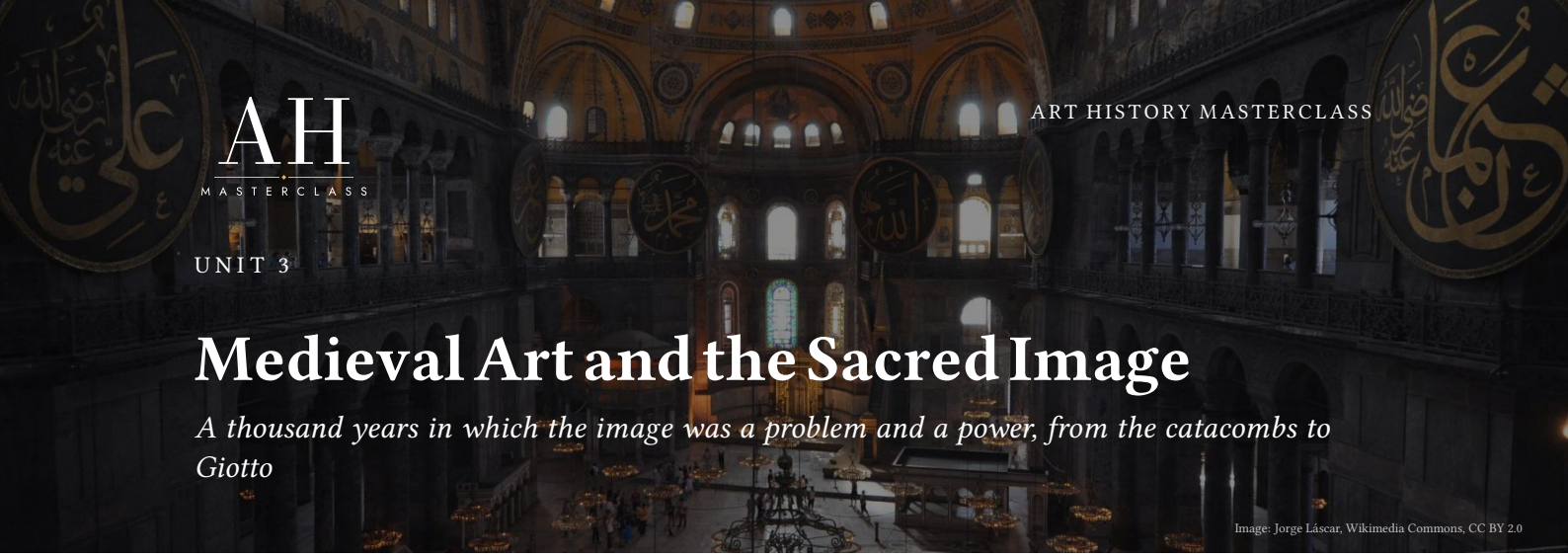


UNIT 3

Medieval Art and the Sacred Image

A thousand years in which the image was a problem and a power, from the catacombs to Giotto

Image: Jorge Láscar, Wikimedia Commons, CC BY 2.0

By the end of this unit, I should be able to answer these questions:

- What is an icon, and why did Byzantine Christians destroy and then defend images?
- How was Hagia Sophia built to make light and sound part of worship, and what did its visitors say they experienced?
- How was a page of the Book of Kells made, from the calf's skin to the last spiral, and what does the Chi Rho page show?
- Why could a Gothic cathedral have walls of glass where a Romanesque church had walls of stone?
- What did a stained glass window and a sculpted portal teach, and to whom?
- How does Giotto's Arena Chapel differ from the icons and mosaics before it?

For a thousand years, from the first painted tombs of the Christians in Rome to the chapel that Giotto painted in Padua, almost every image made in Europe was made for religion, and almost every argument about images was an argument about what an image could do. Could a painted face give access to the person it showed? Could a building let a worshipper experience light as something more than light? Who was allowed to make an image, and who was allowed to break one? This unit follows these questions through six kinds of object, which are the basilica with its mosaics, the great church of Constantinople and the icon, the painted book, the carved portal, the glass wall of the Gothic cathedral, and the painted chapel; it ends at the point where Unit 4 begins.

1 The basilica and the mosaic

The oldest Christian images that survive are paintings in the catacombs of Rome, the underground cemeteries cut into the soft volcanic rock outside the city walls from the late second century onward. In the Catacomb of Priscilla, for example, a painter of the third century showed a young shepherd with a sheep across his shoulders and a woman praying with raised hands. Both motifs were borrowed from the art of the pagan city, where the shepherd stood for kindness and the praying woman for piety, and both were given a Christian meaning by the people who were buried near them. The paintings are small, quickly done, and were seen by lamplight. At Dura-Europos on the Euphrates, in present-day Syria, a private house was converted into a church before the town fell to the Persians in 256, and its walls hold the oldest Christian paintings known in a building rather than in a tomb.

In 313 the emperor Constantine (about 272-337) granted Christians freedom of worship, and within a few years the Church needed buildings for congregations of thousands. The temple was no model, because a temple housed the god while the people stayed outside; a church had to hold the people inside. The model Constantine's architects chose was the **basilica**, the Roman civic hall used for law courts and markets. A basilica is a long rectangular hall with a high central space, the **nave**, lit by windows in its upper wall, the **clerestory**, and flanked by lower passages, the **aisles**, which are separated from the nave by rows of columns. At the far end

a semicircular niche, the **apse**, held the judge's seat in the law court and now held the altar and the bishop's chair. A timber roof covered the whole, and a courtyard, the **atrium**, lay in front of the entrance. Old Saint Peter's in Rome, begun about 319 to 322 over the tomb venerated as that of the apostle Peter, was about 119 m long, a little longer than a football pitch, with a nave 23 m wide, four aisles, and a cross arm in front of the apse called the **transept**; its total width of about 63 m is the width of a football pitch. Figure 1 compares its plan with that of Chartres Cathedral, built nine centuries later. The plan of a basilica is a path, since the eye and the body move from the door to the apse where the altar stands, and this is why the type served the Church for the next thousand years.

