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Architecture Leading to a Meaningful Place

Maria M. Agostini

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ARCHITECTURE LEADING TO A MEANINGFUL PLACE

Maria M. Agostini
Thesis Proposal

Comittee:

C. Grey
S. Folts
S. Henderson
R. Jensen



Program

Area	Occupancy	Size	Square Feet	Total
Chapel	40	40'-0" x 60'-0"	2400	2400
Sacristy	1	8'-0" x 8'-0"	64	64
Chapter House	30	30'-0" x 30'-0"	900	900
Refectory	30	75'-0" x 30'-0"	2250	2250
Kitchen	1	10'-0" x 15'-0"	150	150
Prior's Cell	1	10'-0" x 10'-0"	100	100
Monk's Cells	15	9'-0" x 10'-0"	90	1350
Novice's Cells	9	9'-0" x 10'-0"	90	810
Bathrooms	25	6'-0" x 6'-0"	36	900
Visitor's Cells	5	9'-0" x 10'-0"	90	450
Visitor's Bathrooms	5	6'-0" x 6'-0"	36	180
Meeting Room	30	30'-0" x 3'-0"	900	900
Storage		25'-0" x 25'-0"	625	625
Administrative Office	1			160
Monk's Visiting Area		10'-0" x 15'-0"	150	150
Library	1	20'-0" x 30'-0"	600	600
Subtotal				11989
Circulation 25%				2997.25
Mechanical Rooms 15%				1798.35
Total				16784.6

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"Architecture is the mastery, correct, and magnificent play of masses brought together in light. Our eyes are made to see forms in light; light and shade reveals these forms..." Le Corbusier Towards a New Architecture

I. Thesis Abstract

Thesis Proposition

Spatial enclosure properties are intrinsic in architecture. Properties such as light, scale and proportion form spaces that effect our perception of a place, but light is most important. The creation of a space and the sequence to reach to an area, according to these properties, will affect positively the contemplative state of mind of an individual or a community. The application of said properties, but most importantly light, through the construction of views, forms, materials, textures, and the use of colors will create a narrative that will encounter and achieve individually or collectively a contemplative state of mind.

Program

A place for contemplative life will be developed (monastery or convent/retreat). The structure that composes the program: church, refectory, chapter house, cellar, among others, will give meaning of a place through the use of views, orientation and application of light. The use of sequence and its relationships with other functions, and nature will create an architecture that will represent and find the meaning of contemplation.

Site

The application of the thesis will take place in Puerto Rico, at the east side of the island, in Naguabo. The topographic issues have a close relationship with the thesis proposition and the program: light and views. The sun in part of the island is very intense. For that reason, a strategy to control the sun will be developed through the use of architectural elements and to achieve the purpose of said proposition.

The relationship between water and site will also define the architectural proposition and programmatic issues.

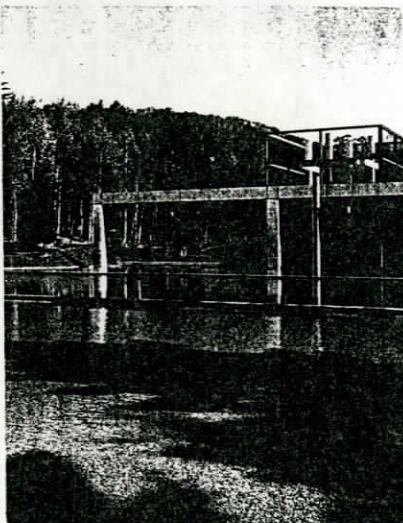
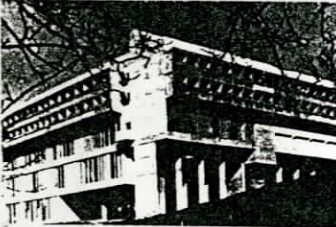
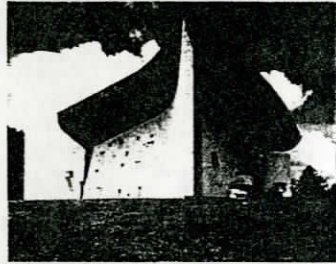
Proposed Research and Methods of Investigation

The research will be directed towards a series of issues relevant to thesis, program, and site. The thesis will investigate symbolical and architectural elements presented in Annunciation paintings that define the narrative, such as perspective, proportion, views, and orders. Written analysis and diagrams of sacred buildings developed through the history of Christianity will be incorporated in the thesis; projects such as Notre-Dame-du-Haut at Ronchamp, Sainte-Marie-de-la-Tourette, both by Le Corbusier, Church on the Water by Tadao Ando, and precedents of the history of monasteries will be examined. The method of investigation will be through use of abstract diagram to dissect each element in order to conclude what was the intention of the author and apply or reinterpret them in the thesis project. The use of computer graphics to test light in different areas and conditions of the projects.

II. Introduction

From the beginning of the process of thesis prep, the intention was based upon the effect of lighting, proportion, scale and view in a space that will express the meaning and narrative of the program: a contemplative place. The effect of lighting, and the other properties based on spatial implications through the analysis of precedent solely is not enough to understand the whole scenario. To achieve said purpose I looked further of how does a place becomes meaningful; what is the contemplative life philosophy; what views do the site offer me to express the meaning of the place; and how through application of light, proportion, and scale one understands its meaning, not to mention the construction of views. Each part of the thesis document: proposition, program, site has to be understand as a whole. Each part is fundamentally connected in order to apply the properties mentioned. You can not separate one part from the other, it becomes a perfect 'weaving'; if you take one part from the other, the whole purpose of thesis is lost.

III. Architectural Proposition



Architecture has been related from the beginning to the cosmos. Humans have been imitating and giving symbols to related to nature. Ancients related to the cosmos elements to construct their buildings. In the Renaissance, for example, architecture and in art in general represented the power of the princely courts as well as a tribute to God and nature, always using the precedent of the ancient architectural orders. Through the course of times, architecture has lost the idea of meaning and has become just merely functional. By this I am not stating that function in architecture is not acceptable. There must be a balance between meaning and function. "Socio-economic conditions are like a picture frame; they offered a certain "space" for life to take place, but do not determine its existential meaning."¹ The thesis, then, will demonstrate that meaning is important through the use of architectural properties such as light, scale, and proportion. For the thesis and programmatic purposes, investigation of monasteries, Annunciation paintings, and architectural precedents such as Notre Dame du Haut at Ronchamp, Sainte Marie de la Tourette, both by Le Corbusier, and Church on the Water by Tadao Ando will be examined to understand the meaning of a place that will be developed in the thesis project.

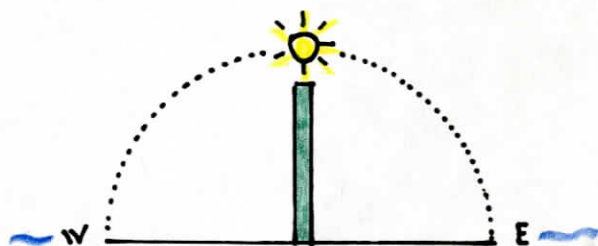
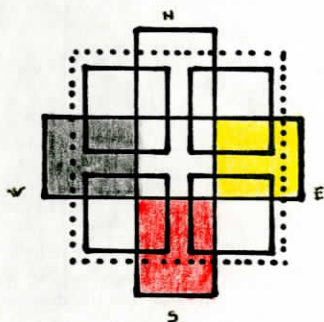
Architecture recognizes the meaning of a place. Space is where our experiences take place and where our lives gain meaning. "Space is a system of meaningful places."² This is achieved through nature and creation of buildings. How does a place becomes meaningful? What elements have humans used to make a place meaningful? From the beginning, humans imitated nature. "Primitive men did not distinguish consciously between the different types of symbolization, but merged them all into magic and myth; good and bad "forces" were associated with everything. They were never indifferent to the environment."³ Although, through the course of the human race, symbolism emerged in the interpretation and understanding of the world, meaning gave order to life, justifying its identity. Norberg-Schulz also states: "Only through such an order, only by recognizing its mutual dependence, do things become meaningful."⁴

We need first to understand what nature offers to human race, the genius loci, in order to give a larger framework of what the thesis is trying to achieve.

Norberg-Schulz's book *Genius Loci Toward a Phenomenology of Architecture* examines the mythical understanding of a natural place and its effects on humans. He states: "From the beginning of time man has recognized that nature consists of interrelated elements which express fundamental aspects of being. The landscape where he lives is not a mere flux of phenomena, it has a structure and embodied meanings."⁵ He divided understanding of the cosmos in five basic modes: the first modes are things, concrete natural elements. They have spatial implications which have components that define it. Such components are:

- a. Mountains, belong both to earth and heaven. "It is a meeting place where the two basics elements comes together. It is the centre through which the 'axis mundi' goes; a point where one can pass from one cosmic zone to another."⁶
- b. Trees unite also both heaven and earth. They create spatial understanding, not solely by rising up to the sky but also because they grows and are "alive". Trees manifest the 'living reality'.
- c. Forest is defined as a place where the sense of orientation is lost, because of the wilderness.
- d. Water manifests the symbol of life; it also belongs to the 'living reality'. Water as well gives identity to the land. In architectural terms it is the medium where the land becomes an object.

