

Exploring Spatial Appropriateness in the Adaptive Reuse of Religious Spaces

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Abstract: This research explores the concept of spatial appropriateness in the adaptive reuse of repurposing churches. The study aims to identify a perceptual structure that upholds the architectural authenticity originally embodied by these ecclesiastical structures. This involves a combination of literature review, critical analysis, and comparative examination of historical artworks and writings by renowned scholars and architects. The findings highlight the significance of spatial appropriateness in religious spaces and its relationship to societal and cultural dynamics. On the other hand, the research seeks to provide insights and guidelines for stakeholders involved in adaptive reuse projects to ensure the respectful preservation of the spatial appropriateness of religious spaces during the transition process. Additionally, the study recognizes the importance of engaging with religious art and spaces to maintain their religious and historical significance amidst the challenges posed by modern secularization.

Keywords: Functionalism; Spatial appropriateness; Adaptive reuse; Form and function; Religious spaces; Perception; Secularization; Hierophany; Ritual expression

1. Introduction

As articulated by Walter Gropius (1883–1969), a pioneer of the modern movement, the concept of functionalism in architecture played a significant role in post-war development. In 1923, Gropius expressed the desire for architecture, where the function is evident in the relationship between form and purpose [1]. This idea continues to influence contemporary urban spaces, such as in Rotterdam, where newly designed spaces rely on pre-program planning to establish a sense of appropriateness within the realms of private and public space.

However, the question arises: What happens when form and function become disconnected? Over time, rapid social, demographic, and cultural changes in the postwar era have exposed weaknesses in historical architectural forms. Traditional spatial configurations, particularly in religious contexts, have become vulnerable, existing in a state of ambiguity between clarity and confusion. With the decline of pillarization in society, the original functions of churches have largely diminished, leading to a distinct spatial discomfort within their contexts. This spatial discomfort serves as the starting point for the disposal of churches.

The decline in religious adherence and financial considerations have significantly impacted the perception of Dutch churches. Once symbols of presence, these buildings have gradually lost their fitting function within a secularizing city. Although they hold architectural heritage, their traditional perception gradually fades from the collective consciousness as utilitarian functions replace their original intended atmosphere and purpose.

This research explores the concept of spatial appropriateness in the adaptive reuse process of repurposing churches. The focus is on identifying a perceptual structure that upholds the architectural authenticity originally embodied by these ecclesiastical structures. Ellen Eve Frank's statement that "space is where time is" reflects the idea that spatial authenticity involves the meaningful relationships between entities within our built environment [2]. It is the outcome of human awareness and the temporalizing activity that occurs. In other words, spatial authenticity within churches suggests that instead of solely adhering to the principle of "form follows function," there is an opportunity to enable and sustain new functions while maintaining spatial appropriateness. This exploration begins by comparing the perceptions of profane spaces with utilitarian functions and religious spaces with sacred functions.

2. Materials and Methods

This research is a realization of research-methodological awareness that considers spatial appropriateness as social and psychological science in adaptive reuse designs, particularly for religious spaces, where the consciousness of perception is disappearing from the existing. This understanding is essential for adaptive reuse projects to alter the church and other heritage buildings in a considerate and respectful manner while keeping their historical and cultural relevance. The knowledge enables us to formulate prospective design decisions and place them within a logically structured research framework that also uses historical references to architectural principles.

The methodology employed in this study involves a combination of literature review and critical analysis. The starting point is to extensively review existing scholarly literature, architectural theories, and historical accounts related to spatial appropriateness in adaptive reuse, particularly in religious spaces. This investigation will completely comprehend the concepts, theories, and views linked with spatial appropriateness and its relevance in both utilitarian and religious functions. A complete knowledge of spatial appropriateness in religious space may be attained by comparing the requirements and expectations of perspectives.

Furthermore, the methodology incorporates a comparative analysis of historical artworks and writings by renowned scholars, architects, and artists, such as Johannes Vermeer, Mircea Eliade, Gerardus van der Leeuw, Adolf Loos, Colin St. John Wilson, and John Ruskin. Their perspectives and insights will contribute to elucidating the intellectual and perceptual aspects of spatial appropriateness in religious architecture.

Overall, the methodology combines to explore the spatial appropriateness of religious space in adaptive reuse. The multidimensional nature of the research methodology enables a thorough investigation of the topic and provides a foundation for valuable insights and conclusions. The research's findings make it possible to promote the idea of spatial appropriateness in future design approaches and to strengthen the mutually beneficial relationship between theoretical research and architectural practice. As a result, this aims to provide insights and guidelines for architects, preservationists, and policymakers involved in adaptive reuse projects to ensure that the spatial appropriateness of religious spaces is respected and maintained during the transition process.

