

ORIGINAL

Minimalism as Architectural Language: Reinterpretation and Adaptation in Modern Design

El Minimalismo como Lenguaje Arquitectónico: Reinterpretación y Adaptación en el Diseño Moderno

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ABSTRACT

Introduction: the article aims to examine the main theories, approaches and practices related to minimalism in architecture, from its historical origins to contemporary trends. It seeks to explore the aesthetic, functional and emotional benefits of minimalism, as well as the challenges associated with its application in various architectural contexts.

Method: the methodology employed is a comprehensive narrative review of the existing scientific literature on minimalism in architecture. Several databases were consulted, such as Archidaily, Google Scholar, Scielo and the Journal of Architectural Lighting, using specific terms and Boolean operators to refine the search. The period covered by the review included articles published between 2020 and 2023, and at the end, 11 articles relevant to the study were identified.

Results: the article results indicate that minimalism allows for the reduction of the superfluous, allowing spaces to speak for themselves and highlight the beauty of materials and functionality. This fosters a deeper connection between humans and their environment, making it a meaningful response to contemporary challenges. In the practical context, it is suggested that architects and urban policy makers consider minimalism as a key approach to creating livable spaces that promote sustainability and well-being.

Conclusions: the main conclusions of the article include: minimalism in architecture is not only an aesthetic trend, but also a way of life that contributes to visual clarity and emotional calm.

Its practice can improve quality of life by optimizing the use of space and fostering an environment that promotes reflection and introspection. Integrating minimalist principles into architecture can result in more functional and pleasant environments, helping to create a more balanced and harmonious world.

Keywords: Minimalism; Architectural Language; Reinterpretation; Adaptation; Modern Design.

RESUMEN

Introducción: el artículo tiene como objetivo examinar las principales teorías, enfoques y prácticas relacionadas con el minimalismo en la arquitectura, desde sus orígenes históricos hasta las tendencias contemporáneas. Busca explorar los beneficios estéticos, funcionales y emocionales del minimalismo, así como los desafíos asociados a su aplicación en diversos contextos arquitectónicos.

Método: la metodología empleada es una revisión narrativa exhaustiva de la literatura científica existente sobre el minimalismo en la arquitectura. Se consultaron diversas bases de datos, como Archidaily, Google Académico, Scielo y el Journal of Architectural Lighting, utilizando términos específicos y operadores booleanos para refinar la búsqueda. El período abarcado por la revisión incluyó artículos publicados entre

2020 y 2023, y al finalizar, se identificaron 11 artículos relevantes para el estudio.

Resultados: los resultados del artículo indican que el minimalismo permite reducir lo superfluo, lo que permite que los espacios hablen por sí mismos y resalten la belleza de los materiales y la funcionalidad. Esto fomenta una conexión más profunda entre el ser humano y su entorno, convirtiéndose en una respuesta significativa a los retos contemporáneos. En el contexto práctico, se sugiere que arquitectos y responsables de políticas urbanas consideren el minimalismo como un enfoque clave en la creación de espacios habitables que promuevan la sostenibilidad y el bienestar.

Conclusiones: las principales conclusiones del artículo incluyen: el minimalismo en la arquitectura no es solo una tendencia estética, sino también un modo de vida que contribuye a la claridad visual y la calma emocional. Su práctica puede mejorar la calidad de vida al optimizar el uso del espacio y fomentar un ambiente que promueva la reflexión y la introspección.

Integrar principios minimalistas en la arquitectura puede resultar en entornos más funcionales y agradables, ayudando a crear un mundo más equilibrado y armonioso.

Palabras clave: Minimalismo; Lenguaje Arquitectónico; Reinterpretación; Adaptación; Diseño Moderno.

INTRODUCTION

Minimalism seeks to improve people's quality of life by eliminating unnecessary elements.⁽¹⁾ It is an approach that has gained tremendous popularity in modern architectural design due to its ability to fuse functionality and aesthetics, promoting simplicity and harmony in spaces.⁽²⁾ A study adds that the fundamental elements of minimalism in architecture are geometry, compositional organization, and precision in its application. The goal is to create a sense of spaciousness and visual clarity in buildings. For some, minimalism offers a way to escape the chaos of the outside world, providing calm and serenity when arriving home.⁽³⁾ Wincho et al.⁽¹⁾ mention that it is not just a style but a way of life since people are mainly looking for a simple and peaceful space to find happiness. All the elements associated with this style have sought to be minimalist today to reduce the impact on the planet as much as possible.⁽⁴⁾

In Europe, minimalism also left a strong mark, especially in Nordic regions such as Denmark, Iceland, and Norway, where its influence was felt particularly strongly. The 9/11 Memorial in New York is an abstract and minimalist work highlighting the Twin Towers' absence and the void they left behind, preserving their traces. Designed by architect Michael Arad, this space is conceived as a theater of memory at the site of the tragedy. Arad reflects on its ability to unite people while providing each visitor with a moment of "intimate isolation".⁽⁵⁾

