

Modern Architecture: Reading Signs and Symbols in a Technological Environment

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ABSTRACT

In an era where technology continues to develop rapidly, modern architects are faced with the challenge of creating buildings that are not only aesthetically pleasing, but also able to communicate with their occupants through an effective visual language. This research aims to explore an in-depth understanding of how modern architecture interacts with the technological environment through the use of signs and symbols. This research method involves literature analysis to investigate the role of signs and symbols in modern architecture using a qualitative approach. The research results show that the use of signs and symbols in modern architecture, especially in the context of a technological environment, has a significant impact. Signs and symbols not only function as visual communication tools, but also as aesthetic elements that can increase the artistic value of a building. Through intelligent integration, symbols form a visual identity, create a sense of connection with technological advancements, and provide an immersive, holistic experience for residents. The implication is that the wise use of signs and symbols can guide architectural designers in creating buildings that not only combine aesthetics and technology, but also provide deeper meaning and value for the people who inhabit the building.

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INTRODUCTION

Modern architecture, as opposed to classical architecture, marks a paradigm shift in the approach to building design. In this context, the main focus of modern architecture is on processing space as the main object, creating structures that appear simpler and cleaner (Dharma, 2012). The basic principles of modern architecture include two key elements, namely functionality and efficiency. Functionality in modern architecture demands that the building must be able to accommodate all activities that occur within it (Cahyani & Sari, 2020). The design carefully considers the needs of the occupants, so that the resulting spaces are not only aesthetically beautiful, but also function optimally to support various activities. This concept encourages creativity in arranging space so that each element has a clear and effective role (Mudeng & Siswanto, 2012).

Meanwhile, the principle of efficiency in modern architecture refers to the wise use of resources, be it time, costs or maintenance (Arvian & Subekti, 2012). Modern building design is based on the idea that every element should serve a specific purpose and no element should be considered superfluous. This brings the concept of order and simplicity which is realized in the form of a minimalist but effective design. Modern architecture not

only creates aesthetic buildings, but also meets the practical needs of its residents (Wicaksono, 2020). A deep understanding of the relationship between form and function, as well as efforts to achieve efficiency in all aspects, makes modern architecture a dynamic and relevant design expression in facing the demands of the times (Lake et al, 2019).

Modern Architecture began its journey by exploring the influence of two significant art movements, namely Art Nouveau and Art Deco (Arwas, 1996). Art Nouveau made a major contribution by showcasing the beauty of natural plasticity, combining organic elements and creating flowing and harmonious designs. This style emphasizes unique organic forms inspired by nature, creating an environment that reflects natural beauty (Becker, 1997). The journey of Modern Architecture further received the influence of Art Deco, which specifically expressed human admiration for technological advances and modern lifestyles. Art Deco emphasized bold geometric shapes, clean lines, and the use of modern materials such as glass and metal. This style reflects the spirit of innovation and progress, creating futuristic and luxurious designs (Striner, 1990).

These two influences were then integrated into architectural media, art and lifestyle, creating the foundation for the development of Modern Architecture (Pawitro, 2010). In architecture, the manifestation of these concepts can be seen in building designs that are cleaner, simpler, and use the latest technology (Gunawan & Prijadi, 2011). Modern fine arts and lifestyle have also adopted these principles, creating an era where aesthetics and functionality are interrelated to create an environment that combines beauty with technological progress (Fadilasari, 2019). Modern Architecture, as a result of this journey, continues to inspire the world of design with an outlook that continues to evolve and adapt to changing times.

The rapid growth of technology has changed the face of modern architecture, introducing new elements that reflect the close relationship between building design and technological innovation (Gartiwa, 2006). The shift from classical architecture to modern architecture began with the influence of the organic aesthetics of Art Nouveau and the technological expressions of Art Deco. These two influences paved the way for the integration of natural beauty and admiration for technological progress in architecture. Today, modern architecture not only pursues clean and simple aesthetics, but also utilizes technology as a creative tool to create a more efficient, responsive and intelligent built environment (Rasikha, 2009).

In the context of the technological environment, modern architecture continues to undergo transformation. The integration of innovative materials, such as glass and metal, allows the creation of lighter and more transparent structures (Hatta et al, 2023). Smart building systems, with intelligent sensors and automated management, are becoming the norm in modern architectural design (Erdiono, 2012). These developments reflect not only the need for energy efficiency and security, but also the aspiration to create spaces that are responsive to the needs of their occupants (Laurens, 2003). Thus, modern architecture in a technological environment is not only the result of design evolution, but also a manifestation of how technology shapes and is integrated into built structures.

