

IS THE EVOLUTION OF THE  
**URBAN LANDSCAPE**  
BRINGING AN END TO THE TRADITIONS OF  
**SACRED ARCHITECTURE?**

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(BA HONS ARCHITECTURE)



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# INTRODUCTION

The question of whether the evolution of the urban landscape is bringing an end to the traditions of sacred architecture can be answered by studying two kinds of influence:

- » The influence of religion and its sacred architecture on urban environments around it
- » The influence of general architectural trends identifiable on religious buildings.

Sacred architecture is defined as any religious building's architecture. An urban landscape is the study of traits, social patterns, physical environments and the town/city's collective built structure.

Urban landscapes change with the evolving architecture adopted to create it. Changes include shape, layout and materials used to create buildings. This is true of any building, even religious ones. However, the way these buildings are set out have to come from religious tradition.

After all, religious buildings are designed as places of worship for the god that the religion is based around. However, since there are several religions, each of which has a distinctive building that's designed in a unique way as a means of worshipping their god, there's

insufficient time to answer this question by referring to a group of key religions since the field is so broad, but using two religions allows for focus; Christianity and Buddhism. They contrast greatly in terms of popularity and originate from different realms worldwide. Each established their own architecture styles, which will also be comprehended in the study.

My career path will be involved in the future development and evolution of the urban environment. I'm interested to investigate how much of our past architectural traditions are still incorporated in architecture today and if it can be incorporated into today's architecture. Sacred architecture is a good example of past architecture, which allows for a rich study. I'm intrigued, because even though design is always changing with the development of technology and tastes, I feel we disregard our identity when we neglect the old rich traditions of design, such as those that will be studied forthwith. Sacred architecture to me also touches the soul, whereas other buildings don't really do that. When a building can touch the soul, it makes architecture so much richer.

Research will conclude whether these religions still influence the ways that buildings are designed

today and if their traditions are still followed. The reason being that in centuries past, in the days of the first of these religious buildings, their influence had an impact on other buildings too, particularly those from urban environments. Religions don't just affect the country of origin. To gain popularity, religions disperse and influence the world. It'll be useful to learn how sacred architecture has changed as it has spread to other countries and influenced other buildings worldwide.

To confirm how strong or weak the architectural influence of the religions have become overall, religious buildings from different eras of time will be studied as well as their location in relation to the country and its urban surroundings.

This will also reveal if modern architecture and the evolution of the urban trends have perhaps created an end to the sacred architecture traditions and caused ethical controversy amongst religious communities. This part will be defined in a study of modern day versions of churches and temples. The debate here is whether modern day versions look better even though they may contradict sacred tradition, my intuition tells me there are those who may not agree.

## CHAPTER 1

# THE ORIGINS OF THE CHURCH AND THE TEMPLE



Firstly, what must be investigated is the collection of features of religious buildings, in relation to Christian churches and Buddhist temples. The features come from the concept of cosmology.

### Cosmology

This is the philosophical study of the origin and nature of the universe (<http://www.thefreedictionary.com>, 17th July 2011). Every kind of sacred architecture is linked to cosmology since religions teach their advocates about cultural beliefs, their gods, the origin of life and the universe. The universe is the great entity beyond outer space. So, cosmology, in architectural terms, is the relationship between the building and the cosmos. That's why religious buildings are designed with the heights that they are. Each has a high reaching feature known as the vertical axis, which in religious teachings is the link between heaven and earth. There's also a central point where this vertical axis touches the earth.

In terms of the Christian Church...

The layout resembles that of the Christian Cross with the main axis aligned metaphorically along the long shaft of the cross.

*"The axis is generally east/west with external emphasis upon the west front and internal emphasis upon the eastern end."*

*"There is generally a prominent external feature that rises upwards. It may be a central tower, two western towers or towers at both ends. The towers may be finished with pinnacles or spires."* (<http://www.bookrags.com>, 17th July 2011)

The main feature of eastern internal emphasis is the altar that serves as the direction that everyone prays and a large window that allows the light to enter the building for when morning prayers begin.

All kinds of churches have a courtyard or graveyard, which acts as a garden and an approach to the church itself. These surround the church, but the main garden is mostly at the front of the site.

(Fig. 1a - exterior of a pagoda - [http://humantumbleweed.com/?attachment\\_id=1892](http://humantumbleweed.com/?attachment_id=1892), 14th October 2011)

In terms of the Buddhist Temple...

*"A Buddhist temple is constructed inside an enclosure, which may include one or a whole series of temples. Forbidding statues guard the entrance to the temple. These statues represent two mythological kings and are thought to ward off evil."*

*"The main sanctuary of a Buddhist temple is called the Buddha Hall and is generally the most imposing structure in the temple precincts. The interior is plainly furnished and contains very dim light from candles surrounding the altar. Around the altar are images of the Buddha. Lighted sticks of incense add an aura of holiness."* (<http://www.haddonfield.k12.nj.us>, 17th July 2011)

*"The pagoda consists of a tiered tower"*

*"A few pagodas are significantly higher to establish their importance over others."* (<http://images.scholastic.co.uk>, 17th July, 2011)

In Buddhism, the pagoda itself

creates the cosmological link, known as vertical cosmology. Or at some temples where the central tower is considerably higher, four smaller towers surround it to represent the five elements. The first four are earth, water, wind and fire with the element of space being represented by the tallest tower to establish the cosmological connection. (<http://www.lujong.org>, 17th July 2011)

The courtyard...

*"An area designed for silent meditation. It often contains a fig tree symbolising the Bodhi Tree - a sacred fig tree under which Buddha was meditating when he achieved Enlightenment"* (<http://images.scholastic.co.uk>, 17th July 2011)

These also contribute to creating a sense of hierarchy on the buildings' sites, with the emphasis on the importance of the church/temple over the rest of the components that make up the landmark.

Both religions eventually set their own styles of architecture. This can be seen on other buildings by observing the design, materiality and general orientation of buildings in relation to the cosmology theory.

Fig 1a





## The First Christian Church, Jordan

Underneath Saint George's Church in Rihab, Ma'raq, Jordan is what archaeologists believe is the first Christian church in the world. It dates back to 33AD and sheltered the early Christians: the 70 disciples of Jesus Christ, who are said to have practiced their rituals in secrecy here. They fled from Jerusalem during the persecution of Christians.

(Samain, 2008)

In the first few centuries AD, Christians were persecuted and punished by the Roman Empire.

(Lunn-Rockliffe, 2011)

So this first church was in fact underground because of the secrecy required and couldn't really offer any architectural merit as such owing to the technology and knowledge of building construction at the time.

Despite the persecution, Roman emperor Constantine I saw political advantages in Christianity to hold the empire together and so he converted. Before then, Christians could just worship anywhere, but

it was Constantine who introduced churches that were built above ground. (de la Bedoyere, G. 2006, p.161) For the purpose of this investigation, it would be wise to consider the first above ground church as the main precedent case study.

## Glastonbury Abbey, England

(Fig. 1b - South Elevation of Abbey ruins - <http://www.glastonburyabbey.com>, 14th October, 2011)

(Fig. 1c - Groundplan of Glastonbury Abbey - (Rahtz, P. and Watts, L. 2003, p.33)

Glastonbury is seen as the birthplace of Christianity in England. (<http://www.photosofchurches.com>, 14th October 2011) as well as being the first church to be ever built above ground. (<http://www.tudorplace.com>, 14th October 2011)

There's little and inconclusive documented historical evidence of this place, as was discovered in an interview with the curator at the Abbey, Janet Bell. The current ruins date back to between the 6th and 10th centuries to the Romanesque period, which implies the influence of the Roman Empire, who were Christians, thanks to Constantine. Bell stated that there was also Roman

Fig 1b



Fig.1c

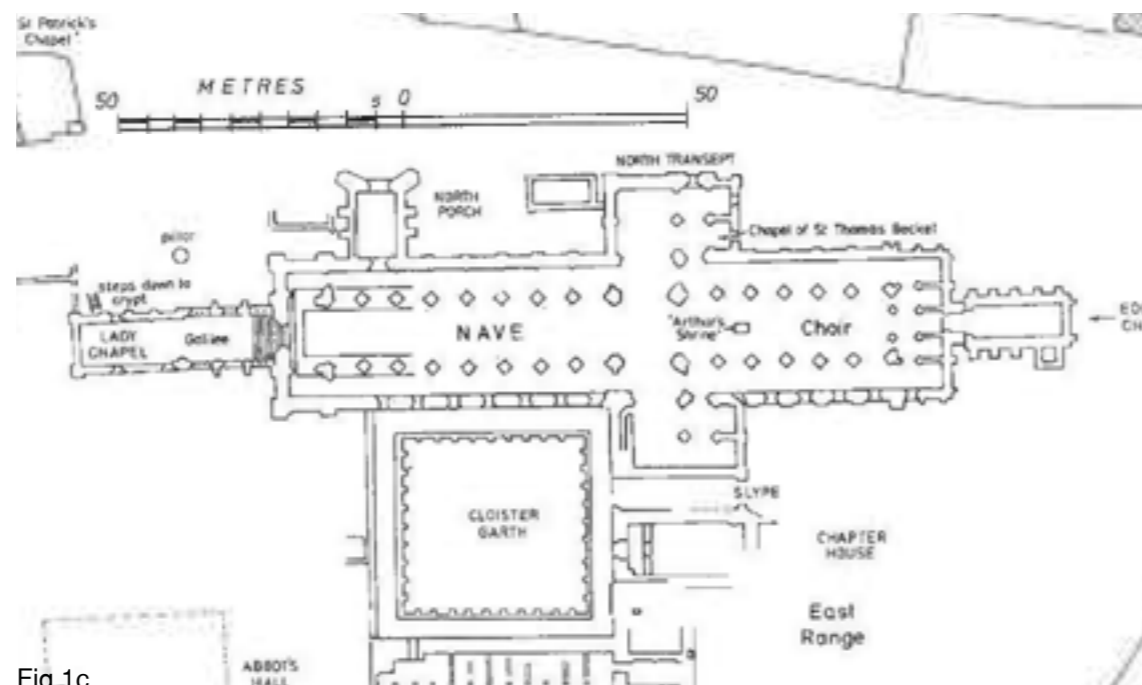
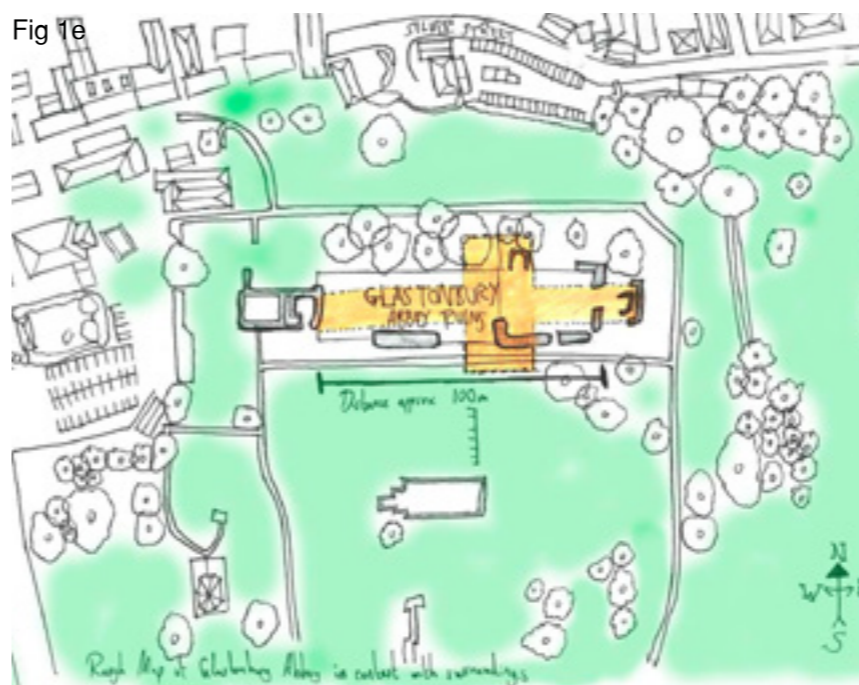