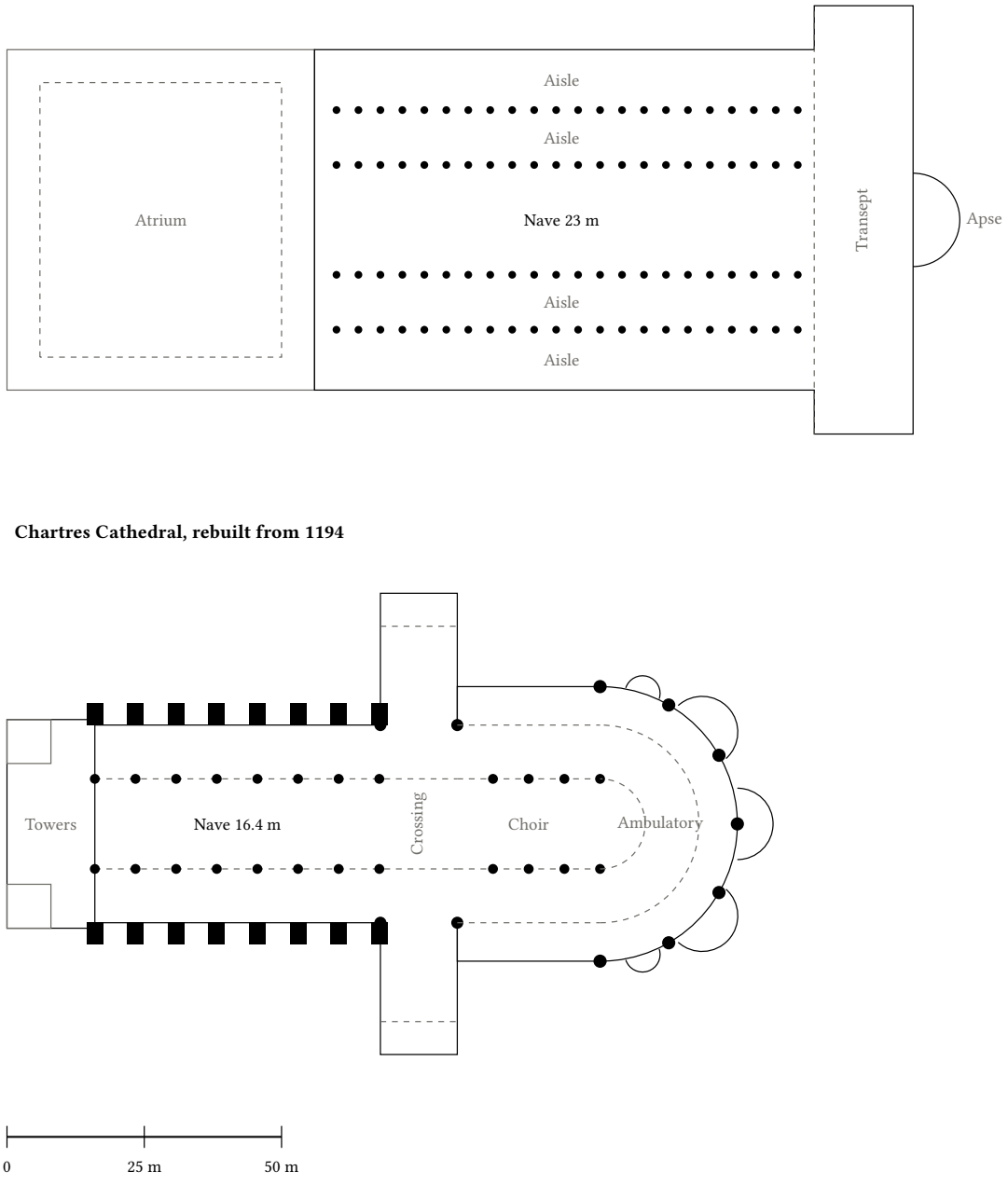


Figure 1. Simplified plans of Old Saint Peter's in Rome (about 319 to 322, demolished from 1506) and of Chartres Cathedral (rebuilt from 1194) at the same scale, drawn after the plans of Dehio and von Bezold (1884 to 1901) and the dimensions given by Krautheimer for Old Saint Peter's. Walls are shown as outlines and the columns of the basilica as dots; the Gothic plan adds the transept with its own aisles, the ambulatory around the choir with its radiating chapels, and the outer piers of the flying buttresses, three terms that Sections 4 and 5 explain.

The best place to see what the walls of such a church looked like is Ravenna on the Adriatic coast, which was the capital of the Western Roman Empire from 402, then of the Ostrogothic kings, and from 540 the seat in Italy of the Eastern Roman Empire, the empire governed from Constantinople that historians call **Byzantine**, after Byzantium, the old name of that city. The city declined after the eighth century, and decline preserved its churches, which keep their sixth-century mosaics almost complete. San Vitale, begun about 526 under Bishop Ecclesius and consecrated in 547 by Bishop Maximian (about 499-556), is an octagon rather than a basilica, which shows that the basilica was never the only type; in the East, churches planned around a centre, with a dome over the middle, became the rule, as Section 2 shows.

A **mosaic** is a picture made of small cubes of stone, glass, or gold set into a bed of lime plaster. The cubes are called **tesserae**, from a Greek word for a four-sided piece, and in Ravenna most of them are about one centimetre across, so that a single standing figure contains several thousand of them. Coloured glass tesserae are cut from slabs of glass melted with metal oxides, and a gold tessera is a leaf of gold sealed between a thick glass base and a very thin glass cover, which protects the metal and makes it shine through the glass. A floor mosaic has to be flat, but a wall mosaic does not, and the mosaicists of Ravenna and Constantinople set their gold tesserae at slightly different angles, so that light from windows and lamps is reflected in many directions at once. The wall does not reflect like a mirror; it glitters, and the glitter changes as the viewer walks or the lamp flickers. Section 2 returns to this effect, because it is the subject of the research presented in this unit.



Figure 2. Emperor Justinian and his court, about 547, wall mosaic in the apse of San Vitale, Ravenna. The emperor stands in the middle with a halo and a jewelled crown and holds a gold dish for the eucharistic bread; the bishop to his left is named MAXIMIANVS above his head. Credit: public domain reproduction via Wikimedia Commons.

CLOSE LOOKING The Justinian panel in San Vitale

What do I see. A row of men stands on a strip of green ground against a gold background (Figure 2). Every face is turned to the viewer, every body is upright, and nobody casts a shadow. In the middle, the emperor Justinian (about 482-565) wears a purple cloak fastened with a jewelled brooch, a crown, and a halo, and he holds a large gold dish. To his right (the viewer's left) stand two officials in white cloaks with purple panels and, behind them, soldiers with spears and a large shield painted with the chi rho, the monogram of Christ that Section 3 meets again. To his left stand a bishop with a jewelled cross and two clerics with a gospel book and a censer, and between the emperor and the bishop, a little behind them, one more man in white. The feet overlap, and the emperor's right foot rests on the foot of the

official beside him. The figures are tall and thin, the folds of the cloth are drawn as lines, and the heads are drawn with more care than anything else.

What does it show. The gold dish is a paten, the plate for the bread of the Eucharist, and on the opposite wall the empress Theodora carries the chalice for the wine. The two panels therefore show the imperial couple bringing the gifts to the altar of the church whose apse they decorate. The name written above the bishop, MAXIMIANVS, identifies the man who consecrated the church in 547. The order of the row is the order of the state: the army on one side of the emperor, the clergy on the other, and the emperor's foot on the foot of his official so that nobody can mistake who stands first. Frontality, the gold ground, and the missing shadows are conventions, and they remove the scene from any particular room or hour; the court is shown as an order that always holds, which is exactly what Justinian, who never visited Ravenna, wanted the city to see; it had been taken from the Goths only a few years before.

How was it made. The tesserae are glass, stone, and gold, set into fresh plaster a patch at a time, with the smallest pieces reserved for the faces. The letters of the bishop's name sit on tesserae that differ from those around them. The head of Maximian, which is a little smaller than its neighbours, and the man in white behind him are later insertions into the row; most probably they were made when Maximian succeeded Victor, the bishop who was first shown there and who died in 545. Irina Andreescu-Treadgold and Warren Treadgold argued this from the cutting and the setting of the tesserae in *The Art Bulletin* 79 (1997).

How do we know. The consecration of 547 gives the date; the name gives the bishop; the overlapping feet give the rank. The panel is a statement of the order of power as the church of Ravenna wished it to be seen, with emperor, army, bishop, and clergy in one line, and not the record of any ceremony that took place.

CHECK YOUR UNDERSTANDING Question 1

The men in the Justinian panel at San Vitale all stand on one line, face the viewer, and cast no shadows. Which account of this does the unit's reading support?

(A) The mosaicists of the sixth century had not yet learned to show depth and shadow

(B) The conventions place the court outside any room or hour and show rank by position

(C) The panel copies a record of a ceremony that Justinian attended in Ravenna in 547

(D) The glass tesserae could not be cut small enough to render shadows on the faces

The solution is at the end of the unit.

2 Hagia Sophia and the icon

In January 532 a riot in Constantinople burned the cathedral of the city, and within a few weeks Justinian had begun a new one. Hagia Sophia, the church of the Holy Wisdom, was dedicated on 27 December 537, less than six years after work began, and it remained the largest church in the world for nearly a thousand years. The two men in charge, Anthemius of Tralles (died about 534) and Isidore of Miletus (active 532 to 537), were known as mathematicians and engineers rather than as master builders, and the geometry of the building shows it. Its plan (Figure 3) sets a square about 31 m on a side, marked by four huge **piers**, the massive masonry supports that carry the roof, in the middle of a rectangle about 70 by 75 m. On the four arches between the piers sits a **dome**, a roof shaped like half a sphere, 31 m across. The problem of placing a round dome on a square base is solved by the **pendentives**, the four curved triangles of masonry that rise from the corners of the square and meet in a circle at the base of the dome. A dome, like an arch, presses outward on whatever holds it up, and this outward push has to be carried somewhere. To the east and west, half-domes of the same width lean against the main arches and carry the push outward, and smaller half-domes in the corners carry it further, so that the

central space opens in every direction. Aisles with galleries above them run along the north and south sides. The crown of the dome stands about 55 m above the floor, as high as a building of eighteen storeys, and a ring of forty windows runs around its base.

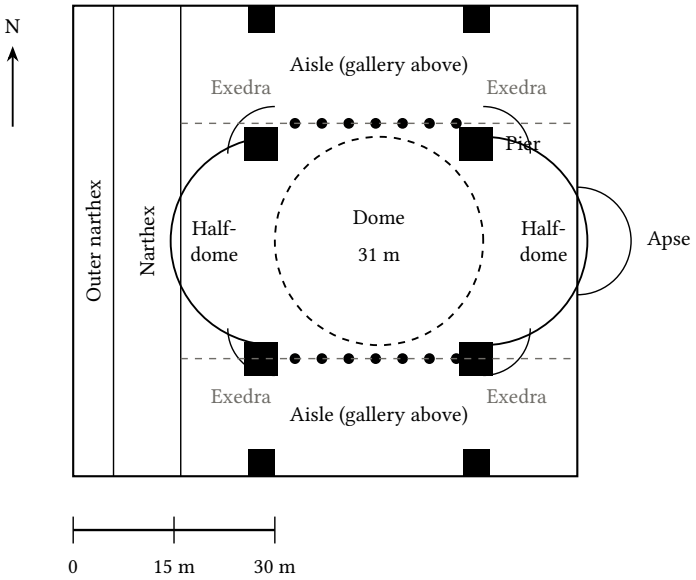


Figure 3. Simplified plan of Hagia Sophia at the level of the floor, drawn after the plans of Dehio and von Bezold and the dimensions published by Mainstone (1988). The dome (dashed circle, 31 m across) rests on the four piers of the central square; the half-domes to the east and west and the four smaller half-domes of the corner exedrae (the curved recesses in the corners) carry its push outward. The aisles, the galleries above them, the double narthex on the west, and the apse on the east complete the rectangle.

