



READING BETWEEN THE LINES

LIQUID- SOLID- VOID

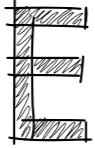
The Personal Reading Room

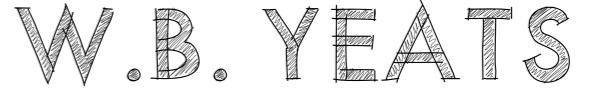
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BA Hons Architecture & Design Y4.Part 1
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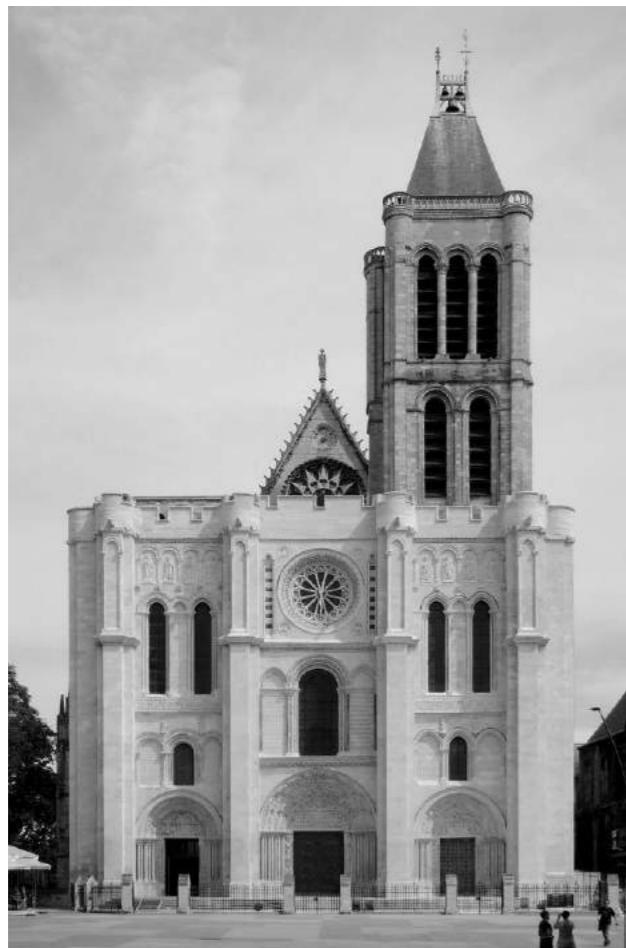


“ducation is not the filling of a pail, but the lighting of a fire” -

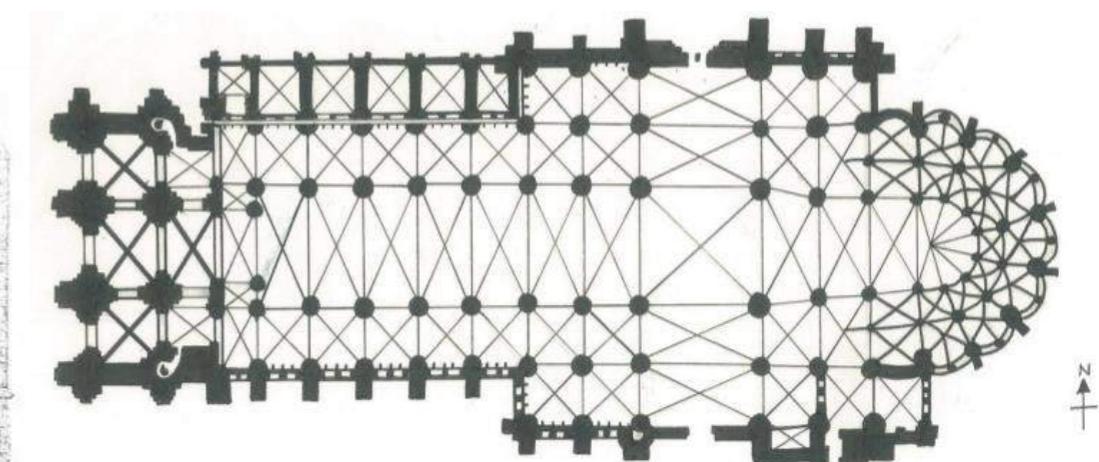
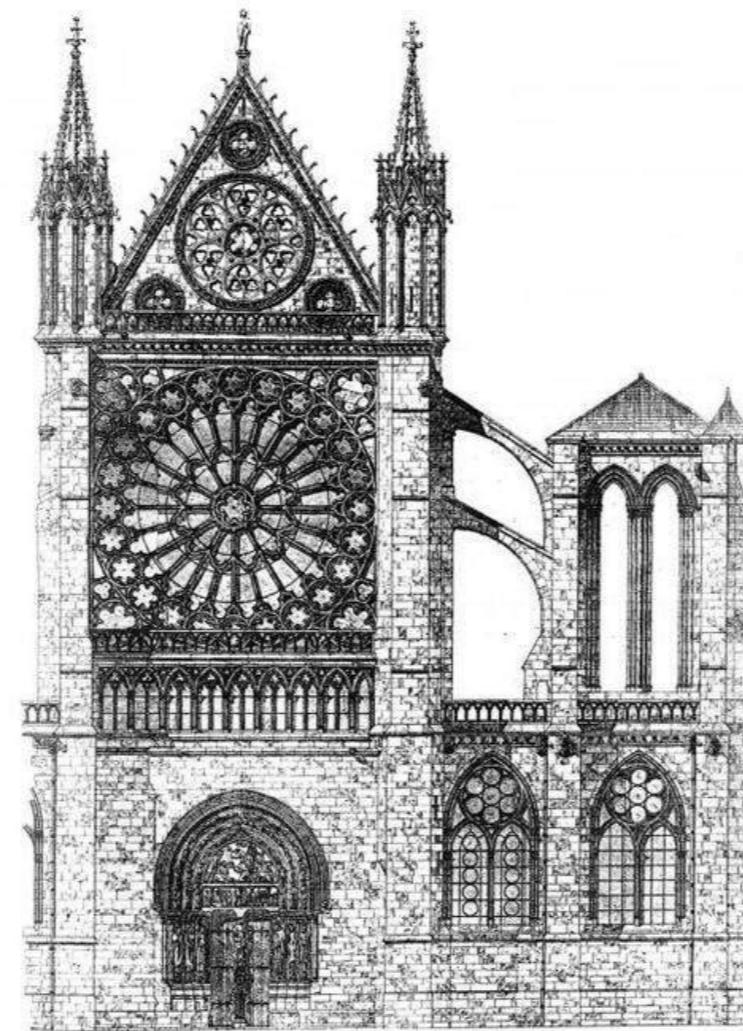


Gothic architecture

- The Gothic architectural style developed in northern France in the early 12th century. At the time, the Capetian dynasty of French kings had established their power base, which led to an immediate upswing in influence and wealth.
- To demonstrate their newfound riches, as well as their religious faith, they soon built monumental cathedrals and monasteries.
- The first notable building to be constructed in this new style was the Basilica of Saint-Denis. From here, the style quickly spread throughout Europe.



Height- aspirations to heaven

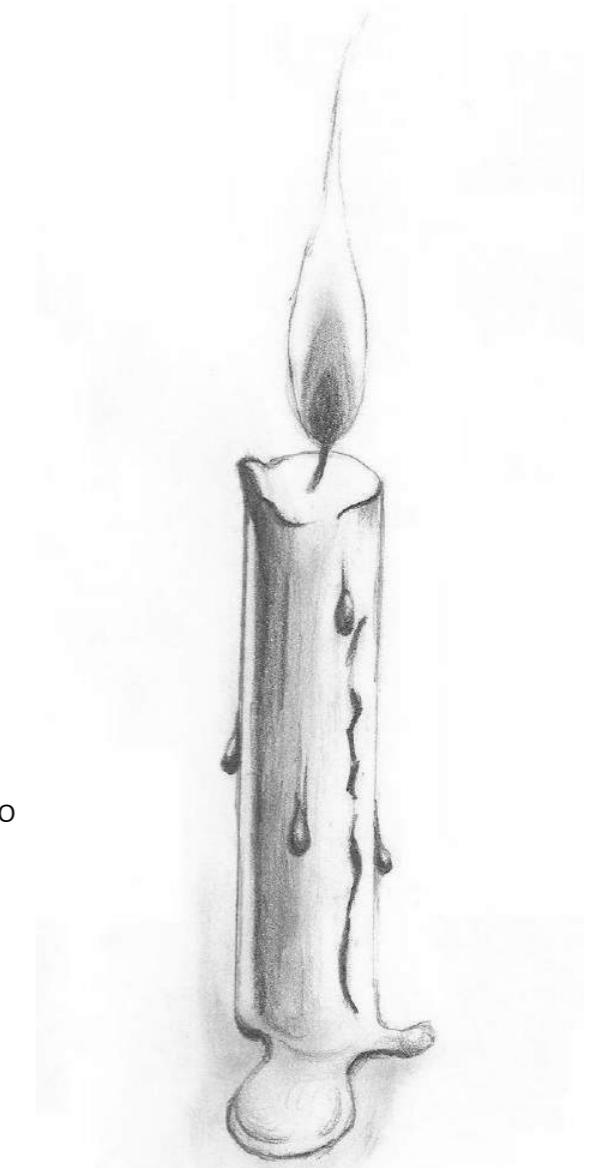


Floor Plan of Saint Denis

Geometry of cruciform which represents the geometry of a person

God is light

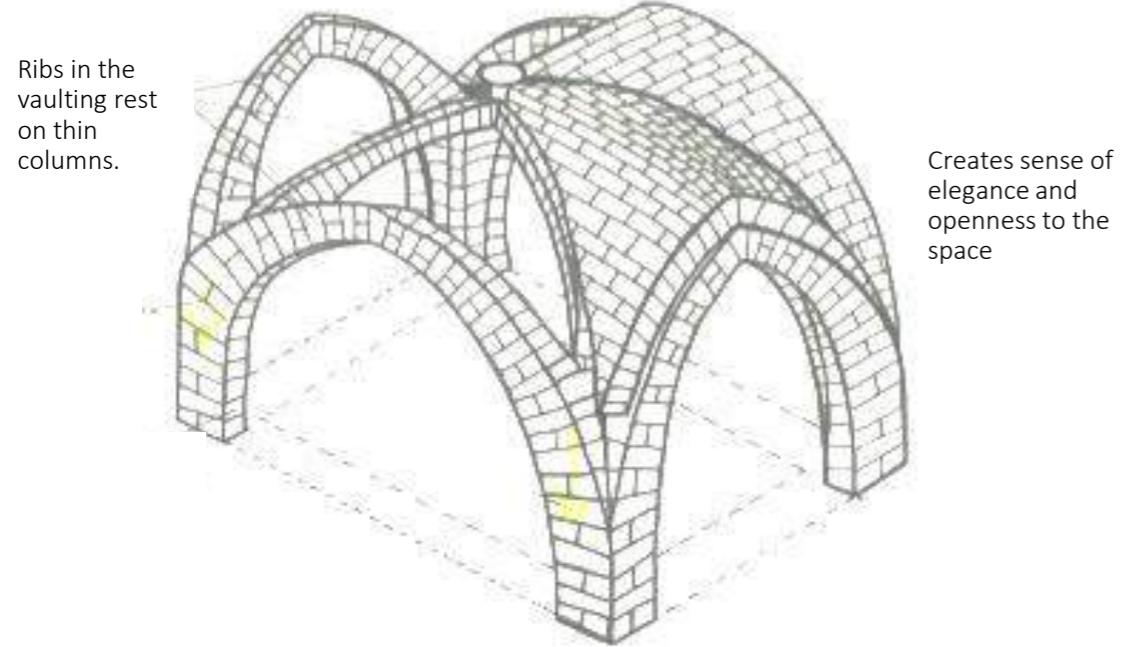
- Abbot Suger began working on the rebuild of Saint Denis abbey in 1135. He thought how light was connected to the divine and saw in light the perfect metaphor for God.
- To express it, he simply harnessed the structural advantages of the **pointed arch, the ribbed vault and the flying buttress** to make the windows in the abbey as large as possible allowing **more light** into the spaces.



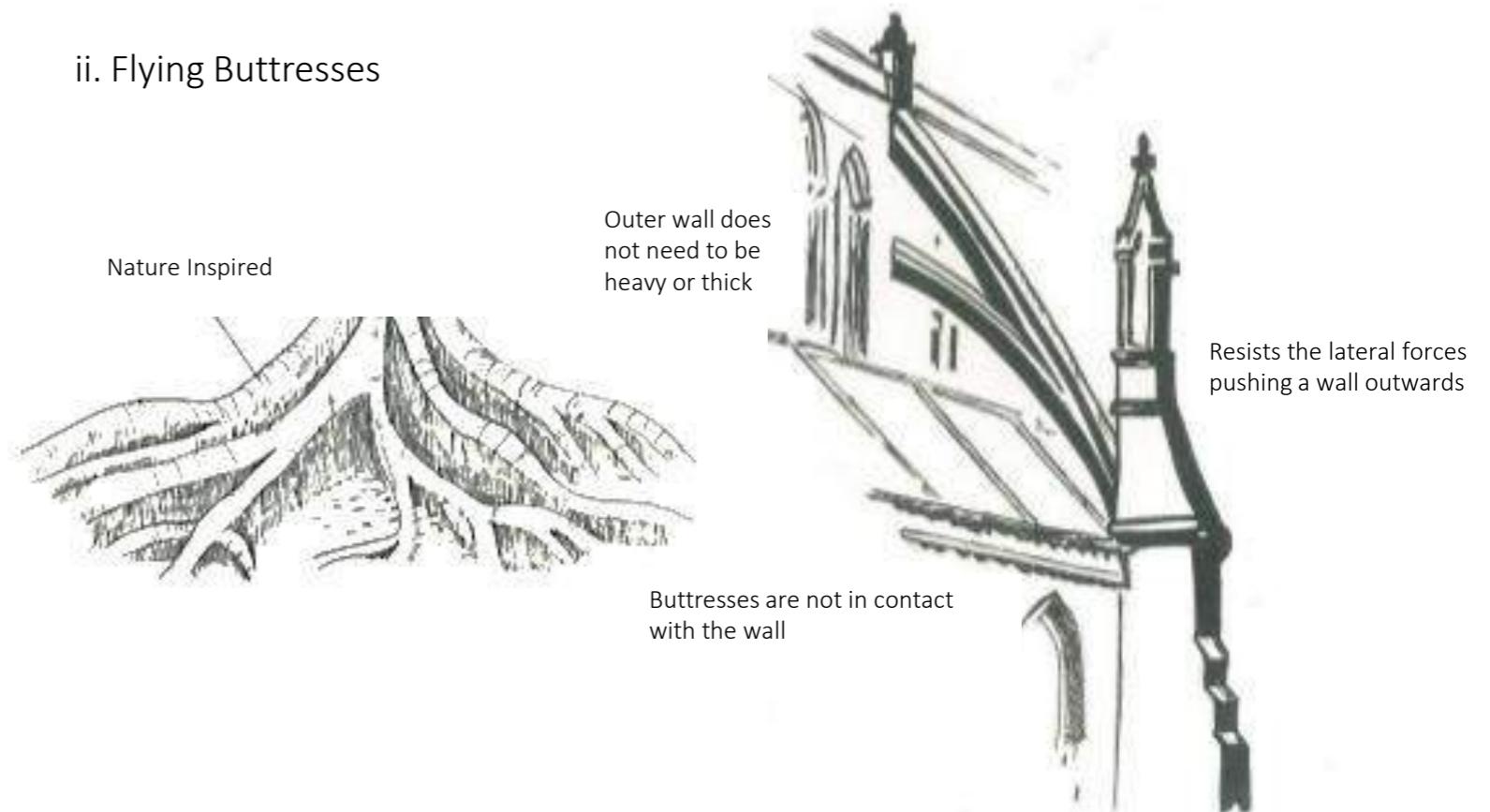
- Instead of a dark, sombre interiors, churchgoers' gaze was now drawn up to high ceilings filled with light- a window into heaven.
- Peasants could "read" the Gothic comic books of stained glass windows, ultimately strengthening their faith.
- By the 12th century, **ceilings soared, walls thinned and large windows** adorned structures.

Characteristics of Gothic Architecture:

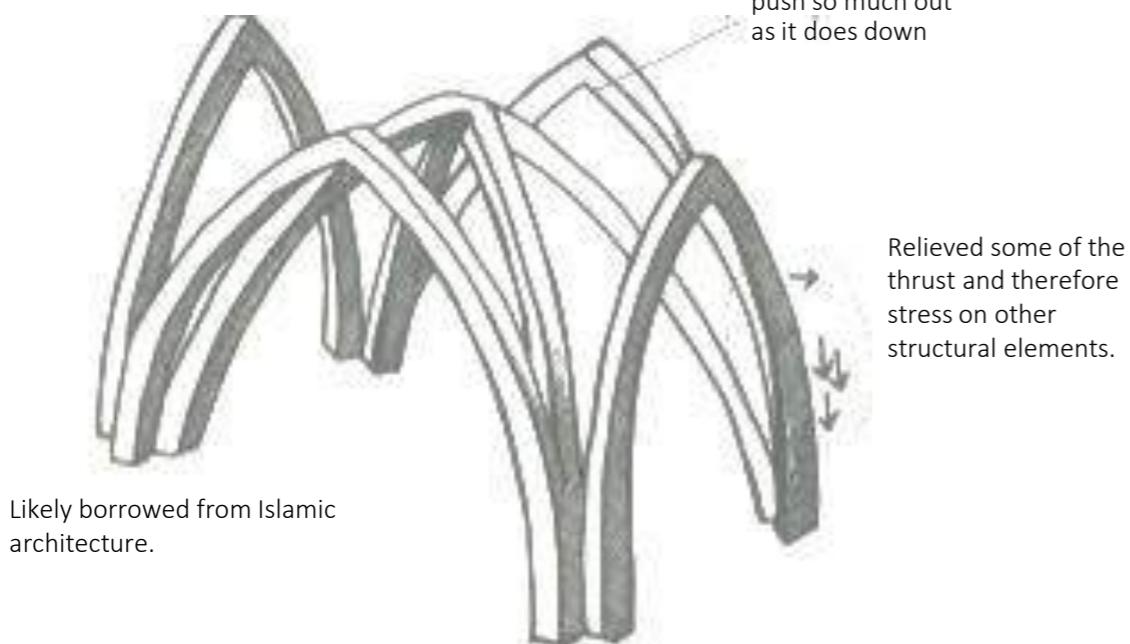
i. Rib Vaults



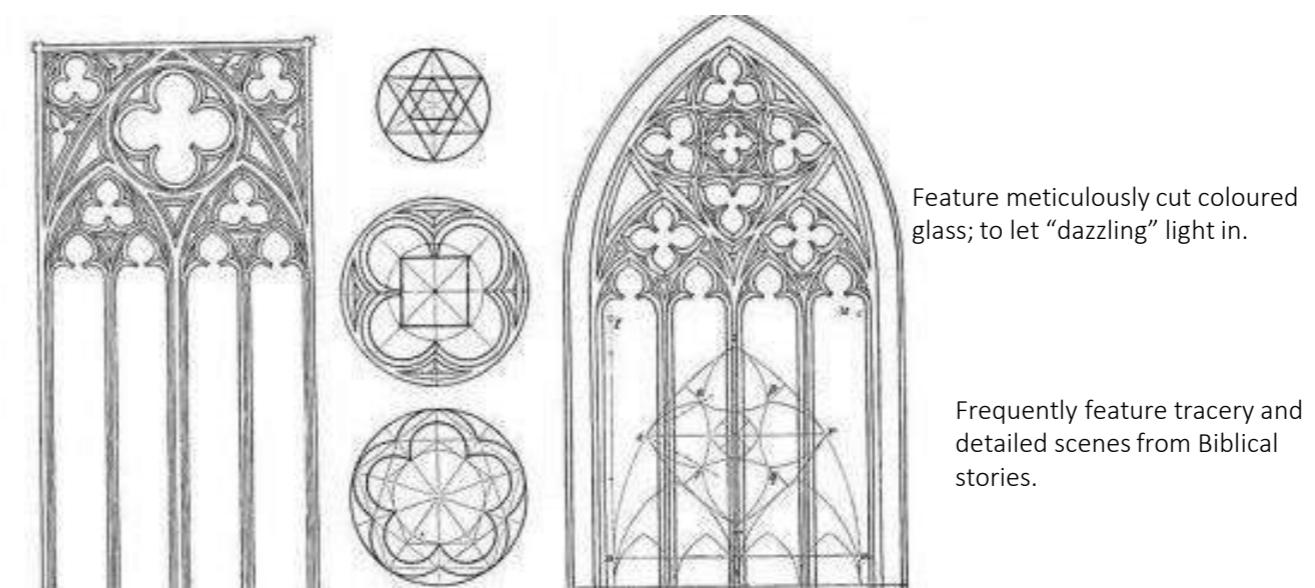
ii. Flying Buttresses



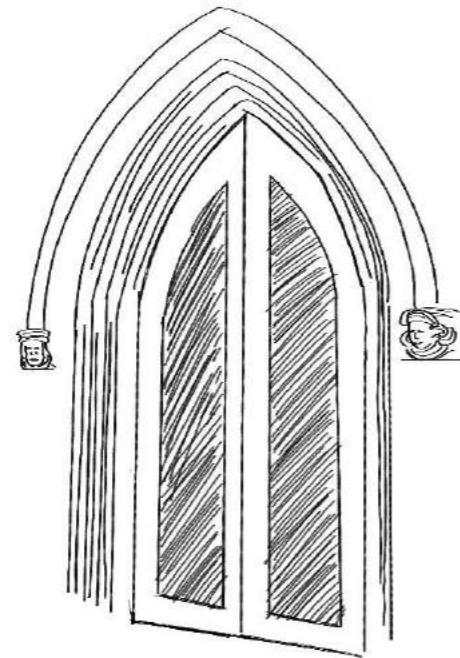
iii. Pointed Arches



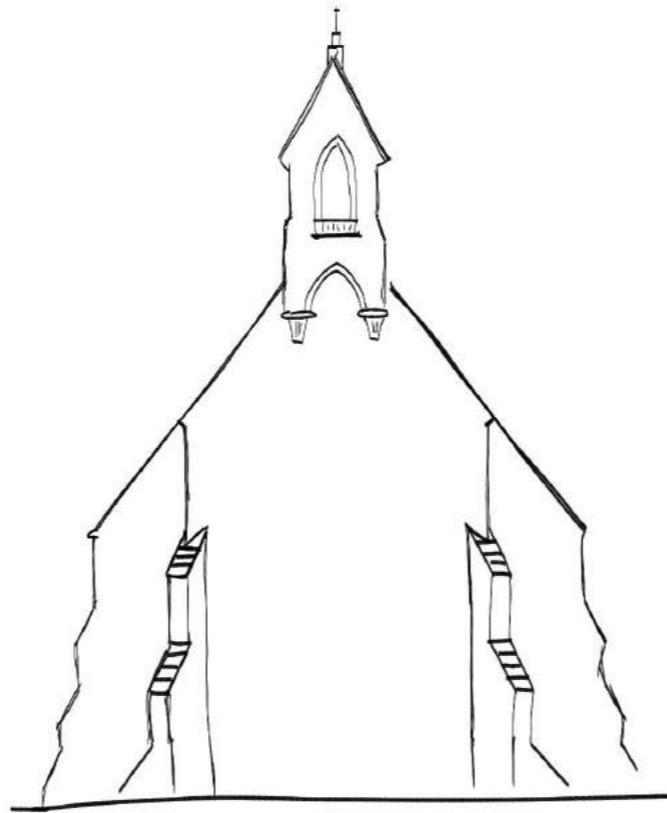
iv. Rose or Stain glass Windows



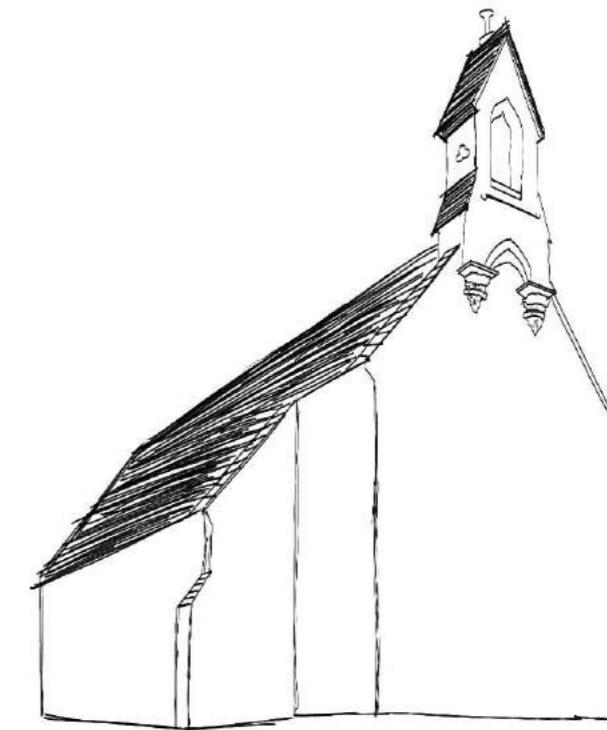
Gothic Characteristics of Sligo Library



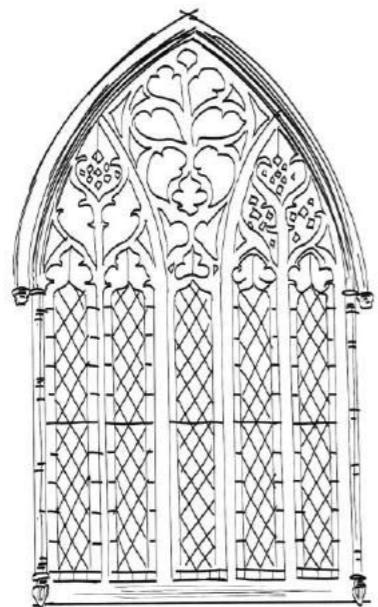
i. Pointed Arches



ii. Front Projecting gables



iii. Gable Roof



iv. Large Arched Window

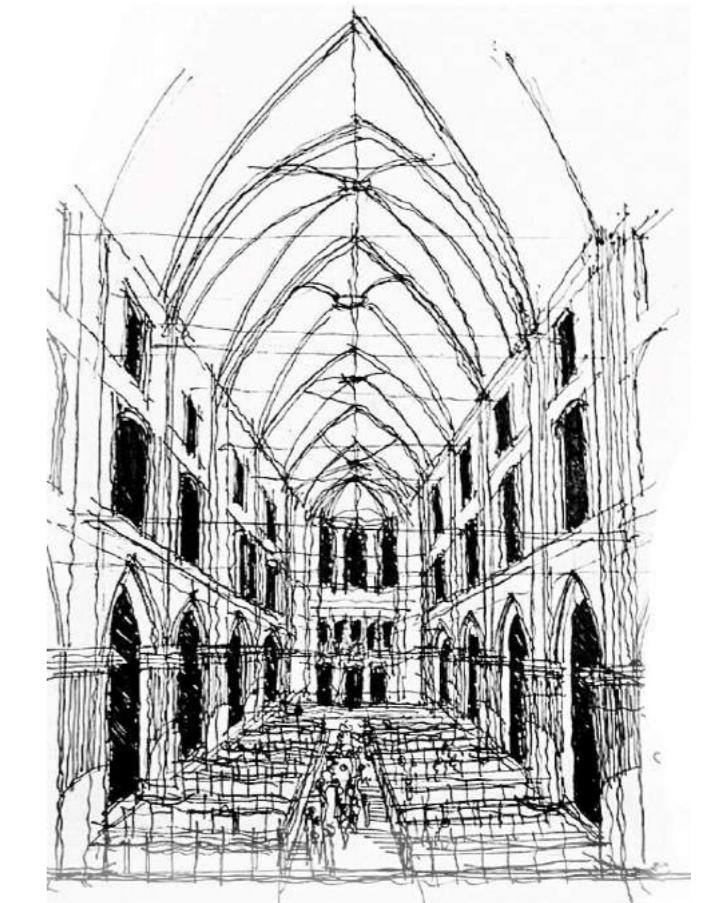
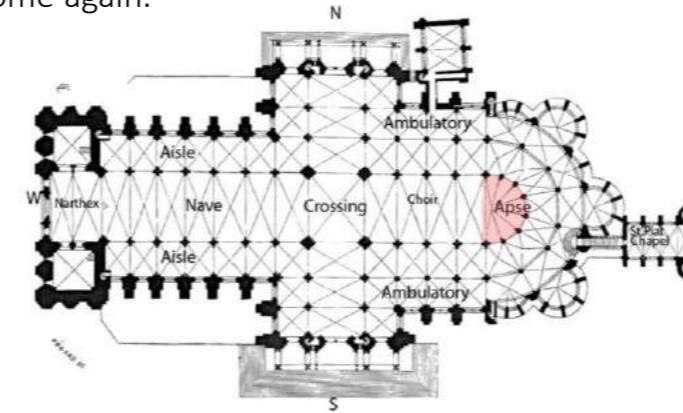
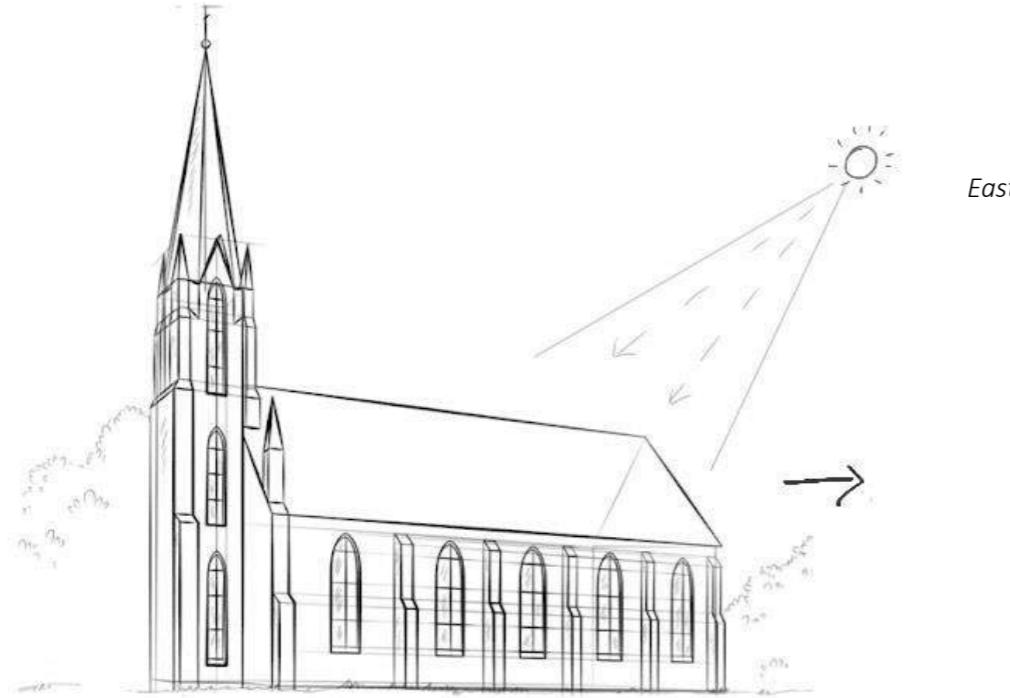


v. Decorative elements

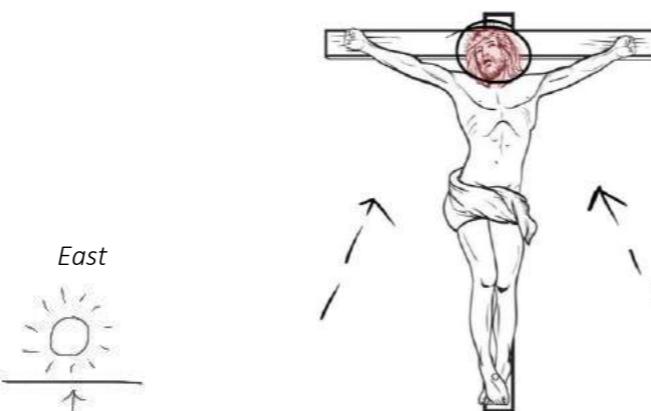
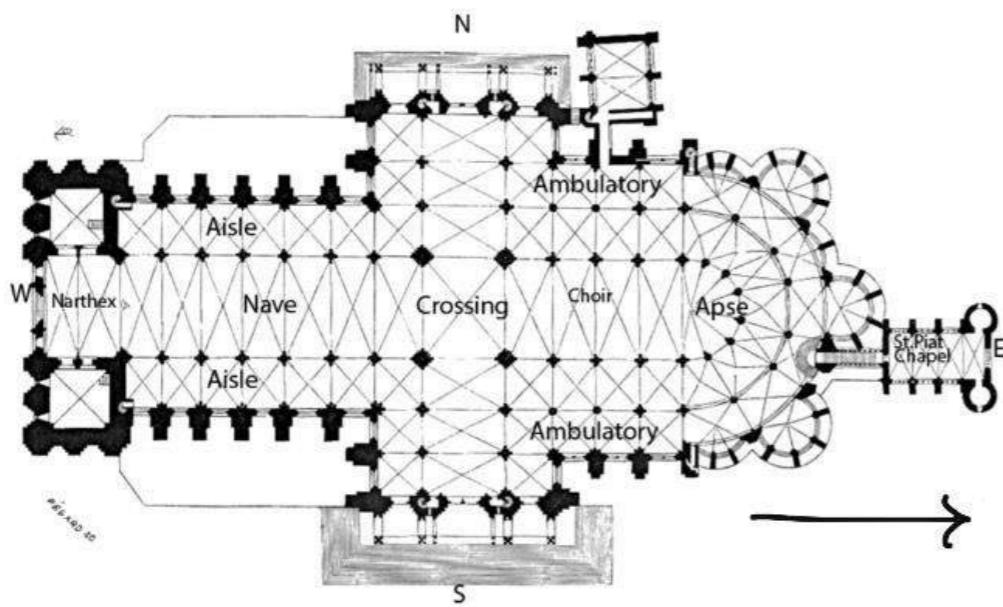


The History of the church design

Traditionally churches were built facing East and the apse was located in the direction of the rising sun. It symbolized the direction from whence Christ, the light of the world, would come again.



“GOD IS ABOVE ALL”

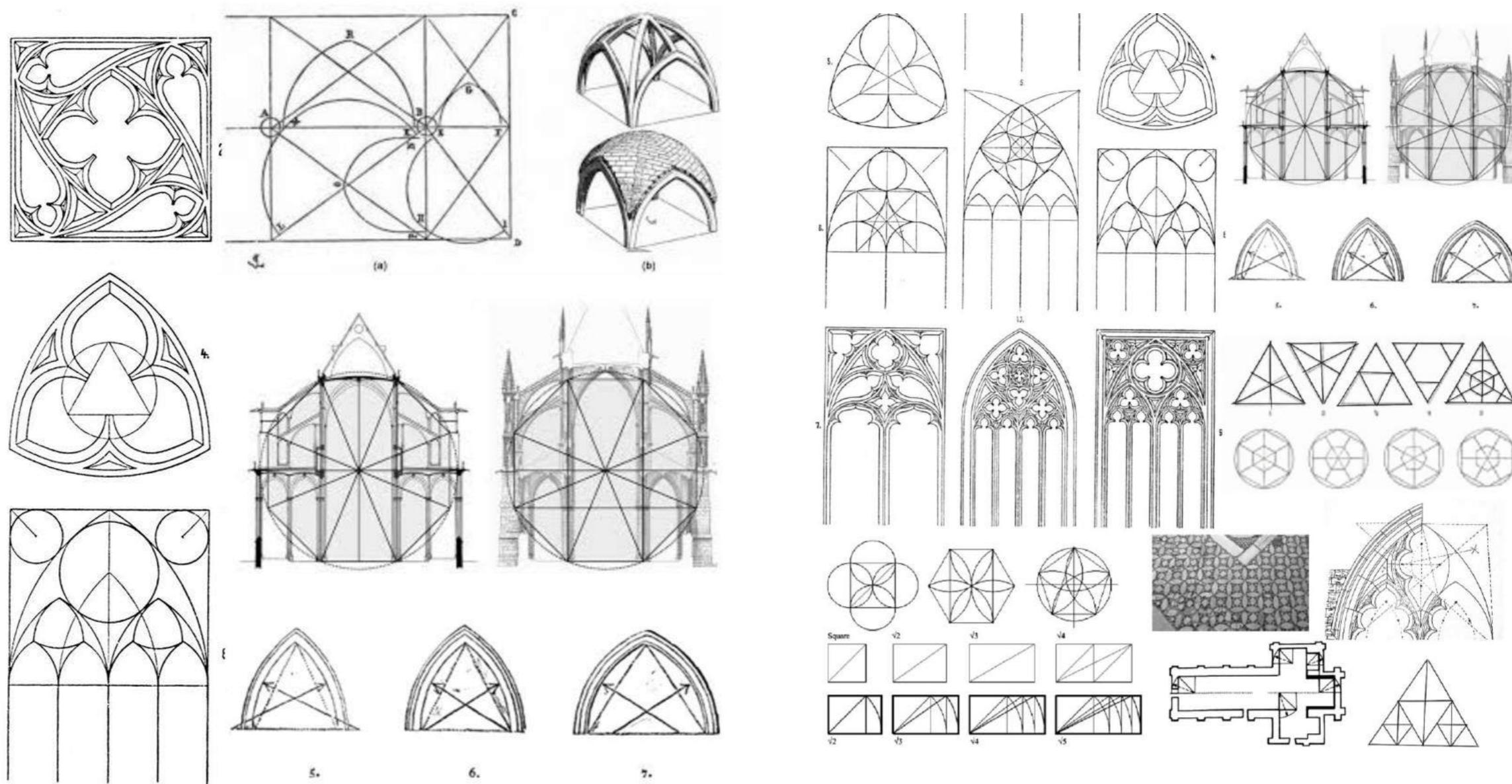
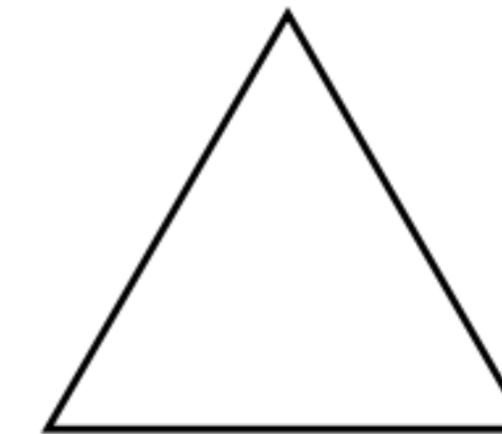


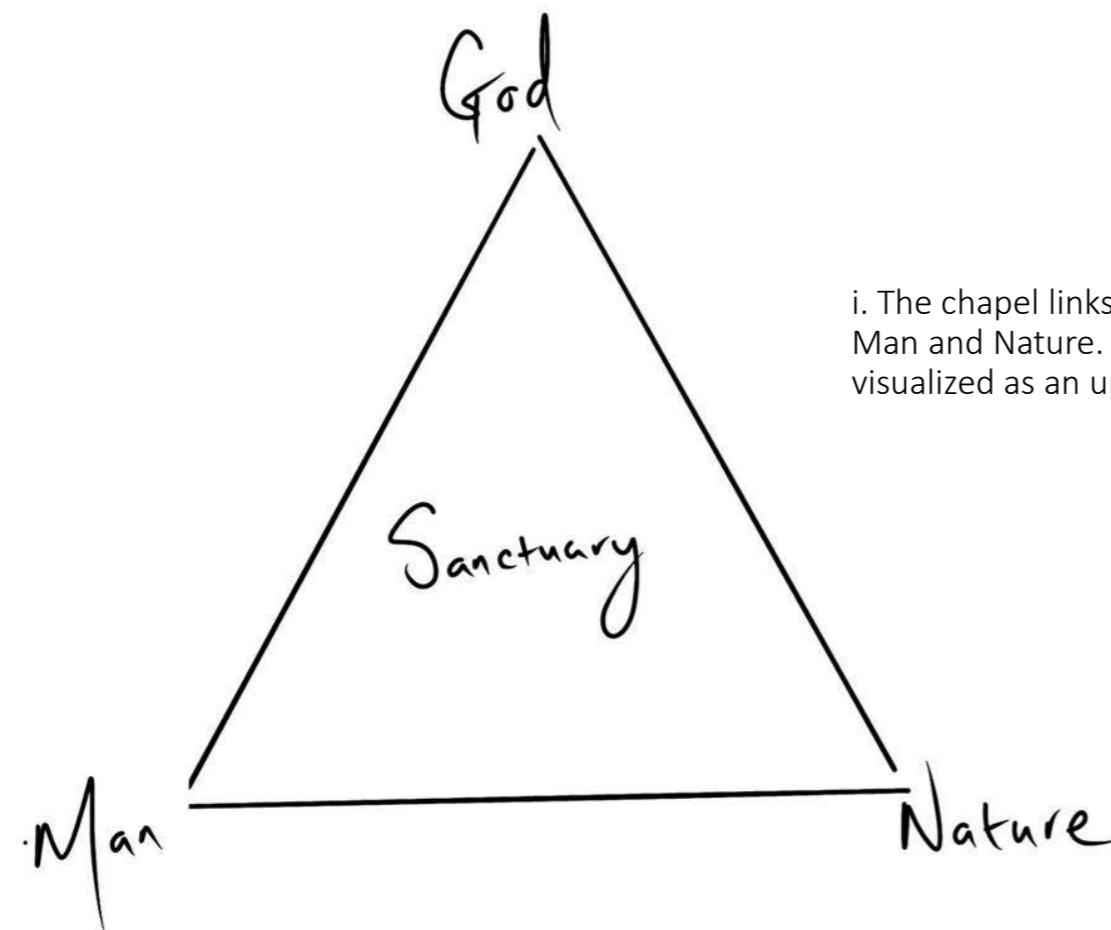
Additionally, the apse was placed on the location of Jesus' head on the crucifix. Since the head is what directs the rest of the body, all worshipers in the church looked to the head.

Conceptually, churches were the most important structure in a city in ancient times; where the elite class belonged. The ceilings were high in order to create an impact that the house of God is above all.

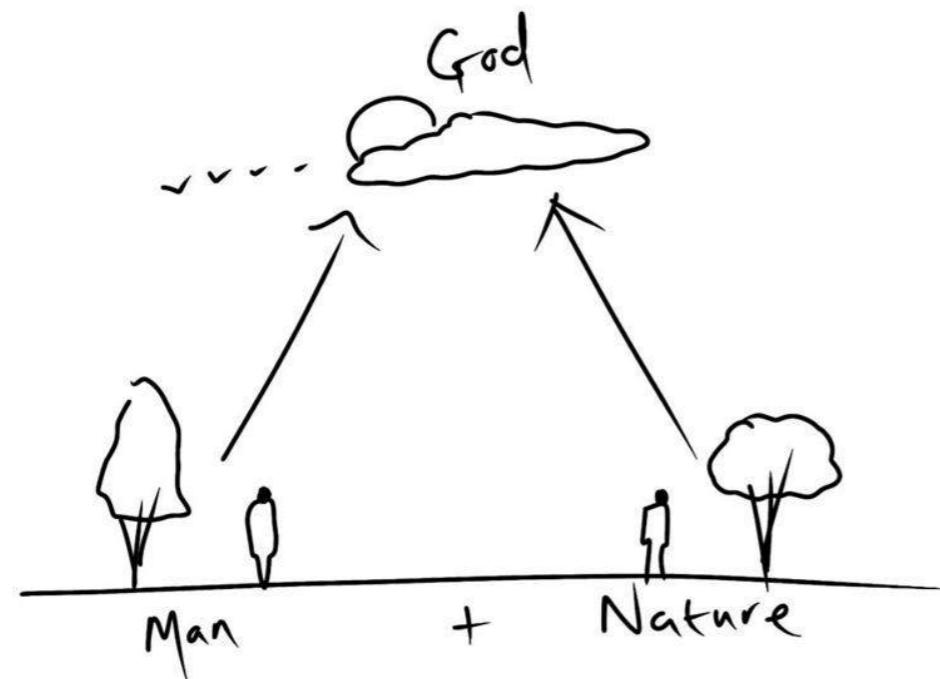
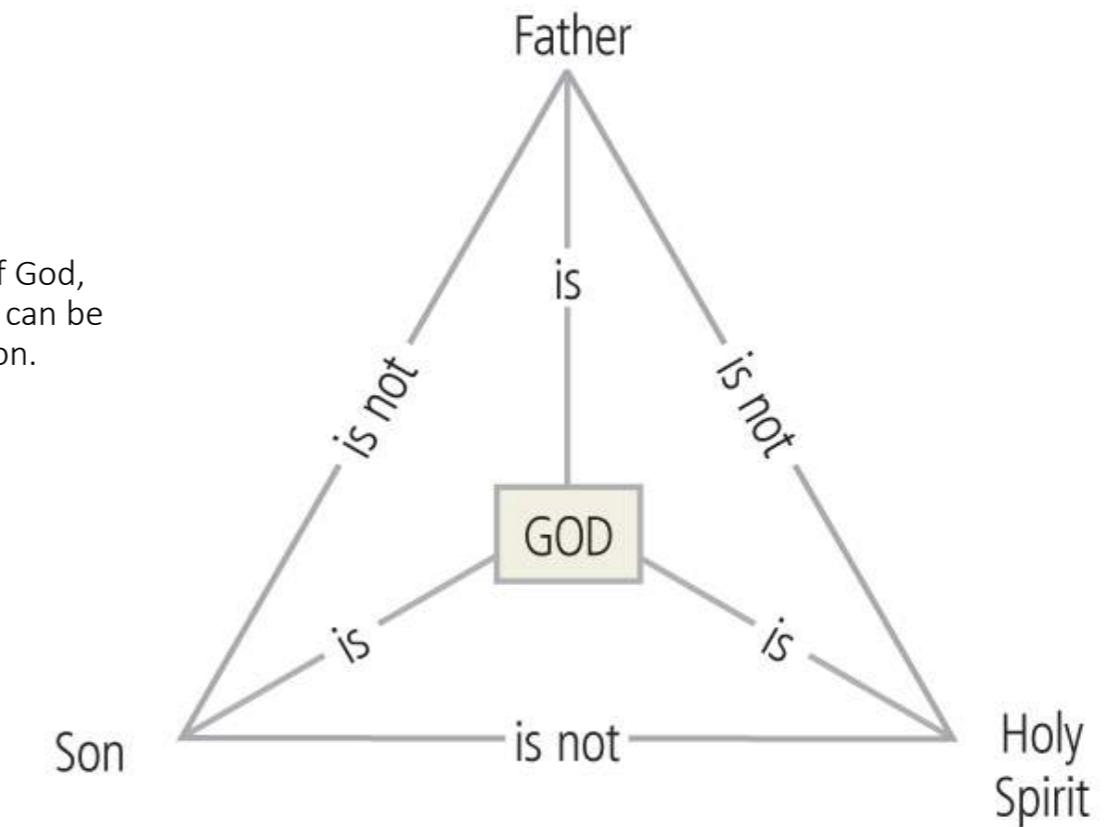
Breakdown of Gothic architecture

- The audacious designs and complex configurations to gothic architecture originate from simple and organic geometry
 - The spires and towers of gothic churches can all be broken down into their essential form- the triangle.

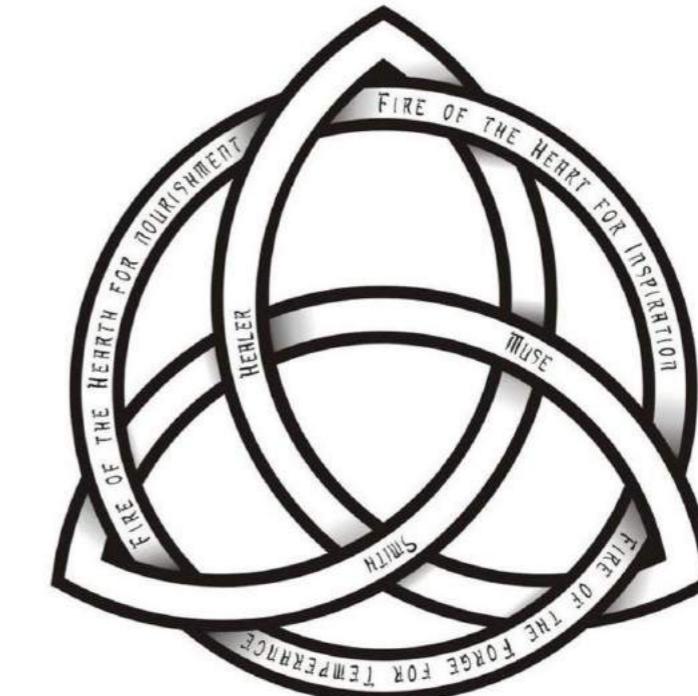




i. The chapel links the three elements of God, Man and Nature. These three elements can be visualized as an upright triangular section.



ii. The base symbolizes man's connection to the earth, and the two arms point heavenward joined in a gesture of reaching for God.



iii. Similar to the holy trinity and man's relationship with heaven and earth.