Fig 1d



Fig 1e



occupation here (Appendix C). This can be supported by the evidence of artefacts found in archaeological excavations, bearing the monogram of Constantine, which date back to late fourth and fifth century A.D (Rahtz, P. and Watts, L. 2003, p.33)

(Fig. 1d - drawing of original abbey reconstructed - <http://www.photosofchurches.com/somerset-glastonbury-abbey.htm>, 14th October 2011)

(Fig. 1e - Hand drawing of site and surroundings around the Glastonbury Abbey ruins, author's own)

Fig. 1d illustrates the layout of the original Abbey, which follows the tenets as described in the Cosmology section. The Abbey is laid out perfectly as an east/west cross with the nave, which is the hallway and key approach to the altar. It is not possible to tell from photographs of the site today that there was a great eastern window that served its purpose in allowing the vast morning sunlight to enter the interior space. The limited evidence does indicate though that

traditional stone is entirely used in the construction, which is seen in Fig. 1c. Given the era of construction, it was the only practical choice since it was the most workable material at the time in terms of creating decorative sculptures. Sculpting implies power and therefore creates a hierarchy compared to buildings surrounding it.

Fig. 1d indicates a drawing from 1935 which shows what the abbey would look like if it was fully reconstructed after being destroyed in the Dissolution in 1538-39 (Appendix C). It is also the first of its kind and naturally, other churches of that time followed this architecture style of church design subsequently.

Fig. 1e indicates the layout of the church itself in relation to its surroundings. You'll notice that there are vast amounts of garden space around it, which implies its high status in comparison to the buildings nearby, which respectfully keep their distance.



## Mahabodhi Temple, Bodh Gaya, Bihar, India

(Fig. 1f - exterior of Mahabodhi Temple - Schumann, H.W., 1973, p.48)

(Fig. 1g - map showing the pagoda in the centre of the great grounds that surround it - <http://maps.google.co.uk>, 22nd July 2011))

(Fig. 1h - interior showing the layout of the Buddha Hall - <http://www.superstock.co.uk>, 22nd July 2011)

The first Buddhist temple was established here since it was the place where Buddha had achieved enlightenment (Pant, P. 1997, p. 28), and subsequently created the religion. 1f indicates the pagoda shape

adopted as described earlier.

You can see in Fig. 1g that the hierarchy is established once again. The entrance is to the east and the surrounding courtyard is the first feature that one approaches when they arrive. The tower is central on the site with four smaller ones on each corner.

As described in the cosmology definition earlier, the interior is highly decorated to emphasise the majesty of the Buddha as indicated in Fig. 1h.

In terms of materiality, the temple is constructed of brick and several kinds of stone, which is visible in Fig. 1f. Inside and out, it is highly decorated with several carvings and decorations. After reading countless books on Buddhist temples, one can conclude that carvings and decorations signify majesty and importance. It is perhaps therefore a trend that gets carried on into later Buddhist architecture.

Fig 1f



Fig 1h



Fig 1g





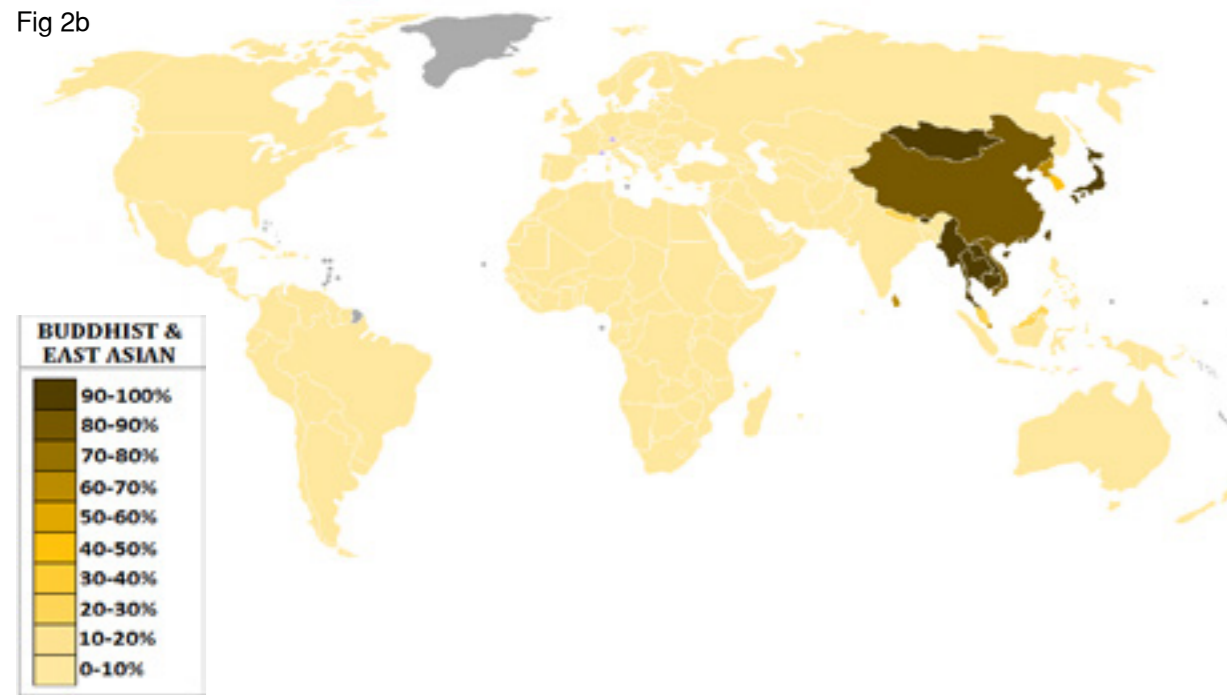
## CHAPTER 2

# RELIGIOUS AND ARCHITECTURAL SPREAD

Fig 2a



Fig 2b



(Fig. 2a - colour graph indicating presence and density of Christians worldwide - <http://commons.wikimedia.org>, 24th July 2011)

(Fig. 2b - colour graph indicating presence and density of Buddhists worldwide - <http://upload.wikimedia.org>, 24th July 2001)

Each religion originates from one country, but in one way or another, the religions spread worldwide. Does the religious spread across other countries, whose architecture styles vary, affect the way they're built?

Fig. 2a indicates Christianity's presence worldwide mainly in Europe, but in America and some parts of Africa too.

Fig. 2b shows the Buddhist population being virtually based in most of Asia, although there is presence of a really small amount of Buddhists in other countries. Even when religions aren't represented by anymore than 20% of a country's population, there's still the need to provide a place of worship in that country.

Therefore, you'd expect in virtually any country to find a Christian Church

or a Buddhist Temple. However, these buildings, in terms of architectural style, materiality and construction, will vary across each country, but this can be seen as advantageous according to the following passage.

*"Buddhism in the West has the advantage not possessed by the East that wherever the Dhamma is taught, the message falls on almost virgin soil, and in a soil that is eager for new ideas of salvation and new meaning for the process of living."* (Humphreys, C., 1974, p. 122)

Levels of material available in each country differ. Technology levels and equipment vary and this will affect the construction and design of the sacred building. The religions didn't spread across the globe overnight. The fact that churches are still being built around the world today implies that Christianity has been spreading for over 2000 years. Buddhism began in 563 BC (Ross, N. W. 1966, p. 79), so that spread is just over 500 years longer than Christianity.

## Buddhapadipa Thai Temple, Wimbledon, London, United Kingdom

(Fig. 2c - joiner photograph of front elevation of temple, author's own)

The temple situated in Wimbledon has a rich backstory, which was revealed in an interview with resident Thai Buddhist teacher Phramaha Sangthong Dhammacaro (Appendix A). Although

a Buddhist temple, its architecture relates more to the Thai style rather than the traditional Buddhist architecture, which existed in India, but is still described by Humphreys as a sustained missionary effort. (Humphreys, C., p. 120)

Fig 2c





(Fig. 2d - map showing the temple in the centre of the main green that surrounds it [<http://maps.google.co.uk>] [Accessed 29th August 2011])

(Fig. 2e - Wat Pho - <http://www.twip.org>, 31st July, 2011)

However, in terms of being a traditional temple, the tenets have been applied in the design as can be seen in Figs. 2c and 2d. The temple is situated centrally in the land plot and a clear

boundary is situated around the site with the tall trees as well as a white stone walled entrance from the road. At the entrance, as described earlier in the paragraph about the traditions of Buddhist temple architecture, there are two forbidding statues that guard the entrance to the temple. Despite the fact that this temple had only been established in 1982 (Appendix A), it is good to see that

Buddhist traditions still exist in this place.

