

Review

# Integrating Fengshui and environmental psychology into contemporary architecture design for enhanced occupant well-being

# Mei Xie<sup>1,\*</sup>, Yanhui Mao<sup>2</sup>

<sup>1</sup> Department of Psychology of Developmental and Socialization Processes, Sapienza University of Rome, 00185 Rome, Italy <sup>2</sup> Institute of Applied Psychology, Psychological Research and Counseling Center, Southwest Jiaotong University, Chengdu 610031, China **\* Corresponding author:** Mei Xie, mei.xie@uniroma1.it

#### CITATION

Xie M, Mao Y. Integrating Fengshui and environmental psychology into contemporary architecture design for enhanced occupant well-being. City Diversity. 2025; 6(1): 3036. https://doi.org/10.54517/cd3036

#### ARTICLE INFO

Received: 1 December 2024 Accepted: 8 January 2025 Available online: 7 February 2025

#### COPYRIGHT



Copyright © 2025 by author(s). *City Diversity* is published by Asia Pacific Academy of Science Pte. Ltd. This work is licensed under the Creative Commons Attribution (CC BY) license. https://creativecommons.org/licenses/

by/4.0/

Abstract: This review provides a comprehensive analysis and develops an integrated framework for incorporating Fengshui principles into modern architectural design, focusing on their multidimensional impact on occupant well-being. In ancient China, Fengshui is a sophisticated practice integrating spatial layout and environmental optimization, drawing from natural sciences such as geography, geology, meteorology, and environmental studies. Its core objective is to harmonize the natural and built environments, creating optimal living conditions that support a harmonious coexistence between humans and nature. By regulating the flow of spatial energy, Fengshui fosters livable and balanced spaces, enhancing thermal comfort, aesthetic appeal, cultural and spiritual significance, and environmental sustainability. These benefits underscore Fengshui's contemporary relevance in modern architectural practices, showcasing its unique potential to create spaces that promote holistic well-being. This study systematically identifies four key advantages of Fengshui and explores its reintegration into modern design, emphasizing its historical wisdom in respecting and harmonizing with nature. Despite facing obstacles related to scientific validation and cultural adaptability, Fengshui is proposed as a significant theoretical framework and practical resource for architects and urban planners. It can be utilized to design environments that promote human well-being, enrich cultural significance, and support sustainability.

**Keywords:** Fengshui; occupant well-being; modern architectural environment; environmental psychology; sustainable architecture; indoor environment quality; aesthetic harmony

# **1. Introduction**

In recent years, Fengshui (also called Chinese geomancy), a cornerstone of traditional Chinese culture, has gained growing recognition in academic discussions regarding its potential to enhance the well-being of occupants in the built environment. Rooted in millennia of practice, Fengshui integrates astronomy, geography, environmental science, architecture, and Taoist philosophy [1,2]. Its essence lies in designing spatial layouts that harmonize with natural elements to create balanced environments, positively influencing health, interpersonal relationships, and overall quality of life [3]. Beyond practical considerations such as furniture arrangement, Fengshui adopts a holistic approach, emphasizing the interplay between physical environments and human vitality through elements like terrain, orientation, light, water, and vegetation [4,5].

Architectural design increasingly focuses on human-centric care in modern urban planning, where priorities often center on land value and sustainability. Fengshui's principle that "spatial energy influences individual well-being" provides a unique cultural and theoretical perspective for crafting environments conducive to human flourishing [6–8]. Contemporary concepts of well-being acknowledge the emotional and spiritual dimensions of physical spaces, aligning with Fengshui's emphasis on harmony between humans and their surroundings [8,9]. This alignment underscores the compatibility of Fengshui principles to create spaces that enhance thermal comfort [10], aesthetic appeal, cultural depth, and sustainability [11].

The application of Fengshui in contemporary urban settings has been found to enhance thermal comfort, humidity regulation, and indoor air quality, as evidenced by research on bioclimatic architectural approaches [12,13]. Moreover, the incorporation of natural materials and well-organized spatial designs can positively influence both hedonic well-being (such as pleasure and happiness) and eudaimonic well-being (including purpose and fulfillment) [14]. However, a systematic framework for integrating Fengshui into contemporary architectural design must be more extensive. Bonaiuto et al. [15] emphasize the necessity for objective and systematic methods to evaluate the psychological and physiological impacts of environments influenced by Fengshui principles.

We conducted a comprehensive literature review to address this gap using the ISI Web of Science database and Google Scholar. In addition to the initial pool of 245 publications from ISI Web of Science, we identified several high-citation, high-impact articles from Google Scholar to enrich the review further. After excluding unrelated topics and inaccessible conference proceedings, we selected 80 relevant articles, which provided the conceptual foundation for this study.

This research aims to bridge the gap between Fengshui's historical wisdom and contemporary architectural practices. By examining its design principles and showcasing case studies, we seek to develop a framework that integrates Fengshui with modern trends in sustainability, environmental psychology, and occupant wellbeing. The study addresses three key questions: (1) How can Fengshui principles be effectively applied in modern architectural design to enhance well-being? (2) What scientific evidence supports Fengshui's impact on occupant well-being, and how robust are these findings? (3) What challenges and opportunities arise when integrating Fengshui principles into contemporary architectural practices?

In summary, this study explores the interplay between Fengshui and architectural space, highlighting its significance in fostering harmonious human-nature interactions, maintaining regional characteristics, and enhancing the cultural richness of urban design. By advocating for interdisciplinary dialogue and practical applications, the research positions Fengshui as a valuable framework for creating spaces supporting well-being, and inspiring curiosity and innovation across various cultural and environmental settings. In summary, this study examines the relationship between Fengshui and architectural space, emphasizing its importance in promoting harmonious human-nature interactions, maintaining regional characteristics, and enhancing the cultural richness of urban design. By encouraging interdisciplinary dialogue and practical applications, the research presents Fengshui as a significant framework for designing spaces that foster well-being, thereby, inspiring curiosity and innovation across various cultural and environmental settings.

# 2. Framework development

## 2.1. Definition of Fengshui

Fengshui, a practice with over 3000 years of history, embodies humanity's innate capability to interpret and respond to the natural world. In this framework, the environment is seen not merely as a passive backdrop but as an active force that profoundly influences the quality of life for its inhabitants. The primary objective of Fengshui is to assist individuals in living harmoniously with nature by integrating aspects of physical geography, aesthetics, psychology, and architectural landscape science [3,16]. Grounded in Taoist philosophy, Fengshui focuses on the flow and balance of "Qi" (life force energy) within a space, which is believed to directly affect the health, prosperity, and happiness of its occupants [4]. To optimize this energy flow, Fengshui practitioners carefully consider the orientation, placement, and arrangement of buildings, furniture, and natural elements such as water features [17]. The practice of Feng Shui strives to foster harmonious coexistence between humans and nature. This principle is vividly articulated in the *Huangdi Zhaijing* by Liang [18], which states: "A house takes form as its body, spring water as its veins, land as its skin and flesh, plants as its hair, dwelling places as clothing, and doors as crowns and belts. Achieving this state is considered dignified and elegant—thus truly auspicious". This poetic metaphor likens buildings and their surrounding environments to the anatomy of the human body, highlighting the intrinsic interconnection between constructed spaces and the natural world.

According to Fengshui, the universe's dynamics are governed by the interplay of Yin and Yang, further refined through the Five Elements theory—wood, fire, earth, metal, and water. These elements represent different aspects of the natural world and human existence, maintaining a steady balance through cycles of generation and transformation [3,11]. The Five Elements are crucial in designing spaces that optimize energy flow and create balanced and harmonious environments [4].

Another critical tool in Fengshui is the Bagua (Eight Trigrams), a symbolic system used to assess and influence the energy dynamics of a space. Applied to architectural blueprints, this system helps practitioners enhance or correct specific energy fields related to life domains such as wealth, health, career, and relationships [19]. For instance, Fengshui philosophy suggests placing plants or water features in the southeast corner of a home to attract prosperity.

