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VIEWING HEAVEN: ROCK CRYSTAL, RELIQUARIES, AND TRANSPARENCY
IN FOURTEENTH-CENTURY AACHEN

By

Claire Kilgore

A THESIS

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VIEWING HEAVEN: ROCK CRYSTAL, RELIQUARIES, AND TRANSPARENCY
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University of Nebraska, 2017

Advisor: Alison Stewart

This thesis examines reliquaries and objects associated with medieval Christian practice in fourteenth-century Aachen. The city's cathedral and treasury contain prestigious relics, reliquaries, and liturgical items, aided by its status as the Holy Roman Empire's coronation church. During the reign of Holy Roman Emperor Charles IV (r. 1349-1378), reliquaries, pilgrimage, and architecture reflect late medieval interests in vision, optics, and transparency. Two mid-fourteenth century reliquaries from the Aachen Cathedral Treasury, the *Reliquary of Charlemagne* and the *Three-Steepled Reliquary*, display relics through rock crystal windows, in contrast to the obscuring characteristics of earlier reliquaries. Not only do the two reliquaries visually present relics in rock crystal, but they also use Gothic architectural structures, creating an open and transparent atmosphere.

Several other reliquaries in the Aachen Cathedral Treasury include miniaturized Gothic architecture and rock crystal. Other objects associated with Aachen, including pilgrimage badges, choir robe brooches, and crosses, also exhibit the three-dimensional transparency of Gothic architecture. Rock crystal and Gothic architecture in Aachen's reliquaries and religious objects showcase an emphasis on the effects of light, space, and visibility. Transparent elements, both architectural and material, communicate changes

in medieval thought emphasizing vision and sight, while continuing to represent the Heavenly Jerusalem using Gothic characteristics.

I consider the materials and structures of objects from fourteenth-century Aachen, as well as medieval writings on gems and how their characteristics contribute to medieval visions of heaven. Rock crystal's transparency and clarity describes the Heavenly Jerusalem literally and metaphorically. Light and immaterial space also appear in the inexpensive metalwork of pilgrim badges that incorporate Gothic details and ideas about optics and reflection. Charles IV's spirituality and patronage appear not only in church renovations imitating Sainte Chapelle, but also in the reliquaries donated during his reign featuring rock crystal and miniature Gothic architecture. Rock crystal and open Gothic architecture communicate a new, different vision of the medieval religious ideal of the Heavenly Jerusalem, while revealing interests in perception and optical theory, and their application into medieval religious objects.

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Table of Contents

Table of Illustrations	vii
Introduction	1
Overview of Previous Scholarship	3
Light, Heaven, and Transparency	6
Chapter 1: Structure, Visibility, and Materiality in Early Reliquaries	10
Structure and Materiality	11
Physicality, Sight, and Aesthetics	14
Rock Crystal and Early Medieval Reliquaries	18
Theorizing the Light of Heaven	22
Chapter 2: Changing Visions, Changing Materials: Rock Crystal, Reliquaries, and the Fourteenth Century	29
Aachen and Architecture	30
Vision and Theology	34
Relics and Reliquaries	36
Open and Closed Gothic Architecture	47
The Science and Significance of Vision	51
Chapter 3: Expanding Three-Dimensionality: Light, Space, and the Heavenly Jerusalem	53
Observing Medieval Pilgrimage and the Senses	54
Pilgrimage and Badges	56
Aachen: Saints, Relics, and Badges	58
Other Architectural Miniatures	64
Memory, Sensation, and the Heavenly Jerusalem	68
Conclusion	70
Illustrations	80
Bibliography	113
Appendix A	121

Table of Illustrations

Figure 1.1	Carolyn Malone, Reconstruction of the eleventh-century Church of Saint-Bénigne	80
Figure 1.2	<i>Reliquary of St. Anastasius the Persian (artophorion)</i> , late tenth or early eleventh century	81
Figure 1.3	Attributed to Nicholas of Verdun and others, <i>Shrine of the Three Kings</i> , ca. 1180-1230	82
Figure 1.4	<i>Ninian Reliquary</i> , ca. 1200	83
Figure 1.5	<i>Cross of St. Nikomedes of Borghurst</i> , ca. 1050	84
Figure 1.6	<i>Reliquary with the Tooth of Saint John the Baptist</i> , rock crystal flask ca. 1000, metalwork ca. 1375-1400	85
Figure 1.7	<i>Domed Reliquary</i> , ca. 1170-1180	86
Figure 1.8	<i>Reliquary Monstrance</i> , thirteenth century	87
Figure 1.9	<i>Lantern of Begon</i> , also known as <i>the Reliquary of St. Vincent</i> , ca. 860	88
Figure 2.1	<i>Shrine of the Virgin Mary</i> , 1220-1239	89
Figure 2.2	<i>Shrine of Charlemagne</i> , 1182-1215	90
Figure 2.3	<i>Reliquary of Charlemagne</i> , mid-fourteenth century	91
Figure 2.4	<i>Three-Steepled Reliquary</i> , 1370-1390	92
Figure 2.5	<i>Reliquary of Thomas Beckett's Blood</i> , 1173-1180	93
Figure 2.6	<i>Reliquary for the Flagellation Rope of Christ</i> , ca. 1380	94
Figure 2.7	<i>Reliquary for the Belt of the Virgin Mary</i> , ca. 1360	95
Figure 2.8	Attributed to Jean de Touyl, <i>Reliquary of Elizabeth of Hungary</i> , ca. 1325-1350	96
Figure 2.9	<i>Reliquary Bust for the Arm of Saint John the Baptist</i> , after 1355	97
Figure 3.1	Wenceslas Hollar, <i>Church of the Virgin at Aachen</i> , ca. 1664	98
Figure 3.2	Wenceslas Hollar, <i>Display of Relics</i> detail from <i>Church of the Virgin at Aachen</i> , ca. 1664	99
Figure 3.3	Floor plan: Aachen Cathedral	100
Figure 3.4	<i>Reliquary Bust of Charlemagne</i> , after 1349	101
Figure 3.5	<i>Pilgrim Badge of the Crowned Virgin and Child</i> , ca. 1200-1224	102
Figure 3.6	<i>Pilgrim Badge of Charlemagne</i> , ca. 1350-1400	102
Figure 3.7	<i>Charlemagne Kneeling Before the Virgin</i> , fourteenth century	103
Figure 3.8	<i>Folding Reliquary Badge</i> , fourteenth or fifteenth century	103
Figure 3.9	<i>Miniature Three-Dimensional Tower Fragments</i> , fifteenth century	104
Figure 3.10	<i>Pilgrim Badge with Frame for Mirror</i> , fifteenth century	104
Figure 3.11	Master of the St. Augustine Altarpiece (Nuremberg), Detail of <i>St. Sebald as Pilgrim Wearing Aachen Mirror Badge</i> , ca. 1487	105
Figure 3.12	<i>Cross of Lothair</i> , ca. 1000	106
Figure 3.13	<i>Base, Cross of Lothair</i> , fourteenth century	107
Figure 3.14	<i>Cantor's Staff, Crown</i> , ca. 1420	108
Figure 3.15	<i>Choir Robe Brooch</i> , 1340-1350	109
Figure 3.16	Attributed to Hans von Reutlingen, <i>Choir Robe Brooch</i> , before 1520	109

Figure 4.1	<i>The Building of Salvation</i> , from Hildegard of Bingen's <i>Scivias</i> III, 2	110
Figure 4.2	The City of God and the Mirror of the Angels, from Hildegard of Bingen's <i>Liber Divinorum Operum</i> III.1. early thirteenth century, ca. 1165	111
Figure 4.3	<i>The Heavenly Jerusalem</i> , from the <i>Trinity College Apocalypse</i> , ca. 1255	112

Introduction

The study of medieval spirituality and religious practice involves both physical objects and immaterial philosophy. The material record of medieval Christianity encompasses a diverse variety of objects and materials. Containers, processional items, vestments, and buildings, to categorize a partial list, offer a view of medieval Christian practice and how it conveys abstract theological concepts through material culture. The form and materiality of these objects vary extensively, even when subdivided into more specific categories expressing characteristics of location, chronology, appearance, and design during the medieval period. Reliquaries, the primary focus of this study, represent a massive subset of these objects. They are widely studied by previous scholarship, including specific articles, comprehensive books, catalogs, and museum exhibitions.¹ In addition to reliquaries, objects that describe religious practice are also considered, such as architecture, processional crosses, jewelry, and pilgrim souvenirs.

These items and their materiality reflect key characteristics of medieval thought and Christian practice. Beginning in the thirteenth century, medieval philosophies of vision and perception began to change, affecting not only scholarly debate about the mechanics and function of sight but also created objects. For Scholastics, influenced by the writings of the Greek philosopher Aristotle, vision became primary. This phenomenon can be attributed to the establishment of universities, which taught

¹ A select list of notable recent exhibitions that center or prominently features relics and reliquaries includes *Jerusalem, 100-1400: Every People Under Heaven* (The Metropolitan Museum of Art, September 26, 2016-January 8, 2017), *Medieval Treasures of Hildesheim* (The Metropolitan Museum of Art, September 17, 2013-January 5, 2014), *Treasures of Heaven: Saints, Relics, and Devotion in Medieval Europe* (The British Museum, Cleveland Museum of Art, The Walters Art Museum, and online exhibition through Columbia University, 2011), *The Special Dead: A Medieval Reliquary Revealed* (The Walters Art Museum, August 2, 2008-January 18, 2009), *Prague, The Crown of Bohemia, 1347-1437* (The Metropolitan Museum of Art, September 20, 2005-January 3, 2006), and *The Treasury of Basel Cathedral* (The Metropolitan Museum of Art, February 28-June 3, 2001).

Aristotle's models. Under Aristotle's framework, vision was the most important of the five senses and only through observation of the visible world could one find knowledge.² The resulting style, Gothic, emphasized light and space. Characteristics of Gothic style are found in an array of objects of diverse materials, ranging from small, hand held, and wearable objects to towering cathedrals. Widespread and popular, Gothic art appears in both religious and secular spaces. The period's interest in optical theory and vision are reflected in these objects, not only through the choice of a transparent medium, rock crystal, but also through the open space created by Gothic architecture.

Changes in form in fourteenth-century reliquaries become notable, especially when compared to reliquaries from the preceding centuries. The relics inside of reliquaries communicate the mediating power and intercession between God and man. Many reliquaries were made of precious materials: containers worthy of the powerful objects they housed. As a result reliquaries increasingly became objects that incorporated beautiful, ornate decoration and valuable materials including precious metals and gems. Despite their beauty and economically significant materials, reliquaries prior to the Gothic period typically concealed their contents behind both protective and decorative, opaque exteriors. While precious and expensive, the reliquary container remained secondary in value to its contents — the relic. Visibility and access to the relics — through their reliquaries — occurred in a variety of ways in the medieval period. Access depended on an individual's position and status. Some relics remained concealed within altars or unopenable reliquaries. Although for some access existed through touching and kissing the reliquaries, observing the reliquary in religious procession or during a

² Michael Camille, *Gothic Art, Glorious Visions* (New York: Harry N. Abrams, 1996), 21.

pilgrimage. Art historian Cynthia Hahn speculates that the concealment and limited access of relics and reliquaries contributed to a desire for contact and interaction.³

Overview of Previous Scholarship

As a material, rock crystal and its transparency provide the opportunity to study vision in Gothic religious objects, especially because of its increased prevalence in many fourteenth-century reliquaries. Although not an unstudied category of objects in the history of medieval art, the scholarship has not addressed the specific study of changing reliquary form and new uses of rock crystal in the Gothic period. Different aspects of these issues have been the subject of recent publication, although frequently in brief or tangential references. An article published by Stefania Gerevini in 2014 as part of a collection of essays by the British Museum about relics, "Christus crystallus: Rock Crystal, Theology, and Materiality in the Medieval West," notes that while scholars have increasingly focused on medieval materials and materiality, rock crystal typically appears in specialized studies and has not been published as part of a dedicated study.⁴ Heather McCune Bruhn's recent dissertation explores the aspects of visibility, rock crystal, and Gothic architectural design as it relates to monstrances, "Late Gothic Architectural

³Cynthia Hahn, *Strange Beauty: Issues in the Making and Meaning of Reliquaries, 400- circa 1204* (University Park: The Pennsylvania State University Press, 2012), 233.

⁴ Stefania Gerevini, "Christus crystallus: Rock Crystal, Theology, and Materiality in the Medieval West," in *Matter of Faith: An Interdisciplinary Study of Relics and Relic Veneration in the Medieval Period*, ed. James Robinson et al. (London: The British Museum, 2014), Note 1, p. 97. Another article published by Gerevini in 2014, "'SICUT CRYSTALLUS QUANDO EST OBIECTA SOLI' ROCK CRYSTAL, TRANSPARENCY AND THE FRANCISCAN ORDER." *Mitteilungen Des Kunsthistorischen Institutes in Florenz* 56, No. 3: 255-83, addresses the subject of rock crystal and its transparency in religious objects, specifically crosses used by the Franciscan order. In addition to discussing materiality, workmanship, and sources of rock crystal, Gerevini also considers its cost, transparency, and interactions with light and vision within the context of Franciscan beliefs and practices.