Phramaha Sangthong Dhammacaro believes that with regards to whether Buddhism has the same influence on architecture today as it has in the past, it is;

*"Slightly different, because of materialism. There were once trees and now people here*

*have money. But because of the modern age, there is the technology needed to make a good temple. The Buddha teaches that everything is impermanent and everything changes according to the time."* (Appendix A)

Since the Buddha teaches that everything changes over time, everybody must learn to adapt to the environment as time passes. No fig tree

is present at this temple, which would also indicate a sense of leaving some of the old tradition behind in exchange for evolution of a new tradition. However, the change isn't necessarily seen as a bad influence. Since there's the technology to make a good temple, in terms of sustainability and durability, it is in fact a benefit that Buddhists support. Despite the drawback that Dhammacaro explained was that the land was insufficient in size to obtain planning permission for the full size Thai Buddhist Temple.

Their original plan in 1979 was to reproduce the architecture of Wat Pho, the oldest Thai Buddhist temple as represented in Fig. 2e. (<http://www.thailandgreattours.com>, 31st July 2011)

It can be observed that Buddhapadipa Thai Temple's architecture relates strongly to that of the original Thai Temple in Bangkok. Despite not being as large, Buddhapadipa is still considered a traditional Thai temple in terms of architecture as well as the interior design.

(Fig. 2f - Interior of Buddha Hall at Buddhapadipa Temple, author's own)

What can be observed in Fig. 2f is that the interior follows the traditions as established in Bodh Gaya, but it has evolved. There are three Buddhist statues which represent the evolution of Buddhism. In Buddhism, three types of Buddha are recognised;

1. Samyaksambuddha
2. Pratyekabuddha
3. Sravakabuddha

Bodh Gaya shows only one since it was there that the Buddha had achieved enlightenment. This is what is known as the Samyaksambuddha, since these kinds of Buddhas achieve enlightenment by themselves and at that time was the birth of Buddhism. The other two didn't exist yet. A Pratyekabuddha is similar to this, but teach only of conduct and not enlightenment. A Sravakabuddha is a disciple of the first kind of Buddha who can go on and teach others. (<http://www.thetaobums.com>, 31st July, 2011).

Therefore, the three statues represent the evolution of Buddhism as it relates to

the way of life, because in life, we learn about how we should live and we can then go on to teach others, or go off on our own journeys. This is the essence of Buddhist philosophy.

*"The architecture of Thai Temples is the way that it is because of how Buddhism adjusted to Thailand. But the temple here still reflects the Buddhist traditions that come from India. I mean in the way that things are laid out, the order that things come, the hierarchy."* (Appendix A)

Despite the amount of time that has passed, Buddhapadipa indicates that Buddhism still has a strong architectural influence since, as Dhammacaro went on to explain, London's Buddhists are content with the temple in terms of its architecture since: *"The architecture relates strongly to the Thai roots. People come to learn about Buddhism and the architecture helps with the experience. Also, the environment is calm and quiet, which enriches the experience."* (Appendix A)



Fig 2d



Fig 2e

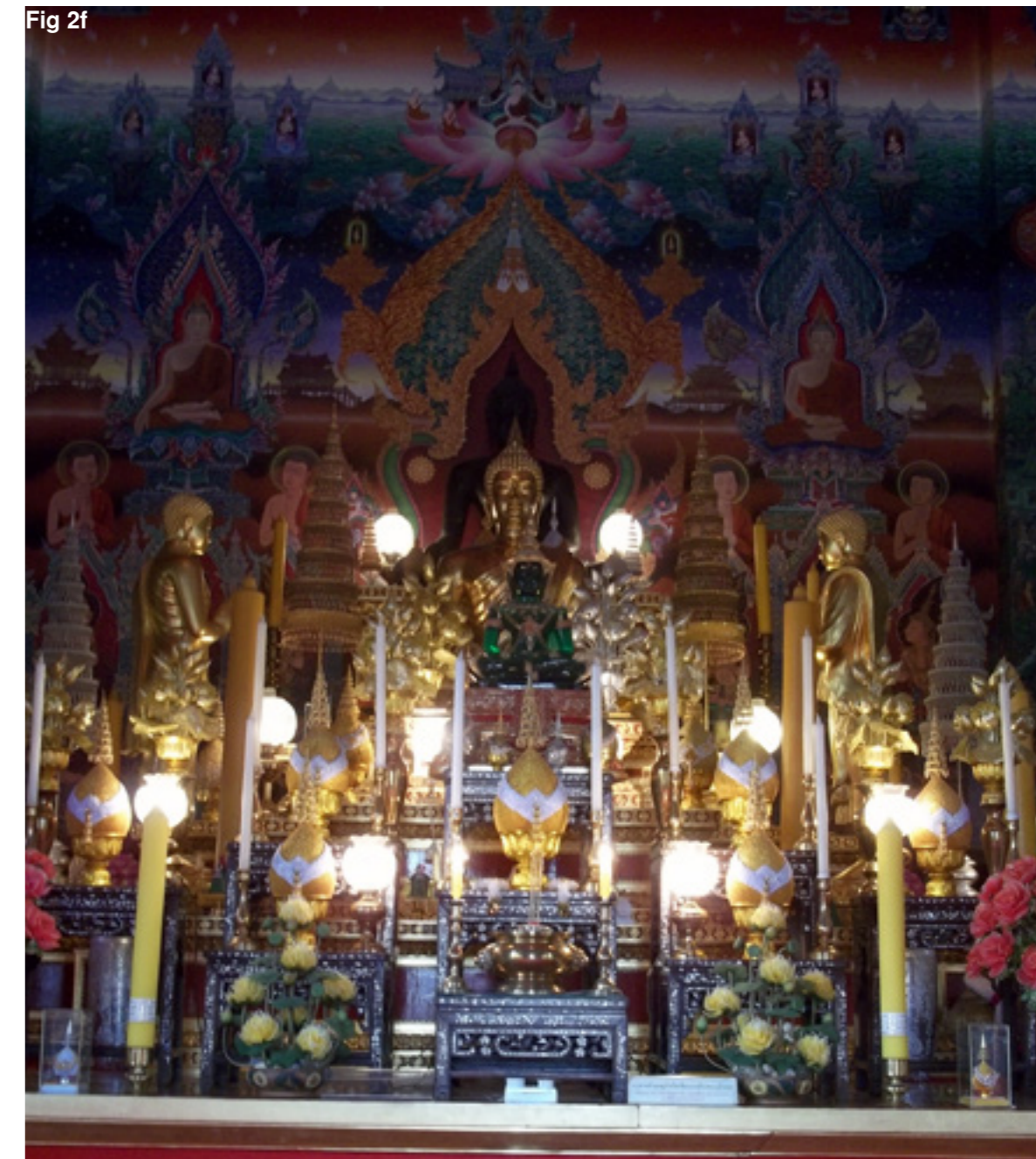


Fig 2f



## Thai Buddhist Architecture

A few centuries after Buddhism was established, the religion spread across Asia.

The Buddha's teachings required the religion to change. Buddhism started declining in India and monks were sent from many countries, including Thailand, to study the newer versions of teachings. These monks settled in Southern Thailand and their fame soon spread to the North. (<http://www.thaibuddhism.net>, 31st July, 2011) It can be argued that as part of the required change, Thailand adopted its own kind of Buddhist architecture, which comprises of existing Thai architecture and Buddhist traditions from India.

Thai Architecture evolved from the idea of the building being raised from the ground, due to potential flooding weather that Thailand endures. Homes were built on stilts made from bamboo, which is the most plentiful material that Thailand has available. ("Open Mind", 2011) Whilst bamboo is sustainable, durable and water and fungal resistant, it is not appropriate in terms of aesthetics for a Buddhist temple. The main characteristic of a Thai house design is the steeply slanting

roof, which easily directs rainwater off the house. The main materials used, such as hardwoods, bamboo and dried leaves help to keep the house cool. It is thought that the overall design also reflects spiritual beliefs. Nowadays, most traditional homes are found in rural settings. Most are meeker versions. The main reason for the decline in their popularity is the cost of construction and maintenance, but also changes in taste as well. Grander versions of residential homes do still exist, but most are in large private estates or in cities. (<http://www.thailand.com>, 31st July 2011)

So the materials used in Thai residential dwellings serve their purpose of shelter and wellbeing for the occupants, but a hierarchy is established. Bamboo and dried leaves weren't considered to be high class materials, and were therefore unsuitable in Buddhist temple design. That is why Thai temples are constructed of white stone and have golden trims, which can be observed in the Wat Pho and Buddhapadipa Thai Temples. The fact that stone is used in the construction at all makes its connection with Bodh Gaya's traditional architecture. Temples are

considered to be buildings of great importance in Thailand, which fortunately is a fact that hasn't been forgotten in the late 19th century with the construction of Buddhapadipa Temple.

*"Gold, orange, and earth browns are the colours of Buddhist Thailand, hues seen in village and city alike."*

*"Since ancient times, orange has been the colour of monks' robes and temple roofs, and gold adorns everything regarded as sacred."* (Van Beek, S., 1994, p.98)

The traditions were brought to London, England. What is also established is that Buddhism did impact on the architecture of other buildings outside of temples since the above passages state that designs of houses reflected spiritual beliefs. This notion is enriched and continued through the ages since the traditional house is found in rural settings and grander versions are found in high end districts of cities, which would therefore make them rare and considered high value. Buddhism still maintains its respect today and even after change.

Fig 2g



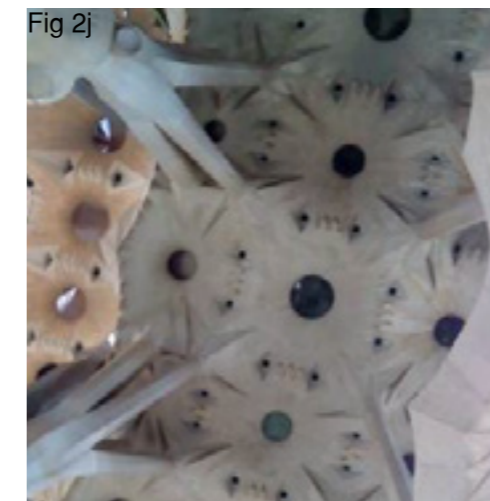
Fig 2h



Fig 2i



Fig 2j



## Christian Architectural Influences

Although this has evolved over 2000 years due to advances in technology and materials and the fact that churches tended to imitate other architecture styles, the key architectural influences are both the gothic architecture style and then succeeded by the renaissance style. (Frankl, P. 1962. pp. 212-213)

## Gothic Architecture

Religion didn't introduce Gothic churches. The Gothic style was a taste that developed in Europe across all of architecture altogether, which lead to the beginning of the construction of Gothic style churches.