This research aims to explore the role and influence of signs and symbols in modern architecture, especially in the context of the technological environment. The main goal is to understand how these elements can be effectively integrated in modern building designs

that demand a balance between aesthetics and technology. By identifying successful design strategies, this research seeks to contribute to a deeper understanding of how modern architecture can read and respond to signs and symbols in the technological age. Its benefits lie in its potential to guide architectural practitioners, designers, and other stakeholders in creating built environments that are more meaningful, efficient, and connected to contemporary technological changes.

METHOD

The research method used in this research is a descriptive research method with a qualitative research approach. Qualitative research method is a research method based on the philosophy of postpositivism, used to research the conditions of natural objects, (as opposed to experiments) where the researcher is the key instrument, data collection techniques are carried out triangulation (combined), data analysis is inductive/qualitative, and the results of qualitative research emphasize meaning rather than generalization (Sugiyono, 2011). The researcher chose to use a descriptive research method with a qualitative approach. It is hoped that more complete, in-depth, and meaningful data and information will be obtained, so that the research objective of how modern architecture interacts with the technological environment through the use of signs and symbols can be achieved. According to Sugiyono (2011) that "in qualitative research, the instrument is a person or human instrument, namely the researcher himself." For this reason, in collecting data in this research, the main instrument is the researcher himself. Then, after the research focus becomes clear, a research instrument is developed which is expected to complement and compare the data with data that has been found through interviews and observation or documentation. The research instrument uses an interview guide that has been prepared to facilitate the implementation of the research.

RESULT AN DISCUSSION

The Role and Influence of Signs and Symbols in Modern Architecture, Especially in the Context of the Technological Environment:

Visual Communication

Signs and symbols play a central role in forming visual communication systems in modern architecture, especially in environments supported by advanced technology. They function as a universal language that can quickly and efficiently convey information to building occupants or users. For example, on a smart control panel, intuitive symbols describe certain functions such as lighting, temperature or security. Users can easily identify and understand these operations without requiring complicated explanations. Thus, the use of signs and symbols is key in creating a user-friendly and effective interface.

Visual communication through signs and symbols not only simplifies the occupant experience, but also contributes to the effectiveness and harmony of modern architectural design. Designers can integrate these symbols organically into structural elements, creating a harmonious aesthetic balance. The use of technology-related symbols also supports the overall theme of the building, creating a visual identity closely linked to progress and innovation.

More than just a communication function, the use of signs and symbols extends to the dimensions of the occupant's experience. In modern architecture, symbols are not only practical guidelines, but also aesthetic elements that can increase visual appeal. By combining attractive design with technology-related symbols, the building creates a dynamic and relevant environment. This brings a new dimension to the relationship between occupants and space, creating a more meaningful experience and connecting with today's technological developments.

Instructions for Using Technology

Symbols found on smart control panels or security systems play a central role in providing visual cues that guide occupants in operating and understanding the functions of technology integrated within the building. In this context, smart control panels often become the control center for various aspects of daily life, such as lighting, temperature, security and other smart devices. The symbols used on these panels are carefully designed to create an intuitive interface, where occupants can easily recognize and interact with the features.

Each symbol on a smart control panel has its own meaning associated with a specific technological function. For example, a temperature icon could represent a cooling or heating setting, while a padlock image could represent a security setting. By involving the occupant in the process of using these symbols, the smart control panel becomes a tool that is not only technically functional, but also creates a positive interactive experience.

More than just providing guidance, these symbols also play a role in increasing residents' technological literacy. By continuing to present symbols that are consistent and easy to understand, residents can become more skilled in understanding and utilizing the technology in their environment. Therefore, in modern technology-enabled architecture, symbols on smart control panels are not just design elements, but also practical tools that contribute to ease of use and understanding of technology within the building.

Visual Identity Formation

Signs and symbols play a significant role in shaping the visual identity of a building, providing artistic dimensions and symbolic messages. In the context of modern architecture, the use of signs and symbols is not just about the function of communication, but also penetrates into the realm of deep creative expression. Each carefully selected symbol not only conveys information, but also creates a unique identity related to the technological innovation or values you wish to emphasize.

The visual identity resulting from signs and symbols on a building creates an impression that can evoke a sense of identity and the desired image. For example, the use of symbols of advanced technology can create a futuristic and modern impression, while symbols of nature or sustainability can emphasize a commitment to ecological values. The choice of these symbols helps build a visual narrative that supports the design concept and purpose of the building.

Furthermore, the visual identity produced through signs and symbols is able to provide a strong message related to the unique characteristics of the building. Whether it emphasizes innovation, sustainability, or certain values, the use of signs and symbols becomes an effective means of communication to express the vision and identity of an architectural project. Thus, in modern architecture which focuses on the values of

technology and innovation, signs and symbols are not only visual communication tools, but also design elements that build visual identity and deep messages.