Originating in China, Fengshui has historically influenced the design and organization of towns, buildings, and communal areas. Its principles are increasingly relevant in modern sustainable urban planning and architecture, embodying the harmony between humans and nature. Fengshui offers valuable insights for addressing contemporary urban challenges, such as environmental degradation, energy inefficiency, and cultural identity loss [20–22]. As globalization progresses, the impact of Fengshui on modern architecture continues to grow, with planners and architects recognizing its potential to create spaces that enhance physical and mental well-being, resonating with the tenets of modern environmental psychology [15].

Despite its benefits, cultural and linguistic barriers have often limited the understanding of Fengshui outside East Asia. Western interpretations frequently focus on its surface elements, such as site selection and natural aesthetics, while overlooking its profound cultural and philosophical significance. This superficial understanding highlights the need for deeper cross-cultural engagement to appreciate Fengshui's holistic contributions to architecture and well-being.

## 2.2. Benefits of Fengshui for well-being

Fengshui, as an ancient and profound philosophy of environmental design, utilizes unique spatial layouts and architectural principles to enhance individuals' well-being in built environments significantly. Modern architects and designers increasingly draw upon this time-honored wisdom to create spaces that foster physical, mental, and emotional health. By integrating thermal comfort, aesthetic appeal, cultural and spiritual significance, and sustainability into building design, Fengshui contributes to holistic well-being.

## 2.2.1. Thermal comfort

Thermal comfort is a cornerstone of physical health, mood regulation, productivity, and overall mental well-being. Research indicates that maintaining a stable and comfortable indoor environment positively impacts sleep quality, reduces stress, and enhances overall wellness [23,24]. Achieving this involves temperature control and creating a space that aligns with occupants' physical and psychological needs.

Fengshui emphasizes harmonizing built and natural environments to optimize thermal conditions. For instance, the strategic use of natural features, such as mountains to shield against cold winds and bodies of water to enhance humidity, can improve a space's microclimate and the quality of life for its occupants [25,26]. Even in urban areas where conventional site selection is constrained, Fengshui principles can guide building orientation, landscape design, and incorporating natural elements to create comfortable living conditions.

Studies highlight the effectiveness of Fengshui in enhancing thermal comfort by focusing on site selection, orientation, and spatial arrangement. For example, houses in mountainous regions are traditionally oriented southward or eastward to benefit from optimal thermal conditions, avoiding hot westerly winds and shielding against cold northern breezes [27]. Fengshui also encourages integrating natural ventilation and sunlight to reduce reliance on artificial heating, ventilation, and air conditioning (HVAC) systems, thus improving environmental health and mental well-being [12,28]. A great many residential and commercial buildings in Hong Kong have midheight holes, including the famed "building with a hole" in Repulse Bay, which was designed (like many others) "…with a large square hole in the middle to allow Qi to flow through" [4].

Architects increasingly incorporate natural elements like water features and vegetation to further refine microclimates. These features not only enhance the thermal environment but also align with contemporary sustainable building practices, such as passive solar design. Such methods increase energy efficiency while ensuring a stable and comfortable indoor climate. According to Zhang et al. [29,30], Fengshui-based designs maximize natural light and thermal regulation, contributing to energy savings and improving occupants' psychological and emotional health.

By blending Fengshui principles with ecological design concepts, architects can create environments that harmonize with their surroundings, offering enhanced microclimates and overall quality of life. Research suggests a strong correlation between Fengshui and modern ecological design practices, emphasizing the importance of balanced and harmonious living spaces that fulfill multiple levels of human satisfaction [31,32].

In summary, Fengshui's approach to thermal comfort transcends basic temperature regulation by addressing occupants' mental and spiritual well-being. Its principles promote sustainable, peaceful, and health-enhancing environments, demonstrating the enduring relevance of this ancient wisdom in contemporary architecture [33].

## 2.2.2. Aesthetic appeal

In traditional Chinese architecture, the aesthetics of Fengshui are highly valued, particularly their emphasis on symbolic and natural beauty. These aesthetic principles serve a dual function: They enhance the built environment and positively influence residents' mental and emotional well-being. Both natural and artificial elements, such as mountains, skies, and buildings, contribute to the aesthetic quality of surroundings through their harmonious interactions. This natural beauty fosters positive emotions and stimulates creativity and imagination.

The aesthetic ideals of Fengshui are rooted in the philosophy of shared life, emphasizing symmetrical balance and harmonious synergy with nature. The Forbidden City exemplifies this principle with its north-south orientation and symmetrical layout [34]. Similarly, ancient Chinese communities were often established near mountains, rivers, and lakes—sites considered "treasured" in Fengshui for their emanation of positive energy. These principles have profoundly influenced the landscape designs of traditional Hunanese villages, which strive to maintain a balance between humans and their natural surroundings. This balance is reflected in spatial planning, site selection (such as traditional Hakka villages in Ganzhou, China) [12], and architectural layout, creating environments that not only enhance aesthetic appeal but also quietly promote psychological well-being, security, and health [35].

Fengshui's emphasis on environmental and ecological aesthetics has significantly shaped contemporary architectural practices. Its principles inspire architects to design spaces that integrate people and nature. For instance, Fengshui aesthetics adopt the philosophical concept of "the unity of man and nature", which is beautifully manifested in garden planning and landscape layouts. This connection between visual appeal and livability strengthens the bond between occupants and their environment, enhancing their overall satisfaction and well-being [17].

At the core of Fengshui aesthetics lies the balance of opposing forces, Yin and Yang. Wu et al. [36] highlight that this harmony is achieved through balancing opposites, combining concealment with exposure, and merging small details with grand designs. These methods create dynamic yet harmonious spaces, guiding observers from the near to the distant, the real to the imagined, and stillness to motion.

Buildings influenced by Fengshui also carry deep emotional and cultural significance. For example, the "Yin embracing Yang" design pattern in courtyards

visually symbolizes health and balance, providing a sense of physical and emotional contentment [37]. Traditional decorative elements, such as ridge monsters, further enrich these structures by symbolizing prosperity, good fortune, and protection. These symbols enhance the cultural richness of homes and reinforce positive psychological states, promoting happiness and satisfaction [14].

According to Fengshui principles, a well-designed home should emphasize proportion, harmony, and symmetry. Incorporating natural elements like water and mountains can revitalize spaces, fostering tranquility and reducing stress and anxiety [38]. Additionally, symbolic features such as color, form, and texture influence the space's functionality and occupants' well-being. Symmetry and balance in Fengshui design create environments that support mental health and foster a sense of calm and stability [35].

In conclusion, homes designed according to Fengshui principles profoundly impact occupants' emotional and mental well-being. By creating harmonious, environmentally integrated, and aesthetically satisfying spaces, Fengshui addresses residents' aspirations for beauty and promotes inner peace and health. Combining modern architectural techniques with Fengshui principles can lead to healthier, more pleasant living environments that resonate with the timeless wisdom of this ancient practice [39,40].

#### 2.2.3. Cultural and spiritual significance

Fengshui transcends basic design principles, embodying a rich tradition deeply rooted in East Asian culture, particularly in China. It is a cultural heritage of immense local significance that enhances the spiritual essence of historical districts and offers valuable insights into contemporary heritage preservation and global cultural development [41]. Coggins [42] emphasizes that Fengshui has been integral to architectural practices for centuries, strengthening cultural identity, spiritual wellbeing, and the overall significance of living spaces. Through its distinct application of symbols, color schemes, and spatial layouts, Fengshui fosters harmony, continuity, and a profound sense of cultural belonging by aligning architectural design with spiritual beliefs and cultural values [43].

From a humanistic perspective, Fengshui reflects a long-standing respect for the philosophy of "harmony between man and nature". It emphasizes the balance of Yin and Yang, aiming to guide humanity toward harmonious coexistence with nature through exchanging materials and energy, environmental health, and comfort [41]. Incorporating Fengshui principles into residential landscape design, especially in urban areas, enhances living spaces and aligns with the broader goal of fostering balanced socioeconomic development in modern China [4].

Fengshui practices also critically highlight regional traits, preserve historical memories, and showcase ethnic cultures. For instance, the traditional roundhouses of Fujian, known as "tulou", symbolize family unity through their circular layouts and reflect conventional hierarchies in strategically placing entryways and main halls. These designs enhance spiritual bonds among occupants, fostering a sense of togetherness and respect within the community [17]. Fengshui Forest has a long history, and people believe it can bring good wishes, safety, unity, good luck, wealth, and health to local communities [44].