*"Firstly, Gothic architecture came from 12th century France and remained popular until the 16th century."*

*"The Goths contributed many architectural ideas. Those ideas have been used in various structures in the Gothic Period most importantly in the construction of Cathedrals. Renaissance Architecture*

*which flourished after the Gothic Architecture adopted some of its ideas but modified it according to their architectural sense of understanding. The elements that developed during the Gothic Period are as follows:*

- 1) *Pointed Arch*
- 2) *Fan-like Vault*
- 3) *Flying Buttress"*

(<http://www.architecture-student.com>, 8th August 2011)

## Basilica i Temple Expiatori de la Sagrada Familia, Barcelona, Spain

(Fig. 2g - exterior view of the church, author's own)  
(Fig. 2h - flying buttresses, author's own)  
(Fig. 2i - pointed arch element, author's own)  
(Fig. 2j - fan like vaults, author's own)

The church, which stands today, currently under construction, was designed by Spanish architect Antoni Gaudi. It was a project Gaudi took over the project a year after construction started (Burry, M. 1993. p. 11).



# CHAPTER 2

RELIGIOUS AND ARCHITECTURAL SPREAD

(Fig. 2k - map showing orientation of Sagrada Familia, site area indicated in blue and cross symbol indicates shape represented by church, Appendix E)

Gaudi is known for his unique architecture style, which combines the aged Gothic architecture style with the Catalan style (Collins, G. R. 1960. pp. 10-11).

Although aesthetically it looks a lot different than

the first church in Glastonbury, Gaudi designed the Spanish church with grand looking arches and columns along with the three key elements, which comprises the Gothic influence; pointed arches, fan like vaults and flying buttresses, which can be seen in Figs. 2g - 2k.

In terms of orientation, it was difficult for Gaudi to design the church to perfectly keep to tradition, because of the

surrounding streets in the urban environment around it. However; it still keeps to cosmological tradition as the axis of Sagrada Familia is east to west with external emphasis to the west and internal emphasis to the east. The church is situated in central Barcelona. As what can be observed in Fig. 2k is that the streets are in blocks and comprise of a tessellated diamond pattern.

Furthermore, the sizes of the blocks are relatively small. The church has garden courtyard elements, which create the sense of hierarchy for the church itself, but they're situated on the northern and southernmost blocks adjacent to it. So although it cannot be considered 100% traditional, the design of it when seen from the outside does show enough homage to the original Christian church.

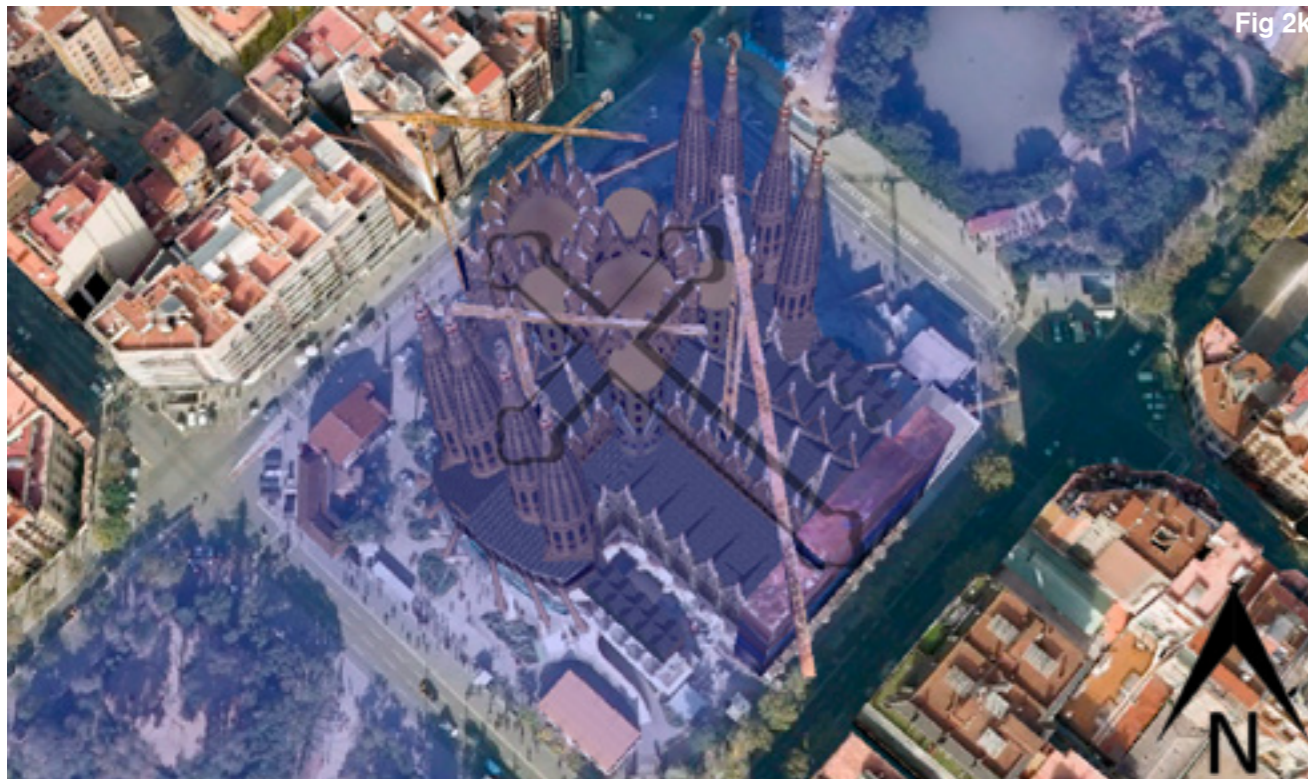


Fig 2k

# CHAPTER 2

RELIGIOUS AND ARCHITECTURAL SPREAD

(Fig. 2l - interior of the church, author's own)

Photographs from the visit, shown in Fig. 2l and m, that the interior consists of stained glass windows and stone. Stone's used to create a relationship to traditional church architecture, but also, from Gaudi's point of view, it is the best material to use to create the carved shapes he desired to demonstrate his unique architecture style.

Although his style is unique and seemingly comes away from tradition, his new architecture made buildings in Barcelona world famous in the late nineteenth and early twentieth centuries. His sacred style brings the ordinary person to God. (Gill, P. 2001, p.10)

This can therefore conclude that Gaudi's architecture has its relationship to Christianity and thus religion altogether.

Despite the slight change of shape of detail, the window still serves its purpose for prayer as the eastern most windows allow the morning sunlight into the depths of the nave as is true of all traditional Christian Churches.

At present, the church is under construction and is due to be completed in 2026. The curator at this church mentioned that the final spire will have the cross at the apex to act as the central point and therefore the connection to God, completing the cosmological link.

In terms of focusing at where the religious influence came from in this church design, the main religion of Spain has been mostly Roman Catholicism, which is its own branch of Christianity. As the name implies, its roots come from the Ancient Romans. The Catholic Church was founded by Jesus Christ in the Second Century during the Roman Empire in which Christianity was the dominant religion (<http://heavenawaits.com>, 9th August 2011). This fact alone completes more than one link since it was the Roman Empire that brought Christianity and the Roman Catholic Church to England. As explained in the previous chapter, this was the origin of Glastonbury Abbey. Just like the Romans invaded England at the end of the 5th century, the Romans also invaded Spain, which was how Roman Catholicism came to Spain.

Fig 2l





(Fig. 2m - eastern facing stained glass windows inside the church, which reflect traditional church design, author's own)

(Fig. 2n - Greek Parthenon symmetry diagram - <http://www.natures-word.com>, 12th August 2011)

## Renaissance Architecture

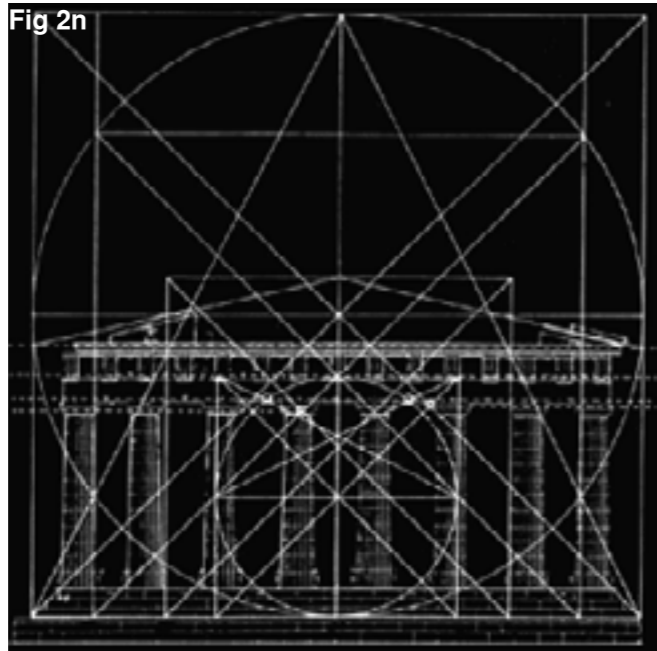
*"As its name implies, is a deliberate revival of the ideas and practices of the architects of classical antiquity and, in point of fact, it may be said that Renaissance Architecture is Roman."*

(Murray, P., 1969, p.7)

Renaissance is the development of the Gothic style, but owing to the Roman Empire's domination, it is set around the principles that the Romans believed in and moves away from the 12th Century French origin. This style was popular after the Gothic era. Therefore, this style became popular at the start of the 16th century.

*"The Renaissance style places emphasis on symmetry, proportion, geometry and the regularity of parts as they are demonstrated in the architecture of Classical antiquity and in particular, the architecture of Ancient Rome, of which many visible*

Fig 2n



*examples existed. Orderly arrangements of columns, pilasters and lintels, as well as the use of semicircular arches, hemispherical domes, niches and aedicules replaced the more complex proportional systems and irregular profiles of medieval buildings."* (<http://www.italian-architecture.info>, 10th August 2011)

Although mostly Roman architecture inspired, there are Greek architecture elements to be found, with inspirations coming mainly from the ancient temples, shown in Fig. 2n.

The Greeks learned about sacred architecture from the Egyptians, who believed that initiation into a temple represented rebirth (<http://www.natures-word.com>, 12th August 2011). What can be concluded is that the theory has been passed on into renaissance architecture. The word "Renaissance" means revival. So it can be argued that buildings that show signs of symmetry, such as what is being described are inspired by renaissance architecture owing to their roots.

Fig 2m



The dome element was inspired by Islamic Architecture. What Muslims incorporated as a key feature in the design of their religious building, the mosque, was the dome, since to them, it symbolises the heavens and cosmos above. (Pearson, D., 1994, p.14). It is therefore a feature that makes this style of architecture, in religious terms, a lot richer in terms of being traditional with the idea of cosmology. This consecutively brought about newer church designs that we see today designed with

the renaissance style incorporated. An example is the current St. Paul's Cathedral in London, which was designed by architect Christopher Wren as a restoration of the old building, which was mostly destroyed in the Great Fire of London in 1666.