3. Results

3.1. Terminology: Spatial appropriateness and spatial appropriation

Spatial appropriateness in adaptive reuse manifests the environment with suitability and comfort. The term "appropriateness" describes many elements of the

psychological and philosophical process that involves "value judgments regarding the status of a given utterance in its social context, just as, used to assess other kinds of behavior, these words capture generalizations and their attendant value judgments" [3]. In light of this, there is some degree of appropriateness in space when public actions increase the intensity of engagement, along with their associated responses. Moreover, spatial appropriateness in churches is about the relationships between judgments that integrate with the social context in different periods. This leads to the insight of "architectural styles," meaning how church spaces are believed to be or perceived.

It is important not to confuse spatial appropriateness with spatial appropriation. Spatial appropriation refers to "claim ownership of, actively use, and ultimately create meaning in and become attached to the physical environment" [4]. The term is also used to "describe individuals' and groups' creation, choice, possession, modification, enhancement of, care for, and/or simply intentional use of a space to make it one's own" [5]. In adaptive reuse, many building projects are often seen as a process of spatial appropriation that sometimes underlines contemporary concerns to the public. In the case of church adaptation, spatial appropriation is needed to welcome new functions. However, spatial appropriateness must be emphasized and used as a guideline to transform spatial appropriation to be justifiable and correct simultaneously.

3.2. Difference of Spatial appropriateness in secular and religious space

Spatial appropriateness in secular space consists of utilitarian or profane functions that refer to the suitability of a space or building for its intended use. It involves considering factors such as size, layout, lighting, acoustics, and the relationship between the various spaces within the building. Private spaces such as dwellings and offices facilitate spatial appropriateness by promoting well-being and productivity. As a result, these spaces are perceived as comfortable, functional, and conducive to the activities that take place. Spatial appropriation is designed through room layout and settings, light, furniture arrangement, etc.

On the contrary, spatial appropriateness in public spaces is intended for safe and engaging settings for the wider public, including comfort, accessibility, and amenities for social interaction. In that sense, spatial appropriateness is required for both public and private spaces. It is also about creating a sense of correctness, enhancing users' comfort, and contributing to intended functions that lay upon cultural, social, economic, and aesthetic contexts.

Compared with the spaces mentioned that are day-to-day or utilitarian, the idea of spatial appropriateness can be prioritized differently in monumental or heritage architecture. This is due to the different concepts of purpose, where utilitarian building forms were derived from practical purpose such as housing, retails, and office. At the same time, the latter is designed to serve a symbolic or cultural purpose. Particularly church architecture has even been perceived as 'fine' or 'speculative' art [6]. For such, spatial appropriateness in religious spaces rely not only on the physical space that facilitates religious activities such as worship, prayer, and fellowship but, most importantly, gives spiritual meaning to the intellectual perception that can trigger an elevated state of mind. This idea is best described in the work of the Dutch Baroque Period painter Johannes Vermeer, called "Allegory of the Catholic Faith." The main symbolic meaning focused on a lady resting her feet on a terrestrial globe, representing the profane realm. However, this realm

contrasts with her gaze toward a glass sphere suspended on the ceiling, representing the existence of an abstract but perceived religious realm.