The second mode of mythical understanding is order, which is determined by the sky. It is understood as a "structured place where the main directions represent different 'qualities' or meaning. These directions are specified as the cardinal points and the sun. Cardinal points have been clearly identified in the Roman cities where at both sides, the *cardo* and the *decumanus* meet at the 'axis mundi'. It has also defined as four quarters of the world and represented in different colors. North was given the color of white; south, red; east, yellow; and west black. (M. Muller, Gifford Lec. 1890)⁷ Humans ordered the world as four squares. "The world walls made a vast square, the type of all perfect garden and cloister, the enclosure four-square, in which according to Avesta, man was first placed."⁸ The sun is described by Norberg-Schulz as the most invariant and grandiose natural phenomenon. It has been defined also, as the guide, the soul of the world.⁹ The sun traveling from east to west, divided the universe into two worlds; the world of the north and the world of the south.¹⁰ Egyptians defined where the sun rises as the "domain of birth and life" and the west as the "domain of death".¹¹ Thus, through the course of the history of the human race, the sun has taken another meaning, and has been personalized as the light.



This brings us to the third mode. Light is also a basic part of the reality. But that reality changes according natural phenomenon. Light is less constant; it changes from morning to evening. "Light is silence, silence to light, as to be a kind of threshold and when this is realized, sensed, there is inspiration."¹² This inspiration has been not only in architecture, which will be analyzed later, but also in paintings. In Christian times it was identified as a symbol of conjunction and unity that was connected with the concept of love. In the Byzantine times, light was used to identify figures as saints by creating halos on their heads. In the Renaissance it was understood as 'microtheos' which means God is manifest in everything."¹³ It was represented as God, the 'divine light', the 'pater luminis'.¹⁴ Norberg-Schulz also states that light is intimately connected with the temporal rhythms of nature, which form a fifth dimension of understanding.

Character, the fourth mode, relates to the human inherent characteristics and which defines the general atmosphere of the place. The place could offer protection, others danger or other could make us feel that we are the center of the world.

And finally time, the fifth mode, which is qualitative and concrete as the other order of nature. Time is only experienced by man's pace and by intervals. Time is related to rituals. It is "the dimension of constancy and change, and makes space and character parts of a living reality."¹⁵ All these mythological modes has been expressed in Sandro Botticelli Annunciation painting. It is one aspect to the achievement of the narrative.



Nature has been imitated in architecture. But architecture and building are two distinct things, L. R. Lethaby describes them as "the soul and the body." He also stated: "As the pigments are but the vehicle of painting, so is building but the vehicle of architecture, which is the thought behind form, embodied and realized for the purpose of its manifestation and transmission. Architecture, then, interpenetrates building, not for satisfaction of the simple need of the body, but the complex ones of the intellect."¹⁶ Their interpretation was first used for the construction

of a temple. The temple was built similarly to the world. Maspero in his book *Egyptian Archeology* describes it: "The earth, as they believed, was a flat and shallow plane, longer than its width; the sky, according to some extended overhead like an immense iron ceiling, and according to others, like a shallow vault. As it could not remain suspended in space, without some support, they imagined it to be held in place by four immense props or pillars."¹⁷ Each element has its meaning: the floor symbolized the earth, and it was clothed with vegetation; the columns were decorated with foliage; the roof was vaulted; and the idea of the sky was painted blue. All this has a connection with God and the cosmos. Similar representation has been used in the Christian architecture. The nave and the chancel that is divided by a screen symbolizes the earth and the heaven, especially in the Byzantine churches which were shut off by the iconostasis. Stycley, an old antiquities, stated: "Ever since the world began, in building temples or places of religious workship, men have been studious in setting them according to the quarters of the heavens; since they considered the world as the general temple, or house of God, and that all particular temples should be regulated according to the idea. The east naturally claims a prerogative, where the sun and all the planets and stars rise. The east they therefore considered the face and front of the universal temple."¹⁸

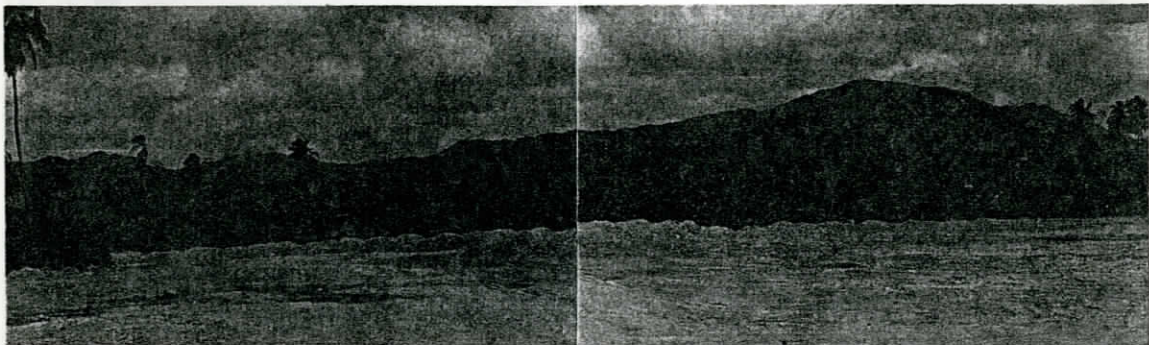
To accomplish its meaning, composition and its architectural properties must be fully developed. It is my intent, in the thesis to investigate three of the most important properties inherent in architecture: light, scale and proportion. Norberg-Schulz's mythical order will be included as a part of the narrative by constructing views as another layer for understanding the meaning of a place.

The site is surrounded mostly by palm trees, which compose a unique spatial condition. There is a transparency to other views, but at the same time they have the capacity to reach to the heaven and also have the flexibility to move freely through the constant winds. Palm trees rise from the earth and only at the top express beauty, as it is only talking to the heaven.

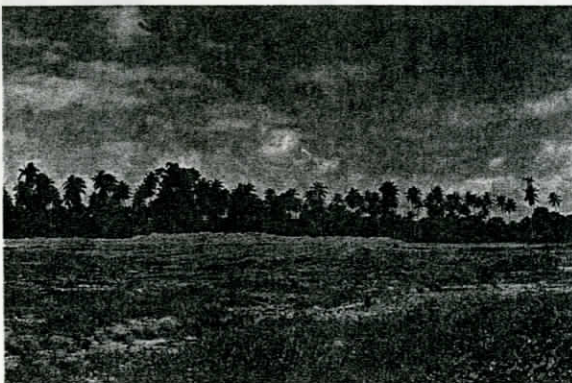
The forest can be seen from the distance, which is El Yunque. But at the periphery of the site there is wilderness; the boundary between the site is a small river which culminates at the Caribbean Sea.

In the distance there are two islands, which are part of Puerto Rico, Vieques and in close proximity, Cayo Santiago, a National Institute of Health Research Facility. The presence of water is important because of the proximity to the site, the river, which comes from El Yunque, and the sea which creates a physical separation from the other islands. As mentioned in the book *Genius Loci Towards a Phenomenology of Architecture*, Norberg-Schulz mentioned: "The presence of water, thus gives identity to the land and the legend of the Deluge presents the 'loss of place' as a great flood."

Light is very strong during the day in this part of the island. The sun sets behind the mountains, which gives the character of a total separation between the east and west. The challenge for the thesis is to achieve within the spaces a transformation of light within the spaces.



View of El Yunque National Tropical Forest (North west side)



South west view of palm trees



Rio Blanco (North east side)



Distant view of Vieques



Cayo Santiago



Program

In order to understand the intention of the project, it is fundamental to add to the discussion what contemplative life means. A contemplative life is a life that is chosen to achieve a close relation with God. "Zen said that contemplation was a life to which human persons are called in virtue of their humanity."¹⁹ Merton also mentioned: "Now while the Christian contemplative must certainly develop by study, the theological understanding of concepts about God, he is called mainly to penetrate the wordless darkness and apophatic light of an experience beyond concept, and here he gradually becomes familiar with God who is 'absent' and as it were 'non-existent' to all human experience."²⁰

The project is composed of two different areas that will interrelate within each other at special functions. There will be a place for complete and absolute contemplative life, where the monks will live; a place for pure and passive contemplation. This will have a direct and experimental contact with God, as defined in Merton's book.²¹ The monastery also will offer a place for temporal retreat of what Merton called the analogous or infused contemplation.²²

The monastery/ retreat will be a mendicant order, the Carmelites. The mendicant orders were established in the beginning of the thirteenth century. Their duties is to have a spiritual life that is included with spiritual work in the outside, teaching and working in the communities as missionaries. The Carmelite order were founded by the prophet Elijah, who lived solitary in Mount Carmel, Israel. Through times the order were extended in Europe and America.

