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Original Article

Rereading the Concept of Ecosophy in Architecture

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Abstract

This research provides a comprehensive exploration of ecosophy as a modern interdisciplinary concept in architecture, integrating ecological philosophy and psychology. The research problem focuses on examining how ecosophical principles can be effectively implemented in architectural design by emphasizing the interaction between humans and the environment. The central question is how ecosophy can transition from theoretical discourse to practical application in contemporary architecture. The study employs a descriptive-analytical method, utilizing both inductive and deductive reasoning. Key ecosophical attributes are identified through a literature review and the analysis of case studies that exemplify ecological, psychological, and socio-environmental harmony. The findings highlight the integration of cultural, psychological, and ecological elements in architectural design to enhance human-environment interactions. Furthermore, the research underscores the importance of incorporating natural elements such as daylight, greenery, and sustainable materials to promote physical and mental well-being. The study advocates for design strategies that align with ecological sustainability while respecting cultural and social contexts. By aligning ecosophical architecture with sustainability, environmental consciousness, and human well-being, this research moves beyond conventional functionalist approaches, positioning architecture as a medium for fostering meaningful and harmonious relationships between humans and nature. Ultimately, ecosophy offers innovative solutions in architecture that address contemporary environmental crises while enhancing spatial experience and ecological balance.

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Introduction

In today's world, human societies face numerous environmental, social, and psychological challenges. Climate change, pollution, and rapid urbanization are among the key factors that not only degrade environmental quality but also significantly impact human interactions with nature. These conditions have profound effects on mental, social, and physical well-being, underscoring the urgent need to rethink the ways in which we design and construct built environments. In this context, architecture plays a crucial role in mitigating these crises by shaping spaces that enhance human life and the environment. Ecosophy, an approach that integrates ecology, philosophy, and psychology, has emerged as a comprehensive and innovative paradigm in contemporary architecture. First introduced by Félix Guattari, the concept of "three ecologies" highlights the interconnectedness of mental, social, and environmental dimensions. Ecosophy not only seeks to minimize the negative ecological footprint of the built environment but also aims to improve the quality of human-environment interactions and reinforce a sense of identity and belonging. This approach, by incorporating natural elements such as light, air, water, and vegetation into architectural design, creates meaningful and sustainable spaces that respond to both functional and psychological needs. At the same time, the principles of ecosophy emphasize the intelligent use of natural resources and renewable energy sources, striving to transform architecture from a purely functionalist discipline into one that is human-centered, culturally aware, and ecologically responsible. However, the key question remains: how can the principles of ecosophy be effectively translated from theory into practice in contemporary architectural design? Addressing this question requires a thorough examination of ecosophical attributes and the identification of strategies that can be integrated into the design process. This research explores ecosophical principles in architecture through case studies and theoretical analysis, ultimately proposing a framework for incorporating ecosophy into contemporary architectural practice. By emphasizing sustainability, cultural sensitivity, and psychological well-being, ecosophical architecture has the potential to go beyond traditional ecological approaches. It not only provides solutions to current environmental crises but also enhances human interactions with nature, creating balanced, meaningful, and integrated living experiences.

Chart1.
Problem statement model

Literature Review

Many studies have been conducted on the philosophy of ecosophy and its applications in environmental sciences, art, and architecture. Some notable research includes:

Arne Naess and Deep Ecology: In his works, Arne Naess examines the relationship between human values and ecological sustainability. In his 1973 paper, "Deep Ecology: A New Philosophy of Our Time," he emphasizes that every human decision should consider the health and well-being of the entire ecosystem.

Ecosophy and Art: Recent studies, such as the 2018 article "Ecosophy in Contemporary Arts" by Smith, analyze how ecosophy is used in visual arts and literature as a tool for conveying environmental messages.

Ecosophy in Architecture and Environmental Design: Studies like the 2020 paper "Ecosophic Architecture: Designing for Harmony Between Humans and Nature" by Williams demonstrate how ecosophic principles can help create more sustainable spaces that align with natural ecosystems. conscious feelings of the environment which places the individual in an internal connection with the environment; So that a person's conception and feelings are connected and integrated with the semantic context of the environment. This sense is an aspect that causes space to become a place with special sensory and behavioural characteristics for specific people (Fatahi et al, 2024,p. 81).

Ecosophy and Social Issues: Research such as "Ecosophy and Environmental Justice" by Johnston (2015) shows that ecosophic philosophy, in addition to addressing environmental issues, also focuses on social aspects like justice, equality, and social sustai nability.

Ecosophy and Eastern Philosophy: Studies like "Ecosophy and Zen Philosophy" by Suzuki (2017) explore the connection between ecosophy and Eastern perspectives on nature, such as Buddhist and Zen philosophies.