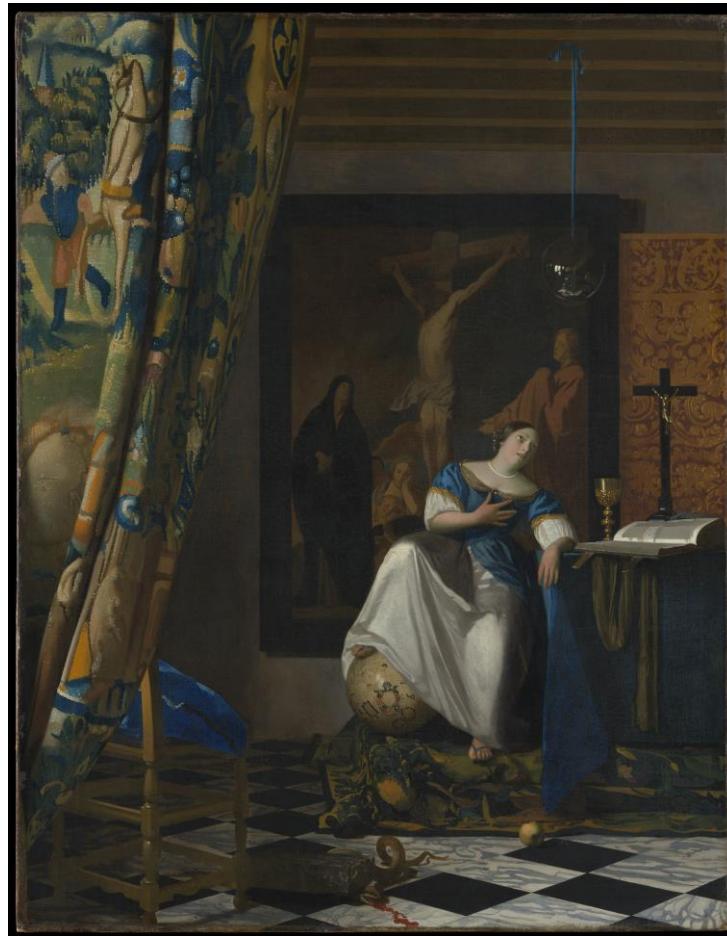


Figure 1. Johannes Vermeer, *Allegorie op het Katholieke Geloof* (Allegory of the Catholic Faith), c. 1670-1674

In portraying a domestic setting, Vermeer's artwork allegorically represents the Catholic faith, conveying a sense of secrecy and privacy as the lady engages in subtle acts of devotion. This representation sheds light on the challenges faced by Catholics in the 17th century, including suppression, restrictions, and discrimination, which compelled them to practice their faith discreetly within private homes to avoid persecution. Vermeer's art serves as a testament to his ability to navigate sensitive subjects, offering a glimpse into the social and religious dynamics of the time and preserving the memory of a suppressed community [7].

The situation of suppression mentioned brought a resemblance to the modern era of The Netherlands. Pillarized society nowadays has been stressed due to the impact of secularization in the present day, extending beyond the challenges faced by a specific religion. The rise of secular values and institutions, driven by societal and cultural changes, has diminished the influence of religion in public life, relegating it primarily to the private sphere for many individuals. This shift raises essential questions regarding religious freedom, diversity, and the relationship between religious and secular authorities. As religious allegory and perception wane, there is a risk of losing the contextual understanding of religious art and space interpretation. Religious subjects may result be viewed primarily as cultural artifacts, disregarding their religious significance.

It is important to recognize the parallel between historical suppression and modern secularization, as both raise fundamental inquiries about the role of religion in society, the preservation of religious identity, and the balance between religious and secular spheres. The diminished religious perception in contemporary times highlights the need for thoughtful engagement with religious art and spaces to ensure their significance is not reduced to mere cultural artifacts but rather acknowledges their religious and historical importance.

Therefore, the topic of spatial appropriateness in religious spaces is not only a study of typology in architecture but also an understanding of the broader dynamics of society and culture at different times. It is a complex interaction that requires the exploration of other themes in various disciplines, such as art, architecture, sociology, history, etc..

3.3. Spatial Appropriateness of religious space in an abstract dimension

'For those to whom a stone reveals itself as sacred, its immediate reality is transmuted into supernatural reality,' writes Mircea Eliade (1907-1986) in the book *The Sacred And The Profane*, 'In other words, for those who have a religious experience all nature is capable of revealing itself as cosmic sacrality.' [8] In the book, Eliade immediately expresses the abstract of different perceptions required to understand between religious and non-religious entities. On the other hand, early twentieth-century Dutch historian and religious philosopher Gerardus van der Leeuw outlined some of the critical characteristics of perceiving sacred space in his three books, including *Religion in Essence and Manifestation*.

To explain how religious spaces are constituted, Eliade first addresses the central idea to link three categories: the Sacred, which is a transcendent referent to the divine; Hierophany, which is the appearance of the sacred into human experience; and Homo religious, which is the supreme being able to perceive such appearance. In particular, churches acted as a position station between the sacred and the profane (or secular) space, oriented as 'Axis Mundi that reflected the cosmos [9]. Likewise, this axis mundi is often represented by an element of height, such as a bell tower. In addition, this also means that creating appropriate spaces is needed to maintain the existential value that preserves the uniqueness of this ontological status. Without spatial appropriateness that embodies the values, religious spaces find themselves in an emptiness described as 'the formless expanse' or a value that 'nothing can begin, nothing can be done' [10].