The first dome was shallower than the one we see. After earthquakes in 553 and 557, its eastern part collapsed on 7 May 558, and the nephew of Isidore rebuilt it about 6 m higher, which made its push on the piers more nearly vertical, because a steeper dome leans outward less; the church was rededicated on 24 December 562. The lesson that a steeper vault pushes outward less strongly returns in Section 5.

What the building was built to do is recorded by the people who used it. The historian Procopius (about 500-after 565), writing in the 550s, said that the dome seemed "not to rest upon solid masonry, but to cover the space with its golden dome suspended from Heaven", in Dewing's translation of 1940, a phrase in which scholars have heard an echo of the *Iliad*, where Zeus boasts that he could hang the earth and the sea from heaven on a golden chain. The poet Paul the Silentiary (died about 580) composed a long description in verse for the rededication and recited it before the emperor a few days afterwards, at the turn of 562 and 563; he devoted much of it to the marble, the gold, and the hundreds of lamps that lit the church at night. The ring of windows at the base of the dome is the reason for Procopius's impression. Seen from below against the light, as in the lithograph of Figure 4, the masonry between the windows disappears and the dome seems to float on a ring of light.

The building was made for sound as well. In 2010 Bissera V. Pentcheva of Stanford University and the sound engineer Jonathan Abel recorded the echo of balloons popped under the dome and measured a **reverberation time**, the time a sound takes to die away after its source stops, of more than ten seconds, with a peak near twelve seconds in the middle of the range of the human voice (*Speculum* 92, 2017). A modern concert hall is built for about two seconds. In Hagia Sophia a line of chant does not end when the singers stop; it hangs in the air and the next line is sung into it, so that words blur into a continuous sound. The gold mosaic of the vaults, which once covered them completely, and the polished marble of the walls reflect light in the same way as they reflect sound, and the building treated both as something that happened to the worshipper rather than something the worshipper looked at.

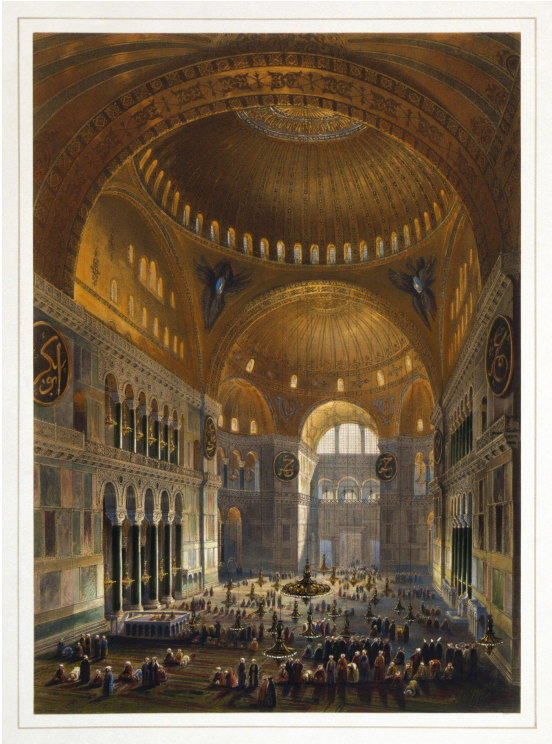


Figure 4. Gaspare Fossati and Louis Haghe, *View of the nave of Hagia Sophia looking west*, tinted lithograph from the album *Aya Sofia, Constantinople, as Recently Restored by Order of H.M. the Sultan Abdul-Medjid* (London, 1852), made after Fossati's restoration of the building in 1847 to 1849, when it served as a mosque. The ring of windows at the base of the dome and the half-domes below it are clearly visible. Credit: public domain reproduction via Wikimedia Commons.

KEY IDEA Light as theology

In Byzantine and later medieval thought, light was the nearest thing in the created world to God, and a building that gathered light and sound was built to make the divine perceptible. The idea applies to Hagia Sophia and, six centuries later, to Abbot Suger's Saint-Denis (Section 5). It does not mean that the builders ignored structure: the collapse of 558 shows what the pursuit of height cost.

The other great invention of Byzantium is small enough to hold in the hands. An **icon**, from the Greek word for image, is in the narrow sense a portable painting of Christ, the Virgin, or a saint on a wooden panel, painted on a white ground with a background of gold leaf, in egg tempera (Unit 1) or, in the earliest centuries, in encaustic, pigments bound in hot wax. The oldest that survive are at the Monastery of Saint Catherine on Mount Sinai, date from the sixth century, and are encaustic. An icon claims something that no other kind of painting claims. It is held to be a true likeness, and the person it shows is held to be present to the one who prays before it, so that a candle lit in front of the panel is lit for the saint, and a kiss given to the panel is given to the saint. This claim fixes the conventions of the icon. The face is turned to the viewer, the eyes are large and meet ours, the body is tall and still, and the gold ground places the person outside any room and any hour. There are no cast shadows, because the light of the icon is not daylight. In a real room, the edges of a floor or a footstool run closer together as they go away from us toward the horizon; in an icon they tend to spread apart instead, so that the picture seems to open toward the person praying rather than away from them. This convention is often called reverse perspective, and the footstool in Figure 5 shows it. Painters repeated established types, with Greek names such as the Hodegetria, the Virgin who points to the Child, and the Pantokrator, Christ as ruler of all, because the authority of an icon rested on its faithfulness to an older image and not on invention.

KEY IDEA The icon as presence

An icon is a likeness through which a person is held to be present to the one who prays before it, and the honour given to the image is given to the person it shows. This is why icons copy an established type rather than invent, and why their destruction and their defence were fought over so hard. The idea applies to the painted panel, the mosaic, and the relief icon in metal and enamel; it does not apply to an ordinary portrait or to a picture that tells a story.



Figure 5. Byzantine, thirteenth century (possibly from Constantinople), *Madonna and Child on a Curved Throne*, about 1260 to 1280, tempera on linden panel, 82.4 × 50.1 cm (painted surface), National Gallery of Art, Washington, Andrew W. Mellon Collection, 1937.1.1. Credit: National Gallery of Art, CC0.

CLOSE LOOKING An icon of the Virgin and Child in Washington

What do I see. A panel of linden wood, 82.4 cm high and 50.1 cm wide, which is roughly the size of a large tray (Figure 5). A woman in a deep red hooded mantle over a blue dress sits on a throne whose high back curves round her like the wall of an apse, and a child in orange and green sits on her left knee. He raises his right hand with two fingers extended and holds a rolled scroll in his left. Both have gold haloes, and the child's halo carries a red cross. Two angels in medallions float in the upper corners, each holding a staff and a globe. The background is gold, the throne is painted in gold and brown, and the folds of the red mantle and the blue dress are drawn as fine gold lines that fan out from the knees and shoulders like rays. There is no floor beyond the footstool and no room; the woman's feet rest on a cushioned stool that is drawn as if seen from above while the throne is seen from the front.

What does it show. The woman is the Virgin Mary and the child is Christ, which the cross in the halo, the gesture of blessing, and the scroll, which stands for the Word of God, make certain. The curved throne with its architectural back is a type found in several icons of the thirteenth century, and the two angels

with globes and staffs are the archangels Michael and Gabriel as guards of the throne. The gold lines on the cloth, a convention called chrysography, mean that the light on these bodies is divine light. The picture does not show an event; it shows two persons to be prayed to.

How was it made. The panel was covered with white gesso, the gold leaf was laid on a red clay base and burnished, that is, polished until it shone, and the figures were painted in egg tempera with the gold lines added last. The National Gallery of Art attributes the panel to a Byzantine painter of the thirteenth century who may have worked in Constantinople. Linden is a wood of central and eastern Europe, and the question whether the painter worked in Constantinople or in Italy for a Byzantine-trained workshop has been argued from the wood, the style, and a companion panel in the same collection.

How do we know. There is no signature and no document, which is normal for an icon, since the painter's name was never the point. Date and origin rest on style and on comparison with dated works. The reading of the picture, however, does not depend on the attribution: by its gold ground, its frontal gaze, and its gold-lit cloth, the panel presents the Virgin and Child as present to the viewer, outside any place and time, exactly as the defenders of images in the eighth century said an icon should.

