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Interior Design & Architecture of Religious Institutions with Pedagogical Influence

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Abstract

This paper explores the concept of architectural space as a pedagogical force—a "third educator"—with specific focus on monotheistic religious buildings. It investigates how the design and atmosphere of synagogues, churches, and mosques communicate silently, influence behavior, and facilitate informal learning about faith, values, and community. The analysis draws upon a theoretical framework combining Otto Friedrich Bollnow's phenomenology of space, Bernd Overwien's concepts of informal learning, and Michel Foucault's analysis of spatial power dynamics. By examining the symbolic, functional, and experiential elements of these sacred spaces—from their overarching forms to specific features such as the Bima, the altar, and the Mihrab—this paper argues that religious architecture exerts a profound and intentional pedagogical influence. The analysis concludes that this silent pedagogy is not a modern concept but rather a foundational principle in the design of spaces dedicated to spiritual formation and community life, suggesting that the conscious design of any learning environment must acknowledge this powerful, non-verbal educational force.

Keywords: Space as Third Educator, Religious Architecture, Pedagogy, Informal Learning, Architecture and Power, Symbolism, Synagogue, Church, Mosque

Introduction: Space as a Silent Educator

"The silence of the space often contains the loudest truths."

This statement captures the profound potential of space. Spaces tell stories, reveal secrets, and serve as silent witnesses to moments and events. They become sources of memory, places where thoughts originate and ideas find freedom. On the canvas of space, life paints patterns that touch us in various ways. Human nature possesses the power of imagination, enabling us to build, shape, and design spaces. Through this imagination, we create new worlds and develop existing ones. Both human needs and desires provide the impetus to give form to creative ideas, views, and perspectives. In this way, humans have, over time, impressively shaped and transformed their living space, the earth itself. This transformation has produced beautiful and fascinating spaces while also destroying others and rendering them uninhabitable.

Since humans are inherently social beings with an innate tendency to interact, build relationships, and form communities, we also possess the capacity for both verbal and non-verbal communication. We exchange thoughts, ideas, emotions, and information. Interaction with others leads to the emergence of social norms, values, and cultural practices. Fundamentally, this is only possible

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through the integration of learning processes. Experiences, observations, educational institutions, media, technologies, and cultural traditions constitute the multitude of sources through which people learn and teach, and hence, every learning process requires space.

A developing perspective and research area within pedagogy examines the extent to which space itself serves as an educator. This perspective recognizes that space, despite its silence, possesses and exerts considerable influence on human learning. The present work addresses how a space, building, or institution can deliver silent messages and how these influence human thought and unconsciously shape learning. This topic is particularly limited to spiritual and pedagogical aspects of monotheistic religious institutions.

This paper constructs a theoretical framework based on the concepts of space, informal learning, and architectural power. It then applies this framework through a detailed examination of the synagogue, church, and mosque, analyzing how their specific architectural languages function as silent yet powerful forms of pedagogy.

Theoretical Foundations of Space and Its Design

This section establishes the core theoretical concepts underpinning the analysis, moving from a general understanding of space to its specific pedagogical potential.

1. The Multifaceted Concept of "Space"

The term "space" is versatile and carries different meanings across contexts. From a pedagogical perspective, scholars distinguish between physical and architectural space as well as social space. Physical space refers to the three-dimensional area that forms an enclosed environment. Architectural space encompasses both the interior and exterior of buildings, which architects design to be both functional and aesthetically appealing. Social space describes the spatial dimension of social relationships and interactions between people. Bollnow (1979) distinguishes between two types of space: 'Lebensraum' (life-space) and 'erlebter Raum' (experienced space). He designates the place where one dwells as experienced space and the world in which one exists as life-space. Bollnow (1979) explains:

"Our ideas of space are usually determined by Euclidean space, as we learned it in mathematics and physics lessons during our school days. No point in it is distinguished from another point, no direction from another direction. One can shift any point to any other direction with a simple shift. This space is completely unstructured and can therefore be regarded as a kind of vessel in which things are located. This idea of space has become so self-evident to us that we mostly forget that the concrete space in which we live—and which we experience, in short, as the experienced space is completely different. This one, rather, has a rich structure, which we want to recall in some basic features."

2. The Principles of Space Design:

Space design refers to the conscious planning, organization, and aesthetic treatment of physical spaces to create specific functions and atmospheres. Space design applies to any form of institution, building, or residence. Functionality ensures that the intended purpose is supported, while ergonomics involves arranging furniture and other elements to ensure comfort. Aesthetics-based on the selection of colors, materials, textures, and decorations, plays an important role in space design and influences the space's appeal. Other aspects, such as personal, societal, and religious expression, can also be reflected in space design.

3. Informal Learning through Spatial Experience

Space and space design play important roles in human learning. Learning is a fundamental, lifelong process through which people acquire information, skills, knowledge, and understanding, develop their personalities, and adapt to constantly changing challenges. Learning can be formal, informal,

structured, or self-directed. Learning through space and space design belongs to informal learning, where knowledge, skills, and abilities are acquired outside conscious control. As Overwien (2009) notes, "Informal is then that learning which has its place outside of formal institutions or formally organized processes" (p. 45). It happens spontaneously in everyday life through personal experiences, addressing individual interests and needs, thus enabling a valuable complement to formal education systems. Dewey viewed informal education as an essential foundation and environment for formal education (as cited in Overwien, 2009).