In Peru, it is said that during the period of modernization in the early 20th century, minimalism was potent in various fields, as it is today.⁽⁶⁾ In our country, the artistic sphere has few large-scale facilities adequately equipped for the exhibition of art and, to a lesser extent, institutions specializing in professional training in art. The most prominent of these institutions is the Escuela Nacional Superior Autónoma de Bellas Artes del Perú (National Autonomous School of Fine Arts of Peru), which seeks to develop an innovative architectural image that invites not only observation but also reflection to improve the mental experience by relating architecture and art. It aims to expand society's perception of art and minimalism in architecture.⁽⁷⁾

This narrative review article examines minimalism's main theories, approaches, and practices in architecture, from its historical origins to contemporary trends. A literature review will explore the aesthetic, functional, and emotional benefits of minimalism and the challenges associated with its application in various architectural contexts. In addition, we will discuss how the philosophy of minimalism, from an architectural perspective, can contribute to sustainable design by optimizing the use of space and improving inhabitants' quality of life through simplicity and efficiency.

The article is justified in a context in which urban life is becoming increasingly complex and congested. Minimalism in architecture offers a response to the need for more orderly, functional, and pleasant spaces. By exploring how minimalism can improve inhabitants' quality of life through simplicity and efficiency, this article contributes to a greater understanding and appreciation of an approach that may be crucial for social well-being in dense urban environments.

The study of minimalism's theories and practices over time, as well as its contemporary applications, establishes a solid foundation for understanding its principles and effects in architecture. This methodological approach facilitates the identification of patterns, advantages, and difficulties, offering a comprehensive and well-founded perspective on minimalism that is useful for both researchers and design professionals.

Reviewing trends and applications of minimalism in architecture can offer valuable guidance for professional practice. By highlighting how minimalism can contribute to sustainability and space optimization, the article provides practical tools and examples that can be applied in design projects, helping architects and planners to create more functional and aesthetically pleasing spaces.

METHOD

A comprehensive narrative review was conducted to explore the existing scientific literature on minimalism in architecture, consulting databases such as Archidaily, Google Scholar, Scielo, and the Journal of Architectural Lighting. To refine the search, terms such as “minimalism,” “design,” and “architecture” were used. Boolean operators AND and OR were applied to refine and broaden the scope. The search period covered articles published between 2020 and 2023, considering texts in Spanish and English and excluding manuscripts such as case reports, interviews, and theses with less empirical focus. Initially, 50 articles were identified; 30 came from Google Scholar, five from Archidaily, and 15 from Scielo. After removing some duplicates, eight articles that did not align with the study objective and nine that did not meet the inclusion criteria were excluded. As a result, a final corpus of 11 articles relevant to the review was obtained.

RESULTS

Minimalism seeks to emphasize the main information of each piece and, in turn, show the functionality of what is being communicated.⁽⁸⁾ It also offers valuable insight into how minimalist architecture can be adapted to different contexts and requirements, driving the progress of contemporary architectural design.^(9,10,11)

LENGUAJE LIBRE	TÉRMINO MESH
Arquitectura minimalista	Minimalist architecture
Minimalismo en construcciones	Minimalism in construction
Minimalismo impacto	Minimalism impact

Figure 1. Procedure for finding, selecting, and incorporating articles into the research

	Número de estudios
Año de publicación	
2020	2
2021	2
2022	1
2023	5
2024	1
Diseño	
Investigación	3
Fundamentado	1
Estudio de Caso	2
Exploratorio	2
Analítico	3
Lugar de estudio	
Dinamarca	1
Islandia	1
Noruega	1
Asia	1
Perú	1

Figure 2. Characteristics of the included studies

Minimalism as an Aesthetic and Functional Response In their study, Wincho et al.⁽¹⁾ analyze how minimalist architecture contributes to visual clarity and functionality in beach houses in Punta Hermosa. Using a quantitative approach, they show that minimalism improves the aesthetics of homes and optimizes space, allowing for more significant interaction between the natural environment and the living space. This approach highlights how simplicity in architectural design can create more sustainable and pleasant environments.

Minimalism and Human Health: Integrating Nature Radha⁽²⁾ highlights how biophilic design, closely related to minimalism, improves users’ health and well-being by integrating nature into built spaces. The study highlights the importance of minimalist elements such as natural light and ventilation, which optimize energy efficiency and promote psychological restoration, creating an environment that reduces stress and fosters emotional comfort.

