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Environmental Indicators of Safety Perception: A Multidimensional Analysis of Spatial Readability and Sensory Inputs

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ABSTRACT

Although architectural space is often seen as a unified set of physical arrangements, it possesses a multi-layered structure that shapes human behavior and influences the sense of security. A person's experience of safety cannot be defined solely by structural stability or technical standards; perception of space, the manner in which it is experienced, and the behaviors individuals adopt within that environment are essential components of this feeling. Therefore, safety is not only a technical outcome of architectural decisions, but also emerges from the emotional and cognitive relationship between the user and the space.

The research examines users' behavioral responses to a space alongside various design variables. It demonstrates that the elements influencing perception of security encompass a broader scope than previously thought. Legibility, the quality of light, the combination of color and texture, volumetric proportions, and the visibility of escape routes all directly shape an individual's perception of the environment. When these elements combine with cultural codes and symbolic meanings, security becomes not only a physical construct but also an experiential one.

This study combines behavioral sciences, environmental psychology, and phenomenological approaches to address architectural safety as a multifaceted phenomenon. Consequently, safety is not considered merely a design input limited to technical measures, but rather a value that is constantly reshaped in the human-space interaction. This approach, which emphasizes the designer's ethical responsibility, suggests that safety in architectural production should be addressed holistically and from a human-centered perspective.

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Introduction

Architectural space is much more than a mathematical arrangement of surfaces and structural elements; it is a multifaceted phenomenon that guides human behavior and shapes the cognitive relationship an individual has with their environment. This process, extending from the first impression upon entering a building to the behavioral patterns formed during the time spent within the space, actually constitutes one of the most effective, yet invisible, dimensions of architecture. Therefore, architectural space is not merely a "designed physical environment," but also an experiential realm that gains meaning in the human mind, triggers emotions, and produces psychological responses.

While safety in modern architectural practices is often defined by measurable technical parameters such as fire regulations, structural strength, or spatial arrangement rules, the sense of security an individual feels in these spaces often transcends these technical criteria. The perception of safety is sometimes as subtle as the direction of light, and sometimes as complex as the readability of a space.

A user's feeling of safety is formed by the interaction of multifaceted psychological processes. This feeling stems from design decisions such as the openness of the space, the choice of colors and textures, or the visibility of escape routes. Therefore, it is impossible to draw a clear line between technical safety and perceptual safety; in most cases, they are two distinct dimensions that progress independently but together influence the user experience. This study aims to redefine the concept of architectural safety by moving beyond its technical limits and exploring the cognitive, emotional, and behavioral relationships that humans establish with space [1-10].

Today, the increasing spatial complexity, especially in large cities, has made the factors affecting an individual's perception of safety more visible. People can feel uneasy due to spatial uncertainty even in situations that do not involve physical danger; they may unconsciously exhibit defensive behaviors in spaces where they have difficulty finding their way, where there is insufficient light, or where the volumetric proportions are unbalanced. It is insufficient to explain such reactions solely through instinctive reflexes; every perceptual cue offered by the space is read as a sign of meaning

in the individual's mind, and these signs constantly reshape the perception of safety. Therefore, reducing the concept of spatial safety in architecture solely to the reduction of physical risks ignores a significant aspect of the user experience.

The most important assumption forming the theoretical basis of this research is that the perception of security is not a static characteristic, but is constantly reshaped through the individual's relationship with space. Humans do not perceive their environment as a mere physical shell; many elements, such as the legibility of space, the movement of light within the space, the psychological effects of colors used on surfaces, and the complexity of textures, influence how an individual interprets space. This interpretation process is not solely a mechanism based on visual perception; the echo of sound, the ambiguity of spatial boundaries, and architectural decisions that strengthen or weaken the sense of direction are also among the elements that either foster or undermine the sense of security.