Monstrances in the Rhineland, c. 1380-1480: Objects in Context" (2006).⁵ Her focus on the characteristics of monstrances and their relation to the display of the Eucharistic Host and the feast of Corpus Christi establishes a needed, although specific study that does not address the question of non-monstrance reliquaries and rock crystal. Published in 2001, Christof L. Diedrichs' dissertation *Vom Glauben zum Sehen: Die Sichtbarkeit der Reliquie im Reliquiar Ein Beitrag zur Geschichte des Sehens*, investigates rock crystal and transparency in reliquaries, although in examples prior to 1215 and the Fourth Lateran Council's decree regarding the display of relics.⁶ His discussion includes many relevant examples, especially of cabochon reliquaries, but does not focus on aspects of architecture in reliquary design. The dissertation is a useful and convincing contribution to the study of relics, reliquaries, and visibility. However, Scott B. Montgomery, reviewing Diedrichs' scholarship, notes the continued opportunities for study, especially concerning the role of vision and display with other reliquary types, such as figural reliquaries and altarpieces with relic compartments and figural busts.⁷ The German catalog *Corpus der Hartsteinschliffe des 12.-15. Jahrhunderts* (1985) by Hans R. Hahnloser and Susanne Brugger-Koch compiles an extensive record of western medieval rock crystal objects, however the majority of illustrations are in black and white, with only a few color plates. In addition to catalog descriptions identifying the objects, their significance, and publications, Hahnloser and Brugger-Koch provide a survey of

⁵ Heather McCune Bruhn, "Late Gothic Architectural Monstrances in the Rhineland, c. 1380-1480: Objects in Context" (PhD diss., The Pennsylvania State University, 2006).

⁶ Christof L. Diedrichs, *Vom Glauben zum Sehen: Die Sichtbarkeit der Reliquie im Reliquiar Ein Beitrag zur Geschichte des Sehens*, (Berlin: Weißensee Verlag, 2001).

⁷ Scott B. Montgomery, Review of *Vom Glauben zum Sehen: die Sichtbarkeit der Reliquie im Reliquiar; ein Beitrag zur Geschichte des Sehens*, by Christof L. Diedrichs. *The Medieval Review*, 2004, 04.02.18. <https://scholarworks.iu.edu/journals/index.php/tmr/article/view/15670/21788>.

medieval rock crystal and gems, techniques, shapes, and types.⁸ A crucial resource, the catalog provides a starting point for further research on rock crystal objects but does not provide in depth analysis or research on specific objects.

Interest in the symbolic, scientific, and other properties of materials is not restricted to modern scholarship. This thesis considers medieval writings on materials, such as Marbode of Rennes' (1035-1123) *De Lapidibus* and Theophilus' mid-eleventh-century text about the production of painting, stained glass, and metalwork, *On Divers Arts*. In addition to medieval texts, ranging from theological and poetic to scientific on materials and materiality, contemporary scholarship has also had a recent interest in the study of medieval materiality and how it should shape our understanding of the period's art, culture, and history. This renewed interest in the materiality and substance of medieval art, not only acknowledges the rich and tactile materials used, such as vellum, ivory, gold, gems, textiles, glass, and wood but also seeks to balance an interpretation that is not merely literal, iconographic, or skeptical. Introducing her perspective in her book *Christian Materiality*, Caroline Walker Bynum asserts her intention to "understand the period's own character by taking seriously aspects usually treated cursorily or with incomprehension and condescension."⁹ Herbert L. Kessler's reevaluation of medieval art, *Seeing Medieval Art*, notes the importance of sense, sensation, and material to medieval art, where "experience was not restricted to seeing; art was felt, kissed, eaten, and smelled," although sight remained the most influential and important sense.¹⁰

⁸ Hans R. Hahnloser and Susanne Brugger-Koch, *Corpus der Hartsteinschliffe des 12.-15. Jahrhunderts* (Berlin: Deutscher Verlag für Kunstwissenschaft, 1985).

⁹ Caroline Walker Bynum, *Christian Materiality: An Essay on Religion in Late Medieval Europe* (New York: Zone Books, 2011), 18.

¹⁰ Herbert L. Kessler, *Seeing Medieval Art* (Ontario: University of Toronto Press, 2011), 176-177.

Light, Heaven, and Transparency

This thesis examines the changing uses and methods of incorporating rock crystal into fourteenth-century religious objects, especially reliquaries. These changes reflect interests in the materiality and transparency of rock crystal, the importance and prominence of Gothic architectural style, and the late medieval curiosity towards sight, perception, and optics. The use of rock crystal in reliquaries changed in the thirteenth and fourteenth centuries. However its incorporation into reliquary and object decoration was not new, occurring in earlier medieval reliquaries, and other objects. Prior medieval production of rock crystal objects was limited by available technical skill. In contrast to the Fatimid workshops in Egypt and other production sites in the Islamic world, western medieval rock crystal output was smaller and limited.¹¹ However, these limitations did not prevent the incorporation of rock crystal into various reliquaries and other liturgical objects.

The function and efficacy of relics lies in their associations with saints and the holy. They provide the intangible link bridging the terrestrial and celestial worlds.¹² In many medieval reliquaries, the physical shape of a reliquary does not reveal a strictly literal understanding of the reliquary's contents. Hahn's study of arm-shaped reliquaries notes that many contain only non-arm body parts, such as leg bones, teeth, or hair, contain large numbers of various other human relics in addition to fragments of arms or

¹¹ See Genevra Kornbluth, *Engraved Gems of the Carolingian Empire* (University Park: The Pennsylvania State University Press, 1995), 5-24 and Anna Contadini, *Fatimid Art at the Victoria and Albert Museum* (London: V&A Publications, 1998), 18-27.

¹² Peter Brown, *The Cult of the Saints: Its Rise and Function in Latin Christianity* (Chicago: The University of Chicago Press, 1981), 3.

hands, or contain relics such as textiles that have no direct connection to the body.¹³

Instead she argues that these reliquary shapes formed a more abstracted purpose in the medieval liturgy. The extended arm shape, with the hand molded in gestures of blessing, should be viewed as representative of a larger whole: taking on a silent but speaking role to communicate performative gestures in liturgy.¹⁴ In this example, it is the visibility and actions of the reliquary and the relics contained within that communicate power.

Several fourteenth-century reliquaries from the Aachen Cathedral Treasury combine rock crystal chambers that display their relics and Gothic architectural reliquary structures. These objects, part of Aachen's church and treasury since the fourteenth century, were not all created in the surrounding region, with some smaller examples presumed to have been created in Prague.¹⁵ All however are generally associated with the court of Emperor Charles IV, who was crowned King of the Romans in 1349 at Aachen, followed by coronation as Holy Roman Emperor in 1355 in Rome; titles held throughout his reign until his death in 1378.¹⁶ Reliquaries created in the mid to late fourteenth century form the primary evidence in this thesis. Research was conducted during the summer of 2016 onsite in Aachen and Hildesheim, and in New York City in January 2017, where I had the opportunity to study the reliquaries and their use of rock crystal in person. Also considered are earlier reliquaries with a contrasting application of rock crystal and other religious objects that express the evolution and spread of Gothic aesthetic and design. In addition to physical objects and their material characteristics,

¹³ Cynthia Hahn, "The Voices of the Saints: Speaking Reliquaries," *Gesta* Vol. 36 No. 1 (1997): 21-22. <http://www.jstor.org/stable/767276>.

¹⁴ Hahn, "The Voices of the Saints," 28-29.

¹⁵ Herta Lepie and Georg Minkenberg, *The Cathedral Treasury of Aachen* (Regensburg: Verlag Schnell & Steiner GmbH, 2013), 114-116.

¹⁶ *Ibid*, 114.

architecture, and religious narrative, historical records from the lives of Charlemagne and Charles IV are also used in conjunction with medieval writings on vision and optics, materials, liturgy, and pilgrimage.

The thesis is organized around objects and their structure and materiality with a specific focus on the fourteenth century and Aachen. The first chapter examines reliquaries prior to the fourteenth century, their use of rock crystal, and the resulting levels of visibility and invisibility of the reliquary contents. Vision, light, and materiality are all important characteristics, highly influential to individual examples. However, in contrast to the examples studied in the second chapter, these characteristics are not linked through architectural structure and Gothic design. The second chapter emphasizes the changing understanding of vision in the fourteenth century and the incorporation of rock crystal and Gothic architecture into reliquary design. While materials and their beauty continue to be an important method of communicating the heavenly, Gothic treatments of space and light in reliquary design express a new depiction of the Heavenly Jerusalem, imitating the experience previously begun in religious architecture. This section also focuses on the role of Emperor Charles IV, his patronage of the Aachen Cathedral Treasury, and the influence of Paris and Sainte Chapelle. The third chapter examines non-reliquary religious objects pertaining to transparency including pilgrimage tokens and liturgical objects such as processional crosses and jewelry that incorporate Gothic architectural space in miniature. The thesis concludes by analyzing depictions of the Heavenly Jerusalem and how materiality is used, focusing on manuscript illuminations and reliquaries. The Heavenly Jerusalem and its materials, especially ones describing

clarity and transparency, are considered in relation to Aachen's rock crystal reliquaries associated with Charles IV.

Reliquaries from the fourteenth century, especially the examples from Aachen, increasingly incorporate Gothic architectural innovations emphasizing space, vision, and the Heavenly Jerusalem in conjunction with rock crystal components. The relics visible within the rock crystal culminate the expression of religious power and holiness. As a magnifying lens and a window, rock crystal emphasizes vision and sight. Vision and seeing function on multiple levels, involving not only the relics within the reliquary and their immediate intercession and materiality, but also pilgrim interactions and architectural context. These factors combine to shape a future vision of the Heavenly Jerusalem and paradise, using Gothic architecture to emphasize light, space, and materiality.

Chapter 1: Structure, Visibility, and Materiality in Early Reliquaries

Rock crystal was valued for its transparency long before the medieval period. Its mineral hardness allowed it to be worked extensively, while creating a durable product.¹⁷ Furthermore, its transparency, magnification, and clarity added a striking visual element. In addition to objects produced in medieval Europe, various examples remain from antiquity as well as the Byzantine and Islamic worlds. Differing levels of craftsmanship and technical skill resulted in the production of objects of varying levels of complexity, size, and decoration. Although not all geographies and workshops produced similar objects, trade and other methods of exchange spread diverse forms of rock crystal throughout Europe and around the Mediterranean in both the early and late medieval periods. Most large and complex objects originated in Fatimid workshops in Egypt, while western medieval workshops, especially in the early medieval period before the twelfth century, tended to produce smaller objects, especially intaglios and other small crystals.¹⁸

According to the writings of Theophilus from the twelfth century, rock crystal results when water, frozen into ice, naturally hardens into stone over the course of many years.¹⁹ This medieval understanding follows classical ideas of the properties of rock crystal. Pliny also wrote about the origins of rock crystal from hardened ice.²⁰ Theophilus' instructions include details on polishing, cutting, and carving rock crystal. He references how to pierce and cut it into knobs for the purpose of decorating both bishops'

¹⁷ According to the Mohs scale of mineral hardness, rock crystal (part of the quartz family) is a 7/10. The softest mineral is talc, measuring 1/10. The hardest is diamond, measuring 10/10.

¹⁸ Gerevini, "Christus crystallus," 92-93.

¹⁹ Theophilus, *On Divers Arts*. trans. John G. Hawthorne and Cyril Stanley Smith (New York: Dover, 1979), 189.

²⁰ Kornbluth, *Engraved Gems*, 17.

staves and candlesticks.²¹ However the remainder of his instructions do not identify specific objects or purposes for cut, carved, or polished rock crystal, nor does he mention its size. The amount of rock crystal incorporated into medieval reliquaries is not constant. Reliquaries include rock crystal through small gems set into metal, repurposed Fatimid flasks of varying sizes, polished cabochon domes, cut and faceted cylinders, and placed as multiple small windows and containers built into the reliquary structure. Although the material and symbolic properties of rock crystal build associations regardless of the manner of inclusion, other characteristics of the reliquary combine to communicate theological ideas to medieval audiences. This chapter examines early medieval reliquaries, either ones associated with Aachen and its cathedral treasury or that use rock crystal to significant effect. The function and materiality of the reliquary structures are considered, noting shape and references to architecture. Within these examples, transparency and architecture overlap infrequently, in contrast to many of Aachen's fourteenth-century reliquaries. Although the reliquaries examined in this chapter communicate visions of their contents and the Heavenly Jerusalem, it is through different references.