That defence had been necessary. From the 720s the Byzantine state turned against the images it had made, in the movement that historians call **Iconoclasm**, the breaking of images. The traditional account says that the emperor Leo III (about 685-741) had an image of Christ removed from the gate of the palace in 726 and issued a decree against images in 730; the story comes from later sources hostile to Leo, and historians today doubt its details while agreeing that the policy began under him. His son Constantine V (718-775) called a council at Hieria in 754 that declared images of Christ and the saints heretical. Images were painted over, mosaics were replaced by crosses, and almost no icon from Constantinople survives from before this period; the icons of Sinai survived because Sinai lay outside the empire, under Arab rule. The empress Irene (about 752-803) reversed the policy at the Second Council of Nicaea in 787. A second period of Iconoclasm followed from 815, and the veneration of images, the honouring of them with bows, kisses, and candles, was restored for good in 843 under the regent Theodora, an event the Orthodox Church still celebrates on the first Sunday of Lent as the Triumph of Orthodoxy. The arguments of both sides are the subject of the excursion below, and they matter beyond Byzantium, because the same arguments returned in western Europe in the sixteenth century, as Unit 5 shows.

EXCURSION ***The argument about images***

The Iconoclasts began from the second commandment, which forbids making a likeness of anything in heaven or on earth to bow down to it, and from the obvious charge that people who kissed panels and lit candles before them were doing exactly that. Their best argument was theological. Christ, they said, is both God and man; an image can show only his human body, so either it separates the human from the divine, which the Church had condemned as heresy, or it claims to show the divine in paint, which is worse. The only true image of Christ, the Council of Hieria declared in 754, is the bread and wine of the Eucharist.

The defenders answered from the Incarnation, the doctrine that God became a human being in Christ. John of Damascus (about 675-749), a monk writing in safety under Muslim rule in Palestine, argued in three treatises of the 730s that God, who could not be depicted before, had become visible by taking a body, and that to refuse to depict him was to doubt that he had. "I do not worship matter," he wrote, in David Anderson's translation, "I worship the Creator of matter who became matter for my sake." He borrowed from Basil of Caesarea (about 330-379) the sentence that decided the question for the next thousand years: the honour paid to the image passes to the prototype, the person shown. The council of 787 made the distinction official. Images may be given honour and veneration, which in Greek is proskynesis, the bow; worship, latreia, belongs to God alone. A generation later Theodore the Studite (759-826) sharpened the point with the image of a seal and its impression in wax: the impression is not the seal, and nobody confuses them, yet the impression carries the seal's whole form.

The dispute was about power as well as theology, since it set emperors against monks and councils against councils, and it was decided by an empress and a regent. Its result was the art of Byzantium after

843, in which the icon, defended at such cost, became the centre of every church and every house.

CHECK YOUR UNDERSTANDING Question 2

Which statement matches what the Second Council of Nicaea decided about images in 787?

(A) Images may be worshipped as God himself is worshipped, because the honour given to them passes on to God

(B) Images may be kept in churches for teaching only, and must never be bowed to, kissed, or given candles

(C) Images may be given honour and veneration, which pass to the person shown, while worship belongs to God alone

(D) Only images of Christ may be venerated, because he alone took a visible body that a painter could see

The solution is at the end of the unit.

The defenders of images spoke of presence, and modern research has tried to recover what they can have meant by it. The research spotlight below presents the work of Bissera V. Pentcheva, whose question is not what Byzantine images show but what they did under the moving light of a church, and whose answer connects the gold tesserae of Section 1 to the golden statues of saints that Section 4 describes.

RESEARCH SPOTLIGHT

Bissera V. Pentcheva *Stanford University*

The glittering eye of the medieval image was its claim to be alive

Bissera V. Pentcheva, Professor of Art and Art History at Stanford University, asks why the makers of Byzantine icons and of the gold reliquary statues of the Romanesque West used gold, gems, glass, and enamel so lavishly, when a painted face could be made far more lifelike. Her answer, set out in a paper of 2016, is that medieval makers aimed at liveliness rather than likeness. Gold and gems change their appearance with every change of light, and in a church lit by candles that flicker in a draught or in the breath of a praying person, the surface of such an object never looks the same twice. She calls this changing appearance animation and argues that it is what Byzantine writers meant when they described images as ensouled. Her method combines the reading of Greek and Latin texts with time-lapse photography and video of the objects themselves, among them a relief icon of the Archangel Michael of the late tenth century in the treasury of San Marco in Venice and the silver-covered statues of Saint Chaffre at Le Monastier-sur-Gazeille and Saint Candidus at Saint-Maurice d'Agaune. Moving a candle up and down in front of the Archangel, she found that the shadows in the relief eyes make the gaze seem to sink as the light rises and to rise as it falls, as if the image answered the hands of a praying person. She reads the same exchange in the Latin book of miracles that Section 4 describes, on the golden statues of the south, and she links this glitter to the long reverberation she measured in Hagia Sophia, as two sides of a sensory experience in which the sacred was felt before it was understood. For this unit the work recovers what the defenders of images meant by presence, and it warns that a museum photograph taken in still light shows a Byzantine object as it was never seen.

Read the paper: Pentcheva (2016), Glittering Eyes: Animation in the Byzantine Eikōn and the Western Imago, Codex Aquilarensis 32, 209 to 236

3 The manuscript page

While Byzantium argued about images, the monasteries of Ireland and northern Britain made books, and the books they made contain the most elaborate pages ever painted. Art historians call this art **Insular**, from the Latin word for island, and date it from about 600 to about 900. Its ornament, the interlace of ribbons, the spirals that turn into three-armed whorls (shapes like a wheel with three curved spokes), and the animals that bite their own tails, came from the metalwork of the Celtic and Germanic peoples and was transferred to the page by monks who had learned Latin and the Gospels from Rome.

A book was made in the **scriptorium**, the writing room of the monastery, from the skin of calves. The skin was soaked in lime, scraped of hair and flesh, stretched on a frame, dried under tension, and scraped again until it was thin, pale, and smooth; this material is **vellum**. One calf gave one large sheet, which folded once gives two leaves, or folios, and, since each leaf is written on both sides, four pages. The sheets were gathered into groups of eight or ten leaves, pricked along the edges with a point to mark where the lines should run, and ruled between the pricks with a blunt point to guide the lines of writing. The scribe wrote first, with a quill cut from a goose feather and an ink made either of soot or of oak galls and iron salts. The painter came afterwards, with a short list of pigments that Table 1 names, and marked out his circles with a compass whose pricks can still be seen in the pages.

The Lindisfarne Gospels, now in the British Library in London, were made on the island of Lindisfarne off the coast of Northumbria about the year 700, and we know who made them. About 950 a priest named Aldred added an Old English translation between the lines, and with it a note naming Eadfrith (died 721), bishop of Lindisfarne, as the man who wrote the book. The note names a binder and a metalworker but no other painter, so the painting is credited to Eadfrith as well, which makes him one of the first named painters of the Middle Ages.

The Book of Kells, now in the Library of Trinity College Dublin as manuscript 58, is about a century younger. It was made about 800, probably begun in the monastery of Iona off the west coast of Scotland and finished at Kells in Ireland, to which the monks of Iona withdrew after Viking raids. It contains the four Gospels in Latin on 340 surviving leaves, each now about 33 by 25.5 cm, a little larger than a sheet of A4 paper, after a nineteenth-century binder trimmed the edges. The usual estimate is that about 185 calves gave their skins for it, which is roughly one calf for every two leaves and means that a whole herd was raised for one book. In 1007 the book was stolen from the church of Kells, and the Annals of Ulster record that it was found after two months and twenty nights under a piece of turf, stripped of the gold of its cover. Trinity College has owned it since 1661.

Colour	Pigment	Chemical Make-up	Source
Blue	indigo	plant dye	woad or indigo plant
Red and orange	red lead	lead oxide	roasted lead white
Yellow	orpiment	arsenic sulfide	mineral, imported
Green	vergaut	orpiment with indigo	mixed in the scriptorium
Purple	orcein (probable)	lichen dye	lichens
White	gypsum	calcium sulfate	mineral
Black	carbon and iron-gall ink	soot, oak galls, iron	made locally

Table 1. The pigments of the Book of Kells identified by Raman spectroscopy at 681 points of the manuscript (Bioletti and colleagues, *Journal of Raman Spectroscopy* 40, 2009). The purple was identified from its fluorescence rather than from a clear Raman signal.

Table 1 lists the pigments that a survey by Raman spectroscopy, a method that identifies a substance from the way it scatters laser light, found in the Book of Kells. The list is short, and two things about it surprise most visitors. The book contains no gold leaf at all; what looks like gold on its pages is orpiment, a yellow arsenic sulfide that painters valued because it imitated gold and that poisoned them slowly. And the blue, which older descriptions of the book took to be ultramarine ground from lapis lazuli brought from Afghanistan, turned out everywhere the survey looked to be indigo, a plant dye that could be made from woad grown in Europe.

KEY IDEA The manuscript page as a made object

A page of an illuminated book is a stack of decisions: a calf's skin prepared as vellum, a ruled grid, a text written first, and painting added over it with a short list of pigments. Reading a page as a made object means asking what each layer cost in animals, hours, and trade before asking what the picture means. The idea applies to every manuscript; it does not tell us who the painter was, which for most medieval books nobody recorded.