Spatial legibility is one of the most fundamental components of the perception of safety. Users feel more comfortable in environments where they can intuitively understand where they are, which direction they can go, and how to reach an exit or a safe point to escape to in case of danger. Conversely, complex floor plans, corridors requiring sudden changes of direction, or spaces where visual continuity is interrupted, weaken perceptual safety by creating a feeling of "loss of control" in the individual's mind. The effect of lighting on this process is also quite significant; high-contrast shadow areas, sudden changes in ceiling height, or situations where light is not evenly distributed in the space can increase the feeling of uncertainty and create cognitive tension.

Color and texture arrangements are another important design component that influences an individual's emotional responses. Light colors and soft textures generally evoke a feeling of spaciousness, openness, and comfort, while dark tones, harsh materials, or complex textures can create a repressive atmosphere. This feeling of oppression, even in the absence of a physical threat, can be associated with the "possibility of danger" in the user's mind, lowering their sense of security. Therefore, color and texture choices should be considered not only as aesthetic decisions but also as tools for psychological regulation [11-19].

The clarity of escape routes is a key concern in environmental psychology. People instinctively look for exits, even when they don't notice immediate danger. This basic safety behavior stems from evolutionary history. When exits are hidden or a space feels confining, anxiety rises. In these conditions, people act more cautiously, leave sooner, or avoid the space.

For all these perceptual and cognitive processes to gain meaning within the context of architecture, the concepts offered by phenomenological theories of space are quite valuable. Phenomenology considers space not merely as a physical arrangement, but as a realm of existence that humans experience and fill with meaning. This approach demonstrates that explaining the effects of architectural space on humans solely in terms of technical, measurable parameters is insufficient. Humans perceive space through their senses; the atmosphere, associations, and symbolic elements of the space take root in the individual's mind. Some of these associations reinforce the feeling of security, while others may have the opposite effect.

Environmental psychology complements the phenomenological approach by enabling the scientific explanation of the effects of space on human behavior. This discipline reveals that space influences individuals' movement speed, decision-making behavior, forms of social interaction, and even physiological responses. These behaviors, unconsciously guided by environmental stimuli, make the role of architectural design in safety much more prominent. When a space is highly complex, individuals move more slowly, the decision-making process lengthens, and reactions become more cautious. Conversely, in spaces with open, legible, and balanced volumes, individuals exhibit more positive behaviors and emotional responses.

This study aims to evaluate, through a holistic approach, how architectural space produces or weakens safety by bringing together all these theoretical frameworks. Space is not merely an entity defined by physical boundaries; it is a dynamic system that guides user behavior, triggers emotional responses, and shapes perceptual decision-making. Therefore, safety gains meaning not only through conformity with technical standards but also through its psychological impact on the user.

Methodology

The methodological framework of this research is designed to analyze the effects of architectural space on human behavior and perception of security in a layered manner. The aim of the study is not only to describe how a space is arranged, but also to understand how this arrangement is perceived by people, which points create ambiguity, and which design elements reinforce a sense of security. This is because security is often a more complex and personal experience than is commonly thought. A space that seems clear and understandable to one user may be disturbing or manipulative to another. Therefore, instead of a one-dimensional evaluation, the research has developed a broader approach that examines user responses from different perspectives.

The study employed both qualitative and observational methods; the natural flow of users' movements within the space, the points where they paused or sped up, and their responses to perceptual cues were evaluated separately. Such observations demonstrate that the perception of security is not merely a sudden reaction to a moment of danger, but is constantly reshaped by the visual and sensory messages offered by the space. Elements such as light distribution, color harmony, the readability of the space, or the openness of transition areas directly influence how users behave within the space [20-28].

Instead of confining this data to a single perspective, the research method prefers an interdisciplinary reading. By considering environmental psychology, behavioral sciences, and architectural theories together, the study evaluates how space constructs a sense of security within a more holistic framework. Thus, the study reveals that security is not merely a technical matter; it is a process in which perception, experience, and spatial meaning are intertwined.

Determining Research Locations

The spaces examined in this study were selected from among structures with high daily usage and where users' wayfinding behaviors are constantly at play. The selection of spaces was not random; examples with different volume ratios, varying lighting conditions, complex corridor geometries, and multiple entry and exit points were specifically preferred. In this way, it was possible to observe, comparatively, how both simple and complex spaces affect perceptions of security.

