

A STUDY OF DIFFERENCES IN THE PHYSICAL EMBODIMENT OF PLACE-MAKING PATTERNS BETWEEN
THE SACRED AND SECULAR IN ARCHITECTURE

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*The sacred is pre-eminently the Real,
a wholly other Reality which does not belong to this world,
even though it is manifest in and through it.*

Mircea Eliade, 1959

INTRODUCTION

Defining the sacred is improper, because definitions imply limits and are not all-inclusive (Lawlor, 1994). But, though the sacred cannot be defined, it can be sensed and partially understood, its presence can be known (Meurant, 1989). According to the famed historian of religion, Mircea Eliade, the sacred can be thought of as the "opposite of the profane", something that reveals and manifests itself to us as a wholly different order from the profane, thus making us aware of its reality (1959:11). To understand the sacred in architecture, therefore, one has to explore multiple ways in which it finds inclusion in place-making (i.e., the action for creating a place or sense of place).

According to Eliade (1959), desacralization of place has made it increasingly difficult for modern societies to rediscover existential dimensions of the sacred that were once readily accessible to humans of archaic societies in their everyday places. In a time dominated by vapid architectural styles and economy-oriented place-making strategies, the rediscovery of timeless design principles and values, which have guided and informed place-making from time immemorial, is often overlooked or worse, forgotten. The motivation behind this study, therefore, comes from the need to reconnect with such archetypal principles and to reinvigorate the corporeal process of mundane architecture.

Several authors have discussed and developed characteristics or patterns associated with place-making in their respective works. These include (in ascending order of date of publication): 1) Marcus Vitruvius Pollio in the First Century BC (*The Ten Books on Architecture*); 2) Andrea Palladio in 1570 (*The Four Books on Architecture*); 3) Mircea Eliade in 1959 (*The Sacred and the Profane: The Nature of Religion*); 4) Christopher Alexander, Sara Ishikawa and Murray Silverstein in 1977 (*A Pattern Language: Towns, Buildings, Construction*); 5) Michael Brill in 1985 (*Using the Place-Creation Myth to Develop Design Guidelines for Sacred Space*); 6) Charles Moore and Donlyn Lyndon in 1994 (*Chambers of a Memory Palace*), 7) Phillip Tabb in 1996 (*Sacred Place: The Presence of Archetypal Patterns in Place Creation*); and 8) Christopher Alexander in 2002 (*The Nature of Order: The Phenomenon of Life*). This study is intended to foster a renewed interest in the meaning and use of specific place-making patterns that contribute towards the sacredness of place.

Patterns typically refer to recurring or underlying characteristics which *first*, can be discerned and *second*, can be used to generate something. Place-making patterns, within the context of this study, can be defined as spatial and/or physical characteristics that contribute to creating a sense of place. According to

Critchlow (1980), place-making patterns embodied in sacred architecture, express higher intensions, exemplifications, and important cultural values. This study propounds that these place-making patterns, if present, and more importantly, when uplifted in place, have the potential of transforming secular architecture into sacred place.

METHODOLOGY

The purpose of this research was to explore differences in the physical embodiment of place-making patterns between the sacred and secular in architecture. Based on a set of ten criteria (Table 1), the two case studies were Rothko Chapel (Figure 1) and Contemporary Arts Museum (Figure 2), both located in Houston, Texas. The listed criteria were used to ensure greater conformity between the case studies for comparison purposes. Rothko Chapel is an acknowledged sacred building and houses a group of fourteen paintings by Mark Rothko. The paintings are exhibited along the periphery of the interior octagonal shaped plan. Besides exhibiting Rothko's work, the Chapel functions as a place for private meditation, common worship, and hosting colloquia related with philosophical and religious themes. The Contemporary Arts Museum, on the other hand, is a secular building, dedicated to exhibiting contemporary art to the public.

TABLE 1. Comparative analysis of criteria associated with selection of case studies.