Structure and Materiality

The form and materials of reliquaries draw on a wide variety of factors, generally revolving around some consideration of prestige and value. Reliquary structure and design involves the examination of both material constraints and narrative requirements. One must account for the size of the relic, expenses allocated for construction of the reliquary, and the communicative program of the reliquary exterior. The precedent of

²¹ Theophilus, *On Divers Arts*, 190.

associations between liturgical space, architecture, and reliquaries has been the focus of previous studies in medieval art history. Éric Palazzo argues that church architecture in the Carolingian and Romanesque periods reflects the importance given to relics in medieval Christian liturgical practice, culminating in the architectural structure of the church becoming in essence a "true monumental reliquary whose ultimate purpose was to express a theological understanding of the liturgy."²² The increase of church altars combined with crypts and rotundas purposefully planned for the devotion of relics demonstrates the changes in liturgical practices requiring these additions. Palazzo notes that the multistory rotunda of the church of Saint-Bénigne in Dijon (fig. 1.1), consecrated in the eleventh century, hosted an elaborate liturgy of relics throughout its different levels dedicated to the Virgin Mary and various saints, the Trinity, and the archangel Michael, setting apart the space as both a separate but complementary structure to the main church and a protective, architectural reliquary.²³

In certain instances, peculiar reliquary forms and materials occur because of reused objects, valued for other reasons such as origin, legacy, history, or beauty. The *Reliquary of St. Anastasius the Persian* (fig. 1.2), part of the Aachen Cathedral Treasury since the beginning of the thirteenth century, takes the form of a domed building.²⁴

According to this basic consideration of structure, it is comparable to several later

²² Éric Palazzo, "Relics, Liturgical Space, and the Theology of the Church," in *Treasures of Heaven: Saints, Relics, and Devotion in Medieval Europe*, ed. Martina Bagnoli, et al. (New Haven: Yale University Press, 2011), 107.

²³ Ibid, 102.

²⁴ Lepie and Minkenberg, *The Cathedral Treasury of Aachen*, 112. Per Lepie, it is likely that the object arrived at Aachen in the twelfth or thirteenth century after the beginning of the crusades. Although it is possible that object arrived in the late tenth century with Empress Theophau (d. 991). The original donor, identified in an inscription, Eustathios Maleinos, was a Byzantine aristocrat who functioned in a military capacity at Antioch around 969. See also Holger A. Klein, "Artophorion (Reliquary of St. Anastasios the Persian)Aachener Dom, Schatzkammer," Columbia University *Treasures of Heaven* online catalog: <http://www.learn.columbia.edu/treasuresofheaven/relics/Reliquary-of-St-Anastasios-the-Persian.php>. Accessed April 19, 2017.

architectural reliquaries at Aachen that also incorporate rock crystal as an integral component. However the origin of the *Reliquary of St. Anastasius the Persian* reveals a significant difference. Created in the late tenth century in Antioch, the object originally functioned in the Byzantine world as an *Artophorion* holding the Eucharist.²⁵ Only upon its relocation to Aachen, removed from the Eastern tradition, did the object begin to be a reliquary. Several other similar examples belong to the treasury of San Marco in Venice.²⁶ Reusing and modifying objects into reliquaries was not unusual for medieval Christianity. Numerous other examples exist of western reliquaries absorbing outside and foreign materials, including secular Islamic ivory caskets and Fatimid rock crystal flasks.²⁷

The inclusion of architectural structures, either through intentional design or reuse of outside objects, in reliquary design showcases both the physicality of the Christian church as dwelling place for the divine and its imitation of a perpetual, heavenly home. The detail and complexity of architecture used in these structures ranges considerably. Depending on the example, more prominence may be given to metaphorical and material characteristics than to imitative architectural details. However the underlying message remains, reappearing in multiple methods throughout the medieval period. Visionary writings by Hildegard of Bingen (1098-179) frequently used architecture to describe

²⁵ Klein, "Artophorion." Lepie and Minkenberg, *The Cathedral Treasury of Aachen*, 112.

²⁶ For example: *Lamp or Perfume-burner in shape of Domed Building*, Southern Italian (?), end of 12th century, partially gilt silver from the Treasury of San Marco, Venice. Most likely originally made as a lamp or censor, the object was repurposed as a reliquary for a rock crystal phial containing a relic of the Holy Blood after 1231. See Danielle Gaborit-Chopin, "Catalog Entry 33," in *The Treasury of San Marco Venice* (New York: The Metropolitan Museum of Art, 1984), 237-243.

²⁷ Avinoam Shalem, "From Royal Caskets to Relic Containers: Two Ivory Caskets from Burgos and Madrid," *Muqarnas*, Vol. 12 (1995), 24-38.

heaven.²⁸ Pope Gregory the Great wrote of houses for the deceased in heaven, corresponding to ideas of houses and mansions in paradise as described in John 14:2.²⁹

Physicality, Sight, and Aesthetics

In discussing the materiality of rock crystal and its inclusion in reliquaries, it is essential to raise the question: did relic visibility matter to medieval viewers and how is that reflected in reliquary design and religious practice. Although the materials, form, and size of reliquaries vary extensively in the medieval period, the generalization remains that for the majority of medieval reliquaries prior to the Gothic period, the relic remained concealed. Hahn connects this to a range of issues including aesthetics and biblical tradition, specifically noting the stories where death is the result of touching the Ark of the Covenant as in the story of King David and Uzzah.³⁰ However, she also emphasizes that regional traditions played a significant role; kissing and touching relics was common to Eastern practice, while uncommon in the West.³¹ These qualifications are broad, encompassing a wide subset of medieval beliefs on cultural practice, religious devotion, and theological necessity. Changing reliquary structures that incorporate windows and transparent materials and changing methods of pilgrimage display, as at Aachen in the fourteenth century, indicate shifting attitudes regarding the importance of vision and visibility.

²⁸ Margot. E. Fassler, "Allegorical Architecture in *Scivias*: Hildegard's Setting for the *Ordo Virtutum*," *Journal of the American Musicological Society* Vol. 67 No. 2 (2014): 317-378.

²⁹ Arnold Angenendt, "Relics and their Veneration," in *Treasures of Heaven: Saints, Relics, and Devotion in Medieval Europe*, ed. Martina Bagnoli, et al. (New Haven: Yale University Press, 2011), 25.

³⁰ 2 Samuel 6:6-7 and 1 Chronicles 13:9-10.

³¹ Hahn, *Strange Beauty*, 23-24.

The aesthetics of relics and the physicality and "ugliness" of human remains requires investigation into a larger legacy of religious behavior and treatment of the dead and their remains. In his study of the devotion of saints, Peter Brown notes the cultural changes required by the incorporation of the physical remains of the dead into religious practice and liturgy. Previously restricted to outside the city walls, cemeteries and human remains became a source of controversy. Brown emphasizes the paradoxical nature of the new close interactions with the dead and their relics and the cultural taboos involving the body of the deceased.³² As Brown rightly points out, revering the dead through "heroization," especially one's relatives or prominent public figures such as emperors, was not unusual. Instead, the new Christian focus on the powers of intercession granted to martyrs, the "very special dead," and the public procession of their relics interrupted the previous and proper divisions between the living and the dead.³³

Regardless of direct visibility, the physicality of relics and the bodily connection to the saints involved the unaesthetic reality of bones and human remains. Medieval theological commentary addresses this issue, often emphasizing the paradoxical beauty and preservation attributed to the relics of saints, distancing the relics from the physical and sensory attributes of death. Abbot Thiofrid of Echternach (d. 1110) recorded that relics smelled sweet, reminiscent of paradise.³⁴ The bodies of saints were also believed to be incorruptible, that is undecayed, an earlier idea referenced by both St. Ambrose and St. Augustine in the fourth century.³⁵ Such characteristics reinforced the power and abilities

³² Brown, *The Cult of the Saints*, 4.

³³ Ibid, 6-7, 70.

³⁴ Arnold Angenendt, "Relics and their Veneration," 22, 27, Notes 34 and 35. Thiofrid of Echternach, "Flores Epytaphii Sanctorum," in *Corpus Christianorum Continuatio Mediaevalis* 133: Section 1.4, 20, L. 80, Section 3.4, 67, L. 43. (Turnhout: Brepols, 1996).

³⁵ Angenendt, "Relics and their Veneration," 21-22.

of relics, although remained somewhat inconsequential for relics locked away in reliquaries, unseen outside of their sumptuous containers. The introduction of transparent elements, allowing physical observation of the human remains as in the fourteenth-century *Reliquary of Charlemagne* (fig. 2.3) reminds observers of the materiality and physicality of relics.

Additionally, reliquaries and their relics reserve multiple levels of restricted visibility and access, beyond physical sight. Contact and interaction with reliquaries depends on an individual's status, occupation, and intention. Saint's relics and their reliquaries were popular attractions and objects of desire for medieval pilgrims and clergy. Accounts of pilgrimage convey the types of experiences pilgrims had with relics and reliquaries. Jacobus de Voragine's *Legenda Aurea* (*The Golden Legend*), recorded in the 1260s, compiles accounts of the lives of saints, their miracles, as well as sections on liturgy and doctrine providing medieval audiences with examples of pilgrimage, shrines, and donations.³⁶ *The Golden Legend's* account of pilgrims traveling to the shrine of St. James at Santiago de Compostela includes descriptions of families, individuals, men, women, and soldiers who undertook the pilgrimage. Their stories contain not only the obstacles they face, such as dishonest innkeepers, plague, and temptation by the devil, but also how the saint responds to their afflictions.³⁷ St. James not only physically appears to the pilgrims, but encourages and aids them in their pilgrimage, offering transportation, food, and protection from death.³⁸ Jacobus also writes of the reward available through

³⁶ Eamon Duffy, introduction to *The Golden Legend: Readings on the Saints* by Jacobus de Voragine, translated by William Granger Ryan (Princeton: Princeton University Press, 2012. *eBook Collection* (EBSCOhost), xvii.

³⁷ Jacobus de Voragine, *The Golden Legend: Readings on the Saints*, trans. William Granger Ryan, 392-395.

³⁸ *Ibid*, 392-395.

pilgrimage and intercession of the saints, apparent in a story recorded by Bede (ca. 672-735) of a man who laid a notice recording his sins on the altar of St. James and prayed, resulting in the erasure of his sins by the merits of the saint.³⁹

The relics of saints and their shrines attracted pilgrims, who brought with them prayers and gifts. Charles Freeman observes that by the eleventh century, local parishes provided much of the ordinary needs of worshippers including observation of the Mass, baptism, marriage, and burial, that pilgrimages "catered for much more immediate and emotional needs, above all the desperation for salvation that a pilgrimage to a favoured saint or shrine might bring."⁴⁰ Pilgrim devotion of reliquaries was not without criticism or controversy. Writing in 1125, Bernard of Clairvaux laments that "there is more admiration for beauty than veneration for sanctity" because pilgrims "feast their eyes on gold-covered relics and their purses will open. Just show them a beautiful picture of some saint. The brighter the colors, the saintlier he'll appear to them."⁴¹ The display of relics occurred in a variety of circumstances, both positive and negative. The humiliation of relics, an event common in the tenth and eleventh centuries, occurred after a saint had failed in some capacity and involved insulting the saint by "hurling complaints and curses against his image or his relics."⁴²

³⁹ Jacobus de Voragine, *The Golden Legend: Readings on the Saints*, trans. William Granger Ryan, 392. William Granger Ryan's translation (Princeton, 2012) uses the word paper in the account by Bede to describe what the man set on the altar listing his sins before praying to Saint James. It is unlikely this is actually paper, given the dates associated with Bede (ca. 672-735) and Jacobus de Voragine (ca. 1275). The version translated by William Caxton in 1483 and edited by F.S. Ellis (Temple Classics, 1900, reprinted 1931) and used in Paul Halsall's text in Fordham's *Medieval Sourcebook* references a "schedule in which the sin was written."

⁴⁰ Charles Freeman, *Holy Bones, Holy Dust : How Relics Shaped the History of Medieval Europe* (New Haven: Yale University Press. Accessed October 17, 2016. ProQuest ebrary), 94-95.

⁴¹ Bernard of Clairvaux, "Apology" in *Fordham Medieval Sourcebook*, Paul Halsall, 1996. Translated by David Burr. <http://sourcebooks.fordham.edu/source/bernard1.asp>. Accessed April 19, 2017.

⁴² Palazzo, "Relics, Liturgical Space, and the Theology of the Church," 106.