In determining the selection criteria, the opinions of architects, environmental psychologists, and behavioral scientists were utilized; thus, the aim was to ensure that the areas to be examined would generate rich data not only from a physical but also from a behavioral perspective.

Designing the Observation Method

The primary data source for this research is direct observations of user behavior. No measuring devices or tools that could interfere with the user were used during the observation. Participants moved naturally within the space, and the researcher only recorded their behavioral patterns. This approach was chosen to observe real behaviors without creating an artificial environment. The following moments were particularly noted during the observations:

- Pauses in corridors or passageways
- Hesitation in deciding to change direction
- Slowing down in dimly lit areas
- Behavior is becoming more fluid in open and spacious areas
- Increased eye movements when searching for an escape route.

These elements provided valuable clues for understanding how the space creates a safety map in the user's mind.

Examination of Spatial Readability

The readability of a space, that is, the user's ability to easily decipher its layout, is one of the important aspects of the research. A "readability diagram" was created for each sample space. This diagram analyzes the continuity of sight lines within the structure, blind spots, spatial orientation elements, the pressure or comfort felt by the user due to volume ratios, and the overall rhythm of the space. In some buildings, elements such as sudden changes in ceiling height or unexpected narrowing of corridors negatively affected perceptions of safety. Conversely, it was determined that geometries with an open view and areas receiving natural light facilitated easier analysis of the space.

Evaluation of Light and Illuminance Levels

Lighting was treated as an independent area of study in this research because the amount and distribution of light were found to significantly alter user behavior. The direction of natural light entry into the space, the areas where shadows were created, and the intensity and color temperature of artificial lighting were meticulously noted during observations. For example, individuals were observed to proceed more cautiously in areas with low ceiling heights and limited light penetration to the floor. Conversely, movement was more confident and uninterrupted in spacious areas with balanced lighting levels. These findings further confirmed that light is a fundamental design parameter affecting not only visibility but also the feeling of security [29-40].

Analysis of Color, Texture, and Material Characteristics

Another important aspect of the study is the arrangement of colors and textures that creates the space's atmosphere. Details such as surface hardness or softness, the sharpness of color transitions, and the use of glossy or matte surfaces directly influenced user behavior. It was noted that some participants spontaneously slowed down in darkly painted long corridors, while their behavior became more fluid in spaces with light tones and homogeneous textures. This reveals that safety is shaped not only by structural arrangement but also by the psychological weight of the space.

Detectable Escape Routes

The visibility of escape routes was addressed as a separate investigation topic in this study. Most users unconsciously check the direction of escape, even if they don't consciously consider the danger. Therefore, the location of signs, the angle differences of doors, passage widths, and the consistency of directional signs were evaluated. In some locations, although exit signs were visible, users noticed them late due to environmental clutter. This finding demonstrates that safety depends not only on signage but also on the readability of the spatial context.

Method of Data Analysis

The collected observational data were not converted into a numerical scale; instead, a thematic analysis was conducted to explain the spatial experience. Notes obtained from each space were compiled under themes such as "readability," "atmosphere of light," "flow of behavior," "perceptual interruptions," and "intuition of escape route." Comparisons were made between spaces during the analysis, but the findings were not generalized, because the perception of security, by its nature, varies depending on context and user profile.

Fındıngs and Dıscussıon

Architectural space subtly and powerfully shapes user behavior, as this research demonstrates. Observations from the study revealed that cues such as a brief pause in a corner, an unnoticed dark area, or an ambiguous passage significantly impact users' perception of safety. These findings show a continuous feedback loop between how users interpret the space and how safe they feel. In other words, a person's behavior within a space largely reflects their perception of it.

