

GOTHIC ARCHITECTURE

ANATOMY OF FORM

Week 5

Perpendicular 1335-1535

GOTHIC

- **Cathedral and Religious Buildings in Wales, the Marches and the South West from 1066 - 1500**

Gothic Decorated Period



Wells Cathedral Chapter House 1320-40 CE

Gothic Decorated Period



Wells Cathedral Eastern Choir 1329-45 CE

GOTHIC

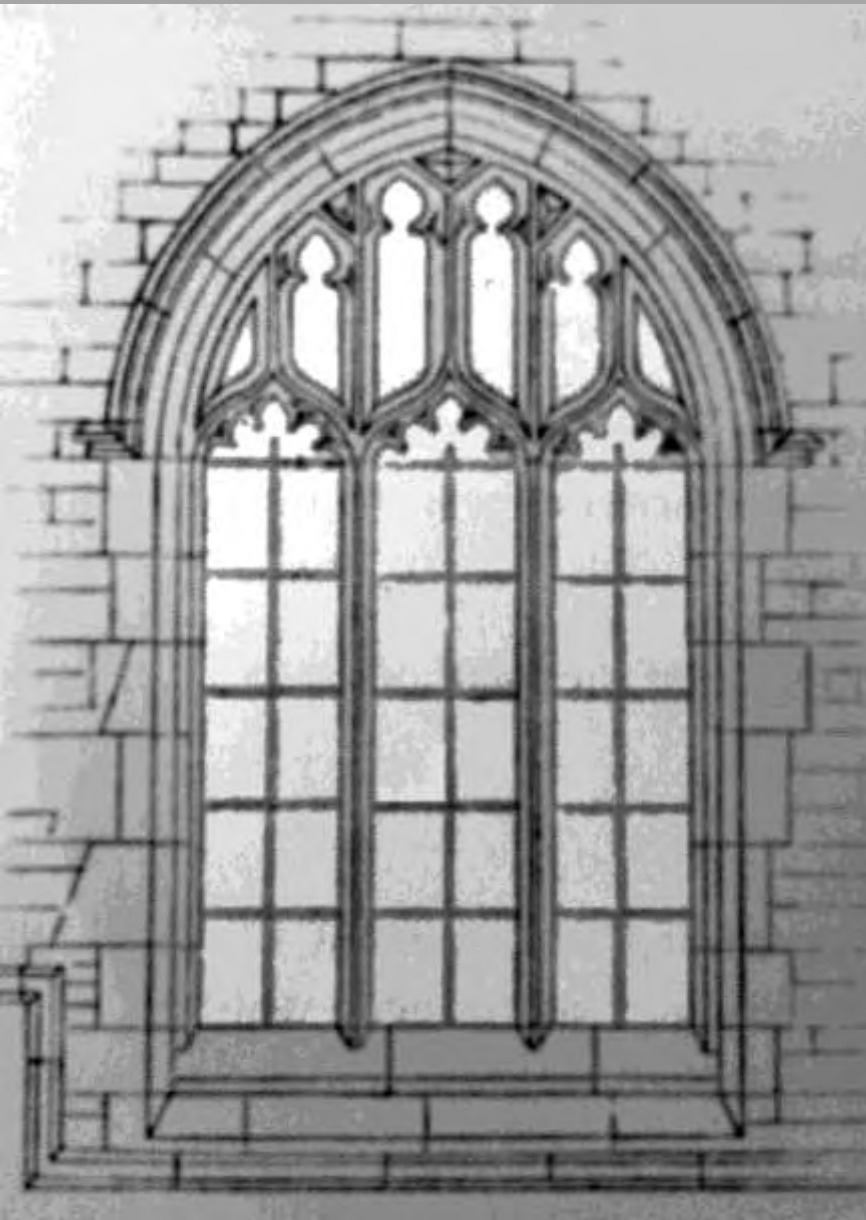
Week 5 -Perpendicular 1335-1535 CE

- **Gloucester 1350 CE**
- **Gloucester 1400 CE**
- **Winchester 1500 CE**

Gothic Perpendicular Period

- From about 1350 CE English Gothic began to forego the complex tracery of the Decorated phase in favour of an emphasis on vertical and horizontal lines – hence the name Perpendicular given to this period.
- From the geometric and curved shapes used for tracery in earlier phases - in the Perpendicular Period these became elongated with decided emphasis on the vertical elements.

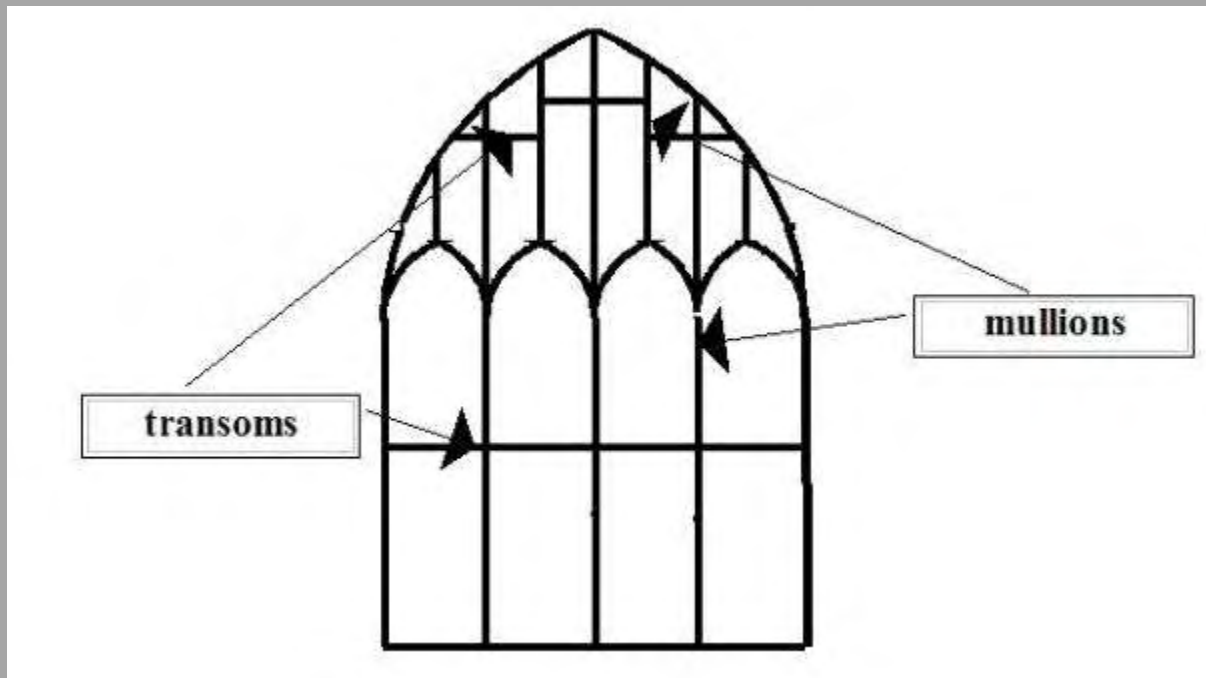
Gothic Perpendicular Period



LATE PERPENDICULAR WINDOW-HEAD

Gothic Perpendicular Period

- Windows filled more of the wall space creating series of repeating glazed panels.
- Where horizontals and verticals occur together a grid is formed and it is this feature of English Perpendicular which, for Pevsner, "is really what distinguishes it from all its predecessors"



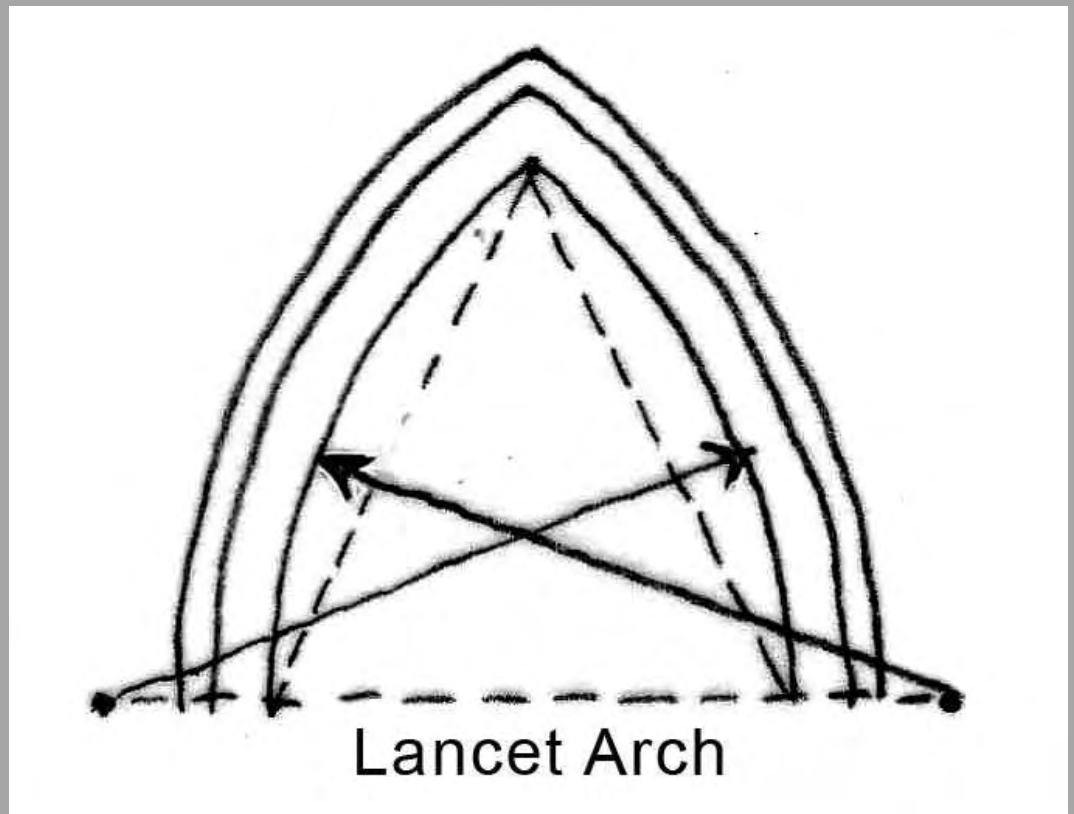
Gothic Perpendicular Period

- Windows where lofty were divided in to storeys by transoms.
- The mullions often continued perpendicularly in to the head.