Figure 6. The Chi Rho page of the Book of Kells, folio 34 recto, about 800, ink and pigments on vellum, about 33 × 25.5 cm, Library of Trinity College Dublin, MS 58. The page opens the account of Christ's birth in the Gospel of Matthew with the first three letters of his name in Greek. Credit: public domain reproduction via Wikimedia Commons.



Figure 7. The Chi Rho page of the Book of Kells, detail of the two cats and four mice at the foot of the great letter. Two of the mice hold a round wafer between them. Credit: public domain reproduction via Wikimedia Commons.

CLOSE LOOKING The Chi Rho page of the Book of Kells

What do I see. A page a little larger than A4, filled almost to its edges by three letters (Figure 6). The largest, which sweeps from the upper left across the whole page, is the Greek letter chi, shaped like an X; its left arm curls down into a long tail that reaches the lower left corner. Tucked into its lower right quarter stand a rho, shaped like a P, and an iota, a vertical stroke, and below them a single short line of ordinary writing. Every surface of the letters is filled with ornament: spirals that split into smaller spirals, interlace, knots, and roundels (round medallions), in purple, red, yellow, and a little blue and green, with the vellum left bare between them. Looking longer, one finds living things. A human head ends the curl of the rho. Three angels float along the left arm of the chi. At the foot of the letter two cats face each other with four mice between them, two of which hold a round wafer (Figure 7); an otter with a fish in its mouth lies at the lower left; and two moths meet near the crossing of the chi.

What does it show. The three letters, chi, rho, and iota, are the first letters of Christos in Greek and together form the monogram of Christ, which Section 1 saw painted on a soldier's shield in Ravenna. The line of writing below reads "h generatio", the abbreviated opening of the sentence "Christi autem generatio sic erat", "Now the birth of Christ was in this way", which is Matthew 1:18. The page therefore marks the moment in the Gospel where Christ enters the world, and the scribe marked it by turning Christ's name into a picture. The round wafer in the mouths of the mice is a eucharistic host, the bread of the Mass, and the cats, the mice, the otter, and the fish have been read as the creation gathered around the name, though no text of the period explains them and the reading stays open.

How was it made. The vellum was ruled and the ornament laid out with compass and rule, as the compass pricks and the geometry of the roundels show. The pigments are those of Table 1, with orpiment for the yellow that reads as gold. The painting of this one page has been estimated at weeks of work, and the fineness of the spirals, some of them with lines less than a millimetre apart, is such that Gerald of Wales (about 1146-1223), who was shown a Gospel book of this kind in Ireland in 1185, perhaps this one, wrote that it seemed the work of an angel rather than of a man.

How do we know. The date rests on the script and the style compared with dated manuscripts and on the history of Iona and Kells; the annal of 1007 proves that the book was at Kells and already famous by then. The page shows the first three letters of Christ's name in Greek, turned into an image so dense that the letters are found rather than read, which was the point: the reader was meant to slow down at the place where the Gospel reaches the birth of Christ.

4 Romanesque and the portal

In the decades after the year 1000, a monk of Burgundy named Rodulfus Glaber (about 985-1047) wrote, in a sentence that is often quoted, that the world was shaking off its old age and clothing itself everywhere in a white mantle of churches. The churches he saw being built were the first in western Europe since antiquity to be vaulted in stone throughout, that is, roofed with a **vault**, a ceiling of stone built on the principle of the arch, instead of with timber, and the nineteenth century named their style **Romanesque**, in the manner of the Romans, because of its round arches, heavy walls, and stone vaults. The chronology of this program, fixed in Unit 1, closes the early medieval and Romanesque centuries at 1150; the Romanesque proper, the vaulted churches of this kind, runs from about 1000. A stone vault does not burn, which mattered in a Europe where timber-roofed basilicas burned every generation, but it has a cost that Section 5 measures: a **barrel vault**, a half-cylinder of masonry over the nave, pushes outward along its whole length, so the walls that carry it must be thick along their whole length and can be pierced only by small windows, which is why Romanesque naves are dark.

What filled them was pilgrimage. From the eleventh century, pilgrims walked in large numbers to Rome, to Jerusalem, and above all to Santiago de Compostela in north-west Spain, where the body of the apostle James was believed to lie, and the churches along the roads were built for crowds that moved. The **pilgrimage church** has aisles that continue around the apse as a passage, the **ambulatory**, with small chapels opening off it, so that

pilgrims could pass behind the high altar and visit the relics without disturbing the service in the choir. A guide for pilgrims written about 1140 and preserved in the Codex Calixtinus at Santiago lists the roads, the shrines, and the relics worth a detour.

One of the shrines was Conques in the hills of southern France, whose abbey held the bones of Sainte Foy, a girl martyred at Agen about 303. The monks of Conques had stolen the relics from Agen in 866, by their own proud account, after one of them had spent years in the Agen community to get near them; historians call such thefts furta sacra, holy thefts, and they were common. The relics were kept in a seated statue of wood covered with gold and set with gems, cameos, and rock crystal, about 85 cm high, whose head is a reused gold head of late Roman date. When the schoolmaster Bernard of Angers (active 1010 to 1020) first saw it on a visit about 1013, he wrote in his book of the saint's miracles that he had taken the golden figures of the south for idols, and that he changed his mind when he understood the statue as a container for the relics and saw how the pilgrims behaved before it. Of the first such statue he met on the road, Saint Gerald at Aurillac, he wrote that it seemed to see the peasants who looked at it and to grant their prayers with its shining eyes, which is the text that the research spotlight of Section 2 reads.



Figure 8. Abbey church of Sainte-Foy, Conques, tympanum of the west portal, early twelfth century, yellow limestone with traces of paint. Christ sits in the middle of the tympanum; the saved are on his right (the viewer's left) and the damned on his left. The lintel runs below the tympanum, the archivolt frames it, the trumeau divides the doorway below it, and the jambs are the sides of the doorway. Credit: photograph by Titanet, Wikimedia Commons, CC BY-SA 3.0.

The sculpture of a Romanesque church is concentrated at its door, and the door has a vocabulary of five parts, which Figure 8 shows at Conques.

- The **lintel** is the horizontal beam of stone over the doorway.
- The **tympanum** is the semicircular field between the lintel and the arch above it.
- The **archivolts** are the arches that frame the tympanum in receding bands.
- The **trumeau** is the post that divides a wide doorway in two.
- The **jambs** are the sides of the doorway.

At Conques the tympanum, carved in the early twelfth century, shows the Last Judgement, the scene in which Christ returns at the end of time to judge the living and the dead, with 124 figures in yellow limestone that still carry traces of their paint. Christ sits in the middle, the saved stand in orderly rows on his right, and the damned

are pushed into the mouth of hell on his left, under an inscription that warns sinners of the judgement to come. At Autun in Burgundy the Last Judgement of about 1130 over the west door of the cathedral of Saint-Lazare carries under the feet of Christ the words *Gislebertus hoc fecit*, "Gislebertus made this", one of the very few signatures of the period. Who Gislebertus (active about 1120 to 1135) was is less certain than the books say: Linda Seidel of the University of Chicago argued in *Legends in Limestone* (1999) that the name may be that of a patron rather than the sculptor, and the question is open.

Why pictures stood over the door is answered by a letter. In 599 and again in 600, Pope Gregory the Great (about 540-604) wrote to Serenus, bishop of Marseille, who had thrown the images out of his churches because people were worshipping them. Gregory told him that he had been right to forbid the worship and wrong to destroy the images, and he gave the reason in one sentence, in Barmby's translation: "what writing presents to readers, this a picture presents to the unlearned who behold, since in it even the ignorant see what they ought to follow; in it the illiterate read." For nine hundred years the sentence was the standard justification of images in the West, and it differs from the Byzantine one: the picture teaches; it does not make anyone present. A set of images chosen and arranged so that they teach one lesson together is called a **programme**, and a Last Judgement over the door is a programme in one scene, because whoever enters the church walks under the judgement into the place where it is decided.

5 The Gothic system and the glass wall

The change came at Saint-Denis, the abbey north of Paris where the kings of France were buried. Its abbot from 1122, Suger (about 1081-1151), rebuilt the west front, which was dedicated on 9 June 1140, and then the **choir**, the eastern part of the church around the high altar where the clergy sang the services, which was dedicated on 11 June 1144 in the presence of King Louis VII and a crowd of bishops. In the new choir the ambulatory and its chapels were covered by a single system of vaults carried on slender columns, and the walls between the columns were filled with glass. Suger wrote two accounts of what he had done, and in them he explained why. On the gilded doors of the west front he had verses inscribed that say, in David Burr's translation, "The dull mind rises to the truth through material things", and of the choir he wrote that it was pervaded by "the new light". The light coming through the coloured glass was for Suger the visible form of something beyond the senses, and the way up to that something led through gold, gems, and glass rather than away from them, which is the idea of Section 2 transplanted to France.