Sometimes, simply having sufficient lighting in a space can provide comfort to a user, while in other cases, the harmony of colors or the proportion of volume can lead to a feeling of unease that the person doesn't even notice. Although such behavioral responses may seem coincidental at first glance, the research process revealed that they are related to specific spatial arrangements. In particular, fundamental elements such as the visibility of escape routes, the readability of the space, and the clarity of boundaries guide users' conscious or unconscious responses. The fact that some participants exhibited very different behaviors within the same space further confirmed that perceptions of security are subjective and experience-based.

These findings demonstrate that architectural space design is not merely about technical drawings or regulations; it must be considered alongside the sensory, cognitive, and cultural layers of the human experience. The emotions evoked by a space are often more decisive than the space itself. Therefore, safety is not simply a design parameter aimed at risk reduction, but a process reshaped through the meaning of the space and its relationship with the user. This study, by highlighting the multifaceted nature of architectural safety, clearly reveals that the designer's responsibility extends beyond technical limits.

The Impact of Spatial Readability on Behavior

One of the most striking findings in the studied spaces is that users tend to move more slowly and imperceptibly in areas with complex geometry. This behavior was particularly noticeable in sections where corridors suddenly changed direction and load-bearing elements interrupted their view. Some participants experienced brief pauses even in the absence of an apparent threat; these pauses suggested a momentary refresh of their mental map of the space.

Conversely, in areas that provided clear vision and did not interrupt their sense of direction, users quickened their pace, and their movements became more fluid. Spatial readability emerged not only as a factor facilitating wayfinding but also as a tool for

organizing a sense of security in user behavior.

The Effect of Lighting on the Perception of Security

The effect of lighting on behavior proved more pronounced than expected. In areas where the light was not homogeneously distributed, shadows were dense, or contact with the ground was weak, users' movements were naturally disrupted. In these areas, participants behaved cautiously, regardless of perceived danger; some even felt the need to recheck their exit direction. Conversely, in adequately lit areas, the perception of safety increased significantly. While light doesn't directly contribute to a sense of safety, the clarity of the environment acted as a significant component of safety in the individual's mental processes.

The Effects of Color, Texture, and Atmosphere on the User

The findings regarding how color and texture alter the spatial atmosphere are also noteworthy. Particularly during long transitions when dark tones predominated, participants' gazes were directed more towards the floor, and their tendency to quickly scan the surroundings decreased. This suggests that dark surfaces narrow an individual's environmental awareness.

On the other hand, in spaces where light tones, warm texture transitions, and soft material surfaces were used, users' behavior became more confident. Such surfaces functioned not only as an aesthetic preference but also as a psycho-emotional element of security [41-50].

Detectable Escape Routes and Silent Effects

The visibility of escape routes directly influences user behavior. In some locations, even though signage or directional markers are technically correctly positioned, users notice these signs late due to spatial clutter. This shows that safety cannot be ensured solely by the presence of signs; contextual readability is at least as important as the signs themselves.

It was observed that the vast majority of participants unconsciously searched for an exit point upon first entering the space. This behavior demonstrates that even without perceiving a threat, humans have a need to establish an "internal balance" regarding the existence of a safe exit. Therefore, the visibility of escape routes within a space is important not only for emergencies but also in terms of everyday user behavior.

The Overall Effect of Spatial Atmosphere on User Psychology

When all the findings of the study are considered together, it can be said that the space shapes user behavior with a series of small but continuous stimuli. Each of these stimuli may not be decisive on its own; however, when combined, they form an invisible network that both strengthens and weakens the perception of security. Therefore, security should be considered not only as a phase of design, but as a continuous component of the spatial experience.

Conclusion and Recommendations

When examining the effects of architectural space on the user, it becomes clear that the feeling of security is shaped not only by structural measures but also by the impressions the space leaves on the human mind, the perceptual cues that guide behavior, and the sensory atmosphere. In particular, elements such as the readability of the space, the distribution of light, the relationships between color and texture, or the perception of escape routes silently but powerfully shape individual behavior, independent of technical security measures. Observations throughout the study revealed that a large part of user behavior consists of unconscious responses, which are highly sensitive to micro-stimuli in the space.