Space is therefore closely connected with the learning process and should be incorporated into the design of learning spaces. Unger and Bauer (2015) explain:

"In the case of space and learning, one can speak of a natural duality. By this, the researcher means that each of these phenomena—space and learning—stands for itself. However, there is a very close relationship between the two, characterized by versatility. When it comes to learning, one cannot avoid considering the space in which learning takes place. In the idea of space, one includes the perception, thinking, and action taking place within it. Therefore, architectural considerations belong to pedagogical work."

Consequently, space design can significantly influence the learning process. It shapes mood and atmosphere, creating positive and inviting environments. Bright, open, quiet spaces with pleasant lighting support concentration, while inspiring decorations, visual stimuli, and creative elements awaken interests and motivations, promoting imagination and creative thinking. As Unger and Bauer (2015) observe, "Every idea of pedagogy has its counterpart in the ideal living and learning space. Related to school learning, this means that space planning always represents a didactic element with corresponding impact on teaching". The connection between architecture and pedagogy is thus an important area linking the design of learning environments with pedagogical principles to promote successful learning. As Overwien (2009) suggests, "When architecture and pedagogy 'marry', wonderful things can happen".

Architectural Features as Mechanisms of Pedagogy and Power

Architecture, as the art of building, encompasses specific features that directly contribute to its pedagogical and social function. Understanding these features—sociology, function, symbolism, behavior setting, and power—is crucial to decoding the educational message of built spaces.

1. Sociology and Function of Architecture

Architectural sociology examines how architectural features shape cultural identity and community sense. It aims to develop a comprehensive understanding of the complex relationship between the built environment and society. Schäfers (2012) explains:

"In an anthropological perspective, architecture is the self-assurance and concretization ('localization') of humans in three-dimensional space; architecture is an expression of human community, of the reliance on community and civilization; architecture from the various epochs of building and art history symbolizes the memory of a people for its culture and history."

The function concept in architecture describes how a function or purpose of a space or building is predetermined, from which the form or design emerges. Schäfers (2012) notes that "in architecture and architectural theory, the function concept has central importance... the style elements of a building, the spatial division, the use of materials, etc., are to be derived exclusively from the function, i.e., the intended purposes: form follows function".

2. Symbolic Imprints and Behavioral Settings

Humans use symbols to represent, interpret, and communicate meanings, concepts, and ideas. Symbols point to deeper meanings and reveal spiritual and pedagogical perspectives. Ernst Cassirer (1874-1945) argued that humans are

'animal symbolicum' (Cassirer, 1990, p. 51); for orientation in the complex life world, we depend on symbols. According to Cassirer, humans must produce the signs and symbols necessary for orientation and communication as part of the entire cultural process (as cited in Schäfers, 2012, p. 41). Architecture is similarly based on various symbolic imprints, with different cultures and religions using distinct symbols to convey their ideas and values. Symbols constitute an essential part of communication. Schäfers (2012) describes the architectural-semiotic approach:

"Typical for the architectural-semiotic approach is the interpretation of individual elements of a structural, scale, material, or functional nature as signs. A prominent place here is held by the column, symmetry, the Golden Ratio (*'sectio aurea'*), marble, the door/threshold, windows, roof, etc. If one also includes 'typical' floor plans as well as elevations and abstract geometric elements like the square or circle, then one can speak of the 'syntax' of a building, a square, etc., based on these signs."

The Behavior Setting Approach is a concept from environmental psychology addressing the interaction between social behavior and physical environments. It refers to specific environments or places where social interactions or activities occur. Roger G. Barker conceptualized the connections between the built environment and social behavior regarding "congruence" as Behavior Setting (Barker, 1968, as cited in Schäfers, 2012, p. 42). "Setting" refers to an environmental situation—for example, in a school or doctor's waiting room—where not only the form and equipment of buildings or rooms are considered, but also the functions known to users, conditions of access, and other peculiarities affecting specific behavior. The "recurring behavioral patterns" generated by this complex environmental situation form the approach's core.

Physical properties influence people's behavior and interactions. Thus, societal norms, customs, systems, rules, regulations, guidelines, standards, and laws are transmitted from one generation to another. As Unger and Bauer (2015) note, early psychological field observations confirm that people behave similarly at certain places despite very different individual characteristics (Barker, 1986). Examples include certain architectural styles, such as spatial constellations in churches, which, with their high ceilings and firmly built-in rows of benches, invite contemplation, or supermarkets that encourage shopping through long rows of shelves. Location-bound behavior is particularly clear in cinemas, where seats are arranged to support screen viewing and darkness that hardly allows activities other than watching the film.