Table1.
Introduction of books and articles

Author	Title	Topic	Translator	Type	Year
Mahdieh Haj Ghani, Ferial Ahmadi	**A Review of Landscape Ecology Literature**	The article **"A Review of Landscape Ecology Literature"** examines the concepts, background, and principles of landscape ecology and analyzes the role of interactions between nature and humans in landscape design and sustainability.	-	Article	2015
Seyed Majid Mofidi Shemirani, Mohammad Javad Mahdavi Nejad, Elham Alavi Zadeh	**Ecological Park; Natural-Cultural Ecology**	The article **"Ecological Park; Natural-Cultural Ecology"** examines the role of ecological parks in integrating natural and cultural ecology, restoring urban ecosystems, and enhancing social and educational interactions.	-	Article	2009
Arsin Habibi	**Is Nature Beautiful? Reflections on the Philosophy of Natural Beauty**	This article explores the aesthetic values of nature and the active role of humans in experiencing its beauty. By analyzing the physical characteristics of nature and their relationship from an aesthetic perspective, the study focuses on the combination of objective and subjective aspects of human experience with nature.	-	Article	2013

Research Method	Research Methodology	From the Perspective of Purpose	Fundamental-applied: Providing a practical framework for architectural design.
		From the Perspective of Approach	Developmental-evolutionary: Expanding ecosophy theories in architecture.
		From the Perspective of Method	Descriptive-Analytical: Analyzing texts and architectural samples. Comparative: Comparing examples with ecosophy principles. Inductive: Extracting design principles from samples. Deductive: Testing hypotheses based on ecosophy.
		From the Perspective of Variable Control	Exploring correlations between ecological, environmental psychology, and philosophical aspects.
	Data Collection	Library Research Reviewing theoretical resources on ecosophy and architecture.	
		Field Methods Analyzing ecosophic architectural samples and collecting related data.	
	Data Analysis	**Content analysis and theory development.**	
		Analytical Foundations: Perspective on the Problem	Analyzing environmental crises and the role of architecture in solving them.
		Analytical Foundations: Research Framework	Establishing ecosophy principles for designing sustainable and meaningful spaces.
		Analytical Foundations: Research Logic	Employing analytical and phenomenological approaches.
		Analytical Foundations: Function	Identifying design patterns and formulating a practical framework for ecosophy-based architecture.

Theoretical Foundations

Definition Ecosophy

The term “ecosophy” was first introduced by Norwegian philosopher Arne Naess, who had fundamental concerns about the relationship between philosophy and the environment. This term is a combination of the words “ecology” and “philosophy.” In the later stages of his philosophical and psychoanalytic work, Félix Guattari redefined this term, extending it beyond the environmental domain. By critically engaging with the works of interdisciplinary English thinker Gregory Bateson, Guattari introduced the concept of three interrelated ecologies: psychological, social, and environmental. According to Guattari, the fundamental issue is the separation of these interconnected and intertwined domains. Ecosophy seeks to redefine psychological, social, and environmental issues based on the interwoven relationships of these areas and to create new actions to save the “life-world” that are appropriate to these new existential realms(Guattari,1989). In this perspective, as Deval and Sessions (2004) state, “sophia” is derived from the Greek word for “wisdom,” which relates to ethics, laws, and practical methods. Therefore, ecosophy signifies a shift from science to wisdom. What we need in the contemporary world is the expansion of ecological thinking towards ecosophical thinking. The human condition transforms into an entity integrated with the environment—a complete and comprehensive being that combines biological, mental, social, and spiritual aspects. Ecosophy provides a framework that offers new energy or creates an approach to reflect on issues in education and the environment. As Guattari has pointed out, ecosophy does not consider the environmental dimension as synonymous with nature; rather, it equally values the quality of social relations and the quality of human subjectivity, which are constructed from the relationships humans have with themselves, with other beings, and with the planetary environment (Cavalcante, 2018, p. 26). The term ecology (Ökologie) was first coined in 1866 by the German scientist Ernst Haeckel. Ecological thinking is derived from established currents in philosophy, particularly from ethics and politics. Ancient Greek philosophers such as Hippocrates and Aristotle laid the foundations of ecology in their studies of

Abdollah Amini	**From Philosophy to Art or from Art to Philosophy**	This article explores the reciprocal relationship between philosophy and art, analyzing how these two fields influence and are influenced by each other.	-	Article	2009
Félix Guattari	**Ecosophy: The Three Ecologies**	Guattari added a third dimension to his activities in the psychological and social domains by engaging in ecological and environmental movements, which led to the introduction of three ecologies—psychological, social, and environmental—under the title **Ecosophy**.	Mahdi Rafi, Hamed Fouladvand	Book	2020
Siamak Panahi, Seyed Hamed Honarparvar	**Architecture of Techne**	This book provides a **“comprehensive plan”** and a **“comprehensive history”** of science, invention, and innovation, which, appropriately, begins with philosophy.	-	Book	2020
Siamak Panahi	**Architecture and Meaningful Cinema**	This book analyzes how architectural spaces play a role in expressing concepts in meaning-oriented films.	-	Book	2018
John Lang	**Creating Architectural Theory**	Lang, in his book **“Creating Architectural Theory”**, refers to the role of behavioral sciences in environmental design.	Alireza Einifar	Book	2008
Azadeh Shahcheraghi, Alireza Bandarabad	**Encased in the Environment**	This book is based on global knowledge and adapted to local conditions and cultural layers in Iran. It presents multiple suggestions for designers to apply these findings in designing living environments.	-	Book	2020

Research Methodology

The research method is analytical-descriptive, relying on inductive and deductive reasoning. Initially, using inductive reasoning, key examples are examined, leading to the formation of new theories. Subsequently, through deductive reasoning, the characteristics of ecosophy are evaluated in several case studies. Finally, the research outcomes are derived from the processes of induction and deduction.