Spatial readability emerged as one of the most prominent behavioral indicators in these results. Users were observed to move more slowly and cautiously in complex or disorienting spaces, and in some cases even paused briefly to mentally "re-analyze" the space. This behavior demonstrates that the perception of security is closely related not only to the threat of danger but also to feelings of uncertainty and a sense of loss of control. The continuity of clear fields of vision and the consistency of spatial cues that provide direction reinforce a sense of security by creating a natural flow in user behavior.

Lighting design also holds a special place among the results. Lighting designs that are not homogeneously distributed, intensify shadows, or direct users to blind spots have had an effect that weakens behavioral safety. One of the most noticeable behaviors observed is that users unnoticedly slow down their steps in dark or gray-toned areas. In contrast, in areas where light is evenly distributed across the floor and volume, users have a more confident and relaxed pace of movement. This shows that lighting is much more than a functional need; it acts as a crucial component that forms the emotional basis of perceived safety.

The relationship between color, texture, and the perception of security is also remarkably strong. In narrow or transitional spaces dominated by dark tones, users' tendency to scan the environment decreases; instead, their gaze is generally directed towards the floor. This behavior suggests reduced environmental awareness and a greater sense of vulnerability. In spaces dominated by light tones, subtle textures, and smooth transitions, behavioral security increases significantly. This finding reveals that color and texture are not merely aesthetic preferences but psychological elements that, though indirectly, contribute powerfully to perceptions of security [51-59].

The perceptibility of escape routes should be considered one of the most critical points at which the technical and perceptual dimensions intersect in terms of safety. Even if signage is correctly positioned, users may notice it late if the space is poorly lit. An interesting finding is that individuals tend to unconsciously search for an exit route within the first few seconds after entering a space. This reflex demonstrates that the perception of safety develops through a constantly active pathway in the human mind, and architectural arrangements should be compatible with this cognitive pathway. An escape route that the user can perceive without conscious thought increases behavioral safety not only in emergencies but also in everyday use.

The overall assessment of the study shows that the capacity of architectural space to generate safety extends far beyond technical calculations. An individual's perception of space is a process that often operates beyond rational explanation, drawing on past experiences and cultural associations. This is precisely where the phenomenological approach gains importance. Space is not merely a functional entity; it is an experiential field that produces meaning, creates emotion, and directs behavior. Therefore, safety is determined not only by the technical adequacy of the space but also by the emotional response that the meaning it produces evokes in the user.

Another important finding of the research is the ethical dimension of spatial safety. The designer's responsibility is not limited to protecting the structure from technical risks; it also includes creating spaces that psychologically support the user, do not create mental burden, and balance sensory stimuli. Safety is not only hidden in engineering calculations, but also in the individual's

relationship with the space, in what the space "says" to the user, and in how this discourse is reflected in behavior. Looking at the results as a whole, it becomes clear that the definition of safety needs to be re-evaluated in the discipline of architecture.

Safety is not merely the "absence of danger"; it is the internal state of balance that the individual feels while expressing themselves, moving, and perceiving within the space. This internal balance is strengthened by the consistency of behavioral cues and is more firmly established when integrated with the meaning world of the space.

When the information provided by a space is clear, when colors and textures create an engaging context for the user, when light supports the character of the volume, and when escape routes become visible through a natural flow, a sense of security is established spontaneously. Otherwise, the user struggles with the space; this struggle, even if unconscious, disrupts the rhythm of behavior, slows decision-making, and increases spatial uncertainty. These findings necessitate that architectural safety be designed not only for emergency scenarios but also for the rhythm of daily life. In everyday spatial experiences, safety is directly related to how uninterrupted the flow of movement is for the individual, how little mental burden they feel, and how easily they can interpret the space. Therefore, behavioral safety serves as a bridge between architecture and environmental psychology.