Criteria	Rothko Chapel	Contemporary Arts Museum
01. Place Type	Sacred place (non-profit institution)	Secular place (non-profit institution)
02. Spatial Program	Gallery space	Gallery space
03. Denomination	Non-denominational	Non-denominational
04. Site Context	Urban	Urban
05. Cultural Context	Houston, Texas	Houston, Texas
06. Building Life	1971	1972
07. Design Process	Designed by professional architects (Philip Johnson, Howard Barnstone, Eugene Aubry)	Designed by professional architect (Gunnar Birkits)
08. Scale	Area = 4,500 sq. ft.	Area = 8,900 sq. ft.
09. Visitation	Facility open year round	Facility open year round
10. Accessibility	100 miles from researchers' location	100 miles from researchers' location

The research was conducted by means of on-site observations and involved an architectural analysis of the selected sacred and secular buildings. Multiple site

visits were conducted in each setting. Graphical data was produced by means of sketches (with field notes) and photographs at the sacred and secular buildings. The assessment of differences in the physical embodiment of place-making patterns between the sacred and secular buildings involved the following: *first*, identifying physical and spatial characteristics at each setting that make the place; *second*, comparing the physical and spatial characteristics of the sacred building with the physical and spatial characteristics of the secular building; and *third*, identifying physical and spatial characteristics that seem to be unique to individual settings.

RESULTS

The assessment of differences in physical and spatial characteristics between the sacred and secular buildings is summarized in Table 2. The characteristics at each setting correspond with underlying themes listed under 'Place-making Patterns'. Figure 3 and Figure 4 show graphically, how these place-making patterns are embodied within each place. Based on observations conducted at each setting, a descriptive summary of individual place-making patterns is provided in Table 3.

TABLE 2. Differences in physical and spatial characteristics between the sacred and secular buildings.

Place-making Patterns	Physical and Spatial Characteristics	
	Rothko Chapel	Contemporary Arts Museum
Center	Spatial center of octagonal shaped plan of Chapel	No characteristics observed
Bounding	Walls, floor, and ceiling of Chapel	Walls, floor, and ceiling of Museum
Direction	Alignment of Chapel entrance with pool on south	No characteristics observed
Descent	Darkness within Chapel	Basement level of Museum
Ascent	Light entering skylight in the ceiling of Chapel	No characteristics observed
Passage	Main entrance doorway of Chapel	Main entrance doorway of Museum
Numeric Order	Eight sides of the Chapel	No characteristics observed
Geometric Order	Octagonal shape of Chapel	Parallelogram shape of Museum
Spatial Order	Hierarchical transition of spaces from center of Chapel to outdoor pool	No characteristics observed

Anthropomorphic Order	High ceilings of Chapel	No characteristics observed
Ordered Nature	Water pool with bamboo screening	Vegetative shrubs on site
Celestial Order	Skylight in the ceiling of Chapel	No characteristics observed
Differentiating Boundaries	Varying offsets within walls of Chapel	No characteristics observed
Ordered Views	Walls of Chapel restricting views to outside	Walls of Museum restricting views to outside
Materiality	Gray walls of Chapel	Metallic siding of Museum
Elementals	Walls - earth, skylight - fire, pool - water, movement of bamboo groove - wind	Fountain - water
Light	Sunlight entering skylight in the ceiling and contrasting with darkness inside Chapel	Sunlight entering the basement clerestory windows of Museum
Ceremonial Order	Solemn interaction of people with the paintings and the Chapel.	No characteristics observed

TABLE 3. Descriptive summary of individual place-making patterns.

Place-making Patterns	Descriptive summary of individual place-making patterns
Center	Focal point or geometrical center of the place, typically associated with intense activity and meaning.
Bounding	Enclosures such as the outer walls, floors, roofs of a building, or the edge of the site.
Direction	Building alignment on the site such that there is significant orientation with the cardinal directions.
Descent	Features that occupy the under-realm and allow visual or physical descent such as ground and lower floors, foundations, footings, and wells.
Ascent	Vertical features that allow visual or physical ascent such as towers, vertically ascending roof lines, tall columns, and shafts of light from above.
Passage	Doorways, foyers, entrances, or thresholds that provide points of entry to the place. These thresholds function as distinct spaces of continuity between two domains.

