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THE ENVIRONMENTAL PSYCHOLOGICAL EFFECTS OF FENG SHUI PRINCIPLES: A QUANTITATIVE STUDY BASED ON STUDENT DESIGN PROJECTS

In recent years, both architects and psychologists have become more aware that the way people sense and move through space affects how they feel and think. When looking for ways to describe this connection, many have turned again to ideas found in traditional Feng Shui. Although its origins are ancient, Feng Shui can still be read as a reflection on how human life adapts to the environment rather than as a set of mystical prescriptions. Its central belief—that people and nature work best in balance—links closely to the modern search for physical ease and mental calm. If we place the notion of qi, the living energy discussed in Feng Shui, beside the idea of "perceptual feedback" from environmental psychology, the resemblance is striking [Ulrich 1983]. The present paper explores this relationship by studying six interior design projects completed by students and translating Feng Shui principles into indicators that can be tested and compared in psychological terms.

Keywords: Feng Shui; Environmental Psychology; Psychological Perception; Empirical Case Evaluation

1. INTRODUCTION

Research Background

Most of what people do happens inside buildings or somewhere in between—the house, the street, the park, or the city square. These places don't just provide shelter; they also shape how we think and feel. It has taken a while for architects and psychologists to talk about this in the same language, but the idea that space affects mind has been around for decades. As Gifford [2014] notes,

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environmental psychology looks beyond walls or materials to the way people sense and respond to them. Earlier studies were often limited to numbers—temperature, light, dimensions—while later work began asking what people actually experience when they move through a room. That change of focus turned design itself into a kind of dialogue between person and setting, something alive.

Following this idea, Gibson [1979] and Ulrich [1983] showed that visible or measurable features are only one part of spatial experience; the rest emerges from the subtle interplay between perception and the surrounding environment.

Commonalities Between Feng Shui and Environmental Psychology

Both Feng Shui and environmental psychology explore how spatial qualities influence human comfort and behavior.

In Feng Shui, the idea of "hiding from the wind and gathering qi" reflects an early human sensitivity to environmental comfort—it shows an awareness that gentle, steady airflow and balanced temperature can bring relaxation to both body and mind [Bruun 2003].

Although environmental psychology expresses this understanding in modern scientific terms, it conveys a similar idea: that the coordination of air movement, humidity, and light fosters psychological calm and stability.

Research Objectives and Questions

People generally agree that Feng Shui may have a positive influence on psychological well-being, yet solid empirical evidence is still lacking.

Take the idea of "hiding from the wind and gathering qi." This central concept is often described as a metaphor for balance and harmony of energy, but very few studies have explored how it actually shapes people's emotional or cognitive responses within real spatial settings.

Without measurable data to support these ideas, Feng Shui continues to drift at the margins of modern design science. The present study grows out of this gap. Using six student projects from architecture and interior design courses, it attempts to translate Feng Shui's spatial logic into quantifiable variables that reflect psychological responses.

Article Structure

This article is divided into five main parts: Chapter 1 is the introduction; Part 2 involves theoretical construction, establishing a corresponding analytical framework for Feng Shui and environmental psychology; Part 3 covers the research methodology, describing the methods and evaluation system used; Part 4 presents the research findings, including quantitative analysis data and discussion of relevant cases; Part 5 is the conclusion and outlook, summarizing the main findings and pointing out potential future research directions.

2. THEORETICAL FRAMEWORK

Studying the effects and influences of the environment on human psychology also provides a possible scientific perspective for interpreting Feng Shui principles. Comparing Feng Shui principles with environmental psychology theories reveals a high degree of consistency in their core psychological effects. This consistency makes it possible to establish concrete and verifiable psychological variables for Feng Shui principles.