PRECEDENT'S

University of St. Andrews, Martyrs Kirk Reading room

 **Client**
University of St.
Andrews

 **Location**
80 North Street, St.
Andrews
Scotland

 **Value**
£897,000

 **Internal Floor Area**
710m²

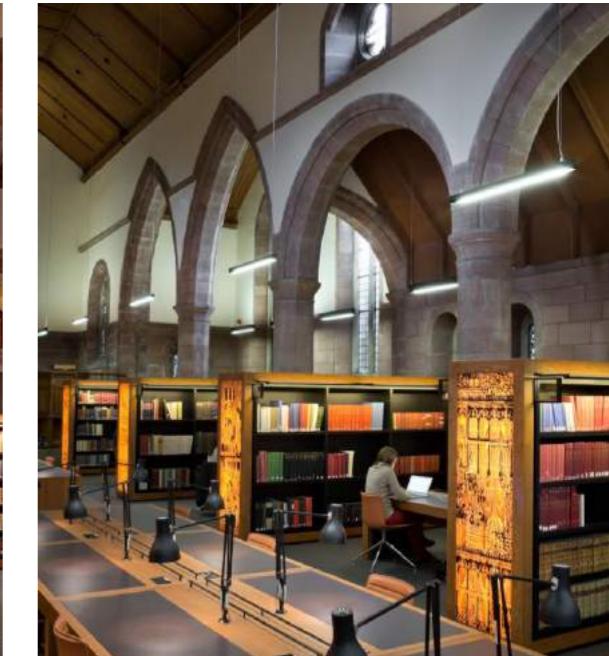
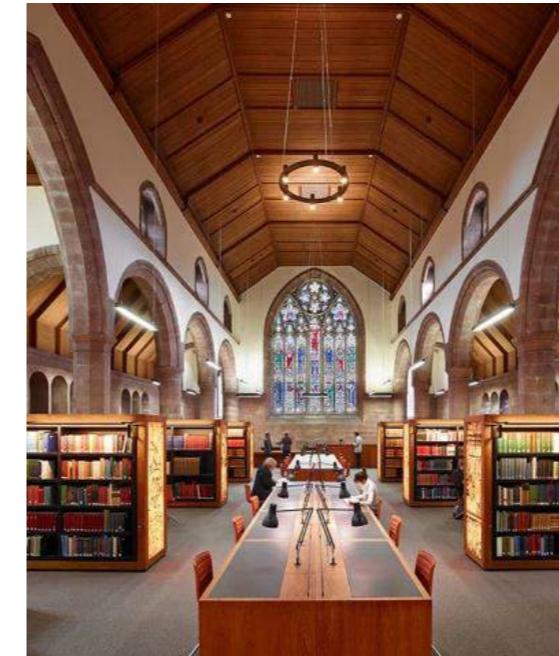
 **Completion**
September 2013

Architects: Page/ Park

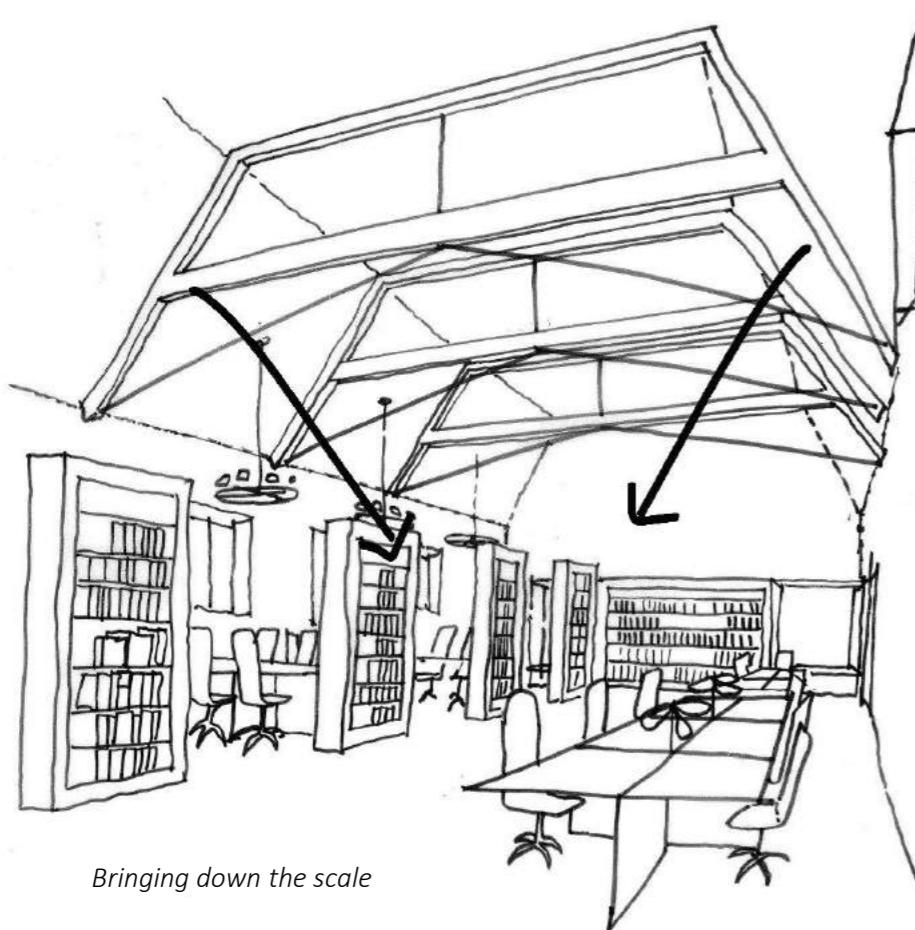
Task: Conversion of church into an attractive reading and research room for the use of academic students.

Concept: to create a personal sense of intimacy within the greater volume.

Materials: Wood, stained glass windows, brick



Interior Views



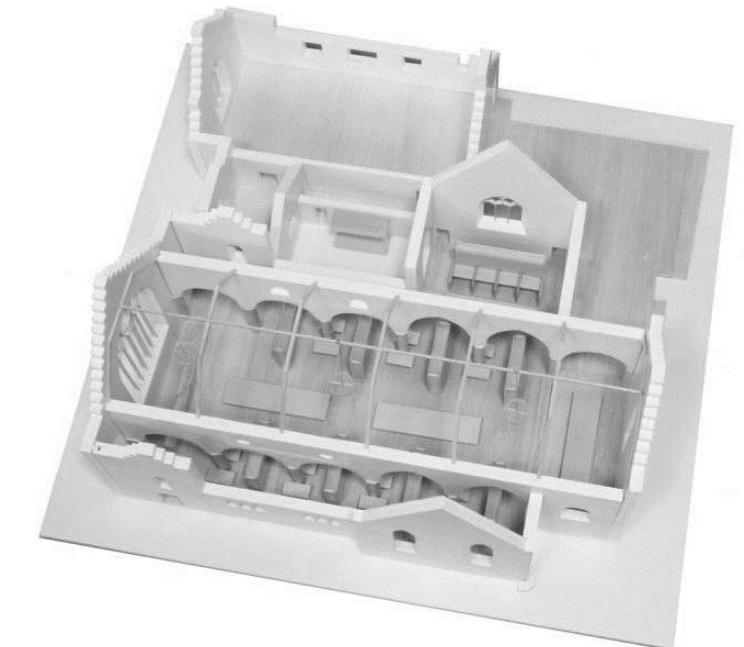
Bringing down the scale

and fittings were carefully selected to reconfigure the space, bringing down the scale to create a sense of intimacy.

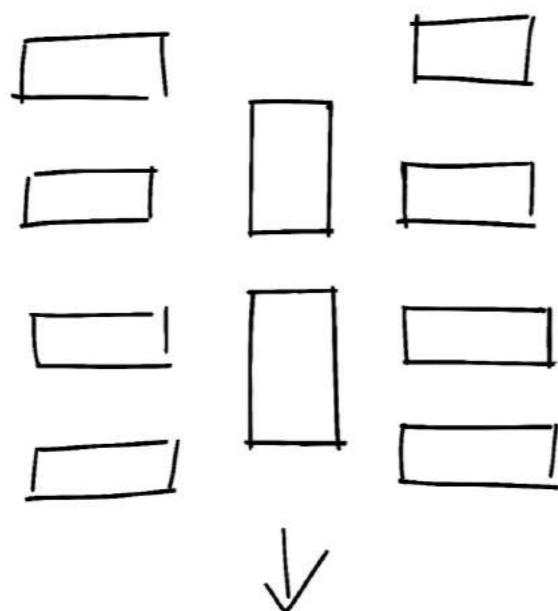
cases and writing tables re-define the interior space of the room, addressing the scale of the nave and the ecclesiastical nature of the architecture.

Wood is used as the main material- rich grain creating a warm atmosphere.

Panelled bookcase end panels act as references to the stained glass of the church.

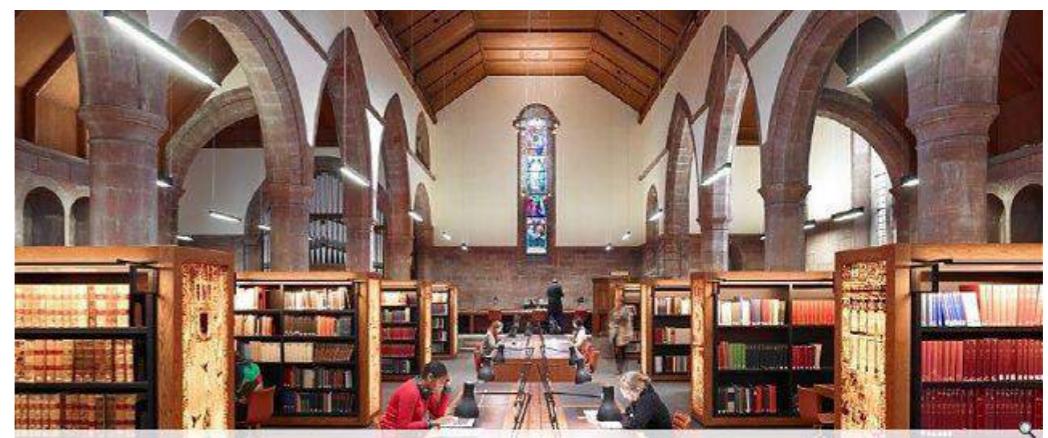
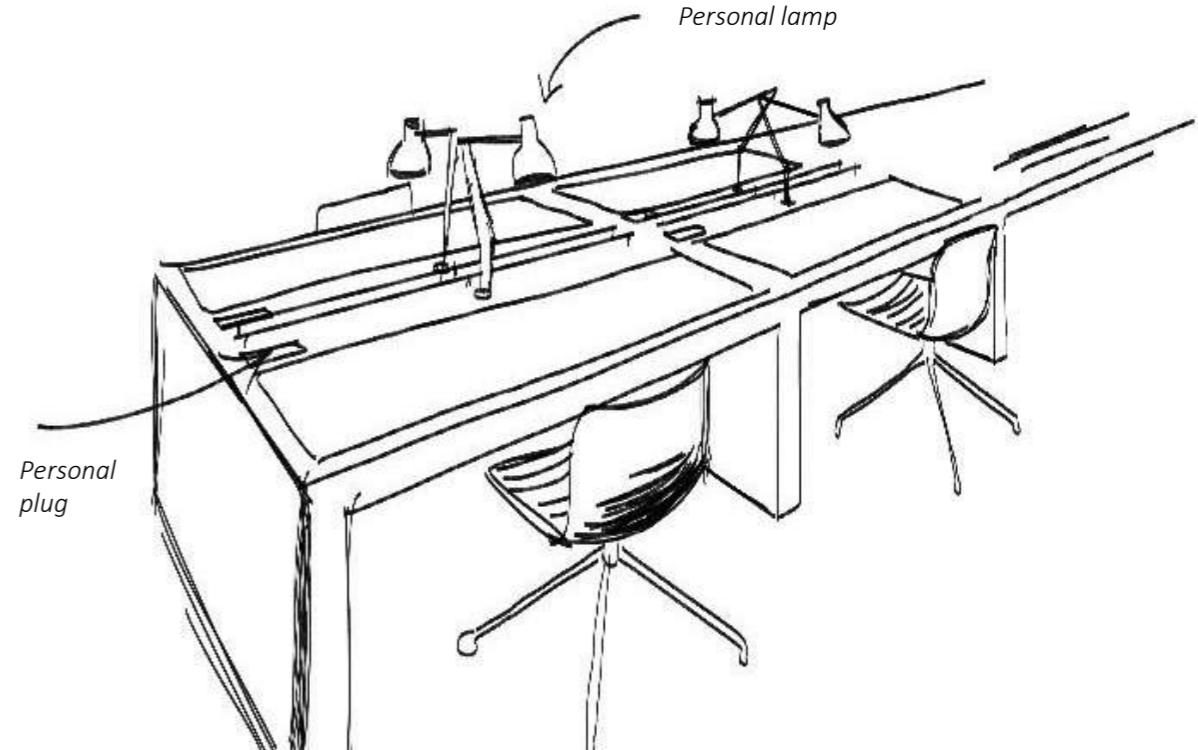


Model

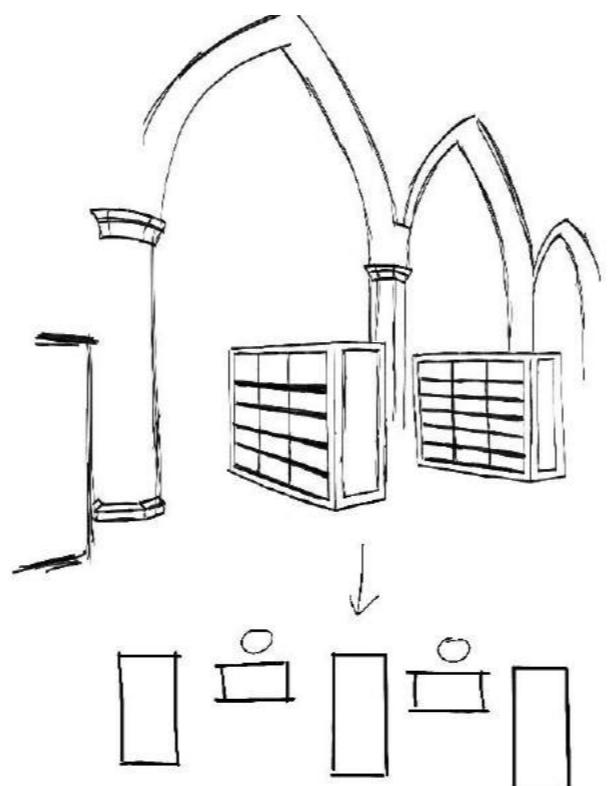


Floor plan mimics structure of a book

- A central reading spine, aligned with the original aisle, is comprised of a series of writing tables, each one individually lit by a desk lamp. This creates an intimate personal space for users where they have a sense of belong.
- Bookcases are used both to house books in addition to partitioning the spaces up into personal “zones”. The bookcases are minimal in design and illuminated, placing the books at the focal point of the users attention.



Interior View



Reading alcoves

- By locating the bookcases in-between the arches a new echoing ‘colonnade’ is created framing reading alcoves. Users become drawn into these spaces.
- Bookcases are an appropriate height for users and do not block sunlight from the arched windows, ensuring that the reading room remains light and airy



Appropriate scaling of bookcases

Wayfarers Chapel, Palos Verdes

 **Client**
Swedenborgian,
Church of North
America

 **Location**
Palos Verdes,
California, US

 **Value**

 **Internal Floor Area**

 **Completion**
1951



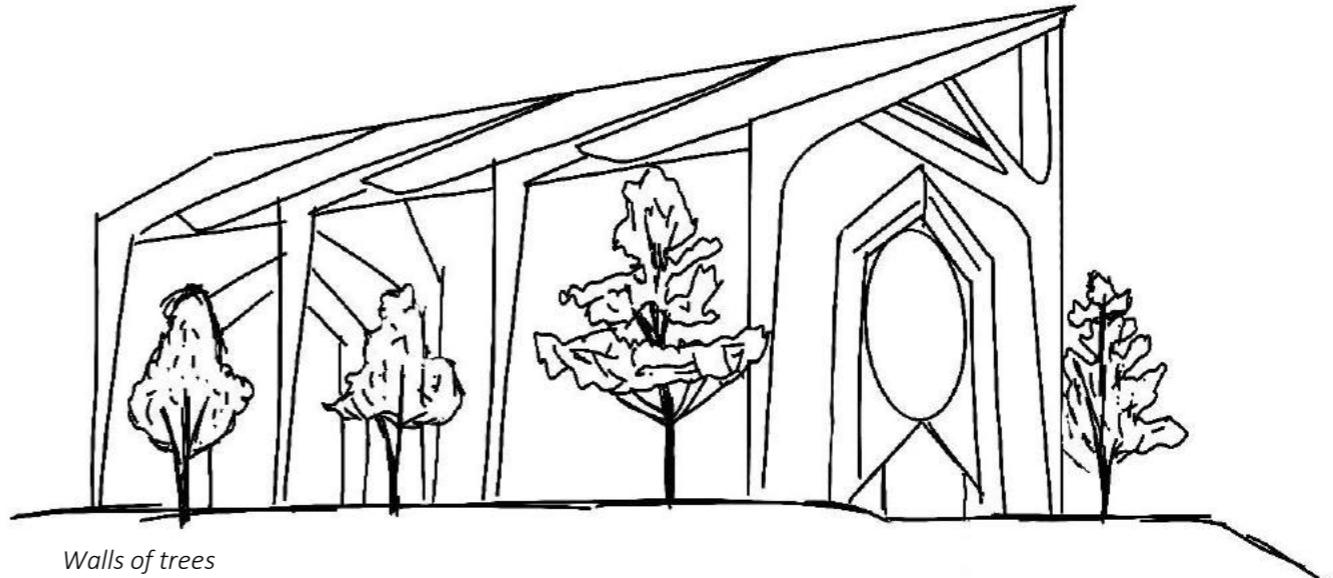
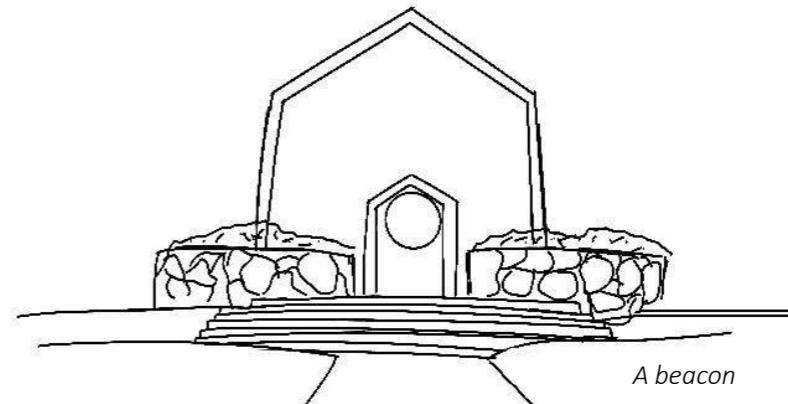
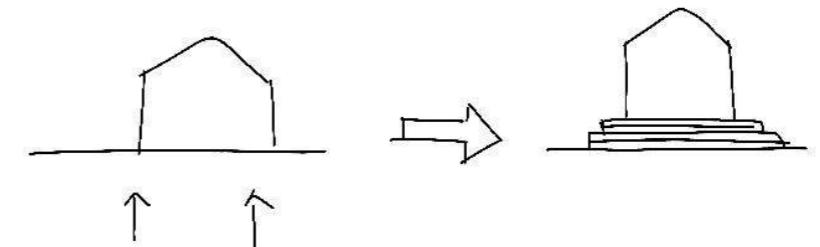
Architects: Lyold Wright

Task: To design a chapel on a hillside above the Pacific Ocean where wayfarers could stop to rest, meditate and give thanks to God for the wonder and beauty of creation.

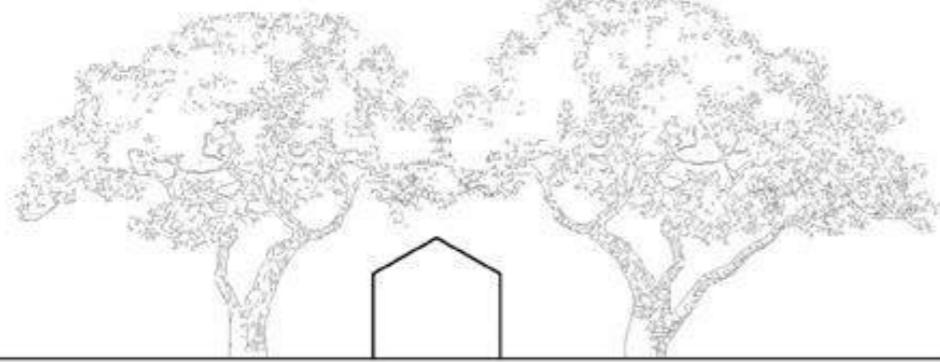
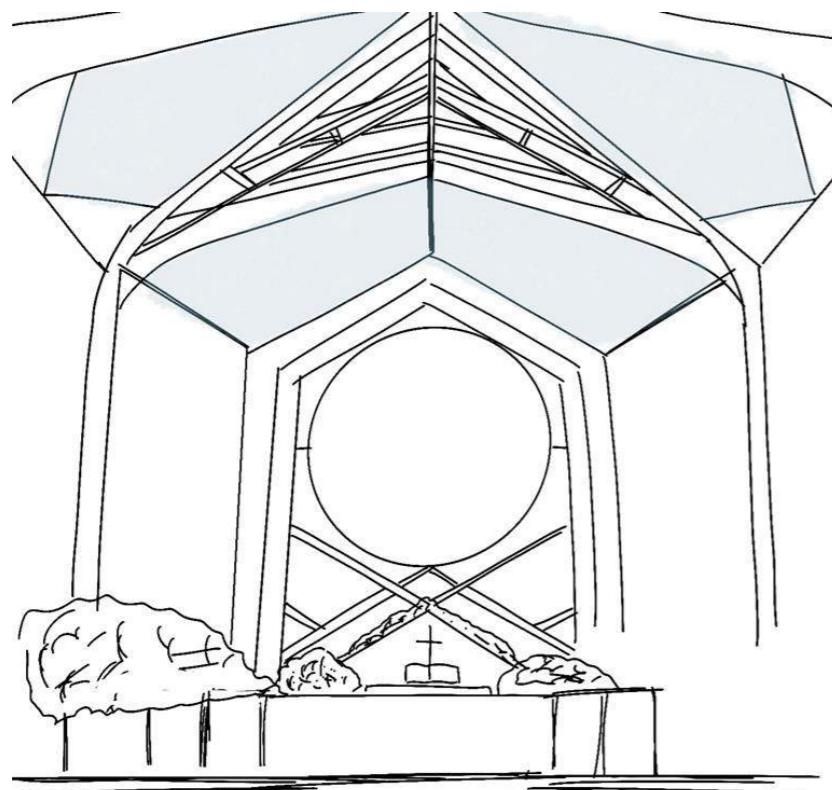
Concept: To emphasize the harmony between God's natural world and the inner world of mind and spirit. Inspired by the "cathedral-like" majesty of the redwood trees in northern California where he sensed great peace, sublime beauty, dignity, and repose.

"When the trees that surround the Chapel grow up, they will become the framework, become a part of the tree forms and branches that inevitably arise from the growing trees adjacent to it. I used the glass so that the natural growth, the sky, and sea beyond became the definition of their environment."

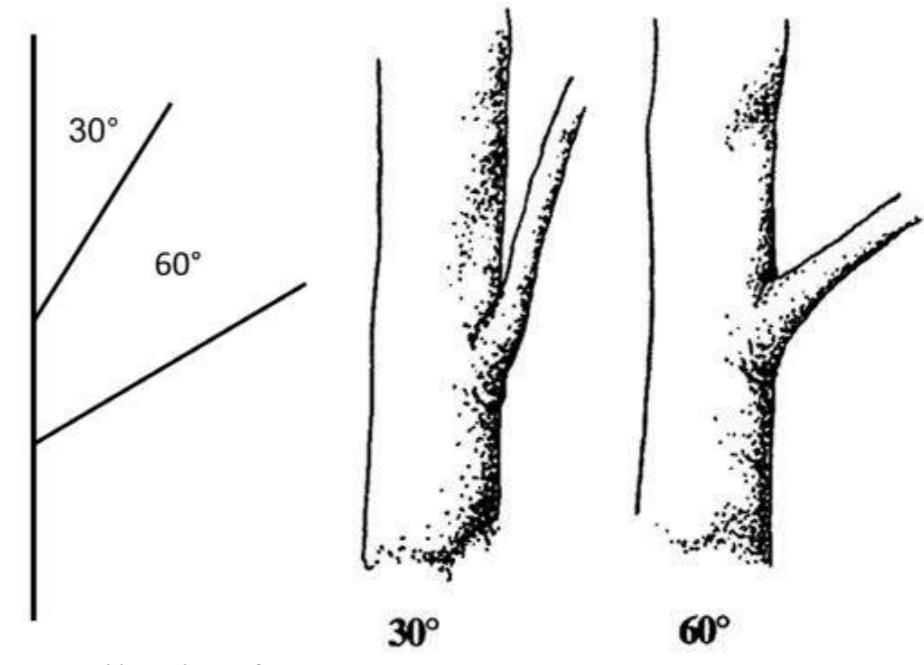
- Achieved a delicate enclosure that allows the surrounding landscape to define the sacred space.
- A transparent structure made entirely of triangular glass panes surrounded by nature, emphasizing Wright's intent to "give the congregation a sense of inner as well as outer space."
- Raised on a plinth the structures importance as a religious monument is highlighted, ultimately acting as a "beacon" to the users
- The trees planted over 50 years ago have matured and make up somewhat of a beautiful wall surrounding the chapel.



- Lloyd used organic architecture to incorporate plants and natural trees around the site forming a natural sanctuary.
- Used 30/60- degree angles because they occur naturally in snowflakes, crystals, and tree branches.
- The chapel was made up of wood and glass to expose the trees and natural sunlight. The glass creates a “live” chamber.
- Lloyd Wright-designed the six triangular acoustic panels in the ceiling to balance the sound. They are painted a light blue-green to appear white, like fleecy clouds.