Beyond residential spaces, Fengshui's cultural and spiritual impact extends to public and religious buildings, serving as physical landmarks and spiritual centers. These spaces support communal traditions, enriching daily artistic and cultural activities while promoting continuity in the broader societal and cultural fabric [4]. The evolution of Fengshui—from its agricultural roots to its integration of the Five Elements (wood, fire, earth, metal, water)—demonstrates its adaptability and continued relevance as a cultural expression and environmental strategy.

In contemporary design, the blind adoption of Western planning models often leads to homogenization and neglect of site-specific conditions. This underscores the importance of integrating Chinese cultural elements into modern designs to foster cultural confidence and preserve regional identity. Fengshui offers a scientific yet culturally grounded approach to residential landscape design, combining ecological and environmental psychology to provide actionable frameworks for sustainable and culturally significant urban environments [45]. Consumers believe that Fengshui is integral to their spiritual life and cultural identity [46].

Moreover, Fengshui principles remain instrumental in restoring and preserving historic towns. By representing traditional villages' cultural identity and landscape history, Fengshui ensures these areas retain their distinctive way of life while adapting to modern needs [47]. Spiritual practices centered on connecting with nature also find a vital ally in Fengshui, as it integrates natural elements and cardinal directions into architectural designs to promote spiritual growth and well-being [45].

Modern architecture that incorporates Fengshui principles enhances aesthetic and functional aspects and elevates its inhabitants' mental, emotional, and spiritual wellbeing. Designing spaces that reflect cultural values and spiritual beliefs fosters personal growth, communal harmony, and spiritual satisfaction. Whether applied to homes, religious institutions, or community hubs, Fengshui principles create visually appealing and meaningful environments [19].

In multicultural societies, Fengshui offers a pathway to inclusion and social harmony by bridging diverse cultural traditions through architectural design. Applying Fengshui concepts in public spaces and community centers can foster environments that respect and celebrate all users' cultural and spiritual values [48].

Ultimately, Fengshui holds immense cultural and spiritual significance in contemporary architectural design. Bridging human culture with nature provides practical guidance for creating harmonious, comfortable, and prosperous living spaces that support individual and community growth. As China modernizes, integrating Fengshui principles aligns with the national goals of promoting livable environments and fostering cultural confidence [47].

#### 2.2.4. Sustainability

Fengshui is vital in modern urban construction because it integrates natural geographical characteristics and ecosystems into the built environment. It emphasizes environmental balance through practices like wind curtailment, topsoil retention, and water conservation, all of which contribute to ecological sustainability and soil fertility. In traditional Chinese village planning, particularly in South China, Fengshui trees and forests are typically located in culturally and ecologically significant areas such as ancestral halls, village entrances, waterways, and burial sites [49]. These

elements embody natural beauty, ecological roles, and cultural symbolism rather than economic utility [45,50]. Fengshui forest populations can maintain some level of genetic diversity and protect endangered species [51,52].

Incorporating Fengshui into contemporary landscape design highlights integrating natural elements into urban settings. For instance, traditional Chinese gardening, guided by Fengshui, emphasizes site selection and spatial sequencing with initiatives like "bringing the mountain into the city". Such practices align regional ecosystems with metropolitan areas, creating complex ecosystems that unite people, nature, economy, and culture in harmonious coexistence.

Amid global challenges like climate change and resource depletion, Fengshui provides sustainable architectural solutions by advocating for natural resource utilization and reducing environmental impacts. Techniques such as leveraging wind direction for natural ventilation and optimizing passive solar energy reduce dependency on artificial systems, enhancing both energy efficiency and indoor environmental quality [53,54]. Incorporating natural elements, such as vegetation and water features, into urban spaces transforms these environments into energy-efficient and ecologically balanced ecosystems.

Fengshui's sustainability principles extend to assessing land suitability by considering interconnected environmental factors such as geography, sunlight, water, and air quality. These considerations, rooted in ecosystem theory, emphasize the harmonious interdependence of environmental components, akin to a human circulatory system, to ensure stability and ecological functionality [50]. This approach supports livable neighborhoods that promote residents' physical and mental wellbeing while maintaining environmental balance.

Further, Fengshui stresses the strategic placement of plants and the preservation of natural landscapes. Green roofs and vertical gardens inspired by Fengshui principles improve urban air quality, regulate temperatures, reduce heat islands, and foster biodiversity [13,55]. By creating green, nature-inspired interiors and strategically positioning gardens to harness growth energy from favorable directions like the southeast, Fengshui promotes environmental and personal well-being [17].

Water, a critical Fengshui element symbolizing energy, wealth, and prosperity, is integral to sustainable designs. Adding ponds and fountains aids rainfall management supports ecosystems, and generates microclimates that enhance environmental sustainability. These features also contribute to mental health by producing calming sounds that alleviate stress and anxiety [9,56].

Fengshui-inspired architectural designs often incorporate renewable energy technologies, such as solar panels and wind turbines, alongside eco-friendly materials like bamboo and repurposed wood. These approaches reduce environmental impact while fostering a harmonious relationship between human activity and nature [13]. By promoting ecological awareness and resource conservation, Fengshui aligns with global sustainability objectives and strengthens societal resilience against environmental challenges.

In conclusion, Fengshui offers a comprehensive framework for creating sustainable, health-promoting, and environmentally harmonious built environments. Its principles, which emphasize integrating natural and human-made elements, resource efficiency, and ecological balance, serve as an essential guide for environmentally responsible architecture and planning. The proposed model for integrating Fengshui into the contemporary built environment to enhance occupant well-being is illustrated in **Figure 1**.



Occupant Well-being

Figure 1. Fengshui-based framework for optimizing well-being in contemporary built environments.

## 2.3. Integration with environmental psychology

Designing a living environment that is reasonable, comfortable, attractive, practical, and culturally rich is as essential as functional spatial organization. Personal privacy remains a fundamental aspect of every home. Yet, the design process demands an acknowledgment of the philosophical and moral insights derived from multidisciplinary fields such as landscape architecture, psychology, geography, and environmental science. Fengshui emphasizes the intricate connection between a residence and its geographical environment, factoring in topography, water bodies, soil, and vegetation—all elements believed to influence the well-being and destiny of occupants. While Fengshui includes elements of mysticism, its practical applications in residential layouts offer precise, rational guidelines that can be effectively implemented in contemporary housing design [17].

Integrating Fengshui with environmental psychology provides a robust theoretical framework for understanding the profound effects of physical environmental design on human behavior, cognition, and emotional well-being. Environmental psychology, which examines interactions between individuals and their surroundings, consistently demonstrates that thoughtfully designed spaces significantly enhance cognitive clarity, emotional regulation, and positive person-environment relationships [15]. Both fields are committed to creating environments that foster physical and mental health. Fengshui's emphasis on spatial balance, placement, and strategic design aligns seamlessly with these goals, promoting harmony between humans and nature. According to Liu et al. [50], incorporating Fengshui concepts—such as building orientation, proximity to natural features, and using plants as protective barriers—into urban residential areas can create health-promoting, harmonious spaces.

#### 2.3.1. Environmental psychology and well-being research

Environmental psychology underscores the profound influence of the built environment on an individual's psychological well-being. Key elements include the amount of natural light entering a space, the room's layout, proximity to vegetation, and the choice of colors and materials. Research demonstrates that people feel better in quiet, well-lit spaces enriched by natural elements [9]. Through its distinctive spatial arrangements and aesthetic principles, Fengshui strongly advocates for creating environments that cater to these psychological needs, enhancing overall welfare. By incorporating natural features such as trees and water bodies as environmental regulators, Fengshui and environmental psychology can collaboratively establish spaces that promote both physical and mental well-being.

## 2.3.2. Cognitive function

Cognition refers to the mental processes of acquiring knowledge and understanding through thought, experience, and the senses, encompassing functions such as memory, attention, problem-solving, and decision-making [57]. Fengshui principles can enhance cognitive performance by fostering environments that facilitate focus and clarity of thought. Its unique approach to spatial harmony and the seamless integration of natural materials encourages an unobstructed energy flow within a space, improving concentration and productivity [58].