Numeric Order	Significant recurrence of characteristics such as the singularity or duality of forms, the number of towers, doors, windows, columns, walls, and steps.
Geometric Order	Shapes that make up the physical form of the building.
Spatial Order	Rhythm and succession of spaces that could reveal symmetry and be circular, linear, radial, triangular, orthogonal, or spiral in nature.
Anthropomorphic Order	Proportions in form based on measurements of the human body.
Ordered Nature	Special plants, trees, gardens, and other natural landscape features that are bordered and controlled, i.e., continually taken care of by humans.
Celestial Order	Openings or markers that indicate the movement of the sun, moon, other celestial objects, or through alignment of the building to articulate solstices. It could be manifested by domed or vaulted ceilings.
Differentiating Boundaries	Boundaries such as walls and roofs that reveal differentiation depending on their orientation with the cardinal directions.
Ordered Views	Limited or specially positioned openings that restrict and/or frame views between corresponding spaces to enhance the experience within the place.
Materiality	Building materials such as brick, stone, wood, cement, steel, ceramic tile, plaster, and glass.
Elementals	Fire, water, air, and earth. It could be expressed by features such as fireplaces, fountains, openings allowing for ventilation, and solid masonry walls.
Light	Luminance that could provide orientation with the cardinal directions or demarcate the passage of time with movement of the sun across the sky.
Ceremonial Order	Spaces that allow for ceremony, meditation, prayer, temporal/seasonal celebrations or ritual/consecrative acts at the place.

DISCUSSION

Based on data collected and analyzed in the research, a total of nine place-making patterns were observed to be distinct and unique to Rothko Chapel as compared to the Contemporary Arts Museum. These included, *Center, Direction, Ascent, Numeric Order, Spatial Order, Anthropomorphic Order, Celestial Order, Differentiating Boundaries, and Ceremonial Order*. The remaining nine place-making patterns (*Bounding, Descent, Passage, Geometric Order, Ordered Nature, Ordered Views, Materiality, Elementals, Light*) were observed to be common to both settings. Work in progress, however, speculates that although several of these place-making patterns

may be common to both sacred and secular architecture, the quality of their expression in place, could have a significant bearing in contributing to the sacredness of place (Rodrigues, 2008). The research findings of this study and current work in progress were utilized to develop a place-making pattern matrix (Figure 5). The place-making pattern matrix is meant to serve as a guide for architects in creating sacred place.

The matrix is composed of eighteen place-making patterns arranged in two outer layers with *Unity* at the center of the matrix. *Unity* signifies the experience of "wholeness" or "oneness" between all the place-making patterns in the matrix. It denotes the integral and meaningful unification of all eighteen place-making patterns that contribute to sacredness of place.

The hierarchical ordering of place-making patterns in the matrix is currently a work in progress and could function as an indicator of the importance of individual place-making patterns in contributing to sacredness of place, i.e., it is likely that the presence and quality of expression of place-making patterns in the middle layer of the matrix (in descending hierarchical order, *Light, Celestial Order, Center, Ceremonial Order, Ascent, and Anthropomorphic Order*) have a greater impact in contributing to sacredness of place, than the presence and quality of expression of the remaining twelve place-making patterns in the outermost layer of the matrix (in descending hierarchical order: *Ordered Nature, Ordered Views, Bounding, Spatial Order, Elementals, Direction, Numeric Order, Differentiating Boundaries, Passage, Geometric Order, Descent, and Materiality*). In this sense, it is speculated that the presence and high quality of expression of the place-making pattern *Light* may have greater impact in contributing to sacredness of place as compared to the presence and quality of expression of the place-making pattern *Materiality*.

CONCLUSION

The study utilized graphical data to explore differences in the physical embodiment of place-making patterns between a sacred building, i.e., Rothko Chapel and a secular building, i.e., Contemporary Arts Museum. Contrast and comparison of graphical data which emerged from the architectural analyses, revealed that a total of nine place-making patterns (*Center, Direction, Ascent, Numeric Order, Spatial Order, Anthropomorphic Order, Celestial Order, Differentiating Boundaries, Ceremonial Order*) were observed to be distinct and unique to Rothko Chapel as compared to the Contemporary Arts Museum.

The remaining nine place-making patterns (*Bounding, Descent, Passage, Geometric Order, Ordered Nature, Ordered Views, Materiality, Elementals, Light*) were observed to be common to both settings.

Based on current work in progress, it is speculated that the presence and quality of expression of six place-making patterns in the middle layer of the matrix (*Light, Celestial Order, Center, Ceremonial Order, Ascent, Anthropomorphic Order*) have a greater impact in contributing to sacredness of place, than the presence and quality of expression of the remaining twelve place-making patterns in the outermost layer of the matrix (*Ordered Nature, Ordered Views, Bounding, Spatial Order, Elementals, Direction, Numeric Order, Differentiating Boundaries, Passage, Geometric Order, Descent, Materiality*).