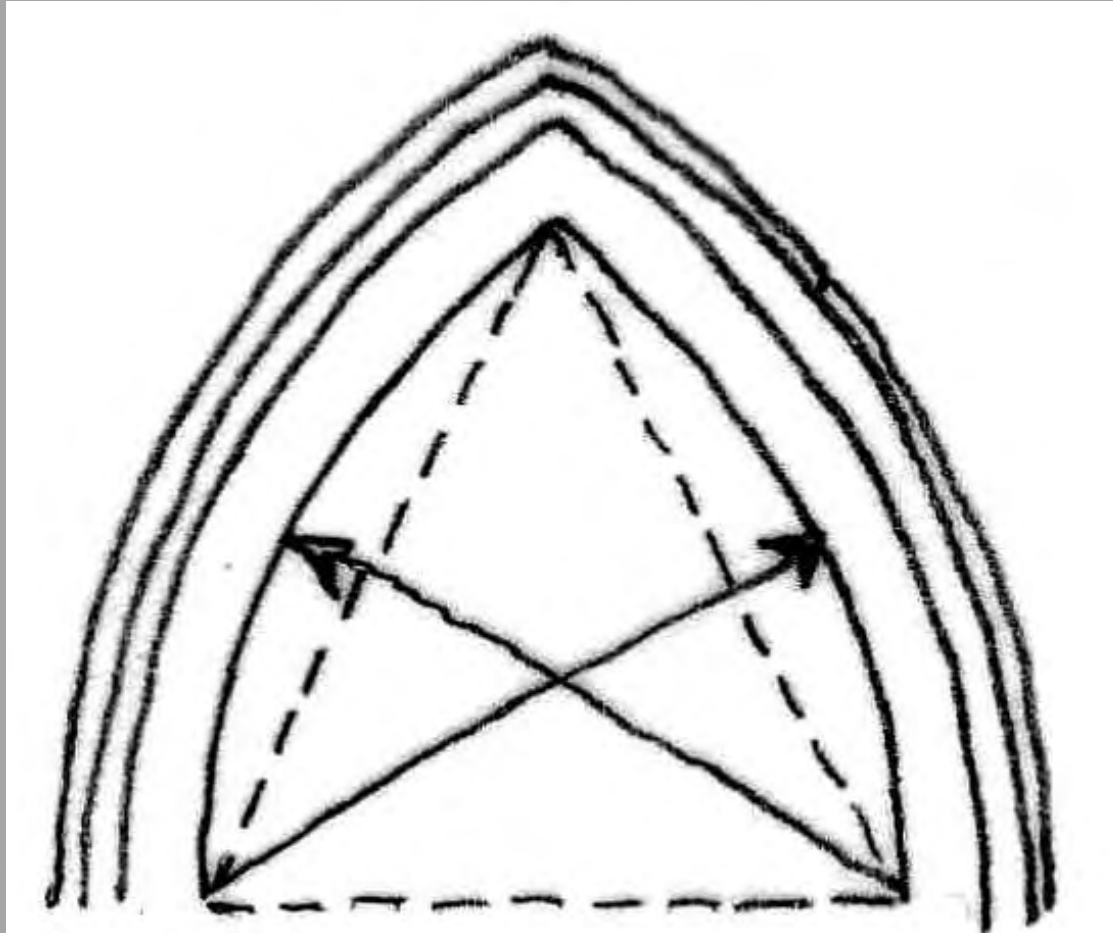
Early English period: 1175-1275

- Early English or sometimes known as Lancet
- Lancet is derived from the shape of ordinary window heads, which resemble the point of a lancet in outline.



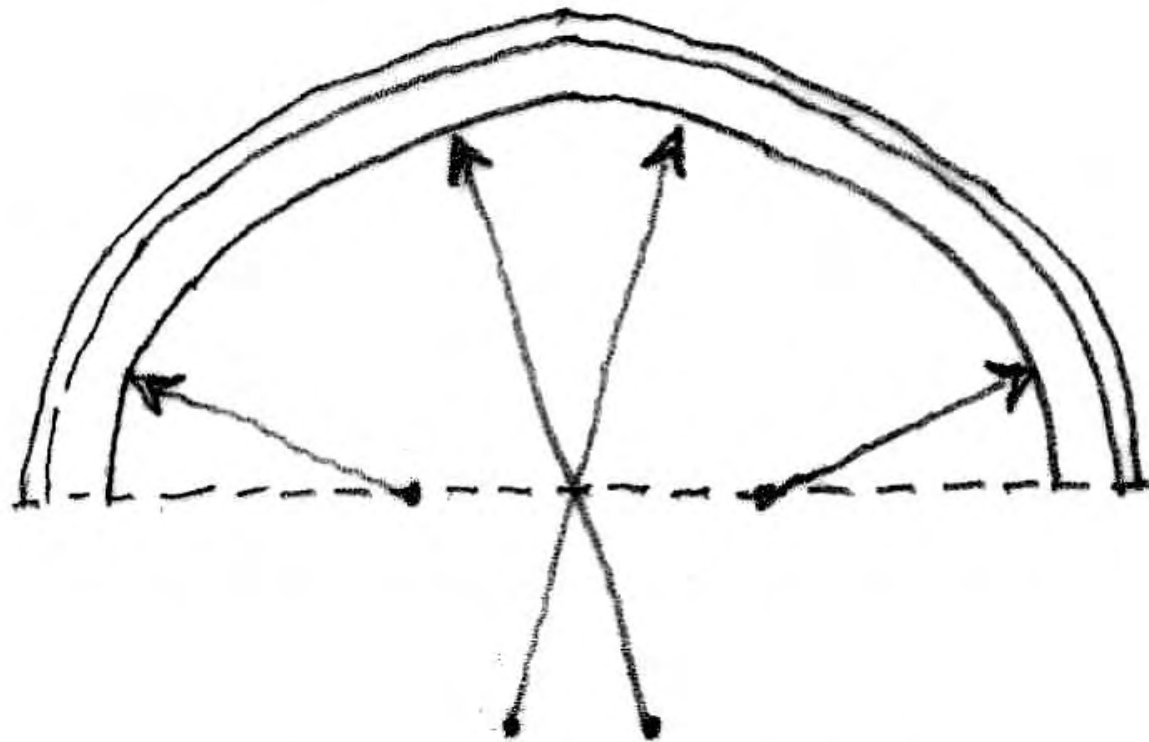
Gothic Decorated Period (Transition)

- Arches mostly enclosing an equilateral triangle afterwards obtusely pointed and struck from four corners.



Equilateral Arch

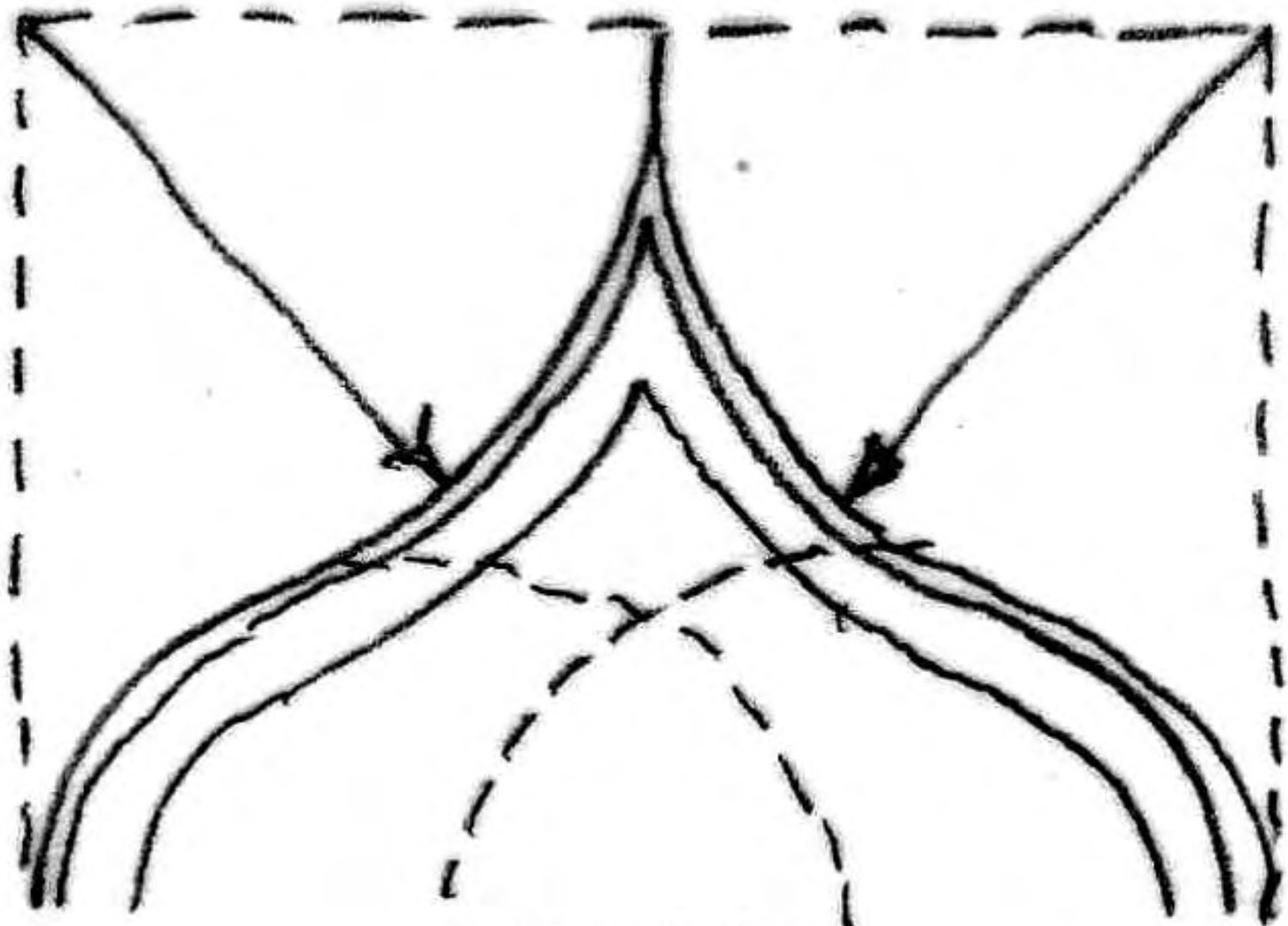
The Depressed (or Four-centred) Tudor Arch is characteristic of the Perpendicular period, and was then constantly employed.