Table2.
Research approach and method

Research Approach	Qualitative Method		
	Research Paradigm	Relationship Between Researcher and Research	The researcher is an integral part of the research process (analyzing ecosophic samples).
		Research Objectives	Providing practical and theoretical solutions.
		Main Function	Understanding, describing, and discovering ecosophy principles in architectural design. Developing theories and design patterns from analytical data. Creating an architectural design framework based on ecosophy.
		Study Data	Ecosophic architectural samples and their analysis. A limited number of prominent and relevant samples.
		Validation	Testing hypotheses through sample analysis. Utilizing adaptive modeling and data analysis.

is God—a God who is not outside the world but is within things and shapes the essence and nature of the world (Sālem, 2014, p. 75). Aristotle's theory of imitation also distanced itself from naturalism, which required that art only depict those objects and events that have general meaning and, in other words, are of a certain type (Panāhī & Honarparvar, 2020, p. 24).

Philosophy in Ecosofia

Fichte considered the lifeless material world as a separate creation of the living self; however, Schelling, on the contrary, stated that all life is a creation of "nature," which was once the lifeless material world. Schelling presented an image where nature is the totality of existence, continuously in transformation and evolution. In the beginning, there was nothing but lifeless matter, but gradually, life emerged within it and began to grow, first in the form of plants, then animals, and finally humans(Maggie, 2006, p. 156) In this philosophy, architects and designers strive to create environments that are compatible with human needs and desires while also aligning with the preservation, protection, and enhancement of natural resources and the environment. In other words, this philosophy focuses on the relationship between humans and the environment and its effects on human health and quality of life.

The philosophy of ecosophy in architecture not only helps balance between humans and the environment but also aims to achieve livable, attractive, and usable environments that improve human quality of life and preserve natural resources.

Ecology

The history of ecology, biogeography, demography, and evolutionary biology has examined how individual organisms adapt to their physical environment, how populations grow, and the patterns of distribution and abundance of various species. Due to the vast scope of ecology, it is considered an interdisciplinary science (Haj Ghani & Ahmadi, 2015, p. 62). Political ecology is an extension of "deep ecology," a term introduced to environmental literature by Arne Naess in 1973. Deep ecology was both a philosophy and a practical movement. Prominent activists and writers such as Henry David Thoreau, John Muir, and Aldo Leopold also participated in this movement (Sharban, 2010, p. 49). Yang states that we aim to create a way of life that is intertwined with nature and not in conflict with it. These buildings are harmoniously integrated with the environment (Hart, 2022, p. 3). Understanding ecology as "a broad category that includes objects and ideas, organic species, and their habitats, which are inextricably linked," ecology clearly encompasses architecture at numerous levels, far beyond the technological parameters of sustainable buildings that dominate the concepts of this field. What Felix Guattari refers to as ecosophy—a moral-political articulation between three interconnected environmental registers: environment, social relations, and the realm of ideas—is considered within this framework. Within the ecological mindset, concepts such as resistance, spatial allocation, and indeterminacy in architecture evolve as stages in the immediate task of rewriting the ontology of architectural evolution (Gabrielson, 2011, p. 163). Ultimately, ecosophy deals with change, confronting the status quo and the stability of values (Gabrielson, 2011, p. 186). Construction techniques are an effort to ensure integrated quality in economic, social, and environmental terms. The rational use of natural resources and proper construction management help preserve limited natural resources, reduce energy consumption, protect energy, and improve environmental quality. Quality is the foundation of sustainable design. Optimal quality cannot be achieved without considering nature, and the use of materials with long-lasting durability should also be considered (Modaberian, 2021, p. 27). Architects may be easily misled into thinking that by sufficiently using ecological technologies such as solar collectors, photovoltaic cells, biological recycling systems, and smart systems in buildings and double-skin facades, they can label a building as ecological architecture. Although these technologies are widely used in reducing energy consumption, considering them alone is not a sufficient solution leading to ecological architecture; rather, they are some of the tools to achieve ecological architecture. Ecological design is not just about using low-energy systems; for these technologies to be effective, they must be appropriately integrated with the building's form. They must also be compatible with the site's climatic conditions.

natural history. Modern ecology became a robust science in the late 19th century. The concept of evolutionary theory, related to adaptation and natural selection, became the cornerstone of modern economic theory (Ahmadvand, 2007, p. 4).