3. The Power Dynamics of Spatial Design

Spaces affect humans. The term "power of space" refers to a space's ability to influence people's behavior, emotions, interactions, and even their thinking. Michel Foucault, a French philosopher, sociologist, and historian, dealt extensively with the topic of power. Foucault (1976) describes how architecture takes on a new function:

"In this process, in which a 'completely different physics of power' crystallized, architecture takes on a new function: whereas in the past it either assumed a representative function or served to monitor public life, it is now attributed formative forces that not only subject those persons entrusted to it to control but also subject them to a sustainable behavioral change. It is therefore about an architecture that is an instrument for the transformation of individuals: that acts on those it holds, makes their behavior influenceable, allows the effects of power to penetrate to them, exposes them to knowledge, and changes them." (p. 222, as cited in Rieger-Ladich & Ricken, 2009).

Foucault used the term "Panopticon"—a circular prison design—to illustrate the idea of constant surveillance and self-control. People adjust their behavior because they feel constantly observed, even when this is not actually the case. As Foucault (1976) notes, "the boundary between the prison staff and the convict, between the punishing authority and the punished subject begins to evaporate at the moment when the prisoner proceeds to make the

prescribed behavioral codes his own, in which he incorporates the prison order and thus 'becomes the principle of his own submission" (p. 260, as cited in Rieger-Ladich & Ricken, 2009).

The concept of Panopticons was not restricted to prisons but also applied to other buildings. Foucault understood the Panopticon as a "generalizable functional model" not limited to the area of punishment but also efficiently deployable in production, healing, and education (Foucault, 1976, p. 263, as cited in Rieger-Ladich & Ricken, 2009, p. 194). Consequently, he considered factories, hospitals, and schools as "Panoptic Institutions" characterized by the sublimation of power, ultimately increasing its effect enormously.

4. Towards an Analytical Framework and Methodology

The theories outlined above—from the experience of space (Bollnow, 1979) and informal learning (Overwien, 2009) to symbolic communication (Cassirer, 1990) and disciplinary power (Foucault, 1976)—provide a multifaceted lens for analysis. When applied to religious architecture, they allow us to decode how a building's design functions as a pedagogical system. This paper employs a qualitative, comparative case study approach. It constructs a theoretical framework from the works of Bollnow, Overwien, and Foucault and applies this framework to analyze the architectural pedagogy of three distinct religious building types: the synagogue, the church, and the mosque. The analysis is based on secondary sources and theoretical interpretation, focusing on decoding the silent pedagogical messages embedded in architectural form, symbolism, and spatial organization. This framework will now be used to examine the specific pedagogical influences at work in the architecture of synagogues, churches, and mosques.

The Pedagogical Influence of Space Design & Architecture

The theoretical framework establishes how space can function pedagogically. This section explores the specific manifestations of this influence, from the silent calls of architecture to the deep psychological and spiritual experiences it facilitates.

1. The Silent Pedagogy of Space

The form of space and its architecture often transmit messages or effects on viewers in subtle ways, without using loud words or obvious signals. This can be regarded as a form of education. Sources of education encompass various influences and resources from which people acquire knowledge, values, and skills and prepare for personal and social development. Family, friends, art and culture, and nature and environment are among sources that are not educational institutions but play significant roles in people's education. The form and architecture of buildings or institutions also belong to such sources. Their structures, walls, ceilings, pictures, and paintings make silent calls that people feel and learn from.

As Winston Churchill observed, "First we shape our buildings, and then our buildings shape us" (as cited in Hemmelhuber, 2021). The former British prime minister refers to the complex interplay between space and psyche, because the environment we find ourselves in always affects us. Dahlinger (2009) notes that "spaces affect people immediately and sustainably. Whether one enters a department store or a church, the difference is immediately palpable. Every space leaves a very specific mood in us" (p. 247).

2. Didactic Dimensions and Unique Education

The didactic dimensions of space refer to the way spaces are designed and used for conveying different learning concepts, including consideration of pedagogical learning objectives. Unger and Bauer (2015) explain that "the term didactics is derived from the ancient Greek *'didaskein'* (to communicate, to lecture, to teach) and originally refers to methods

for conveying content. Didactics is today primarily described as the science of teaching or of teaching and learning processes, thus as an educational or teaching methodology" (p. 83).

Although didactics traditionally deals with the design of learning plans, methods, objectives, and evaluation procedures, it is also considered for optimal adaptation of spatial structures and their pedagogical effect. Important here are the building's outer and inner forms, structure, and aesthetic mood; interior furnishings; and furniture. Unger and Bauer (2015) identify three didactic dimensions in relation to school spaces:

"First, we encounter the outer form and the structure of the school building, which also determine the form of the interior spaces and the basic aesthetic mood of the building. In the building itself, secondly, it is the fixed interior furnishings of the rooms (for example, lighting or colors) that significantly influence our behavior and experience. Finally, thirdly, the movable elements of the furniture, as well as the work and learning material or articles of use or decoration, are supporting components of the spatial learning arrangement."