The Carmelite rule is to live a life of allegiance to Jesus, binding themselves especially to:

- develop the contemplative dimension of their life, in an open dialogue with God
- live as brothers and sisters, full of charity
- meditate day and night on the Word of the Lord
- pray together and alone several times of the day
- celebrate Eucharist every day
- do manual work, as Paul the Apostle did
- purify themselves of every trace of evil
- live in poverty, placing in common what little they may have
- love the Church and all people
- conform their will to that of God, seeking the will of God in faith, in dialogue and through discernment.

The following are some of the rules that govern the Carmelite order in terms of spaces and everyday rituals:

Foundations: the Prior and the brothers may have foundations in solitary places, or where it is given a site suitable and convenient for the observance proper to the Order.

Separate cells: each is to have a separate cell, situated as the lie of the land that propose to occupy may dictate, and allotted by deposition of the Prior with the agreement of the other brothers, or the mature among them.

The common refectory: they are to eat whatever may have been given them in a common refectory, listening together meanwhile to a reading from Holy Scriptures where that can be done without difficulty.

The allotted cells: are to be occupied a cell other than that allotted to an individual, or exchange cells with another, without leave or whoever is Prior at the time.

The Prior's cells: it should stand near the entrance to the property, so that he may be the first to meet those who approach.

The oratory and daily Mass: an oratory should be built as conveniently as possible among the cells. This is the place where the community gather each morning to hear Mass.

Dialogue and fraternal correction; on Sundays, or other necessary days, the community discuss matters of discipline and spiritual welfare.

Silence: the monks strength will lie in silence and hope. they have to keep silence from after Compline until after Prime the next day.

In comparison with the strict monastic life, the place will provide areas to people who want to use the monastery as a retreat and also could be accepted as a laity by attending classes and reading book.

Program SPACES.

Chapter House	30	30'-0" x 30'-0"	900	900
Refectory	30	75'-0" x 30'-0"	2250	2250
Kitchen	1	10'-0" x 15'-0"	150	150
Prior's Cell	1	10'-0" x 10'-0"	100	100
Monk's Cells	15	9'-0" x 10'-0"	90	1350
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Subtotal				11989
Circulation 25%				2997.25
Mechanical Rooms 15%				1798.35
Total				16784.6

Church/Chapter?

To create the meaning of the place, there will be organizing features that will relate the different phases the monks or the visitor will achieve in close communication with God. Shannon's book *Merton's Dark Path The Inner Experience of a Contemplative* states that there are stages from which you reach to the absolute stage of contemplation. As we know, each individual has a different way to approach it, but the thesis will try to narrate what would be the different stages.

The following areas are the most important spaces where the stages of contemplation will be expressed.

The cells are the main area where spiritual growth may take place. For that reason, then will be surrounded by palm trees.

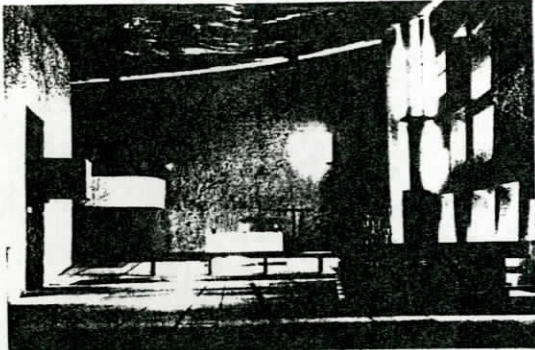
The chapter house and refectory will be located near the river. The function of these spaces is for the reading of the words of God. The space will be interpreted as an object where liturgy becomes a 'living reality'.

The chapel and sacristy will be located facing the west side, toward the forest, El Yunque. This will be defined as the final destination, where the full unity with God will be finally achieved. The unity between the heaven and earth.

"For contemplation is the light of God shining directly on the soul. So, later influenced contemplation sooner or later brings with it a terrible revolution. The ray of light becomes, for a time at least, 'a ray of darkness'. This is a crucial point in the life of prayer, for a person wants to depend on himself and make his own decisions, yet he finds himself called to wait for God to act. "Contemplation is beginning behind this cloud of darkness; it is a powerful, mysterious and yet simple attraction which holds the soul prisoner in the darkness and obscurity. Then one day there is an illumination; the soul comes to realize that in this darkness it has truly found the living God. Life is transformed and there is only thought and one love: God alone."²³
Architectural properties will be the channels from which the understanding of this particular kind of life will be expressed.

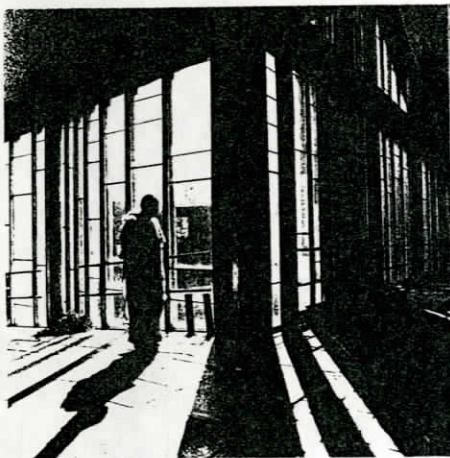
V. Architectural Issues

The nature of the project and significance of its function will be through the use of architecture, which will be composed of pure geometric forms. Light, proportion, scale, and views are the channels from which spaces will find its meaning.



I. Light has been recognized by the most distinguished architects as one of the most important applications in architecture. "It is a principal medium which puts man in touch with its environment."²⁴ Light and shadow have the capacity to transform a place to seen as it is alive. It is a manifestation of textures and colors. Louis Kahn describes light as "a threshold, a place or point of beginning or entering a point at which a psychological and physiological effect begins to be produced."²⁵

Daylight is a "dynamic phenomenon"²⁶ that responses to specific time and place with its relationship with nature. Light control do not only serves design purposes but to eliminate excessive illumination interior surfaces, to eliminate high sky brightness or direct radiation, and to redistribute sunlight by diffusing it. East, south and west are critical to resolve daylight control. There are several architectural ways to control sunlight describe by Marguerite Villeco in September 1997 AIA Journal



a) fixed exterior control to limit excess sun or skylight.

b) overhang eliminate the impact of direct sunlight and heat on glass during specified times of the year.

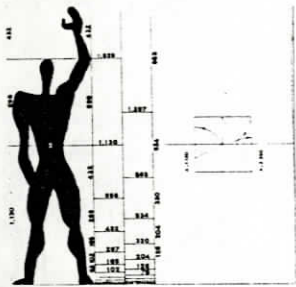
c) exterior louver overhangs allow the reflected sunlight to illuminated the visible surface of the control of the room. The disadvantage of the louvers are that allow rain through them and cannot be used along narrow exterior corridors. Vertical or horizontal louvers have different functions. Vertical louvers lend themselves to control sunlight on the east and west facades, and to control sky brightness on the north; the horizontal ones are more effective on the south side.

d) fixed exterior amplifying controls enhance the impact of sunlight rather than diminish it. This includes surfaces that diffuse or reflect light.

e) overhangs with reflective surface underneath transmit maximum ground reflection. One type of overhang is the light shelves located below the window reflect light up towards the ceiling inside. Another is the use of parapet walls are effective in combination with a north facing clerestory; they reflect light for the southern sky and sun through the clerestory and onto the ceiling.²⁷

These architectural element help to control light but not necessarily represents the meaning of the architect's intention as it will be analyze in Le Corbusier's projects such as Notre-Dame du Ronchamp and Saint Marie de la Tourette.

The use of light in the project will be markedly manifest where there is a path, a transition between one place to the other. The path is going to be dynamic, where the transition between one place to the other will give the narrative of what to expect. When the person reach to the space, light shall be 'static' where the process of meditation will occur.