Definition of Ecosophia from the point of view of Felix Guattari

Three Ecologies

In defining ecosophy, Félix Guattari proposes that environmental ecology institutions extend into the realms of individual and social psychology through the concept of the "three ecologies" (Trovão & Trovão Braga, 2020, p. 6). In environmental ecology, the focus is not solely on defending nature but also on striving for a better quality of life, sustainability, environmental rights, and democracy within the framework of reclaiming nature based on social and individual references (Trovão & Trovão Braga, 2020, p. 8). Contrary to the standardized discourse on "sustainable development," which emphasizes the relationship between "individuals" and their surroundings, Guattari draws our attention to the multiplicity of ecologies, environments, and habitats that do not merely surround us (Antonioli, 2018, p. 2). Although a limited awareness of the most prominent dangers threatening the natural environment of our societies has recently emerged, this awareness generally confines itself to industrial problems, exclusively from a technocratic perspective. However, only an ethical-political articulation (which we call ecosophy) among the three ecological domains—environmental ecology, social relations ecology, and human subjectivity ecology—can adequately illuminate this issue (Guattari, 1989, p. 43). Thus, ecosophy in its social dimension involves the expansion of specific practices that aim to transform and recreate ways of being and living as a couple, within the family, urban planning, work, and so on (Guattari, 1989, p. 56)Félix Guattari's ecosophy (۱۹۸۹) demonstrates that there is no way to separate the material and axiological dimensions of environmental problems, biodiversity loss, social conflicts, hunger and poverty, wars, migratory movements, and so forth. This is because we cannot reductively consider only the loss of animal and plant species; we must also consider the disintegration of our social fabric. Therefore, by advocating for sustainable environmental practices, we elevate the formulation of ecosophy to sustainable practices, all of which are actions that consider socio-environmental, political-economic, cultural, aesthetic-ethical, gender, spiritual, and territorial dimensions. Sustainable environmental technologies, known as ecotechniques, disseminated by various sustainability programs, are also included here, as there is no single goal to achieve with these actions; rather, the impact they can create is what matters (Rezende & Tristão, 2021, p. 6). Social ecology must work to reconstruct human relationships at all levels of social existence. This ecology should never abandon the insight that capitalist power, simultaneously with its extension or outward expansion—i.e., by extending its influence over the entire social, economic, and cultural life of the planet—and its intensification or inward expansion—i.e., by infiltrating the most unconscious layers of subjectivity—has become deterritorialized. This makes it impossible to claim to confront it solely from the outside through union activities and traditional politics. It has become necessary to confront its effects within the realm of mental ecology in the midst of individual daily life, domestic life, marital life, neighborhood life, creation, and personal ethics (Guattari, 1989, p. 87). In conclusion, the three ecologies should be understood, under a single heading, as matters dependent on a common ethical-aesthetic thread and distinguished from one another from the perspective of the practices that characterize them. Their climates depend on what we have called a process of heterogenesis, that is, a process of continuous resingularization. Individuals must become simultaneously more united and increasingly different (Guattari, 1989, p. 119).

Ecosophia Subsets

Philosophy

Ecology

Environmental Psychology

Philosophy

The philosophy we know traces its origins back to ancient Greece. The primary concern of the earliest Greek philosophers was predominantly the nature of things and the substance from which the world is formed. The Greek philosopher Socrates (399–469 BC) is considered the initiator of this shift in interest from nature to human issues. The significance of this change in perspective is such that philosophers before him are referred to as "Presocratics" (Mitrović, 1961, p. 37). Ontology is about "being." Some philosophers state that certain problems, especially in the field of architectural theory, are actually "ontological problems," although architectural theorists may not be aware of this issue (Mitrović, 1961, pp. 53–54). Aristotelian causality is summarized in a single cause, which

From the perspective of maturity and growth, all emotions and feelings associated with human experiences in nature are beneficial for learning and development. As Rachel Saba states, nature provides humans with an endless source of stimuli. The specific conditions and characteristics of nature that evoke these diverse emotional responses are unique and irreplaceable. As Edith Cobb emphasizes, referring to Walt Whitman's poetic views, the diversity and variety of nature help cultivate human capacities for acquisition, creativity, beauty, and identity. Carson also found that interacting with diverse and mysterious nature gives humans a zest for life, awakens the emotions and feelings necessary for learning, and influences the formation of their personality (Eslami,Taheri, 2016,p. 7).

Ecology Ecosophy

Ecological ecosophy is a concept in architecture that refers to the creation of buildings and spaces that are highly harmonious and compatible with the environment. This idea is based on the premise that buildings and urban spaces should actively contribute to environmental sustainability while providing optimal responses to social and cultural needs. In ecological ecosophy, architects and designers strive to reduce the negative environmental impacts of their designs by employing ecological principles and techniques. In other words, ecological ecosophy seeks to balance environmental sustainability and natural resource efficiency with human development. Ecological ecosophy emphasizes the collaboration between humans and the environment, asserting that buildings and urban spaces should enhance the environment while meeting people's needs. To achieve this, methods and elements such as landscape design, the use of renewable resources, harnessing natural light and heat, designing green spaces, and utilizing conventional structures can be employed. Consequently, ecological ecosophy in architecture refers to the creation of buildings and spaces that, in addition to beauty and functionality, achieve balance and harmony with the environment, considering both environmental and economic values. This approach leads to the sustainable and responsible development of cities and established spaces that can be highly compatible with the environment and maximize natural resource efficiency. Some aspects related to the sensitivity of postmodern ecosophic thought, which is currently underway and reintroduces nature as the mother of the Earth—not as an inert, lifeless, and passable substance, but as a "Gaia," a living entity that directly responds to our ways of life—are discussed by (Candido and Inserti 2024, p. 10).