Access to relics occurred in certain instances even without the use the transparency and magnification of rock crystal. The front end of Cologne's late twelfth-century *Shrine of the Three Kings* features a removable trapezoidal panel decorated with tooled gold and gems, beneath which a grille allowed the relics to be viewed by pilgrims (fig. 1.3). Furthermore, pilgrims could reach in with tongs allowing the creation of lesser class relics with fabric and other materials that touched the relics.⁴³ Pilgrims collected tokens of their journeys, some of which were recorded as also having special abilities. Freeman observes that in 1120 a lead, shell-shaped token collected from Santiago de Compostela exhibited healing powers.⁴⁴ Relics inside of reliquaries also interacted with the laity through gesture, procession, and liturgy, as Hahn emphasizes in her discussion of arm reliquaries.⁴⁵

Rock Crystal and Early Medieval Reliquaries

Although relatively uncommon, several reliquaries from the twelfth and thirteenth centuries use rock crystal's transparency to surround relics. While rock crystal's transparency allows partial increased visibility, it did not necessarily eliminate all barriers to direct observation of the relic; fabric wrappings continued to wholly or partially obscure the physical relic. Furthermore, even if rock crystal envelopes the reliquary surface as in the *Ninian Reliquary* (fig. 1.4), the relics may still remain hidden from view.

Rock crystal frequently appears in medieval religious objects. As a material, rock crystal appears with other precious gems in medieval lapidaries such as the listing

⁴³ Lauer, Rolf, "Shrine of the Magi: Information," Kölner Dom/Cologne Cathedral; <http://www.koelner-dom.de/index.php?id=18755&L=1>. Accessed April 19, 2017 and Brian Spencer, *Pilgrim Souvenirs and Secular Badges* (Woodbridge: The Boydell Press, 2010), 17.

⁴⁴ Freeman, *Holy Bones, Holy Dust*, 106.

⁴⁵ Hahn, "The Voices of the Saints," 28-29.

recorded in the eleventh century by Marbode of Rennes.⁴⁶ Marbode also follows the classical convention of associating rock crystal's origins with frozen ice. *De Lapidibus* includes sixty stones, including the conventional precious gems, such as those adorning the priestly garments as dictated in the book of Exodus and forming the foundations of the Heavenly Jerusalem, but also more unusual objects classified as "stones," including coral, barnacle shells, stones from the eye of the Indian tortoise, and pearls.⁴⁷ The transparency, shine, and light of rock crystal link it to the precious gold and gems valued for their material qualities in reliquary construction. Hahn describes the medieval phrasing "gold and gems" (*aureus atque gemmis*) as "shorthand...that, rather than detailing precise components, signifies the whole range of glittering and desirable materials" used in reliquaries.⁴⁸ Transparency and clarity reappear in St. John's descriptions of the Heavenly Jerusalem, even when associated with other materials, such as gold and jasper instead of the more accurate rock crystal or diamond. Crystal is frequently used as a comparison in these descriptions, even if not directly stated as a material.⁴⁹

Although a material with physical characteristics that emphasize vision and transparency, these qualities of rock crystal were not a major factor in many early medieval reliquaries which, prior to the Gothic period, focused on other characteristics. Numerous early medieval reliquaries take the shape of objects including the cross, various body parts such as extended arms and heads, and small portable altars. While

⁴⁶ John M. Riddle, *Marbode of Rennes' (1035-1123) De Lapidibus Considered as a Medical Treatise with Text, Commentary, and C.W. King's Translation Together with Text and Translation of Marbode's Minor Works on Stones* (Wiesbaden: Franz Steiner Verlag GmbH, 1977), 77.

⁴⁷ Riddle, *Marbode of Rennes*, 59-60, 76, 76, 84.

⁴⁸ Hahn, *Strange Beauty*, 38.

⁴⁹ Revelation 4:6, 21:11, 18-21.

many of these objects incorporate precious gems and rock crystal as ornaments, the rock crystal does not function in a transparent capacity, enabling observation in or out of the reliquary. Even though not allowing direct observation, rock crystal still serves as a magnifying lens, as in the early thirteenth-century *Ninian Reliquary* (fig. 1.4), now in the collection of the British Museum. Gerevini observes that the magnification of the rock crystal makes the reliquary's container, value, and materials seem more precious.⁵⁰ The face of the pendant reliquary comprises a dome of rock crystal, beneath which a wood and gold cross sits surrounded by pearls. While the cross visible beneath the rock crystal references one of the contained relics, a fragment of the True Cross, the actual relics remained invisible to the viewer, placed in settings held on the pendant's backing plate.⁵¹

The source and workmanship of the rock crystal affects its visibility and communication of transparency. Decoratively carved Fatimid rock crystal flasks provide a different visual perspective of reliquary and relic than plainly worked rock crystal. The mid-eleventh-century *Cross of St. Nikomedes of Borghurst* (fig. 1.5), previously in the Church of St. Nikomedes in Steinfurt-Borghurst until its recent theft, places Fatimid rock crystal flasks into the gold and jeweled surface of the cross to contain its relics. The two flasks, at the middle and foot of the cross, reveal the red fabric covering the relics. The flask at the center of the cross features carved motifs, although the majority of the flask's surface area is not concealed by this decoration. In contrast, the carved surface of a tenth or eleventh century Fatimid flask placed into the late fourteenth-century *Reliquary with*

⁵⁰ Gerevini, "Christus crystallus," 93.

⁵¹ The British Museum, "reliquary/relic, Museum number: 1946,0407.1, *Ninian Reliquary*," http://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=49980&partId=1. Accessed April 20 2017. See also Zarnecki, George et al. *English Romanesque Art 1066-1200*, (London: Hayward Gallery, Arts Council of Great Britain, 1984), No. 310.

Tooth of St. John the Baptist (fig. 1.6) redirects the eye, impeding visibility into the crystal flask.

Non-Fatimid sources of rock crystal present a different view. Instead of the kufic script and floral and vegetal patterns typical of Fatimid flasks, the surface of the crystal, often cut according to the constraints of the desired reliquary, invites easier examination. Hildesheim's *Domed Reliquary* (fig. 1.7), dated to ca. 1170-1180, places a large cabochon dome of rock crystal atop a wooden core decorated with enamel. Underneath this dome sits the fabric wrapped relic. Apart from metal fittings supporting a cross placed above the rock crystal dome, its surface is unadorned, except for its polished smoothness. A thirteenth-century French *Monstrance Reliquary* (fig. 1.8) prominently uses rock crystal for the body of the reliquary. The rock crystal cylinder's surface is cut into facets required by the cylindrical shape, without other embellishment. Although the reliquary interior is readily visible through the transparent rock crystal, the absence of the original relic or contained object impedes further study of the visible relationship between relic and reliquary. Monstrances, from the Latin *monstrare* or to show, displayed their contents. Bynum notes the uncertainty over the contents of many late medieval monstrances which could be "relics, the Eucharist, or *Dauerwunder*,"⁵² so similar was the treatment of these objects devotionally and liturgically.⁵³ The horizontally oriented form of the French *Monstrance Reliquary* noticeably differs from later monstrance reliquary forms. The majority of later, fourteenth century monstrance reliquaries, including examples from Aachen as well as the Art Institute of Chicago's *Reliquary with Tooth of*

⁵² Literally "enduring miracles." Bynum defines *Dauerwunder* as "miraculous transformations that not only appear but also endure, thus becoming themselves foci of devotion." Bynum, *Christian Materiality*, 25.

⁵³ Bynum, *Christian Materiality*, 29.

Saint John the Baptist, emphasize verticality in the placement of the rock crystal and the metalwork enclosure.

The direction of vision and mechanisms of sight are critical in examining the use of rock crystal and the concept of windows in medieval reliquaries. Philosophies of vision changed during the medieval period, influencing understandings of not only physiology and anatomy but also theology. An eleventh-century reliquary, the *Lantern of Begon* (fig. 1.9), from the Conques Abbey Treasury, takes the form of a lantern, or possibly a tower. Diedrichs remarks upon the reliquary's architectural connections to Byzantine influences, especially the domelike form crowning the lantern.⁵⁴ According to Hahn, the windows of these lantern type reliquaries served to let "light come out rather than the gaze to penetrate inward."⁵⁵ The gilded silver reliquary incorporates transparent openings around the upper portion of the structure, through which are visible written labels and relics. The lantern form echoes the environment of the relics and reliquaries. Hahn notes that they would have been surrounded by multiple sources of light, including light from candles and lamps.⁵⁶ Not only were relics and reliquaries in close proximity to devotional sources of light, but the relics themselves emit light that "flickers, flashes, and coruscates; in short it is incandescent."⁵⁷

Theorizing the Light of Heaven

The metaphysical properties of light apply to many spiritually significant concepts in medieval Christianity. Patricia Cox Miller emphasizes the *ekphrasis* established in the

⁵⁴ Diedrichs, *Vom Glauben zu Sehen*, 53.

⁵⁵ Hahn, *Strange Beauty*, 26.

⁵⁶ *Ibid*, 26.

⁵⁷ *Ibid*, 26.

late fourth century poet Prudentius' account of the tomb of the martyr Hippolytus. As one descends underground, the environment remains light, lit by "frequent shafts of light [which] penetrate from the openings in the vault. So it is possible to see and enjoy the radiancy of bright light even below the earth where there is no sun."⁵⁸ Multiple sources of light and brightness abound, including the metal of the shrine, the martyr's blood, and the painted walls.⁵⁹ Miller notes that these multiple reflective surfaces, including the wall painting depicting the martyr, the metallic shrine, and its contained relics, "collapses the temporal and spatial distinctions between earth and heaven, so also the boundary between the horrible and graceful is dissolved as the tortured body and the beatific body become an aesthetic whole."⁶⁰ The qualities of light, its visibility and brightness, matter in this created environment, and the spiritual experience obtained within.

Medieval optical theory investigated the perception and direction of sight, drawing on both classical and Arab sources. Michael Camille observes the importance of late medieval shifts in thinking regarding the comprehension of vision. The models of extramission and intromission originate from different philosophical foundations, namely Plato and Aristotle. The Neoplatonic model and extramission theory proposed that vision occurred "in which a visual fire emanated from the observer's eye coupled with light or fire coming from the perceived object."⁶¹ In contrast, intromission "placed emphasis not upon the viewer, previously the beaconlike source of vision, but upon the image as the

⁵⁸ Patricia Cox Miller, "'The Little Blue Flower is Red': Relics and the Poetizing of the Body," *Journal of Early Christian Studies*, Vol. 8, No. 2 (2000). <https://doi.org/10.1353/earl.2000.0030>, 224. Michael Roberts, *Poetry and the Cult of the Martyrs: The Liber Peristephanon of Prudentius* (Ann Arbor: The University of Michigan Press, 1993), 157-158.

⁵⁹ Miller, "The Little Blue Flower is Red," 225.

⁶⁰ *Ibid*, 226.

⁶¹ Michael Camille, "Before the Gaze: The Internal Senses and Late Medieval Practices of Seeing," in *Visuality Before and Beyond the Renaissance: Seeing as Others Saw*, ed. Robert S. Nelson (Cambridge: Cambridge University Press, 2000), 205.

base of the visual pyramid, literally reversing the flow of the visual rays from subject to object and making the trajectory one that went from object to subject, from the image to the eye/I."⁶² The increasing importance of intromission theory not only for medieval scholars, influenced by new and newly translated scholarship and the university environment, but also the perception of images and light appears in the changes in material and form of reliquaries, especially concerning rock crystal and other transparent elements. Visual and perceptual changes occurred in several places in the medieval religious experience. One of the most notable, especially regarding liturgical practice, involved the increasing visibility attached to the elevation of the host in the Mass in the thirteenth century.⁶³

In her study of reliquaries between the fifth and thirteenth centuries, Hahn argues that reliquaries on a broad level recreate or attempt to recreate sacred space, drawing on biblical precedents, notably the Ark of the Covenant and the Temple of Jerusalem's sanctuary. The method of conveying this sacred space differs considerably throughout reliquary form and construction, involving different aspects of materiality and various theological and philosophical priorities. The sacred space and sacred contents of reliquaries occupy transitory space, bridging spiritual and temporal, heaven and earth. Jerusalem occupied the center of the medieval world in the ordinary, evidenced by its place at the center of medieval cartography, and the extraordinary, as an object of spiritual desire and pilgrimage. Freeman makes the dramatic statement that Jerusalem "haunted the Christian imagination."⁶⁴ Jerusalem and its spiritual significance to

⁶² Camille, "Before the Gaze," 206.

⁶³ See "Vision and Theology" in chapter 2, pages 34-36 for a more detailed discussion.

⁶⁴ Freeman, *Holy Bones, Holy Dust*, 95.

medieval Christianity inspired earthly pilgrimage and crusade, attracting a significant number of western visitors.

The Heavenly Jerusalem, described extensively in Revelation, promoted a different spiritual longing and desire to medieval audiences. Situated in the temporally unknowable future, the Heavenly Jerusalem inspired descriptions and representations throughout medieval literature, theology, manuscript illumination, and other material objects. Hildegard of Bingen's mid-twelfth century visionary text *Scivias* (*Scito vias Domini* or *Know the Ways of the Lord*) relies extensively on comparisons to the heavenly city, liberally using references to its architectural elements.⁶⁵ The experience of the heavenly appears in a variety of different ways. Notably, Abbot Suger cites heavenly beauty and light in his writings describing the renovations at St. Denis.⁶⁶ Reminders of the eternal, both heaven and hell, appear frequently in medieval art. Scenes of the Last Judgment and its dual promises of either paradise or hell were a frequent subject of the tympana above the doorways to medieval churches.