Aesthetic Aspect

Signs and symbols are not only communication tools that function to convey information, but are also aesthetic elements that can provide significant artistic value to a building in modern architectural design. In their use, signs and symbols can become decorative elements that decorate building facades or even strengthen the overall design theme.

The selection and placement of certain symbols can create an attractive and harmonious visual composition, which not only plays a role in conveying the message, but also provides overall visual beauty. These symbols can be focal points or attention-grabbing elements, adding an artistic dimension to basic architectural elements.

Apart from that, signs and symbols can also be used to form cohesive artistic motifs or patterns in building design. For example, symbols that are repeated regularly can create a visual rhythm or order that blends with a modern aesthetic. The use of signs and symbols not only serves a decorative function, but also provides elements of beauty that support the aesthetic quality of the building as a whole.

In this way, signs and symbols become more than just a means of communication or identification; they also contribute to the achievement of artistic value that can increase the attractiveness and uniqueness of a building in the realm of modern architectural design. By combining communicative and aesthetic functions, signs and symbols create visual harmony that enriches the aesthetic experience of building occupants and observers.

Introduction of Certain Values or Messages

Certain symbols not only function as decorative elements or visual communication, but can also be implemented strategically to introduce certain values or messages related to technological advances in a building. The use of symbols in this context can be a symbolic language that implies deep meaning related to innovation, progress and technological values promoted by the building.

Symbols that reflect advanced technology, such as icons representing artificial intelligence, renewable energy sources, or sustainability concepts, can be arranged in a way that creates a powerful visual narrative. Thus, these symbols become more than just decorative elements; they become a driving force for conveying the philosophical message or values promoted by the building.

Recognizing these values through symbols can trigger thinking and awareness in residents or visitors regarding the role of technology in building design and sustainability. For example, a charged battery symbol may refer to sustainability and energy efficiency efforts, while a binary code chain symbol may depict the presence of information technology underlying a building's function. By designing these symbols carefully, architectural designers are able to depict the essential values and philosophical messages they want to convey through visual elements in modern architecture. Thus, symbols become a powerful means of conveying meaning and inspiring deep interpretations related to technological advances and the values contained therein.

Improved Holistic Resident Experience:

The strategic use of signs and symbols in modern architectural design plays a crucial role in enhancing the holistic experience of residents and deepening the relationship between technological elements and architectural aesthetics. Signs and symbols not only function as visual clues or identification, but also become design elements that embrace the overall occupant experience. In creating an evocative atmosphere, symbols can be arranged and arranged in a way that creates a visual narrative that intelligently engages the occupants.

The use of symbols can provide a deeper emotional dimension related to technology within the built space. For example, an open door symbol can convey a message about technological access and openness, creating a bond between residents and the ease of use of smart devices. In this way, signs and symbols not only function on a practical level, but also penetrate into the realm of the occupants' psychological and emotional experiences, enriching the level of involvement and understanding of the occupied space.

Careful use of signs and symbols also supports harmonious integration between technological elements and overall architectural design elements. By designing symbols that are in harmony with the overall aesthetic and theme of the building, designers create a close connection between the presence of technology and architectural elements. This not only enhances practical functionality, but also creates a memorable experience that allows residents to feel the extent to which technology coexists with design to create a comfortable and dynamic environment.

Thus, the strategy of using signs and symbols in modern architectural design is not just a decorative element or visual clue, but a foundation that changes the holistic experience of residents. In a world dominated by technology, symbols become a kind of visual language that connects aesthetic and technological elements. They are not just functional or identification markers, but also a medium for conveying deep messages and values.

In modern architecture, symbols take on the role of visual glue that unites design concepts and technology, creating a harmonious whole. These symbols play an important role in shaping the visual identity of a building, marking the connection between the values promoted by the architect and the technological advances applied. In this way, symbols become more than just design elements; they become emotional drivers that provide depth and meaning to residents.

As a visual language, these symbols open the door to richer interpretations and experiences. In a fusion of aesthetics and technology, they create a space where residents can experience harmony between visual beauty and technological comfort. By connecting these diverse elements, symbols in modern architecture not only create physically beautiful buildings, but also provide experiences that make an impact and add value to those who inhabit them.