Environmental psychology

Phenomenology is closely linked to the emergence of experimental psychology, which was formally established in 1879 by Wilhelm Wundt (1832–1920). He was the first to believe that introspection—examining the state of an individual's mind according to specific rules—could serve as an empirical method. Brentano's ideas are closely aligned with those of the founder of Gestalt psychology, Christian von Ehrenfels (1859–1932) (Robinson, 2023, p. 120). The dualism of mind and body is a perspective embraced by many individuals, in which the most important aspect of our existence is the immaterial mind, or, as it is often referred to in religious contexts, the soul. René Descartes is probably the most famous proponent of mind-body dualism: this form of dualism is often called Cartesian dualism (Warburton, 2023, pp. 189-190). Although philosophy of mind and psychology are closely related, they must be distinguished from one another. Psychology is the scientific study of human behavior and thought. It is based on observing individuals, often in experimental and laboratory settings. In contrast, philosophy of mind does not belong to the empirical sciences. It does not require scientific observations in the real world. Philosophy focuses on analyzing the concepts and ideas we have (Warburton, 2023, p. 187). Perception in contemporary psychology refers to the mental or psychological process that actively selects, organizes, and ultimately assigns meaning to sensory information. Perception is a mental process in which sensory experiences are made meaningful, allowing

They must also be compatible with the site's climatic conditions. Therefore, design should be site-specific, and there is never a standard solution suitable for all locations and climates in design (Hart, 2022, p. 10). In site design, whether in urban areas or more natural environments, design harmonized with nature embodies a return to environmental life, and environmental impacts help us create a natural space (Varmarzyar et al., 2016, p. 5). Ecological architecture can take shape within all limitations. Yang did not deny that new construction methods have a positive impact on integrating and harmonizing buildings with the environment. However, he wanted to prevent environmental programs from being limited to transient populist trends. Yang, a biologist architect who understands the history of both the natural and built environments, states: The goal of ecological design is the beneficial and harmonious biological connection between buildings and the environment (Hart, 2022, p. 11). Yang presents the principles of ecological design in four sections: 1) Green ecological infrastructure: attention to natural habitats; 2) Grey infrastructure: utilizing new technologies in engineering; 3) Blue infrastructure: water management; 4) Human infrastructure: attention to culture (Hart, 2022, p. 13).

Ecosophy and the relationship between man and nature in the contemporary world

Therefore, ecosophy is not merely an ecological philosophy; it is a way of thinking about the destruction of nature and human relationships in contemporary society. By becoming aware of environmental degradation and social relationships, it places humans within the reality they experience and seeks answers and solutions to the problems identified. Ecosophy proposes that humans be analyzed integrally with the environment they inhabit through practical connections with their daily lives. According to Avila-Perez (1983), from a simple link in natural ecosystems, as a major predator, humans began to decisively influence the environment and gained the power to alter natural processes, including those regulating their own evolution. In this view, Mafessoli (2010) emphasizes that by expanding discussions on environmental issues from a philosophical perspective, humans enter a transitional phase—from being nature's predators to a desire to live in harmony with it. Thus, humans seek solutions to their relationship with the environment and move from a self-centered focus to a broader, multifaceted perspective. For Mafessoli (2017), ecosophy signifies a paradigm shift, where humans realize they are an inseparable part of the environment (Cavalcante, 2020, p. 166). Naturalism in architecture emphasizes that spaces should be designed dynamically and in interaction with the natural environment and humans. Tschumi states that architecture occurs as an event in space, and these events interact with both internal and external elements (khodaee et al, 2024,p. 81). Man can reach a proper understanding of his relationship with the architecture of his surroundings because he receives clues and signs by observing it and tries to give order to it with his information and memories and to formulate the whole environment. Therefore, a person is able to establish a relationship with the environment in which he lives, and his surrounding environment is also able to exchange information with him as an intermediary (Faregh et al., 1403, 161).

Nature and Physical development

Physical growth is often associated with the large muscles involved in major and strenuous movements such as running, jumping, and climbing. Through these activities, children become familiar with their bodies, recognize their abilities and limitations, and develop self-confidence by learning specific skills. The dynamic and potential characteristics of nature play a significant role in children's physical development by creating suitable conditions for various motor activities (Eslami,Taheri, 2016,p. 7).

Nature and psycho-social development

According to biological structures, the lack of a proper connection between humans and nature also affects their social relationships and temperament. Creating harsh, dry environments that are distant from nature and disrupting the inherent conditions of humans can lead to or exacerbate social issues. Managed nature is a significant part of human social interaction experiences, as evidenced by the widespread use of zoos and urban parks, and perhaps in the impact these parks have on human health and social functioning. Nature evokes a wide and complex range of human emotions and feelings, including wonder, satisfaction, pleasure, and undoubtedly other emotions such as challenge, fear, and anxiety.