> EXCURSION *Suger and the sapphire glass*
>
> Suger's account of his administration, written in the late 1140s, reads in places like an inventory and in places like a confession. He lists the gold and the gems he collected for the altar furnishings, hyacinths (the name then given to an orange-red stone), rubies, sapphires, emeralds, and topazes, and he records with satisfaction that kings and princes, seeing him at it, pulled the rings from their fingers and gave them. For the windows he called glass painters from several regions, and the makers were provided, by his own figure, with about seven hundred pounds and more in ready money, pounds being the money of account of the time rather than a weight, and with the sapphire glass itself, a material he names with the gem to say that the blue cost as much as gems. He appointed a craftsman to keep the windows in repair and set aside an income for it. Looking at the stones on the altar, he wrote, he felt himself carried from this world to a higher one, in a manner that he called anagogical, the word the theologians used for an ascent from the visible to the invisible. His great opponent, Bernard of Clairvaux (1090-1153), had written in about 1125 that the walls of monastery churches shone while their poor went hungry, and the two men stand for the two answers that the Middle Ages gave to the question whether gold belongs in a church. Suger's answer was built, and it became the Gothic cathedral.

The style that spread from Saint-Denis over the next century was named Gothic by Italians of the sixteenth century who meant it as an insult, since the Goths were barbarians; the name stuck and lost its sting. The program dates Gothic from 1140 to about 1500. What made it possible was a system of three parts, each of which had existed before, used together for the first time. The parts are easiest to describe for one **bay**, the

compartment of a nave between one pair of piers and the next; a nave is a row of such bays, and each bay carries its own vault. Figure 9 shows one bay of Chartres cut across, with the three parts in place.

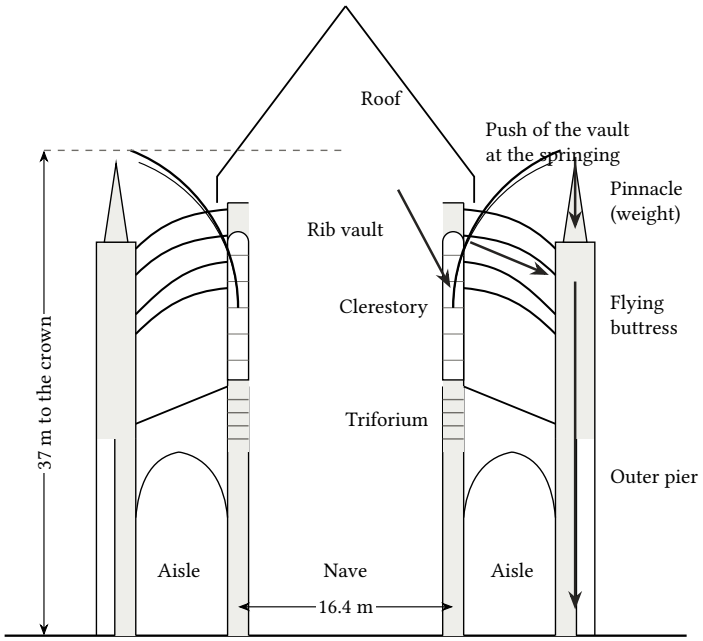


Figure 9. Cross-section of one bay of a Gothic nave in the manner of Chartres, drawn to the proportions of the nave (16.4 m wide, vault about 37 m high) and not to the measured survey. The arrows mark the path of the forces: the weight and the outward push of the pointed rib vault arrive at the springing, the point where the vault leaves the top of the pier, and the flying buttress carries the push over the aisle roof to the outer pier, and the pinnacle loads that pier so that it is not overturned. The wall between the piers, the clerestory, carries only itself and is opened into glass.

PRINCIPLES The Gothic system

1. **The pointed arch.** Two arcs meeting at a point can be built to any height over a given span, so vaults over bays of different widths can reach the same height, and a steeper arch pushes outward less strongly than a round arch over the same span.
2. **The rib vault.** Stone ribs built first along the diagonals and edges of each bay carry the thin shell of the vault built between them, and they gather the weight and the outward push of the vault into the four corners of the bay, so that the wall between the corners carries nothing.
3. **The flying buttress.** A half-arch leaping over the aisle roof from a free-standing pier outside the church to the point where the vault pushes carries that push to the ground outside the building, so that the nave wall between the piers is free to be opened into glass.

ANALYSIS IN DETAIL Why the Gothic wall could become glass

A vault pushes down, because it is heavy, and it pushes outward, because each half of an arch leans against the other and would fall outward if nothing held it. For an arch of span s (the width it bridges) and rise h (the height of its crown above the springing, the level at which the arch leaves its supports), carrying a load w for each metre of span, the outward push at the springing is approximately

$$H \approx \frac{w\,s^2}{8h},$$

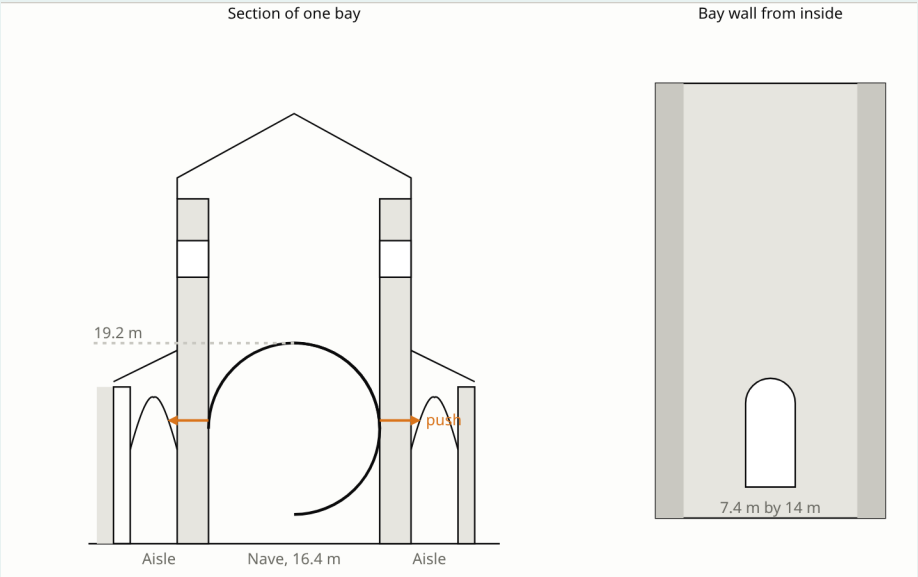
which is the exact rule for a parabolic arch under a uniform load and a fair approximation for a masonry vault. The rule says that the push grows with the square of the span and falls as the arch gets steeper. A semicircular barrel vault has $h = s/2$, so $H \approx ws^2/(8 \cdot s/2) = ws/4 = 0.25\,ws$. An equilateral pointed vault, in which the two arcs

are drawn from the opposite springing points, has its crown at the top of an equilateral triangle built on the span, and the height of such a triangle is $\sqrt{3}/2 \approx 0.87$ of its side, so $h \approx 0.87\,s$ and $H \approx ws^2/(8 \cdot 0.87\,s) \approx 0.14\,ws$. Since $0.14/0.25 = 0.58$, the pointed vault pushes with about 58 per cent of the force of the round vault over the same span and the same weight. This is the first gain, and it is the reason the rebuilt dome of Hagia Sophia was made steeper in 562.

The second gain is where the push arrives. A barrel vault pushes along the whole length of the wall, which must therefore be thick along its whole length. A rib vault gathers the push into the corners of each bay, so that the wall between the corners carries only its own weight. The third gain is the buttress, which takes the push at those corners and carries it outside the building to a pier that can be as massive as the builder likes, because it stands in the open air where nobody needs a window.

At Chartres the nave is 16.4 m wide between the piers and the vault stands about 37 m above the floor, as high as a building of twelve storeys. Everything in the clerestory wall between the piers that is not pier is glass, and the whole cathedral carries 176 windows with about 2,600 square metres of glass, which is more than a third of a football pitch. A Romanesque nave of the same width could not have been lit this way, because its walls would have had to be solid, and it could not have been built this high, because a round vault of that height over that span would have pushed its walls apart. The chain from arch shape to glass wall is therefore a chain of arithmetic, and the numbers decide it.

INTERACTIVE From the Romanesque bay to the Gothic bay



Move the slider from Romanesque to Gothic and watch the round barrel vault become a pointed rib vault, the wall grow thinner as flying buttresses take over the push, and the window in the bay wall grow from a slit to a glass wall. The readouts give the height of the vault crown, the outward push relative to a round vault over the same 16.4 m span by the rule of the Analysis in Detail box, and the share of the bay wall that is window in the drawing.

Click the picture or this link to try it in the online version of this unit.

The system was pushed as far as it would go. Chartres burned on the night of 10 June 1194 and was rebuilt in about twenty-five years, from 1194 to about 1220, with its vaults at 37 m; the cathedral was dedicated on 24 October 1260 in the presence of King Louis IX. Amiens, begun in 1220, reached 42 m. The choir of Beauvais, begun in 1225, reached about 48 m, and part of its vaults fell in 1284; it was rebuilt with extra piers and never completed. Height had its limit, and the limit was found by building past it.