CONCLUSION

This research reveals that the use of signs and symbols in modern architecture, especially in the context of a technological environment, has a significant impact. Signs and symbols not only act as visual communication tools, but also as aesthetic elements that can

increase the artistic value of buildings. By emphasizing visual identity, symbols are able to create impressions and messages related to technological advances and the values to be conveyed. This research also highlights that symbols have a deeper role, not only as an introduction to technological values in buildings, but also as unifying diverse elements to create a holistic experience for residents. The intelligent integration of aesthetics and technology through symbols forms the basis for creating dynamic and meaningful environments. Thus, the strategic use of signs and symbols in modern architectural design can have a positive impact on the visual identity, artistic value and holistic experience of residents. The implications of these findings provide valuable guidance for architectural practitioners in designing buildings that not only reflect technological advances, but also present harmony between aesthetic and technological aspects. By understanding the role of symbols in shaping experience and meaning, designers have the potential to create buildings that are more meaningful and relevant in the ever-evolving era of modern architecture.

REFERENCES

1. Arvian, N., & Subekti, B. (2021). Penerapan Konsep Arsitektur Modern dalam Rancangan Mall di Kota Baru Parahyangan. *FAD*, 1(1).
2. Arwas, V. (1996). *The Art of Glass: Art Nouveau to Art Deco*. Papadakis Publisher.
3. Becker, G. F. (1997). *Art nouveau*. Konemann.
4. Cahyani, M., & Sari, Y. (2020). Kajian Arsitektur Modern Pada Bangunan Pusat Mode. In *Seminar Nasional Komunitas dan Kota Berkelanjutan* (Vol. 2, No. 1, pp. 124-130).
5. Dharma, A. (2012). Unsur Komunikasi dalam Arsitektur Post-Modern. *Fakultas Teknik dan Perencanaan. Universitas Gunadarma*.
6. Erdiono, D. (2012). Arsitektur 'Modern'(Neo) Vernakular di Indonesia. *Sabua: Jurnal Lingkungan Binaan dan Arsitektur*, 3(3).
7. Fadilasari, D. (2019). Analisis Penerapan Art Deco Pada Rumah di Bandung Periode Perang Dunia I-II Studi Kasus: Tiga Villa dan Perumahan Dosen UPI. *Jurnal Arsitektur*, 9(2), 1-6.
8. Gartiwa, M. (2006). Polarisasi Arsitektur Modern dan Post Modern.
9. Gunawan, D. E. K., & Prijadi, R. (2011). Reaktualisasi Ragam Art Deco Dalam Arsitektur Kontemporer. *Media matrasain*, 8(1).
10. Hatta, A. J., Hasriyanti, N., Rahmayanti, R., Rahmansah, R., Syafriyani, S., Fitriani, D., ... & Saputra, W. (2023). *METODOLOGI DAN FAKTOR PENTING DALAM PERANCANGAN ARSITEKTUR*. Get Press Indonesia.
11. Lake, R. C., Purbadi, Y. D., Rayawulan, R. M., Daton, R., & Lalu, E. D. (2019). Simbol Dan Ornamen-Symbolis Pada Arsitektur Gereja Katolik Regina Caeli Di Perumahan Pantai Indah Kapuk-Jakarta. *Jurnal IDEALOG: Ide dan Dialog Indonesia*, 4(1), 23-39.
12. Laurens, J. M. (2003). Imaji dan Peran Media Desain Dalam Proses Desain Arsitektur. *DIMENSI (Journal of Architecture and Built Environment)*, 31(1).
13. Mudeng, J., & Siswanto, W. (2012). Penerapan Prinsip Prinsip Seni Ekspresionisme Dalam Rancangan Arsitektur. *Jurnal Arsitektur DASENG*, 1(1), 30-36.

14. Muktiono, A. (2021). Information Message Of Kindness On The Architecture Gate Of The Palace Solo. *International Journal of Science, Technology & Management*, 2(4), 1280-1291.
15. Muktiono, A., & Mahfud, B. (2022). KAJIAN ESTETIKA PADA FASAD BANGUNAN STASIUN:(Studi Kasus: Stasiun Bogor). *Jurnal Ilmiah ARJOUNA*, 7(1), 61-69.
16. Pawitro, U. (2010). Fenomena Post-Modernisme dalam Arsitektur Abad ke-21. *Jurnal Itenas Rekayasa*, 14(1).
17. Rasikha, T. (2009). Arsitektur organik kontemporer. *Depok: Universitas Indonesia*.
18. Striner, R. (1990). Art Deco: Polemics and Synthesis. *Winterthur Portfolio*, 25(1), 21-34
19. Sugiyono, P. (2011). Metodologi penelitian kuantitatif kualitatif dan R&D. *Alpabeta, Bandung*, 62-70.
20. Wicaksono, M. R. T. T. (2020). Kajian Arsitektur Modern Pada Prasarana Sekolah Keberbakatan Olahraga (SKO). *Jurnal Arsitektur Zonasi*, 3(2), 252-260.