humans to understand the relationships between things and the meanings of objects. This process takes place in the mind to such an extent that it appears simultaneous with sensation. Perception is the human awareness and knowledge of both the external world and the inner world. It has long been a topic of philosophical debate as a form of sensory cognition and identification. What is currently discussed in scientific psychology is sensory perception, which has a (biological-cognitive) foundation (Aflatounian, Panahi, 2023, p. 9). With the advent of technological science and the conquest of the world, and the emergence of the new human, a new world had been created. This world was not created by individuals, but rather a world adapted to human knowledge, power, and freedom. Maintaining relationships and interactions in this world required supervision and care. The human and social sciences were the supervisors and regulators of the modern world and modernity. "The new world, whose administration and order were entrusted to humanity, required psychology, law, sociology, anthropology, economics, and demography, among others. The need for human sciences in the developing world is greater. Thus, in this world, not only has more attention been paid to engineering sciences, but the humanities have not had the weight and credibility in the engineering aspect" (Maafi, 2013, p. 9). A brief overview of the development and expansion of environmental psychology and its connection with architectural design aims to introduce this new field (which has been in existence for more than three decades) to architects, urban designers, and landscape designers. Additionally, it is essential to introduce concepts in environmental psychology, such as environmental perception, behavioral settings, environmental meaning-making, human needs, environmental capabilities, and the meaning of the environment, which can be of particular importance to environmental designers. Discussions on the relationship between human behavior and the built environment, and the importance of understanding this relationship for design purposes (particularly in architecture and urban design), provide a general framework for analyzing the relationship between humans and the environment (Motlabi, 2013, p. 48). The science of psychology is the study of the reciprocal effects between humans and their environment (Shah Cheraghi, 2015, p. 19). Eco psychology, or environmental psychology of ecology, is a branch of psychology that examines the impact of the environment on human behavior and psychology. In architecture, Eco psychology refers to a set of principles and approaches aimed at creating physical environments that have a positive impact on human psychology and emotions. Research has shown that the environment significantly influences individuals' mood, creativity, vitality, and general state of being. Eco psychology, therefore, focuses on improving the quality of life and individuals' mental well-being. This approach has influenced architectural design by emphasizing human needs and desires, creating environments that respond to individuals' psychological needs. Eco psychology in architecture is applied through various factors such as light, sound, color, space, and scent. For example, using bright colors and decorative elements inside buildings and green spaces can help increase feelings of calmness and satisfaction. Architects can also use fountains, plants, and other natural elements both inside and outside buildings to improve air quality and cleanliness. Furthermore, parameters such as proper ventilation, the provision of emergency escape routes, and the creation of social spaces for interaction are also considered in architectural design with a focus on Eco psychology. The goal of this approach in architecture is to enhance individuals' mental and emotional health and improve their quality of life. This ensures that spaces and buildings are designed not to confine people to cold and damp environments like offices and factories, but to create environments that have a greater influence on concentration, general state of mind, and emotions.

Research method

Ecosophy in architecture

Ecopsophy is essentially an approach or philosophy in architecture that emphasizes the interaction and relationship between the environment and the building. According to this approach, architecture should be designed in such a way that buildings are harmoniously integrated with their surrounding environment and, rather than negatively impacting the environment, have a positive influence on it.

Chart2.
Ecosophy model

Ecopsophy typically focuses on principles of environmental sustainability in buildings, optimizing energy and resource consumption, utilizing natural environmental resources and recyclable materials, minimizing construction waste and residue, production and visitation processes, optimizing transportation methods, and aligning with regional classifications and local resources, among other factors. Ecopsophy encourages architects to pay greater attention to the impacts of construction on the environment and to propose solutions in the design and execution of buildings that are beneficial to both the environment and human health.

A case study of Ecosophy in architecture

Table3.
A case example in the contemporary era

Project introduction	Architectural features in the project	The image of the building
Memorial to the Murdered Jews of Europe Architect: Peter Eisenman Location: Berlin Year of Construction: 2005	• Urban Carpet • Unity in diversity and diversity in unity • The Odyssey and the profound human journey • Jewish cemetery	
Best Products Company Buildings Architect: City Corporation Location: Houston Year of Construction: 1975	• Part of the Montoya Palace • Painting of destruction on the wall • As Bruno Zevi says, "It is an unfinished poem."	
Philosophy Department, NYU Architect: Steven Holl Location: New York Year of Design: 2007	• Column of Light • Based on the flow of light, awareness from the philosophy professor to the students *Development of light and truth	

Table4.
A case example in the course of history

Project introduction	Architectural features in the project	The image of the building
Sheikh Lotfollah Mosque Architect: Sheikh Bahaʾal-Din Amuli Location: Isfahan, Iran Year of Construction: 1603–1619	• Floral tilework with turquoise and golden colors. • Natural lighting through ceiling skylights. • Double-shell dome with color change effects in daylight and natural ventilation. • Nature-inspired geometry with golden proportions and symmetry. • Harmonious with its surroundings: no minarets to maintain the unity of Naqsh-e Jahan Square.	
Takht-e Soleymān Architect: Built by order of Sasanian Kings Location: West Azerbaijan, Iran Period of Construction: Sasanian era	• Integration with the natural environment (located within a natural lake and harmonized with the surrounding landscape). • Organic design (large open spaces adapting to natural terrain). • Use of natural elements (water and fire as primary elements in religious rituals). • Connection with nature (design emphasizes respect for and harmony with the natural environment).	
Pantheon Temple Architect: During Emperor Hadrian's reign Location: Rome, Italy Year of Design: 118–125 AD	• Massive dome with an oculus symbolizing the sky (allowing natural light to enter). • Use of natural elements (light, space, and Roman concrete). • Geometric proportions (diameter and height are equal, creating balance). • Harmony with the environment (local materials, lightweight yet durable structure).	
Pyramids of Giza Architects: Fourth Dynasty of Ancient Egypt Location: Egypt Year of Construction: 2600 BC	• Astronomical orientation (aligned with the sun and stars). • Local materials (constructed from native limestone and granite). • Pyramid form inspired by mountains and natural stability. • Integration with the desert landscape.	
Ajanta Caves Architects: Buddhist monks and artisans Location: India Year of Construction: 2nd century BC	• Carved into natural rock without disturbing the environment. • Use of natural light (entrances positioned to optimize daylight). • Local materials (native stones function as part of the structure). • Nature-inspired paintings (depicting animals, plants, and daily life).	
St. George Church Architect: Emperor Lalibela Location: Ethiopia Year of Construction: 13th century AD	• Carved from a single rock without external materials. • Cross-shaped plan (resembles a Greek cross when viewed from above). • Natural lighting and ventilation through small openings. • Local volcanic stone as the primary material. •Minimal environmental impact (built without altering the surrounding terrain).	