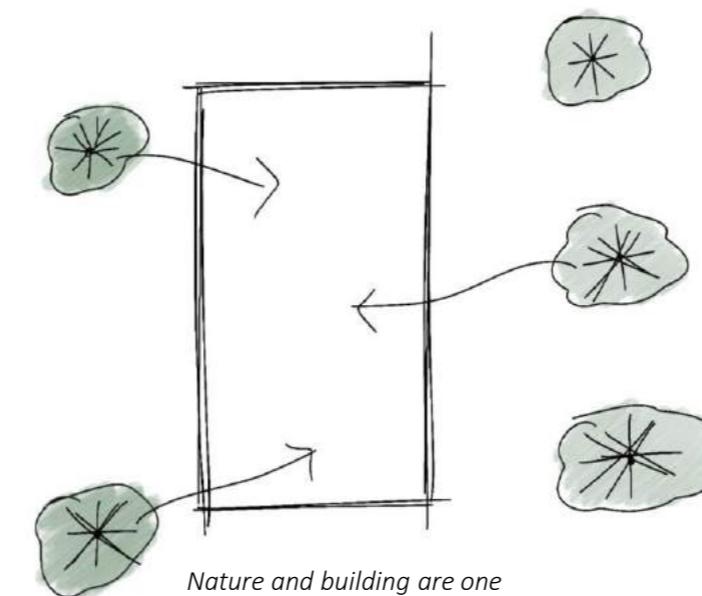


Nestled in the trees

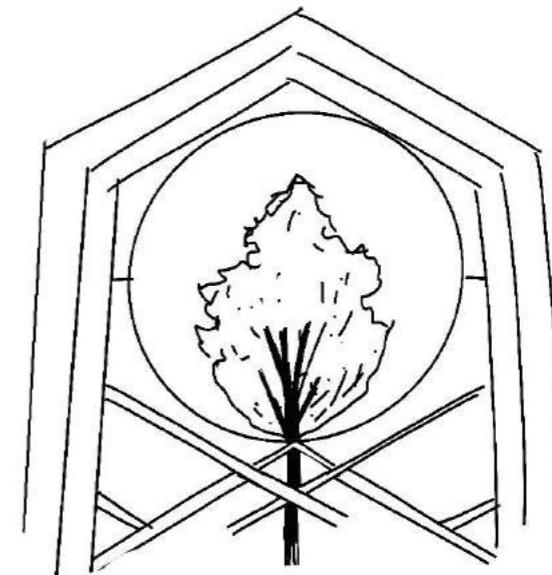


Natural branching of trees

- Plantings in the chapel make the exterior and interior one; making the glass enclosure as inconspicuous as possible.
- The round windows over the front entrance and the altar symbolize the inclusiveness of the chapel and the Swedenborgian Church, which welcomes all people.
- Framed in the altars glass circle, is a toyon tree- nature is at the heart of the church .
- At night, indirect lighting in the chapel and spotlights in the chancel create a candlelight effect.

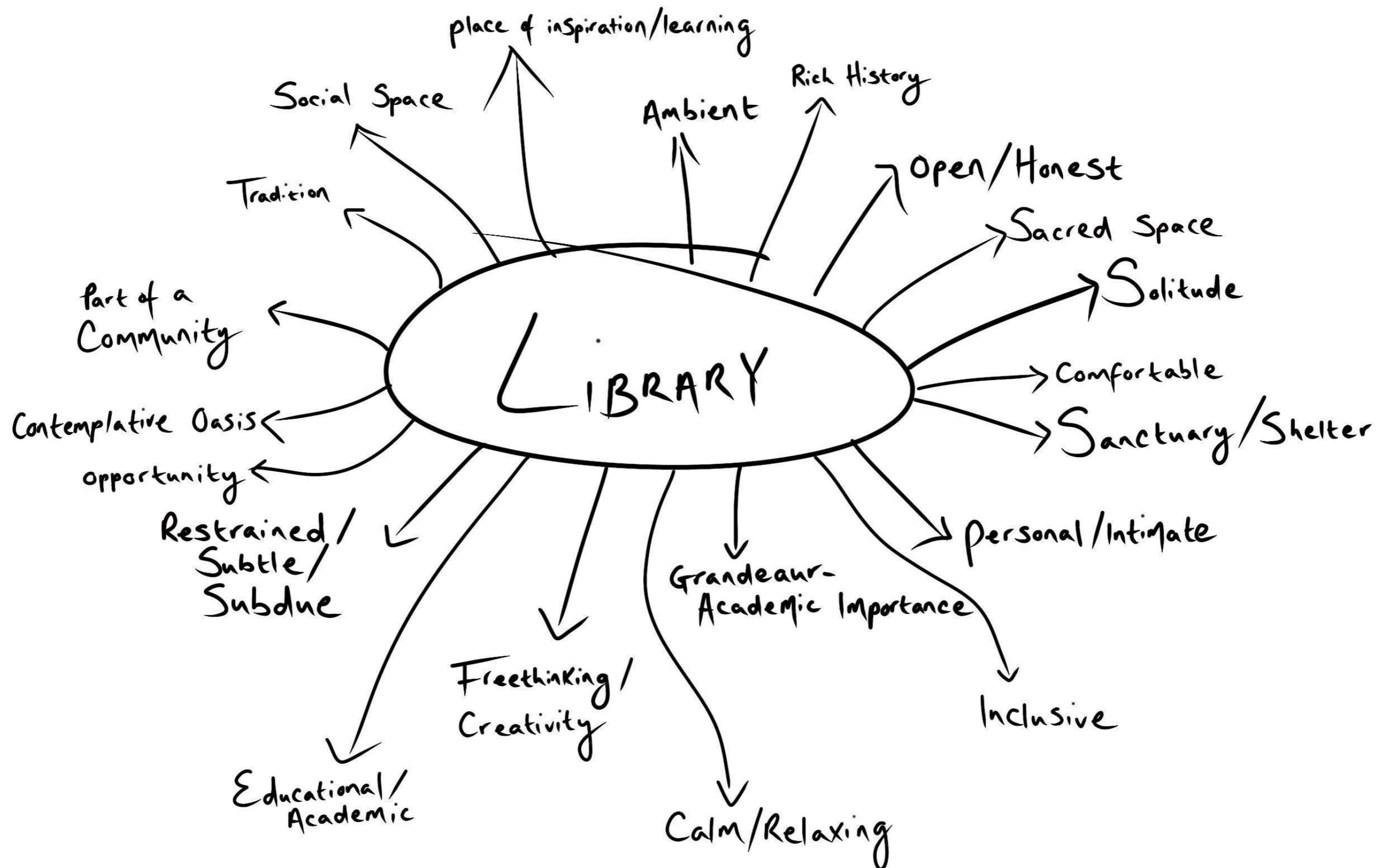


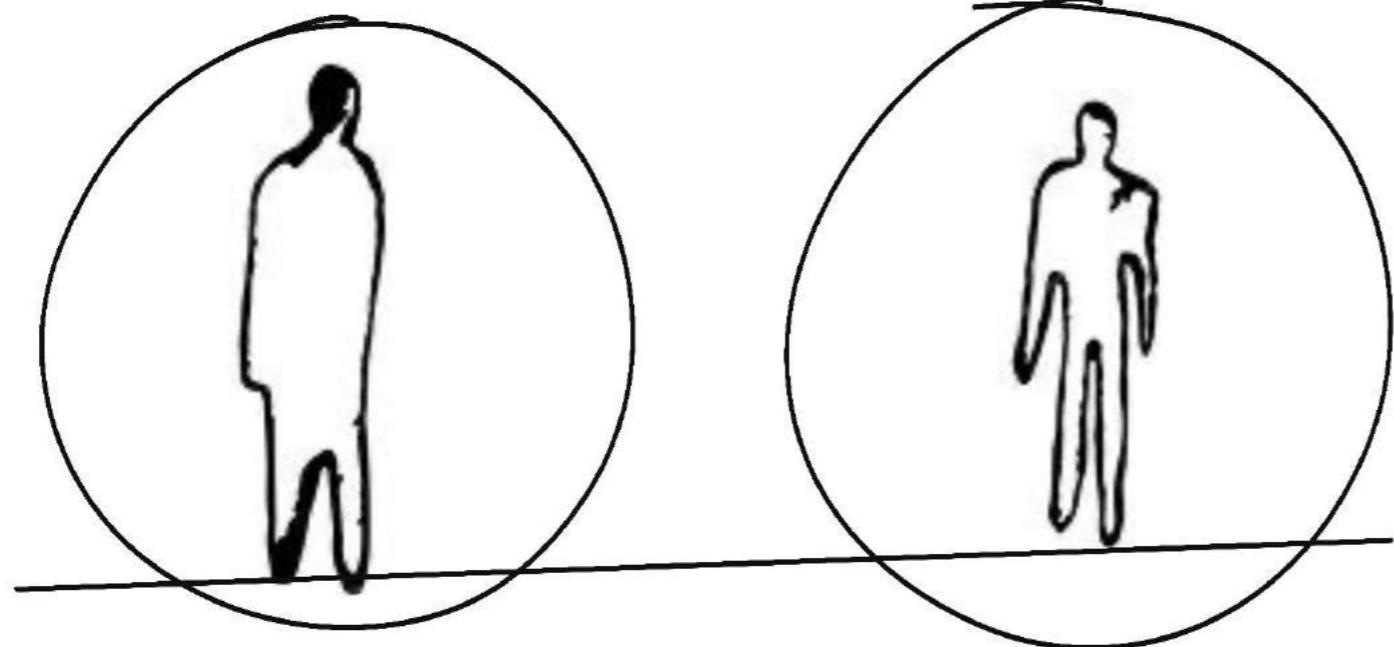
Nature and building are one



Nature at the heart

IDEOLOGY





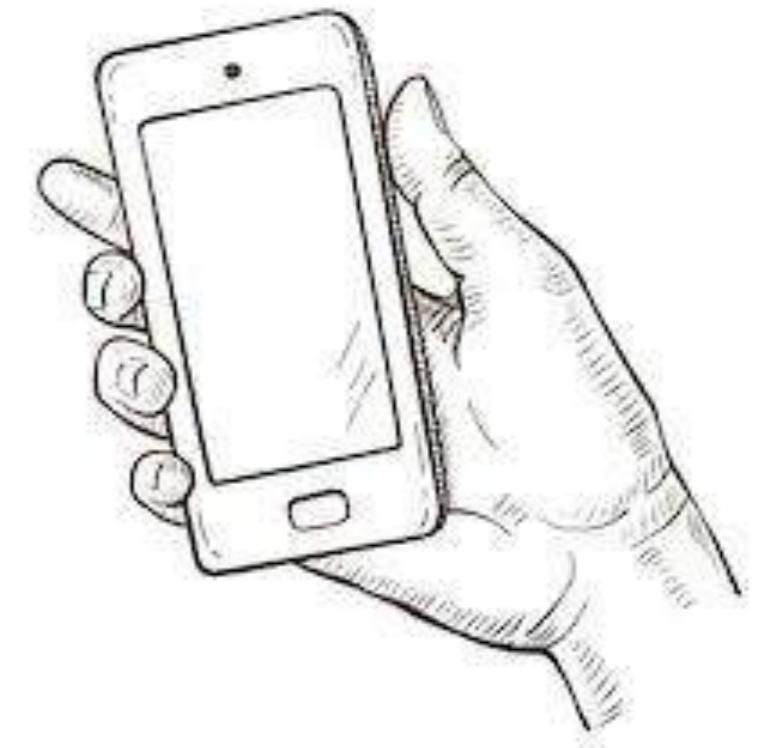
1. Being “separate”, yet together in a public space. Libraries have a significant social role. Brings people together.



2. Important as a contemplative oasis; an “escape from the real world”. Source of inspiration.



4. “A significant majority of students still consider the traditional reading room as their favourite area of the library—the great, vaulted, light-filled space, whose walls are lined with books they may never pull off the shelf”- Freeman. T

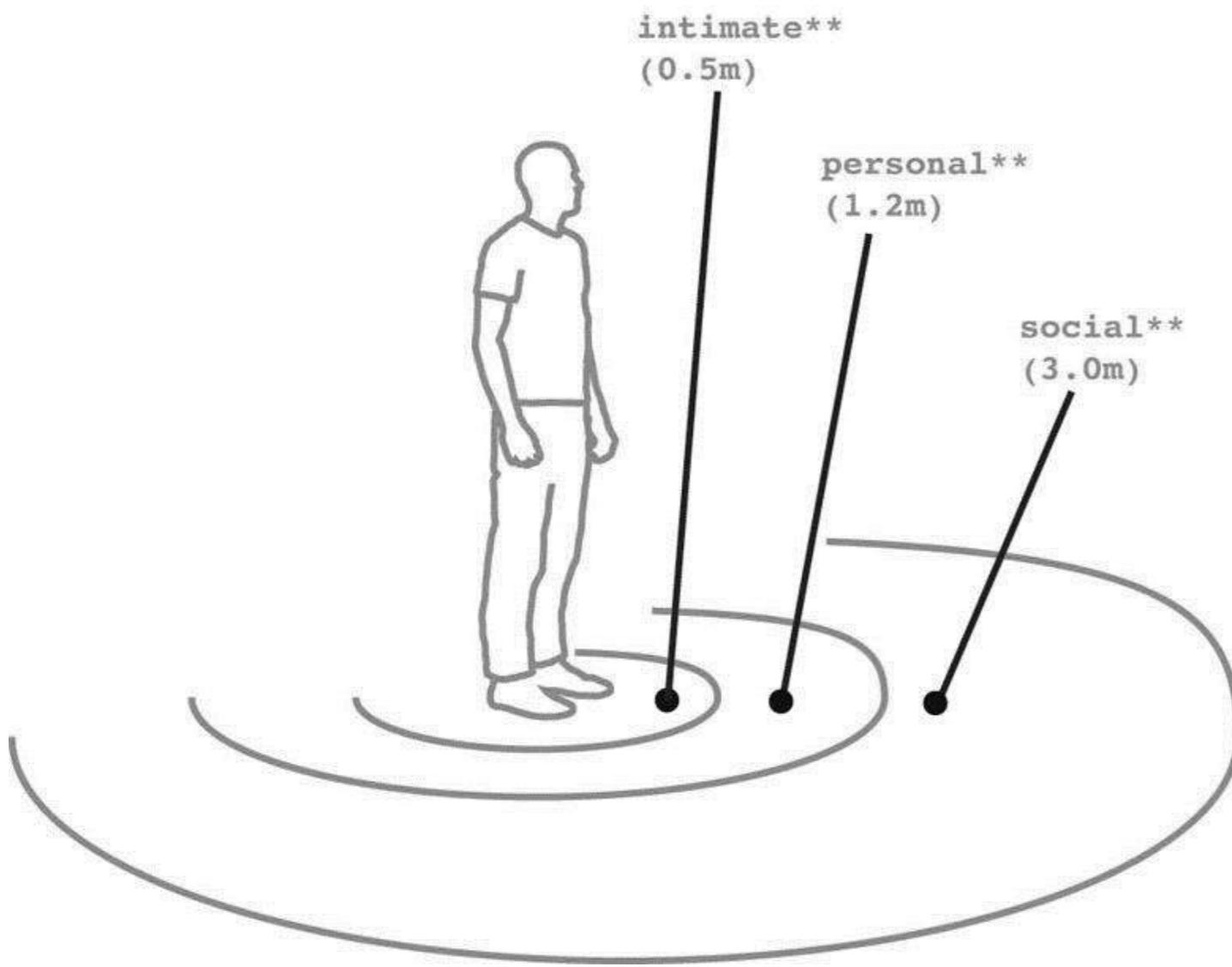


3. Churches and libraries are the one place where phones must be on quiet- inviting users into a new world- free from the distractions of every day life.



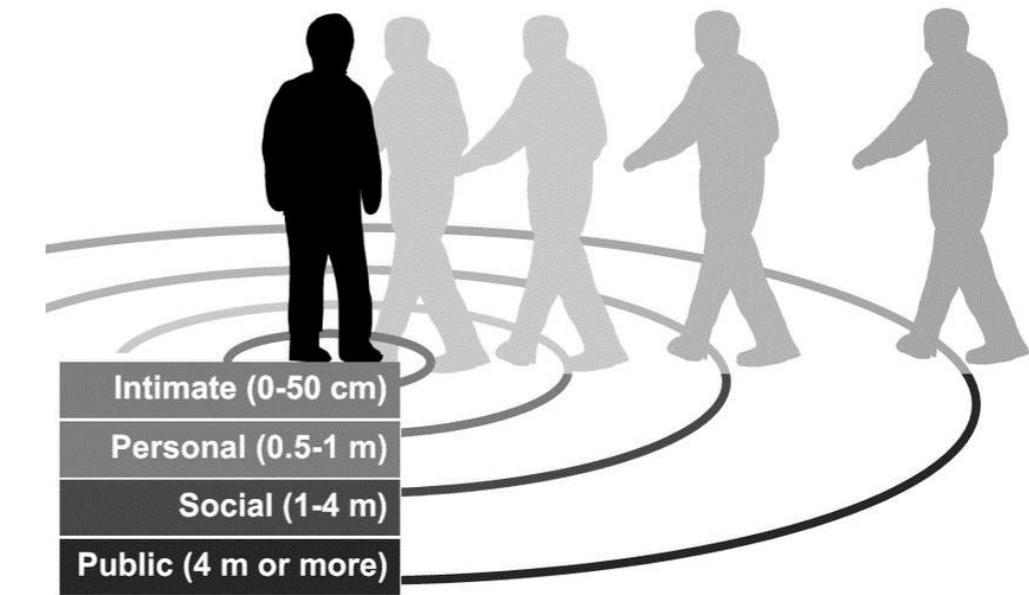
5. Users become part of a larger community—a community that endows one with a greater sense of self and higher purpose

Proxemics



What Is personal space?

"the physical space immediately surrounding someone, into which encroachment can feel threatening or uncomfortable" Oxford Dictionary



Edward T. Hall's interpersonal distances of man.

It is hard to measure personal space because it is different for each individual—and the distance varies depending on your relationship with that individual.

Physical factors are not the only intrusions. Noises and smells can also be an intrusion.



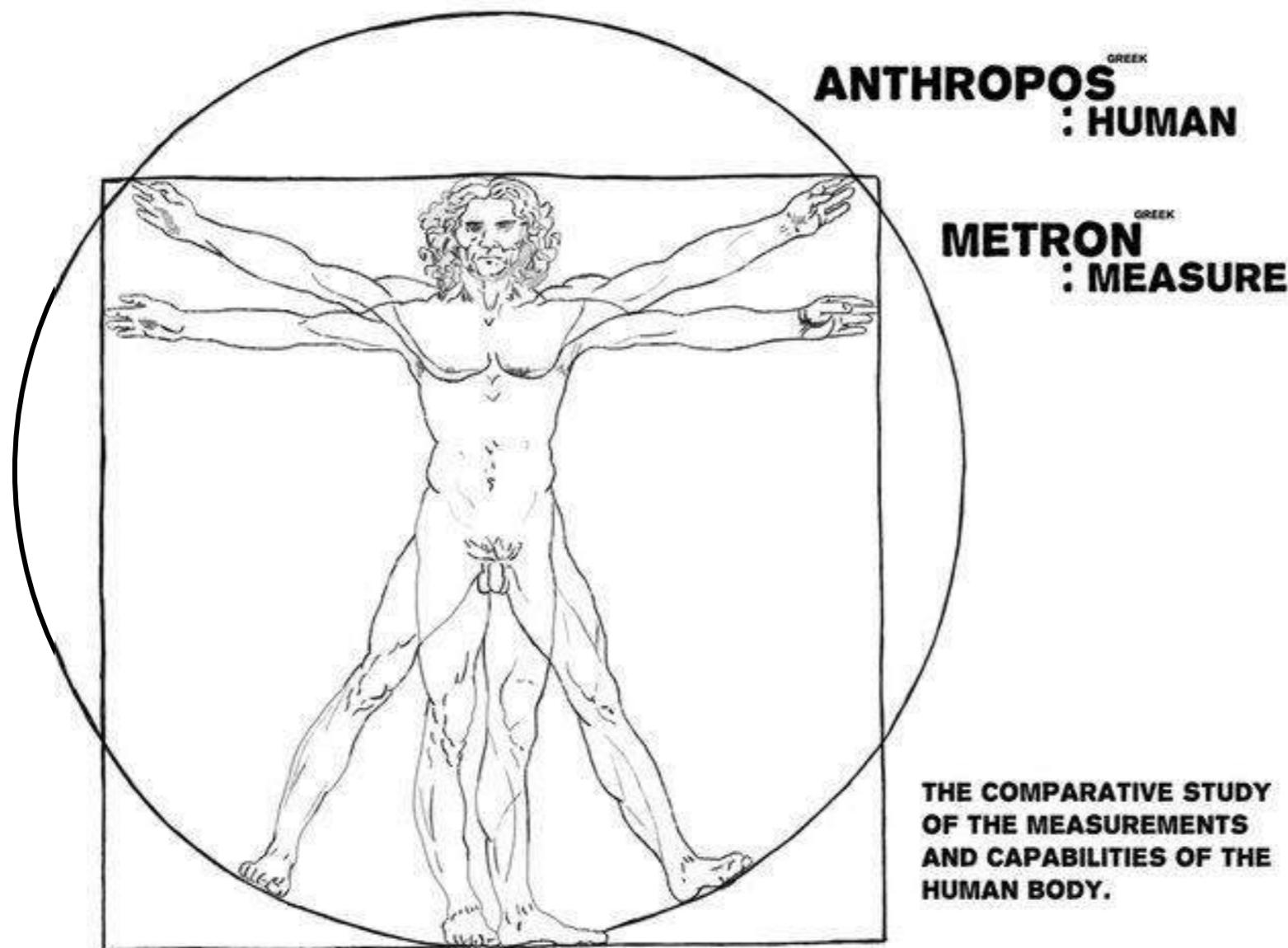
What is Solitude?

"Solitude is a state of seclusion or isolation, i.e., lack of contact with people."

It can have both positive and negative effects, depending on the situation.

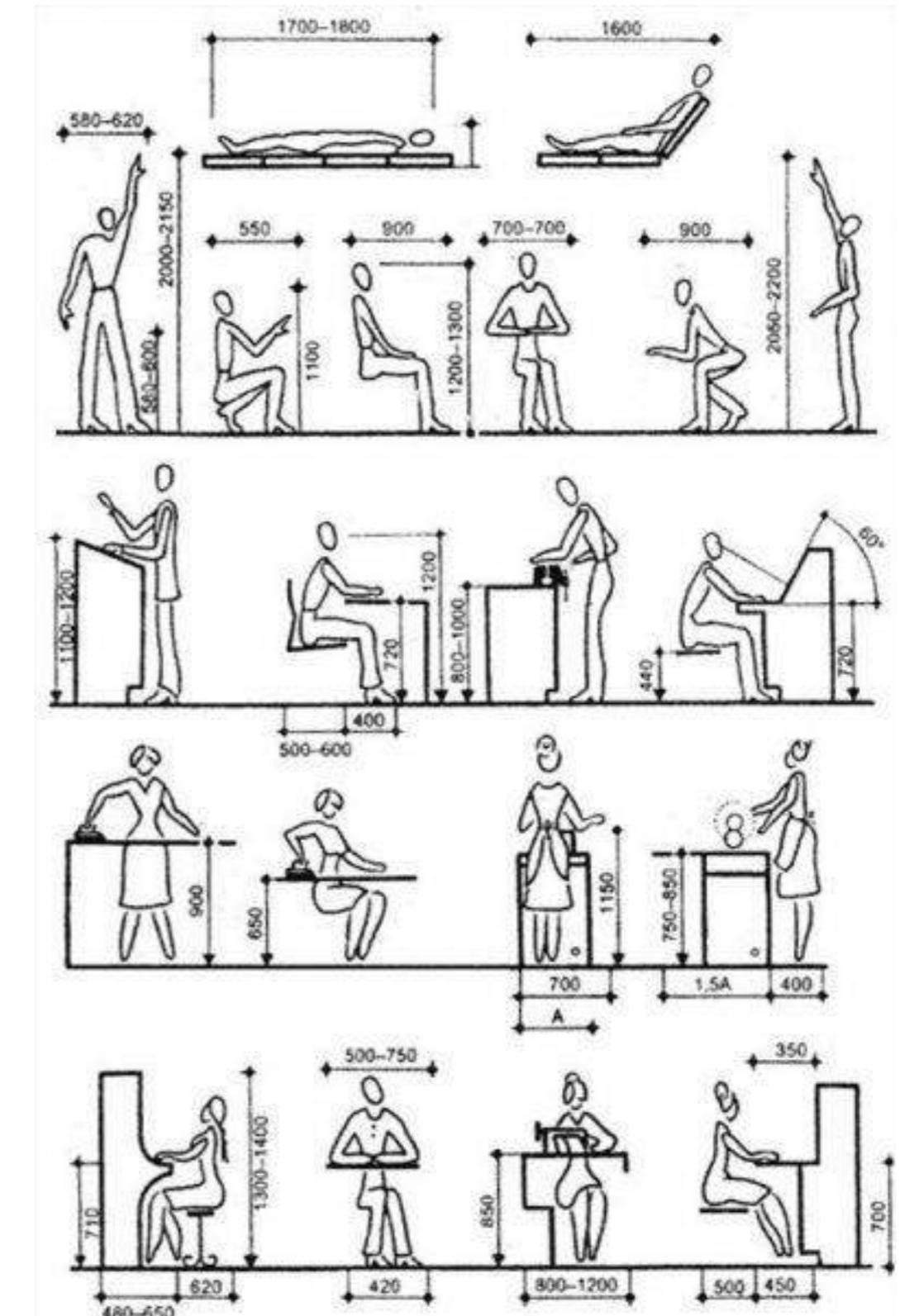
Long-term solitude is often seen as undesirable, causing loneliness or reclusion resulting from inability to establish relationships"