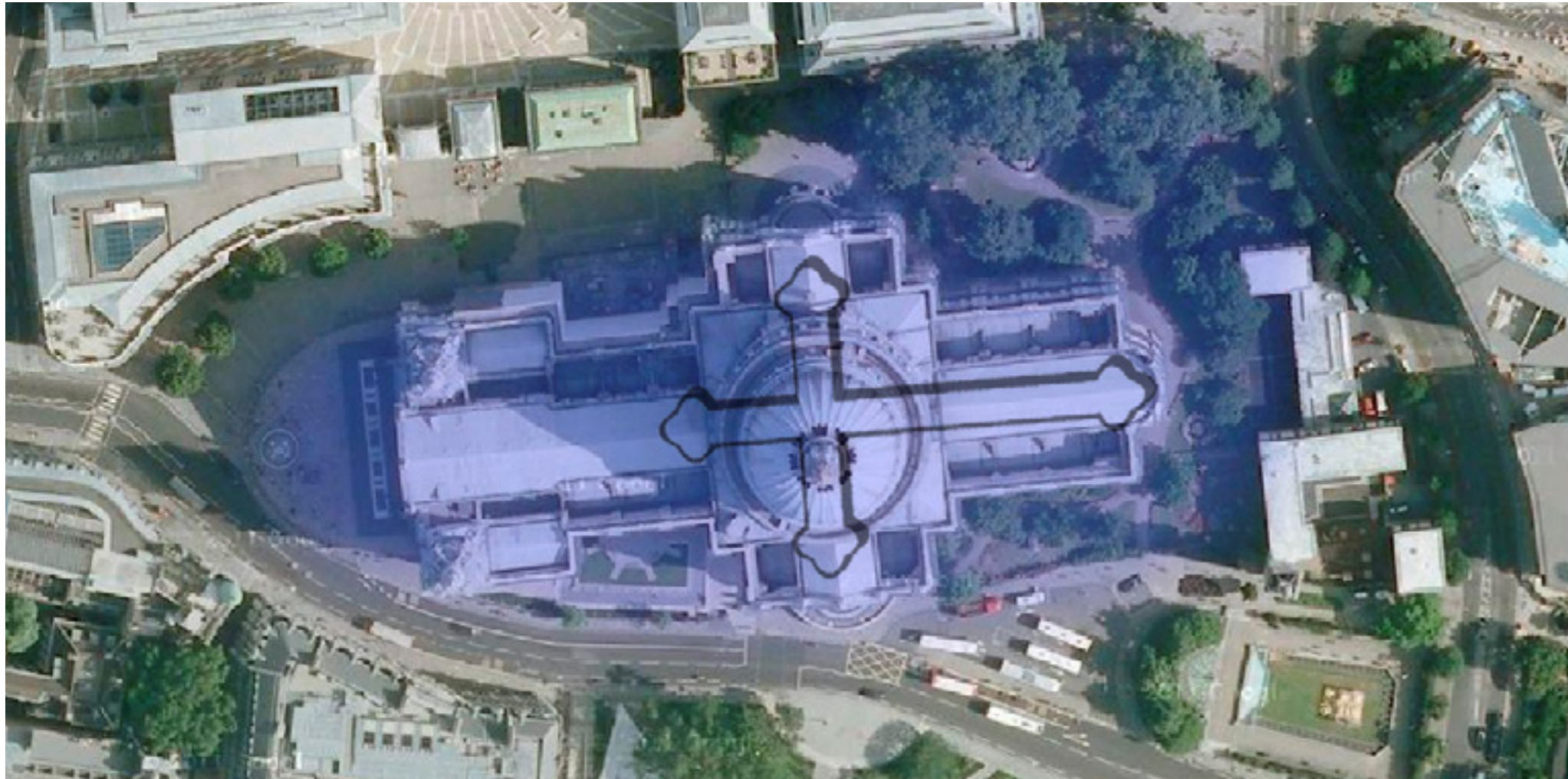
Fig 2o

## St. Paul's Cathedral

(Fig. 2o - Part South Elevation of St. Paul's Cathedral, author's own)

It consists of every aspect of renaissance architecture, including the dome element that establishes the cosmological connection. Seen in Fig. 2o, all around the facade of the building are the symmetrical repeating elements of the double pillars and niches in between them. This alone allows for a more contemporary looking church that signifies sacred architectural evolution.





(Fig 2p - map showing the cathedral in relationship to its surroundings - Appendix F)



Fig 2q

(Fig 2q - interior of cathedral looking east along the nave - Whinney, M. 1971, p. 123)

The interior shown in Fig. 2q follows the traditional church layout, as related to the fundamentals as described in Chapter 1. Though it does have a few slight differences in as much as there's a longer cross element as indicated in Fig. 2r and the entrance is to the west of the building. This isn't breaking away from tradition, but indicates its evolution.

To conclude the religious spread investigation, sacred architecture has

evolved as time has progressed and as the religions spread across the world. Each culture's tastes play a key role in that and the architecture that is displayed in those countries show evolution compared to the architecture around them.

The way things look in terms of being traditional have changed, but sacred architectural traditions still exist. The change isn't a bad consequence, but it is inevitable as the Buddha suggests. This fact is true not just in Buddhism, but also in Christianity.



CHAPTER 3

SACRED ARCHITECTURE  
REFLECTED



(Fig. 3a - London Skyline as proposed for the Year 2020, <http://www.constructionenquirer.com/2010, 31st July 2011>)

*"The history of architecture is a history of civilisation."*

*"To understand a piece of architecture is to gain insight into countless aspects of a place and a moment in time - geography, weather, social hierarchies, religious practices and industrialisation."*

*"The fluidity of history can make for unwieldingly attempts to classify periods succinctly, and architecture styles and movements reflect this difficulty."*

(McMorrough, J., 2006, p.232)

These passages state that styles have slightly altered depending on time and place due to availability of technology and materials in different places during different eras. As an architect, knowing the ages of certain styles, it is possible to learn about the history of places we see this architecture, in comparison to other buildings around it. To enrich this study, it would be intriguing to discover whether the sacred architectural influence reflects the architecture of the surrounding urban environment. Though already, a part of this segment has already been answered.

*"On or about 11 September 1666, Wren gave the King a plan for*

*rebuilding London."*

(Downes, 1982, page number unknown) Christopher Wren was the main architect responsible for London's restoration after the Great Fire and his lifetime was during the 1600s, during the Renaissance era. So his buildings he designed would be of that style as it was the taste of that time.

After studying the basic elements of religious buildings, owing to their stature amongst other buildings like homes and offices, religious buildings have made an influence in early eras. This is since their architecture generally is rather grand compared to other buildings. Religious buildings demonstrate a sense of majesty and therefore establish a high position

in the hierarchy of buildings overall. The influence is that religious buildings are of a higher stature than most other buildings. For instance, this was what was demonstrated clearly in the study of Thai Buddhist architecture in the previous chapter. During the beginning of that era, it was made clear that temples were considered greater than that of residential buildings and other buildings in the highly built up urban environment. What should be established now is whether that sacred architectural reflection is as strong now as it has before. This can be investigated by looking at architecture in today's urban environments. It would also help to investigate how the changes, if any, came about and when.

### Architecture around London

(Fig. 3b - Houses of Parliament, Westminster, author's own)

London demonstrates a great diversity in the kinds of Architecture that exists in the city. There are buildings from several eras and styles. The UK is known for its architectural talent and has several technological advances and high availability of materials. Furthermore, materials have also been developed and enhanced thanks to the technology that exists in the country today. It is clear that the architecture of general buildings has developed because of this, but it is not as clear whether this is the case in terms of religious buildings.

This is due to tastes that society has ascertained and those tastes have differed as time has passed. When most common people think about architecture, it is more about how a building looks rather than its functionality.

*"Form ever follows function, and this is the law."* (Benton, T. and C., 1975, p.13)

Although a well known law, not everyone agrees.

*"Can you tell whether a building is a theater, a library, or a museum just by looking at the outside? In a research study at Ohio State University, 160 people from three distant cities were shown pictures of buildings and asked to guess the purpose of those*

*buildings. Most people couldn't."* (<http://architecture.about.com>, 15th August 2011)

Therefore, functionality isn't noticed as much since people are attracted by what they can see straightaway. It is like the cover of a book. People are most likely going to decide whether they'll investigate what is inside after scrutinising what they see first and foremost. Thus, in our time, aesthetics are more important in the public eye than its functionality. One can explore the architecture of London to see the evidence for real. What also throws a spanner in the works is that cities are highly built up areas.

*"The population of England and Wales grew from nine million in 1801 to 32*

*million in 1901. The increase was very unevenly distributed. London expanded vastly..."* (Lloyd, D. W., 1984, p.208)

With the growing population of the city and thus the demand to build more homes, it is difficult to design something that has much architectural merit generally. For the case of London, one can take into account the facets that make up the design of a church to see whether sacred architecture is reflected in other buildings around it. Fig. 3b indicates the meeting place of the House of Commons and the House of Lords, the two governmental bodies of the country. Therefore, its gracious architecture suits the purpose in creating a sense of

hierarchy between them and the rest of the population. Its spires create the cosmological connection, but there are also symmetrical suggestions to relate to the Renaissance style. The architecture style is gothic and constructed in the 1800s as a restoration from after the Great Fire.

Fig 3a



Fig 3b





# CHAPTER 3

SACRED ARCHITECTURE REFLECTED

(Fig. 3c - Buckingham Palace facade and Victoria Memorial, author's own)

(Fig 3d - map showing Buckingham Palace in relationship to its surroundings - Appendix G)

Buckingham Palace, known for being the home of the Queen of England, also shows links to the Renaissance Style. The first palace was constructed in the 1762 by architect John Nash, (Service, A. 1979, p.92) during the renaissance era. This later version seen in Fig. 3c indicates the passing of taste through the Royal Family as well as the hierarchy in terms of style

and in relation to surroundings. Fig. 3d shows how this is achieved by St. James' Park creating the front garden element, The Mall road representing the nave, which brings us to the arrival at Buckingham Palace that acts as the altar. The memorial acts as a spire at the centre of the cross. Thanks to the space provided in front of the palace, the east morning sun also shines on the front facade adding to the sense of majesty.