Jewish Museum Architects: Studio Libeskind Location: Berlin Year of Construction: 1999	• Star of David • "One-Way Street" by Walter Benjamin • Symphony of Moses and Aaron by Arnold Schoenberg • Space of the Holocaust and exile • Jewish casualties on the map of Berlin • Contextualism	
Holocaust Memorial Architect: Studio Libeskind Location: Canada Year of Construction: 2017	• Star of David • Holocaust • Triangle of Fire •Historical contextual matrices	
Parc de la Villette Architect: Bernard Tschumi Location: Paris, France Year of Construction: 1987	• Michel Foucault's Doctoral Thesis, History of Madness • Pointing in James Joyce's novel • Evoking cinematic montages • Philosophical foundations of Deconstruction	
Plaza Landing Ross Park Architect: City Corporation Location: USA Year of Construction: 1992	• Increasing biodiversity and organic mass • Use of organic form • Evoking a sense of nature • Creation of pleasant air	
Edt Tower Architect: Ken Young Location: Singapore Year of Construction: 2005	• Increasing biodiversity and organic mass • Ecosystem restoration • Preservation, maintenance, and development only in non-impact areas	
House Eight Architect: BJR. Kengel (BIG) Location: Denmark Year of Construction: 2010	• Creation of a central courtyard in the shape of an English eight for sunlight usage and natural ventilation • Use of a sloping green roof to reduce urban heat and overlap with adjacent farms (contextualism)	
Mississauga Tower Architect: Ken Young Location: Malaysia Year of Construction: 1994	• Creation of shade and visual contrast between metal and aluminum surfaces • Use of flat concrete frame and covering of glass and metal combination • Evoking high-tech architecture	
Bosco Verticale Towers Architect: Stefano Boeri Location: Italy Year of Construction: 2014	• Creation of a vertical forest • Raising height to use various plant covers, including tall trees • Helping to improve urban air quality	
AG Building Architect: PLP Design Office Location: Netherlands Year of Construction: 2014	• Creation of a smart and green building • Creation of a corridor as the core of the building to create a visually comfortable and productive environment • Use of computer-controlled lighting system connected to solar cells	
ACROS Fukuoka Building Architect: Emilio Ambasz Location: Japan Year of Construction: 1995	• Creation of a series of terrace gardens • Babylonian Hanging Gardens-like gardens • Creating harmony between urban space and green, living nature	

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Table5.
Examination of Ecological Characteristics of Ecosophy in Architecture

Ecosophy Features in Architecture (Ecology)	
Feature	**External Manifestation in Architecture**
Use of Renewable Resources	Ecosophical architecture focuses on utilizing renewable resources such as solar, wind, water, and biomass to generate energy, electricity, and heat needed for buildings
Designing Buildings with Consideration for Human Needs and the Environment	In ecosophical architecture, buildings are designed based on human needs while preserving the environment. This includes using natural resources like light and air to optimize comfort and indoor air quality
Energy Efficiency	This type of architecture prioritizes optimal energy utilization, incorporating solar systems, solar panels, rainwater collection systems, and smart systems to manage and reduce energy consumption.
Use of Recycled Materials	Ecosophical architecture employs recycled and recyclable materials in construction. This may include recycled materials such as scrap metals, concrete, glass, stone, and reclaimed wood.
Green Space Design	Special attention is given to designing green spaces both inside and outside buildings. This includes rooftop gardens and green walls, which not only enhance aesthetic appeal but also provide shade and contribute to cooling the environment.