Does the silence of architecture influence people's education? This is a fascinating aspect of pedagogy where didactic considerations are incorporated into architectural decisions. Nugel (2016) notes:

"The history of the design of pedagogical space in pedagogical intention does indeed reach far back into antiquity and the Middle Ages, but only with the 'invention of the pedagogical' in the course of the enlightenment did a decidedly pedagogical, concretely material, physically experienceable, psychologically perceptible, socially significant, and more and more functional 'educational living space'—a specific architectural structure with which both the basic pedagogical processes and the pedagogical subjects are bound to a specific and usually only for this purpose constructed place—arise gradually, alongside a more differentiated pedagogical theory, an institutionalized organizational structure, and an expansion of pedagogical professions."

Thus, one feels the dynamic call of architectural statics and learns consciously or unconsciously from space design. The hypothesis that space influences learning has been discussed more intensively by psychology and behavioral biology since the mid-twentieth century. The discipline of architectural psychology "deals with the effect of buildings, or the effect of designed environment on experience and behavior" (Unger & Bauer, 2015, p. 86). This includes not only conscious psychological reactions but also partially conscious and unconscious reactions. This new area is a subfield of ecological or environmental psychology, whose founder is considered to be Kurt Lewin. According to Lewin's field theory (1936), behavior represents a function of both person and environment equally. Modern environmental psychology aims to understand the demands of building users, consider them in planning and construction, and thus establish adequate design and satisfaction through interdisciplinary discourse (as cited in Unger & Bauer, 2015, p. 86).

3. Psychological and Spiritual Dimensions

The concept of the building and house serves to protect and provide security for humans. The need for protection and security has led humans to develop cave structures and build houses from the beginning. The term architecture speaks of the human ability to build and construct something creative, with the feeling of security as the strongest element. Nugel (2016) explains:

"With the term architecture, the genesis and structure of a sensually experienceable space with a certain extension, surface structure, and materiality is denoted. Architecture encompasses all forms of built space, but also its design and planning. As such, architecture is a human cultural achievement that responds to central needs. Already due to climatic conditions alone, humans need a 'shell' that grants them protection and security. Architectural philosophy points to the fundamental significance of

building for human self-understanding itself. And from a cultural-evolutionary perspective, it is argued that being human not only presupposes upright walking but also implies the erected, three-dimensionally upward-striving, widely visible form of dwelling."

Security is thus a comprehensive architectural aspect considering the physical, environmental, and social security of users and the environment. This foundational feeling of security is a prerequisite for all higher-order learning, including the spiritual and moral education that religious spaces facilitate. A space that feels safe and protective allows individuals to lower their guard, open their minds, and become receptive to the subtle pedagogical influences of the environment, whether through contemplation, awe, or community interaction. In this way, architectural provision of security is the first and most fundamental lesson a space teaches: that one is in a place where learning and transformation can occur.

Reckwitz (2012) explains that creativity has a dual meaning:

"On the one hand, it refers to the ability and reality to dynamically produce something new. Creativity prefers the new over the old, the deviant over the standard, the other over the same. This production of the new is not thought of as a one-time act but as something that happens again and again and permanently. On the other hand, creativity refers to a model of the 'creative', which ties it back to the modern figure of the artist, to the artistic and aesthetic overall."

This definition explains how people, through the power of creativity, have always built and improved something new. In architecture and space design, creativity plays a significant role. Regarding the pedagogical influence of architecture, people have always been creative, developing new types, ways, ideas, and concepts to accelerate learning processes. Creativity is also an essential component of art and culture, enabling the expression of emotions, telling of stories, and reflection of human experience in diverse ways. Images, paintings, calligraphy, color combinations, columns, and roofs present pictures of human creativity.

The subject of pedagogy has a deep connection with philosophy. Philosophy addresses fundamental questions about the nature of reality, knowledge, morality, existence, and thinking. Philosophy of education, ethics and morality, aesthetics, and spirituality also belong to pedagogy. Traditionally, spirituality is used to describe deeply religious people, but the term has expanded and is increasingly examined as a construct connected with mental and physical health. Sheldrake (2007) notes, "The word 'spirituality' refers to the deepest values and meanings by which people seek to live. In other words, 'spirituality' implies some kind of vision of human spirit and of what will assist it to achieve full potential".

As Crnjak (2018) observes:

"Without religion, there is no true culture, no art. Religion and culture have always been firmly connected. Consecrated places shape our midst and are built signs of cultural development and identity.... The psychological need is part of it and cannot be ignored. Just as people need language to express their thoughts, so they need religion to express their spirituality. Therefore, architecture should create the space where a common denomination of faith can take place. Architecture, as a threshold to transcendence, is supposed to create spirituality in our environment."

Space Design and Architecture in Historical Perspective

The history of architecture and space design spans millennia and is characterized by different stylistic and technical influences. Humans have sought shelter since the beginning of time and built with creativity.