Anthropometry

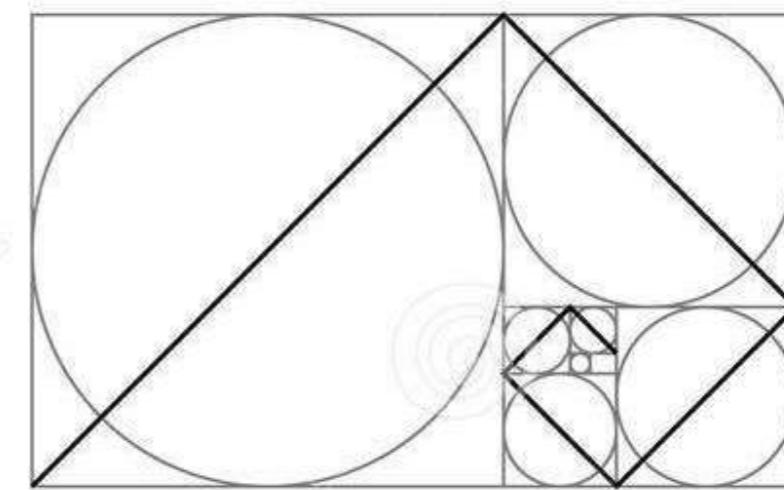
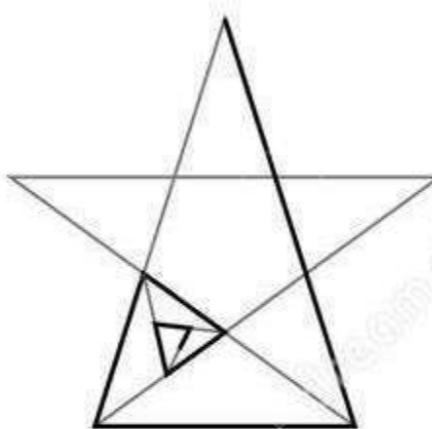
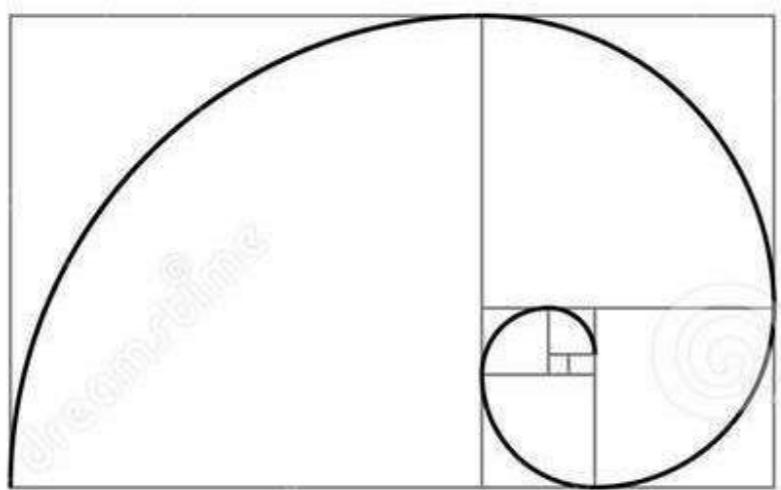
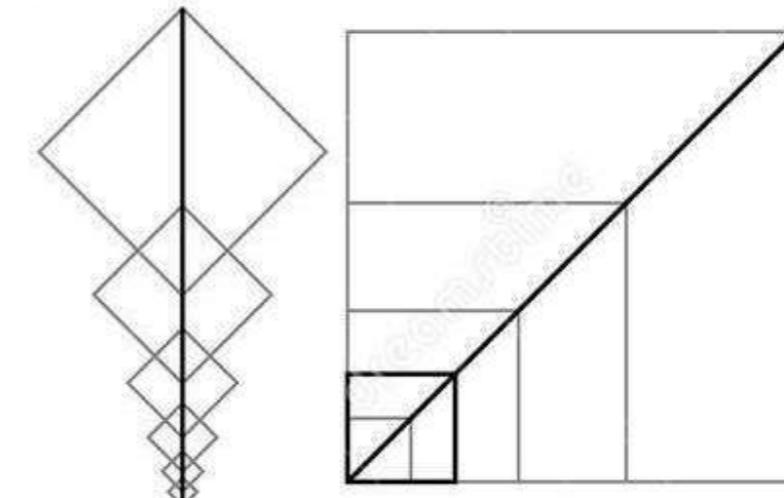
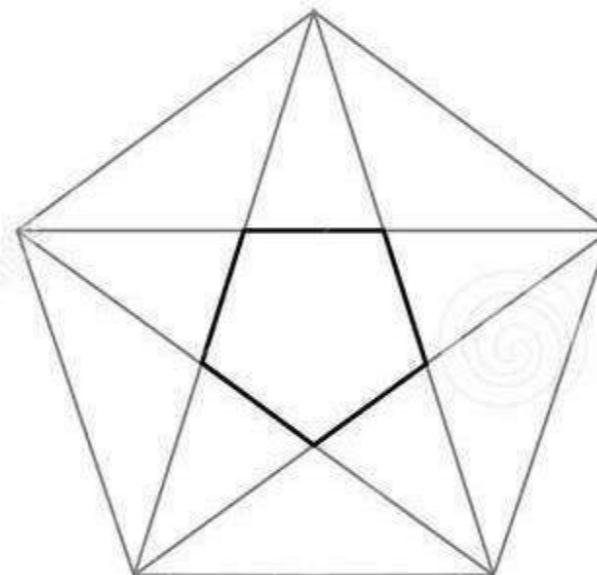
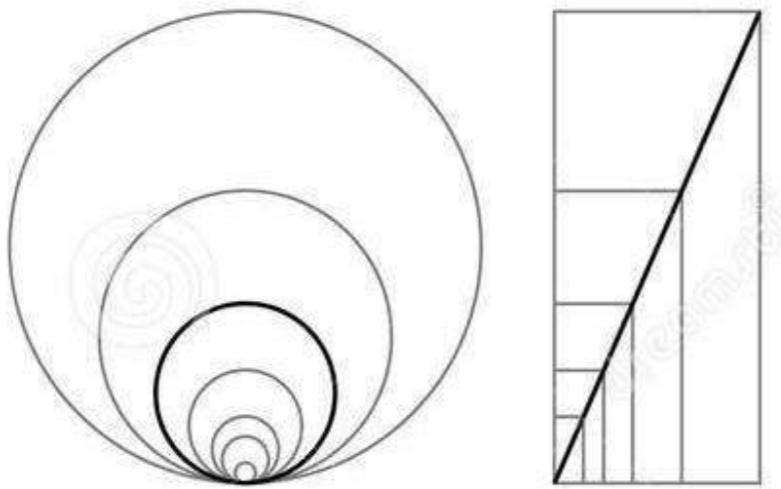
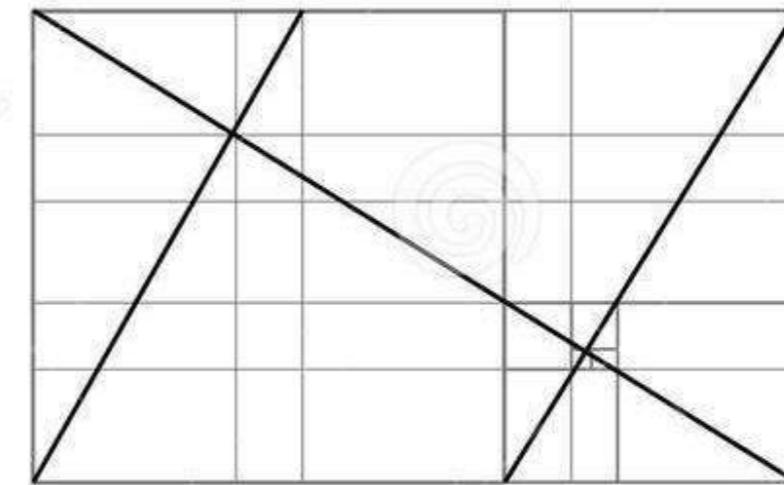
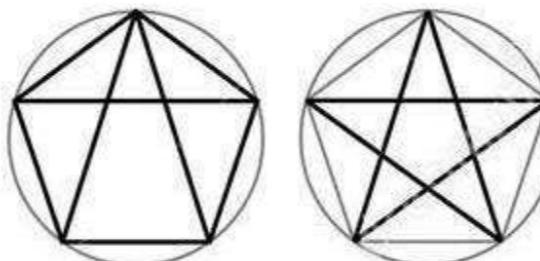
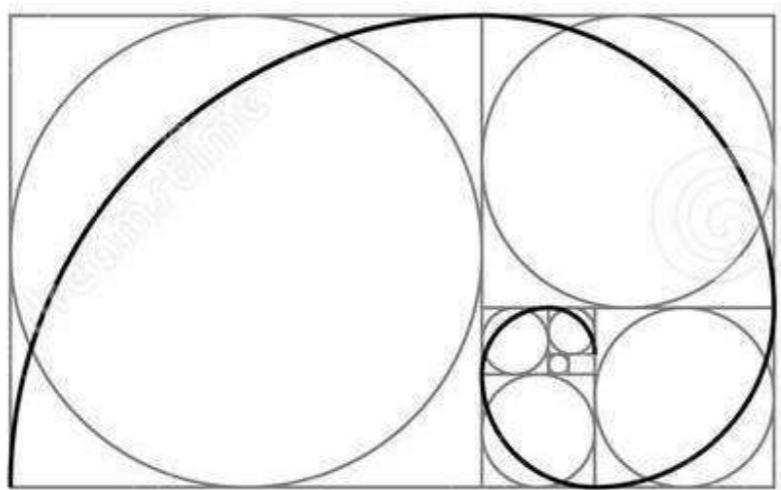


Around 1490, Leonardo da Vinci drew the image of the Vitruvian Man in a work titled Canon of Proportions or The Proportions of Man where he attempted to bring natural and mathematical harmony into the human form.

The basic principle of anthropometrics is that building design must be well adapted to fit the dimensions of the human body and human motion



Golden Ratio



Whether we realize it or not, humans can't help but find objects that conform to Phi as intrinsically beautiful.

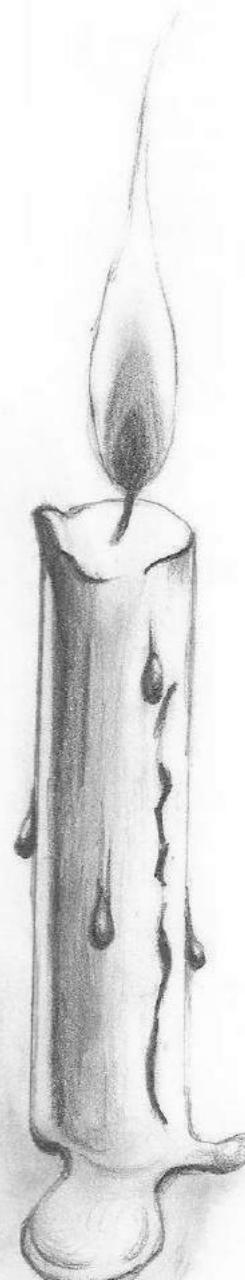
You can find evidence of Phi everywhere in nature

Candles

Lighting candles is a significant convention in Christian churches, originating from Old Testament times where an oil lamp was lighted to 'sustain a perpetual flame.'

Symbolises Jesus as the Light of the world, in addition to the presence and power of God.

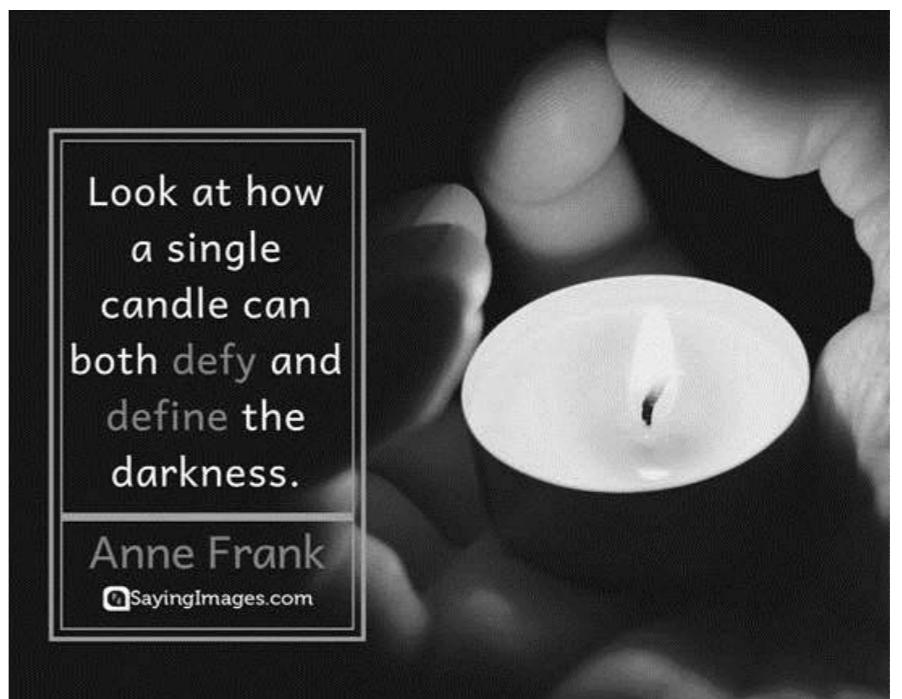
Many light a candle prior to worship to symbolize their life as an offering, being burned up in service to God.



Candles are also often burned whilst studying due to their soothing, healing properties.

The sheer act of lighting a candle, along with its flicker and gentle glow helps ease and soothe the mind.

The burning of candles can create an ambient atmosphere, which increases focus and helps the brain get into a more productive mindset.



Light

- Natural light can help hospital patients to recover and school pupils perform better.
- “Light certainly has a physiological impact on people. Research has shown that visible light helps the human body to regulate the production of the hormone melatonin, which in turn helps to regulate our body clock, affecting sleep patterns and digestion. Visible light also helps to stimulate the body's production of the neurotransmitter serotonin, which can reduce the symptoms of depression.” - *Dr Alan Lewis, a lecturer in architecture at Manchester university.*



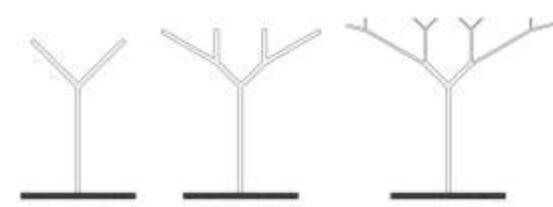
The Tote Restaurant, Mumbai, designed by the Serie Architects, UK

Nature

- *“I am nearer God’s heart in a Garden than anywhere else on earth”*
- God walked and conversed with the first man and woman in the Garden of Eden.
- Trees and leaves have inspired structural forms in architecture- particularly gothic.
- Branched structures are evident at all levels of organization in living organisms.



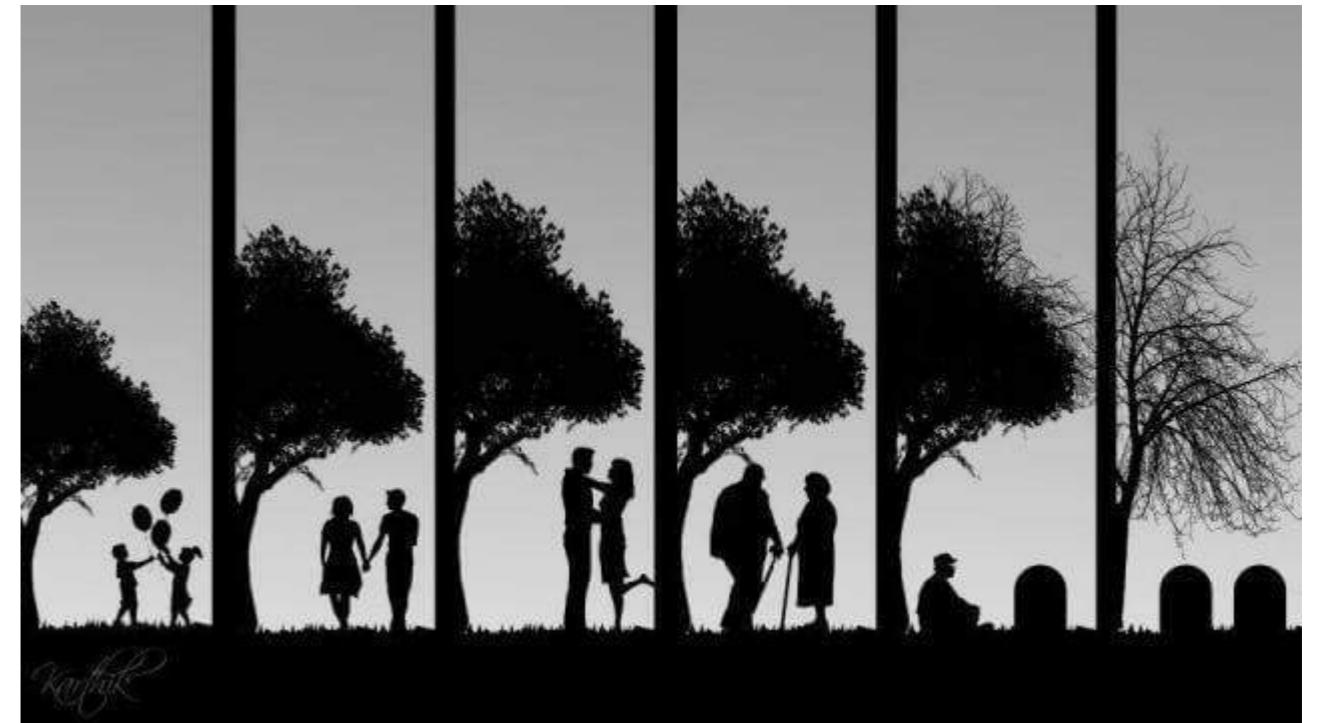
Branching is observed in the human anatomy



Fractal tree generation

The tree as a metaphor

- A sapling needs protection from the wind (shelter), water and nourishment until its roots are deep enough to find its own nutrients and water. As children we require the protection and nourishment that our parents give us to grow strong enough to stand on our own two feet.
- The roots in a forest entwine with other tree roots making a stable tree community in the forest. We need to be kept accountable by being rooted in a community where we will flourish; a lone tree stands danger of being struck by lightning, eaten by deer or being chopped for firewood. If we don't have a supporting community, we are an easy target for those who would harm us.



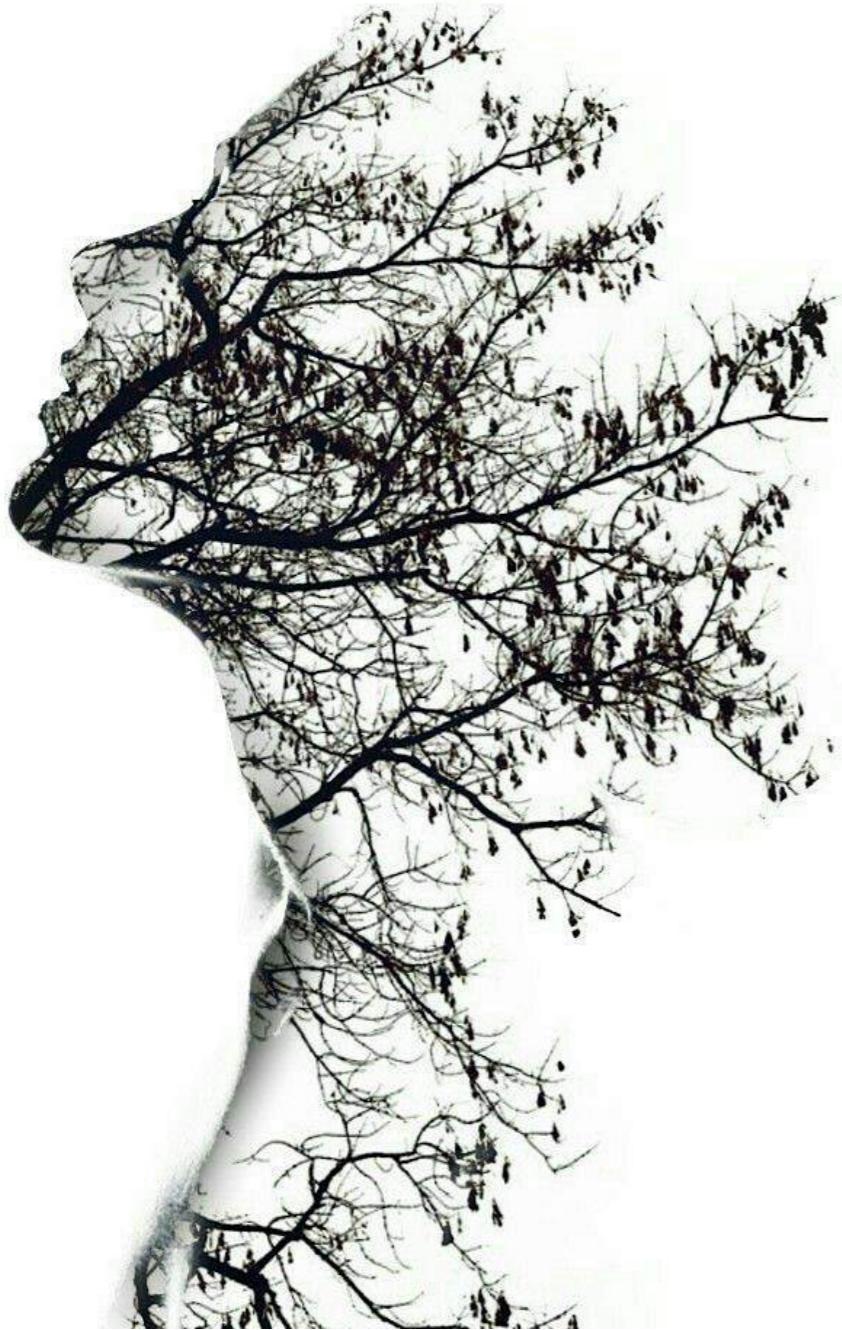
Life and death

- The trunk of an established tree stands firm and supports its branches. It shows flexibility when the wind blows, and becomes stronger year on year. Our growth in maturity should support all our activities, our relationships and our emotional intelligence. Each year a layer of wisdom is added from our life experiences, so we become stronger and not easily swayed by the winds of other people's opinions.
- Branches grow upwards and outwards to provide shelter to birds and small creatures from storm's and the sun. The branches bear fruit providing food or beauty for the eye of the beholder. As humans mature, our branches are our children, families and relationships with others; providing for them shelter, food and pleasure.
- Trees and leaves are seasonal, similar to humans. We have seasons of growth and seasons to rest and be still. When we go through transitions, we are like trees that need to rest, to conserve and renew our energy. We may even be transplanted if we move to a new location, this will take a long time before our roots settle down into the new soil and find their food and nutrients. Until we become stable again, we will be vulnerable.

“Knowledge is a plant of slow growth” -

THOMAS COOPER

CONCEPT'S



“STRENGTHEN THE BOND
WITH NATURE”

To feed the human craving of connecting with the natural environment.

“Good Architecture lets nature in”-
Mario Pei (author)



“R EPECT THE P AST”

Integral to the design is respecting the buildings former history and story- a place of worship and teaching as a Methodist church.