Depressed Tudor Arch

Gothic Perpendicular Period

The Ogival/ Ogee Arch is occasionally employed late in the period, but was more used by French and Italian architects than by those of Great Britain.



Ogival Arch

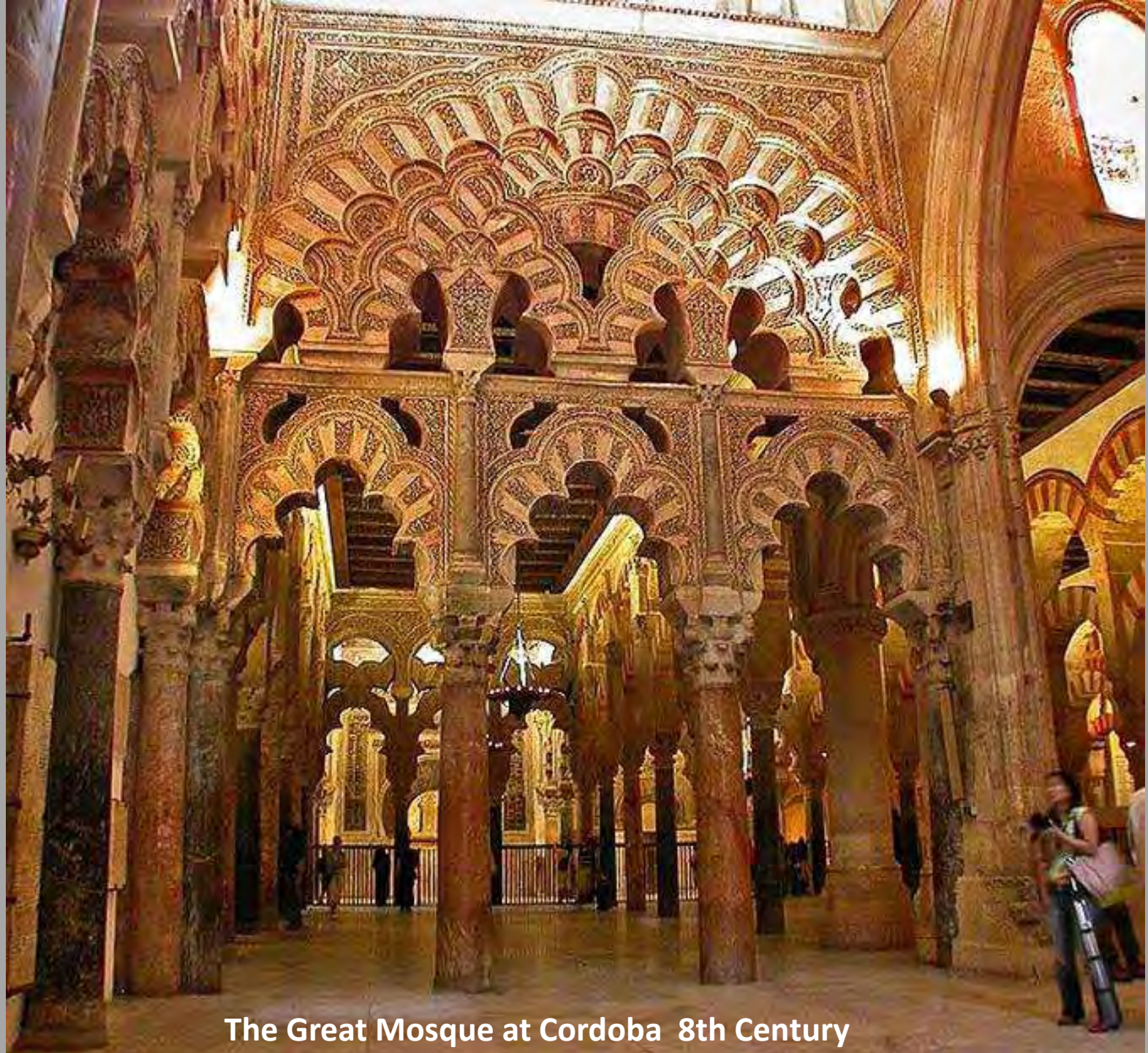
Gothic Perpendicular Period

Ogee Arch

- The ogee arch is a pointed arch, each side of which is composed of a lower concave curve intersecting a higher concave one.
- A feature of the Late Gothic examples St. Urbain in Troyes, France.