1. From Primitive Shelters to Monumental Structures

The first evidence of human creativity, spirituality, education, and security is found in caves. Caves were used as living spaces to protect from

environmental adversities. Cave paintings provide insights into the culture and artistic talent of people thousands of years ago. Tools, jewelry, and other artifacts found in caves reveal much about early human life. Caves were also regarded as sacred sites, serving as places for rituals and offerings, thus holding spiritual significance. Cave people were gatherers who built their houses from natural materials. Köthe (2006) describes how "the people of the Old Stone Age leaned branches against each other, which formed a roof. Heavy stones prevented lateral slipping of the branches. Leaves and pelts sealed the roof" (p. 5).

People developed their building skills, reflecting not only progress in architecture and engineering but also cultural, social, and technological changes in human society. A symbolic term for human residence is the word palace, used as a symbol of beauty, power, wealth, and authority. Palaces are characterized by impressive architecture, often adorned with artful details, marble furnishings, columns, arches, and ornaments. Köthe (2006) explains:

"Another reason for the erection of particularly splendid buildings was the demonstration of power. Impressive buildings are very suitable for this, which impress people through their size and splendor or instill awe in them. This drive is still visible today when companies, cities, and not least architects compete to build the tallest skyscraper."

Large buildings, also known as skyscrapers, represent one of the most powerful forms of human architectural development. Furthermore, Gothic architecture, including that of temples, synagogues, cathedrals, churches, and mosques, is often considered particularly splendid. These religious buildings have had, and continue to have, spiritual significance for humanity. As Köthe (2006) notes, "In disasters such as crop failures and war, in sickness and death, people hoped for the support of supernatural powers. To appease them or also to prove gratitude, splendid temples, mosques, and churches were created."

2. The Important Phases of Historical Buildings

The history of human buildings extends from prehistoric architecture to the modern world. Important phases of architectural development include prehistoric architecture, ancient architecture, Roman architecture, Byzantine architecture, medieval architecture, and modern architecture.

3. Religious Architectures and their Pedagogical Effects

Religious buildings were mostly artworks that, through their structures and forms, colors and calligraphy, materials and decorations, transmitted special messages and still stand as significant expressions and communication forms. They unconsciously affect their visitors, viewers, and passersby. Art historian Franzsepp Würtenberger viewed religious and cultic buildings as attempts by believing people to bridge the distance between heaven and earth, between the earthly human world and the supernatural divine realm, by symbolically preparing worthy dwellings for their gods, who can only be grasped in thought (Würtenberger, 1989, as cited in Goecke-Seischab & Ohlemacher, 2010, p. 17). Their structures were often shaped by spiritual, cultural, and educational meanings. They vary greatly depending on the belief system, cultural context, and historical period, but one thing is clear: they can be regarded as pedagogical powers.

Menan (1990) observes:

"Religious buildings have, through the ages, expressed the highest aspirations of a civilisation. In the house of God, the architect invested his deepest emotions as an individual and as a professional, and, in building it, sought immutable aesthetic principles and structural indestructibility associated with the eternal. Thus, in terms of size, symbolic meaning, and creative imagination, religious buildings represented a special genre in architecture, distinct from other building types. It was an important genre too, because much of architectural history is identified and explicated through the development of religious buildings."

Religious buildings are found in many different forms and styles worldwide. The diversity of these architectures reflects different religious traditions, cultural backgrounds, and architectural developments. Temples, churches, synagogues, shrines, and mosques are examples thereof.

Floor plan forms have different types and can also be considered symbolic, such as the cross shape of churches, the square outline of mosques, and the circular foundation of Buddhist stupas. Likewise, roof forms can have symbolic meaning. In many Buddhist pagodas and Hindu temples, stepped roofs represent the ascent to enlightenment, and the domes of mosques symbolize the sky.

4. The Synagogue: Architecture of Memory and Hope

The Jewish religion, also called Judaism, is one of the oldest religions in the world. A synagogue designates itself as a Jewish prayer house, used as a central place of assembly and worship. For the Jewish community, the synagogue plays an important role in religious, cultural, and social life. Weissbach (2011) explains:

"It has frequently been observed that synagogue buildings have long fulfilled three related but somewhat different functions, as reflected in the three Hebrew terms used to designate these buildings. The synagogue customarily has been called a *'beit knesset'*, a house of assembly; a *'beit tefilah'*, a house of prayer; and also a *'beit midrash'*, a house of study. However, there is yet another function of a synagogue building at least as significant as the three usually enumerated, for a synagogue is also a *'mivneh simli'*, a symbolic structure fraught with meaning. That is, a synagogue building often acts as a concrete representation of the character and condition of the Jewish community it serves."

The architecture of the synagogue also symbolizes many spiritual and pedagogical aspects and can vary depending on region and cultural context. Some synagogues are richly decorated and feature artful architectural elements, while others are designed more plainly. The synagogue is considered a sacred building in Judaism, and no other building is allowed to be higher than a synagogue. Weissbach (2011) notes that "the symbolic power of synagogue buildings has long been recognized in Jewish tradition. This is why, as a mark of both its sanctity and its central role in Jewish communal life, the synagogue was to be, at least ideally, the tallest building in a city" (p. 1). The Babylonian Talmud warns that any city in which other roofs are higher than that of the synagogue is destined to be destroyed.