References

1. Arıcı A (2025) Restoration of Hacıbaşı Lodge, Preservation and Reinterpretation of Ottoman and Western Architectural Elements. KİÜ Fen, Mühendislik ve Teknoloji Dergisi 2: 35-47.
2. Arici A (2024) An Academic Study of Alaca Mosque the Integration of Ottoman and Western Architectural Elements. Journal of Waste Management & Recycling Technology 2: 1-7.
3. Arici A (2023) Envıronmentally Frıendly Constructıon Sıtes: Sustaınabılıty and Green Practıces. International Scientific Journal Vision 8.
4. Arici A (2023) Creatıng Fast And Safe Structural Desıgns And Quarantıne Structures Durıng An Epıdemıc. International Scientific Journal Vision 8.
5. Arıcı A, Tayyar R, Usta P, Nureddin M (2024) Kompozit Ahşap Malzemelerin Çeşitli Avantajlari Dayaniklilik Estetik Ve Çevre Dostu Özellikleri. KİÜ Fen, Mühendislik ve Teknoloji Dergisi 1: 1-9.
6. Arici A, Usta P, Kepenek E (2017) Recommendations To Enhance Life Quality With Sustainable Planning In Rural Areas. In ICSD International Conference on Sustainable Development 19-23.
7. Arıcı A, Baran H (2024) Microstructural behavior of recycled aggregates in geopolymer binder systems. International Journal of Construction Materials Research 12: 47-62.
8. Evci PU, Arıcı A (2023) Effect of 6 February 2023 Kahramanmaraş Earthquake on rural structures. Journal EJSDR – European Journal of Sustainable Development & Researc 7.
9. Arıcı A, Elbir U (2024) The role of social interaction in safety culture: Promoting safe behaviors through effective work and collaboration. European Journal of Sustainable Development Research 8: 8-11.
10. Arıcı A (2024) Examination of Mjøstårnet structure in the context of wooden buildings and sustainable architecture re-utilization of natural materials. International Scientific Journal Vision 9.
11. Arıcı A (2024) Use of personal protective equipment in occupational safety and awareness and application trends of construction workers, legal obligations and compliance. Sui Generis 3: 7-21.
12. Arıcı A, Elbir U (2024) The collective consciousness in security: Contributions of social ties and interactions to risk reduction. European Journal of Sustainable Development Research 8: 17-19.
13. Arıcı A, Usta P (2023) Evaluation of disability standards in primary schools: The case of North Macedonia Gostivar Municipality. Journal EJSDR – European Journal of Sustainable Development & Research 7.
14. Arici A, Usta P, Kepenek E (2017) Recommendations to enhance life quality with sustainable planning in rural areas. ICSD International Conference on Sustainable Development Proceedings: 19-23.
15. Arici A, Elbir U (2023) Innovative solutions in labor law and construction sector: Future perspective. Sui Generis 2.
16. Ayşe A (2025) Automatic crack detection on concrete surfaces using lightweight deep learning models. Journal of Clinical Case Studies Reviews & Reports 7: 1-4.
17. Arıcı A (2025) Restoration of Hacıbaşı Lodge: Preservation and reinterpretation of Ottoman and Western architectural elements. KIU Journal of Science, Engineering and Technology 2: 35-47.
18. Evci PU, Sever AE, Şakalak E, Arici A (2024) Effect of opening frame materials with different mechanical properties on the behavior of unreinforced masonry structures. European Journal of Sustainable Development Research 8: 31-40.
19. Elbir U, Arıcı A (2024) The collective consciousness in security: Contributions of social ties and interactions to risk reduction. Journal EJSDR – European Journal of Sustainable Development & Research 8.
20. Alexander C (1977) A pattern language: Towns, buildings, construction. Oxford University Press https://global.oup.com/academic/product/a-pattern-language-9780195019193?cc=in&lang=en&.
21. Altman I, Chemers M (1980) Culture and environment. Cambridge University Press.
22. Arendt H (1958) The human condition. University of Chicago Press.
23. Bitner MJ (1992) Servicescapes: The impact of physical surroundings on customers and employees. Journal of Marketing 56: 57-71.
24. Canter D (1977) The psychology of place. Architectural Press.
25. Ching FDK (2014) Architecture: Form, space, and order (4th ed.). Wiley https://www.wiley.com/en-dk/e%3A+Form%2C+Space%2C+and+Order%2C+4th+Edition-p-9781118745199.
26. Cooper C (2011) Psychology of architecture. Architectural Press.
27. Dewey J (1934) Art as experience. Perigee Books.
28. Foucault M (1977) Discipline and punish: The birth of the prison. Vintage Books.
29. Gibson JJ (1979) The ecological approach to visual perception. Houghton Mifflin.
30. Heidegger M (1962) Being and time. Harper & Row.
31. Hillier B, Hanson J (1984) The social logic of space. Cambridge University Press.
32. Hollnagel E (2014) Safety-I and Safety-II: The past and future of safety management. Ashgate.
33. Kaplan R, Kaplan S (1989) The experience of nature: A psychological perspective. Cambridge University Press.
34. Lefebvre H (1991) The production of space. Blackwell.
35. Lynch K (1960) The image of the city. MIT Press.