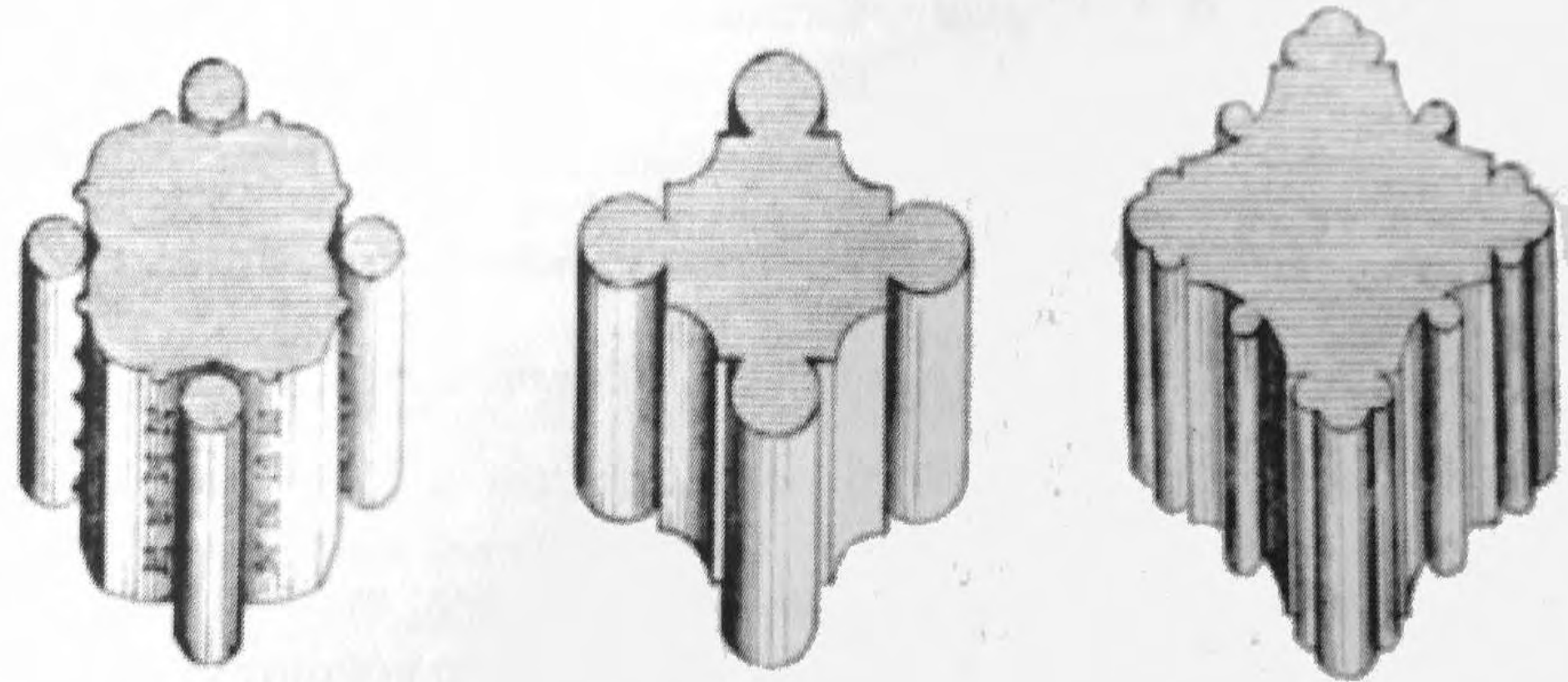
The Great Mosque at Cordoba 8th Century



The Great Mosque at Cordoba 8th Century

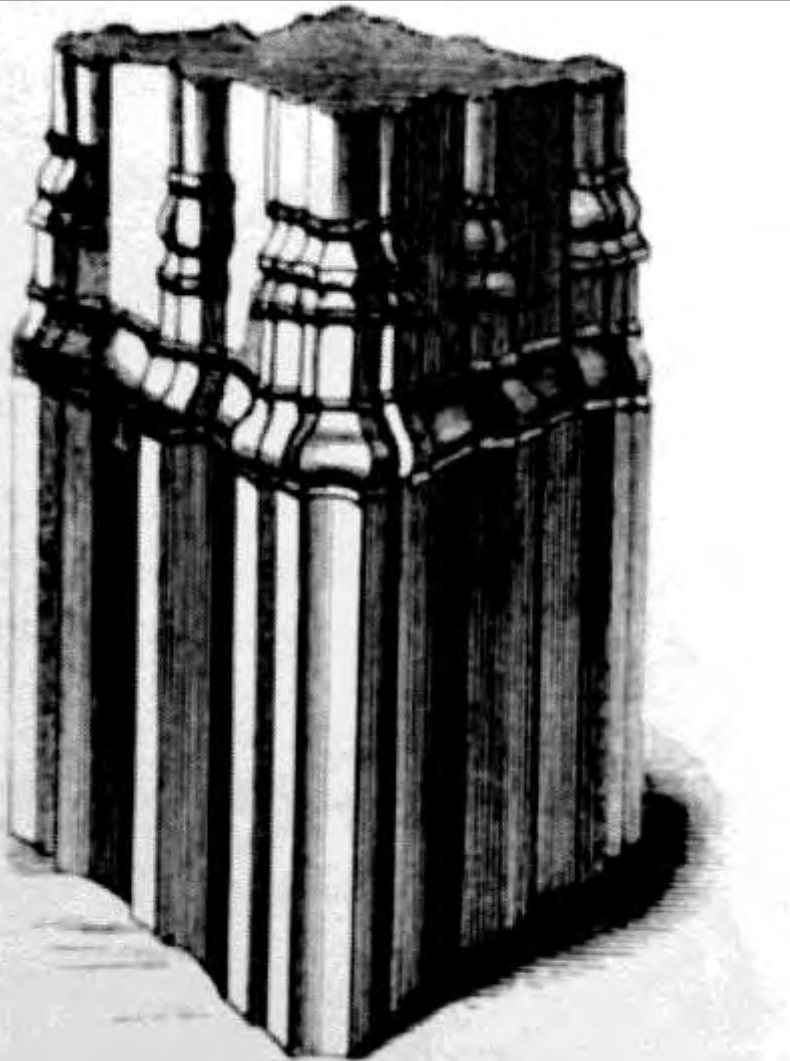
Gothic Perpendicular Period

Piers generally oblong; longitudinal direction north and south



LATE DECORATED AND PERPENDICULAR PIERS.

Capitals with mouldings large, angular and few, with abacus and bell imperfectly defined. Foliage of a conventional character, shallow and square in outline. Bases polygonal.



BASE OF PERPENDICULAR SHAFT



PERPENDICULAR CAPITAL

Gothic Perpendicular Period

Complex Vaulting

- The quadripartite vault developed in a number of ways. Tierceron vaults featured additional ribs emanating from the main supports to abut on to the transverse ribs, sometimes with lierne ribs between them.
- In England this evolved in to the fan vault, one of the main characteristics of the Perpendicular.

Gothic Perpendicular Period

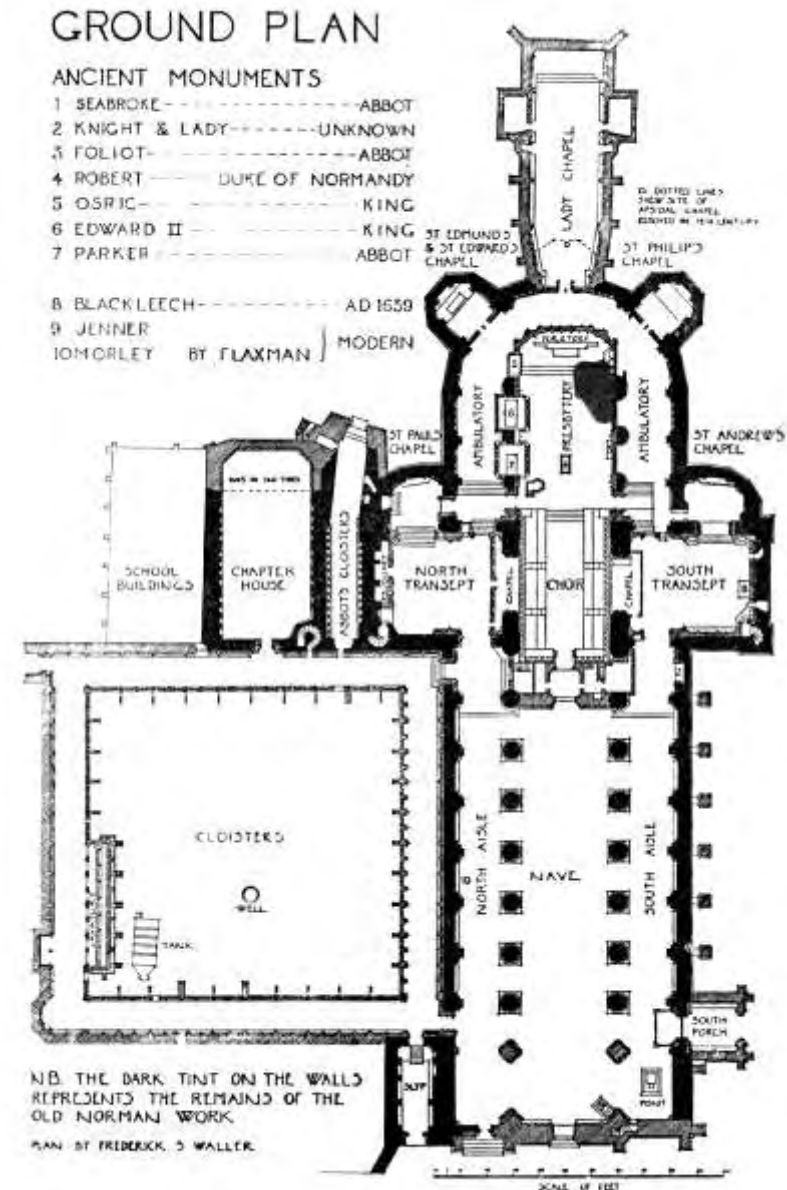
Complex Vaulting

- The complex vaults of the Decorated period evolved into the structurally simpler (though more dramatic in its apparent lightness) fan vault, formed from identical ribs emanating from a single point.
- The vaults of Gloucester Cathedral and the naves of Canterbury and Winchester are among the most important realizations of the Perpendicular Phase of Gothic.

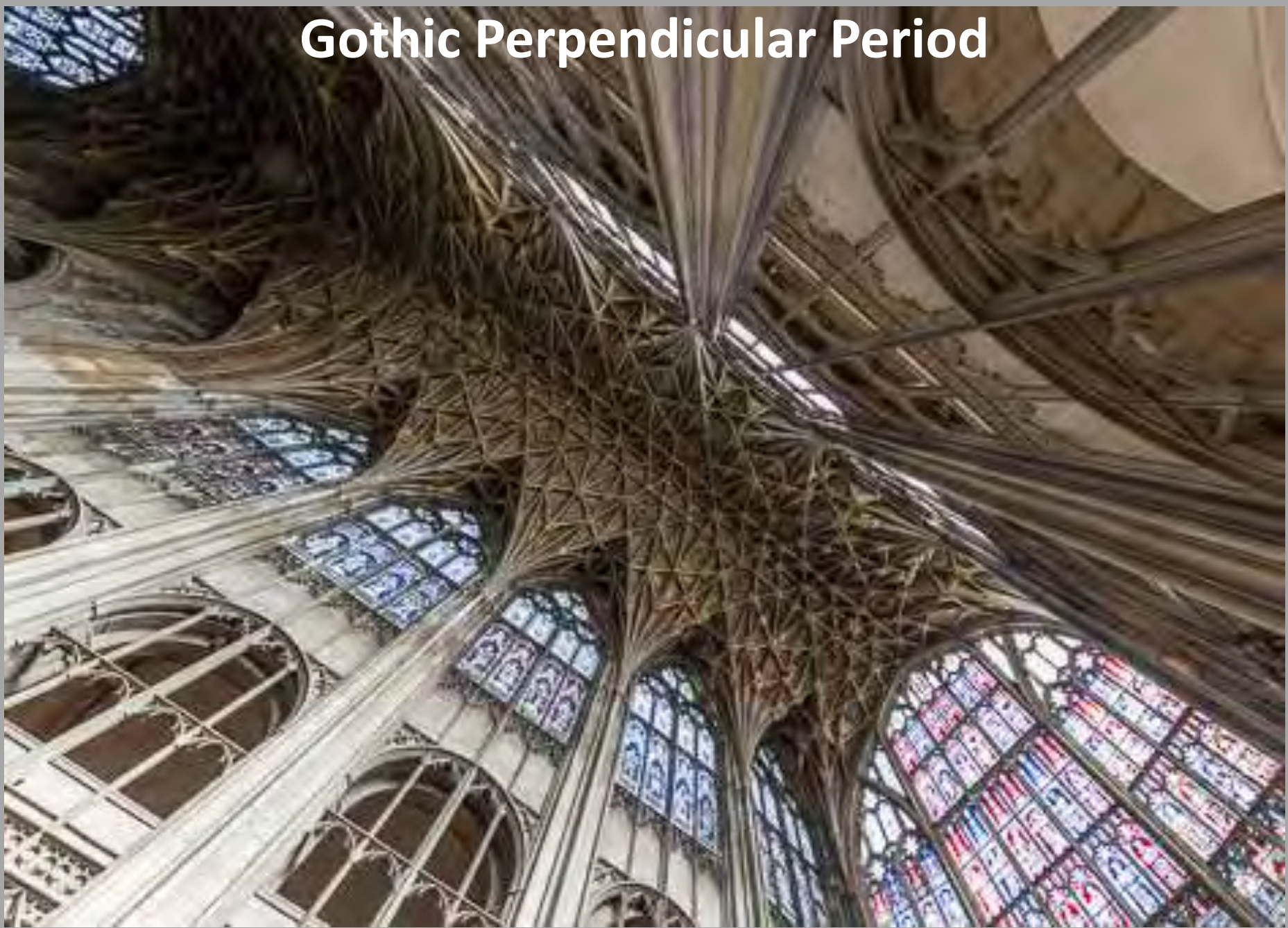
Gothic Perpendicular Period



Gloucester Cathedral Choir 1331-55CE



Gothic Perpendicular Period



Gloucester Cathedral Choir 1331-55CE

Gothic Perpendicular Period



Gloucester Cathedral Choir 1331-55CE

Gothic Perpendicular Period

- The gothic choir of Gloucester cathedral is a unique and spectacular work.
- The walls so heavily panelled as to suggest a huge stone cage (disguising the Norman arches behind) crowned by a glorious net-like vault adorned with numerous bosses (those over the Altar with figures of Christ and angels)
- whilst the east wall is entirely glazing in delicate stone tracery, and still preserving most of the original 14th century stained glass.