In Jewish tradition, synagogues are typically oriented towards the east. The roots of this orientation concept lie in various religious and symbolic concepts. Weissbach (2011) explains, "More specifically, symbolism has also figured in certain matters of synagogue design. Traditionally, synagogues in Europe and the Americas have been oriented toward the east, that is, towards Jerusalem, signifying the connection of the Jewish people with the land of Israel and their longing for an end of exile."

Important features of the synagogue include the *'Aron HaKodesh'* (Holy Ark), *'Bima'* (Reading Desk), Torah Scrolls, *'Ner Tamid'* (Eternal Light) which usually hangs above the holy ark, the arcade or women's gallery (which in some synagogues is a separated area for women), and stained glass windows decorated with religious symbols and art. Weissbach (2011) describes a specific example:

"At the synagogue, the path from the everyday world into the sacred begins in the parking lot. The gravel of the parking lot symbolizes the journey through the desert; cedars around the forecourt represent those that Solomon used to build his Temple. The passage over water in front of the building may represent crossing the Jordan into the Promised Land, or the ritual cleansing necessary before entering the Temple in Jerusalem. The sanctuary's striking canvas ceiling "wraps the entire congregation in a *'tallit'*" or, more literally, recalls the desert tents of Jewish ancestors. Like the tents of Abraham and Sarah, this tent has opened sides (the

windows below) as a sign of hospitality and openness. The Jerusalem stone surrounding the ark provides a connection to Israel and a symbol of the Western Wall.... Stripes on the carpet are oriented toward Jerusalem." Thus, it becomes clear that both the interior and exterior design of the synagogue can have pedagogical influence.

Applying the Framework to the Synagogue

This detailed description reveals the synagogue's function as a comprehensive pedagogical environment. The central Bima creates a behavior setting (Barker, 1968) that fosters a community of active learners and participants rather than passive observers. The orientation toward Jerusalem serves as a constant spatial lesson in history and hope, shaping the worshipper's "experienced space" (Bollnow, 1979). The historical separation of the women's gallery can be analyzed through a Foucaultian lens (Foucault, 1976) as a spatial regulation of social roles, while the overall focus on the Torah Ark emphasizes the supreme value of study and law. Every element—from the symbolic gravel to the directional carpet stripes—facilitates informal learning (Overwien, 2009), embedding Jewish identity, history, and law into the very fabric of the space through a silent yet powerful curriculum.

5. The Church: Architecture of Journey and Hierarchy

The church characterizes the religious building of Christianity. Church architecture and spatial design have played a central role in Christian religious education for centuries. The murals, color combinations, and luminous statues create a profound religious atmosphere and invite visitors to reflect upon God and divine power. As Goecke-Seischab and Ohlemacher (2010) note, "The visible church is a symbol for the invisible church" (p. 17). This medieval understanding applies to every Christian church building, meaning that structures erected by human hands make the spiritual edifice of faith visible.

Churches serve as places of worship and religious assemblies. Spread worldwide, they have developed a broad variety of significant architectural styles and expressions over the centuries. Like other religious institutions, church architecture carries symbolic, spiritual, and pedagogical significance. The Greek word kyriakon, from which we derive the term "church," means "belonging to the Lord" (Goecke-Seischab & Ohlemacher, 2010, p. 17). Thus, the church serves as a symbolic dwelling place of God on earth—a place where people can draw close to God, encounter the divine, celebrate divine greatness, speak of God and divine deeds, and find strength through prayer. The church is regarded as a symbol of the eternal heavenly city, a heavenly gate promising paradise, and a representation of God's kingdom.

According to traditional symbolism, the church represents the eternal heavenly city into which Jesus entered as king and high priest. It also symbolizes the kingdom of God and the path that believers must travel externally and internally until they can unite with Christ at the altar (Goecke-Seischab & Ohlemacher, 2010, p. 20). Walking through the church from the entrance toward the illuminated altar has symbolized the Christian's journey to God from the beginning. Many images and sensory signs—painted on walls and glass windows, carved from wood, and hewn from stone—accompany this spiritual path (Goecke-Seischab & Ohlemacher, 2010, p. 21). The paintings narrate holy stories, such as the Ascension and depictions of the Virgin Mary with the newborn Jesus. Medieval painters followed the principle that whoever ascends to the highest earthly elevations simultaneously attains the greatest possible proximity to God (Goecke-Seischab & Ohlemacher, 2010, p. 19).

Light carries multiple meanings in Christianity: brightness displacing darkness, warmth and vitality, and the transition from earthly life to life after death. In Christianity, as in many ancient religions, prayer is directed eastward with the hope of Christ's return as the "sun of salvation." Early Christian communities customarily directed their

gaze eastward toward the rising sun during prayer, expecting Christ's return as the "sun of salvation" (Matthew 24:27 and Revelation 7:2). Corresponding to this eastward-facing prayer direction, Christian prayer rooms have been "oriented"—that is, oriented toward the rising sun in the east—since the third century (Goecke-Seischab & Ohlemacher, 2010, p. 26).