CHECK YOUR UNDERSTANDING Question 3

A mason replaces a semicircular barrel vault, whose rise is half its span, with an equilateral pointed vault of the same span and the same weight per metre of span. By the rule in the Analysis in Detail box, what happens to the outward push at the springing?

(A) It falls to about 58 per cent of the push of the round vault

(B) It rises to about 173 per cent, because the pointed vault is taller and heavier

(C) It stays the same, because the span and the weight have not changed

(D) It falls to half, because the pointed arch is twice as steep

The solution is at the end of the unit.

The colour of the glass that filled the walls was given to it while it was molten, not painted on afterwards. A monk who wrote under the name Theophilus (active about 1100 to 1120) left the only medieval description of the craft in the second book of his treatise *On Diverse Arts*, and his account can be checked against the windows. The glassmaker coloured the molten glass with metal oxides, cobalt for blue, copper for red and green, manganese for purple, and blew it into sheets; such glass is called pot-metal because the colour goes through the whole thickness. The glazier drew the design full size on a table whitened with chalk, laid the coloured sheets over the drawing, and cut each piece to shape with a hot iron drawn along the line, then trimmed the edges with a notched tool, the grozing iron. Faces, folds, and lettering were painted on the pieces with a brown-black paint of ground glass and iron oxide, which was fired in a kiln so that it fused to the surface. The pieces were then joined with strips of lead of H-shaped section, the **cames**, soldered at every joint, and the finished panels were fixed to an iron frame set in the window opening. A medieval window is therefore a drawing in lead filled with coloured light, and the pieces are small, rarely wider than a hand, because large sheets could not be blown and large pieces cracked.

The oldest glass at Chartres survived the fire of 1194: the three windows of the west front, made between about 1145 and 1155, and the panel of the Virgin and Child known as Notre-Dame de la Belle Verrière, made about 1180 and reset after the fire in a surround of thirteenth-century angels, whose blue, made with cobalt, is the colour that visitors remember. The rest of the glass dates from about 1205 to 1240 and is the largest ensemble of medieval glass to survive anywhere, taken out and stored during both world wars. What the windows taught, and to whom, has two answers. The lower windows, at eye level, tell the lives of saints and the stories of the Old and New Testaments in panels read from the bottom upward, and many of them carry at the bottom a small scene of the people who paid for them, among them the bakers, furriers, carpenters, and money changers of the town, so that the trades of Chartres stand in the walls of its cathedral. The upper windows, 30 m above the floor, cannot be read in detail from the ground at all, and their scheme of prophets and apostles was addressed to the clergy who knew the theology. To everyone the windows taught what Suger had said, which is that the light itself was the meaning.

The sculpture of the Gothic portal changed as fast as the structure. The Royal Portal on the west front of Chartres, carved between about 1145 and 1155 and spared by the fire, still shows the Romanesque arrangement of a tympanum that is read as a programme.

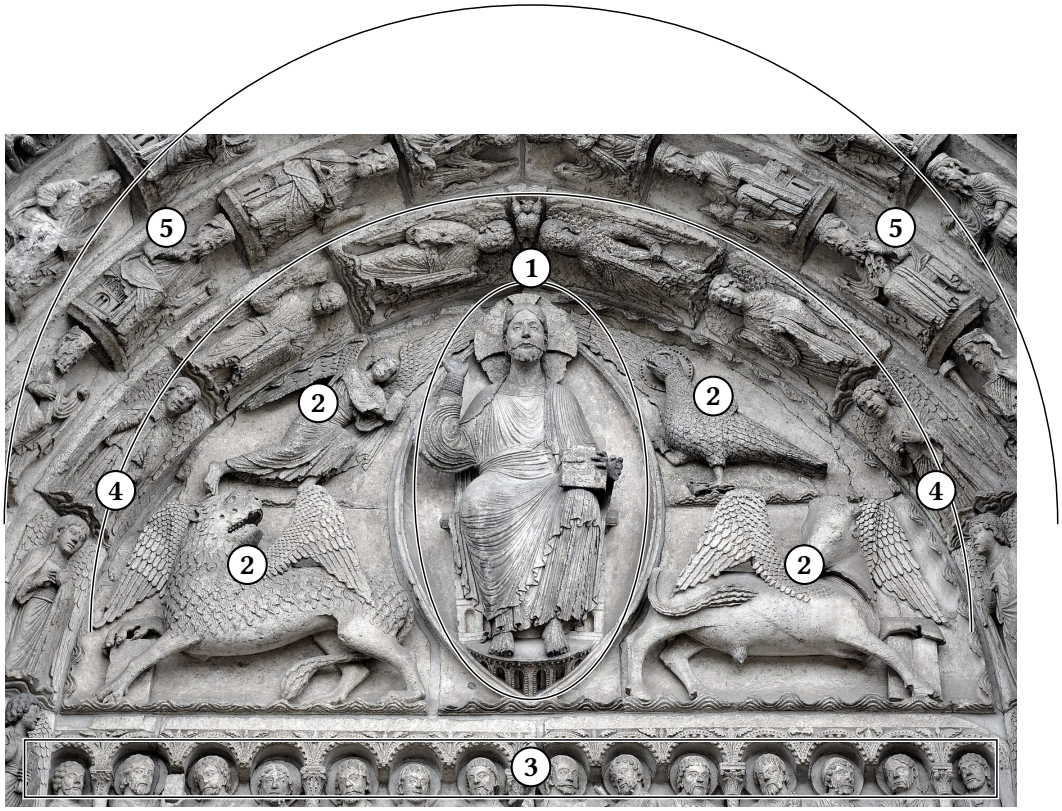


Figure 10. Chartres Cathedral, central tympanum of the Royal Portal, about 1145 to 1155, limestone, with the program's own overlay numbering the parts of the programme: 1 Christ in the mandorla, 2 the four creatures of the evangelists, 3 the lintel with the twelve apostles in four groups of three between two more figures, 4 the inner archivolt with angels, and 5 the two outer archivolts with the twenty-four elders of the Apocalypse. The lines are the program's own analysis and are not on the stone. Credit: photograph by Vassil, public domain, via Wikimedia Commons.

CLOSE LOOKING The central tympanum of the Royal Portal at Chartres

What do I see. A semicircular field of limestone over the middle door (Figure 10). In its centre a bearded man sits on a throne inside an almond-shaped frame, his right hand raised and a book on his left knee; his figure is larger than any other. Around the frame four creatures fill the corners: a winged lion below on the left, a winged ox below on the right, a winged man above on the left, and an eagle above on the right. Below, along the lintel, a row of seated men in groups of three, with columns between the groups, and one more figure at each end. Above, three concentric bands of figures follow the curve of the arch: angels in the innermost band and, in the two outer bands, seated men with crowns and musical instruments. The carving is in high relief, the folds of the cloth are fine parallel lines, and every figure faces forward or toward the centre.

What does it show. The man in the almond-shaped frame, which is called a mandorla, is Christ in Majesty at the end of time, as the Book of Revelation describes him, and the four creatures are the symbols of the four evangelists, Mark the lion, Luke the ox, Matthew the man, and John the eagle, which is how the Gospels surround Christ. The twelve seated men on the lintel are the apostles, and the crowned men with instruments in the archivolts are the twenty-four elders of the Apocalypse, who sit around the throne of God with harps in Revelation 4. The two figures at the ends of the lintel are usually read as the prophets Enoch and Elijah, who are expected to return before the end. The programme is the end of the world shown as order rather than as terror, which is a change from the Last Judgements of Conques and Autun a generation earlier; the judgement here is a vision, and nobody is damned.

How was it made. Carved from blocks of limestone before they were set into the wall, with the mandorla

and the creatures on separate stones whose joints can be seen, and originally painted, as traces on other portals of the period show. The style, with its elongated bodies and linear folds, belongs to the middle of the twelfth century and matches the column statues on the jambs below.

How do we know. The portal is older than the church behind it, because the fire of 1194 spared the west front, and its date of about 1145 to 1155 rests on documents of the building campaign of that time and on style. The tympanum shows the Christ of the Apocalypse surrounded by the Gospels, the apostles, and the elders, a programme of the end of time read from the centre outward, in which the beholder is instructed rather than threatened.

The statues on the jambs of the Royal Portal are columns as much as people: tall, straight, with their feet pointing downward and their folds running in vertical lines, they belong to the architecture. Ninety years later, on the west front of Reims Cathedral, begun in 1211, the statues of the Visitation, carved about 1230, show what had happened in between. Mary and her cousin Elizabeth turn toward each other, their weight rests on one leg in the manner that Unit 2 called contrapposto, and the folds of their cloaks are modelled like the drapery of Roman statues, which the sculptor can only have studied from antique examples. The body returned to western sculpture at Reims, two centuries before the Italians of the Renaissance made its return a deliberate aim, and the statues can be seen in the public domain photographs of the Art in the Christian Tradition database at Vanderbilt University.