“I go into my library and all history unrolls before me”
-Alexander Smith (Poet)

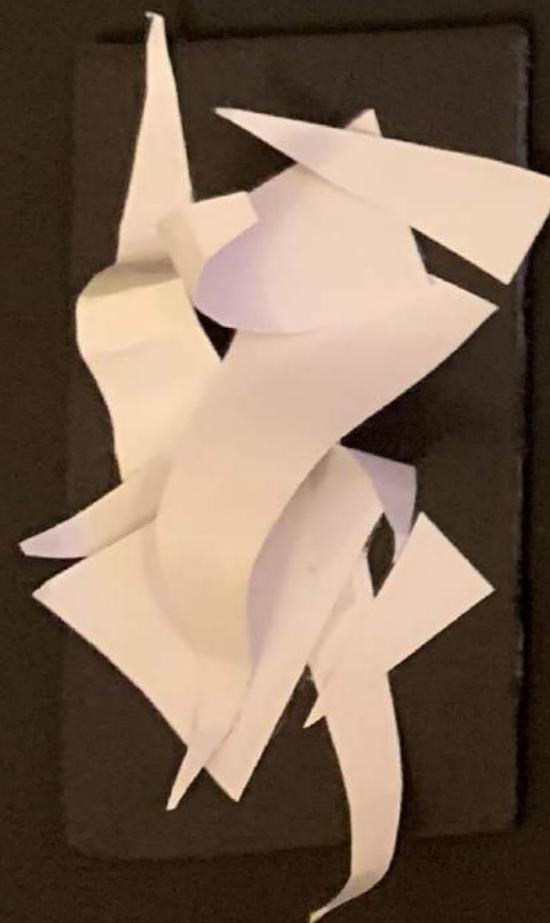
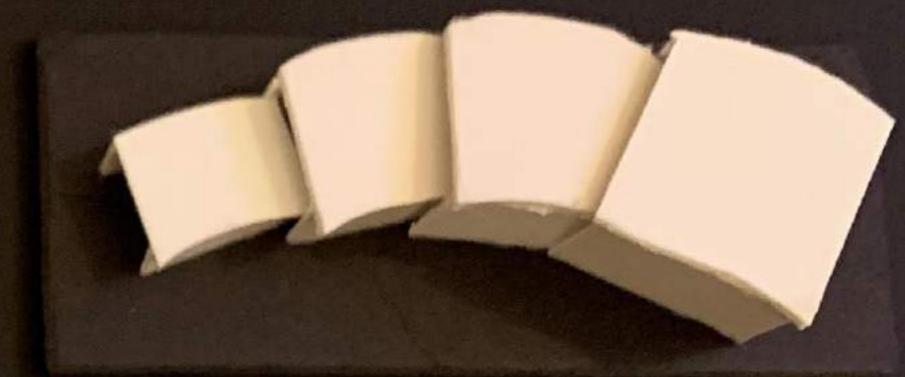
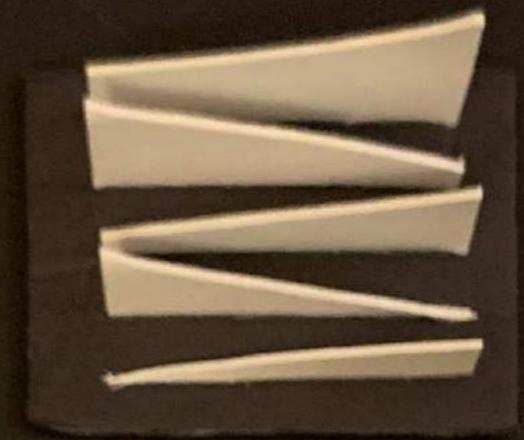
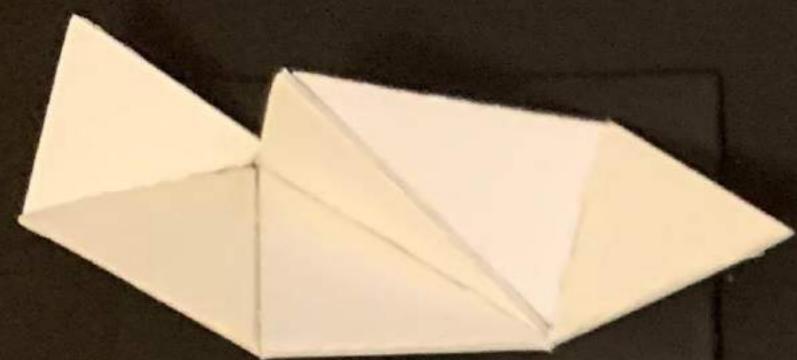


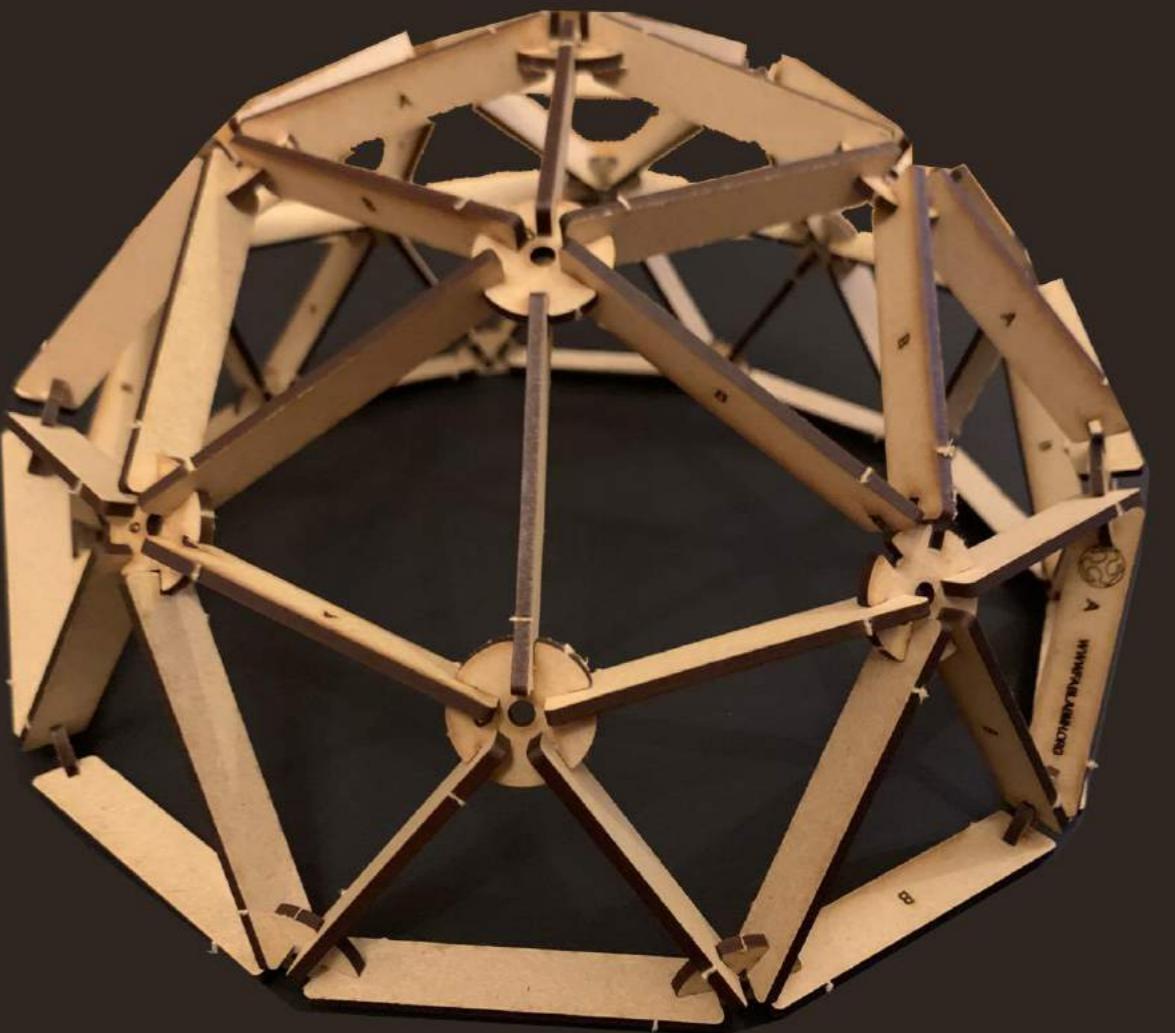
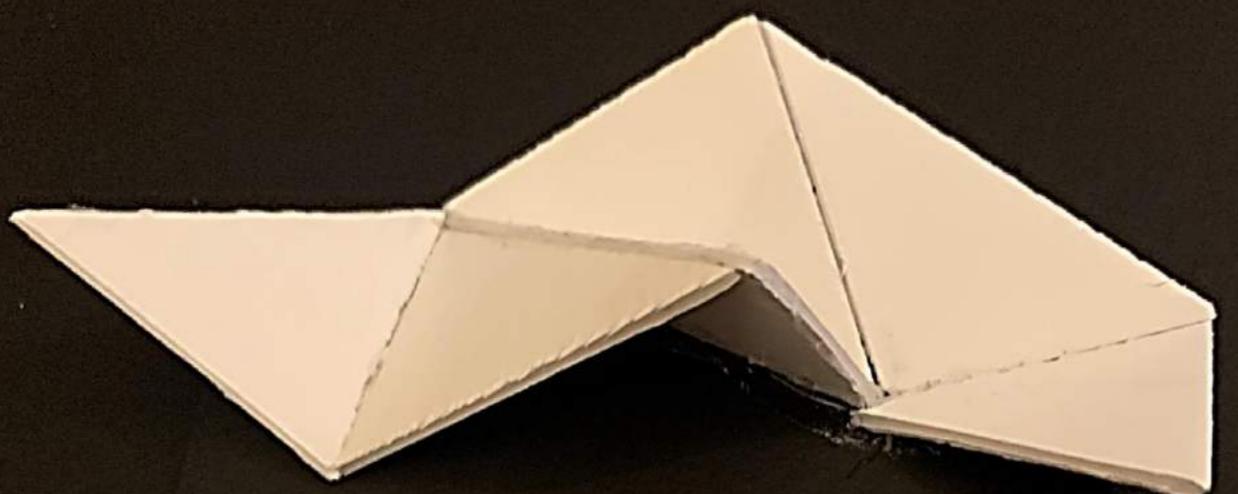
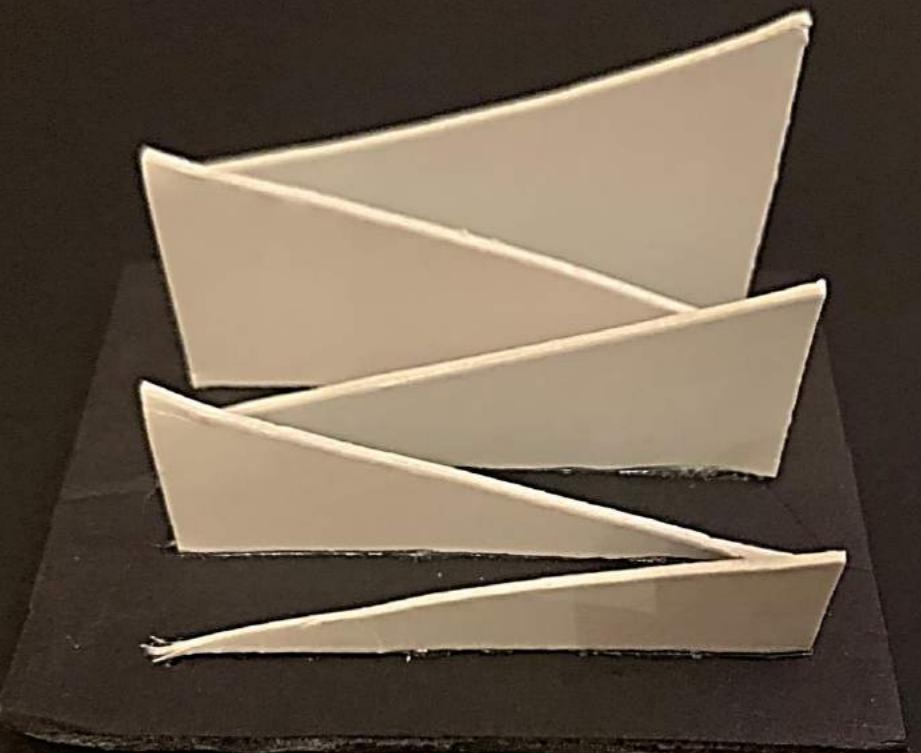
“ENLIGHTEN THE SPACE”

To stand as a metaphorical candle, enlightening the space whilst soothing the user.

“Light, God’s eldest daughter, is a principal beauty in a building”-
Thomas Fuller (English Author)

CONCEPTUAL MODELS





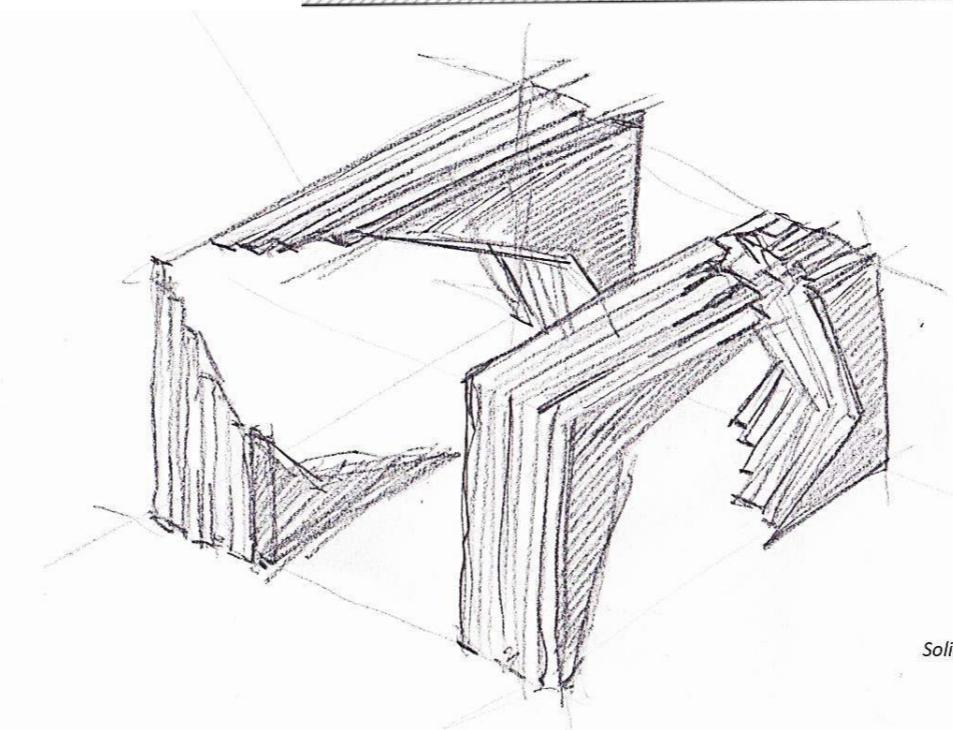
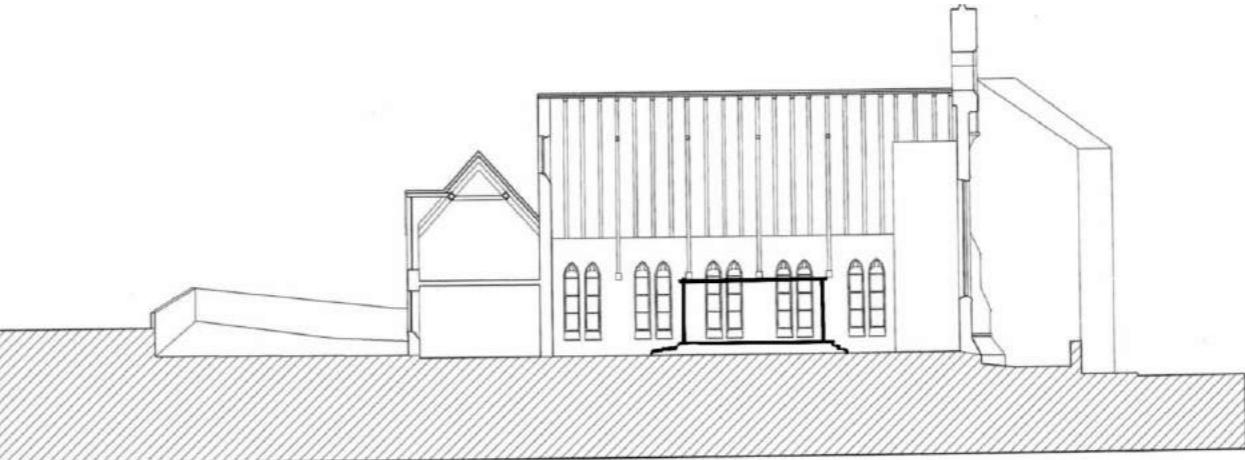
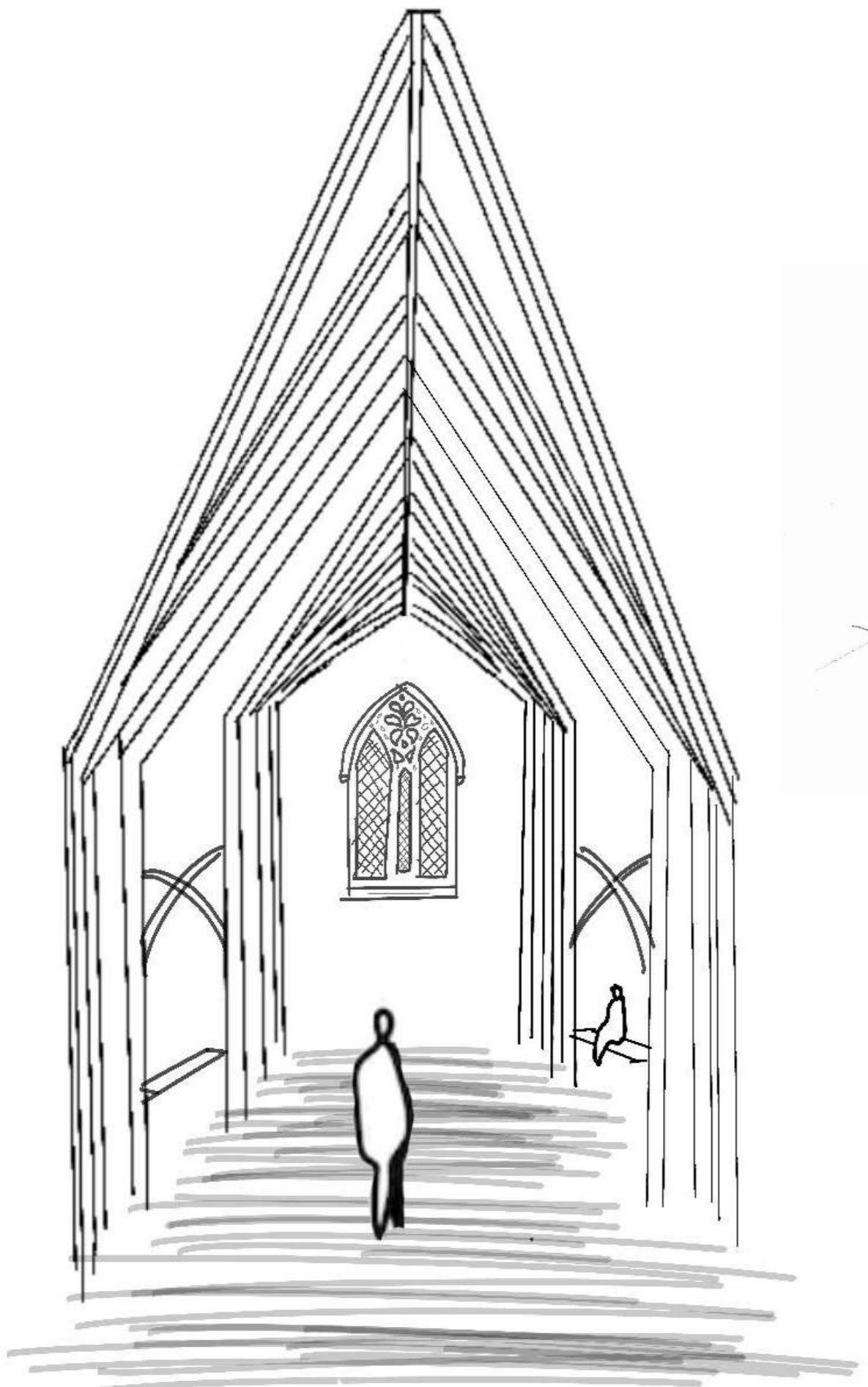
Geometrics, repetition and scale proved most successfully and fitting for the library's context.

ARCHITECTURAL INTENTIONS

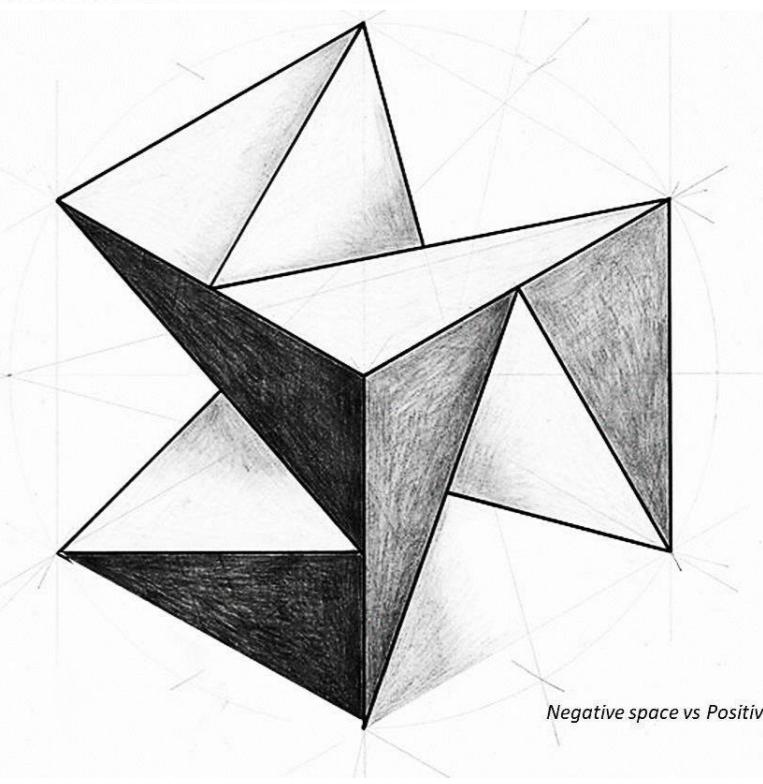
Architectural Intentions

1. To provide a singular, intimate reading room which wraps the reader in, inviting them to get lost in wonderful stories.
2. To restore and conserve the historic fabric of the church, making connections to the essential elements of gothic architecture:
 1. the use of structure to create space and
 2. expressing lightness as the manifestation of light itself.
3. To draw on the tradition of light as a sacred phenomenon, with the structure acting as a metaphorical candle- enlightening the space and healing the user.
4. To provide a deeper connection with the surrounding environment through the use of natural materials which provide a tactile experience.

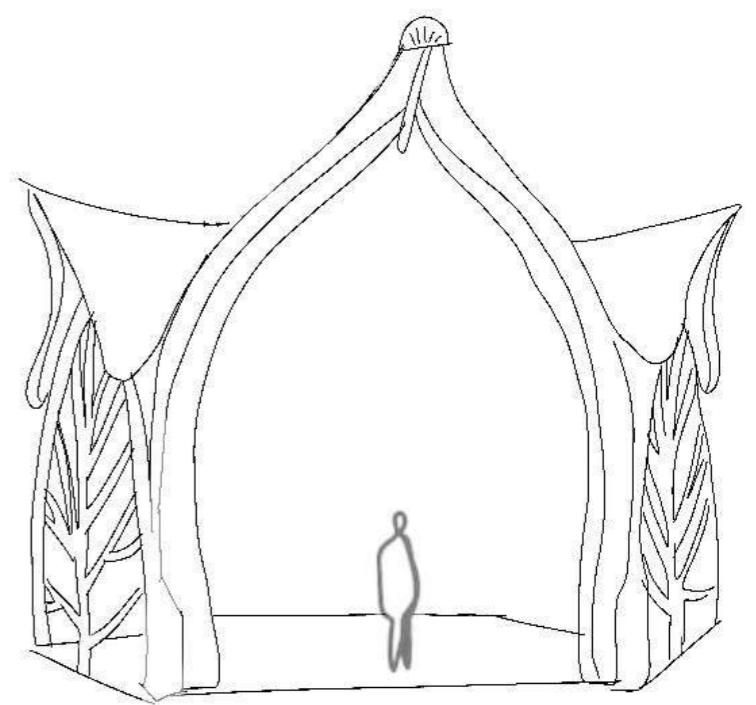
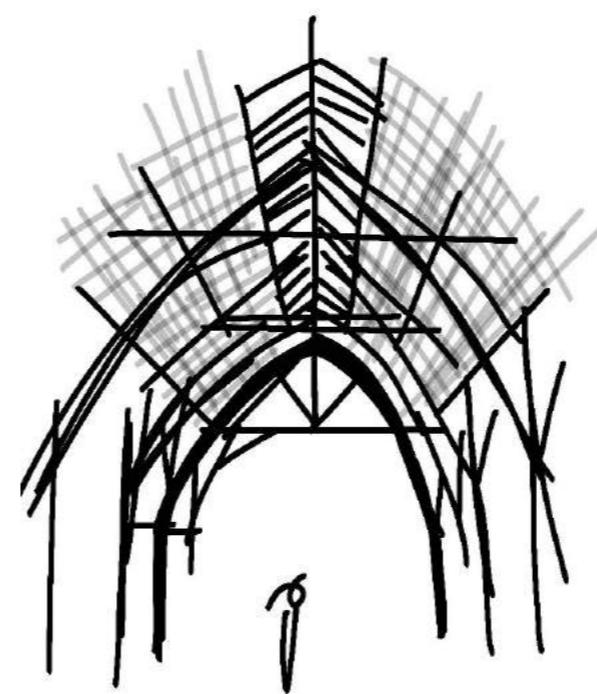
SKETCH DESIGN