Fig 3d



Fig 3e

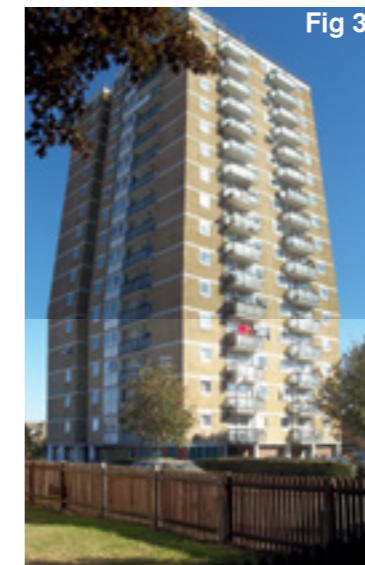


Fig 3f

(Fig. 3e - Joiner photograph of residential block on Chester Gate Street, author's own)

(Fig 3f - Joiner photograph of residential flats in Anerley, South London, author's own)

All of these buildings so far are based in Central London. City centres attract a lot of tourism; therefore the scenery must be appealing.

Residential flats, such as in Fig. f are found towards the suburbs of a city. These aren't as valuable and therefore cheaper for the

# CHAPTER 3

SACRED ARCHITECTURE REFLECTED

population on lower incomes to live in. Owing to the demand to live as close as possible to work in London, there are several residential flats to be found in the suburbs. Due to their demand in terms of building several homes quickly, there's no time and money to spend on making it an architectural statement, therefore there would be no relationship to sacred architecture. After all, sacred architecture requires space to marvel at the features. Flats are built tall to save on land usage. The idea of building residential blocks such as these in suburban areas exists in virtually every town and city around the world, because of the same principle of creating a hierarchy, after all, the homes that are closer to workplaces are of higher value.

Fig 3c





## Urban Architecture in Asia

(Fig. 3g - landscape view of Tokyo skyline - <http://www.tokyointernationaltrade.com>, 17th August 2011)

Zen Buddhism evolved from Buddhism, which inspired great architectural creativity in Japan and remains a dominant influence there (Pant, P. 1997, p.77). In Tokyo, where Buddhism's the dominant religion in Japan, there are several skyscrapers to be seen in the city centre, as seen in Fig. 3g. The skyscraper inspiration comes from the pagoda, which comes from Buddhist Architecture.

*"Kenzo Tange's 1960 plan for Tokyo was proposed at a time when many cities in the industrial*

*world were experiencing the height of urban sprawl."*

(Lin, Z. 2007, p.109)

Kenzo Tange was a Japanese urban architectural designer, whose work mainly was reconstructing Tokyo after World War Two (Tange, K. 1996, p.28). He implemented vertical cosmology into his buildings and was inspired by the Buddhist architectural traditions. He believed that Buddhist Architecture could be expanded to the urban scale owing to having lovely spacial order. (Tange, K. 1996, p.24)

Fig 3g



(Fig. 3h - Taipei 101, Taiwan - <http://vn.360plus.yahoo.com>, 18th August 2011)

(Fig. 3i- interior of Taipei 101 - <http://vn.360plus.yahoo.com>, 18th August 2011)

(Fig. 3j - interior of Temple of Heaven pagoda in China - "Banazir", 2006)

What is meant by a megastructure is a large multi-purpose building, which tends to be high rise. Hence, megastructural movement means a trend in constructing several skyscrapers. Whilst the shapes of these skyscrapers differ, owing to different architects and therefore different tastes and inspirations, there's an outlying but still existent sacred architectural link.



Fig 3i



Fig 3j

Fig. 3h shows the closest connection to the Buddhist Architecture ancestry. The shape closely resembles that of the traditional pagoda, owing to its tiered layers.

You can also notice when you compare the interiors of both traditional and modern pagoda structures, Figs. 3i and j, that there are the same design principles. To emphasise height in the towers, there's a void in the centre of the interior that spans the height. Pillars support the ascending balcony levels. Unsurprisingly, since time has passed, materiality, technology and taste has developed. The key difference is the style of decoration.



Fig 3h



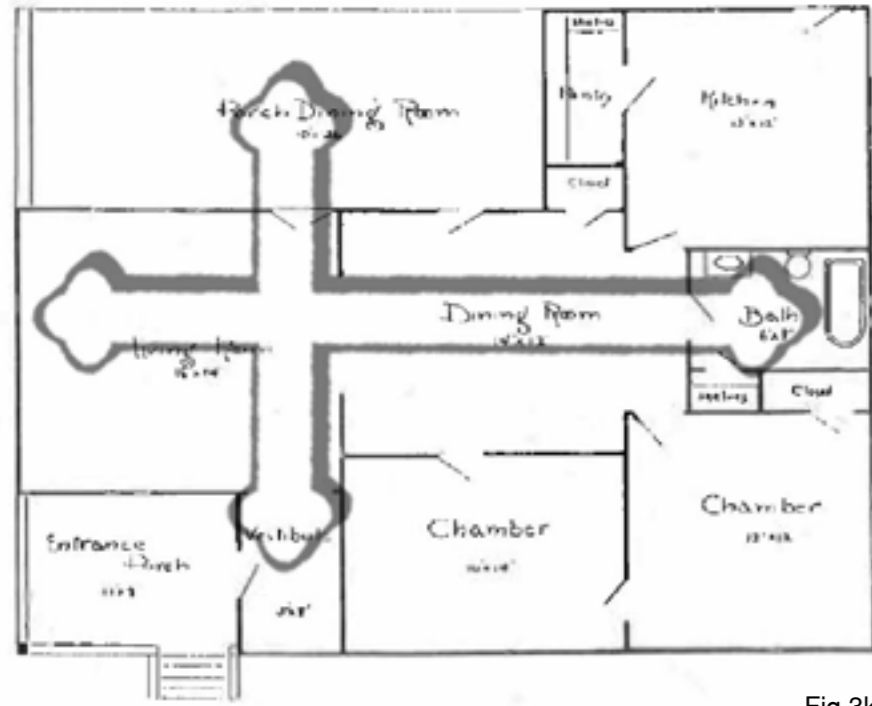


Fig 3k



Fig 3l

### Buildings in Rural Areas

(Fig 3k - A House for One Thousand Dollars - Seebohm, 1978, unknown page number)

Whilst it is difficult to design a building when there are several obstructions around you when in an urban environment, the situation changes when you have a lot more land around you to design. When you're away from the town and cities and out in the country a little more, there's more scope to design something with a lot more architectural merit. Outside of the urban environment, where there

are more residential buildings than commercial buildings, there's less noise and more space, which means residents can relax and reflect, which can be related to the purpose of a religious building.

Fig. 3k resembles a church in some ways. In a church, the area of congregation is the nave, which on the cross is the longest piece. When you look at the floor plan of the California house, you'll notice that the

living and dining room represent the nave element. The relationship is due to the fact that the family congregate mostly in these two rooms in the house. Also, the entrance is mostly found on the shorter bar of the cross in the church layout, which was also reflected in this house. The other less important rooms are situated around them. Thus, the hierarchy that is found in sacred architecture exists in this house design. Fig. 3l shows how the surrounding garden reflects the

sacred architectural hierarchy as the garden acts as an approach to the house. This can be said about any dwelling around the world that is not inside an urban centre.

In conclusion, sacred architecture is reflected in other buildings, but the way it does, and if it does, depends on the surrounding environment.



## CHAPTER 4

# THE MODERN CHURCH AND THE MODERN TEMPLE



Now that we're in our present era, where technology, materiality, taste and materialism have evolved, it would be valuable to discover whether the traditions still remain intact in churches and temples today.

## Richmond Church Design

Richmond Church Design is an architecture practice that designs modern churches across the UK. The answers that Cormacc Artt, Head of Design at the practice, gave in a recent interview were in fact surprising.

Their work is mainly restorations of existing buildings, especially auditoria, since there's little money to build a traditional church from scratch on an empty site. Projects aren't designed to be just churches, but rather multifunctional. These days, churches tend to have more fun than traditional. (Appendix B)

Time is money. In order to keep costs down, less time must be spent on design, which means that the less necessary parts of the project, such as the extra aesthetic and decorating details and ensuring that a church remains as traditional as possible are omitted to save money. Auditoria are ideal for conversions into churches since the layouts are already similar. Furthermore, their capacities are great.

"The truth is that due to people's changing tastes, traditional looking churches are a thing of the past. In our

*church design, our main criterion is ensuring we get correct the way that people worship. Orientation isn't really negotiable because they're existing buildings and we can't really change the layout most of the time.*" (Appendix B)

The main requirement of their clients, who are mostly pastors, is value for money. (Appendix B)

One of their main clients ask them to design different sized churches which can range from 100 - 10,000 congregation capacity. A traditional church can't accommodate 10,000. (Appendix B)

A rule they have at the firm is to not design for architecture, but for people. Basically, the modern church must be cheap and to attract more people to come and worship. "Also, tastes affect the dynamic of the whole scheme. A member of the general public needs to be enticed in



Fig 4a

*less than 30 seconds."*

*"Colours are conservative, but are relevant to the rest of the building. Materiality would be important when reinstating a listed building, so stone does potentially get used. Most of the time, materials are used according to time frame and budget."* (Appendix B)

Since there's little money, especially during the economic downturn, cheaper materials are used. Therefore, bricks or timber tend to be used rather than traditional stone, which is more expensive. These materials though aren't traditional materials in the construction of churches.

When Artt was asked how important it is for the practice to keep to tradition, in terms of Christian Cosmology, the traditions are only followed in terms of beliefs. The architectural side isn't essential anymore, because modern churches are seen differently than how



Fig 4b

they used to be (Appendix B).

Churches aren't seen for their architecture anymore, but rather for just being a place of congregation and worshipping God. As mentioned, the modern church needs to mainly attract people to come and join the congregation. Furthermore, in urban environments where the population is highly dense, this is so much truer. In cities, there is no space to design a church of the traditional style since it is not big enough anymore. A larger church congregation means a more successful church.

## Today's Tastes in Churches

(Fig 4a - Spitalfields Church, London - <http://www.e-architect.co.uk> - 19th August 2011)

(Fig 4b - Church in Husum, Copenhagen, Denmark - <http://tvider.com> - 16th August 2011)

(Fig 4c - All Saints, East Cowton, North Yorkshire, England - <http://www.eastcowton.n-yorks.sch.uk> - 16th August 2011)

(Fig 4d - Richard Meier's Jubilee Church, Rome, Italy - <http://eternallycool.net> - 16th August 2011)

(Fig. 4e - pie chart indicating which of the four churches were most popular)

(Fig. 4f - pie chart indicating which of the four churches was most popular as voted by the 40+ age range)

In terms of looking at people's tastes in the design of churches today, a survey was carried out across London's general public. 250 anonymous passers by were asked.