II. Proportion the comparative, proper, or harmonious relation of one part to the another or to the whole with respect to magnitude, quantity, or degree. The quality between two ratios in which the first of the four terms divided by the second equals the third divided by the forth.²⁸ Proportion must be apply for architecture to become pure in geometry. Balance symmetry is also identified in the Annunciation paintings. Proportion is also fundamental to understand what architect want to achieve. Human proportions are intrinsic in architecture where the architect wants to manifest the sense of belonging. Corbusier's creation of the Modulor will be closely related in the thesis. "The Modulor is related based on upon ancient 'golden section' and the human figure that reflects that section."²⁹

III. Scale is defined as a proportion of space determining the relationships of a representation to that which it represents. A certain proportionate size, extent, or degree usually judged in relation to some standard or point of reference.³⁰ Scale impacts the sense on a place through use of color, texture and pattern along with proportion. By using architectural element, scale defines spaces. For example, high wall is perceive as defensive, protective, complete isolation Entrance could relate to human proportion to give a sense of belonging of a space. "The standard of size is shifted to carry meaning that are recognized by the viewer, and these abnormal standards, large scale, small scales, and above all variations of scale, contribute an eloquence to architecture that can be obtained in no other way".³¹

IV. Views also will become important to the relation between function and landscape. The different views of the site will help to define the meaning of the place. It is evident in the Annunciation paintings how the painter plays with different views to bring his point across; sometimes there is an interrelation between the views, as a series of layers. "To make the landscape interesting one must take the radical decision to limit it, to give a certain dimension: to occlude the horizon by raising the walls, and to reveal it through gaps at strategic points..."³²

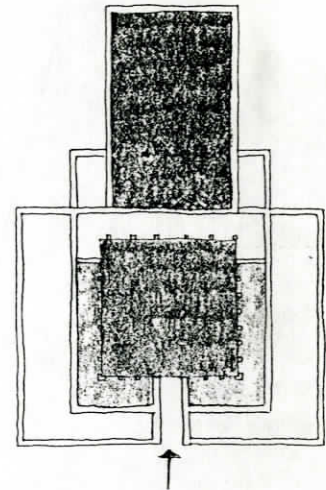
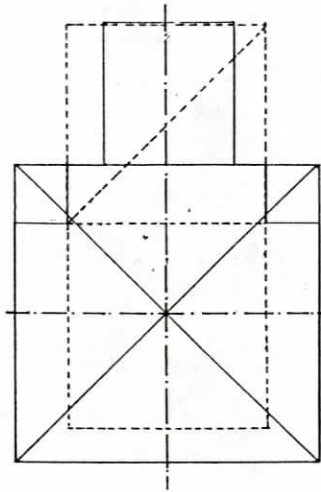
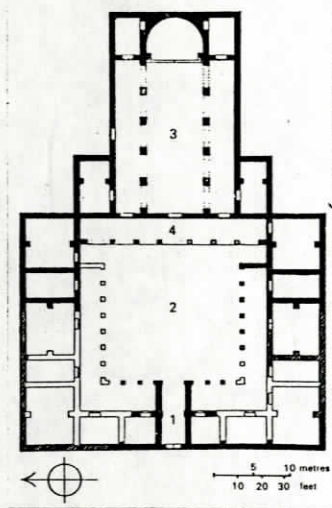
VI. Precedent

Three categories of precedents are presented in other to clarify the intentions of the thesis.

I. Historic Monasteries of Western Europe:

A. Id- Der, Syria

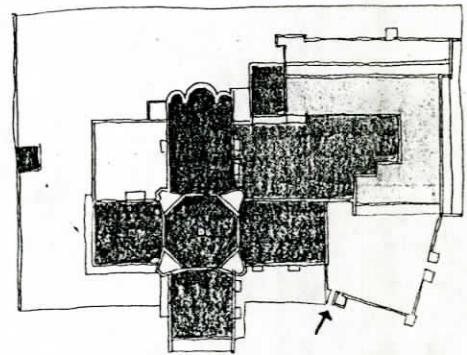
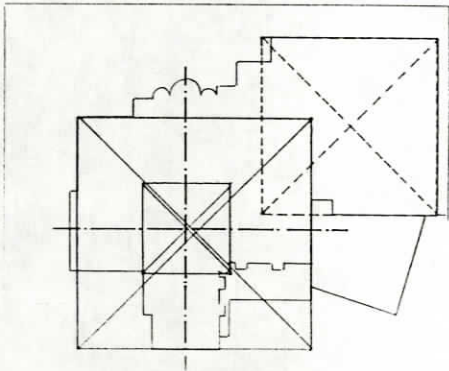
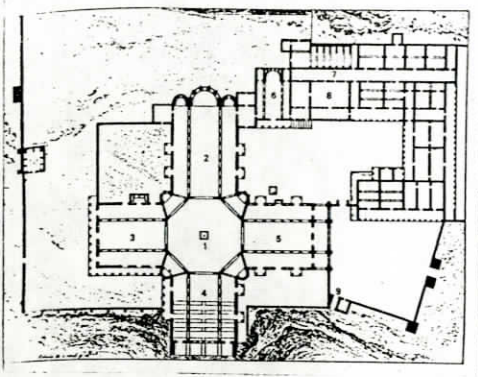
- Introspective, all the functions are organized around the cloister.
- Longitudinal axis more important. Entrance, west axis directly to the church entry, it is compress and then opens up to the atrium. Entrance to another world.
- Proportion, interlocking squares.
- The church faces towards the east.



10-DER - SYRIA
CHURCH/CHAPEL
ATRIUM

B. Qal' at Suman, Syria

- Interlocking squares relating to each of the spaces.
- Two cloisters: one organizes the four basilicas (public) and the other organizes the cell, chapter house, refectory, etc. (private).

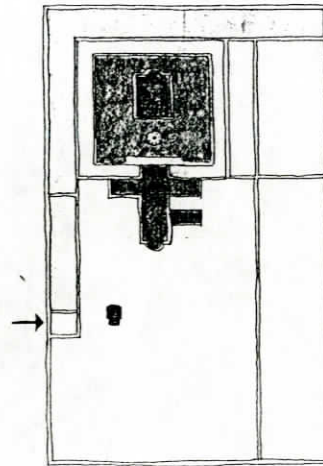
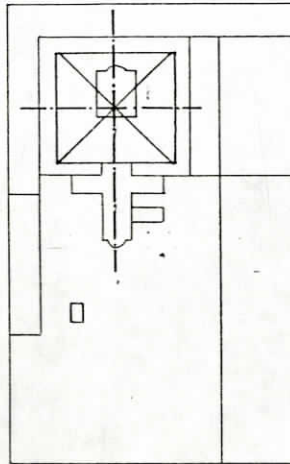
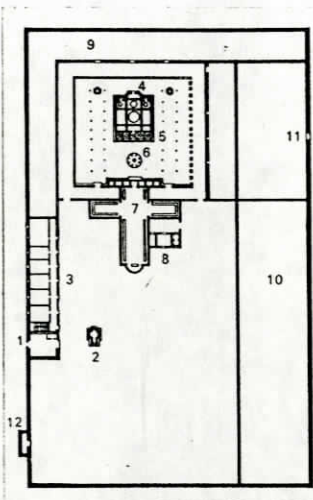


QAL' AT SUMAN - SYRIA

- CHURCH / CHAPEL
- REFECTORY
- KITCHEN
- CELLS
- CLOISTER

C. The Great Lavra Mount Athos

- The cells are located on the periphery of the monastery defining the cloister.
- The church is located in the center of the cloister, as an object. It represents the union of the community (cloister) with a sacred place (church).
- Longitudinal axis is important, defines the entrance to the church and its relation with the refectory.



THE GREAT LAVRA - MOUNT ATHOS

- CHURCH / CHAPEL
- REFECTORY
- KITCHEN
- CELLS
- CLOISTER

D. St. Gall, Switzerland

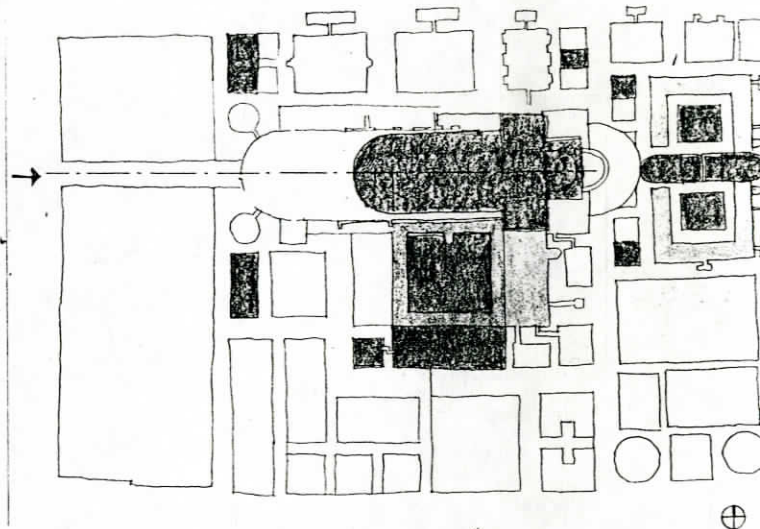
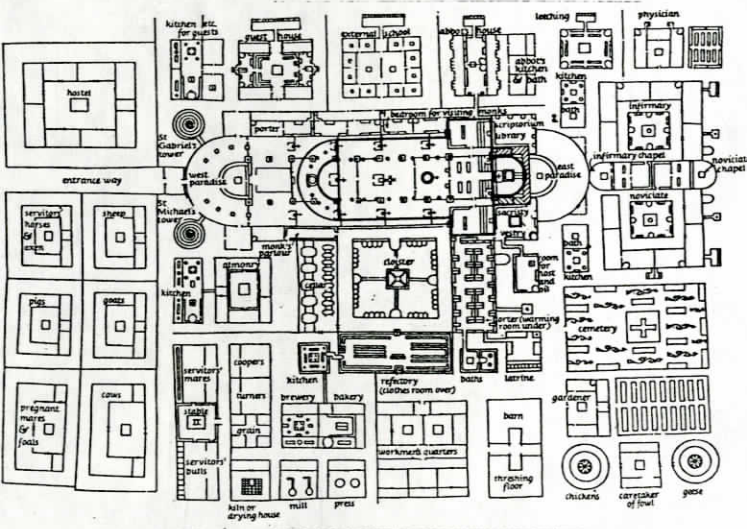
-Plan of an ideal Carolingian monastery. Monks exercised the power of planning. The monastery is created as a micro city, self sufficient. The plan is divided into four main areas:

1. Claustum (monastic enclosure around the cloister). It is composed of a dormer, (east side), refectory (south side), and the cellar (west side).
2. Enclosure- building around the cloister form the monastery within the monastery.
3. Building for guests, school for laity and strangers, the abbot house with separate kitchen and bath.
4. Large kitchen buildings.