Further studies are required to explore how, or in what ways the place-making patterns in the matrix impact sacredness of place. Further studies could also test whether and how sequential embodiment of the place-making patterns, contribute to sacredness of place. In addition, further studies could also help reveal characteristics and/or place-making patterns that have not been identified in this study.

The importance of the patterns in the creation of place has often been under-appreciated and misunderstood. The contents of this study could be seen as a small step in re-evaluating the process, goals, and status of using the place-making patterns in place-design as an activity. The place-making patterns, when meaningfully embodied and uplifted in place, could function as channels for the pure exemplification of the sacred. The resulting architecture could, in turn, act as a channel for remembering and experiencing the sacred. It is through the lens of the place-making patterns that the qualitative nature of sacred place may be understood. In this sense, the patterns could assist in the making of place that helps us re-remember our quest for the most exemplary model of place: place that is sacred and place that heals.

*The road is arduous, fraught with perils, because it is,
in fact, a rite of the passage
from the profane to the sacred,
from the ephemeral and illusory to reality and eternity,
from death to life, from man to the divinity.*

Mircea Eliade, 1959

REFERENCES

- Alexander C, Ishikawa S, Silverstein M, Jacobson M, Fiksdahl-King I, Angel S (1977) *A pattern language: Towns, buildings, construction*. New York: Oxford University Press.
- Alexander C (2002) *The nature of order: The phenomenon of life*. Berkeley, CA: The Center for Environmental Structure.
- Brill M (1985) Using the place-creation myth to develop design guidelines for sacred space. *Proceedings of the Council of Educators in Landscape Architecture's Annual Conference, University of Illinois, Urbana, IL*. September: 17-27.
- Critchlow K (1980) *Lindisfarne letter 10, geometry and architecture: What is sacred in architecture*. West Stockbridge, MA: The Lindisfarne Association.
- Eliade M (1959) *The sacred and the profane: The nature of religion* (W.R. Trask, Trans.). New York: Harcourt, Inc.
- Lawlor A (1994) *The temple in the house: Finding the sacred in everyday architecture*. New York: G. P. Putnam's Sons.
- Lyndon D, Moore CW (1994) *Chambers for a memory palace*. Cambridge, MA: The MIT Press.
- Meurant RC (1989) *The aesthetics of the sacred: A harmonic geometry of consciousness and philosophy of sacred architecture* (3rd edition). Whangamata, New Zealand: The Opoutere Press.
- Palladio A (1997) *The four books on architecture* (R. Tavernor, R. Schofield, Trans.). Cambridge, MA: The MIT Press.
- Rodrigues A (2008) *The Sacred in Architecture: A Study of the Presence and Quality of Place-making Patterns in Sacred and Secular Buildings*. Unpublished doctoral dissertation, Texas A&M University, College Station.
- Tabb PJ (1996) *Sacred place: The presence of archetypal patterns in place creation*. Denver, CO: The Academy for Sacred Architectural Studies.
- Vitruvius M (1960) *The ten books on architecture* (M. H. Morgan, Trans.). New York: Dover Publications, Inc.

FIGURES

- Fig. 01. View of Rothko Chapel.
- Fig. 02. View of Contemporary Arts Museum.
- Fig. 03. Place-making Patterns embodied within Rothko Chapel.
- Fig. 04. Place-making Patterns embodied within Contemporary Arts Museum.
- Fig. 05. Place-making pattern matrix.