St. John's writings in Revelation describe the Heavenly Jerusalem architecturally, emphasizing its structure and the aesthetic qualities of its materials. The listed materials of gold, gems, and crystal share many commonalities with reliquaries. Reliquaries also frequently adopt architectural structures reminiscent of St. John's descriptions and other biblical references, such as the words of Jesus in John 14:2, "In my Father's house are many mansions." Arnold Angenendt observes that the many medieval reliquaries in the

⁶⁵ See Book Three: The History of Salvation Symbolized by a Building in *Scivias*, trans. Mother Columba Hart and Jane Bishop (New York: Paulist Press, 1990).

⁶⁶ Abbot Suger, *On the Abbey Church of St.-Denis and its Art Treasures*. ed. and trans. Erwin Panofsky and Gerda Panofsky-Soergel, 2nd edition. (Princeton: Princeton University Press, 1979), 43, 51, 65. Regarding the importance of light and philosophies of light and heaven to Abbot Suger and in resulting scholarship see further discussion in Note 71, page 27 and Note 84, page 33 of this thesis.

form of houses, such as the *Shrine of the Three Kings* in Cologne, imitate these future heavenly houses.⁶⁷

Significantly, early rock crystal reliquary examples incorporate few architectural components. Of the ones considered here, only the French monstrance reliquary uses architectural elements in its design, introducing a short tower placed at the center of the crystal cylinder. Other aspects of the reliquary monstrance do not emphasize the imitation of architecture. The peaked roof below the tower is decorated with animal forms. The animal details continue in the four raised feet in the shape of paws that support the rock crystal cylinder. Hildesheim's *Domed Reliquary* does not use the rock crystal dome to construct a miniature building, but instead to display its relic contents. The enameled decoration of the reliquary box comprises images of saints and angels. Other reliquaries that explicitly take the shape of buildings focus less on aspects of transparency and sight, instead constructing typical house-like forms.

Stained glass, an increasingly significant component of Gothic churches, plays with medieval concepts of vision and materiality. As Otto von Simson observes, the early and original stained glass used in early Gothic constructions did not result in an overwhelmingly bright space such as a modern viewer might see today — instead appreciating later installations of grisaille or majority white glass windows — although Gothic stained glass and the walls containing it did create a lighter, more "porous" interior than previous Romanesque constructions.⁶⁸ The visual qualities of stained glass did matter in the creation of Gothic style. Abbot Suger's renovations to St. Denis

⁶⁷ Angenendt, "Relics and their Veneration," 25.

⁶⁸ Otto von Simson, *The Gothic Cathedral: Origins of Gothic Architecture and the Medieval Concept of Order* (Princeton: Princeton University Press, 1988), 3-4.

stemmed in part from inadequate space but also embraced expanded space and light, qualities associated with heaven.⁶⁹ Praising the material ornaments and treasures of the church, in particular precious gems, Abbot Suger records that:

I see myself dwelling, as it were, in some strange region of the universe which neither exists entirely in the slime of the earth nor entirely in the purity of Heaven; and that, by the grace of God I can be transported from this inferior to that higher world in an anagogical manner.⁷⁰

Suger's interest in light and materials and their ability to lessen the gap between heaven and earth appears in his renovations to St. Denis' lower choir. Brightened spaces and the luminous, colorful effect of stained glass showcases an increasing interest in the visual and new methods of communication, evolving beyond the previous standard of wall-painting.⁷¹

Changing architectural conventions, especially the mid-twelfth century advent of the Gothic style, resulted in new focuses on height, light, and space. The soaring interiors of Gothic cathedrals and the openness and transparency indicated within appears in miniature in the reliquary architecture. Additionally, rock crystal becomes an increasingly important visual and material component of fourteenth-century reliquaries. The materiality of rock crystal provides another symbolic level. Bynum argues that it is not only the transparency of rock crystal windows that mattered but that its substance, crystal, served to contain "the bone within in the nondecayable quintessence of heaven."⁷² Valued for its transparency and symbolic purity, early medieval reliquaries display the

⁶⁹ Abbot Suger, *On the Abbey Church*, 43,51.

⁷⁰ Ibid, 65.

⁷¹ See Conrad Rudolph, *Artistic Change at St-Denis: Abbot Suger's Program and the Early Twelfth-Century Controversy over Art* (Princeton: Princeton University Press, 1990), 75. For further discussion of Rudolph in this thesis see Note 84, page 33.

⁷² Bynum, *Christian Materiality*, 28.

materiality of rock crystal, if it is included as a decoration. However these pre-Gothic examples do not address questions of perception and openness. Changing theories of vision and perception, especially those promoted by the academic ideas of the thirteenth century contribute to the combination of rock crystal and ethereal architectural metalwork designs in reliquaries.

Chapter 2: Changing Visions, Changing Materials: Rock Crystal, Reliquaries, and the Fourteenth Century

Theories of medieval vision explore aspects of cognition, comprehension, and anatomy — encompassing interests both theological and practical. Over the course of the medieval period, interest in the characteristics of vision originate from multiple scholarly frameworks and backgrounds. While the study of the different theories and philosophies of medieval optics demands its own dedicated investigation, certain changes and their ramifications prove important to the history of art and objects. Specifically, shifting interest in ideas of perception and reaction during the thirteenth century mark a critical divide. Camille argued against interpreting medieval art as a prioritization of the spiritual at the expense of the body. Instead, he explored medieval understandings of perception and cognition, promoting a more nuanced and complex reading, resulting in images that he deemed were "so much more powerful, moving, and instrumental as well as disturbing and dangerous."⁷³

The transition from the early to later Middle Ages sees changes across multiple spheres including philosophy, theology, architecture, and politics. The impact and reach of these occurrences differs, although still affecting a wide range of medieval society. The intellectual and theological debates over the role of vision mattered little to the majority of the medieval world, remaining restricted to an educated minority. Despite barriers to access, the effects of medieval visual theory appear in other areas, especially through art, architecture, and visual culture. This chapter discusses vision and transparency in reliquaries, examining both material, especially transparent rock crystal,

⁷³ Camille, "Before the Gaze," 217.

and architectural structure. The majority of reliquaries belong to the treasury of Aachen Cathedral, creating interactions with the reign of Charles IV and the Holy Roman Empire in the fourteenth century.

Aachen and Architecture

Aachen contains important reliquaries which exhibit medieval interest in vision and perception in its cathedral and treasury. Long valued for its hot springs, the location attracted various settlements, including multiple prehistoric presences and the Romans in the first century C.E.⁷⁴ The significance of Aachen in Christianity connects the city to Emperor Charlemagne, who built his Palatine Chapel at the site in the late eighth century. Although the Palatine Chapel and the surrounding complex experienced significant changes by the thirteenth and fourteenth centuries, the importance of Charlemagne's building, its relics, and associations with royal power continued to be influential.

The octagonal design of the original chapel, then known as the Collegiate Church of the Virgin Mary, draws in part on earlier Christian architecture, particularly San Vitale in Ravenna. Parallels to San Vitale appear not only in the multistory octagonal structure, but also the interior program of arches, columns, and mosaic decoration. Art historian Georg Minkenberg, the former head of the Aachen Cathedral Treasury, argues that while Charlemagne was influenced by his observations of Ravenna and its Byzantine characteristics, including taking spolia from the city as well as from Rome under the authority of Pope Hadrian I, the church's design originated independently, instead of

⁷⁴ Georg Minkenberg, *The Cathedral Aachen*, trans. Manjula Dias-Hargarter (Regensburg: Verlag Schnell & Steiner GmbH, 2014), 2.

being a pure imitation.⁷⁵ According to the history of Charlemagne's life recorded in the early ninth century by Notkers of St. Gall, plans derived from both Charlemagne himself and the architect Odo of Metz,⁷⁶ resulting in the creation of "a basilica finer by far than the works of the ancient Romans" with Charlemagne calling "from all the lands across the sea, masters and builders who were skilled in every relevant art."⁷⁷ Charlemagne's biographer Einhard, who recorded his *Life of Charles* around the year 830, observes that because of Charlemagne's Christian devotion, he constructed "at Aachen a basilica of the greatest beauty...adorned with gold and silver, with lighting fixtures, and with balustrades and doors of solid bronze." Columns and marbles were used from Rome and Ravenna because Charlemagne "was unable to obtain...[them] for its construction anywhere else."⁷⁸ Later expansions throughout the medieval period reflect the changes in architectural design seen throughout Europe, such as the Gothic choir, constructed between 1355 and 1414.⁷⁹ Again the cathedral's expansion draws on earlier, prestigious Christian architectural precedents, in this instance Sainte Chapelle in Paris. Built by King Louis IX and consecrated in 1248, Sainte Chapelle displays the Gothic understanding of heaven and majesty through its towering walls of stained glass, seemingly barely

⁷⁵ Minkenberg, *The Cathedral Aachen*, 20.

⁷⁶ The name Odo of Metz, described as an architect, is usually attached to accounts of Charlemagne's Palatine Chapel at Aachen. Although not mentioned by name in Notker and Einhard's accounts, Thomas F.X. Noble identifies Odo of Metz as the chief architect in his notes to the text. See *Charlemagne and Louis the Pious*, trans. Noble, 83, Note 54. A lost inscription from the Palatine Chapel naming Odo of Metz as architect is cited by Julius von Schlosser, *Schriftquellen zur Geschichte der Karolingischen Kunst* (Vienna: Verlag von Carl Graeser, 1892), 28, Note 107. Odo of Metz appears throughout the secondary literature, including in Betsy L. Chunko's entry on Aachen in *Encyclopedia of Medieval Pilgrimage*, edited by Larissa J. Taylor et al. (2010), p. 1, Georg Minkenberg's *The Cathedral Aachen*, (2014), p. 20, Herman Schnitzler's *Der Dom zu Aachen*, (1950), p. vi, and Charles B. McClendon's entry in *Grove Art Online/Oxford Art Online*, Aachen, Section 2: Buildings, ii: Palatine Chapel.

⁷⁷ Minkenberg, *The Cathedral Aachen*, 20 and Notker, "The Deeds of Emperor Charles," in *Charlemagne and Louis the Pious: The Lives by Einhard, Notker, Ermoldus, Thegan, and the Astronomer*, trans. Thomas F.X. Noble (University Park: The Pennsylvania State University Press, 2009), 83.

⁷⁸ Einhard, "The Life of Charles the Emperor," in *Charlemagne and Louis the Pious*, 42-43.

⁷⁹ Minkenberg, *The Cathedral Aachen*, 14.

supported by exterior walls without flying buttresses, features copied in the Aachen Cathedral choir.

Notable not only for its architecture and collection of relics, Aachen and its church served as the coronation church for the kings of the Holy Roman Empire, preceding their subsequent coronation as emperor in Rome.⁸⁰ This prestigious position enabled the church and its treasury to collect a variety of influential gifts, given by royalty or specifically produced for a coronation. In her history of the treasury, Herta Lepie surmises that multiple large reliquaries, including two examples that incorporate rock crystal and Gothic architecture, arrived at the treasury as donations from Emperor Charles IV.⁸¹ Other smaller but stylistically similar reliquaries housed in the treasury originated from workshops believed to have been based in Prague, the seat of Charles IV's power and government during his reign. Charles IV, who personally visited Paris and Sainte Chapelle in 1378, experienced both its impressive architecture and the relics housed within. The visit, at the end of his life, was not the emperor's first experience with Sainte Chapelle and its relics. He spent several years, beginning at the age of seven, living at the French court, where he visited and experienced religious ceremonies involving Sainte Chapelle and its relics of Christ's Passion.⁸²

Sainte Chapelle, itself an imitative large-scale reliquary building for its precious relics, permitted access to an exclusive few. The royal chapel for the French king, the building protected his recently purchased Passion relics, brought to the west from Constantinople in the aftermath of the fourth crusade. Sainte Chapelle and its walls of

⁸⁰ Lepie and Minkenberg, *The Cathedral Treasury of Aachen*, 5.

⁸¹ Ibid, 5. *The Reliquary of Charlemagne and the Three-Steepled Reliquary*.