For such, a sense of order in religious space will be perceived and experienced through structuring the geometrical space. For instance, the geometrical space of profane function is influenced by industrial civilization, as a result, is characterized by an amorphous mass that can be segregated and delimited in any direction. Therefore, profane space in the past and the present remains homogeneous and neutral [11]. Religious spaces, on the other hand, are about continuity and connection to the hierarchy; 'he experiences interruptions, breaks in it; some parts of space are qualitatively different from others' [12]. This also indicates that the geometrical space of religious function is arranged in a hierarchical sequence. In order to achieve a vertical orientation toward spatial expansion and convey a height of infinity to "the sacred," a center or "a fixed point" serves as the primary mass focus. As a metaphor for the eternal nature of sacred spaces, the orientation is likewise surrounded and symbolically shaped through circular circulation. As a result, the majority of religious spaces in the church frequently use symmetry, repetition, and other design elements that create a sense of balance and harmony to serve their geometrical space.

On the other hand, spatial appropriateness will likely occur when a ritual expression is validated. Both Eliade and Van der Leeuw identified that in sacred space, 'Images of an

opening' or 'threshold experience' were essential characteristics that represent the dynamic interactions between people, their environment, and the rituals they perform there. While a door in sacred space can also be described as a "vehicle of passage from one space to another," which also guards and binds simultaneously between the inside and outside of religious spaces, it also manifests as "a door to the world above" when it opens upward in a church [13]. Thus, these signs came to be understood as "an absolute element" that ended relativity and confusion. Other types of thresholds, such as a gate, a doorway, or a set of stairs, also create a sense of transition between the two realms.

Moreover, Van der Leeuw associates sacred space with a dimension of the inner connection between self and the surrounding environment, referring to it as the 'primitive mentality' [14]. As such, there is a notion in the complexity of this idea that rests in its contradiction. One is the capacity of human perception that encapsulate a sacred space. As individuals perceive and participate within, one is "completely absorbed" in the experience and "loses himself in the divine" [15]. As a result, spatial appropriateness is awakened by the crucial component of religious experience and has the power to influence people through perception. For example, Van der Leeuw believed that using light and darkness was a powerful tool in religious spaces. The use of stained glass windows, candles, or other considered sources of light creates a sense of enclosure and bonding with the transcendence.

To conclude, spatial appropriateness in religious spaces requires both physical and intellectual effort. It is a stage-by-stage process to shift from perceiving non-religious spaces to religious spaces. Start with the Hierophany, which introduces a shell that embodies the concept of transition. The church serves as a manifestation of Hierophany. Within the shell of the appearance is the body of geometrical space that encapsulates the order of sacred space. After passing through the portal that authenticates a ritual expression, one's perception and attention become a part of the flow of the experiences within the space. Light and shadow, acoustics, material, and air dissolve within the perception that weaves the mind of 'axis Mundi' as high as possible to 'the sacred.'

3.4. Transitioning the perception of spatial appropriateness

One would anticipate that a space used for utilitarian purposes would be appropriately built to support the function. Hence, any design components or features that subvert these assumptions may be regarded as inappropriate or undesirable. Nonetheless, the idea of spatial appropriateness in a religious space is frequently connected to tradition, spirituality, and symbolism. People anticipate that the architecture of these places will reflect their religious practices and beliefs, create awe and reverence, and make it easier for them to communicate with the transcendence. Consequently, while churches do offer services to the public, their primary goal shouldn't be to serve as a place of worship or a gathering place. If not, the places of worship lose their "cosmic-sacred character" and 'is no longer believed that anything really happens there' [16]. This character represents the fundamental essence of spatial appropriateness in religious spaces, emphasizing the need for timelessness. Sacred ruins, such as ancient temples and cathedrals, exemplify this concept. Despite having succumbed to disrepair, these religious structures often retain remnants of their original architectural elements and purpose. These ruins serve as tangible reminders of the beliefs, practices, and traditions associated with the religious spaces they once embodied. Therefore, even in their dilapidated state, they can still reflect the endeavors undertaken to facilitate spiritual experiences, evoke a sense of connection, sacredness, and significance.