Table 1. Correspondence between Feng Shui Principles and Environmental Psychology Variables (Author's work)

Feng Shui Principle	**Core Psychological Effect**	**Corresponding Psychological Theory & Concept**	**Spatial Manifestation & Measurable Variables**
Sheltering Wind and Accumulating Qi	Environmental Comfort	Environmental Comfort Theory Stimulation Theory	**Physical Variables:** Airspeed (m/s), Temperature (°C), Relative Humidity (%) **Perceptual Variables:** Airflow Comfort Rating, Spatial Shelter Sense Scale
Backing Mountain Principle	Security Sense of Territory	Defensible Space Theory [Newman, 1972]	**Spatial Variables:** Presence/Absence of solid backing, Rear sightline control range (degrees) **Psychological Variables:** Perceived Safety Scale, Spatial Sense of Territory
Vital Energy (Sheng Qi)	Psychological Restoration Positive Emotion	Biophilia Hypothesis [Wilson, 1984]	**Environmental Variables:** Natural Illuminance (lux), Indoor Plant Coverage Ratio (%), Natural Soundscape Level (dB) **Emotional Variables:** Positive and Negative Affect Schedule (PANAS), Attention Restoration Scale
Bright Hall Openness	Sense of Control Emotional Relaxation	Prospect-Refuge Theory [Appleton, 1975]	**Spatial Variables:** Minimum frontal viewing distance (m), Spatial permeability index **Psychological Variables:** Perceived Control Scale, Profile of Mood States (POMS)
Regular Layout	Sense of Direction Cognitive Fluency	Spatial Legibility [Lynch, 1960]	**Structural Variables:** Spatial plan shape index, Path choice clarity **Cognitive Variables:** Cognitive map accuracy, Wayfinding efficiency

Table 1 takes another look at several core Feng Shui ideas—qi, the idea of balance, and the "mountain-backed" layout—and reads them through the lens of measurable psychological responses.

Rather than staying at the level of theory, the concepts are grounded in data that show how people sense, read, and move through space in practice.

A useful parallel can be seen in Lynch's work on spatial readability (1960), which mirrors the cognitive flow described in Feng Shui; it appears in something as ordinary as how quickly or confidently a person finds direction inside a room.

What this framework really tries to do is to connect Feng Shui principles with environmental psychology and design thinking, keeping the spirit of traditional insight alive while giving it a place in today's design process.

3. RESEARCH METHODOLOGY

The material used in this study came from student coursework in the Interior Design program at the Faculty of Architecture, Poznań University of Technology.

In total, six projects were chosen for review, mostly because they offered enough detail to make comparison possible.

Each student worked on a residential interior and tried to apply a few Feng Shui ideas—sometimes quite intuitively—within a modern context.

Their submissions included drawings, plans, and visual notes that reflected both technical skill and personal interpretation.

Before we began the evaluation, the work was screened once more to make sure that every project included at least some recognizable Feng Shui principles, not just aesthetic imitation.

The evaluation itself was built around five loosely defined psychological variables: visual flow and coherence, protection and safety, access to light and orientation, connection with natural elements, and a general feeling of comfort.

These categories were not rigid; rather, they grew from the overlap between Feng Shui ideas and environmental psychology theory.

Each project was then rated on a five-point scale—from 1 to 5—to reflect how strongly these qualities appeared in the design.

Two reviewers worked independently, following a short guideline document, which helped to reduce personal bias, at least to some extent (see Table 2).

Table 2. Scoring Criteria for Psychological Perception Variables of Design Projects

Evaluation Variable	**1 (Low Degree)**	**5 (High Degree)**	**Basis for Judgment**
Visual Coherence & Flow	Chaotic circulation, numerous visual obstructions	Open, smooth circulation; natural spatial transitions	Floor plan circulation design & perspective visual logic
Protection & Safety Sense	No backing, sightlines exposed	Solid backing for key areas, controllable sightlines in crucial zones	Manifestation of the „Backing Principle" in the design
Light Access & Orientation	Natural light <20%, disorganized orientation	Natural light >60%, rational orientation of main functional areas	Lighting data & orientation markings on floor plans
Biophilic Elements Integration	No natural elements	High integration of plants, water features, etc., with the space	Rendering elements & rationale in design description
Overall Perceived Comfort	Space feels oppressive, no Feng Shui concepts evident	Space feels open and comfortable, good balance of Feng Shui & modern needs	Comprehensive assessment based on prior four indicators & overall design feel

(Author's work)

The scoring was done by two researchers who both had backgrounds in architectural design. They worked separately—each forming their own impressions before comparing results later on.