Fig 4c

Figs. 4a to d were shown to these 250 people and were asked to choose which of these they'd most likely visit. The churches represent different eras and different architecture styles.

The 250 people asked were of various age. Fig. 4e indicates Richard Meier's Church was most popular, mostly amongst the younger audience (Appendix D). Fig. 4d shows that the form doesn't resemble a church in any way. However, it is aesthetically pleasing to the eye. It looks futuristic and adopts a relevant post modern architecture style, thanks to Richard Meier. This corresponds with what Cormacc Artt mentioned when traditional looking churches are a thing of the past. As it does look attractive in the younger audience's eyes from the outside, it will draw them in. This is also the most recently built church out of the four.

Fig. 4f shows that the least popular of



Fig 4d

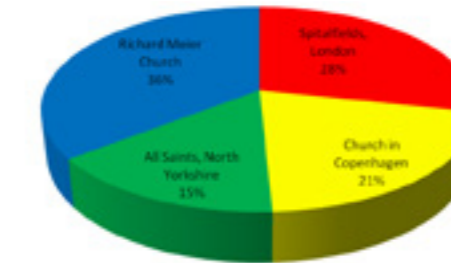


Fig 4e

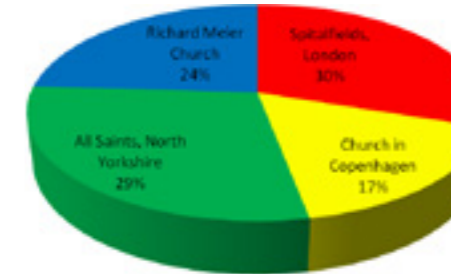


Fig 4f

the churches was All Saints in North Yorkshire. It is the most traditional church of the four, which further supports Artt's comments. When the younger surveyees were asked for their general comments about this church, their comments include that it looked old and boring.

But what was interesting to discover from the results was that All Saints was the second most popular in the eyes of the aged 40+ surveyees. When asked why, it was because it felt most like a church and looks the most traditional. This would be understandable, since these people grew up in these eras when this kind of church and this architecture was in fashion.

The most popular voted by this age range was Spitalfields in London. When these surveyees were asked their reasons for voting for this church, it was because it apparently looked the most imposing of the four. People said it doesn't look too old fashioned, but it still looks like a church unlike the other two more modern churches they were shown. It was in fact built in the 17th century in the latter part of the Renaissance architecture era. Elements of this style can be found on this church, which therefore implies that this church also reflects sacred architecture. Spitalfields was the second most popular church out of the four from the overall vote (Appendix D).



What can be concluded from this survey about the comparison of traditional and modern Christian churches is that the traditional churches are coming out of style, not only in the way that they look on the outside, but how they look and function on the inside too. As mentioned, this is due to less church funding today, less time to spend on the design of the church and ensuring that traditions are still complied to. Since churches are now designed for people and not architecture, aesthetics and capacity are key to the success of today's church.



Fig 4g

### Modern Buddhist Temples

(Fig. 4g - Dhammakaya Temple, Bangkok, Thailand - <http://www.twip.org>, 20th August 2011)

Fig. 4g was constructed in the Nineties and resembles that of the traditional Thai Buddhist Architecture, as described in Chapter 2. It is pleasant to see that the basic components that make for a traditional temple have been remembered whilst looking fresh and current. Simplistic shapes, such as those used by postmodern architects like Richard Meier, are in fashion and that is reflected in this temple. All the while, the interior consists of black marble floor and plain white walls, which create a sense of richness and value to the building. (<http://www.twip.org>, 20th August 2011) Just as the preceding Thai Buddhist Temples have done, they create their sense of status compared to other buildings around it.



Fig 4i

(Fig. 4h - Mulagandhakuti Vihara Temple, Sarnath, India - <http://www.flickr.com>, 20th August 2011)

(Fig. 4i - Jade Buddha Temple, Shanghai, China - <http://www.tourdechina.cn>, 20th August 2011)

Fig. 4h was built in the 1930s. Its stone construction pays respect to the first Buddhist Temple at Bodh Gaya. The general shape in terms of layout still creates the cosmological connection considering the fact that it has a central spire. Also, it has a garden approach that visitors must pass before arriving at the temple's entrance.

*"It was founded in 1882 with two jade Buddha statues imported to Shanghai from Burma by sea."*  
(<http://www.tourdechina.cn>, 20th August 2011)

The Jade Temple's shape differs from Bodh Gaya, but the change is encouraged by the Buddha. This is a Chinese translation of Fig. 4h after all. It is a lot smaller, but does still follow the traditional layout in the sense of a central spire and a tiered roof. The lack of size is due to the lack of space around the site.



Fig 4h



(Fig 4j - Wat Rong Khun, Chiang Rai, Thailand - <http://www.bangkokbeyond.com> - 21st August 2011)

(Fig 4k - Temple Entrance, <http://www.panoramio.com>, 21st August 2011)

This temple's construction began in 1997, designed by a Thai artist and is perhaps one of the very few that maintain the Thai Buddhist Architecture traditions. Plain white is considered

to be current and modern and that is what this temple entirely consists of in terms of aesthetics. It creates a modern and unique look, but still reflects the sacred traditions, as seen in Figs. 4j and 4k

This is true of the temple's general layout on the site. The temple has a garden that surrounds it and there are the traditional guards on either side of the lengthy approach

to the temple's entrance.

What is concluded from the study of how modern churches and temples relate to their older predecessors, it is established that the Buddhists are stricter on designing to keep to tradition than that of the Christian church designers. It can be argued that the modern church has little or no connection to the churches of the past. As Artt stated,

modern churches are mostly conversions of large capacity buildings like auditoria. As the survey revealed, the younger generation's taste doesn't prefer the traditional church, but rather unique looking shapes that are current whether or not they reflect traditional Christian architecture traditions.

Several resulting factors were unearthed in this study. Most are because the religions have spread worldwide. Each country has its own culture and a set of tastes and traditions. This changes the shape and design of religious buildings in that country. Technology, materiality and materialism are also reflected in the design. The technology factor relates more to how advanced it is in a country. Japanese urban landscapes look more modern and unique because of that. This is seen, for example, in the work of Kenzo Tange.

Sacred architectural traditions are reflected in newer religious buildings, but isn't as obvious due to time passing.

As mentioned earlier; *"The Buddha teaches that everything is impermanent and everything changes according to the time."* (Appendix A) Therefore, it is encouraged that tradition is broken away from.

World events have influenced the architecture around us. In

World Wars where buildings will get torn down, they'll get redesigned according to current architecture styles of the time. Christopher Wren's St. Paul's Cathedral is evident of that.

Space is another huge factor. Religious buildings rely on space for people to understand their effect and to create hierarchy. In urban environments, it is harder to create that hierarchy with the building alone. It is the architecture and its existence in the city that creates it. Although not implying as strong a connection to sacred architecture, the connection still exists.

There's a difference in how tradition has been remembered into more contemporary architecture. Today's Buddhist temples have more of a connection to the original traditions of Buddhism as established in India, in terms of materiality, layout and the way they relate to their form of cosmology. There are less modern temples built since older

temples still exist today, since their culture strongly respects their lineage.

So, in answer to the lead question, sacred architectural traditions haven't been forgotten completely. The difference though between the two religions is that the influence of Buddhism and its architecture still exists, but in the case of Christianity, the debate still exists. Janet Bell doesn't personally believe Christianity has the same influence on architecture today since the church is a main contributor to architecture and they don't have a place in today's architecture since they were built more significantly than other buildings of that time that haven't survived. (Appendix C). Though Cormacc Artt believes there is, but isn't as literal as it once was. (Appendix D)

Whether it is influence of sacred architecture on urban environments around it, or the influence of general architectural trends identifiable on religious

buildings, the key factor in this entire investigation is taste. What people thought was exciting and current before doesn't stay that way as time progresses.

Although we design to allow for a sense of belonging in the environment that constantly changes around us, as well as sticking to a budget, my personal opinion as a Christian studying architecture, we are slowly neglecting our sacred architectural traditions.

*"I have dreamed of a unified Japan, of a country strong and independent and modern. And now we have railroads and cannon, Western clothing. But we cannot forget who we are, or where we come from."* (The Last Samurai, 2003, motion picture)

This quote comes from a film based on a true story of how western culture has strongly influenced Japan during a war in 1877. I believe in this quote strongly since it is accepting that evolutionary influences and cultures

change us. At the same time, the Japanese won't forget about their roots.

This is a philosophy that Buddhist culture does hold on to today in terms of its architecture and that I'll continue to follow in my architectural career, starting with my upcoming Final Major Project that will comprise of designing a multi-purpose space of large congregation, which would be laid out according to sacred architectural condition in order to create a scheme that creates an architectural statement in the way that shows significance in the same kind of light that religious buildings were once seen, whilst at the same time being modern and a place that people can reflect on.

To me, architecture isn't just what we can see in buildings, but also what we can touch, not just in terms of materiality, but also how it affects the soul. This allows architecture to become so much richer and an even greater impact on our life experiences.



Fig 4j



Fig 4k



## Appendix A:

Interview:  
Phramaha Sangthong Dhammacaro, 2011, English Influence on Thai Buddhist Architecture, interviewed by Ross Hennigan, answers written as quotes, Buddhapadipa Temple in Wimbledon, London, 1:15pm on the 27th July 2011

Q: When was the temple built?

A: Building started in 1979 and was finished in 1982. Thai artists volunteered to decorate inside, which took 4 years.

Q: How many volunteers were there?

A: There were 76, including the number one artist in Thailand.

Q: Do you believe the temple's architecture relates to the original Buddhist temples in terms of its architecture?

A: Not directly, because it is a Thai Buddhist Temple. The architecture is Thai and is to reflect that of the main Thai Temple in Bangkok. We couldn't do a full size temple, because of planning permission. The architecture of Thai Temples is the way that it is because of how Buddhism adjusted to Thailand. But the temple here still reflects the Buddhist traditions that come from India. I mean in the way that things are laid out, the order that things come, the hierarchy.

Q: Are Buddhists who worship here content with the temple in terms of its architecture?

A: Yes, because the architecture relates strongly to the Thai roots. People come to learn about Buddhism and the architecture helps with the experience. Also, the environment is calm and quiet, which enriches the experience.

Q: What is your opinion of the

English influence on Buddhism?