Figure 2. An example of sacred ruins: Convento do Carmo in Lisboa, remaining a cosmic-sacred character due to the remnants of architectural features evokes a sense of connection with visitors

On the other hand, several architects and writers, such as Adolf Loos (1870-1930), Colin St. John Wilson (1922-2007), and John Ruskin (1819-1900), also reflect the significance of spatial appropriateness by distinguishing understandings between utilitarian and religious spaces. Within religious space is monumental (and sacredness) and is considered 'Architecture,' and the utilitarian purpose as 'building.' [17] While Ruskin considered 'building,' which is profaned by usefulness, may have the potential to be 'Architecture.' However, 'building' can never replace a complete version of 'architecture' due to its purposeless for habitability [18]. Just as Loos emphasized the separation of matter and spirit, he saw the misappropriation of sacredness when its representation is borrowed as utilitarian objects, for example, stating by his friend Karl Kraus, about the difference between an urn and a chamberpot.

'Adolf Loos and I... have done nothing more than show that there is a difference between an urn and a chamberpot, and it is this distinction above all that provides culture with elbow room.... The others, who fail to make this distinction, are divided between those who use the urn as chamberpot and those who use the chamberpot as an urn' [19].

With this figure of speech, religious settings provide not only a different purpose in terms of utility but also serve as a unique affirmation of identity, culture, and faith. The intertwining intricacy of history and culture gradually gave rise to the genuine impression of the religious places we now know. Gradually, this became how the appropriateness of religious entities was established. However, suppose these religious spaces are altered for ill-conceived reasons; in that case, the misappropriation of religious perception will resemble how an urn would be used improperly if it was a chamberpot or the other way around. As a result, awkwardness will persist when religious subjects and space are misused.

Consequently, the notion of transitioning from the religious to the profane spaces can gradually derive as inappropriate use, uncertain, and even sacrilegious according to religious antiquity. To profane, one can mean associating utilitarian activities that are secular or mundane (e.g. markets, homes, and workplaces) and therefore degrade original symbolic or ritualistic meaning. In addition, the meaning can be reflected as 'to open the possibility of a special form of negligence' [20]. This can lead to the problem of profanation, as Loos suggested the same idea:

'Whoever realizes that the purpose of art is to guide man ever onwards and upwards, making him ever more God-like, senses that the fusion of art with functional ends is a profanation of the highest degree' [21].

Parallel with profanation, its outcome is distinguished from the term secularization. A leading figure in Italian philosophy and radical political thought, Giorgio Agamben is the author of the book *Profanations*. He saw secularization as a process of repression and a change from the theological idea of a heavenly monarchy into one based on an earthly monarchy. Profanation, on the other hand, aims to neutralize what it profanes. When something is profaned, it can once again be used where it was once separate and unavailable. However, consequently, it loses its aura due to the act of consumption, which leads to 'in the instant of its disappearance' [22].

The feasibility of converting a sacred space into a utilitarian space from an architectural perspective is shown to be a complex issue that necessitates consideration of a number of factors, including the historical and philosophical significance of the existing, the intended use of the converted space, and the potential impact on the community's architectural and cultural heritage. While transforming a sacred location into a profane space can also be perceived as an act of cultural erasure, it can also result in the development of new meanings and uses for religious space. In this regard, examining the potential consequences for those who hold the space sacred and participating in respectful discourse and consultation before implementing such a change is necessary.

4. Discussion

Religious spaces are often deemed irrelevant in today's secularized society. However, religious perception remains a valuable architectural principle for adaptive reuse projects, even in secular contexts. Churches, as heritage architecture, hold significant cultural and monumental value. Incorporating elements inspired by religious spaces helps preserve the building's identity, maintain a connection to its past, and contribute to the community's cultural fabric.

Understanding the religious perception of space involves spatial experience, architectural detail, and craftsmanship quality. By drawing inspiration from existing religious structures, their architectural principles can be infused into the design process of adaptive reuse. These new design elements bridge the intangible boundary of the spiritual and embody timeless knowledge, beauty, and craftsmanship. The use of light, form, scale, and materiality in religious architecture evokes awe, introspection, and tranquility. Incorporating similar design principles in adaptive reuse projects, even for secular purposes, creates inspiring, contemplative, and enriching spaces.

In a secularized world, religious perception remains significant for shaping personal identities, connecting with cultural heritage, and establishing relationships with the divine. Recognizing and respecting religious perception upholds freedom of belief and safeguards cultural heritage. Neglecting religious buildings' architectural and artistic value may lead to their destruction, neglect, or insensitive renovations. Without religious perception as a guiding principle, adaptive reuse design may prioritize functional, economic, or utilitarian considerations, potentially resulting in a spiritually impoverished environment and architectural homogenization (see Figure 3) .