Colors such as red, blue, green, and gold represented specific meanings in the Christian faith and were employed in painted altarpieces, large-scale ceiling and wall paintings, as well as stained glass windows. Certain colors held deep symbolic meaning in pre-Christian times, which Christianity adopted and adapted to its statements of faith. Red, blue, and green symbolized the kingdom of God, divine love, heaven, and the hope for eternal life (Goecke-Seischab & Ohlemacher, 2010, p. 29). Gold played a particularly special role, embodying the heavenly realm through its self-radiating luminosity, independent of its material value (Goecke-Seischab & Ohlemacher, 2010, p. 30).

The interior design of the church includes important elements with special spiritual and pedagogical meanings. The cross symbolizes Jesus's suffering and death. The choir is located in the east, where the sun rises, and the baptismal font contains baptismal water. Every component of the church's interior and exterior design carries special architectural significance.

Applying the Framework to the Church

The church represents perhaps the clearest example of architecture as both didactic and disciplinary space. The longitudinal axis orchestrates a behavior setting (Barker, 1968) for processional movement, guiding believers on a spiritual journey from the mundane world at the entrance to the divine presence at the altar. The sheer verticality and filtered light of a cathedral create a Bollnowian "experienced space" (Bollnow, 1979) of overwhelming transcendence, teaching through awe and sensory immersion. The stained-glass windows serve as a primary tool for informal learning (Overwien, 2009), narrating scripture and the lives of saints to a historically non-literate populace. Furthermore, the spatial hierarchy—featuring a distant, elevated altar, a prominent pulpit, and ordered pews facing a single direction—establishes a Foucaultian panoptic structure (Foucault, 1976). This layout reinforces theological hierarchy, focuses the congregation's attention uniformly, and disciplines both body and spirit toward unified worship, making individuals conscious participants in their own spiritual submission.

6. The Mosque: Architecture of Unity and Submission

Mosques serve as designated places of prayer for Islam. In Arabic, the word masjid means "place of prostration" and refers to a mosque. Mosques function as sites for daily prayer and assembly centers for various rituals and prayers. The word "mosque" derives from the Italian moschea and the Spanish mezquita. According to Arabic word formation, masjid can be translated as "place where one prostrates oneself"; however, it is probably a loanword from Aramaic that had already taken on the meaning "place of worship" (Korn, 2012).

Mosque architecture varies depending on region and cultural tradition, yet certain common features can be found worldwide. As Khan (2008) observes, "Mosque design spans time, crosses boundaries, and expresses cultures. Perhaps what is recognized as a mosque, and what is not, depends on who one is and where one has been. That is to say that it is a cultural manifestation as much as one based on a regional building tradition or a certain interpretation of religion".

Mosque architecture is simple in nature yet symbolizes various meanings. Symbols and metaphors have been particularly attractive to Muslim scholars and writers, who have traditionally avoided precise literal expressions in any realm, believing that the human mind could not fathom the infinite meanings of the world (Erzen, 2011, pp. 125-131). Consequently, all Islamic artworks, including mosque architecture, must be understood and

appraised in terms of their embodied symbols. According to Islamic belief, humanity has destroyed the perfect world initially given by God. In mosques, an attempt is made to recreate this perfection or help people remember it primarily through symbols and expressions such as calligraphy, decoration, and mosque structure, as well as through aesthetic designs that reference the promised paradise (Erzen, 2011).

Erzen (2011) identifies four types of symbols in mosque analysis. The most common, found in all types of mosques throughout history, refers to "paradise." The second, termed "the heavenly theater," relates to the mosque's unique function as the place for communal prayer. Except for the imam who performs the prayer with the community, there are no actors or rituals for the faithful to watch. Thus, the mosque interior becomes an empty space—a stage for prayer performed through bodily movements of prostration, turning the interior into a space of performance. Third, mosques are often understood as "urban sculptures" that guide visitors through cities. "The cosmic spiral" is the final symbol common to many structures, forms, and decorations in the Islamic world, relating to a medieval understanding of time and space.

Mosques are based on important components that possess spiritual and educational dimensions: the minaret, the mihrab, the dome, the minbar, the courtyard, the columns, the stained glass windows and ornaments, and the community rooms. Some viewers perceive Islamic content symbolized in mosque architecture, where basic religious statements are represented by certain forms. Thus, the dome refers to the vault of heaven and thereby symbolizes the unity of the cosmos and the creator, while the mosque space symbolizes the ideal world into which humans are placed to enter into a relationship with God (Korn, 2012, p. 15). In every mosque, there is a niche in the wall called the mihrab, which indicates the direction of prayer, as Muslims always pray toward Mecca (Blumhagen, 2023, p. 57).

The minaret serves as the center of dispersing light, an essential element of the Mehr cult in Iran; light is manifested in mosques as shamseh (sun), known as helal in Arab countries. The bow-arch architecture of mosques induces peace in worship sites, allowing even passersby to experience it. Calligraphy plays a significant role in Islamic architecture. Islamic calligraphy is an art form that appreciates the beauty of the Arabic script while simultaneously establishing a spiritual connection to the Quran and religion. It is a common decorative element in mosques and can be found above the mihrab, on domes, columns, and walls. Excerpts from the Quran or religious formulas are often artfully written in calligraphy.