- The entrance of the church is facing west. Altars are separated for the monks and the laity.

- At the east side there is a separate cloister for the novices and infirmary separated by a two separate chapels, one for the novice and the other for the infirmary.

- A dominant linear axis connects the entrance with the churches.



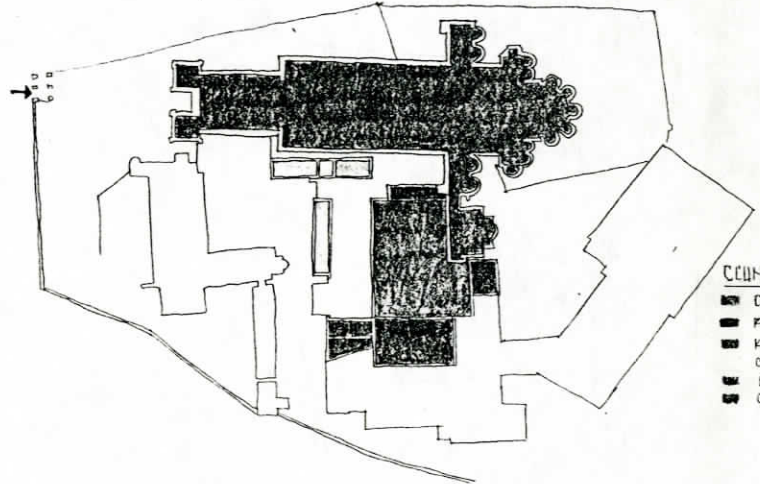
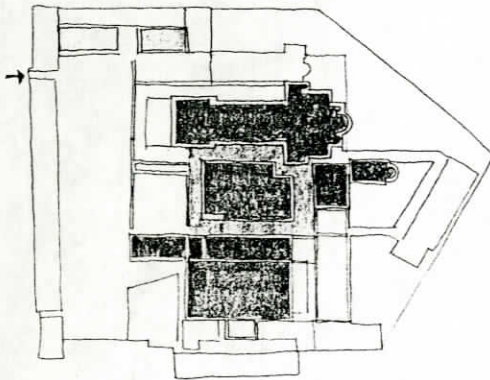
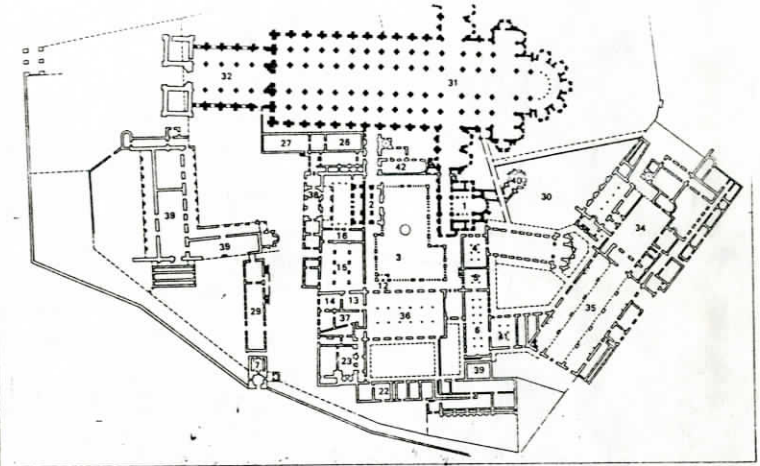
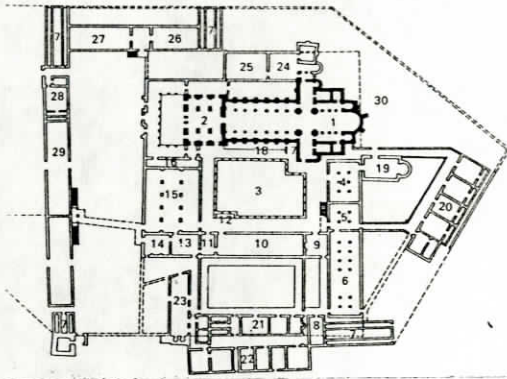
ST GALL 820 SWITZERLAND

- CHURCH / CHAPEL
- REFECTORY
- KITCHEN
- CELLS
- CLOISTER

E. Cluny II & III

- Here the cloister was liberated to become the chief architectural feature of the monastery. In the coming centuries almost unlimited potentialities, both architecturally and as a vehicle for painting and sculpture, were exploited by all enterprising monasteries. The cloister became increasingly the spiritual home of the monks.³³

- Dominant entrance, church.

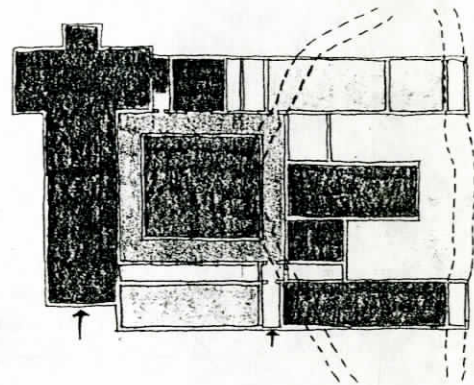
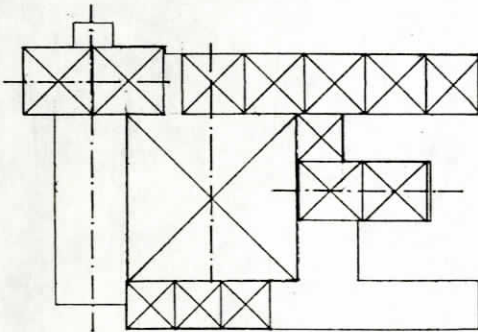
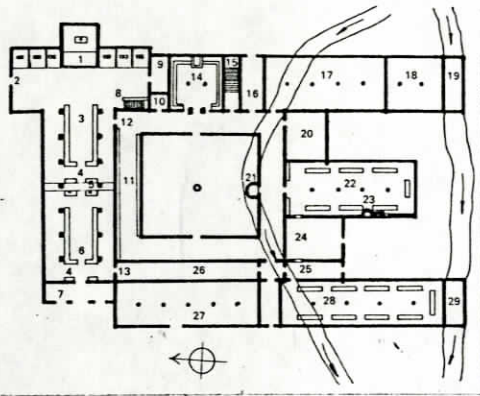


CLUNY II 1049 CLUNY III 1108

- CHURCH/CHAPEL
- REFECTORY
- KITCHEN
- CELLS
- CLOISTER
- CHAPTER-HOUSE

F. Ideal Cistercian Monastery

- They aspire to live in complete isolation from any town. They prefer to live near a stream in a valley.
- Cistercians plan wherever was possible to locate the church at the north side and the cloister at the south.
- The refectory is situated at the right angle to the cloister that allows more light.
- The chapter-house is located next to the church. This could be interpreted as the close communication between the community and God.
- A fountain is placed in the cloister as a ritual before entering to the refectory.



IDEAL CISTERCIAN MONASTERY

- CHURCH / CHAPEL
- REFECTORY
- KITCHEN
- CELLS
- CLOISTER
- CHAPTER-HOUSE

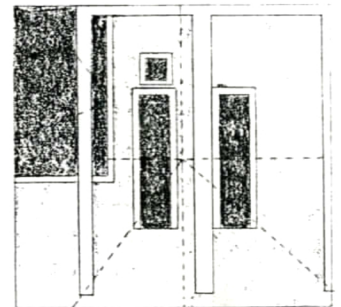
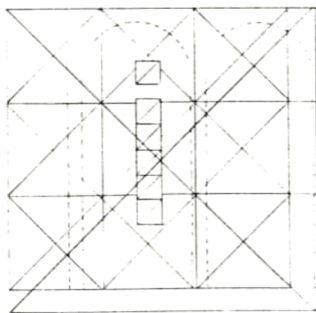
II. Analysis of annunciation paintings

Fra Angelico, Church of San Martino a Mezola, Florence, 1387
Filippo Lippi, Basilica di San Lorenzo, Florence, 1406
Fra Angelico Convento di San Marco, Florence, 1449
Neri di Bicci, Santa Maria Novella, Florence, 1455
Sandro Boticeili, Uffizi, Florence 1490