Gothic Perpendicular Period



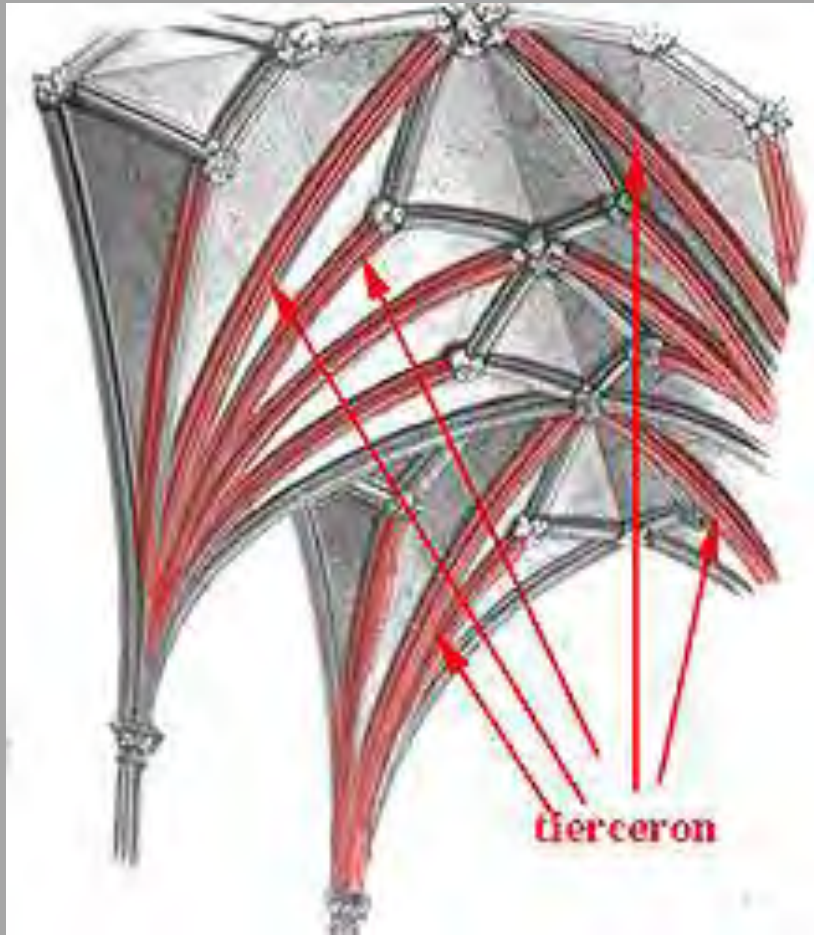
Gloucester Cathedral Choir 1331-55CE

Gothic Perpendicular Period

Complex Vaulting

The rib vault changed with the addition of non-structured ribs called liernes which followed the curve of the vault's web.

Tiercerons or third rib was another type of intermediate structural rib.



Gothic Perpendicular Period

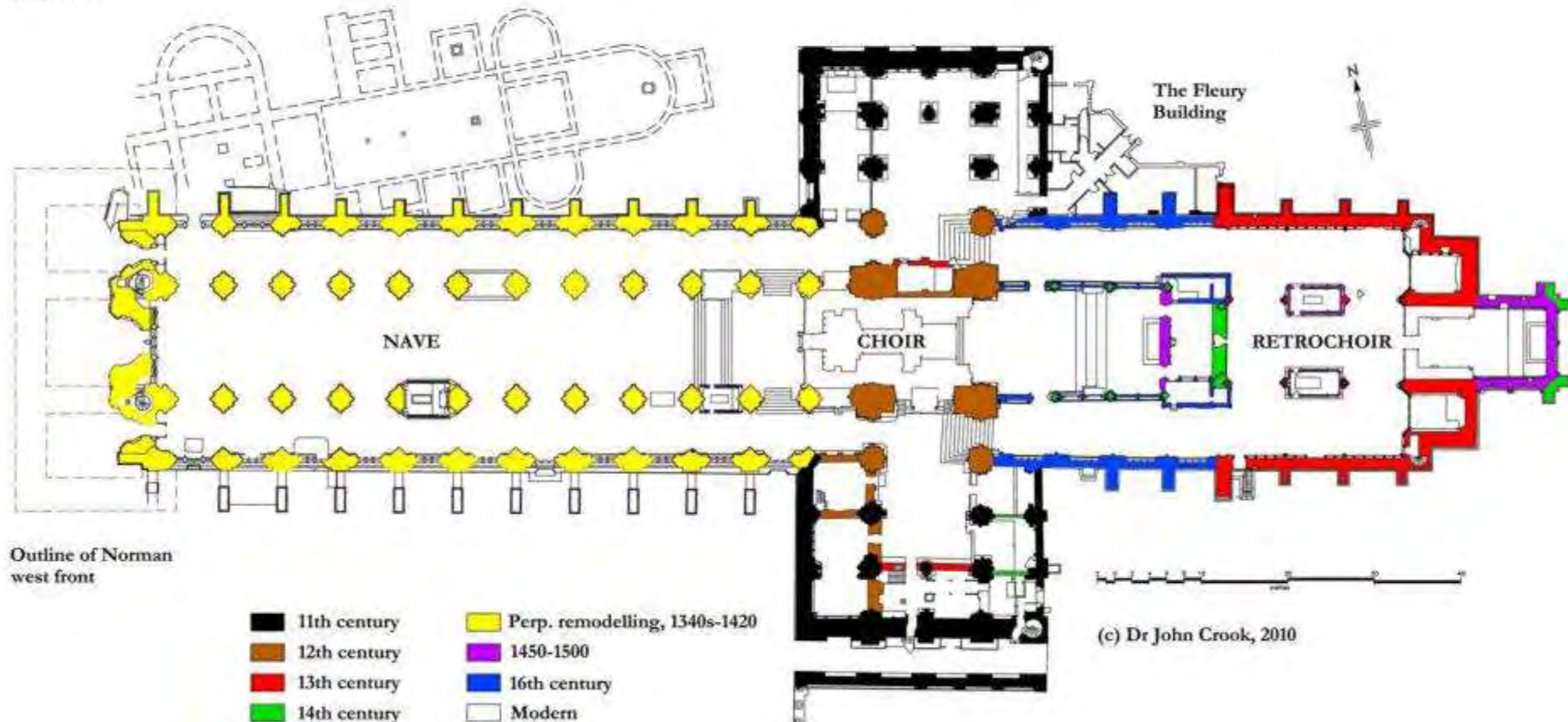


WINCHESTER
CATHEDRAL

How Winchester Cathedral was built

A historical plan showing the main phases of the building's development.