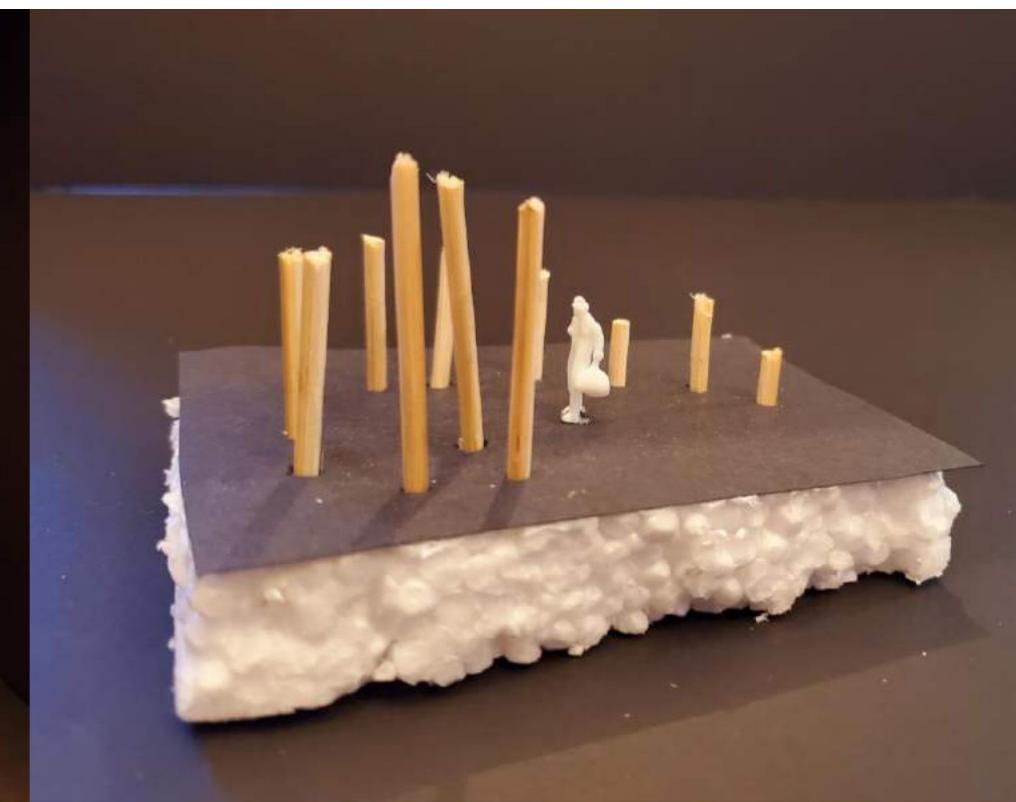
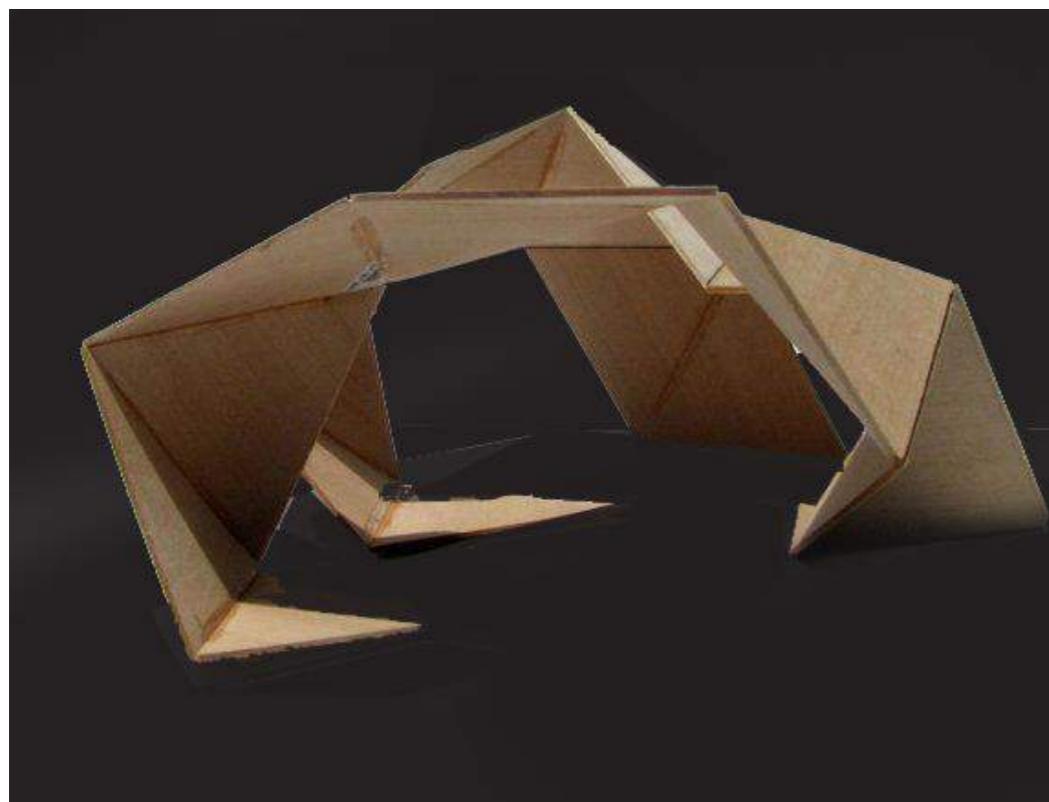
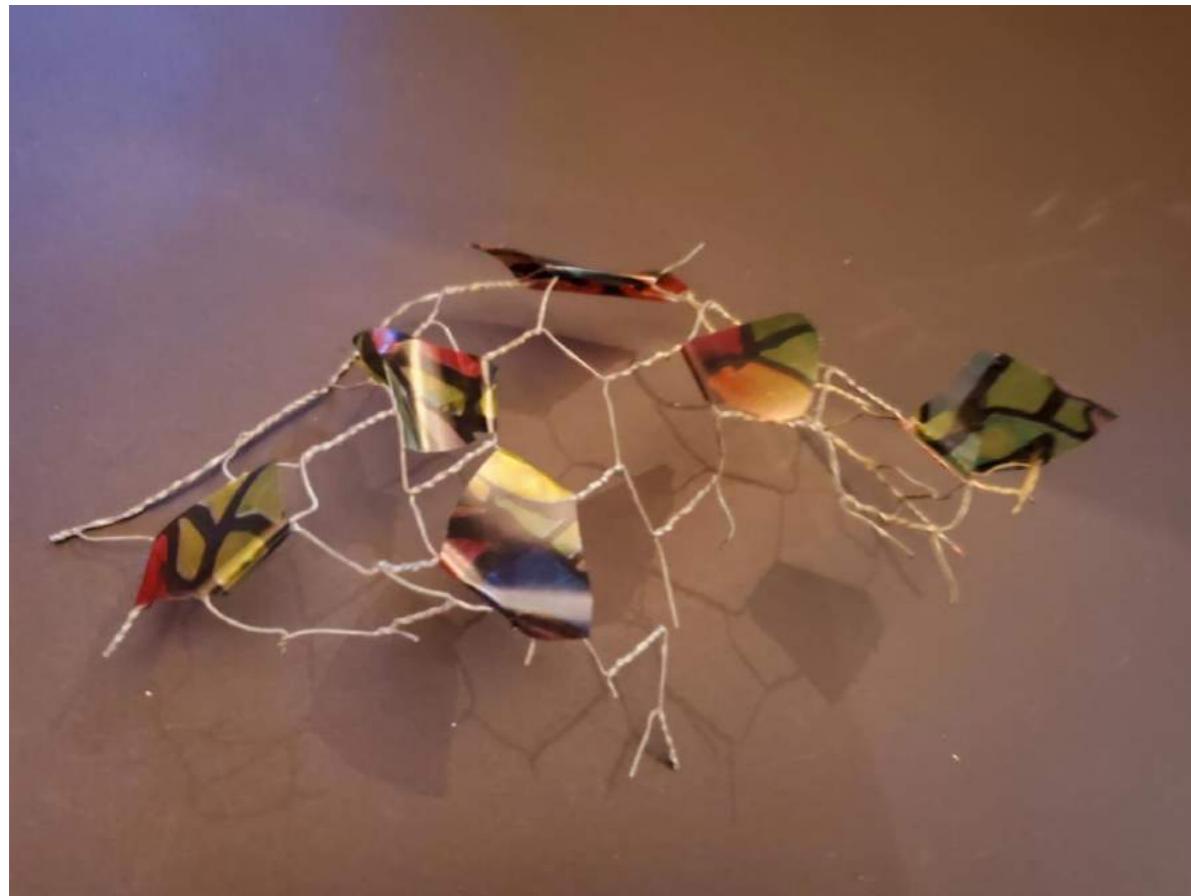
Solid/Void

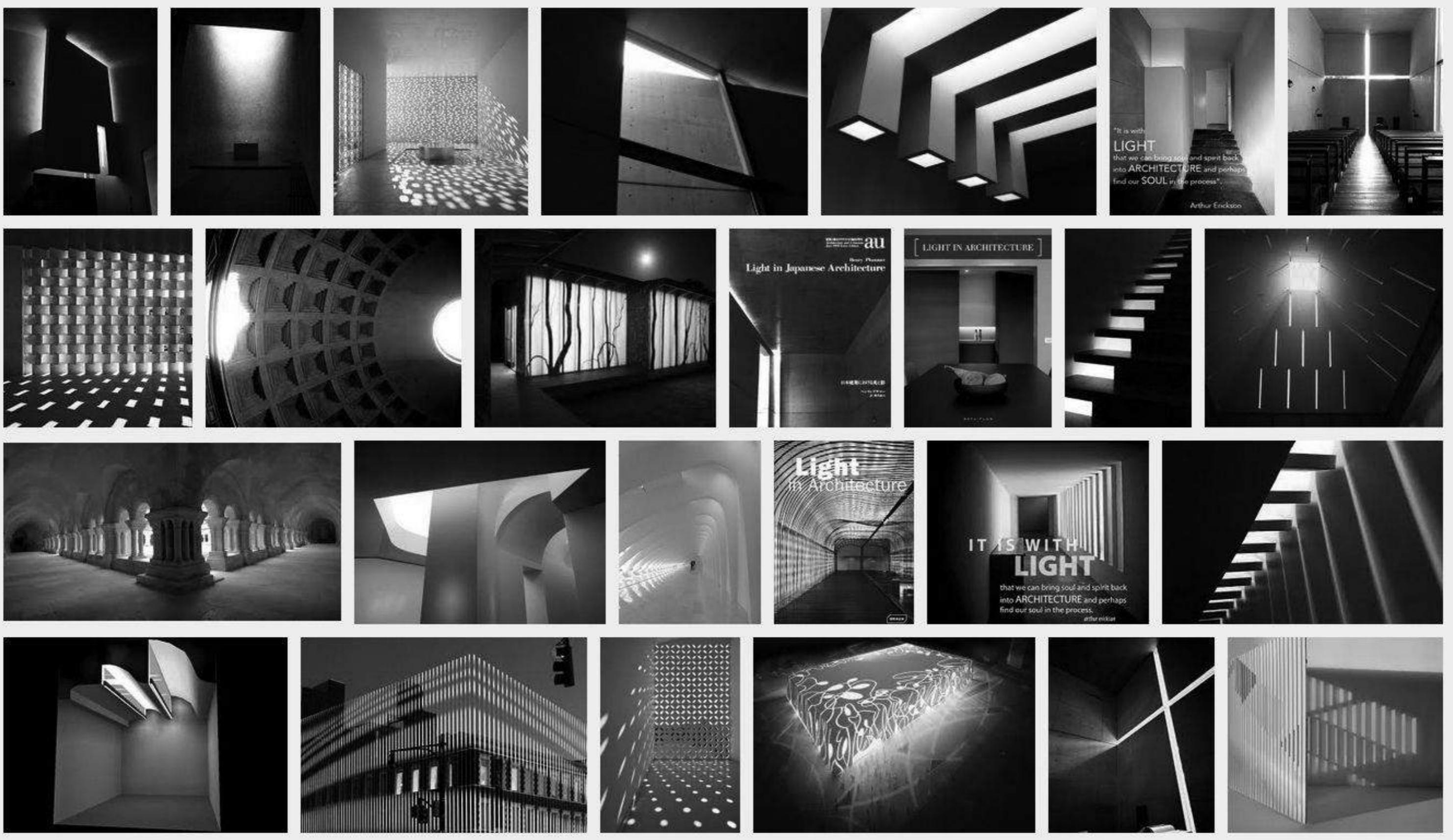


Negative space vs Positive



Test models



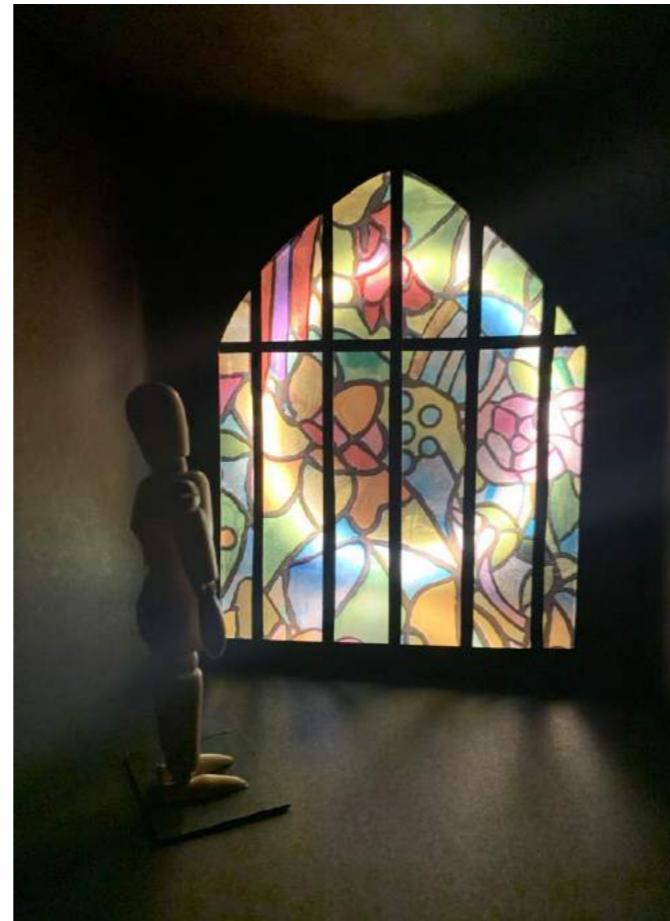


Collage of experiential inspirations

“The architectural experience silences all external noise, it focusses attention on ones very existence.” - An architecture of the Seven Senses, Juhani Pallasma

I feel that the scale and being part of something larger than what man can create such as nature can develop an experience that appeals to the senses. One that is a perfect orchestration of the colour of light, the pattern of shadows, the materiality of the wall, the feeling of warmth, the smells of nature to create a sense of calm within.

Testing Lighting

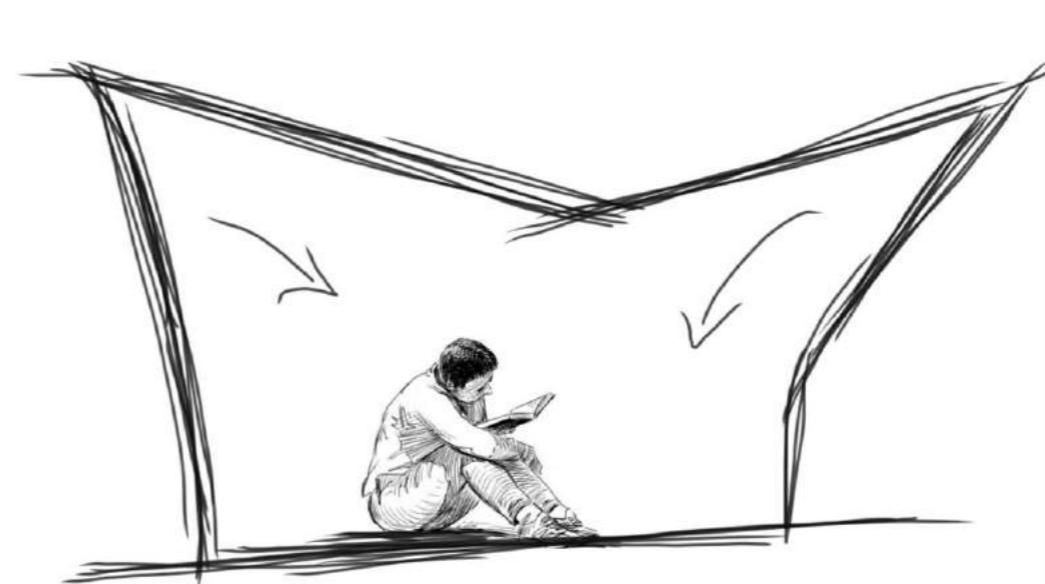


Ambient lighting is much more calming and inspiring than the psychedelic alternative I explored. Vital to maximize productivity and learning of the users. Creates a feeling of intimacy, key to the double height space of the library.

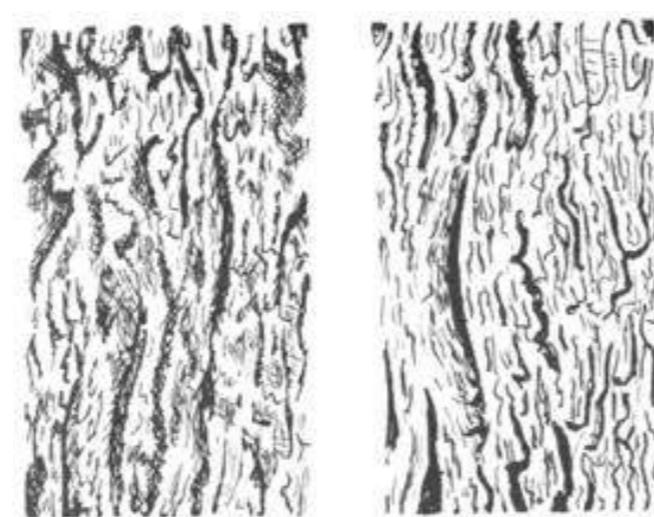
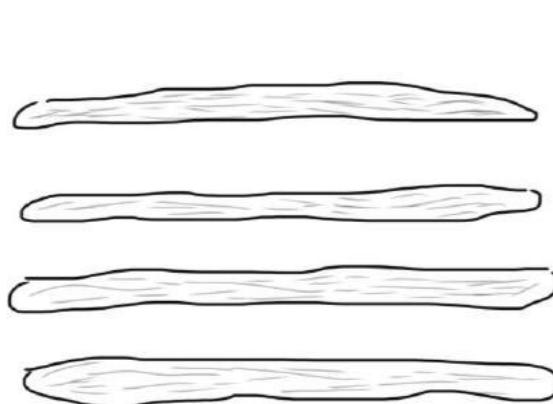
Design Rationale



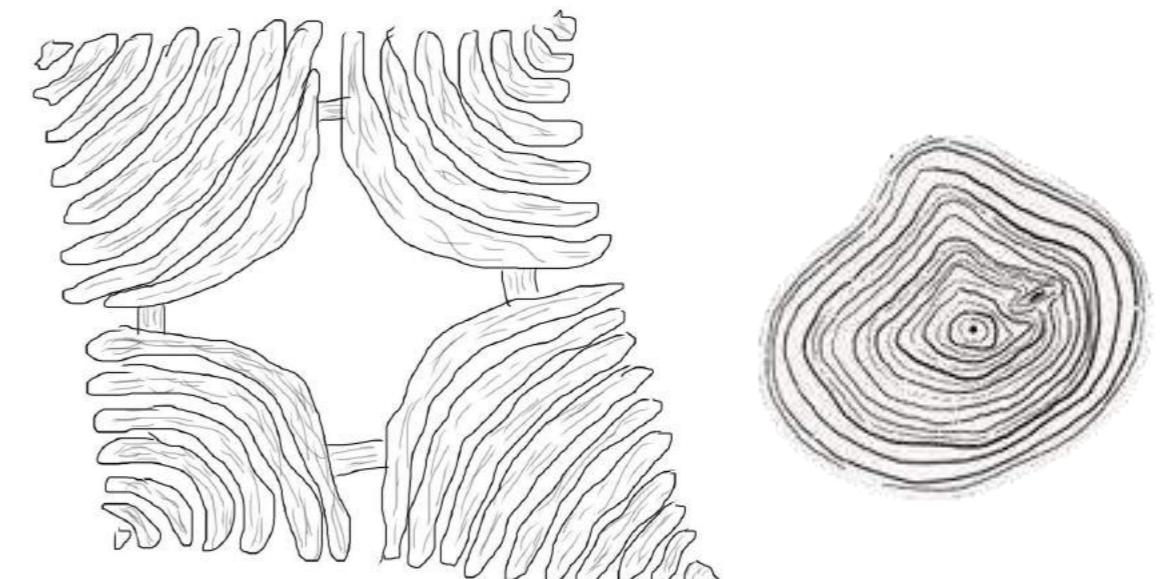
1. Form- geometrical form derived from the breakdown of gothic architecture (pg. 9). Minimalistic in design so as to not overshadow the beautiful gothic details of the church; rather highlights them.



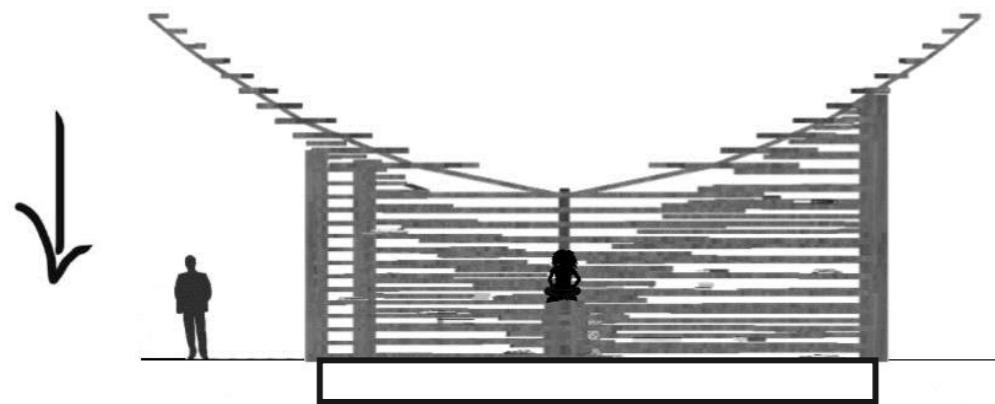
2. Scale- small, enclosed space; feels intimate and personal creating a sanctuary. Users feel safe to “lose themselves in wonderful stories”. Designed to house 3/4 users at a time.



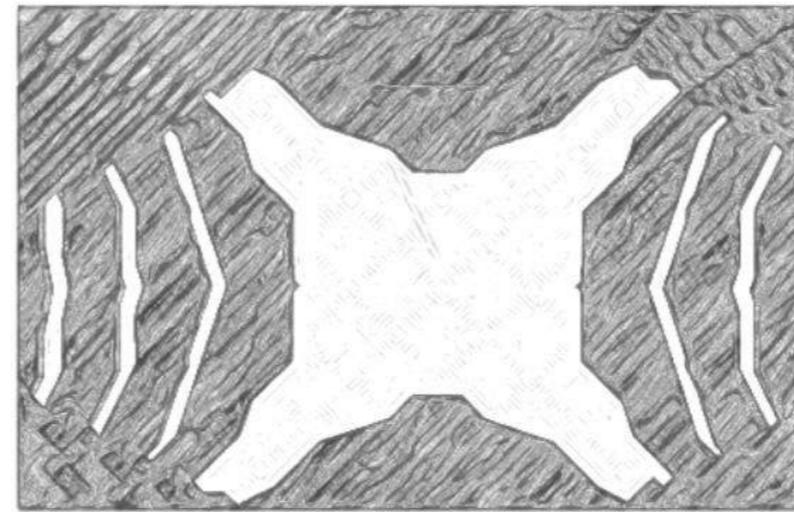
3. Material- wooden slats create a tactile experience which engages the senses i.e. the rich feeling of the deep wooden grain, the smell of the earthy bark. Restrained and subdued material choice, respective to cultural setting. *“A real wooden building does not get old; it matures, gains character, and looks better with time”*.



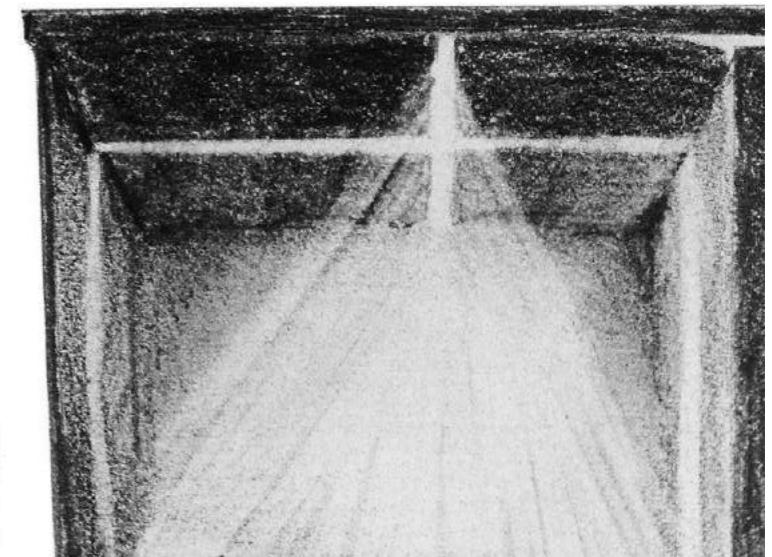
4. Roof outline- makes connections to the tree rings found in trunks. The natural growth of knowledge and growth of trees. Creates a forest-like appearance which generates an immersive and sensory experience for users.



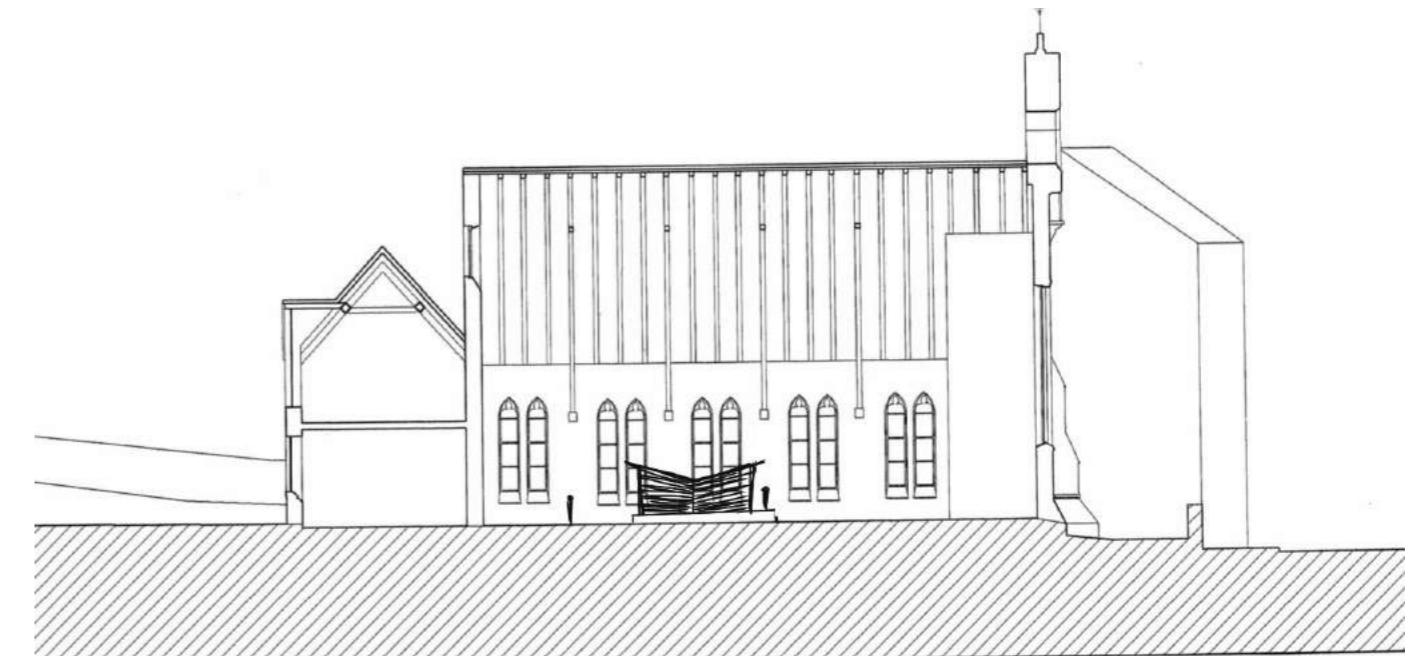
5. Nestled- Nestled into the site- appears as an organic extension to the library's wooden floor. Creates a private, intimate space with a sense of enclosure.