The use of scripts and calligraphy in architectural ornament takes the form of inscriptions and tiles painted and designed with verses from the Quran. Often, the inscriptions reflect verses of the holy Quran, and in Muslim eyes, the Quran is the origin of all beauty, happiness, and human salvation. As the word of God, the reflection of divine words and their permanent display for humans has been of utmost importance. While the inscriptions reflect Islamic orders, they are regarded as important historical information and documentation. Since they represent the most documented information of a building, they are significant and preferred sources for historical knowledge (Negad et al., 2016).

Applying the Framework to the Mosque

The mosque's architecture embodies a unique pedagogical model centered on unity and embodied practice. The prayer hall's grid-like organization creates a powerful behavior setting (Barker, 1968) that fosters an egalitarian community, physically teaching the principle of brotherhood before God through identical rows and the absence of social hierarchy in the prayer space. This spatial equality can be seen as an inverse of the Foucaultian panopticon (Foucault, 1976); instead of centralized surveillance, there is a decentralized focus on the qibla, disciplining the community through a shared,

unifying direction rather than a singular authority figure.

The dome and intricate geometric patterns create a Bollnowian "experienced space" (Bollnow, 1979) of cosmic order and tranquility, facilitating a mindset of submission to divine harmony. The informal learning (Overwien, 2009) is profoundly kinetic and visual: the body learns through repeated ritual prostration, internalizing humility and devotion, while the mind learns through contemplation of non-representational art that points to the transcendent unity and infinite nature of God, avoiding idolatry through abstract beauty.

The Cyclical Nature of Creative Pedagogy

Creativity is the soul of life and humanity. It is expressed through the brushes with which the earth is painted as a wonderful world. What people have never forgotten in this beautiful journey is the spiritual, aesthetic, and educational dimension of their creations. Whether building, designing, creating, founding, or constructing, people have always paid attention to meanings, effects, and the lessons thereby connected. Religious buildings are beautiful examples of this principle. The calligraphies and paintings, the colors and lights, the spatial designs, and the underlying symbolic meanings have inspired people and facilitated learning. From this, one can conclude that the ability to be creative leads, in turn, to further creative power. The speechless spaces and designs awaken ideas and thoughts that again take on new form through words and language. Thus, spatial design plays a significant role in the journey of human education.

This cycle—from human creativity to an architectural creation that, in turn, inspires and educates, fostering further creativity—is the essence of space as a "third educator." The analysis of the synagogue, church, and mosque demonstrates that this is not a passive process but an active, pedagogical dialogue between the individual and their environment. Each building, through its unique architectural language, engages in this dialogue differently, yet all share the common goal of spiritual and moral formation. They are the ultimate testament to the idea that our built environment is not merely a place we inhabit but a teacher that shapes who we are and who we become.

Conclusion

Although the concept of "space as the third educator" is often considered a modern pedagogical idea, this analysis reveals that it is far from new. Throughout history, humans have consistently attended to the pedagogical aspects of spaces and have deliberately utilized them for human education, drawing upon innate aesthetic perceptions and spiritual abilities. The buildings of religious institutions have consistently served as mirrors of their respective traditions, stories, and principles of faith, with different religions developing distinct architectural styles and features to express their spiritual convictions and meet the specific needs of their communities.

The power of such intentional design extends beyond religious contexts. For instance, the German Bundestag building, adorned with the simple yet profound phrase "In the name of the people," conveys the foundational norms of democratic society, just as the names of former professors inscribed on the stairs of an engineering faculty building can motivate students to immerse themselves in the world of knowledge. Fundamentally, religious buildings have historically presented themselves as havens of security and comfort, offering shelter and solace in difficult times while simultaneously fulfilling a vital functional role for society and shaping a significant part of human life. The power of architecture in these sacred settings can be so profound that upon entering, the space itself can awaken a deep, intrinsic motivation for profound reverence, such as the act of prostration. Therefore, one can definitely state that the spatial design and architecture of religious buildings have had, and continue to have, a significant pedagogical influence.

The silent pedagogy of religious architecture provides a profound and historical precedent for the

modern concept of the "third educator." By analyzing these spaces through the lens of Bollnow's lived space, Foucault's disciplinary power, and the mechanisms of informal learning, we move beyond seeing them as mere shelters for ritual. We understand them as intentional, active, and formative educators. The architectural lessons they offer—the sophisticated use of light, the layered deployment of symbol, the careful choreography of spatial flow, and the facilitation of embodied experience—hold immense value for the design of all future learning environments, from schools and universities to public institutions and community centers. To design a space with pedagogical intention is to consciously acknowledge its inherent power to teach, and in this recognition, the ancient architects of synagogues, churches, and mosques are revealed as master pedagogues. Their enduring work challenges us to critically consider what our modern spaces are silently teaching and, in turn, what we will consciously create for the education of future generations.

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