Fig. 01

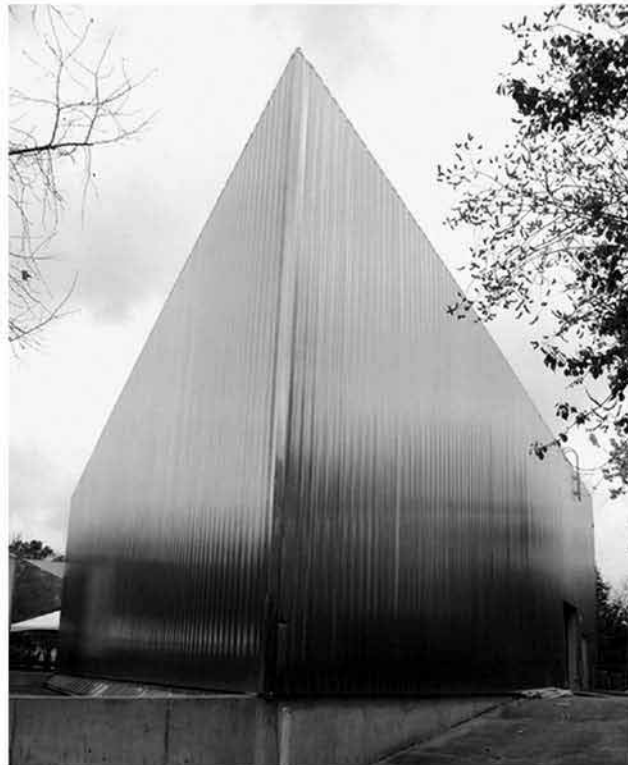


Fig. 02

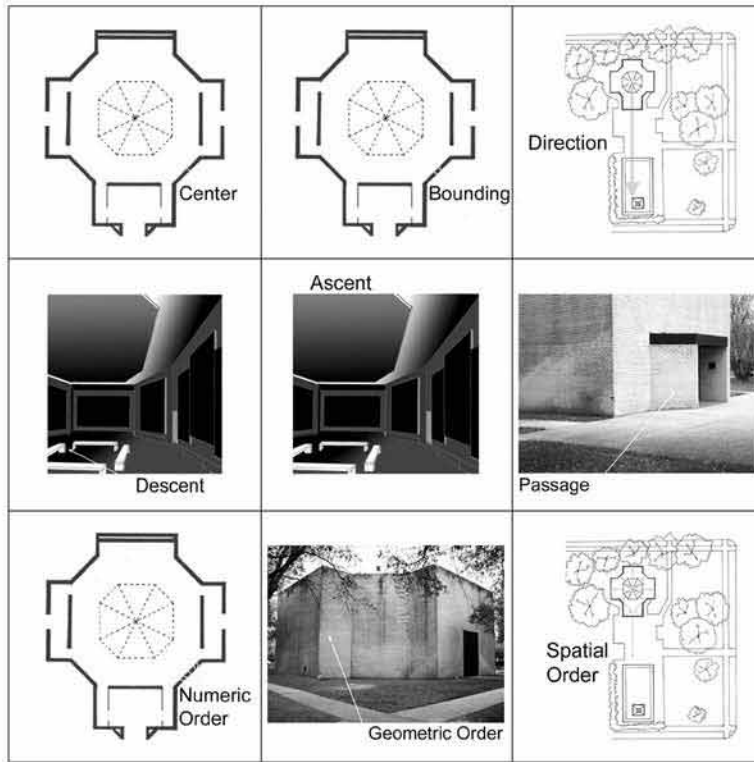


Fig. 03a