Autor(es)	Título	Año	Url/DOI	Resumen
Stefany, S., Y Chilquillo, W.	Arquitectura minimalista y el diseño y construcción de las casas de playa en Punta Hermosa, 2023	2023	https://acortar.link/BfPcEU	El objetivo de esta investigación fue analizar la relación entre la arquitectura minimalista y el diseño de casas de playa en Punta Hermosa en 2023. Se utilizó un enfoque cuantitativo con un diseño no experimental correlacional, y la población consistió en 50 profesionales (arquitectos y expertos) sin muestreo. Se aplicó una encuesta con cuestionarios para cada variable, utilizando una escala ordinal de Likert. El análisis con el estadístico Rho de Spearman mostró una fuerte correlación entre ambas, con una validez del instrumento verificada por un metodólogo y dos expertos, obteniendo una fiabilidad de 0,831 y 0,896.
Radha, C. H	Biophilic Design Approach for Improving Human Health in the Built Environment	2022	https://acortar.link/ufG4CP	El diseño biofílico mejora los entornos construidos al evocar la naturaleza, reduciendo el estrés y favoreciendo la restauración psicológica. Este estudio revisó prácticas biofílicas en edificios públicos, hogares y lugares de trabajo, destacando que elementos como luz natural, ventilación y arquitectura viva mejoran la salud y el bienestar.
Giuseppe Barbiero · Rita Berto · Alice Venturella · Nicola Maculan1	Bracing Biophilia: When biophilic design promotes pupil's attentional performance, perceived restorativeness and affiliation with Nature	2021	https://acortar.link/Pe2Xhw	El estudio "Bracing Biophilia" evalúa el impacto de entornos educativos biophilic en el rendimiento atencional y la conexión con la naturaleza en estudiantes. Se compararon aulas convencionales y biophilic, usando escalas de percepción en tres años. Los resultados mostraron que los entornos biophilic son preferidos y mejoran el rendimiento y la conexión natural.
Trachana y Serbanoiu,	Violence, memory and architecture. The memory-objectification approach into space of the last century's violent events	2020	https://dx.doi.org/10.5209/aris.63557	El artículo examina el minimalismo arquitectónico en memoriales de eventos trágicos, como Yad Vashem, destacando su capacidad para evocar reflexión y conexión con la memoria. Utilizando un enfoque multidisciplinario, se argumenta que estos espacios, al ser abstractos y polisémicos, promueven la reflexión sobre violencia e injusticia, permitiendo diversas interpretaciones.

Figure 3. Articles consulted

Minimalism in Educational Environments The study by Barbiero et al.⁽³⁾ examines the application of biophilic design in educational environments and how this approach, which shares principles with architectural minimalism, improves attentional performance and emotional connection with nature. The results indicate that minimalist and biophilic environments are preferred by students and improve both their performance

and well-being. This approach highlights the potential of minimalism to create functional spaces that foster concentration and emotional connection.

Minimalism as a Language of Memory in Memorial Spaces The work of Trachana et al.⁽⁵⁾ analyzes how architectural minimalism is used in memorials and commemorative spaces to evoke reflection on tragic events, such as at Yad Vashem. Being abstract and polysemic, these spaces allow for multiple interpretations, fostering a deeper and more meaningful experience for visitors. Minimalism here is not only used as a visual language but as a means to connect emotionally with history and collective memory.

Minimalism and Sensory Perception Morales de Vega⁽⁸⁾ explores how minimalism influences the relationship between the observer and space, from a conscious gaze to a more emotional and unconscious perception. The study highlights how minimalism reduces visual and sensory stimuli and allows for a greater introspective and emotional connection with the environment. This reduction of superfluous elements affects aesthetics and enhances the sensory experience, promoting a deeper interaction with the architectural space.

CONCLUSIONS

The studies reviewed show that architectural minimalism goes beyond a simple aesthetic trend; it is an architectural language that favors simplicity, functionality, and emotional connection with the environment. Its application in various contexts, from homes to educational and commemorative spaces, demonstrates how minimalism can improve both the human experience and the performance of spaces. In modern design, minimalism responds to a demand for sustainability and plays a crucial role in creating environments that promote health, well-being, and deep reflection.

Minimalism, as an adaptive and interpretive approach to architecture, continues to evolve. It demonstrates its ability to respond to contemporary challenges by creating livable spaces that favor users' physical and emotional comfort.

Minimalism in architecture is not limited to a simple aesthetic trend but has become a philosophical approach that seeks a deeper connection between the environment and human beings. This approach promotes simplicity in form and the efficient use of materials, eliminating the superfluous and focusing only on the essentials. Beyond visual appearance, minimalism in architecture seeks to create spaces that promote mental clarity, allowing occupants to enjoy an environment free from unnecessary distractions.

By optimizing the use of space and reducing clutter, an environment that favors emotional calm and well-being is promoted. The absence of unnecessary elements in interiors creates a sense of tranquility, ideal for reflection and introspection. Such spaces can be especially beneficial in an increasingly hectic world, providing a refuge where people can find peace and concentration.

Furthermore, the integration of minimalist principles into architecture not only improves the functionality of spaces but also promotes greater sustainability. By reducing the use of materials and simplifying structures, the environmental impact of buildings is minimized. In this way, minimalist architecture seeks visual and emotional beauty and contributes to creating a more balanced and harmonious environment.

In conclusion, incorporating minimalism into architecture has positive effects on quality of life and can have a lasting impact on how people interact with their environment. Simplicity in architectural design facilitates functionality and promotes a more serene, conscious, and environmentally friendly lifestyle.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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