

Church Architecture from Medieval to Modern Times

Julia Walker

Like many other faiths, Christianity has long relied on the metaphorical power of light to reinforce its doctrine. During Christianity's early days, when the faith was literally an underground religion practiced in Rome's catacombs and struggling to survive in pagan Rome, sunlight—unitary and all-pervasive—offered a hopeful and omnipresent symbol of monotheistic belief. By the 4th century Christian churches began to proliferate, but the early Church was not wealthy and lacked the means to add lavish ornament to church buildings. Light therefore offered an inexpensive way to provide interior “decoration” to structures that were outwardly austere. (Austere facades were necessary, as early Christians often needed to conceal—or at least not to announce—the practice of their faith to avoid persecution.) The presence of actual light within a sanctuary space also bolstered the core message in Christian scripture, in which the coming of Jesus was said to “give light to those who sit in darkness” (Luke 1:79). Light, therefore, operated in multiple registers at once: symbolically, as a symbol of Christ's love and the essence of monotheistic truth; formally, as a way to add richness and incident to the plain surfaces of early Christian shrines and churches; and didactically, to suggest the triumph of light over darkness, a belief fundamental to the Christian worldview.

Early Christian churches, such as Old St. Peter's in Rome (Figure 6.1-6) tended to follow the basic plan of the basilica, which proved ideal for Christian liturgy. The long nave of Old St. Peter's supported elaborate processions; the nave and flanking aisles could hold 4000 worshippers. The exterior of the building was plain and unadorned, rendered in distinctly Roman brick. In contrast, however, the interior was decorated with frescoes, mosaics, and marble columns taken from pagan monuments, demonstrating the growing strength and wealth of the Church under Constantine. Elegant chandeliers would have cast twinkling candlelight on these architectural ornaments and on the gold and silver vessels used during services. The basilica form is thus enlivened with ornament to create a specifically Christian meaning, demonstrating not only the new religion's emphasis on the active interior state of the faithful, but also the initiation demanded to participate in its practices.

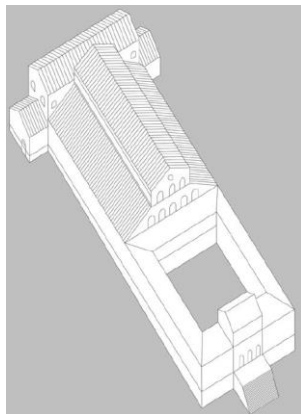


Figure 6.1-6

This focus on interior effects continues into Byzantine architecture, perhaps most notably in Hagia Sophia (Figure 6.2-5). Built in Constantinople to be its cathedral, the church was dedicated to the Holy Wisdom (“Hagia Sophia”) of Christ. An earlier church on the site was destroyed by fire in 532. Once the Christian emperor Justinian inaugurated the structure, it would remain the largest cathedral in the world for a millennium. Designed by the mathematician Anthemius and the physicist Isidorus, Hagia Sophia is a monument to architectural problem-solving. For one thing, the vast structure was completed in only five years by organizing more than ten thousand workers into corporations placed under the orders of one of the two chief architects. For another, Anthemius and Isidorus successfully combined the form of the basilica with the centralized plan of smaller shrines and temples. The viewer would enter the building as though it were a basilica, but experience it quite differently, as the nave was reserved for the clergy. The congregation was separated by gender and directed into the aisles and galleries, meaning that only partial views of the ritual of the Eucharist would have been possible at any given time.



Figure 6.2-5

Yet these partial views served to heighten the experience of the Eucharist itself. Indeed, this intensification of ritualistic experience may have been the most important aspect of Anthemius’ and Isidorus’ problem-solving. For at the heart of the Eucharist, and of Christianity, lies the mystery of transubstantiation: how can bread and wine become the body of Christ? How can one substance become another substance, when your senses tell you that no change has occurred? For the designers of Hagia Sophia, clever engineering was the answer. The pendentive construction of the cathedral, in which the immense dome effectively rests on another partial dome, means that weight is

directed through the pendentives to the four piers anchoring the dome. The lower section of the main dome is punctuated by a ring of forty windows, a structural lightness made possible by the downward transfer of the dome's weight. In bright sunlight, the dome appears to float on a ring of light that enacts the transubstantiation of the Eucharist. The historian Procopius, who visited the building shortly after it was completed, marveled that the dome of Hagia Sophia appeared to be suspended by "a golden chain from Heaven," noting that the abundance of light within the cathedral made it appear that "the radiance is generated within."

As the wealth and power of the church increased and as Catholicism spread throughout the western world, builders and clergy continued to experiment with the use of light to create heightened architectural effects. As pilgrimage churches became more central to regional economies, so too did their decorative programs grow more opulent. While stained glass had been in use for centuries, it was put to dramatic new use in Gothic Europe. The rib vaulting at St. Denis near Paris, for example (Figure 9.2-8), allowed for the walls to be stained glass rather than stone, letting in what Abbot Suger called the *lux nova*—new light—that filled the complex space of the cathedral.