Outline of Old Minster, the Anglo-Saxon Cathedral

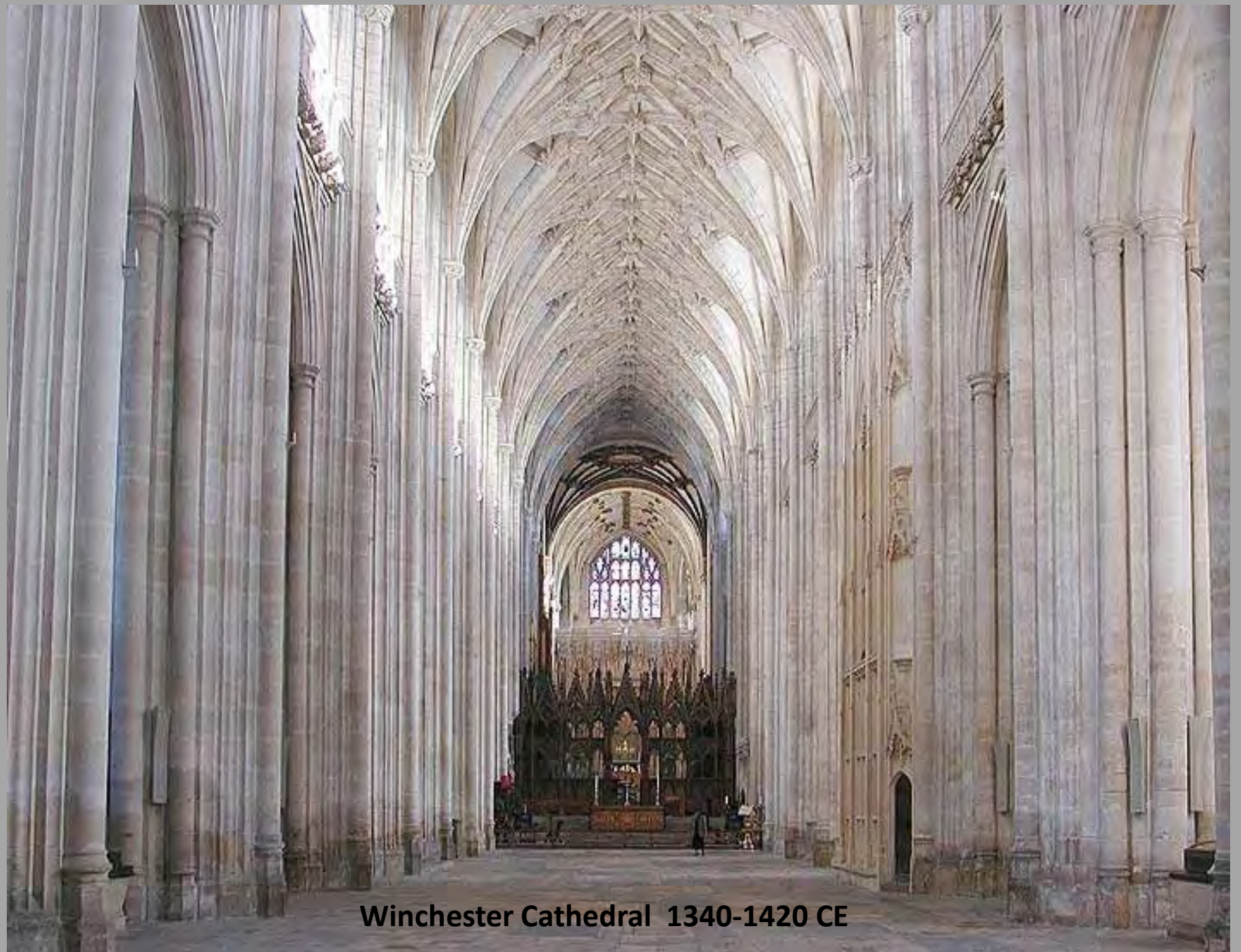


Winchester Cathedral 1340-1420 CE

Gothic Perpendicular Period



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Gothic Perpendicular Period

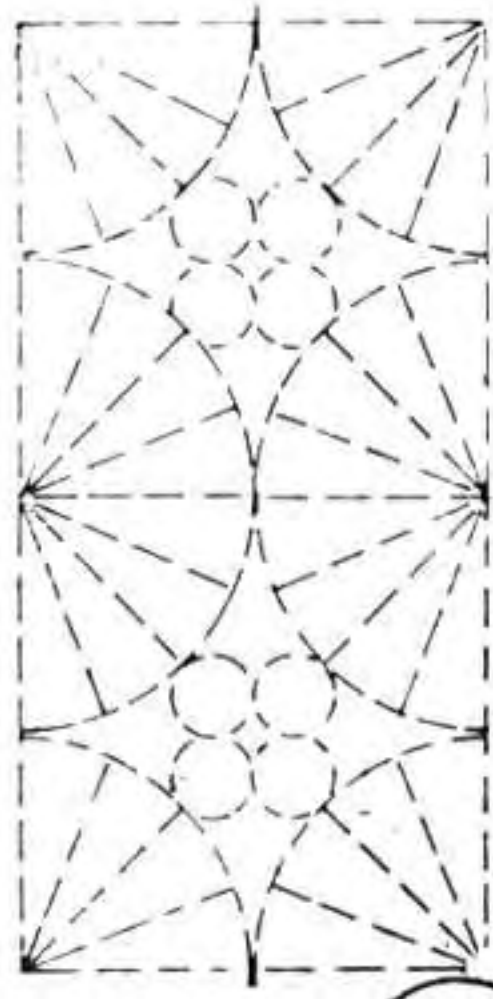
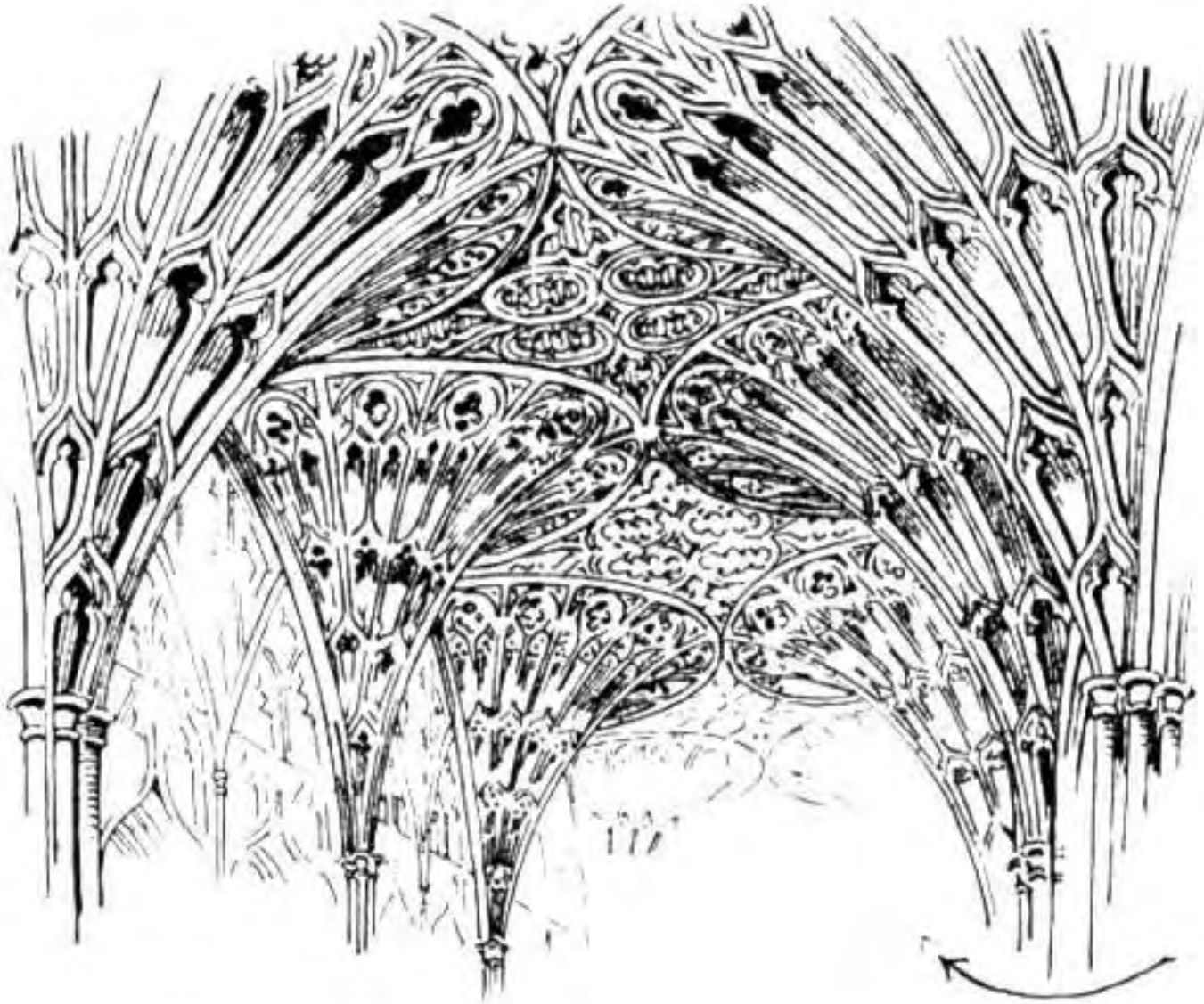
Complex Vaulting

- With the addition of new ribs the pattern of English vaults became more net like as in Gloucester Cathedral Chancel 1337-55 CE or Exeter Cathedral's nave built in the mid-14th C.



Gothic Perpendicular Period

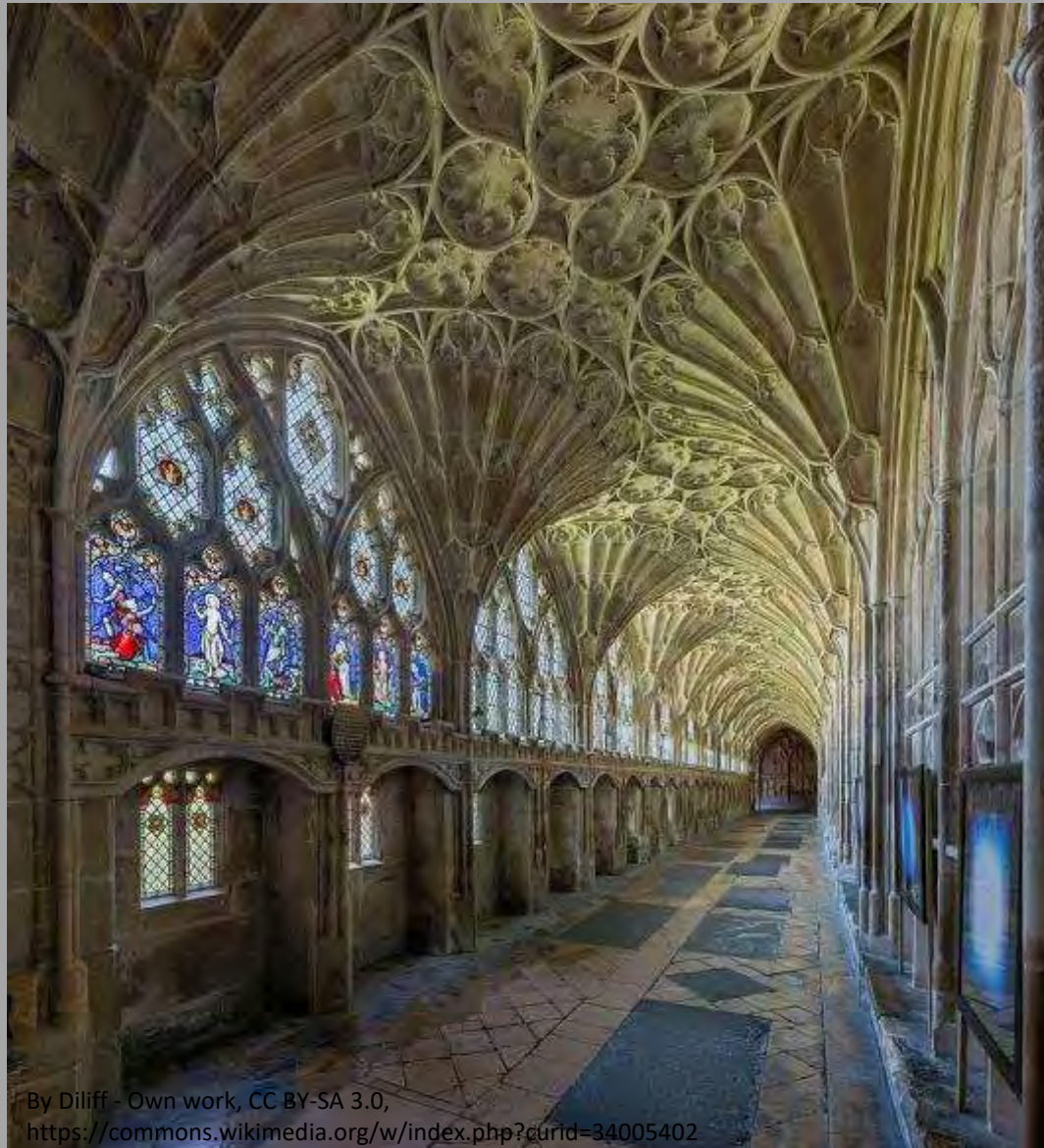
This developed in to the fan vault in the Perpendicular Period.