Once all scores were gathered, the data were summarized and checked through simple statistical averages and deviations. This wasn't just a formal step; it helped to see whether both reviewers were, more or less, consistent in how they judged each project.

4. RESULTS AND DISCUSSION

Quantitative Results

Table 3. Assessment Results by Rater A (Author's work)

Assessment Indicator	Core Principle / EP Rationale	D1	D2	D3	D4	D5	D6	Mean	SD
Visual Coherence & Flow	EP: Legibility & Spatial Clarity; FS: Qi Flow.	4.0	4.0	4.0	3.5	4.0	4.5	4.00	0.37
2. Protection & Safety Space	EP: Territoriality & Safety; FS: Backing Principle.	3.5	4.5	4.0	3.5	3.5	4.0	3.83	0.56
3. Light Access & Orientation	EP: Light Access & Seasonal Affect; FS: Sheng Qi.	4.0	4.0	4.0	3.5	4.0	4.0	3.92	0.38
4. Biophilic Elements Integration	EP: Biophilia Hypothesis; FS: Use of Natural Elements.	3.5	4.0	3.5	4.0	4.5	4.0	3.92	0.49
5. Overall Perceived Comfort	Integrated: Psychological support, Harmony, and Stress reduction.	4.0	4.5	4.0	3.5	4.5	4.0	4.08	0.41
Case Total Score	(Sum of 5 Variables)	19	21	19.5	18	20.5	20.5	19.75	

Table 4. Assessment Results by Rater B (Author's work)

Assessment Indicator	Core Principle / EP Rationale	D1	D2	D3	D4	D5	D6	Mean	SD
1. Visual Coherence & Flow	EP: Legibility & Spatial Clarity; FS: Qi Flow.	3.5	3.5	3.5	2.5	3.5	3.5	3.33	0.37
2. Protection & Safety Space	EP: Territoriality & Safety; FS: Backing Principle.	3.0	4.0	4.5	3.0	4.0	3.5	3.67	0.56
3. Light Access & Orientation	EP: Light Access & Seasonal Affect; FS: Sheng Qi.	4.0	4.5	4.5	3.5	4.0	4.0	4.08	0.38

Assessment Indicator	Core Principle / EP Rationale	D1	D2	D3	D4	D5	D6	Mean	SD
4. Biophilic Elements Integration	EP: Biophilia Hypothesis; FS: Use of Natural Elements.	4.5	4.5	4.0	3.5	4.5	3.5	4.08	0.49
5. Overall Perceived Comfort	Integrated: Psychological support, Harmony, and Stress reduction.	4.0	4.5	4.5	3.5	4.5	4.5	4.25	0.41
Case Total Score	(Sum of 5 Variables)	19	21	21	16	20.5	19	19.42	

Table 5. Final Assessment Results (Author's work)

Assessment Indicator	Core Principle / EP Rationale	Rater A Mean	Rater B Mean	Final Mean(M)	Standard Deviation (SD)
Visual Coherence & Flow	EP: Legibility & Spatial Clarity; FS: Qi Flow.	4.0	3.33	3.67	0.49
2. Protection & Safety Space	EP: Territoriality & Safety; FS: Backing Principle.	3.83	3.67	3.75	0.41
Light Access & Orientation	EP: Light Access & Seasonal Affect; FS: Sheng Qi.	3.92	4.08	4.00	0.25
4. Biophilic Elements Integration	EP: Biophilia Hypothesis; FS: Use of Natural Elements.	3.92	4.08	4.00	0.47
5. Overall Perceived Comfort	Integrated: Psychological support, Harmony, and Stress reduction.	4.08	4.25	4.17	0.41
Case Total Score	(Sum of 5 Variables)	19.75	19.42	19.59	1.36

Note: FS = Feng Shui. All ratings are based on a 5-point Likert scale. ICC = Intraclass Correlation Coefficient.

When we looked again at the results (Table 5), the pattern felt stable. The two sets of scores were close—Rater A gave an overall mean of 19.75 and Rater B 19.42. A combined average of 19.59 suggests that, despite small personal differences, both

followed a similar line of thinking. It's fair to say the process held together well and the results can be trusted.