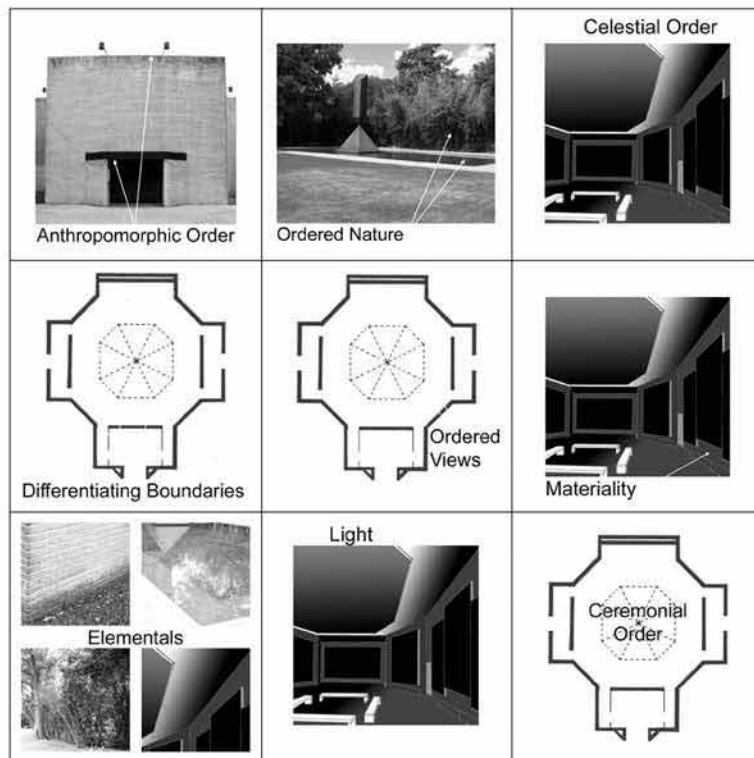


Fig. 03b

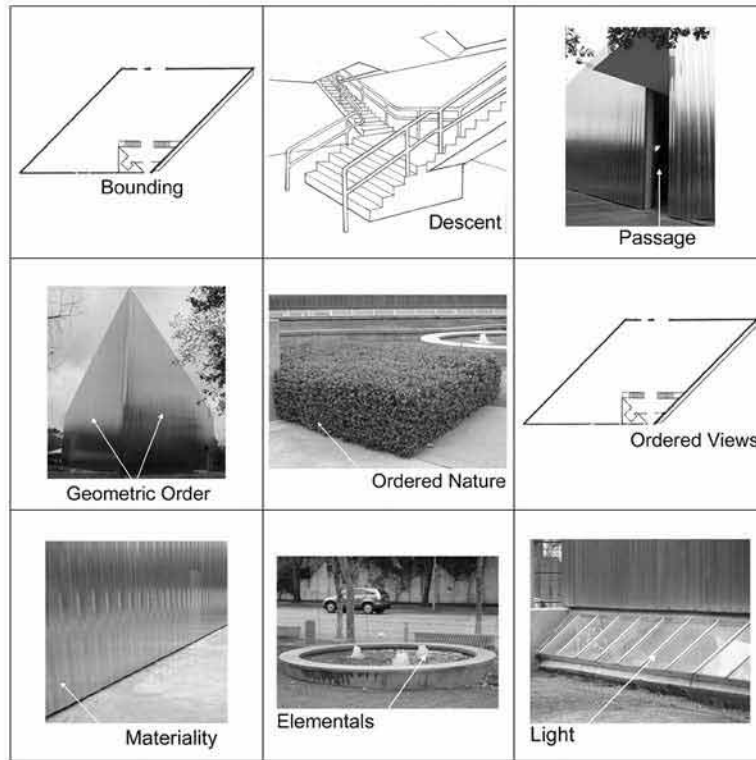


Fig. 04

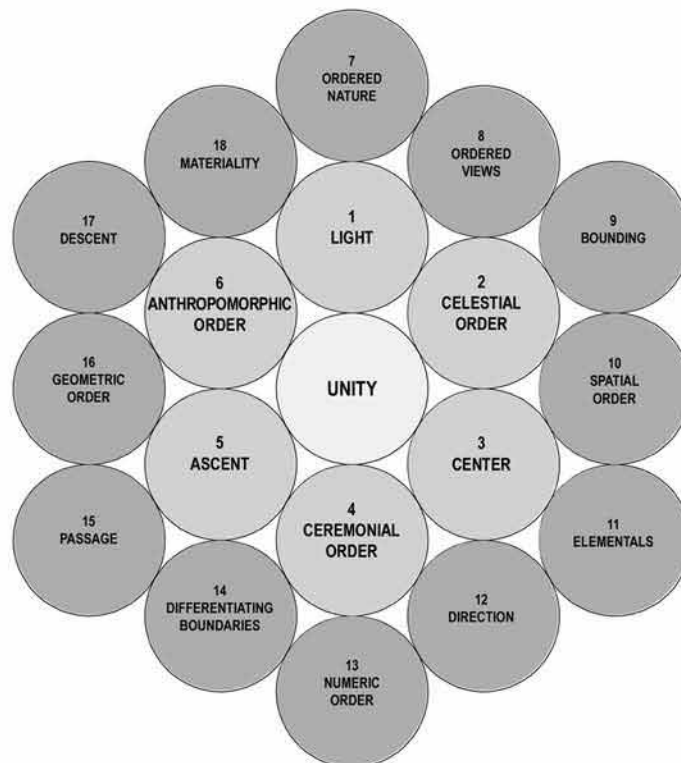


Fig. 05