Environments designed with Fengshui principles minimize visual and physical distractions, enabling individuals to allocate cognitive resources more effectively toward tasks requiring attention and focus. Furthermore, these principles instill a sense of control over one's surroundings, reducing cognitive load and promoting mental clarity.

Environmental psychology supports these findings, showing that orderly, aesthetically pleasing environments that integrate natural elements improve concentration, reduce mental fatigue, and enhance decision-making [38]. Natural lighting, ergonomic furniture, and strategically placed greenery collectively contribute to mental clarity and sustained attention [59]. Additionally, Fengshui's emphasis on harmonious spatial designs aligns with cognitive science insights, highlighting environmental cues' role in optimizing cognitive processing. For instance, integrating Fengshui principles in home offices or study spaces can foster a productive atmosphere conducive to efficient problem-solving and creative thinking.

## 2.3.3. Stress reduction

Interior spaces, as the focal point of daily life, play a pivotal role in fostering mental stability and reducing stress. Fengshui emphasizes balance and harmony, which are essential for creating homes supporting emotional wellness and effective stress management. This is supported by environmental psychology, indicating that spaces incorporating natural elements, such as plants and water, can enhance positive affect, alleviate stress, and improve overall well-being [9]. For example, natural color schemes, soft lighting, and soothing auditory elements like birdsong or water sounds contribute to a tranquil environment that reduces stress-related physiological indicators, including heart rate and cortisol levels [60].

Fengshui's use of natural components aligns with the psychological concept of restorativeness, which refers to an environment's ability to alleviate mental fatigue

and stress while fostering relaxation and rejuvenation. Water features, a hallmark of Fengshui, adhere to its principles and create calming effects, as supported by research showing their ability to reduce stress and enhance emotional stability [61]. Similarly, integrating natural light energizes spaces and promotes positive emotional states, aligning with psychological studies demonstrating its role in reducing depressive symptoms and improving mood [62].

Integrating Fengshui and environmental psychology principles is particularly relevant in therapeutic settings, including hospitals, clinics, and medical centers. Both fields emphasize designing environments that promote health and wellness. Therapeutic spaces incorporating Fengshui principles—such as natural elements, calming colors, and soft natural lighting—have improved patient recovery and prognosis [38]. Research in environmental psychology confirms that patients experience reduced stress, better sleep, and greater satisfaction with healthcare environments when thoughtfully designed facilities [63,64].

For instance, environmental psychology research highlights that surroundings with softer, organic forms foster greater comfort and relaxation, aligning with Fengshui principles that favor rounded edges over sharp corners [65]. Additionally, environmental psychology on color demonstrates that hues like blue and green have calming effects on the mind and body, resonating with Fengshui's preference for such colors in therapeutic environments [66]. These therapeutic qualities, consistent with restorativeness, enhance well-being and reduce stress.

By integrating these concepts, spaces can be designed to support emotional stability, mental wellness, and physical comfort. In therapeutic environments, the holistic combination of Fengshui and environmental psychology creates atmospheres conducive to healing and support. This comprehensive approach reduces stress and fosters emotional well-being, benefiting both patients and healthcare professionals.

### 2.3.4. Social connectivity

While the primary goal of Fengshui is to enhance personal well-being, it also emphasizes fostering positive community relationships. Fengshui integrates social mobility and interaction concepts into spatial design by strategically placing seating areas, pathways, and communal spaces to encourage community cohesiveness and spontaneous interactions [42]. By designing spaces that naturally bring people together—such as circular seating arrangements that promote inclusion—Fengshui helps strengthen the social fabric and foster a sense of belonging.

Environmental psychology similarly highlights the critical role of well-designed public spaces in fostering place identity, attachment, and community spirit [15,67]. Research demonstrates that environments encouraging casual social connections can reduce feelings of isolation and significantly enhance community well-being [68]. For example, parks and communal gardens designed according to Fengshui principles—balancing Yin and Yang elements and ensuring smooth energy flow—serve as aesthetic and recreational spaces and as vital hubs for social bonding and community building.

The integration of Fengshui and environmental psychology provides a robust theoretical and practical foundation for designing harmonious, socially active communities. Public spaces benefit significantly from Fengshui's focus on energy flow, creating environments encouraging movement, interaction, and engagement. Welcoming and dynamic spaces designed with these principles foster a strong sense of community and promote meaningful social bonds among members.

Additionally, Fengshui offers innovative approaches to optimizing limited space, particularly valuable in densely populated urban environments. By employing tools such as the Bagua map to align spaces with energies that support social connectivity, architects and urban planners can create environments that naturally facilitate community participation, even in high-density areas. This approach enhances the livability of urban settings, fostering a strong sense of community, mutual support, and overall well-being for residents.

## **3. Discussion**

Integrating Fengshui concepts into modern architectural projects can significantly enhance the mental and physical health of building occupants. This section provides a concise overview of the key findings, examines their theoretical and practical implications, discusses the challenges of integrating Fengshui into contemporary design, and identifies potential directions for future research.

## **3.1.** Theoretical implications

This study offers substantial theoretical contributions by presenting a fresh perspective on improving human well-being by integrating ancient Fengshui principles with contemporary disciplines such as sustainable design, cultural studies, and environmental psychology. With its deep philosophical and cultural roots, Fengshui provides a nuanced framework for understanding the relationship between the built environment and human health. By combining Fengshui principles with the goals of environmental psychology, which seeks to create spaces that foster mental and emotional well-being, this paper underscores the relevance of Fengshui in contemporary architectural discussions [15].

The research addresses the first research question—How can Fengshui principles be effectively applied in modern architectural design to enhance well-being?—by demonstrating the practical integration of Fengshui with sustainable architecture. This is achieved by creating harmonious spatial arrangements that improve the aesthetic and functional aspects of the built environment and enhance psychological well-being through better thermal comfort, natural light, and cultural significance. Fengshui's emphasis on balance, harmony, and the free flow of "Qi" transforms how occupants experience space, making it a powerful tool for architects seeking to design healthier living environments. This aligns well with the goals of modern environmental psychology, which emphasizes the need to create built environments that support emotional health.

Regarding the second question—What types of scientific evidence exist to support Fengshui's impact on well-being, and how robust are these findings?—this study synthesizes existing empirical studies and highlights the theoretical basis of Fengshui within environmental psychology and sustainability research. Studies of the reliability and validity of Feng Shui using empirical and quantitative methods remain lacking [69]. While traditional Fengshui principles are often seen as esoteric, recent

studies provide a foundation for their applicability, focusing on thermal comfort, aesthetic appeal, and occupant well-being [12,38]. For instance, evidence supporting Fengshui's positive impact on natural light, spatial comfort, and stress reduction draws from interdisciplinary research bridging psychology, cultural studies, and architecture. This research thus positions Fengshui as a culturally rich yet practically practical framework for creating environments that promote well-being, inviting further empirical validation and interdisciplinary exploration.

The third research question—What challenges and opportunities arise when integrating Fengshui principles into contemporary architectural practices?—is addressed by discussing the need for a holistic definition of sustainability that includes cultural and spiritual dimensions, going beyond traditional environmental benefits. This perspective challenges conventional paradigms in sustainable architecture and encourages integrating cultural heritage preservation into green design. Furthermore, while Fengshui principles hold significant potential for enhancing human well-being, challenges such as cultural adaptability and empirical validation remain. Addressing these challenges requires a combination of innovative research approaches and collaboration between disciplines like architecture, anthropology, and psychology.

The research positions Fengshui as a bridge between traditional knowledge and modern design philosophy, demonstrating its capacity to integrate sustainable practices, cultural heritage preservation, and psychological well-being into architectural design [38]. This innovative approach revitalizes classical architectural concepts, emphasizing balance, harmony, and the free flow of "Qi" (energy) as metaphors for psychological and emotional health [64]. This multidisciplinary integration transforms spatial experiences, reshaping "Qi" as a symbol of the dynamic interplay between physical space and emotional energy [70].

Fengshui's alignment with eco-friendly architecture further contributes to the theoretical discourse. By advocating for sustainable practices, eco-friendly materials, and passive design principles, Fengshui fosters harmonious relationships between humans and their natural surroundings. Wu et al. [36] illustrate this through the theory of reasoned action (TRA) and perceived risk frameworks, showing that consumers prioritize housing aligned with Fengshui principles, which promote accessibility, safety, and favorable orientation. Fengshui not only supports energy-efficient and ecologically sound architecture but also provides culturally rich guidance for achieving these goals [13].