Among the indicators, Light Access & Orientation and Biophilic Elements Integration stood out—both reaching 4.00 on average. The light-related variable also showed the least spread (SD = 0.25), which, to me, suggests that natural light and greenery almost always lifted the emotional tone of a space. That's in line with Wilson's (1984) biophilia idea and, interestingly, echoes the Feng Shui notion of "life energy."

Spaces that gave a stronger sense of protection averaged 3.75, linking ideas of safety from environmental psychology with the Feng Shui "support" principle. Meanwhile, Visual Coherence and Fluency came out lower at 3.67 (SD = 0.49). It seems that while circulation paths were generally logical, many rooms lacked the smoother transitions that make movement feel natural.

Finally, Overall Perceived Comfort reached 4.17, the highest score across all categories. Even though a few layouts were imperfect, most still conveyed balance and calm—a sign, perhaps, that traditional Feng Shui ideas can quietly shape modern design when translated into measurable terms.

Case Discussion

Project 2 was chosen for a closer look because, in many ways, it captured the idea of design translation that this study aimed to explore. It scored 21 points in total—not the highest mark, though high enough to make its details worth discussing. At first glance the design appears quite ordinary, yet several Feng Shui principles quietly shape the way the space works. The shared areas are arranged so that air drifts easily from one room to another, avoiding that heavy, stagnant feeling that closed interiors sometimes have. Natural wood tones, used as the main color, lend a soft warmth and make the atmosphere feel calm rather than rigid. Wide windows open toward the garden, letting daylight and greenery spill inside; the interior and exterior seem to breathe together.

In the end, the space feels balanced—functional but still emotional, rational yet comfortable. It's hard to tell whether that balance was planned deliberately or simply felt by intuition, but either way it reflects the quiet harmony that lies at the heart of Feng Shui.

Figure 1. Floor plan and visualizations of Project 2

5. CONCLUSION

In this study, Feng Shui was explored not as a belief but as a way to read how people sense space. We tried to see, in a measurable way, how ideas such as flow, light, or orientation might shape comfort and attention. That observation, small as it is, hints that ancient design logic still speaks to modern psychology. What began as a cultural idea may, in fact, describe how the human mind reacts to spatial cues. Looking ahead, testing this approach in lived environments, or even with tools that track the body's responses, could tell us more about how harmony in space affects well-being over time.

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PSYCHOLOGICZNE EFEKTY ŚRODOWISKOWE ZASAD FENG SHUI: BADANIE ILOŚCIOWE OPARTE NA PROJEKTACH STUDENCKICH

Streszczenie

W ostatnich latach zarówno architekci, jak i psychologowie coraz bardziej dostrzegają, że sposób, w jaki ludzie postrzegają przestrzeń i poruszają się w niej, wpływa na ich emocje i sposób myślenia. Szukając sposobów opisu tego związku, wielu badaczy ponownie zwraca się ku ideom obecnym w tradycyjnym Feng Shui. Choć jego korzenie sięgają starożytności, Feng Shui można dziś odczytywać raczej jako refleksję nad tym, jak ludzkie życie dostosowuje się do otoczenia, niż jako zbiór mistycznych nakazów. Jego centralne założenie – że człowiek i natura funkcjonują najlepiej w stanie równowagi – pozostaje blisko związane ze współczesnym dążeniem do fizycznego komfortu i psychicznego spokoju. Jeśli zestawić pojęcie qi, życiowej energii opisywanej w Feng Shui, z koncepcją „sprzężenia percepcyjnego" znaną z psychologii środowiskowej, podobieństwo okazuje się uderzające [Ulrich 1983]. Niniejszy artykuł bada tę relację, analizując sześć projektów wnętrz wykonanych przez studentów oraz przekładając zasady Feng Shui na wskaźniki, które można testować i porównywać w kategoriach psychologicznych.

Słowa kluczowe: Feng Shui; Psychologia środowiskowa; Percepcja psychologiczna; Empiryczna ocena przypadków