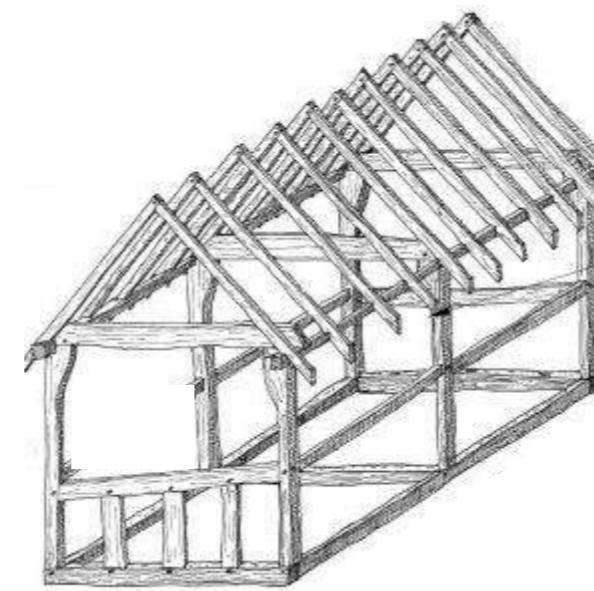
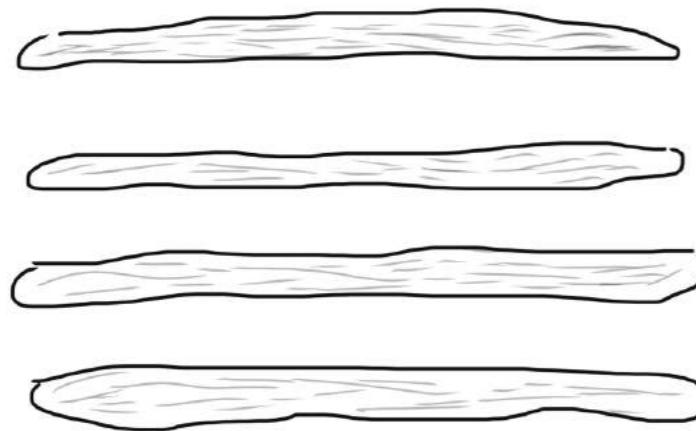
6. Ceiling Void- in the form of a cross; makes reference to the history of the building in use as a Methodist church. Allows users to view the beautiful historic timber beams on the roof and acts as a light well; elevating the user towards the light. Immersing one with "heavenly light", similar to when Methodists were previously immersed in water during their Baptism.



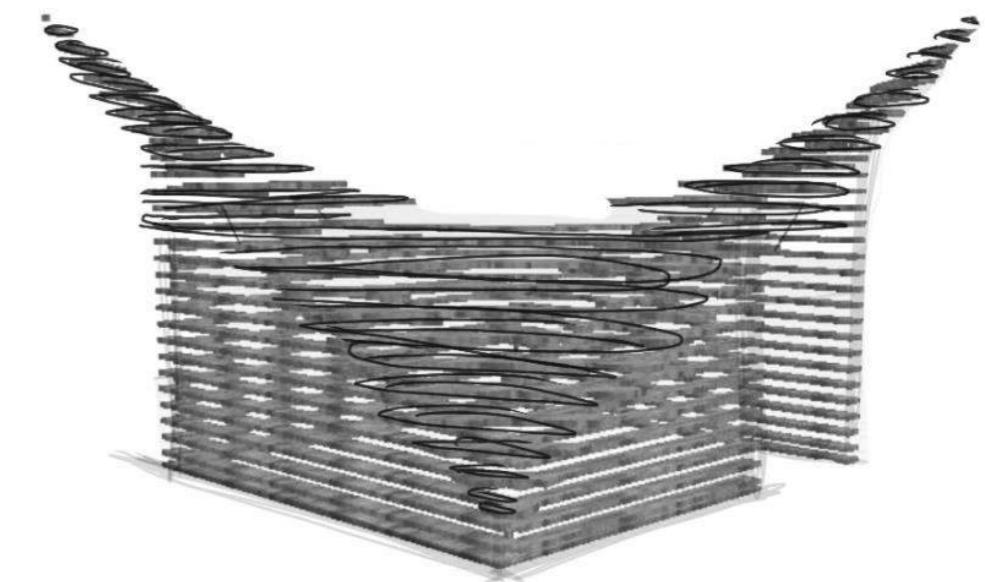
7. Entrance- singular entrance at front of structure. Personal space cannot be invaded with multiple access points. User feels safe- sanctuary.



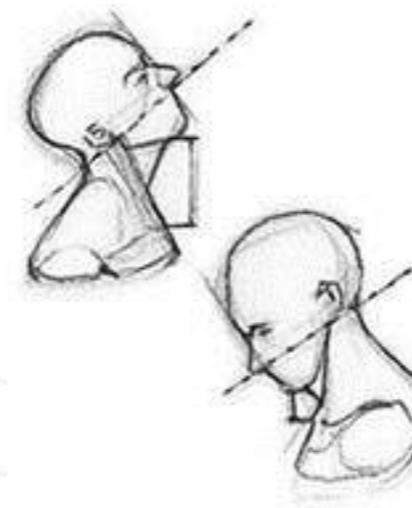
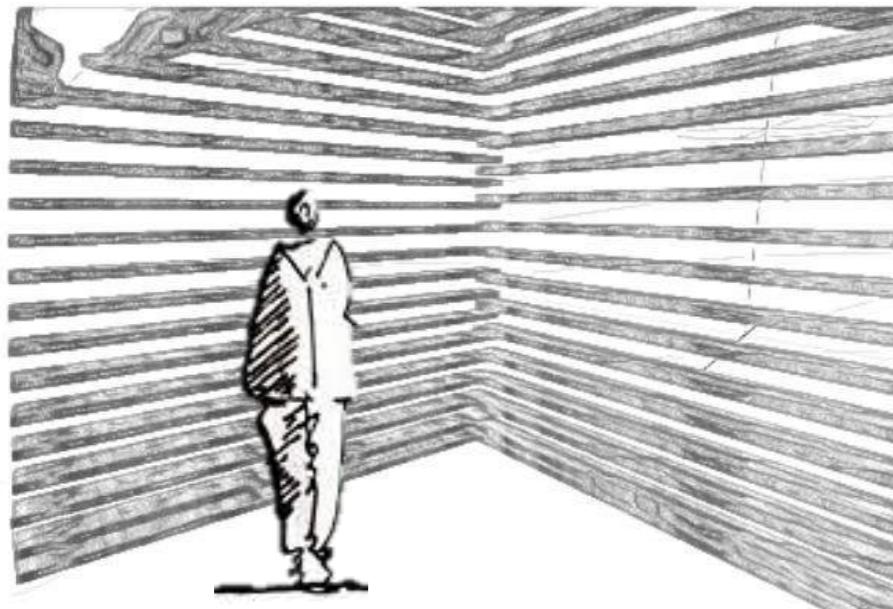
8. Scale- respective to the church. Does not overshadow it, rather highlights it. Does not block the natural light which floods the space from the main gothic arched window on the northern façade.



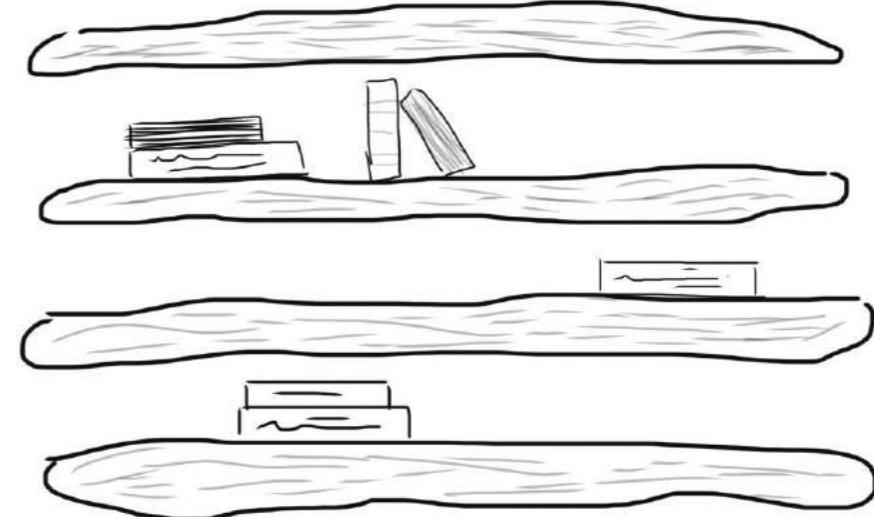
9. Repetition- The structure is composed of a system of wooden slats to generate a sense of depth and rhythm. Serving as a cohesive, textural continuation of the ceiling lattice, tying the entire space together.



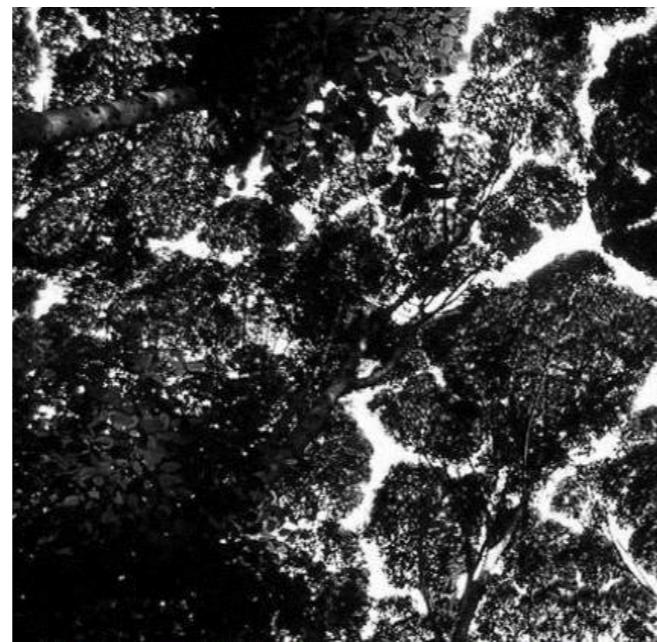
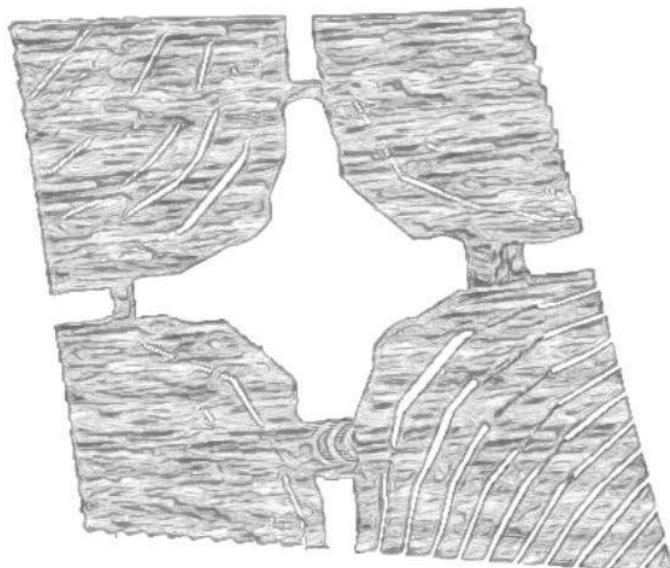
10. Solid/Void- spacing between wooden slats makes the structure appear light; almost like it is floating. An elevated/ uplifting space- making connections to god.



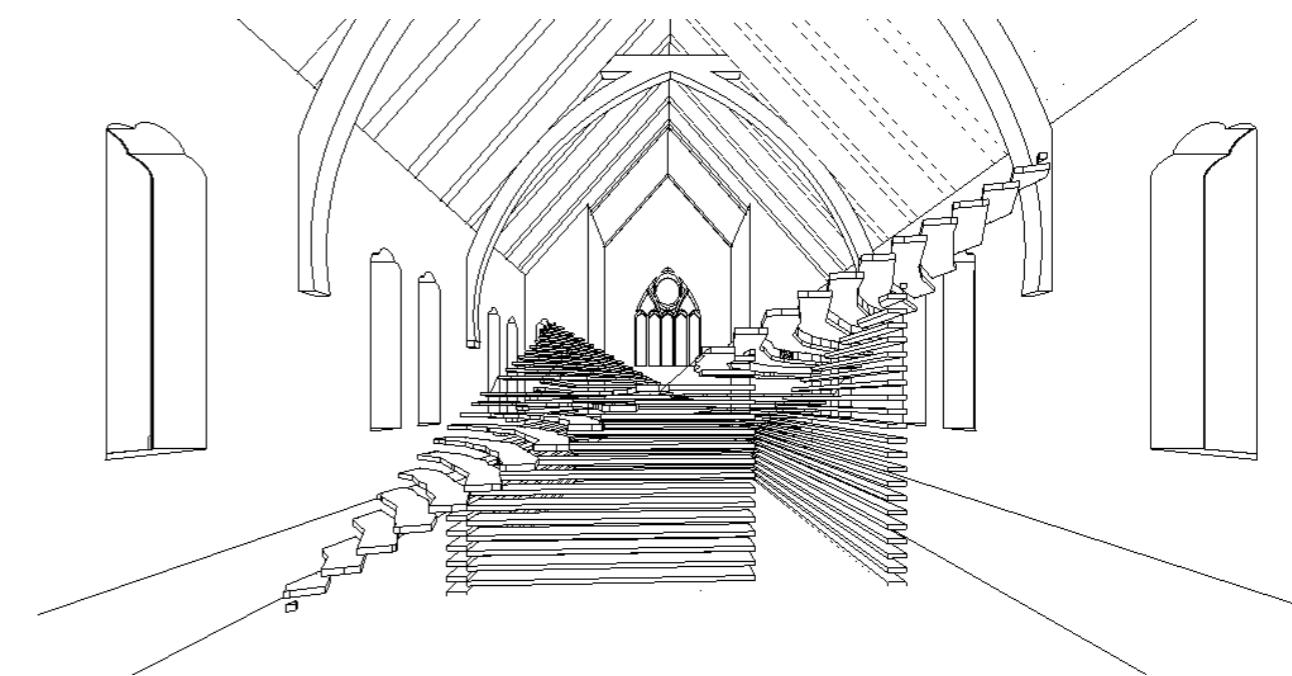
11. Views- spacing between gaps allows users to still view the library from within the enclosed space. "Apart yet still together". Ensures the user still feels part of the library and not in complete isolation.



12. Multi-functional- voids within the wooden slats can also be used to house books. User is quite literally immersed in stories/knowledge. The books form part of the structure. The structure has a form of growth- constantly evolving dependent on the positioning of books.



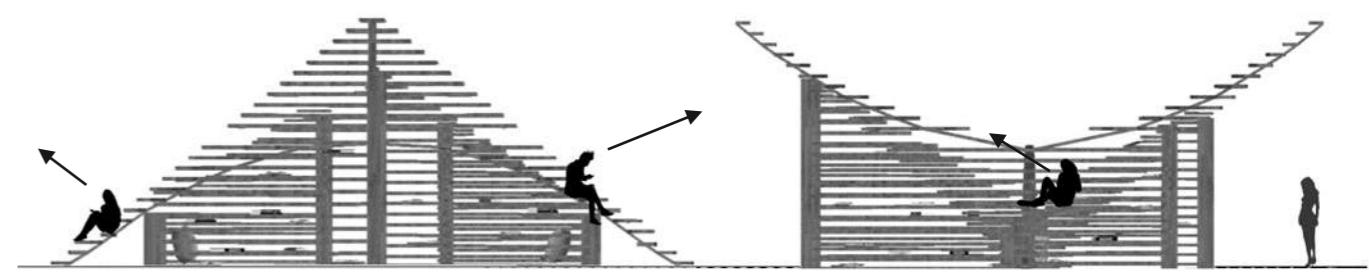
13. Indirect lighting- floods the space suggesting an atmosphere of sunlight filtering through a canopy of trees. Creates a 'forest-ed' inner sanctuary to contemplate and reflect within, further adding to the sanctity of the larger chapel.



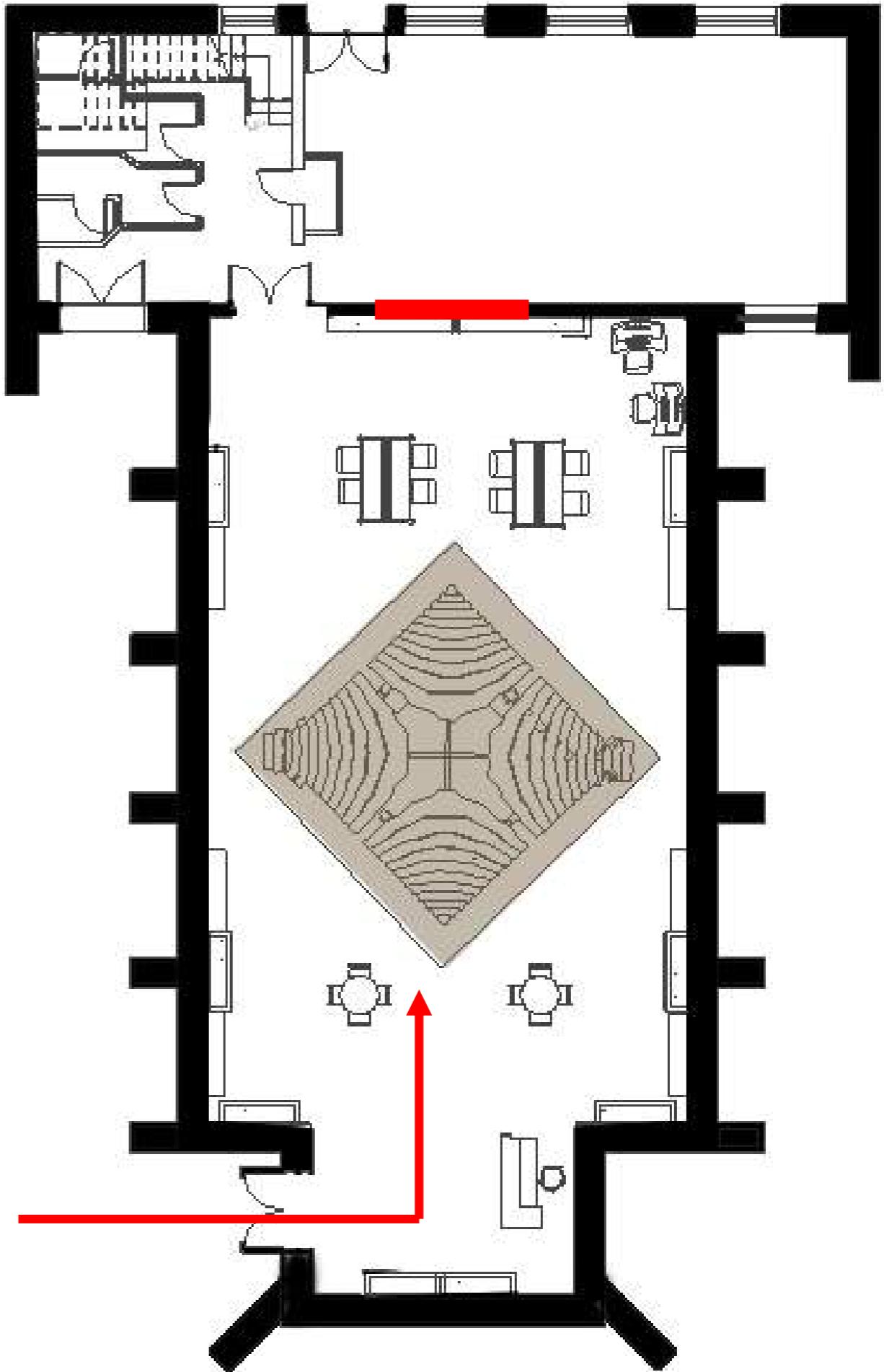
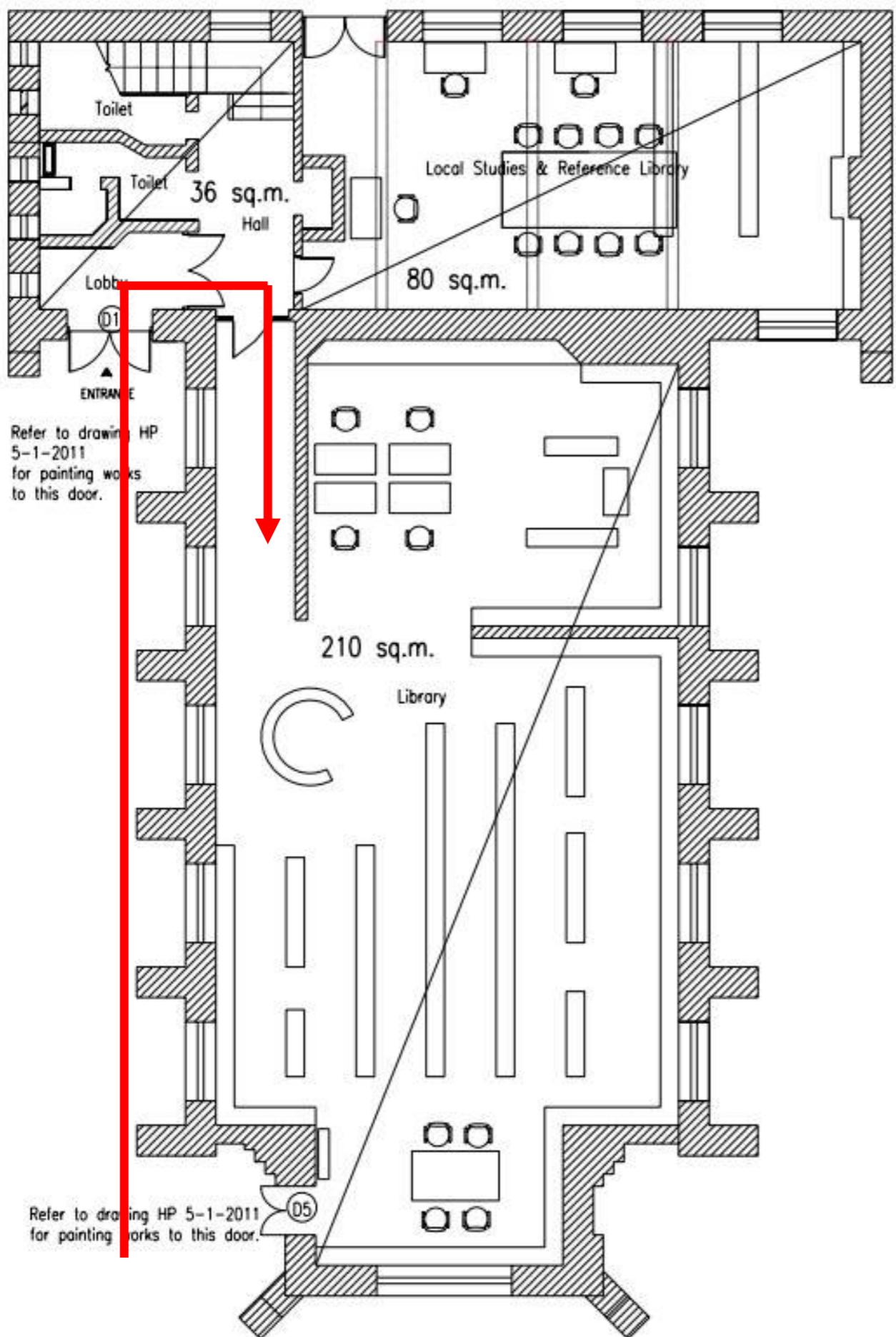
14. Located in the middle of the church aisle space- viewable from all areas of the library. Makes wayfinding easy and intrigues users of the library to explore the space.



15. The structure becomes illuminated with internal lighting to act as a metaphorical candle- enlightening the inner church space with calming, ambient lighting which highlights the wooden grain of the slats. All users of the library reap the benefits of the insertion.



16. Walkable- the wooden slats also act as steps giving the structure a diverse range of uses. Makes the structure playful and attractive to younger users. Additionally offers a series of view points to appreciate the internal gothic elements of the former church.



The design proposal sees one of the former church's main entrance being reopened and changing the circulation pathway to a much more simplified logical version. It also proposes reopening the southern rose window to allow natural sunlight to flood the spaces.