⁸² Jiří Fajt, "Charles IV: Toward a New Imperial Style," in *Prague: The Crown of Bohemia 1347-1437*, ed. Barbara Drake Boehm and Jiří Fajt (New York: The Metropolitan Museum of Art, 2005), 4.

stained glass magnify the qualities of light sought by Abbot Suger during his renovations of Saint Denis in 1144. Seeking to brighten and open the structure of the church, Suger's focus on light appears in the addition to an inscription placed following the completion of the lower choir at Saint Denis:

Once the new rear part is joined to the part in front,
The church shines with its middle part brightened.
For bright is that which is brightly coupled with the bright,
And bright is the noble edifice which is pervaded by the new light;
Which stands enlarged in our time,
I, who was Suger, being the leader while it was being accomplished.⁸³

While Suger's renovations to Saint Denis introduced larger windows and stained glass, pushing away from Romanesque architecture,⁸⁴ the subsequent century's embrace of Gothic style resulted in increasing numbers of churches and cathedrals seeking the magnification of interior space, through height, vaults, flying buttresses and stained glass.

Interpretations of Gothic architectural design tend to focus on the space created and its spiritual implications and the technical details of architecture and construction.⁸⁵ Elements of Gothic design appear frequently in the late Middle Ages as part of full-scale buildings and in a range of miniaturized objects including reliquaries, carved wood ornamentation of furniture and altarpieces, woven tapestries, and metalwork. François Bucher's study of the micro-Gothic concludes that miniaturized architecture allowed

⁸³ Suger, *On the Abbey Church of St.-Denis*, 51.

⁸⁴ Conrad Rudolph details the motivations, justifications, and contexts of Abbot Suger's renovations, as well as the differing views on the role of monastic art, especially those promoted by Bernard of Clairvaux and the Cistercian order in his book *Artistic Change at St-Denis: Abbot Suger's Program and the Early Twelfth-Century Controversy over Art* (Princeton: Princeton University Press, 1990). A point of particular importance is Suger's various justifications for his alterations, and his references to the ideas of Pseudo-Dionysus, which Rudolph describes as vague and confusing (p. 70). Although increased light and its visual effects appear in St. Denis and are cited by Suger in his writings, Rudolph argues that instead of being primarily inspired by Pseudo-Dionysus's ideas of light mysticism, Suger reacts to changing ideas regarding monastic art, especially those pertaining to the Cistercians and Bernard of Clairvaux, while maintaining a beautiful and image filled church (p. 65, 71-75).

⁸⁵ Roland Recht, *Believing and Seeing: The Art of Gothic Cathedrals*, trans. Mary Whittall (Chicago: University of Chicago Press, 2008), 10.

construction that experiments with pushing the technical boundaries of full-scale architecture while remaining possible in the miniature.⁸⁶ Bucher concludes that the "idea" of Gothic style and its focus on geometry, structure, and light are encapsulated in micro-architecture examples, serving to "physically enclose the greatest mysteries of Christianity."⁸⁷ The multiple mid-fourteenth century reliquaries housed in the Aachen Cathedral Treasury that utilize miniaturized Gothic architecture demonstrate the popularity and spread of the Gothic and both the technical challenges it presented and the abstract interpretations of theology and space contained within. Interest in transparency and vision appear in soaring interior space, pierced by stained glass supported by geometrically complex arches on the macro-scale but also in the micro-incorporation of these elements in metalwork and crystal.

Vision and Theology

Reliquaries are not the only objects to demonstrate the curiosity towards sight and perception in medieval theology. The elevation of the Host became one of the most significant changes to liturgy, spreading from an uncommon to typical phenomenon by the middle of the thirteenth century. Roland Recht categorizes this example as part of the larger trends towards increased visibility in religious practice. He notes that while an increased demand for visible signs is apparent, they were not always understood by laity or clergy, pointing in particular to Guillaume Durand's *Rationale divinarum officiorum* (*Manual of the Divine Offices*), which provided instruction to the clergy about the

⁸⁶ François Bucher. "Micro-Architecture as the 'Idea' of Gothic Theory and Style," *Gesta* Vol. 15 No 1/2, Essays in Honor of Sumner McKnight Crosby (1976): 82. <http://www.jstor.org/stable/766753>.

⁸⁷ Ibid, 83.

meanings and symbols associated with liturgy, architecture, and objects.⁸⁸ Although not always apparent to all audiences, Gothic style used symbolism to construct portions of its meaning.

The widespread impact of visibility materializes in the elevation of the Host. Medieval theologians wrote frequently on attitudes and doctrines of communion and the Eucharist. Significant changes had occurred in Christian practice from the early centuries of the church regarding both the frequency and method of receiving communion. The early church received communion in the form of both bread and wine frequently, every week, and shared with the clergy.⁸⁹ By the time of the Fourth Lateran Council in 1215, these customs were substantially altered: in contrast to partaking weekly, instead the minimum requirement for communion was once per year, typically around the holiday of Easter.⁹⁰ According to G.J.C. Snoek, the increasing prominence of the clergy in the celebration of the Eucharist limited the participation of the laity, making them "passive spectators."⁹¹ Gary Macy emphasizes William of Auxerre's (d. 1231) explanation that the priest elevates the Host "in order that all the faithful might both see it and seek what is necessary for salvation."⁹²

⁸⁸ Recht, *Believing and Seeing*, 69-70.

⁸⁹ G.J.C. Snoek, *Medieval Piety From Relics to the Eucharist: A Process of Mutual Interaction* (Leiden: Brill, 1995), 50.

⁹⁰ Ibid, 50.

⁹¹ Ibid, 54.

⁹² Gary Macy, *The Theologies of the Eucharist in the Early Scholastic Period: A Study of the Salvific Function of the Sacrament according to the Theologians c. 1080-c.1220* (Oxford: Clarendon Press, 1984), 89. See also William of Auxerre, *Summa de officiis*, Tract II, cap. 9, 17. *Guillelmus Autissiodorensis, Summa de officiis ecclesiasticis, tract. II, cap. 9, hrsg. v. Franz Fischer, Köln 2007-2013, guillelmus.uni-koeln.de/tcrit/tcrit_t2c9*. Accessed April 12, 2017. "Quo facto sacerdos eleuat corpus christi, ut omnes fideles uideant et petant, quod prosit ad salutem, uel ad ostendendum, quod non est aliud dignius sacrificium, imo est super omnes hostias. Vnde eucharistia bona gratia uel dator gratie interpretatur." I quote Macy's translation.

The elevation of the Host emphasized the tangible to medieval worshippers. Previously the actions of the priest faced away from the laity; instead facing the altar and relics. The introduction of the *elevatio* allowed sight of the consecrated Host.⁹³ Regulations recorded by Bishop Eudes of Sully (d. 1208) in the synodal statutes of Paris, instructed that *elevatio* not occur with an unconsecrated Host, and made particular provisions according to Snoek that "the priest raise the Host sufficiently high that the faithful - to whom the priest's back was turned - could see the Host clearly."⁹⁴ From the beginning of the thirteenth century, gradual changes occurred. Snoek recounts that in contrast to practice in the twelfth century where the priest primarily bowed in the direction of the altar with its relics, in the thirteenth century first the priest "bowed before the consecrated bread before raising it for all to see," while in the fourteenth century genuflection occurred before and after the *elevatio*, both by the clergy and laity.⁹⁵ Other practical alterations to liturgy and practice began to be implemented, with special care given to protect the laity's view of the Host. Some of the many examples recorded by Snoek include the removal of choir screens, pulling back the altar's side curtains, and taking care to insure smoke from incense did not obscure the Host, now afforded a position of increased visibility.⁹⁶

Relics and Reliquaries

⁹³ Joseph A. Jungmann, *The Mass of the Roman Rite: Its Origins and Development* Translated by Francis A. Brunner (Westminster, Maryland: Christian Classics, Inc., 1986), Vol. II, 206-207.

⁹⁴ Snoek, *Medieval Piety*, 55-56.

⁹⁵ Snoek, *Medieval Piety*, 56-57. Jungmann, *The Mass of the Roman Rite*, Vol. II, 212, 213. Per Jungmann while the laity knelt, as described by Snoek on page 56, the celebrant made only a slight bow instead of dropping to one knee. Kneeling genuflection began to appear in the late fifteenth century, becoming a "definitive" part of the Mass in 1570 according to the Missal of Pius V. See Jungmann, Notes 64 and 73, Vol. II, 212-213.

⁹⁶ Snoek, *Medieval Piety*, 56-58.

The focus on visibility and experience in late medieval piety belongs to both the elevation of the Host and relics. Canon 62 of the Fourth Lateran Council in 1215 sets forth regulations regarding the display and treatment of relics. It directs that because

some expose for sale and exhibit promiscuously the relics of saints, great injury is sustained by the Christian religion...we ordain in the present decree that in the future old relics may not be exhibited outside of a vessel or exposed for sale. And let no one presume to venerate publicly new ones unless they have been approved by a Roman pontiff.⁹⁷

The care taken for the proper display and veneration of relics denotes their continued role as sacred objects, deserving of proper devotion and pilgrimage. Angenendt notes that the Fourth Lateran Council's decree failed to eliminate the practice of displaying relics, which continued in cases designed for relic visibility and during special religious days or years.⁹⁸ Prints from the seventeenth century show the continued display of relics at Aachen from the tower of the church to crowds of pilgrims (fig. 3.1).

The medieval *Chronicle of the Reigns of John II and Charles V* records Charles IV's intense interest in observing and experiencing the relics of Christ's Passion housed in Sainte Chapelle during his visit to Paris in 1378.⁹⁹ As visiting royalty, Charles IV avoided many of the barriers impeding access to the Passion relics. Royal status and invited entry to Sainte Chapelle however proved only the first hurdle. Within Sainte Chapelle, the relics were kept elevated on a platform, accessible only by two spiral staircases, recorded in the *Chronicle* as steep and narrow. Charles IV, impaired by limited mobility and gout,

⁹⁷ Canon 62, Twelfth Ecumenical Council: Lateran IV, 1215, Paul Halsall's *Medieval History Sourcebook*, <https://sourcebooks.fordham.edu/basis/lateran4.asp>. Accessed April 19, 2017.

⁹⁸ Angenendt, "Relics and their Veneration," 26.

⁹⁹ Peter Kováč. "Notes on the Description of the Sainte-Chapelle in Paris from 1378," in *Court Chapels of the High and Late Middle Ages and their Artistic Decoration*, ed. Jiří Fajt (Prague: National Gallery in Prague, 2003), 162. The original French text of "Comment le Roy à l'Empereur les reliques de la Sainte-Chapelle de son palais" from *Les Grandes Chroniques de France: Chronique des Règnes de Jean II et de Charles V*, edited by R. Delachenal (Paris, 1916) is reprinted on page 169.

could not climb or be carried. Despite these difficulties, Charles IV succeeds in gaining access, enduring the painful situation of being pulled by his shoulders and legs.¹⁰⁰ The allure of the relics, intimate access, and their lavish, stained glass-enclosed setting combine to create an impressive religious experience. Although the reliquary setting observed by Charles IV is inaccessible because of the destruction during the French Revolution, indications of Gothic reliquary construction and visual priorities appear in other medieval examples, including those valued by Charles IV and associated with his patronage.

Charles IV's reign, established by his coronation in Aachen in 1349, continued until his death in 1378. Two large scale reliquaries from the Aachen Cathedral Treasury date to this period in the fourteenth century. Both encapsulate their relics in rock crystal containers, further enshrined among an elaborate Gothic architectural structure. Reliquaries mimicking the architectural forms of churches build on previous conventions. Examples exist which incorporate conventions of Carolingian, Ottonian, and Romanesque religious architecture. The dramatic focus on height throughout Gothic architecture presents a different visual realization of the reliquary. In contrast, earlier building-shaped reliquaries relied on the traditional basilica form, emphasizing length over width.¹⁰¹ Although, these reliquary structures do not emphasize height as a key component, size still created impressive effects. Cologne's *Shrine of the Three Kings* (fig. 1.3) created in the late twelfth and early thirteenth century by Nicholas of Verdun and other craftsmen, uses size to immense effect. The enormity of the shrine, the largest of its

¹⁰⁰ Anton Legner, *Reliquien in Kunst und Kult: zwischen Antike und Aufklärung* (Darmstadt: Wissenschaftliche Buchgesellschaft, 1995), 201 and 377, Note 433. and Kováč, "Notes on the Description of the Sainte-Chapelle," 162.

