alam Memar publication, 2016.)	Zumthor's works, such as the Therme Vals and the Bruder Klaus Square chapel, are seen as manifestations of these phenomenological principles, showing a deep concern for the experiential qualities of architectural space and its emotional impact on individuals. Protective buildings for Roman archaeological finds - Switzerland (1986) Saint Benedict Church - Switzerland (1988) Residential homes for the elderly - Switzerland (1993) Terror Topographic Documentation Center - Germany (1993) Waltz Hydrotherapy Center - Switzerland (1996) Bregenz Art House - Austria (1997)

Table 3: Review of the highlights of phenomenology emphasized by the leading architects of phenomenology

Leading architects of phenomenology	Emphasized phenomenological highlights	Outstanding works of the architect	Outstanding designs provided
Steven Hall	Considering the elements of light and shadow, understanding the environment and architectural space, paying attention to human experiences, as well as combining time-space and conscious experience.	The book Questions of Perception (Phenomenology of Architecture)	- Kiasma Museum of Contemporary Art (Helsinki, Finland) 1998 (engages with its urban context. The use of natural light and the organization of interior spaces create a phenomenological experience for users)
Juhani Uolevi Pallasmaa	Emphasis on the human presence, attention to the body, physical feelings and senses, human sensory and physical experience and perceptions and knowledge through her experience and presence in the architectural space.	- Simultaneous consideration of architecture and conscious human experience - Believes in the experience of understanding the atmosphere of the space through the audience's five senses as a reference for judging the work Skin Eyes - Architecture and Senses (1996) The thinking hand: Existential and embodied wisdom in architecture" (2009)	- Simmons Hall Cambridge, Massachusetts, USA 2002 (Hall's focus is on light and shadow and creates spatial experiences in its curved form with the concept of "porosity" emphasizing the connections between indoor and outdoor spaces) - Hunters Point Community Library (Queens, New York, USA) 2019 (sculptural form and careful attention to natural light are evident) Campi Center, Helsinki, 2006-2003 Campi Center, Helsinki, 2006-2003 Itakshkosh Shopping Center, Helsinki, 1989-91 Wiki Paul Manzar, Helsinki, 2002

As it can be seen from the results of examining the works of philosophers, theorists and architects with phenomenology approach discussed in the previous two parts, the category of phenomenology can be examined from different perspectives. In fact, the existence of various phenomenological factors (phenomenological factors) causes such a range of diversity in phenomenology. The discussion of the atmosphere of architectural spaces is also a result of such a view, and therefore, the atmosphere of architectural spaces can be examined from different perspectives. In the next part, using the results of this section, we will provide a list of factors that should be considered in phenomenology.

*Identification of effective factors in the atmosphere of space*

As it can be seen from the examination of different phenomenological perspectives in the previous part, the discussion about the architectural space has many complications, and such complications generally arise due to the existence of numerous influencing factors on the atmosphere of architectural spaces. As discussed in the previous part in the review of the history of thematic

literature, phenomenology as an efficient tool in the study of the atmosphere of architectural spaces consists of several factors that each of the different philosophers and architectural thinkers have studied the category of phenomenology from different perspectives. And in such a way that in each of these views, some factors have been considered more and more colorfully. For this reason, when studying and analyzing the atmosphere of an architectural building, the systematic identification of factors that are more important according to the location of the building becomes particularly important.

Therefore, in this part, the factors affecting the atmosphere of architectural spaces are examined through phenomenology, and in the following, each of them will be analyzed analytically.

*Factors affecting phenomenology in the phenomenological views of architects*

After examining the views of prominent architectural phenomenologists, a summary of the factors that they have considered in their works (including designs and publications) has been examined in Table 4:

Table 4: Factors affecting phenomenology in the phenomenological views of top architects in this field

Invoice group	Factors affecting the understanding of space atmosphere	Christian Norberg-Schulz (May 23, 1926.)	Peter Zumthor (April 26, 1943)	Steven Hall (December 9, 1947.)	Johanni Palasma (September 14, 1936.)	Christopher Alexander (October 4, 1936.)
Historical	The historical background of the building			✓		✓
	Building style					✓
Social	Nationality/ethnicity/race					
	Culture	✓	✓	✓	✓	✓
	Civilization				✓	
	Religion				✓	
Technology	Communication technology				✓	
	Construction	✓				
	Material		✓	✓		
	Dependency	✓				
	Attachment	✓				
	Pride and honor					
	Belonging	✓				
Physical experience	Identity	✓				
	Imagination and visualization				✓	
	Feelings and emotions	✓	✓		✓	
Physical senses	Vision	✓	✓		✓	
	Sense of touch	✓	✓	✓	✓	
	Smell	✓	✓		✓	
	Hearing	✓	✓		✓	
Position	Geographical region of the country					
	Site					
Building	Architecture	✓		✓		✓
	The location of the building		✓		✓	
	Time, duration and life of the building		✓	✓	✓	✓
	Physical factors (light, sound, energy)		✓	✓		

## **RESULT AND CONCLUSION**

The results of the review of the studied sources that can be considered as existing chats in the field of the atmosphere of the architectural space are given below. These results can be considered as guidelines for future studies:

- The results of the review show that architectural thinkers have considered different groups in the study of the atmosphere of the space, which include building, location, environmental factors, physical senses (bodily), imagination (memory), sense of place, technology, social and historical factors.
- Merleau-Ponty, who was one of the pioneers of the science of identifying the atmosphere of space, used phenomenology as the most effective method of identifying and investigating the atmosphere of architectural spaces. Most future philosophers have followed Merleau-Ponty's theory in identifying the space atmosphere.
- Different philosophers of architecture have presented different views of atmosphere according to the type of view of the atmosphere of space. Each of these general attitudes has become a school, among the most important of which we can divide Böhme, Steven Hall, Peter Zumthor, Libesking, Palasma and Rogers.
- The influential factors of the atmosphere, from the perspective of two architectural theorists, Steven Hall and Zumthor, are the physical senses (multi-sensory), the bodily senses, and the memorable imagination, which correspond to the influential factors in Iranian architecture.
- From Bohme's point of view, phenomenology is more focused on bodily senses as well as elements of environmental factors. He and the followers of his theory emphasize the understanding of environmental factors through the physical presence of a person in the environment. His ideas are approved and used by many late philosophers.
- What emerges from Daniel Libesking's view of the atmosphere of space shows that by breaking the traditional and convention-

al structures of phenomenology that are used by many architectural thinkers, he has achieved to present new views on the atmosphere of space.

- On the other hand, the investigation of Iranian architectural buildings shows the multiplicity of factors that must be considered in order to understand the atmosphere of the space by them. This issue is due to the special and unique structure of Iranian-Islamic architecture in Iranian buildings.
- Examining different theories of space atmosphere which are based on phenomenology shows that in phenomenology the use of a pure philosophy cannot be useful in the analysis of architectural spaces. In fact, what is concluded as a suitable method (and not the only existing method) in identifying Iranian architectural spaces is the use of a combined method based on the identification of effective factors and analysis using the Zumter-Hall method. The reason for this is that using the combined method of these two philosophies covers many effective factors in understanding the atmosphere of the spaces related to Iranian architectural buildings by the phenomenological method.

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