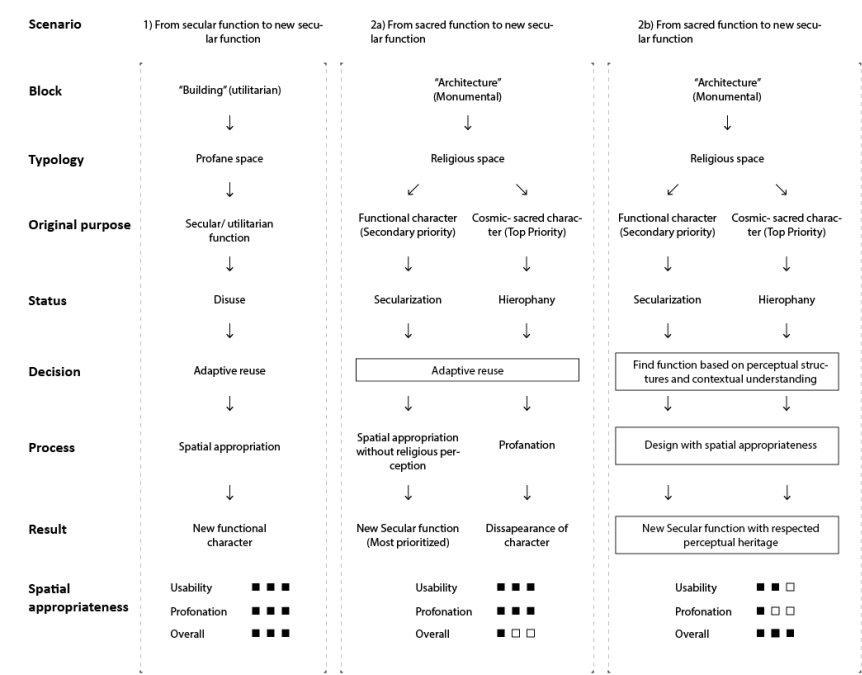


Figure 3. Scenario diagrams of spatial appropriateness in adaptive reuse of secular and religious spaces (Image by author)

Religious perception and practice play a central role in promoting social cohesion and facilitating shared rituals, celebrations, and acts of service. Understanding religious perceptions enables interfaith dialogue, bridges divides, and promotes social harmony. While religious perception can inspire secular adaptive reuse design, it should be approached with sensitivity and respect for diverse beliefs and practices. Architects should engage in open dialogue, involve the community, and ensure inclusive, culturally sensitive, and respectful designs that embrace different worldviews. On the other hand, religious communities serve as vital social support networks, fostering belonging, communal engagement, and collective identity.

Imposing an adaptive reuse design without meaningful participation or consultation from marginalized communities regarding churches of cultural or historical significance can be viewed as cultural insensitivity, appropriation, or disregard for heritage. This perpetuates a historical pattern of taking and exploiting cultural practices, symbols, and heritage without considering their deeper meanings or respecting their origins. It is a risk of erasing or diminishing marginalized community's identity, history, and cultural heritage associated with the church.

Therefore, recognizing and addressing these concerns is crucial in moving towards a more equitable and inclusive approach to adaptive reuse design, particularly when

cultural, historical, and sacred spaces are involved. Collaborative processes that prioritize community engagement respect cultural protocols and ensure informed consent can help mitigate these issues and foster a more just and respectful relationship between the design professionals and the affected communities.

5. Conclusions

In conclusion, this research has explored the concept of spatial appropriateness of religious spaces to understand adaptive reuse logic for repurposing churches. The findings highlight the importance of maintaining the architectural authenticity and spatial appropriateness of religious structures, particularly in the context of churches. The research methodology employed a combination of literature review, critical analysis, and examination of historical references and writings by renowned scholars and architects. Through these approaches, the study has demonstrated that spatial appropriateness in religious spaces is not only a study of typology in architecture but also an understanding of the broader dynamics of society, culture, and perception. The research has emphasized the need to engage thoughtfully with religious art and spaces to ensure their religious and historical significance is preserved and respected. The concept of spatial appropriateness in religious spaces requires both physical and intellectual effort, involving the understanding of Hierophany, the order of sacred space, and the perception of individuals within the space. The insights and guidelines provided by this research can inform architects, preservationists, and policymakers involved in adaptive reuse projects, facilitating the respectful and considerate transformation of religious spaces while maintaining their spatial appropriateness and historical-cultural relevance.

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