¹⁰¹ Although churches become increasingly taller throughout the Carolingian, Ottonian, and Romanesque periods, the heights achieved by Gothic church architecture present a notable contrast.

type measuring approximately 110 centimeters wide, 153 centimeters tall, and 220 centimeters long, and its relics of the Magi attracted large quantities of pilgrims to Cologne. Architectural symbolism communicates aspects of the heavenly, repeatedly described in scripture and other prominent sources, including comments by Pope Gregory the Great, as having characteristics of houses.¹⁰² Angenendt relates these qualities to traditional understandings of graves as homes for the dead, resulting in house and church shaped reliquaries representative of "the house on the other side."¹⁰³

Reliquary shrines of this type emphasize stability and solidity, with a focus on exterior sculptural decoration. Aachen's most prestigious relics, those of the Virgin Mary, lie within a rectangular reliquary with pointed roof. An earlier, similarly shaped object also houses the remains of Charlemagne, but the role of vision differs for these objects. The *Shrine of the Virgin Mary* (fig. 2.1) appears as a single nave church with transept, embellished by sculpted gold figures of the apostles and the Virgin. Narrative panels, also in gold, adorn the roof. Miniature columns support and surround all of these components, with particular attention paid to small details such as patterned surfaces and decorated capitals. Although the reliquary shrine emulates architecture, it contains no windows. Instead the sculpted figures along the main level and the narrative reliefs on the roof direct the eye. The exterior of the reliquary prohibits observation of the relics. While the physical reliquary impedes visual access to the relics, opportunities existed to have visual interaction through pilgrimage. The removal and display of relics from within the reliquary through a door concealed by the sculpted figure of the Virgin Mary occurred

¹⁰² Angenendt, "Relics and their Veneration," 25. See Note 96: Gregory the Great, *Dialogi* 4.37.9, *Sources chrétiennes* 265 (Paris, 1980), 130, L 69.

¹⁰³ Angenendt, "Relics and their Veneration," 25.

every seven years beginning in 1349, although pilgrimage previously existed to the shrine, first mentioned in records in 1220.¹⁰⁴ According to Lepie, the shrine's architectural components do not follow the example of large-scale architecture, instead linking metaphorical associations of the shrine and its golden exterior with the heavenly.¹⁰⁵ Although she notes the conformity of the *Shrine of the Virgin Mary* to other similar shrines of the Meuse-Rhenish type, Lepie includes in her description that it "already displays the conflict with the beginning of the Gothic period."¹⁰⁶ Sculpted pointed pediments shelter the figures of the apostles, while under the transept, the enthroned Virgin and Child sit beneath a trefoil arch. These details contrast with the firmly Romanesque rounded arches embellishing the *Shrine of Charlemagne* (fig. 2.2), created only a few years earlier, between 1182 and 1215.

Despite the varying styles of arches and small architectural elements, the *Shrine of Charlemagne* and the *Shrine of the Virgin Mary* take very similar forms. Of significant size, with each standing just under 100 centimeters tall while extending nearly 200 centimeters in length, observation focuses on the horizontal plane, especially considering the placement of the multiple narrative scenes, present on the roofs of each shrine. In contrast, the Aachen Cathedral Treasury's reliquaries from the mid and late fourteenth century, during the reign of Charles IV, present a noticeably different, open and transparent visual façade. The *Reliquary of Charlemagne* (fig. 2.3) and the *Three-Steeped Reliquary* (fig. 2.4) present their relics in rock crystal, surrounded and dominated by multistoried and elaborate Gothic architectural reliquaries.

¹⁰⁴ Lepie and Minkenberg, *The Cathedral Treasury of Aachen*, 104-105, 108.

¹⁰⁵ Ibid, 104.

¹⁰⁶ Ibid, 104.

Bynum, in her study of Christian materiality, observes that reliquaries handle the materiality of relics, of their bone, flesh, and blood, in complex ways, both concealing and revealing.¹⁰⁷ The variety of materials and shapes of reliquaries long played with issues of shape and substance, seen in the prevalence of reliquaries that imitate the body, or focus on details of the relic. Body part reliquaries, although at times containing multiple and varied relics as demonstrated by Hahn, capture the physicality of substance of the saints and their relics, representing heads, hands, and feet.¹⁰⁸ According to Bynum, reliquaries manipulate materiality, especially ones that play with transparency, revealing the relic's "decay-resistance as bone or wood yet lifting it to immortal life through gold and crystal."¹⁰⁹ The immediate transparency of crystal reveals materiality and object, or suggests a specific materiality while still concealing a relic. The late twelfth century *Reliquary of Thomas Beckett's Blood* (fig. 2.5), similar in chronology to the *Domed Reliquary* (fig. 1.7) from Hildesheim, takes the form of a lidded chest. Its exterior displays scenes of the life of the saint and his martyrdom. Yet the shape and substance of the reliquary do not invite observation of the relic. It does however, as Bynum emphasizes, interact with materiality, hinting at the substance of the relic through the transparent jewel¹¹⁰ colored with red foil, entertaining the appearance of both blood and ruby, although actually neither.¹¹¹ This application of rock crystal, and the rock crystal of many other late twelfth and thirteenth century reliquaries remains separate from the interaction of rock crystal and architecture seen in Aachen's fourteenth century reliquaries.

¹⁰⁷ Bynum, *Christian Materiality*, 70.

¹⁰⁸ Hahn, "The Voices of the Saints," 20-21.

¹⁰⁹ Bynum, *Christian Materiality*, 71.

¹¹⁰ Bynum identifies this jewel as rock crystal. Per the online entry provided by the Metropolitan Museum of Art (object number 17.190.520) it is a glass cabochon.

¹¹¹ Bynum, *Christian Materiality*, 70-71.

Both the *Reliquary of Charlemagne* and the *Three-Steepled Reliquary* replicate in miniature the soaring architectural details of Gothic cathedrals. The reliquaries are large in their own right at 125 centimeters and 93.5 centimeters tall respectively. Despite being comparatively large compared to other reliquaries, both reliquaries are minuscule compared to stone architecture. Both reliquaries point upwards, drawing the eye to three towers, embellished with Gothic arches, buttresses, pinnacles, and framing reminiscent of the tracery in stained glass windows. Both also include many open elements, allowing the eye to penetrate the physical structure of the reliquary. The *Reliquary of Charlemagne* uses a multi-level structure: sculpted angels, religious figures, and paladins¹¹² support the reliquary. As the eye moves upwards, it first encounters the largest relic: a partially fabric wrapped bone, supposedly belonging to Charlemagne visible through eight windows: three roundels at the front and back and a square on each side. Red fabric wraps around the middle of the bone. This convention, seen in other reliquaries, notably the *Cross of St. Nikomedes of Borghurst* (fig. 1.5) shifts in this example. While the entirety of the relics contained with rock crystal in the *Cross of St. Nikomedes of Borghurst* remain hidden by red fabric, in the *Reliquary of Charlemagne* the materiality of bone is highlighted by the partial fabric covering. The contrast between fabric and bone, emphasized by the partial view enforced by the rock crystal windows, stresses the materiality of the relic. Above this relic, the sculpted figures of Charlemagne holding a model of the church in Aachen, the Virgin Mary holding Christ, and St. Catherine of Alexandria stand under pointed Gothic arches decorated with enamel and gems. The roof above these figures holds a variety of other relics including those associated with Charlemagne, John the Baptist,

¹¹² Herta Lepie identifies the eight figures as four angels and four individuals associated with Charlemagne: Pope Leo III, Archbishop Turpin of Reims, and Roland and Olivier from *The Song of Roland*. See Lepie and Minkenberg, *The Cathedral Treasury of Aachen*, 34.

John the Evangelist, and other saints.¹¹³ The upper portion of the reliquary continues the upwards visual trajectory, concluding in three pointed spires that shelter sculpted figures of Christ and two angels, carrying relics of Christ's Passion. The saints and relics included in the program of the reliquary communicate not only an interest in the legacy of Charlemagne and the historical importance of the Holy Roman Empire but also the personal religious interests of Charles IV. He particularly valued St. Catherine of Alexandria, having achieved military victory at San Felice, during the defense of Modena in 1332 on November 25, the saint's feast day.¹¹⁴ The relics of Christ's Passion, included in other reliquaries associated with Charles IV in Bohemia, continue associations with Sainte Chapelle.

The *Three-Steepled Reliquary* uses a similar structure of sculpted figures enclosed in Gothic architecture, surmounted by towers. However the placement of the relics and the organization of miniaturized Gothic architectural elements differs from the *Reliquary of Charlemagne*. The *Three-Steepled Reliquary* holds only three relics: the sudarium and reed scepter of Christ, the rib of St. Stephen, and hair of John the Baptist. Three rock crystal tubes contain the relics, each placed in a tower or steeple of the reliquary. The base of each tower encloses sculpted figures: John the Baptist, Christ, and a kneeling donor. Flying buttresses embellished with finials and pinnacles support each tower, further decorated with medallions resembling rose windows, another link to the design and visual experience of Gothic cathedrals. The elaborate architecture of the reliquary

¹¹³ Lepie and Minkenberg, *The Cathedral Treasury of Aachen*, 34.

¹¹⁴ Barbara Drake Boehm, "Charles IV: The Realm of Faith," in *Prague: The Crown of Bohemia 1347-1437*, ed. Barbara Drake Boehm and Jiří Fajt (New York: The Metropolitan Museum of Art, 2005), 26-27.

becomes the focus. The relics, while presented in rock crystal and visible, almost disappear within the various upward pointing spires of the Gothic towers.

The *Reliquary of Charlemagne* and the *Three-Steepled Reliquary* consciously incorporate elements of Gothic architecture. The repeated stylistic details and visual structure recall not only earthly examples such as chapels and cathedrals but also heavenly examples. The Heavenly Jerusalem, identified by St. John in Revelation, appears repeatedly as a religious ideal in the medieval period, depicted textually in visions and writings as well as throughout the arts in sculpture, illuminated manuscripts, and architecture. Both literal and metaphorical representations of the Heavenly Jerusalem appear throughout the Aachen reliquaries. The base of both reliquaries is surrounded by multi-colored precious gems, recalling the foundations of the heavenly city which according to the text are made of jewels including emerald, sapphire, jasper, and amethyst.¹¹⁵ Hahn notes that jasper poses a question of materiality. The writings of Revelation associate jasper with transparency, noting that the light of the heavenly city appears to have "radiance like a most rare jewel, like a jasper, clear as crystal."¹¹⁶ The text later describes the city walls as being like jasper and the city, made of pure gold, being like clear glass.¹¹⁷ According to Hahn, these descriptions appear to express the qualities of diamond or rock crystal instead of jasper, typically a stone characterized by the colors green and red.¹¹⁸ Although the specific characteristics of jasper might remain debatable, it is clear that the material's transparency and clarity are crucial to St. John's description.

¹¹⁵ Revelation 21:18-21

¹¹⁶ Revelation 21:11

¹¹⁷ Revelation 21:18

¹¹⁸ Hahn, *Strange Beauty*, 41.

Medieval thought associated rock crystal, known for both transparency and properties of hardness, with congealed water. Gerevini notes that these qualities also led to metaphorical associations with a range of theological ideas including baptism, Christ's Incarnation, and conversion from sin.¹¹⁹ She further argues that rock crystal as a substance is "paradoxical and inexplicable...[it] simultaneously partook of liquidity and solidity, of change and immutability" and finally while a solid and due to its mineral properties incredibly hard still "fully transparent and posed no resistance to light."¹²⁰ These characteristics not only provide connections to complex theological perspectives but also reinforce the Heavenly Jerusalem, its promised grandeur and beauty that while glimpsed through visions and earthly perception did not exist fully on earth. In these reliquaries from Aachen, the relics, described by Peter Brown as the "joining of heaven and earth" rest in rock crystal containers.¹²¹

The *Reliquary of Charlemagne* and the *Three-Steepled Reliquary* dramatically express their replication of architecture. While the *Reliquary of Charlemagne* and the *Three-Steepled Reliquary* are striking examples because of their size and height, the miniaturization of the Gothic continues in a variety of smaller objects, notably in reliquaries but also in a wide sampling of other liturgical objects. The inclusion of these architectural details provides another expression of the heavenly: building on the familiarity and experience of Gothic design in religious architecture.

Several smaller fourteenth century reliquaries from the Aachen Cathedral Treasury also use the transparency of rock crystal to surround their relics. These objects

¹¹⁹ Gerevini, "Christus crystallus," 92.

¹²⁰ Ibid, 97.

¹²¹ Brown, *The Cult of the Saints*, 1.

provide another perspective on visibility and rock crystal than the significantly larger *Reliquary of Charlemagne* and the *Three-Steepled Reliquary*. While rock crystal enclosures for the relics provide a visual constant, other elements of decoration, design, and shape establish different applications of visibility and the Gothic. Three of the reliquaries, the "Three Small Holy Relics," incorporate aspects of Gothic architecture. They contain prestigious relics, including the belts of Christ and the Virgin Mary and the Flagellation Rope of Christ. The *Reliquary for the Flagellation Rope of Christ* (fig. 2.6) and the *Reliquary for the Belt of the Virgin Mary* (fig. 2.7) display architectural forms that offer the closest comparison to the *Reliquary of Charlemagne* and the *Three-Steepled Reliquary*.¹²² Intricate buttresses, spires, and pinnacles point upwards while covering the rock crystal container holding the relics. The relics and written identifying inscriptions are readily visible through the transparent rock crystal. The smaller reliquaries with their individualized focus and simple tower designs focus the eye on the rock crystal chamber and the relic within. The "Three Small Holy Relics" vary in height, however all are about half the height of the *Reliquary of Charlemagne* and the *Three-Steepled Reliquary*. Furthermore, the spatial footprint of the reliquaries presents another significant visual difference - the *Reliquary of Charlemagne* and the *Three-Steepled Reliquary* rest on rectangular bases averaging 40 by 70 centimeters, while the "Three Small Holy Relics" sit on bases averaging 20 centimeters in diameter.