The study extends the concept of sustainability beyond environmental benefits to include cultural and spiritual well-being, challenging traditional paradigms in sustainable design. Incorporating Fengshui into green architecture bridges the gap between sustainable development and cultural traditions, offering a more holistic approach to achieving balanced social, economic, and environmental outcomes. This perspective invites the construction industry to embrace a broader definition of sustainability that integrates human culture and spiritual values.

Moreover, this research encourages scholars, architects, and urban planners to reassess the relevance of ancient knowledge systems in modern contexts. By integrating Fengshui into contemporary architectural theory, the study challenges existing paradigms and explores how traditional wisdom can inform innovative design solutions. According to Mak and Ng [58], Fengshui provides a comprehensive framework for designing spaces prioritizing mental, emotional, and physical health.

The study also emphasizes the global importance of preserving cultural traditions in architecture. As architectural homogeneity becomes more prevalent, including diverse cultural elements like Fengshui helps sustain design variety and innovation. Lin and Wu [48] demonstrate how ancient practices can enrich contemporary design theories, fostering cultural exchange and mutual learning in global architecture. This highlights the importance of cultural sensitivity and diversity in the built environment.

Ultimately, this research makes significant theoretical contributions by offering new insights into how Fengshui, environmental psychology, and sustainable design can be seamlessly integrated. Reframing traditional architectural perspectives on space, health, and culture establishes a foundation for future innovation. Incorporating Fengshui into architectural practice opens new possibilities for creating healthier, more harmonious, and ecologically sustainable living spaces.

### **3.2. Practical implications**

Integrating Fengshui principles into contemporary landscape and architectural design emphasizes creating outdoor and indoor spaces harmonizing with nature while establishing a high-quality ecological cycle. The ultimate goals are to enhance human well-being and foster a healthy ecosystem by reducing environmental impact and improving quality of life.

The rapid urbanization in all the countries in the world, driven by an intense focus on GDP growth, has led to significant ecological consequences, including the loss of unique topographical features such as hills, valleys, and streams. Activities such as land reclamation, mountain leveling, river channelization, and large-scale urbanization have replaced these natural elements with conventional roads and buildings, diminishing the distinct character of urban landscapes [71]. Due to changes in the types, scale, frequency, distribution, and dissemination patterns of environmental and human disturbances, a new urban landscape planning paradigm is needed to maintain modern landscapes' ecological and cultural integrity [23]. Although these issues were overlooked in the early stages of development, they present an urgent need to adopt ecologically sensitive design strategies to avoid repeating past mistakes.

Incorporating Fengshui into architectural design offers a practical solution for improving the built environment and enhancing the well-being of its occupants. By addressing physical comfort, mental health, and emotional well-being, Fengshui provides a robust framework that goes beyond aesthetics to create functional and culturally meaningful spaces.

### 3.2.1. Enhancing thermal comfort and natural light

One of the most practical advantages of Fengshui is its ability to improve thermal comfort and maximize natural light in building design. Traditional Chinese practices emphasize the importance of the surrounding natural environment when selecting a site, considering factors such as topography, water sources, and sunlight [72]. These sites, often rich in natural resources like fertile soil, vegetation, and wildlife, were

historically favored for habitation. Fengshui reflects this innate human affinity for water, incorporating considerations of nearby water sources into settlement planning.

By carefully orienting buildings and structures, Fengshui practitioners aim to optimize the flow of natural light and air, reducing reliance on artificial lighting and heating. This strategic approach not only enhances thermal comfort [73,74] but also boosts the mood and productivity of occupants by allowing ample sunlight to penetrate interior spaces through skylights, windows, and reflective surfaces [12].

In addition to improved lighting, this design philosophy enhances indoor air quality by minimizing reliance on artificial systems, which can contribute to indoor air pollution. Natural light plays a vital role in regulating circadian rhythms, which are essential for physical and mental health [38].

#### 3.2.2. Promoting balance and harmony in spaces

Fengshui significantly influences residents' mental and emotional well-being by promoting balanced, symmetrical, and harmonious spatial energy flow. This is achieved by carefully placing furniture, decorations, and architectural elements to create an ordered, peaceful, and supportive environment. Such layouts are particularly beneficial in high-stress work environments, where they can enhance productivity, reduce anxiety, and increase overall job satisfaction [58].

Fengshui principles, such as avoiding sharp angles ("poison arrows") and ensuring unobstructed pathways and doorways, help create spaces that reduce stress and promote a sense of ease. These subtle design choices foster environments that nurture both the spirit and the body, resulting in higher levels of contentment and wellbeing among residents [42]. This holistic approach underscores the importance of designing spaces catering to physical and mental health.

## 3.2.3. Incorporating cultural and spiritual significance

Fengshui integrates profound cultural and spiritual depth into architectural design, connecting the material environment with spiritual beliefs and cultural heritage. Rooted in East Asia's long-standing philosophical traditions, Fengshui enables architects to create spaces that resonate deeply with occupants, fostering a sense of belonging and connection to their surroundings [47].

By incorporating traditional motifs, symbols, or sacred spaces, Fengshui enhances the spiritual atmosphere of a building, offering private areas for reflection, meditation, and spiritual practices. This is especially relevant in homes, religious institutions, and community centers, where cultural and spiritual needs take precedence [19]. These cultural elements not only increase the design's relevance but also contribute to occupants' emotional and mental well-being.

#### 3.2.4. Aligning with sustainable architectural practices

Integrating Fengshui principles with green construction offers practical solutions to global environmental challenges. Fengshui emphasizes living in harmony with nature by using renewable resources, energy-efficient technologies, and eco-friendly materials. These practices not only support sustainable building design but also enhance the quality of life for occupants by reducing indoor air pollution [13].

Fengshui advocates using locally sourced, eco-friendly materials such as bamboo, stone, and wood, harmonizing with the surrounding environment. Zhao [17]

notes that this approach minimizes environmental impact while fostering a stronger connection between buildings and their natural settings. Additionally, passive design solutions, including solar heating and natural ventilation, enhance sustainability by reducing energy consumption. This benefits both the environment and building occupants, promoting long-term ecological and human well-being.

Government and formal and informal institutions are crucial in promoting the adoption of Fengshui-inspired sustainable practices [75]. Policymakers can support the integration of Fengshui principles into green building initiatives by enacting policies that encourage using renewable materials, incentivizing energy-efficient technologies, and preserving natural landscapes that align with Fengshui values. Informal institutions, such as local community groups and cultural heritage organizations, can also play a key role in maintaining and transmitting Fengshui knowledge, ensuring that traditional practices are adapted to meet contemporary sustainability goals. Collaborative efforts between these entities can bridge the gap between conventional wisdom and modern environmental strategies, fostering a holistic approach to sustainable architecture.

#### 3.2.5. Holistic approach to design

Incorporating Fengshui principles into modern architectural design offers a pathway toward holistic well-being, highlighting its relevance in contemporary society. Fengshui provides a robust methodological framework for creating environments that support well-being across multiple dimensions: Physical comfort, emotional health, cultural depth, and environmental sustainability. As noted by Liu et al. [50], Fengshui principles are particularly effective in optimizing the spatial arrangement of natural and built elements, fostering ecological and psychological balance.

The architectural design process is inherently complex, requiring a blend of creativity, logic, and intuitive understanding [38]. While the design process remains difficult to define precisely, it often relies on heuristic approaches where architects draw from intuition and prior experiences to navigate new challenges [58]. This aligns with the Chinese understanding of Fengshui through direct interaction with nature, its principles, and their practical applications. Fengshui seeks harmony between the environment, structures, and individuals, offering a conceptual framework for sustainable and health-promoting architectural design.

In today's fast-paced and globalized world, Fengshui principles resonate with the growing need for spaces that foster both physical and mental well-being. For example, Han [9] emphasizes that natural lighting and ventilation, core aspects of Fengshui, have improved mood, productivity, and overall mental health. Similarly, Soflaei et al. [13] highlight the ecological benefits of Fengshui-inspired green roofs and vertical gardens, which enhance biodiversity, regulate indoor temperatures, and improve air quality.