A: English buddhists do come here. Buddhism is growing in England. People do like to learn since it is another faith. In the 19th century, Buddhism came to England. First, the Zen tradition, then the Tibetan. In 1965, the teacher at this temple was invited to England to teach Buddhism and it was in 1976 that this land was bought.

Q: So is there no trace of English architecture at all on the temple?

A: No, all completely Thai architecture, but inside on the walls, there are modern paintings of famous London landmarks and people, like Big Ben, Margaret Thatcher and Charlie Chaplin.

Q: How many Buddhists worship here?

A: The temple gives freedom to people. People choose to come when they wish. So it is hard to keep track of exactly how many people come. We have a Sunday school, which roughly 200 people come to.

Q: Do you believe that Buddhism has the same influence on architecture today as it has in the past?

A: Slightly different, because of materialism. There were once trees and now people here have money. But because of the modern age, there is the technology needed to make a good temple. The Buddha teaches that everything is impermanent and everything changes according to the time.

## Appendix B:

Interview:  
Cormacc Artt, 2011, Modern Church design, interviewed by Ross Hennigan, answers written as quotes, telephone interview, 3:00pm on the 12th August 2011

Q: How strongly is your practice influenced by other modern architecture (not just churches, but all buildings) and tastes?

A: The work we mainly do is restorations of existing buildings, especially auditoria, since there's a lack of money to build a church from scratch on an empty site, let alone a traditional church. Any works actually aren't really designed to be just churches, but rather multifunctional. These days, churches tend to have more of a fun element than the traditional element.

Q: Who are your main clients?

A: Pastors, but mainly clients who are from the evangelical sector.

Q: What kind of requirements and specifications do your clients have when they approach your practice for a proposal?

A: Their main requirement is value for money. In these days of the economical down turn, this is truer of course. They also ask us to allow space for lighting, audio and visual equipment. For acoustics, we need to incorporate carpet so as to minimise noise pollution. What modern churches have these days are like pop rock concerts where hymns are performed by large bands. KICC (Kingsway International Christian Centre) is one of our main clients for instance, and they ask us to design different sized churches which can range from 100 - 10,000 congregation capacity. Obviously a traditional church can't accommodate 10,000, can it?

Q: How many new projects do you take on in an average month?

A: 3 to 4, depending on the value and whether planning permission is needed.

Q: Does your practice believe that Christianity has the same influence on architecture today as it has in the past?

A: Very much so, but it's perhaps not as literal. The truth is that due to people's changing tastes, traditional looking churches are a thing of the past. In our church design, our main criterion is ensuring we get correct the way that people worship. Orientation isn't really negotiable. Orientation isn't really negotiable because they're existing buildings and we can't really change the layout most of the time.

Q: How important for your practice is it to keep to tradition, in terms of...

a) Materiality?  
Colours are conservative, but are relevant to the rest of the building. In terms of materiality, materiality would be important when reinstating a listed building, so stone does potentially get used. Most of the time, materials are used according to time frame and budget.

b) Positions of traditional components inside the church?  
Because the proposals are mainly carried out in existing buildings, auditoria mainly, it's hard to keep positions as they should be when there are existing elements that can't be moved. Also, tastes affect the dynamic of the whole scheme. A member of the general public needs to be enticed in less than 30 seconds. Our rule is here when it comes to church design now; "Don't design for architecture, but for people".

c) Christian cosmology?  
Because modern churches are seen in different ways than how they used to be seen, the traditions only tend to be followed in terms of ideology, and not really an essential requirement anymore.

## Appendix C:

Interview:  
Janet Bell, 2011, Roman Influence on Glastonbury Abbey, interviewed by Ross Hennigan, answers written as quotes, Telephone interview, 11:25am on the 13th October 2011

Q: What year was the Abbey built?

A: The present ruins date from the Romanesque period, which was between the 6th and 10th centuries. The present Lady Chapel was rebuilt after the fire of 1184. There were several subsequent phases of extension and rebuilding of the abbey church and precinct until the abbey was destroyed in the Dissolution in 1538-39. There is archaeological evidence for earlier underlying buildings and written historical evidence which is summarised by Rahtz but there is no definite date for the foundation of the abbey.

Q: How did the Abbey come to be in terms of the influence of the Roman Empire?

A: Hard to answer. There is some evidence for Roman occupation on the site but this does not necessarily imply Christian use.

Q: Do you believe that Christianity has the same influence on architecture today as it has in the past?

A: Personally I don't believe that Christianity has the same influence on architecture today as it did in the past. The church appears to have been the main patron of architecture and ecclesiastical buildings must account for a large part of our remaining medieval buildings which suggests that they were at least built more substantially than other buildings which have not survived.

CHURCH SURVEY – WHICH IS THE MOST POPULAR TO GO TO?



Spitalfields, London

Age	Quantity
10-20	19
20-40	27
40+	25



Modern Church in Husum, Copenhagen by Erling Steen

Age	Quantity
10-20	15
20-40	23
40+	12



All Saints, East Cowton, North Yorkshire

Age	Quantity
10-20	8
20-40	6
40+	24



Richard Meier Church, Rome, Italy

Age	Quantity
10-20	28
20-40	41
40+	20

Appendix D:



Appendix E:

Above image is result of combination and manipulation in Adobe Photoshop Elements of the following images (excluding the blue highlight which was added in Photoshop):

1) 3d map of Sagrada Familia site

Source: Google Earth. 2010. Basilica i Temple Expiatori de la Sagrada Familia, Barcelona, Spain 41° 24' 12.03" N 2° 10' 28.30" E, elevation 64m. 3D Buildings data layer. Available through: <http://maps.google.co.uk/maps?hl=en&tab=w> [Accessed 8th August 2011]







2) North point used in final image to indicate the northmost direction.  
Source: [Unknown year, author and title] [Image online] Available at: <http://corearchitecture.co.uk/more.html> [Accessed 16th October 2011]



3) Cross symbol used to indicate east/west orientation of church.  
Source: ["Cross #5", unknown year and author] [Image online] Available at: <http://www.allwallpaper.info/cross-5.html> [Accessed 22nd July 2011]



Appendix F:

Above image is result of combination and manipulation in Adobe Photoshop Elements of the following image and the images 2) and 3) (excluding the blue highlight which was added in Photoshop);



1) 2d Map of St. Paul's Cathedral  
Source: Google Earth. 2010. St Paul's Cathedral, St Paul's Church Yard, London 51° 30' 50.55" N 0° 05' 53.59" W, elevation 30m. Primary database. Available through: <http://maps.google.co.uk/maps?hl=en&tab=wl> [Accessed 12th August 2011]



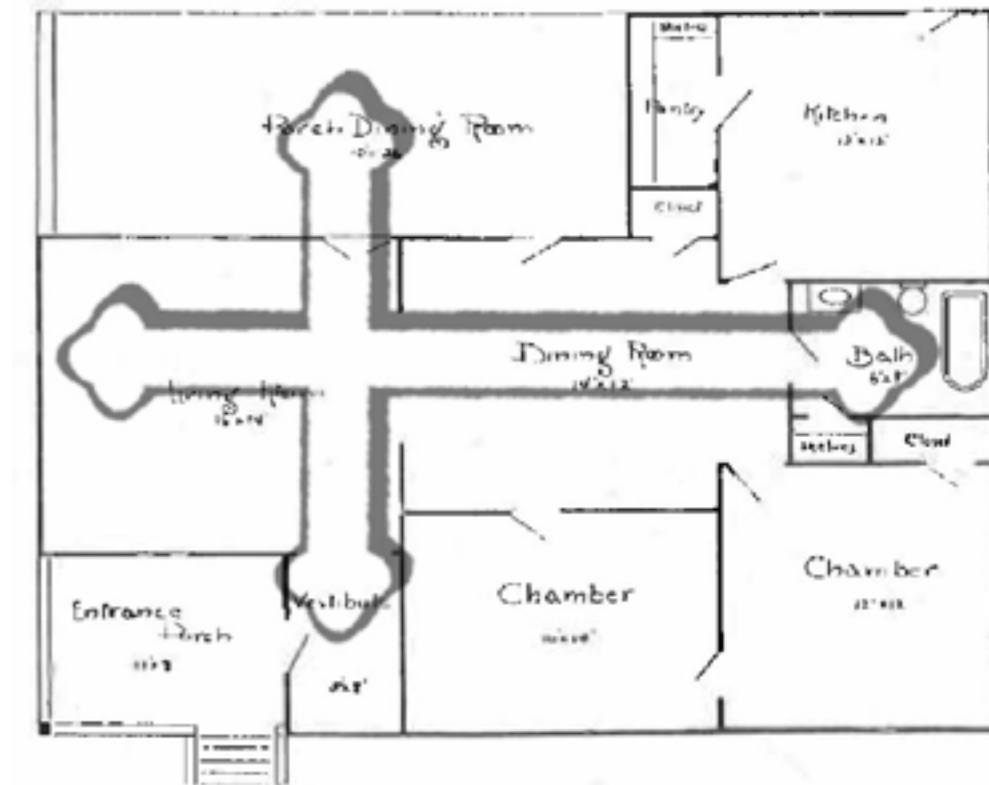
Appendix G:

Above image is result of combination and manipulation in Adobe Photoshop Elements of the following image and image 3)

1) 2d Map of Buckingham Palace and surrounding context  
Source: Google Earth. 2010. Buckingham Palace, London 51 30 10.91 N 0 08 09.67 W, elevation 11m. Primary database. Available through: <http://maps.google.co.uk/maps?hl=en&tab=wl> [Accessed 15th August 2011]



Appendix H:



Above image is result of combination and manipulation in Adobe Photoshop Elements of images below.

1) Floor plan of "A House for One Thousand Dollars  
Source: Seebohm, C., 1978, "20th Century Decorating Architecture & Gardens", Weidenfeld & Nicolson: London





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## Site Visits

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- » Buckingham Palace, London, England
- » Buddhapadipa Thai Temple, 14 Calonne Road, Wimbledon Parkside, London, England
- » Chester Gate Street, London, England
- » Essex Tower, Mersham Place, Anerley, London, England
- » Houses of Parliament, Westminster, London, England
- » St Paul's Cathedral, Saint Paul's Church Yard, London, England

## Interviews

- » Cormacc Artt, 2011, *Modern Church Design*, interviewed by Ross Hennigan, answers written as quotes, telephone interview, 3:00pm on the 12th August 2011
- » Janet Bell, 2011, *Roman Influence on Glastonbury Abbey*, interviewed by Ross Hennigan, answers written as quotes, Telephone interview, 11:25am on the 13th October 2011
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