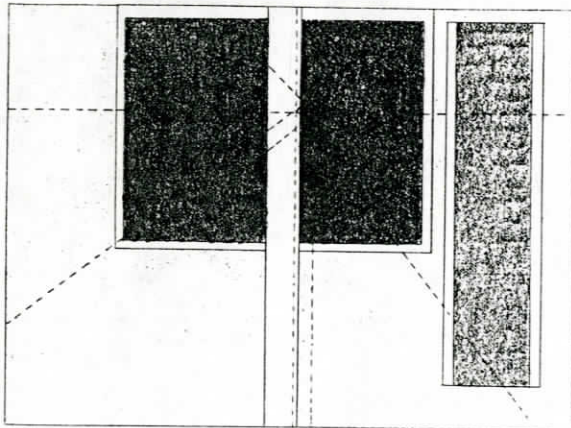
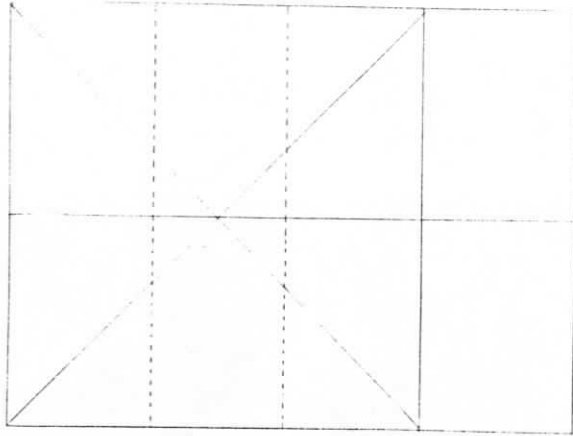
The intention of the diagrams was to analyze the proportion of the painting, different layer of views, deep and shallow, represented through gradations of gray, and the vanishing point of the perspective. Various conclusions were determined:

- Perfect proportional composition, that represents the period of the Renaissance of rationality and the use of mathematics.
- Architectural order are used for the viewer to understand the scenario as well, and most importantly division of the characters, the Virgin Mary and the Archangel San Gabriel, separated physical of imaginary (Boticeili's painting where hands are align with the window jamb to represent symbolism of sacred world and the profane world. Lippi's annunciation both characters are place in one side but a flower vase makes the division between them.) which helps to give the narrative.
- Vanishing point were constructed where the narrative is most important. All the painting except Filipp Lippi have two different vanishing points for each of the characters, located at the right side of the painting

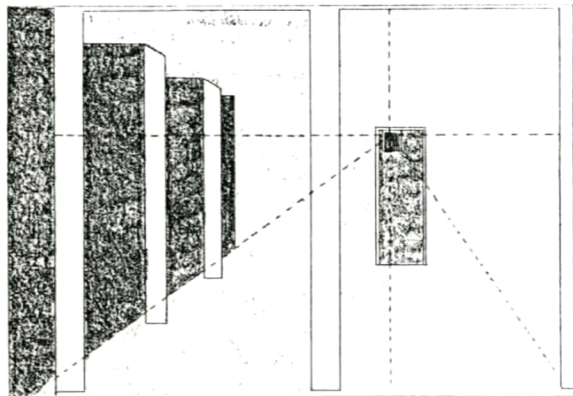
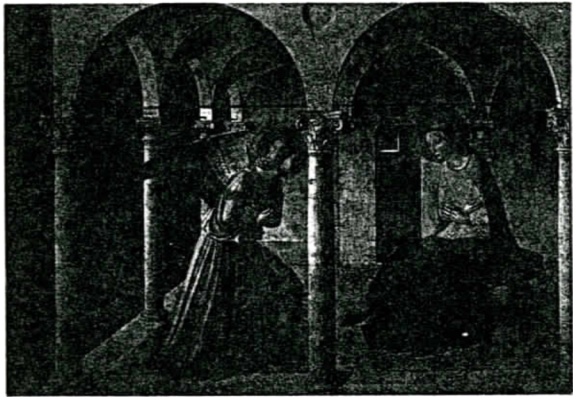
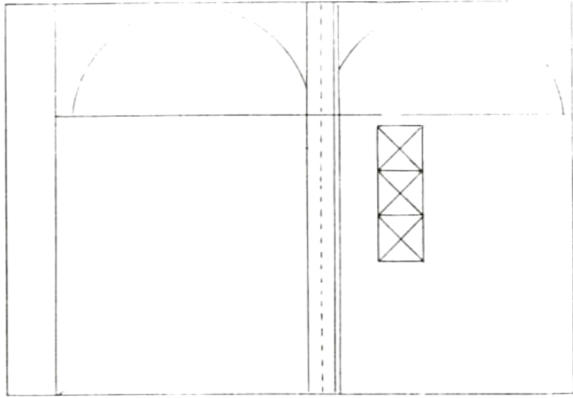
These analyses will become models for the work to establish the hierarchy of spaces for the project, to understand the narrative and meaning that is trying to achieve. The construction of vanishing points to lead ones to a sequence and understanding the different phases of contemplation.



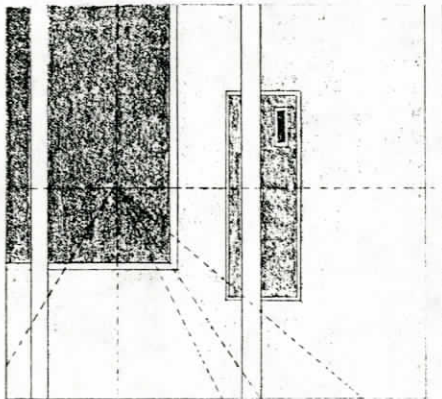
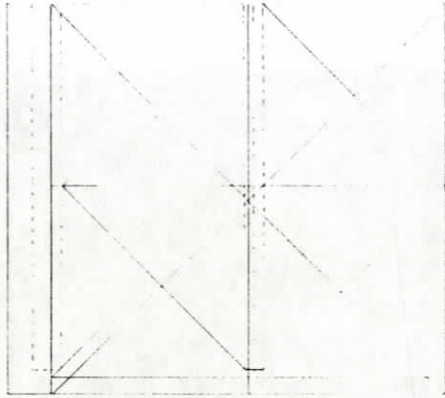
Fra Angelico, Church of San Martino a Mezola, Florence, 1387



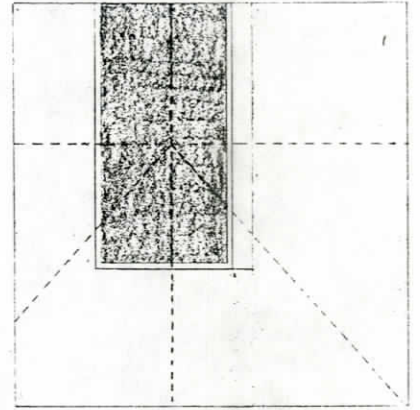
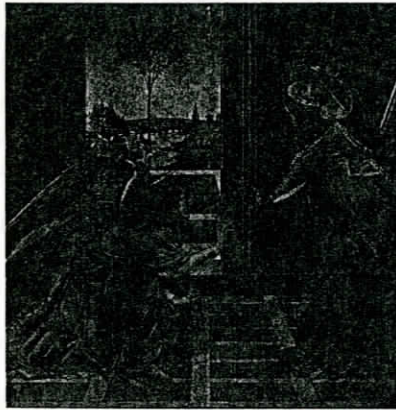
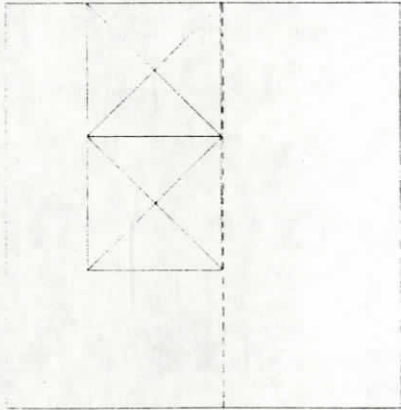
Filippo Lippi, Basilica di San Lorenzo, Florence, 1406



Fra Angelico Convento di San Marco, Florence, 1449



Neri di Bicci, Santa Maria Novella, Florence, 1455



Sandro Botticelli, Uffizi, Florence 1490

Saint Marie de la Tourette, Le Corbusier 1957 - 1960

Dominican monastery located on a hillside overlooking Eveux. The site is a sloping terrain towards the west side surrounding by trees. The approach to the complex is thru the south west, having as the first view a massive wall of the church and then use the human proportion for the entrance. Le Corbusier designed a sculptural building where each floor has a separate function.

- First levels, location of the cloister that connects church, chapter house and refectory. An atrium is located at the entrance of the refectory and chapter house. It is a representation of the community. Ritual starts from this point and move toward the church. Circulation at one of the levels varies, inner side or the outer perimeter to organize views as well as to give privacy.
- The cells are located at the top levels, hallway is located at the inner side with a control view of the cloister.
- The use of light is constructed according to function, and meaning.