Architects and architectural designers try to reduce the effects of negative environmental impacts by utilizing ecological designs and techniques and contribute to environmental achievements. In other words, Ecosophy Ecology seeks to move toward environmental sustainability and natural resource efficiency while also considering human development. Ecosophy psychology refers to humans' interest and inclination toward connecting with nature and protecting it. This concept is also applied in Ecosophy architecture, where psychological principles are considered in designing residential and workspaces to improve mental and physical health in connection with the natural environment. Below, the key psychological aspects of Ecosophy architecture are examined:

Table6.
Examination of Environmental Psychology Features in Ecosophy Architecture

Ecosophy Features in Architecture (Environmental Psychology)	
Ecosophy Psychology Feature in Architecture	**External Manifestation in Architecture**
Connection with Nature	Designing spaces that establish a direct and close connection with natural elements such as trees, water, sunlight, and wind has a positive impact on mental health. This approach instills a sense of calm and comfort in residents and users, ultimately contributing to their psychological well-being.
Use of Natural Colors	The interior and exterior design of Ecosophy buildings incorporates natural colors such as green, blue, and brown. These colors convey a sense of tranquility and natural harmony to residents.
Use of Natural Light	Maximizing the use of natural light is a key focus in Ecosophy architecture. Natural light enhances brightness and cleanliness in spaces and has a positive psychological effect on individuals' moods.
Open Spaces	Ecosophy architecture emphasizes open spaces. These spaces provide opportunities for residents to interact with nature and benefit from psychological advantages such as stress reduction, increased creativity, and improved focus.
Use of Natural Materials	Ecosophy architecture incorporates natural building materials such as wood and stone. These materials enhance the aesthetic appeal of buildings while fostering a stronger connection with nature.

Alhambra Palace Architects: Nasrid rulers Location: Spain Year of Construction: 13th–14th centuries AD	•Built on a hill, blending with the environment •Lush gardens (with pools and fountains in Generalife). •Water as a key element (streams and ponds for beauty and cooling). •Natural lighting and ventilation (arcades and lattice windows for airflow). • Nature-inspired decorations (tilework and plaster carvings with floral motifs).	
Ronchamp Chapel Architect: Le Corbusier Location: France Year of Construction: 1950–1955	• Organic form (wavy roof inspired by nature). • Site interaction (harmonious with the hill's topography). • Natural lighting (mysterious, irregular openings). • Raw materials (exposed concrete with a natural texture). • Integrated structure with the ground (thick, solid walls). • Inspired by vernacular architecture (resembling traditional regional structures)	
Ancient City of Machu Picchu Architects: Skilled local workers Location: Peru Year of Construction: 15th century AD	• Harmony with the environment (built within mountains and natural landscapes). • Use of local carved stones. • Water and green spaces, irrigation channels, and terraced gardens. • Organic design (utilizing natural landforms in the structure).	
Ancient City of Petra Architects: Skilled local workers Location: Jordan Year of Construction: 6th century BC	• Carved into the cliffs (structures cut into granite rocks). • Harmony with the environment (architecture blending with the land and surroundings) • Use of natural resources (water storage in stone reservoirs). • Organic design (roads and pathways adapting to the terrain)	

Conclusion

Ecosophical architecture is a sustainable architectural approach designed to modify land use, preserve natural resources, and create healthy and environmentally friendly spaces. The ecological characteristics of Ecosophical Architecture include: Ecosophy Ecology is a concept in architecture that refers to the production of buildings and spaces that are in harmony and highly compatible with the environment. This idea is based on the fact that buildings and urban spaces should actively contribute to the environment and its sustainability while at the same time providing the most appropriate responses to social and cultural needs.

Chart3.
Ecosophy features in architecture

Data Availability

TThe data underlying the results presented in this paper are not publicly available at this time but may be obtained from the corresponding authors upon reasonable request.

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Conflict of Interest

The results obtained in this research do not conflict with any individual or organization.

Authors' Participation

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Table7.
Examination of Ecosophy Philosophy Features in Architecture

Ecosophy Features in Architecture (Philosophy)	
Ecosophy Philosophical Feature in Architecture	**External Manifestation in Architecture**
Sustainability	Ecosophy architecture places a strong emphasis on sustainability. This design model defines buildings that utilize natural resources, reduce energy consumption, and preserve the environment.
Alignment with the Environment	Ecosophy architecture focuses on human interaction with the environment. This design approach deepens the connection between humans and nature by using natural and cost-effective materials, thereby minimizing negative environmental impacts.
Respect for History and Culture	As a response to contemporary architectural challenges, Ecosophy architecture highly values respect for history and culture. It aims to strengthen the connection with the land and local communities by integrating traditional and regional elements.
Heat and Lighting Efficiency	Ecosophy architecture optimizes the use of natural resources for heating and lighting. By incorporating curtain designs, smart roofs, and intelligent glass systems, this approach helps reduce energy consumption for cooling and heating buildings.
Deepening Human-Nature Connection	Ecosophy architecture enhances the human connection with nature. Examples include using natural materials such as wood and stone, creating open spaces, and preventing pollution from entering buildings.

Thus, the philosophical characteristics of Ecosophy architecture include sustainability, environmental alignment, respect for history and culture, efficient heat and lighting management, and deepening the human-nature connection. These features emphasize intelligent use of natural resources, environmental conservation, and improving people's quality of life.

Ecopsophy in architecture includes several approaches and principles, which are as follows:

1. Designing green and sustainable buildings that utilize natural resources, renewable energies, and energy-saving methods, all of which contribute to environmental preservation.

2. Minimizing pollutants and the negative impacts of buildings on the environment.

3. Repairing and improving natural and sustainable landscapes.

4. Using sustainable and recyclable materials in construction.

5. Integrating cultural identity and the natural environment in the design and buildings.

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