Passages that measured the day also measured a life dedicated to the service and worship of God.

Although the daily rhythm was most persistent, a yearly rhythm was also recognized, strictly established by seasonal variation. In his *Rule*, Saint Benedict established for his order separate horaria for the summer and the winter. "From the sacred feast of Easter until Pentecost, let *Alleluia* be said always both with the psalms and with the responsories. From Pentacost until the beginning of Lent, let it be said every night at Matins with the second six psalms only. On every Sunday out of Lent, let *Alleluia* be said with the canticles of Matins, and with the psalms of Lauds, Prime, Terce, Sext and Nones; but let Vespers then have an antiphon. The responsories are never to be said with *Alleluia*, except from Easter to Pentecost."[2] To this day, Benedictine monks divide the year with different prayers for different seasons.

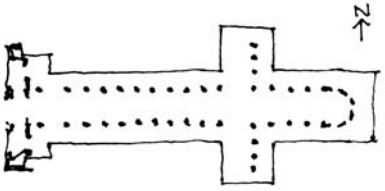
The horaria referred to in Saint Benedict's *Rule* were different from the modern hour.[3] Until the end of the 14th century, everyday life was organized according to the Egyptian–Roman method whereby the period between sunrise and sunset (and vice versa) was divided into 12 equal parts called *horae temporales*. As a consequence, the length of these "hours" varied with season and latitude. Day "hours" were longer than night "hours" in the summer but shorter in the winter. This difference was exaggerated in more northern places where summer days are longer and winter days shorter. Thus changing place made time different; changing time made the qualities of a place different. Changing either changed meaning.

The Horarium was also honored in the great cathedrals. In the same way that monastic life was linked with nature's rhythms, so Gothic architects learned to support ritual with color and light. They confined their stained-glass palette to simple and primary colors: grass was green, blood was red, and milk snowy white.[4]

Colors were used in the windows with geometric precision, separated by lead cames, never allowed to fuse. But when light passed through the stained glass and spread onto stone surfaces, the colors softened and melted together in myriad shadings of season, weather, and time of day.

Rheims Cathedral, France.

The Gothic cathedral has a cruciform plan that accentuates the complex rhythms of sunlight. The nave extends from the apse at the eastern end, facing the Holy Land, to the great entry doors at the western end. Crossing the nave is the transept, running north and south. This arrangement, which held Christian meaning, also held architectural promise. Cathedrals in northern Europe, where the sun is less intense, were opened more to the light than those in the south. Architects in the north made special use of the different directions of nave and transept. When they let sunlight into the nave through great stained glass windows, it intensified the experience of seasons; let into the transept, it amplified the time of day. The rhythmic counterpoint that we now all enjoy, even if we are unaware of the cause, results from the opposing orientations of these two major spaces. In this way, architects symbolically connected the rhythms of sunlight with liturgical rites.



Peterborough Cathedral, England: Typical cruciform plan.

Architectural spaces that are elongated in an east–west direction have their major exposures to the north and south, which emphasizes a seasonal cycle of light and heat. For example, in an open street or courtyard, where the containing buildings cut off the low winter sun, most of the space is left dark and cold. The high summer sun, by contrast, lights and heats most of the space rendering it bright and hot. The space can be uncomfortable at either season, cycling between temperature extremes. However, in an east–west space that is roofed, as the Gothic nave, summer sun is mainly excluded while winter sun enters directly through its southern windows. Winter light rather than summer heat