Homes and public spaces designed with Fengshui approaches not only offer practicality and beauty but also imbue environments with symbolic meaning that nurtures the inner lives of their inhabitants [47]. Fengshui acts as a unifying force, weaving together the needs of people and the natural world to create spaces where individuals can find peace and balance. For example, Choe and Han [76] explore how

Fengshui principles are applied in modern Korean residential projects to integrate cultural heritage with sustainable living.

In conclusion, integrating Fengshui principles into architectural design has profound and far-reaching implications. These principles optimize thermal conditions [12], promote spatial balance and harmony [27], incorporate cultural and spiritual depth [17], and align with sustainable design practices [53]. Such an approach not only reaffirms the enduring relevance of Fengshui in contemporary design but also equips architects and planners with valuable insights, enabling the creation of spaces that promote harmony, sustainability, and overall human flourishing.

#### **3.3.** Challenges and future research

While incorporating Fengshui principles into contemporary architectural design offers considerable opportunities for enhancing occupant well-being, it also presents several challenges that require careful consideration for successful implementation. These challenges include the complexity of cultural adaptation, the difficulties of scientifically validating Fengshui's effects, and integrating ancient principles with modern technological advancements. Addressing these challenges through focused research is crucial for establishing a robust framework that bridges traditional Fengshui practices and modern architectural methodologies.

One of the primary challenges lies in empirically validating Fengshui principles [77]. Fernandez-Beanato [78] categorizes Fengshui as a non-science due to its reliance on cultural traditions and concepts such as "Qi", "Yin and Yang", and the "Five Elements", which are challenging to measure with conventional scientific methods. This limitation has hindered Fengshui's broad academic recognition and application in architectural design. For example, Charles et al. [79] found that applying Fengshui principles to arrange critical care bed spaces did not significantly improve the emotional well-being of nursing staff, as assessed through surveys, suggesting a lack of empirical support for specific applications. Hwangbo [80] advocates for a deeper examination of Fengshui, viewing it as a legacy of human consciousness evolution, albeit one constrained by modernism's social biases.

Overcoming these limitations requires developing innovative research frameworks integrating architecture, cultural anthropology, and environmental psychology to measure Fengshui's effects systematically. Longitudinal studies, behavioral observations, and physiological monitoring are essential for determining how Fengshui-influenced designs impact health, mental states, and interpersonal relationships.

Another significant challenge is cultural sensitivity and adaptation when applying Fengshui principles globally. As a deeply rooted component of Chinese culture, Fengshui faces obstacles in seamlessly incorporating into other cultural settings without losing its essence. Future research should focus on cross-cultural cooperation to adapt Fengshui to diverse contexts while preserving its core principles. Studies exploring cultural variations in spatial interactions and the relationship between people and nature can inform the global application of Fengshui. Initiatives such as cultural sensitivity training, case studies, and empirical research can further facilitate its adoption worldwide. Moreover, blending Fengshui principles with contemporary design concepts can create spaces that balance local cultural identities with the wisdom of Fengshui.

Integrating Fengshui with modern technologies presents both opportunities and challenges. Future research should investigate how advancements in construction technology can enhance the application of Fengshui principles. For example, Building Information Modeling (BIM) software can simulate Fengshui patterns to optimize spatial arrangements. At the same time, smart home solutions aligned with Fengshui's goal of achieving "human-nature harmony" can improve living spaces. Emerging technologies like virtual reality (VR) and artificial intelligence (AI) offer intuitive and user-friendly tools for architects and clients to incorporate Fengshui into the design process. These technological breakthroughs can ensure that Fengshui remains relevant in modern construction by enabling precise and intelligent design solutions.

The intersection of Fengshui, sustainable design, and smart buildings heralds a new era in architectural innovation [16]. Fengshui's emphasis on harmony with nature aligns with energy conservation, emission reduction, and environmental preservation goals. Future research could explore innovative applications of Fengshui in intelligent building design and sustainable urban planning. For instance, incorporating Fengshui concepts into green building evaluation systems could provide a framework for developing more sustainable structures. Studies examining the impact of Fengshui layouts on indoor air quality (IAQ), energy efficiency, and community cohesiveness could yield theoretical insights and practical recommendations for creating smart, sustainable, and livable cities.

Integrating Fengshui principles with modern building techniques requires an interdisciplinary and cross-cultural approach. Future research should focus on bridging the gap between theory and practice by addressing key challenges such as scientific validation, cultural adaptability, and technological integration. By incorporating Fengshui principles into modern design, architects, and planners can create healthier, more harmonious, and ecologically sustainable living spaces that honor tradition while embracing innovation.

## 4. Limitations of the review

This study has several limitations that warrant consideration and suggest directions for future research. This paper proposes a conceptual framework for integrating Fengshui principles into modern architectural practices. While the model offers valuable insights, it remains preliminary and needs more comprehensive refinement that might be achieved through further empirical studies or practical applications. The framework serves as a starting point rather than a conclusive guide. The study is not a systematic review and does not include quantitative data or meta-analyses to validate the proposed concepts empirically. The absence of specific case studies or measurable outcomes limits the ability to test the efficacy of Fengshui principles in real-world scenarios, particularly their impact on occupant well-being.

Due to space limitations, the paper needs to fully explore the diverse applications of Fengshui across varying cultural and environmental contexts. This includes its integration with modern technologies and adaptation in different regions outside its traditional cultural setting, which could enrich the discussion. While this research bridges Fengshui with fields like environmental psychology and sustainable design, it does not comprehensively address the challenges of interdisciplinary integration. This includes reconciling Fengshui's philosophical and cultural roots with the scientific rigor and objectivity demanded in contemporary architectural practices. Future studies could address these limitations by conducting longitudinal empirical research, exploring cross-cultural applications, and systematically validating the proposed framework through experimental designs and case studies.

# 5. Conclusion

This research underscores the value of Fengshui as a robust framework for enhancing the well-being of occupants in contemporary built environments. By integrating Fengshui principles into their designs, architects and planners can address critical aspects such as thermal comfort, aesthetic appeal, cultural and spiritual significance, and sustainability. Thoughtfully designed spaces can profoundly promote physical and mental health, creating environments that support holistic wellbeing. Fengshui contributes to occupant well-being through mechanisms rooted in environmental psychology, including improved cognitive function, stress reduction, and enhanced social connectivity. Despite its potential, significant challenges remain, particularly in scientifically validating Fengshui's principles, adapting them to diverse cultural contexts, and integrating them with modern technological advancements. To ensure Fengshui continues to play a meaningful role in contemporary architectureespecially in fostering health, happiness, and sustainability-it is essential to explore innovative methods for incorporating its principles into contemporary design practices. By bridging tradition and innovation, Fengshui can contribute to creating healthier, more harmonious, and ecologically sustainable living spaces.

**Funding:** This work is supported by the National Natural Science Foundation of China, Grant/Award Number: 71801180, 71871201, and 72271205; China Scholarship Council, Grant/Award Number: 202207000022; Natural Science Foundation of Sichuan Province, Grant/Award Number: 24NSFSC1389; New Interdisciplinary Cultivation Fund of Southwest Jiaotong University, Grant/Award Number: 2682024ZDPY002.

Conflict of interest: The authors declare no conflict of interest.

# References

- 1. Magli G. Astronomy and Feng Shui in the projects of the Tang, Ming and Qing royal mausoleums: A satellite imagery approach. Archaeological Research in Asia. 2019; 17: 98–108. doi: 10.1016/j.ara.2018.10.004
- 2. Guo Y. Fengshui: Science, Religion, Superstition, or Trade? Zygon®. 2023; 58(3): 591–613. doi: 10.1111/zygo.12887
- 3. Zheng Y. Analysis on the application and technology of the five elements in Chinese ancient buildings. Forest Chemicals Review. 2022; 1260–1268.
- 4. Bruun O. In: An Introduction to Feng Shui. Cambridge University Press; 2008.
- 5. He D, Yuan L, Chen W. The connections between Historic Urban Landscape layers in Jingdezhen, the porcelain capital of China. Landscape Research. 2024; 49(3): 393–409. doi: 10.1080/01426397.2023.2296508
- Huang KH, Fang WT. Developing Concentric Logical Concepts of Environmental Impact Assessment Systems: "Feng Shui" Concerns and Beyond. Journal of Architectural and Planning Research. 2013; 39–55.