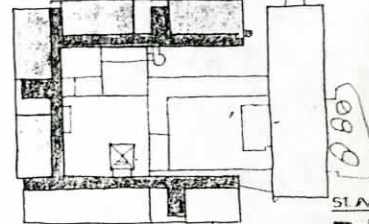
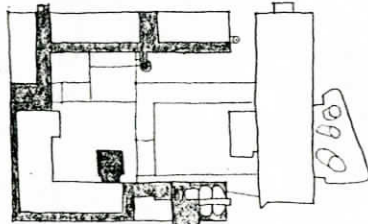
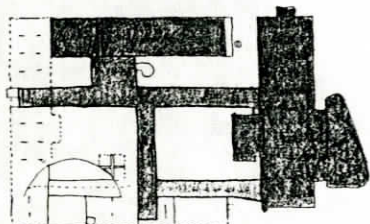
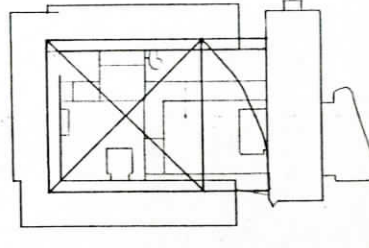
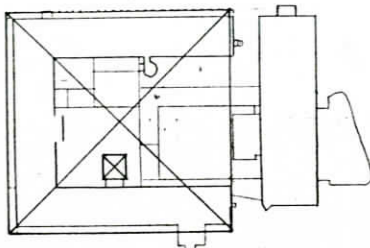
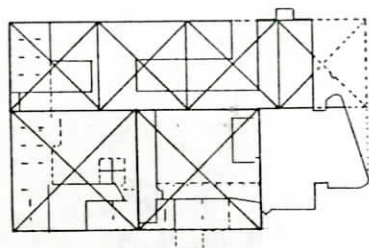
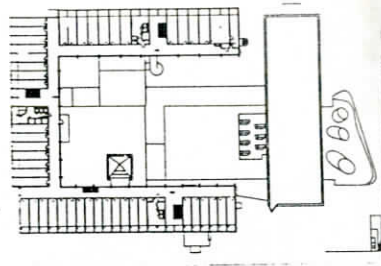
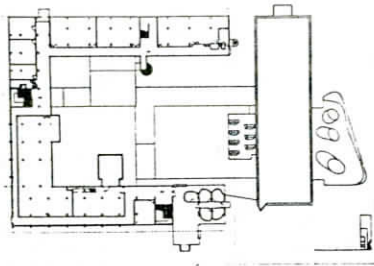
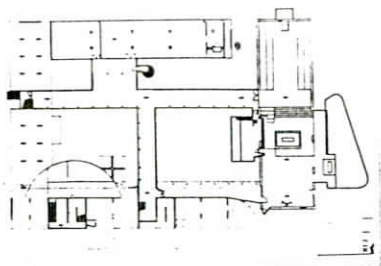
Cloister - vertical fins are applied based on the human proportion, this becomes a dynamic effect that relates to movement, and circulation.

Chapter-house and refectory - open view to the landscape.

Church, chapels, sacristy and oratory - the use of light is very controlled, give a subliminal sense of space. The application of light is static, which directs you to a contemplative mood.

Hallway, cells - light and view is controlled by continuous horizontal windows opening that prepare for a solitude contemplation as well to define horizontally of the structure, in contrast with verticality of the church and the other levels.

It is my intention to use La Tourette as a model for a further reinterpretation of a monastery. La Tourette is a perfect example of how the architect construct light in order to give meaning of a place as well to identified each space as a different function within the monastic life.



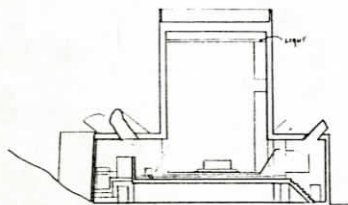
LOWER LEVEL

ENTRY LEVEL

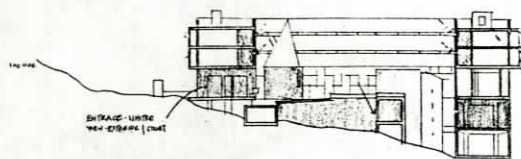
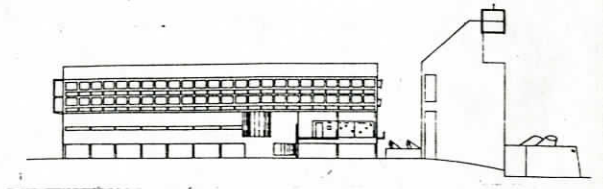
TOP LEVEL

ST LAMPIE DE LA TOURETTE

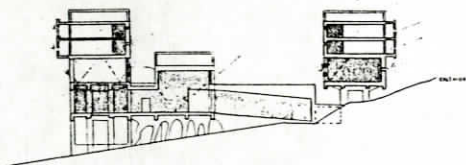
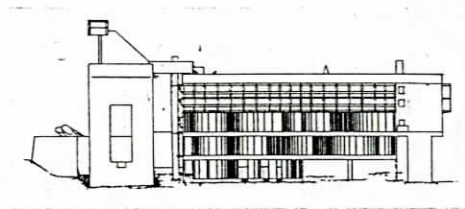
- CHURCH/CHAPEL
- REFECTORY
- KITCHEN
- CELLS
- DIOSTER
- CHAPTER HOUSE
- CIRCULATION



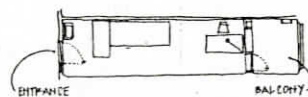
CROSS SECTION THROUGH CHURCH



CROSS SECTION LOOKING SOUTH

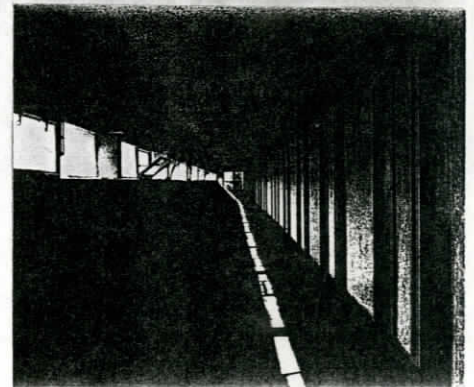
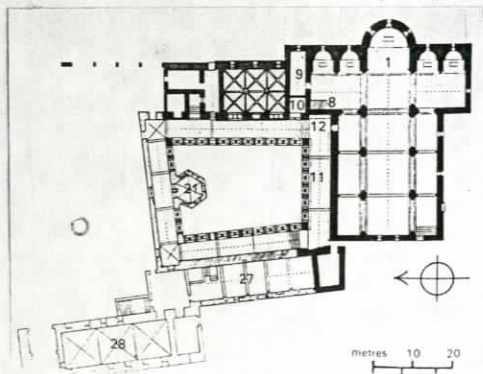
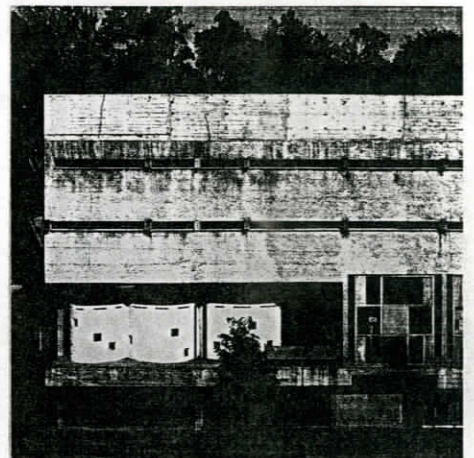


CROSS SECTION LOOKING NORTH



TYPICAL CELL





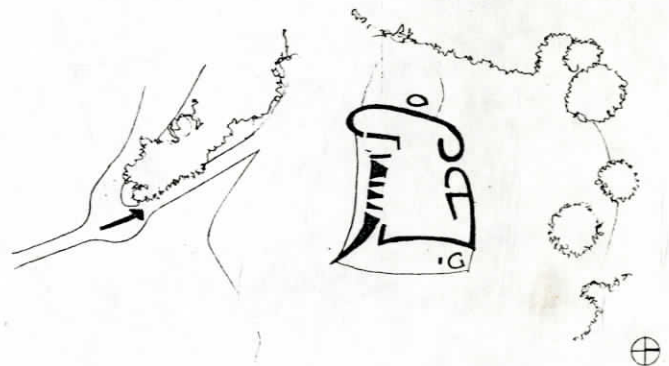
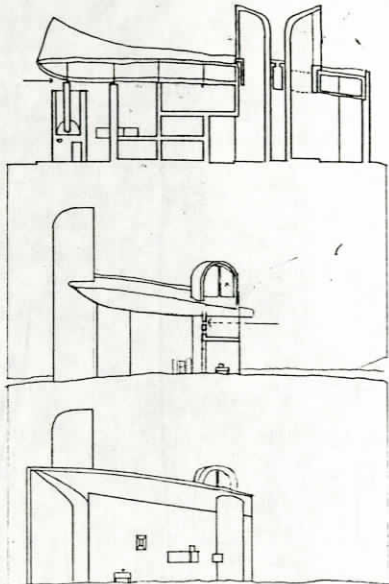
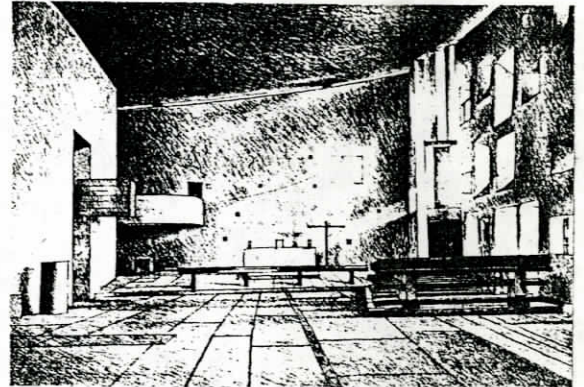
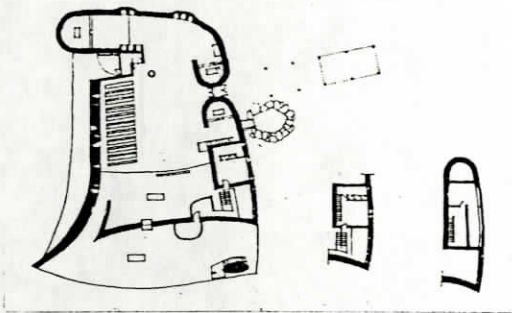
Notre Dame du Ronchamp , Le Corbusier 1950 -1955