36. Madanipour A (1996) Design of urban space: An inquiry into a socio-spatial process. Wiley.
37. Merleau-Ponty M (1962) Phenomenology of perception. Routledge.
38. Meyers-Levy J, Zhu R (2007) The influence of ceiling height on cognition. Journal of Consumer Research 34: 174-186.
39. Newman O (1972) Defensible space: Crime prevention through urban design. Macmillan.
40. Norman D (2013) The design of everyday things. MIT Press.
41. Pallasmaa J (2005) The eyes of the skin: Architecture and the senses. Wiley https://www.wiley.com/en-sg/+Eyes+of+the+Skin%3A+Architecture+and+the+Senses%2C+3rd+Edition-p-9781119943501.
42. Rapoport A (1990) The meaning of the built environment. University of Arizona Press.
43. Rasmussen SE (1964) Experiencing architecture. MIT Press.
44. Reason J (1997) Managing the risks of organizational accidents. Ashgate.
45. Sennett R (1992) The fall of public man. Norton.
46. Somville P (2011) Spatial perception and embodied cognition. Phenomenology and the Cognitive Sciences 10: 333-350.
47. Tilley C (1994) A phenomenology of landscape. Oxford University Press.
48. Ulrich RS (1984) View through a window may influence recovery from surgery. Science 224: 420-421.
49. Weisman J (1981) Evaluating architectural legibility: Way-finding in the built environment. Environment and Behavior 13: 189-204.
50. Whyte WH (1980) The social life of small urban spaces. Project for Public Spaces.
51. Zeisel J (2006) Inquiry by design: Environment/behavior/neuroscience in architecture. https://www.semanticscholar.org/paper/Inquiry-by-design%3A-Environment-behavior-in-and-Zeisel/7b0401150a605a7708ad2b50a96dc2758f153832.
52. Zimring C, Dalton R (2003) Wayfinding in healthcare facilities. Environment and Behavior 35: 581-603.
53. Sailer K, McCulloh I (2012) Social networks and spatial configuration in workplaces. Environment and Planning B 39: 1070-1088.
54. Evans GW, McCoy JM (1998) When buildings don't work. Journal of Environmental Psychology 18: 85-94.
55. Gifford R (2014) Environmental psychology: Principles and practice (5th ed.). Optimal Books https://www.amazon.in/Environmental-Psychology-Principles-Robert-Gifford/dp/0993771904.
56. Berlyne DE (1971) Aesthetics and psychobiology. Appleton-Century-Crofts.
57. Frascara J (2000) Design and the social sciences. Taylor & Francis 256 https://www.taylorfrancis.com/books/edit/10.1201/9780203301302/design-social-sciences-jorge-frascara.
58. Nasar JL (1994) Urban design aesthetics: The evaluative qualities of building exteriors. Environment and Behavior 26: 377-401.
59. Norman DA, Draper SW (1986) User-centered system design: New perspectives on human-computer interaction. Routledge https://www.researchgate.net/publication/32231249_User_Centred_System_Design-New_Perspectives_on_HumanComputer_Interaction.