- 7. Paton MJ. Science and Fengshui: The concept shi 勢, rationality and emotion, and the ritualisation of knowledge. Science & Education. 2021; 30(6): 1371–1386. doi: 10.1007/s11191-021-00255-6
- Paton MJ. Cities created by modernity: A fengshui perspective. Journal of Chinese Philosophy. 2015; 42(5): 477–499. doi: 10.1163/15406253-04205004
- 9. Han KT. Effects of visible greenness, quantity and distance of indoor plants on human perceptions and physical parameters. Indoor and Built Environment. 2021; 30(9): 1353–1372. doi: 10.1177/1420326x20939595
- Guo P, Ding C, Guo Z, et al. Coupling CFD simulation and field experiments in summer to prove Feng Shui optimizes courtyard wind environments: A case study of Prince Kung's mansion in Beijing. Buildings. 2022; 12(5): 629. doi: 10.3390/buildings12050629
- 11. Zhao Z, Zhang S, Peng Y. Analysis of Winter Environment Based on CFD Simulation: A Case Study of Long-Hu Sand Feng Shui Layout at Jiangxi Bailudong Academy Complex. Buildings. 2023; 13(4): 1101. doi: 10.3390/buildings13041101
- Guan R, Chen Y, Chen X. Scientific Evaluation of Fengshui from the Perspective of Geography: Empirical Evidence from the Site Selection of Traditional Hakka Villages. Applied Spatial Analysis and Policy. 2024; 17(4): 1545–1568. doi: 10.1007/s12061-024-09595-6
- 13. Soflaei F, Shokouhian M, Zhu W. Socio-environmental sustainability in traditional courtyard houses of Iran and China. Renewable and Sustainable Energy Reviews. 2017; 69: 1147–1169. doi: 10.1016/j.rser.2016.09.130
- 14. Chiu YH, Wang KF, Lin SW. Thermal comfort, visibility, and the spatial layout in classical gardens of Suzhou, China. Applied Ecology & Environmental Research. 2023; 21(3): 1991–2009.
- 15. Bonaiuto M, Bilotta E, Stolfa A. "Feng Shui" and environmental psychology: A critical comparison. Journal of Architectural and Planning Research. 2010; 27(1): 23–34.
- 16. Teather EK, Chow CS. The Geographer and the Fengshui Practitioner: So close and yet so far apart? Australian Geographer. 2000; 31(3): 309–332. doi: 10.1080/713612250
- 17. Zhao X. The Hall of Superabundant Blessings: Toward an Architecture of Chinese Ancestral-Temple Theatre. Asian Theatre Journal. 2017; 34(2): 397–415. doi: 10.1353/atj.2017.0029
- 18. Liang Q. Huangdizhaijing; Huangdi's Mansion Scripture. In: Daozang. Wenwu Publishing Company; 1988.
- 19. Li X. The aesthetic of the absent The Chinese conception of space. The Journal of Architecture. 2002; 7(1): 87–101. doi: 10.1080/13602360110114740
- 20. Knapp RG. Rural housing and village transformation in Taiwan and Fujian. The China Quarterly. 1996; 147: 779–794. doi: 10.1017/s0305741000051791
- 21. Madeddu M, Zhang X. Harmonious spaces: the influence of Feng Shui on urban form and design. Journal of Urban Design. 2017; 22(6): 709–725. doi: 10.1080/13574809.2017.1336061
- 22. Shokri A, Shieh E, Vahid A. Urban feng shui based on citizenship rights and its impact on the spatial structure and mental health of citizens: Review. Annals of Medicine & Surgery. 2023. doi: 10.1097/ms9.000000000001507
- 23. Hong SK, Song IJ, Wu J. Fengshui theory in urban landscape planning. Urban Ecosystems. 2007; 10(3): 221–237. doi: 10.1007/s11252-006-3263-2
- 24. Wang C, Hong WT, Abdul-Rahman H. Architectural examination on feng shui bedroom. Open House International. 2018; 43(2): 40–48. doi: 10.1108/ohi-02-2018-b0007
- 25. Xiong Y, Zhang J, Yan Y, et al. Effect of the spatial form of Jiangnan traditional villages on microclimate and human comfort. Sustainable Cities and Society. 2022; 87: 104136. doi: 10.1016/j.scs.2022.104136
- 26. Zheng W, Li B, Cai J, et al. Microclimate characteristics in the famous dwellings: A case study of the Hakka Tulou in Hezhou, China. Urban Climate. 2021; 37: 100824. doi: 10.1016/j.uclim.2021.100824
- 27. Tang L, Zhang N. A study on the thermal environment of historical villages with "comb-like" layout in southern China. Indoor and Built Environment. 2018; 27(5): 658–664. doi: 10.1177/1420326x16682821
- So ATP, Lu JWZ. Natural ventilation design by computational fluid dynamics—a feng-shui approach. Architectural Science Review. 2001; 44(1): 61–69. doi: 10.1080/00038628.2001.9697454
- 29. Zhang M, Du J, Yang M. Biophilia and visual preference for Chinese vernacular windows: an investigation into shape. Journal of Asian Architecture and Building Engineering. 2023; 22(5): 2448–2459. doi: 10.1080/13467581.2022.2160203
- 30. Zhang M, Liu F, Liu Q, et al. Climate Adaptation Analysis and Comfort Optimization Strategies for Traditional Residential Buildings in Hot-Summer, Cold-Winter Regions: A Case Study in Xuzhou, China. Sustainability. 2024; 16(8): 3411. doi: 10.3390/su16083411