The chapel is located at the top of the hill. The approach is thru the south east , trees give the enclosure to the building. There are two spaces contained in the site; the landscapes space for collective rituals (east side) and the interior that has a sense of individuality by the application of opening , completely enclosed.

Architectural elements used by Le Corbusier:

- Thick wall to direct the pilgrims (south side), a compress deep entrance to the interior of the chapel, and to have a different window conditions.
- Three chapels represented as tall towers, lighting comes through the top or the tower, use of reflective light. The two towers at the north wall create a secondary entrance.
- Thin opening at the roof line and the wall creates a sense of lightness.

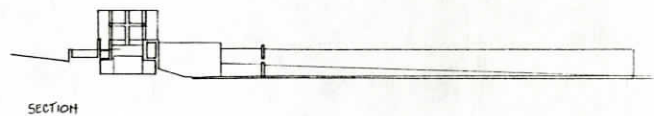
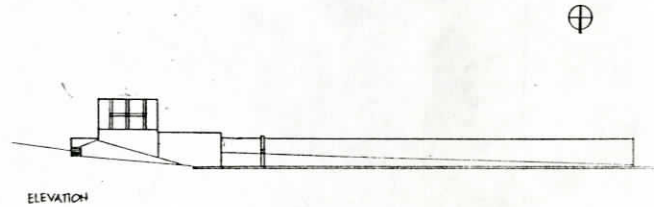
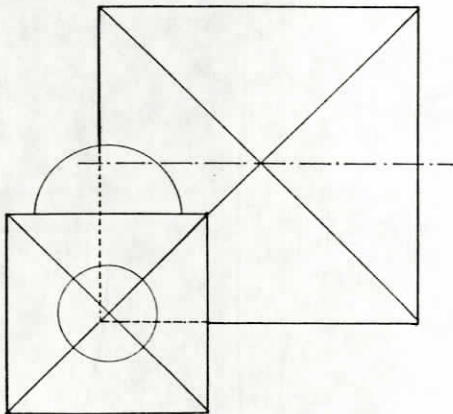
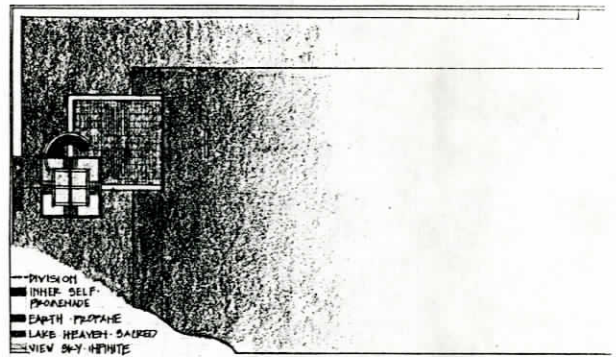
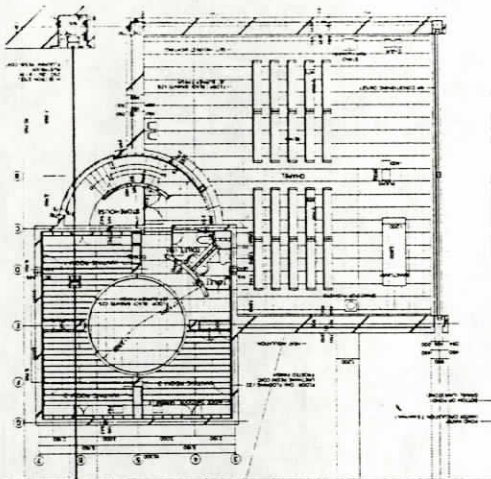
The use Notre Dame du Ronchamp as a model is how a structure it is use for both purposes to create a space in the landscape as well as a control atmosphere in the interior.



Church on the Water Tadao Ando 1985 - 1988

Located at the northern island of Hokkaido. The church is located next to an artificial lake that represents the heaven divided by the earth. The project consist of two overlapping squares, that is divided by a circular stairs. Each area has its meaning:

- Lake is divide by a structure, the chapel - it is the division of heaven (sacred) and earth (profane).
- Circular stairs - connection between floors, it is the promenade to the inner self.
- Transparent space that overlooks completely the landscape, symbolizes the close proximity to the sky, infinite.



VII. Statement of Expectation Criteria of Evaluation

I am considering this thesis book as a working process through it will help me to define the architectural proposition. It is not the final document, there are still a numerous things that I still need to analyze in order to have a complete thesis, such as the application of light in the spaces with different conditions, this will be studied and examined next semester through the application of computer graphics.

I expect that by the beginning of the thesis project the proposition will be clear in order to develop a complete project where all the ideas would be understandable.

VIII. Footnotes

¹Norberg-Schulz, Christian, *Genius loci towards a Phenomenology of Architecture*, New York: Rizzoli, 1980, c1979.

²Norberg-Schulz, Christian, *Architecture: Meaning and Place: selected essays*, New York, N. Y. : Rizzoli International Publications, 1988.

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⁴*Ibid.*

⁵Norberg-Schulz, Christian, *Genius loci towards a Phenomenology of Architecture*, New York: Rizzoli, 1980, c1979.

⁶Norberg-Schulz, Christian, *Genius loci towards a Phenomenology of Architecture*, New York: Rizzoli, 1980, c1979.

⁷Lethaby, W. R., *Architecture Mysticism and Myth*, George Braziller, Inc., 1975.

⁸ *Ibid.*

⁹*Ibid.*

¹⁰*Ibid.*

¹¹Norberg-Schulz, Christian, *Genius loci towards a Phenomenology of Architecture*, New York: Rizzoli, 1980, c1979.

¹²*Louis I. Khan Writings, Lecture and Interviews*, New York; Rizzoli, 1991.

¹³Norberg-Schulz, Christian, *Genius loci towards a Phenomenology of Architecture*, New York: Rizzoli, 1980, c1979.

¹⁴*Ibid.*

¹⁵ *Ibid.*

¹⁶Lethaby, W. R., *Architecture Mysticism and Myth*, George Braziller, Inc., 1975.

¹⁷ *Ibid.*

¹⁸*Ibid.*

¹⁹Shannon, William Henry, *Thomas Merton's Dark Path; The Inner Experience of a Contemplative*, New York: Farrar, Straus, Giroux, 1981.

²⁰ *Ibid.*

²¹*Ibid.*

²²*Ibid.*

²³Shannon, William Henry, *Thomas Merton's Dark Path: The Inner Experience of a Contemplative*, New York: Farrar, Straus, Giroux, 1981.

²⁴Lam, William M. C., *Perception and Lighting as Formgivers for Architecture*, New York: McGraw-Hill, 1977.

²⁵*Louis I. Khan Writings, Lecture and Interviews*, New York; Rizzoli, 1991.

²⁶Villeco Marguerite with Stekowitz, Steve and Griffith, J. W., *Strategies of Daylight Design*, AIA Journal (September 1979) p. 68-75.

²⁷*Ibid.*

²⁸Ching, Francis D. K. *Architecture Form, Space, and Order*, Van Nostrand Reinhold, 1996.

²⁹Blake, Peter, 1920, *Le Corbusier, Architecture and Form*, Penguin Books, Baltimore, 1964.

³⁰Ching, Francis D. K. *Architecture Form, Space, and Order*, Van Nostrand Reinhold, 1996.

³¹Licklider, Heath, *Architectural Scale*, London, Architectural Press, 1965.

³²Blake, Peter, 1920, *Le Corbusier, Architecture and Form*, Penguin Books, Baltimore, 1964.

³³Braunfels, Wolfgang, *Monasteries of Western Europe: The Architecture of the Orders*, London: Thames and Hudson, 1972.

IX. Annotated Bibliography

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