Gothic Perpendicular Period

Fan vaulting

- The cloisters at Gloucester Cathedral 1367-1377 CE are an early example.



Gothic Perpendicular Period

- There are also a series of royal commissions of the 15th C which are also without doubt amongst its most singularly coherent achievements such as King's College Chapel Cambridge and Henry VII's chapel at Westminster Abbey.

Gothic Perpendicular Period

Fan vaulting

- Fan vaults at Kings College Chapel Cambridge begun 1446 CE the ultimate form.



Gothic Perpendicular Period



Fan vaulting

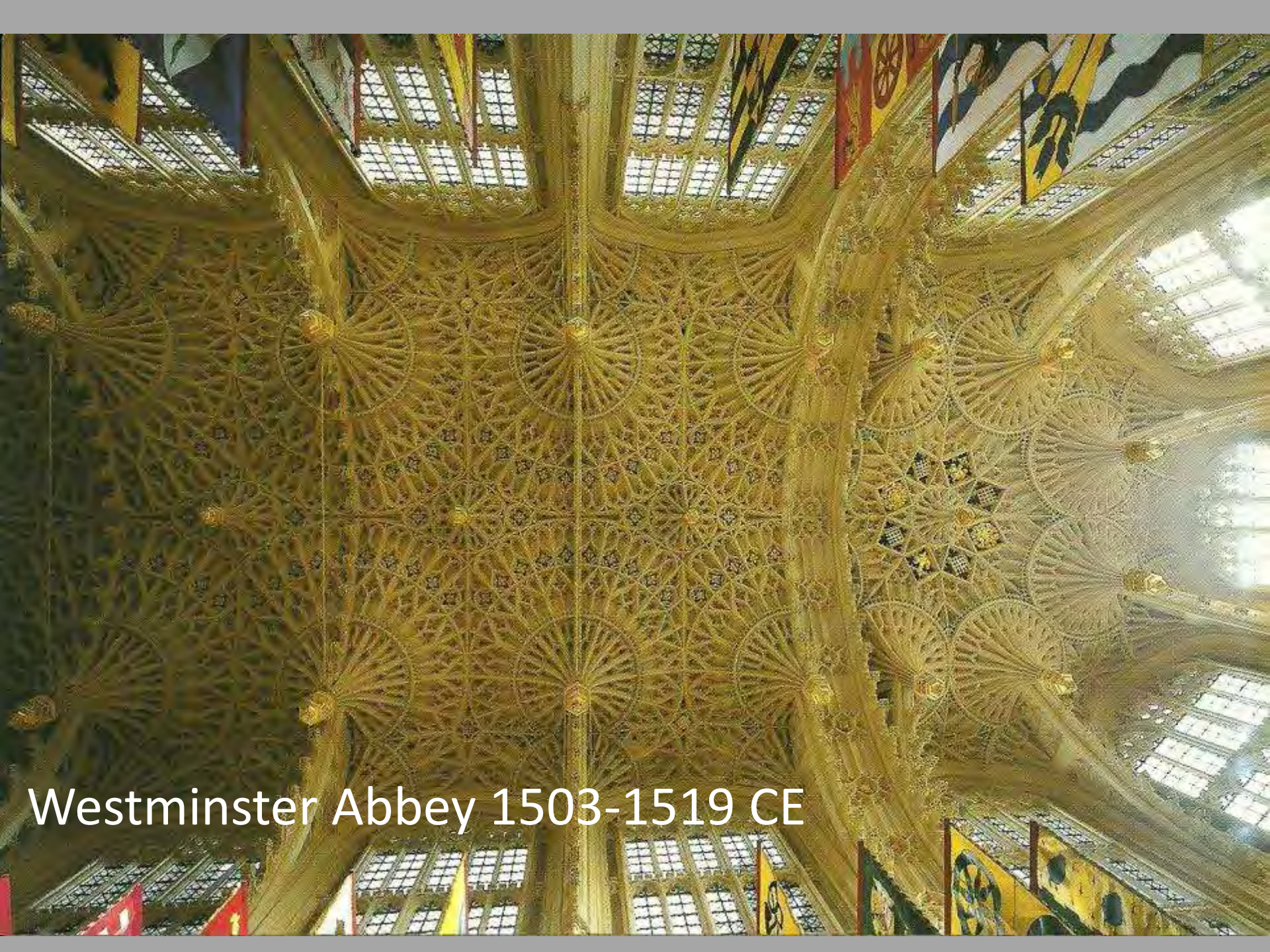
Kings College Chapel Cambridge begun 1446 CE

Gothic Perpendicular Period

Henry VII's chapel at Westminster Abbey 1503-1519 CE with long pendants hanging from each fanning out point. The elaboration of the ribs subordinates the structure to an overall pattern of masterly decoration.



Henry VII's chapel at Westminster Abbey 1503-1519 CE



Westminster Abbey 1503-1519 CE

Spatial Unity

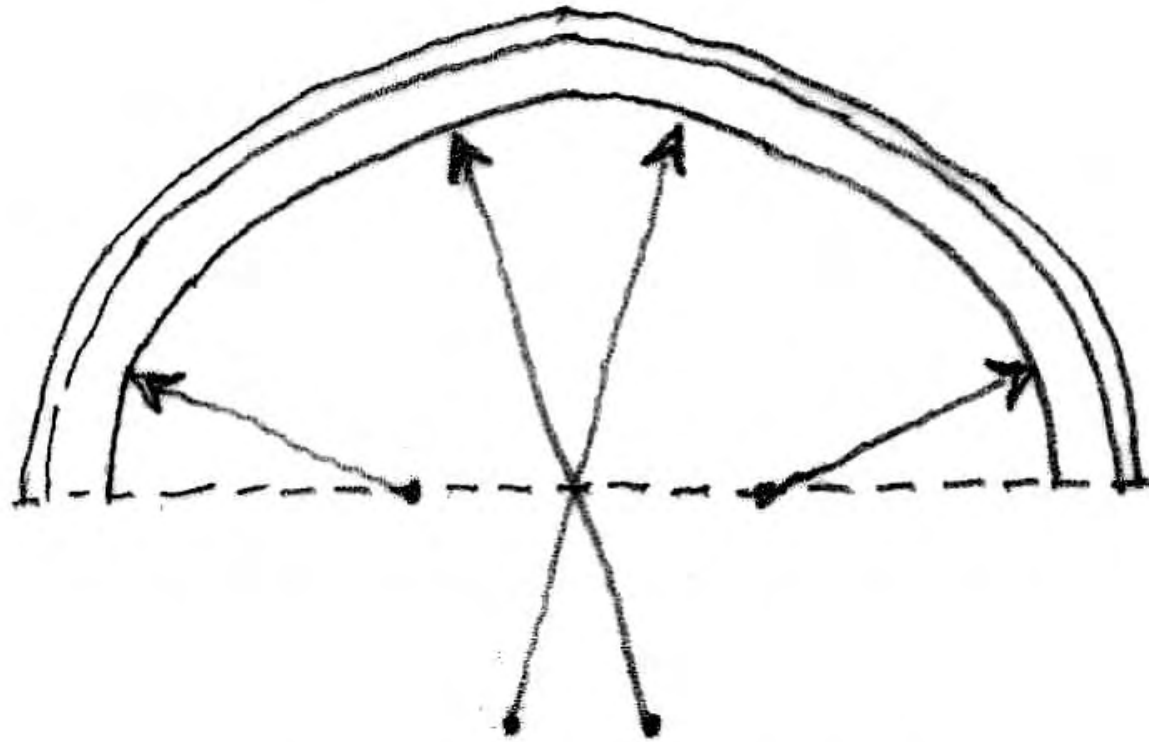
Late Gothic cathedrals moved towards more unified spaces with nave and aisles of similar height

Shafts of columns, thin with no capitals, sometimes carried up in to the vault ribs in one uninterrupted line



Kings College Chapel Cambridge begun 1446 CE

The Depressed (or Four-centred) Tudor Arch is characteristic of the Perpendicular period, and was then constantly employed.



Depressed Tudor Arch

St David's Cathedral





- Open timber roofs of moderate pitch, of elaborate construction, often with hammer beams, richly ornamented with moulded timbers, carved figures of angels and with pierced tracery in spandrels



St David's Cathedral, Nave roof 1530-40 CE



Holy Trinity chapel fan vaulting

Gothic Perpendicular Period



Vladislav Hall Prague Palace 15th C Double curve ribs.