- 31. Parkes G. Winds, waters, and earth energies: Fengshui and sense of place. In: Nature across cultures: Views of nature and the environment in non-Western cultures. Springer Netherlands; 2003. pp. 185–209.
- 32. Tang L, Nikolopoulou M, Zhang N. Bioclimatic design of historic villages in central-western regions of China. Energy and Buildings. 2014; 70: 271–278. doi: 10.1016/j.enbuild.2013.11.067
- 33. Kobi M. Warm bodies in the Chinese borderlands: architecture, thermal infrastructure, and territorialization in the arid continental climate of Ürümchi, Xinjiang. Eurasian Geography and Economics. 2020; 61(1): 77–99. doi: 10.1080/15387216.2020.1714461
- Baratta NC, Magli G. The role of astronomy and Feng Shui in the planning of Ming Beijing. Nexus Network Journal. 2021; 23(3): 767–787. doi: 10.1007/s00004-021-00555-y
- 35. Wu WC, Ma YC, Bourassa SC. Folk Customs and Home Improvement Decisions. International Real Estate Review. 2018; 21(3): 317–341.
- Wu W, Yau OHM, Lu H. Feng shui principles in residential housing selection. Psychology & Marketing. 2012; 29(7): 502– 518. doi: 10.1002/mar.20538
- Çeliker A, Çavuşoğlu BT, Öngül Z. Comparative study of courtyard housing using feng shui. Open House International. 2014; 39(1): 36–47. doi: 10.1108/ohi-01-2014-b0005
- 38. Schweitzer M, Gilpin L, Frampton S. Healing spaces: elements of environmental design that make an impact on health. Journal of Alternative and Complementary Medicine. 2004; 10(1): 71–83. doi: 10.1089/1075553042245953
- 39. Chen Q, Feng Y, Wang G. Healthy buildings have existed in China since ancient times. Indoor and Built Environment. 1997; 6(3): 179–187. doi: 10.1177/1420326x9700600309
- 40. Ho S, Chuang ST. The influence of lay theories of Feng Shui on consumers' peace of mind: The role of regulatory fit. Asian Journal of Social Psychology. 2012; 15(4): 304–313. doi: 10.1111/j.1467-839x.2012.01385.x
- 41. Zhang S. The heritage practices in a Chinese historic neighbourhood: the manifestation of traditional Feng Shui in Langzhong, China. International Journal of Heritage Studies. 2018; 24(5): 531–546. doi: 10.1080/13527258.2017.1390778
- 42. Coggins C. Sacred Watersheds and the fate of the village body politic in Tibetan and han communities under China's ecological civilization. Religions. 2019; 10(11): 600. doi: 10.3390/rel10110600
- 43. Coggins C, Chevrier J, Dwyer M, et al. Village fengshui forests of southern China—culture history and conservation status. ASIANetwork Exchange: A Journal for Asian Studies in the Liberal Arts. 2012; 19(2): 52. doi: 10.16995/ane.43
- 44. Yuan J, Liu J. Fengshui forest management by the Buyi ethnic minority in China. Forest Ecology and Management. 2009; 257(10): 2002–2009. doi: 10.1016/j.foreco.2009.01.040
- 45. Chen J, Lin W, Zhang Y, et al. Village fengshui forests as forms of cultural and ecological heritage: interpretations and conservation policy implications from southern China. Forests. 2020; 11(12): 1286. doi: 10.3390/f11121286
- 46. Ma KV, Nguyen PV, Ahmed ZU. The role of government policy, social infrastructure and Fengshui in intending to buy tourism real estate. PLOS ONE. 2023; 18(7): e0281436. doi: 10.1371/journal.pone.0281436
- 47. Ren X. Socially engaged architecture in a Chinese rural village: Xihe Village Community Centre, 2014. Architectural Research Quarterly. 2016; 20(2): 119–130. doi: 10.1017/s1359135516000282
- 48. Lin X, Wu Y. Architectural spatial characteristics of Fujian Tubao from the perspective of Chinese traditional ethical culture. Buildings. 2023; 13(9): 2360. doi: 10.3390/buildings13092360
- 49. Chen B, Coggins C, Minor J, Zhang Y. Fengshui forests and village landscapes in China: Geographic extent, socioecological significance, and conservation prospects. Urban Forestry & Urban Greening. 2018; 31: 79–92.
- 50. Liu P, Zeng C, Liu R. Environmental adaptation of traditional Chinese settlement patterns and its landscape gene mapping. Habitat International. 2023; 135: 102808. doi: 10.1016/j.habitatint.2023.102808
- 51. Ge YJ, Liu YJ, Shen AH, Lin XC. Fengshui forests conserve genetic diversity: a case study of Phoebe bournei (Hemsl.) Yang in southern China. Genetics and Molecular Research. 2015; 14(1): 1986–1993. doi: 10.4238/2015.march.20.8
- 52. Zhou L, Huang L, Jin C, et al. Fengshui forests as a conservation paradigm of the golden larch in China. Forest Ecology and Management. 2022; 520: 120358. doi: 10.1016/j.foreco.2022.120358
- 53. Marafa L. Integrating natural and cultural heritage: the advantage offeng shuilandscape resources. International Journal of Heritage Studies. 2003; 9(4): 307–323. doi: 10.1080/1352725022000155054
- 54. Wang Z, Liu T, Wu X, et al. Influence of Doorway Position on Wind Comfort in Beijing Quadrangle Dwellings. Buildings. 2023; 13(10): 2557. doi: 10.3390/buildings13102557

- 55. Hu L, Li Z, Liao W, Fan Q. Values of village fengshui forest patches in biodiversity conservation in the Pearl River Delta, China. Biological Conservation. 2011; 144(5): 1553–1559. doi: 10.1016/j.biocon.2011.01.023
- 56. Qi L, Liu R, Cui Y, et al. Study of the Landscape Pattern of Shuiyu Village in Beijing, China: A Comprehensive Analysis of Adaptation to Local Microclimate. Sustainability. 2021; 14(1): 375. doi: 10.3390/su14010375
- 57. Neisser U. In: Cognitive psychology. Taylor & Francis; 1967.
- Mak MY, Ng ST. Feng shui: an alternative framework for complexity in design. Architectural Engineering and Design Management. 2008; 4(1): 58–72. doi: 10.3763/aedm.2008.s307
- 59. Kaplan R, Kaplan S, Brown T. Environmental preference: A comparison of four domains of predictors. Environment and Behavior. 1989; 21(5): 509–530. doi: 10.1177/0013916589215001
- 60. Ulrich RS. View through a window may influence recovery from surgery. Science. 1984; 224(4647): 420–421. doi: 10.1126/science.6143402
- 61. Benko L. In: The Holistic Home: Feng Shui for Mind, Body, Spirit, Space. Simon and Schuster; 2024.
- 62. Beute F, de Kort YAW. Natural resistance: Exposure to nature and self-regulation, mood, and physiology after egodepletion. Journal of Environmental Psychology. 2014; 40: 167–178. doi: 10.1016/j.jenvp.2014.06.004
- Hong WT, Abdul-Rahman H, Wang C. The application of Form School Feng Shui model in a sleep environment: human preferences and subjective sleep quality evaluation. Architectural Engineering and Design Management. 2016; 12(6): 442– 459. doi: 10.1080/17452007.2016.1208076
- 64. Ulrich RS, Simons RF, Losito BD, et al. Stress recovery during exposure to natural and urban environments. Journal of Environmental Psychology. 1991; 11(3): 201–230.
- 65. Bar M, Neta M. Humans prefer curved visual objects. Psychological Science. 2006; 17(8): 645–648. doi: 10.1111/j.1467-9280.2006.01759.x
- 66. Küller R, Mikellides B, Janssens J. Color, arousal, and performance—A comparison of three experiments. Color Research & Application. 2009; 34(2): 141–152. doi: 10.1002/col.20476
- 67. Ren Y, Woudstra J. Between fengshui and neighbors: case studies of participant-led house-making in rural east China. Architecture and Culture. 2022; 10(3): 512–533. doi: 10.1080/20507828.2022.2110779
- 68. Gehl J. In: Cities for people. Island Press; 2010.
- 69. Han KT. An empirical study of consistency in the judgments of Feng Shui scholars and practitioners regarding taboos for residential space. Heliyon. 2023; 9(4): e15296. doi: 10.1016/j.heliyon.2023.e15296
- McMahon D. Geomancy and Walled Fortifications in Late Eighteenth Century China. Journal of Military History. 2012; 76(2): 373–393.
- Huang L, Tian L, Zhou L, et al. Local cultural beliefs and practices promote conservation of large old trees in an ethnic minority region in southwestern China. Urban Forestry & Urban Greening. 2020; 49: 126584. doi: 10.1016/j.ufug.2020.126584
- Han KT, Lin JK. Empirical and quantitative studies of Feng Shui: A systematic review. Heliyon. 2023; 9(9): e19532. doi: 10.1016/j.heliyon.2023.e19532
- 73. Wu Z, Kong F, Wang Y, et al. The impact of greenspace on thermal comfort in a residential quarter of Beijing, China. International Journal of Environmental Research and Public Health. 2016; 13(12): 1217. doi: 10.3390/ijerph13121217
- 74. Zhong J, Jia S, Liu R. Improvement of Indoor Thermal Environment in Renovated Huizhou Architecture. International Journal of Heat and Technology. 2019; 37(2): 633–640. doi: 10.18280/ijht.370235
- 75. Li SY. Community-based forestry and the functions of institutions: a case study of Fung Shui forests in Hong Kong. International Forestry Review. 2018; 20(3): 362–374. doi: 10.1505/146554818824063078
- 76. Choe SJ, Han SH. Applicability of Feng Shui thoughts for sustainable space planning and evaluation in Korea verified using three-dimensional digital mapping and simulations. Sustainability. 2019; 11(20): 5578. doi: 10.3390/su11205578
- 77. Jin Z, Juan YK. Is Fengshui a science or superstition? A new approach combining the physiological and psychological measurement of indoor environments. Building and Environment. 2021; 201: 107992. doi: 10.1016/j.buildenv.2021.107992
- 78. Fernandez-Beanato D. Feng shui and the demarcation project. Science & Education. 2021; 30(6): 1333–1351. doi: 10.1007/s11191-021-00240-z
- 79. Charles R, Glover S, Bauchmüller K, Wood D. Feng shui and emotional response in the critical care environment (FARCE) study. Anaesthesia. 2017; 72(12): 1528–1531. doi: 10.1111/anae.14105

80. Hwangbo AB. An alternative tradition in architecture: conceptions in feng shui and its continuous tradition. Journal of Architectural and Planning Research. 2002; 110–130.