Figure 9.2-8

Stained glass was used to great effect in the rose window, but was also the means by which the walls of the chevet were transformed into glowing, immaterial barriers between the sacred space of the church and the world outside. Suger based much of his theory of light on Pseudo-Dionysus, a mystic saint of the fifth century who spoke of God as an “incomprehensible and inaccessible light.” The light created by the windows was a luminous, palpable presence that seemed to fall in almost solid fragments on the church’s interior. Despite Christ’s own calls for poverty, those responsible for pilgrimage churches embraced costly and sumptuous decoration, ushering in an era of extravagant expenditure for church architecture throughout the Christian world.

The structural innovations at St. Denis thus not only created the cathedral’s soaring height, but also made possible a richly symbolic new use of light. Twentieth-century architects were likewise attuned to the way in which modern structural techniques could maximize the flow of light into the interior of buildings. In many cases, this goal had a profoundly materialist flavor, as rapid industrialization and the emergent principles of modernism demanded light for the sake of hygiene and efficiency. However, architects were also sensitive to the possibilities that glass, steel, and concrete opened for using light in new sacred architecture.

For example, Oscar Niemayer’s Cathedral of Brasília (Figure 19.2-10) is entered from underground via tunnel; viewers emerge from this dimly lit channel into a luminous space with colored glass suspended from hyperboloid concrete columns that gather together at the top. The drama here comes not only from the aqueous color palette of the glass (designed by Marianne Peretti and installed in 1990 under Niemayer’s supervision), whose opulent blues and greens reference the new capital’s lakeside site, but also from the contrast between lightness and darkness.



Figure 19.2-10

Similarly, Auguste Perret’s church of St. Joseph (Figure 19.1-20), completed in 1954 in Le Havre, France, is rendered expressively in the architect’s favorite material of concrete. As part of Perret’s larger project for the reconstruction of the port city devastated by Allied bombing during World War II, the church’s single, slender tower

was to act at once as religious beacon and secular memorial to the war dead. At 107 meters, the octagonal tower is highly visible throughout Le Havre, much of which Perret set at a height of seven stories. Thus, the tower fulfills its earthly function as a memorial. From the interior of the church, however, its sacred meaning becomes more apparent. Perret reunited with the stained-glass artist Marguerite Huré, with whom he had collaborated on the church of Notre-Dame du Raincy near Paris earlier in the century. Huré's abstract, geometric glass punctures the elegant concrete surface of Perret's tower, creating a poignant play of light and color that descends into the central-plan sanctuary. Though the light that fills the interior blends into a distinctly golden cast, each side of the octagon is patterned with a different color scheme. Consistent with the church's neo-Gothic bearing, the jewel-like fragments of colored light cast by these windows recall Abbot Suger's *lux nova*—yet the concept of light here is abstract and decidedly modern.



Figure 19.1-20

Perret did not consider himself to be deeply religious, yet architecture offered a locus of spiritual meditation for him. He shared this tendency with Le Corbusier, whose church of St. Pierre in Firminy-Virt (Figure 19.1-21) provided an opportunity for the architect to expand on ideas of sacred space with which he had first experimented in the convent of La Tourette and the chapel of Notre-Dame du Haut at Ronchamp. Though Le Corbusier designed St. Pierre in 1961 as part of his plan for a new quarter of the industrial town of Firminy—one which also included a stadium, a youth and cultural center, and the housing block type known as the *Unité d'habitation*—the church was not completed until 2006 under the supervision of José Oubrier, Le Corbusier's former assistant. From afar, the concrete structure looms in the shape of a truncated cone seeming to sit somewhat heavily on its site. But as the viewer approaches, the impression changes from bulkiness to lightness, as the building's delicate base of glass and concrete comes into view. Inside, the study in contrasts continues; the raw concrete walls of the snub-nosed structure are stark and almost harsh, yet a self-contained world of light, shadow, and symbolism opens as the viewer's eyes adjust to the dimness. A ring of colored-glass windows in vivid red, green, blue, and yellow surrounds the galleries. Small windows puncturing the east façade create focused points of light that appear differently at different times of day; sometimes tiny dots of light scatter like stars above

the altar, and at other times sinuous waves of light flow across the interior walls. As with Hagia Sophia, the play of light and shadow seems only possible through an otherworldly transformation of material. The imagery at St. Pierre is nonspecific, but utterly sacred in character. As Le Corbusier observed, architecture itself has a unique capacity to foster spiritual belief: “I have not experienced the miracle of faith,” he said, “but I have often known the miracle of ineffable space.”



Figure 19.1-21

For Further Reading

Britton, Karla. *Auguste Perret*. London: Phaidon, 2001.

Camille, Michael. *Gothic Art: Glorious Visions*. New York: Harry N. Abrams, 1996.

Kipnis, Jeffrey. “A Time for Freedom.” In *A Question of Qualities: Essays in Architecture*. Cambridge, MA: The MIT Press, 2013.

Kieckhefer, Richard. *Theology in Stone: Church Architecture from Byzantium to Berkeley*. New York: Oxford University Press, 2004.