6 Giotto and the altarpiece

By the thirteenth century the priest said Mass facing east with the congregation behind him, and the altar had moved back against the east wall or the screen that separated the choir from the nave, so that the space above and behind it became a place for a painted panel. The **altarpiece**, a painting on wood standing on or behind the altar, is the form in which the panel painting of Europe began, and the first great altarpieces were painted in Tuscany. On 9 June 1311 the *Maestà* of Duccio (active about 1278 to 1318), a panel about five metres wide painted on both sides (the title means "majesty" and names a Virgin enthroned among angels and saints), was carried in procession from his workshop to the cathedral of Siena with the bishop at the head, the shops closed, and the bells ringing, as a chronicle of the city records. Panels of this kind were made as icons had been made, in egg tempera on gesso with gold grounds, and their Virgins sat frontally on thrones as the Washington icon of Section 2 does. Two of them hang in one room of the Uffizi in Florence and show what changed. The *Maestà* that Cimabue (about 1240-1302) painted for Santa Trinita about 1290 to 1300, 385 × 223 cm, which is nearly four metres high, sets its Virgin on a throne without any floor, with angels stacked on either side as if standing on each other. The *Ognissanti Madonna* that Giotto di Bondone (about 1267-1337) painted about 1310, 325 × 204 cm, sets its Virgin on a throne that is a box with a visible floor and a canopy, her body fills the robe with weight, and the angels kneel on the ground in front of her.

Giotto's largest surviving work is a whole chapel. Enrico Scrovegni (died 1336), the son of a money lender whom Dante placed in Hell for usury, the lending of money at interest, which the Church condemned as a sin, bought the site of the Roman arena in Padua on 6 February 1300 and built a chapel beside his palace there, which is why it is called the Arena Chapel as well as the Scrovegni Chapel. Giotto painted its walls in fresco (Unit 1), in thirty-eight scenes of the lives of the Virgin and Christ arranged in three rows around the room, with a Last Judgement over the entrance wall, the Virtues and Vices painted in grey as if they were stone along the base, and a blue vault scattered with stars over everything.

ANALYSIS IN DETAIL How the Arena Chapel is dated

No contract for the paintings survives, and Giotto signed nothing in the chapel. The date rests on a chain of documents about the building. On 6 February 1300 Enrico Scrovegni bought the land of the arena. The bishop of Padua gave permission for a chapel there before 1302, when he left the city for another post. On 25 March 1303, the feast of the Annunciation, the chapel was consecrated for the first time, which means that the building stood. On

1 March 1304 Pope Benedict XI granted an indulgence, a remission of the penalties for sin, to those who visited it, which means that it was in use and worth visiting. On 9 January 1305 the friars of the neighbouring church of the Eremitani complained to the bishop that Scrovegni had built a large church with a bell tower where he had been allowed a small oratory with one altar. On 16 March 1305 the Council of Venice lent Scrovegni hangings from San Marco for a consecration, and on 25 March 1305 the chapel was consecrated for the second time. The paintings would not have been begun before the walls were up and dry, and a consecration with borrowed hangings and a papal indulgence makes little sense before the walls were finished, so most scholars place the frescoes between 1303 and the spring of 1305, with some room for work into 1306. The chain gives a span of two years, which is as close as documents bring us for most medieval paintings, and the apse and transept that the friars complained of were probably demolished afterwards, since paintings of a later date were found where they joined the chapel.



Figure 11. Giotto di Bondone, *Lamentation*, about 1303 to 1305, fresco, 200 × 185 cm, Scrovegni Chapel (Arena Chapel), Padua. Credit: public domain reproduction via Wikimedia Commons.

CLOSE LOOKING Giotto's Lamentation in the Arena Chapel

What do I see. A nearly square field of about two metres on the north wall, one of the scenes of the Passion (Figure 11). A bare rocky ridge runs from the upper right down to the lower left and divides the picture into a crowd below and a sky above. On the ground in the lower left, a dead man lies across the lap of a woman who presses her face to his; other women hold his hands and feet, and two of them, seen entirely from behind, sit in the foreground as broad shapes of grey and green. Behind them a man in pink leans forward with both arms flung back, and to the right two older men stand quietly. A bare tree grows from the ridge. In the blue sky ten small winged figures fly in every attitude of grief, some turned away, some foreshortened so that only a face and a pair of wings are seen. Every face has an expression, and the expressions differ. The blue of the sky is pitted with small dark flecks.

What does it show. The Lamentation over the dead Christ after the Deposition, the taking down of his body from the cross, with the Virgin holding her son, Mary Magdalene at his feet, John the Evangelist with his arms thrown back, and Joseph of Arimathea and Nicodemus standing on the right with the

shroud and the ointment. The angels are the heaven that mourns with the earth. The ridge leads the eye down to the two heads that touch, which is the subject, and the bare tree is the tree of knowledge, dead since the Fall and expected to flower again with the Resurrection, which is the next scene on the wall.

How was it made. Fresco, painted in patches of fresh plaster each day, with the joins between the days' work visible in raking light, which is light falling across the wall from the side; the blue, which is azurite, could not be painted into wet lime and was applied on the dry wall, which is why it has fallen in flakes and left the sky pitted. The two mourners seen from behind are painted without faces, which no icon would have done, and they put the viewer among the mourners rather than in front of them.

How do we know. The documents of the chapel date the scene to about 1303 to 1305, and its place in the cycle fixes its subject. In this picture the ground has become a hillside between us and the figures, the figures have weight and backs, and grief has a different face for each person, which the mosaics and icons of this unit never attempted; the scene shows the Lamentation as an event in a place, seen by someone standing in it, and not as persons made present to the one who prays.

KEY IDEA Giotto's space

Giotto paints a picture as a view into a space in which bodies have weight and feelings have faces; a mourner can be seen from behind, and the ground can rise as a hillside between the viewer and the figures. The idea applies to the Arena Chapel and to the Florentine painting that followed it; it is not yet the geometric construction of perspective of the fifteenth century, which Unit 4 explains.

Contemporaries saw the change. Dante Alighieri (1265-1321), who by a tradition recorded in the fourteenth century visited Giotto in Padua while the chapel was new, wrote in the *Purgatorio* about 1315 that Cimabue had thought he held the field in painting and that now Giotto had the cry, as he put it, meaning that the acclaim was his, so that the fame of the other was darkened. Two and a half centuries later the painter and writer Giorgio Vasari, in his *Lives of the Artists* of 1550, opened the modern story of art with Giotto, and Unit 8 shows what that story made of him. Unit 4 begins where this one ends, with what the Florentines did with Giotto's space.

The question of this unit has been what an image is for, and the thousand years have given four answers that still stand next to each other in every museum. An image can make a person present, as the icon claims and as the golden statue of Sainte Foy claimed with its glittering eyes. It can teach, as Gregory told Serenus and as the portals and windows of Chartres did. It can make a building into an experience of light and sound in which the sacred is felt before it is understood, as Hagia Sophia and Saint-Denis did. And it can tell a story as if it happened in a place, which is Giotto's answer and the one that the next three units follow. Who may make or destroy an image was decided, in this period, by emperors and councils, by a bishop in Marseille and a pope in Rome, by an abbot and his critic, and by a usurer's son who paid for a chapel; the next time the question was put, in the sixteenth century, the answer split Europe, and Unit 5 tells how.

KEY POINTS

- The basilica, a Roman civic hall with nave, aisles, clerestory, and apse, became the Christian church under Constantine because it held the congregation inside and led the eye to the altar; the wall mosaics of Ravenna set their gold tesserae at angles so that the wall glitters in moving light.
- Hagia Sophia (532 to 537, dome rebuilt 562) places a dome 31 m across on pendentives over a square of four piers, lit by a ring of forty windows, with a reverberation of more than ten seconds; light and sound were made part of worship.
- An icon claims that the person it shows is present to the one who prays before it, and the honour paid to the image passes to the prototype; Iconoclasm (726 to 843) attacked this claim and the Second Council of Nicaea (787) defended it by distinguishing veneration from worship.
- A page of the Book of Kells (about 800) is a made object of calfskin, a ruled grid, ink, and seven

pigments with no gold; the Chi Rho page turns the first three letters of Christ's name into a picture that is found rather than read.

- The Gothic system of pointed arch, rib vault, and flying buttress gathers the outward push of the vault into points and carries it outside, so that at Chartres a nave 16.4 m wide could rise to 37 m with walls of glass; portals and windows taught by pictures, as Gregory the Great had said they should.
- Giotto's Arena Chapel (about 1303 to 1305) paints a story as an event in a place seen by someone standing in it, which is the hinge between the medieval image and the Renaissance picture.

Solutions to the questions in the text: 1-B, 2-C, 3-A. The online version of this unit explains each answer.