Gothic Perpendicular Period

LANTERNS, PARAPETS AND ROOF

- The form and proportions of the Early and Decorated Gothic cathedrals were essentially defined by the right angle.
- The Late Gothic was characterised by attempts at more complex spatial configurations, often realised in octagonal lanterns as at Ely Cathedral, Cambridgeshire producing a dynamic experience to the crossing.
- Parapets – embattled and panelled.
- Roofs sometimes of very flat pitch.

Gothic Perpendicular Period



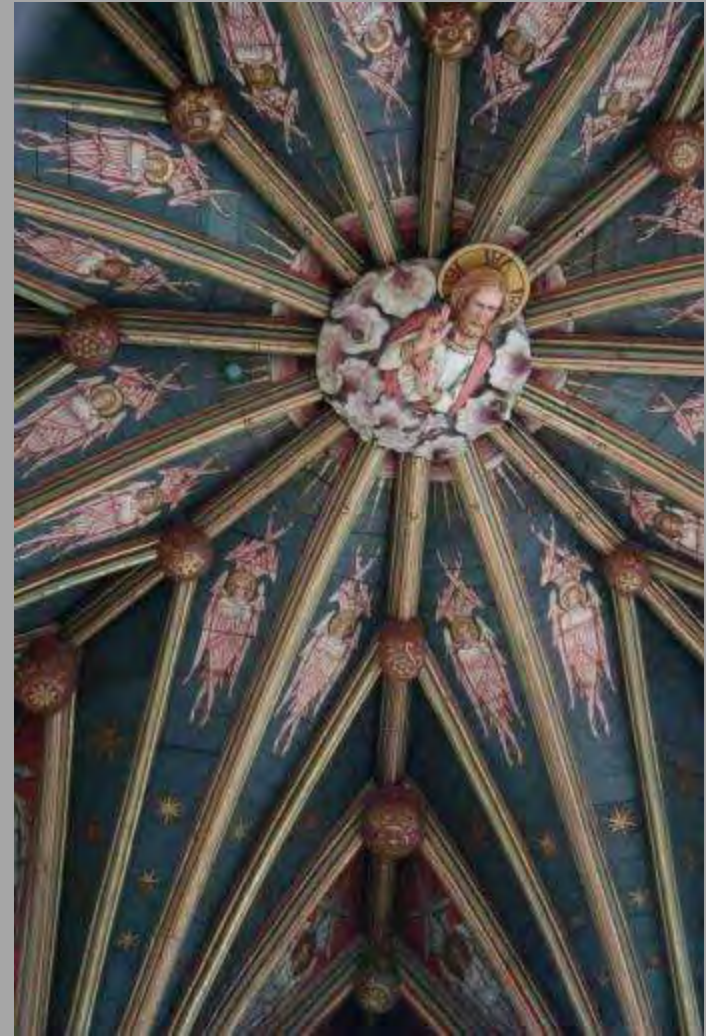
Ely Cathedral Cambridgeshire 14th C
Octagonal Lantern



Gothic Perpendicular Period



Ely Cathedral Cambridgeshire 14th C
Octagonal Lantern



Gothic Perpendicular Period

- **Intense Ornamentation**
- Late Gothic was marked by a concern for surface with thinner, lighter and more intricate tracery.
- Iberian Gothic featured the most intense surface ornamentation, while the hardly less ornate German iteration retained more spacious character. Example San Pablo, Valladolid Spain 1445 CE
- Lets consider the wider context for this period of Gothic

Gothic Perpendicular Period

- Intense Ornamentation – canopies of ogee character enriched with crockets

San Pablo, Valladolid Spain 1445 CE

Gothic Perpendicular Period



Mosque of the Palace of Ahmedabad, India

This elegant mosque was built by Sidi Saiyed in 1573 CE. The *Jalis* are in rear wall of the mosque. The *Jalis* have fine carving design in geometrical and intertwined tree and foliage, palm and parasite motif.

Milan Cathedral , window detail
1385-1485CE

Gothic Perpendicular Period

Spires

- The spire at Freiburg in Breisgau (Freiburg Minster) shows an open structure of filigree stonework on a square tower mid-14th C influenced the towers at Cologne Cathedral.
- Salisbury Cathedral 1220-1258 CE the Spire was added around 1320CE formed from an octagonal base to a height of 123m/404ft.
- Lincoln Cathedral Spire circa 1311CE height 143m/469ft collapsed in 1549CE



Lincoln Cathedral - Model



Salisbury Cathedral - Model

Gothic Perpendicular Period



Freiburg in Breisgau (Freiburg Minster)

Milan Cathedral



Milan Cathedral , ornate flying buttresses, bold projections and finials, pierced with tracery 1385-1485CE

Milan Cathedral

Another example is Milan Cathedral 1385-1485CE
with an octagonal tower over the crossing



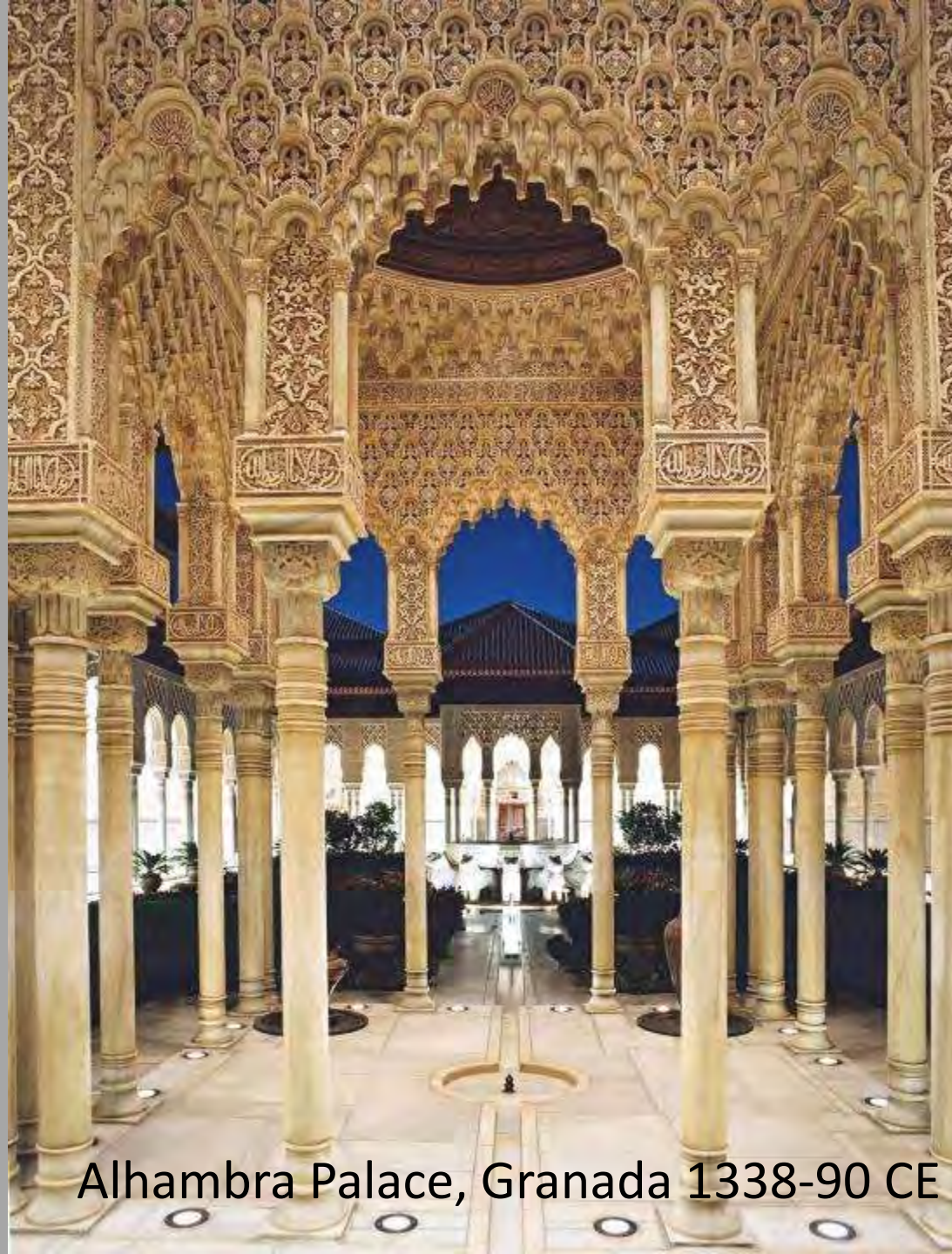
Muqarnas

- A unique feature of Islamic architecture, 'muqarnas' is an Arabic word to describe a 'stalactite vault', the complex geometric interlacing of components to produce a three-dimensional surface that was used both for volume and ornamentation.
- It was developed in the mid 10th century and was later adopted throughout the Islamic world.

Muqarnas



Alhambra Palace,
Granada 1338-90 CE



Alhambra Palace, Granada 1338-90 CE



Alhambra Palace,
Granada 1338-90 CE



The Hall of the Two Sisters, the second main chamber of the Palace of the Lions



Gothic Architecture beyond 1550

Cologne Cathedral (Kölner Dom) 1248-1880 CE

- The old Carolingian Cathedral in Cologne burnt down the new cathedral influenced by French High Gothic architect Gerhard.
- Cologne is notable for its clarity of detail and enormous size. It also has a typical feature of the central European cathedrals - the spire.
- Construction of Cologne Cathedral commenced in 1248 and was halted in 1473, leaving it unfinished.
- Work restarted in the 1842 and was completed in 1880. The cathedral is the largest Gothic church in Northern Europe and has the second tallest spires (157m/515ft) after Ulm Minster (161.5m/ 530ft) finished in 1890. The towers for its two huge spires give the cathedral the largest façade of any church in the world.
- The choir has the largest height to width ratio, 3.6:1, of any medieval church.



Cologne Cathedral (Kölner Dom) 1248-1880 CE



Cologne Cathedral (Kölner Dom) 1248-1880 CE





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