Basic differences in size create different visual impressions. However other constants provide a unifying representation of the relics and the heavenly. The crowning

¹²² The third reliquary, the *Reliquary for the Belt of Christ*, uses the simplest style of Gothic architecture, surmounted by a spire sheltering sculpted figures standing under pointed niches. A crucifixion scene is mounted to the top of the spire. The *Reliquary for the Flagellation Rope of Christ* and the *Reliquary for the Belt of the Virgin Mary* both feature multiple spires, pinnacles, and flying buttresses.

towers of the "Three Small Holy Relics" point upwards toward heaven. As in the *Reliquary of Charlemagne* and the *Three-Steepled Reliquary* Gothic architecture creates a beautifully soaring structure. A multi-layered program of materiality and decoration surround the relics. Gems, enamel decoration, and gold-work construct a lavish setting that recalls the physical descriptions from Revelation. Simultaneously, the transparency of the rock crystal connects to St. John's repeated comments on transparency and clarity. The relics visible within the rock crystal culminate the expression of religious power and holiness. As a magnifying lens and a window, rock crystal emphasizes vision and sight. This applies to multiple levels — that of the contents of the reliquary and their immediate intercession and materiality but also to the future vision of the Heavenly Jerusalem and paradise.

Open and Closed Gothic Architecture

The intertwining of transparent rock crystal and Gothic design in reliquary structures creates a captivating and potent statement on the nature of relics, vision, and the Heavenly Jerusalem. Another fourteenth-century reliquary, the *Reliquary of Elizabeth of Hungary* (fig. 2.8), demonstrates a different application of Gothic architecture. The reliquary has undergone extensive restoration, complicating understanding of its attributions and provenance.¹²³ The reliquary uses Gothic architectural components to construct and embellish the interior of the tabernacle. The polyptych doors of the reliquary obscure its contents - sculpted figures of the Virgin Mary, Infant Christ, and

¹²³ Although the reliquary has undergone several restorations and alterations and previous scholarship has offered contradictory opinions, Danielle Gaborit-Chopin concludes that the reliquary dates to the fourteenth-century, probably produced in or near Paris by goldsmith Jean de Touyl. See Danielle Gaborit-Chopin, "The Reliquary of Elizabeth of Hungary at the Cloisters," in *The Cloisters: Studies in Honor of the Fiftieth Anniversary*, ed. Elizabeth C. Parker with Mary B. Shepard (New York: The Metropolitan Museum of Art, 1992), 327, 350.

two angels situated underneath a highly detailed Gothic canopy. Each angel holds a box faced by a transparent window, through which multiple, small relics appear. A third window, cut into the base of the reliquary below the enameled polyptych doors, is not original, perhaps added during alterations made in the seventeenth or eighteenth century.¹²⁴ The multi-paneled, enameled doors of the reliquary mitigate the transparency of the angel's reliquaries. The richly detailed enamel panels, displaying various narrative scenes replicates the aesthetic of stained glass. They also hide the contents of the reliquary, its sculpture, architecture, and relics, when closed. Although the exterior enameled doors imitate the visual experience of stained glass when the reliquary is closed, the interior enamel "stained glass windows" become invisible except for the private gaze of the Virgin Mary, Infant Christ, and angels. While the exterior enamel doors still convey the materiality of stained glass windows when shut, the medieval viewer observes from the outside of the structure, unaware of the interior Gothic architectural details.

The most elaborate components of the Gothic architecture of the reliquary become invisible when the doors are shut. The architectural canopy sheltering the figures of the Virgin and Child and angels comprises pointed arches pierced by trefoil arches and roundels. The other primary display of micro-architectural decoration, four sculpted figures in the corner piers who are covered by pointed Gothic canopies, also disappear behind the closed enameled doors of the reliquary. The *Reliquary of Elizabeth of Hungary* poses an interesting question to the issue of vision and visibility. The presence of concealing doors differentiates the reliquary from the other examples considered in

¹²⁴ Gaborit-Chopin, "The Reliquary of Elizabeth of Hungary at the Cloisters," 335 and 351, Note 24.

this thesis. The physical transparency of the windows carried by the angels first requires the opening of the reliquary structure, unlike the rock crystal tubes, cylinders, and roundels of the Aachen reliquaries. The polyptych style of the *Reliquary of Elizabeth of Hungary* also communicates interest in levels of vision, however one that does not engage questions of materiality and transparency. Furthermore the design of the doors of the *Reliquary of Elizabeth of Hungary* presents a noticeable difference from full-scale architecture. The reliquary incorporates multiple elements familiar to Gothic church design, such as the enameled doors evoking stained glass as well as arches, canopies, and figural sculpture in architectural niches, comparable to jamb sculptures surrounding exterior portals of churches and cathedrals. However the disappearance of these aspects when the reliquary is closed fails to translate to full-scale architecture. The open, penetrable facades of the *Reliquary of Charlemagne* and the *Three-Steepled Reliquary* encourage vision. The inclusion of rock crystal facilitates this, however it forms only part of the program of transparency and clarity. The absence of doors and enclosing elements protects the transparent frameworks of the reliquaries. While the relics held by the angels in the *Reliquary of Elizabeth of Hungary* are visible, inviting observation and curiosity, they are restricted by the exterior doors of the reliquary.

Similarly, rock crystal alone, although inviting observation, creates a less dramatic sense of space. The *Reliquary Bust for the Arm of Saint John the Baptist* (fig. 2.9), from the mid-fourteenth century Cistercian convent at Aachen-Burtscheid and most likely a donation by Emperor Charles IV, displays an arm relic of the saint through four rock crystal windows in the bust's torso. The reliquary continues associations with Charlemagne and the other imperial reliquaries at Aachen. John the Baptist, one of

Charlemagne's patron saints, appears as a sculpted figure in the *Three-Steepled Reliquary*, while his physical relics are housed in both the *Three-Steepled Reliquary* and the *Reliquary of Charlemagne*. The crown worn by the *Reliquary Bust for the Arm of Saint John the Baptist*, an earlier, separate piece of metalwork, also suggests the patronage of Charles IV. Barbara Drake Boehm observes that Charles IV had previously connected separate crowns of royal origin with reliquary busts: his Bohemian coronation crown from 1347 on the reliquary bust of Saint Wenceslas in the treasury of Saint Vitus's cathedral in Prague and the Aachen coronation crown from 1349 on the *Reliquary Bust of Charlemagne* (fig. 3.4) in the Aachen Cathedral Treasury, suggesting a similar occurrence in the Aachen-Burtscheid example.¹²⁵

The gilded silver framing of the openings as well as the sculpted figures of two kneeling angels who support the relic bear striking similarity to the *Reliquary of Charlemagne*.¹²⁶ The two are not identical. While the *Reliquary of Charlemagne's* windows placed on the front and back of the reliquary are round, framed by enamel decoration, the four square windows of the *Reliquary Bust for the Arm of Saint John the Baptist*, fit into the front of the reliquary, framed by gems and pearls. The reliquary bust of St. John the Baptist also restricts observation and transparency. While the *Reliquary of Charlemagne's* comparable relic chamber features windows on all sides, extending to the edges of the structure, the shoulders of the reliquary bust limit observation. Although the visible relic is prominent, the detailed patterning of the metalwork creating the saint's characteristic camel hair coat surround the windows. It draws the eye away, refocusing it on the solidity of the bust. Furthermore, the sculpted head and elaborate crown of the

¹²⁵ Boehm, *Prague: The Crown of Bohemia*, 153.

¹²⁶ *Ibid.*, 153.

reliquary bust demand attention. Instead of vaults and spires pointing heavenwards, the face of the saint becomes the focal point of the reliquary. The metal tracery adorning the windows recalls the stone details present in full-scale Gothic architecture.

The Science and Significance of Vision

The late medieval fascination with vision and perception appears in multiple instances of medieval culture. Within the still broad realm of religious practice, vision proves significant to architecture and interior space, to theology and liturgy in the elevation of the Host, to the materiality of reliquary construction and the increasing popularity of the monstrance. Intromission theory explained the physical, not mathematical, aspects of vision that resulted in the perception of an object by the eye.¹²⁷ Many advancements made in visual and optical theory, especially arguments debating significances in extramission and intromission, occurred beginning in the ninth century by Islamic scholars, including Al-Kindi, Alhazan, and Avicenna. Albertus Magnus and Roger Bacon promoted western scholarship of these works and their application to the medieval Christian world in the thirteenth century.¹²⁸ Camille argues that the most important effect of the popularity of intromission on theology was the transition from prioritizing the viewer to instead prioritizing the image.¹²⁹ The primacy of the image, which in the example of reliquaries becomes the relics of the saints, increases. Rock crystal allows the eye to observe these images, while also magnifying and focusing. Rock crystal also mimics the physical properties of the eye, believed to have a crystalline

¹²⁷ David C. Lindberg, "The Science of Optics," in *Science in the Middle Ages* ed. David C. Lindberg (Chicago: The University of Chicago Press, 1978), 341.

¹²⁸ Ibid, 349-350.

¹²⁹ Camille, "Before the Gaze," 206.

humor through which rays passed, enabling vision.¹³⁰ Intromission theory supported the view that visual rays emanated not from the viewer's eye as in extramission but from the object itself.¹³¹ In the case of reliquaries, observation of the relic and its rays, through transparent rock crystal increased contact with the sacred and powerful fragments.

The inclusion of rock crystal windows in reliquaries combines medieval interests in optical theory and perception with materiality and spiritual meaning. The architecture of Gothic cathedrals experiments with both the technical challenge of constructing a towering, open interior space and optimizing metaphysical qualities of light and the heavenly. Combining micro-architecture with rock crystal's transparency imitates in miniature architecture's mixing of science and materiality. The upward focus of architectural reliquaries such as the *Reliquary of Charlemagne* and the *Three-Steepled Reliquary* reveal relics while also dazzling the eye with spires, towers, and transparent space. Seeking to replicate the heavenly through earthly materials and craftsmanship, these reliquaries continue previous Christian tradition but with the style, philosophy, and vocabulary of the Gothic period.

¹³⁰ Lindberg, "The Science of Optics," 349.

¹³¹ Camille, "Before the Gaze," 206.

Chapter 3: Expanding Three-Dimensionality: Light, Space, and the Heavenly Jerusalem

The reliquaries examined in the preceding chapter construct layers of transparency. Rock crystal chambers and windows allow overt transparency, magnifying and amplifying the relics within. Transparency also exists within the interior space of the reliquary. Elaborate architectural structures utilize Gothic building components, weaving an immaterial space open to the eye and light. The effects created by Gothic design — beauty, intricate open space, an encapsulated vision of heaven on earth — appear not only in reliquaries and architecture but also in smaller and more personalized functions of religious experience. These include pilgrimage badges, memorializing and remembering the reliquaries and relics visited, as well as various liturgical objects such as processional crosses, choir robe brooches, and altarpieces. Combined, this range of objects becomes inclusive for a wide range of medieval individuals, encompassing clergy, royalty and nobility, and ordinary pilgrims from the middle and lower levels of society. This alternate depiction of transparency, seen in the modification of three-dimensional space by Gothic elements, provides another view of Late Medieval religious practice, materiality, and applied theology.

Medieval pilgrimage offered the chance to experience and interact with powerful expressions of the sacred and holy. The relics of saints, contained in reliquaries, were the primary attraction of pilgrimage, combined with other religious incentives including promises of forgiveness, indulgences, and healing. Previous scholarship, both in art history and museum displays has in the past typically privileged reliquaries and their sumptuous materials and craftsmanship. However basic, inexpensive items such as

pilgrimage tokens and badges provide an additional and important picture of medieval religious devotion and sacred experience. Late Medieval pilgrimage souvenirs, including some specifically associated with Aachen, mimic not only its prominent pilgrimage objects, but also the increasingly Gothic details found in fourteenth century reliquary designs from the city, its cathedral, and its treasury. Other liturgical objects from the Aachen Cathedral Treasury also display miniaturized Gothic characteristics. These details capture not only the pervasive popularity of the Gothic style but also its transparency and embrace of three-dimensional space. This chapter connects these smaller objects, both ordinary and precious, to the larger reliquaries of Aachen and their particular expression of the heavenly.

Observing Medieval Pilgrimage and the Senses

Christian pilgrimage in medieval Europe revolved around both large and small scale sites across local and distant geographies. Jerusalem, Rome, and Santiago de Compostela formed the three primary medieval Christian pilgrimage sites. However numerous other locations across Europe attracted large numbers of pilgrims. Some churches and shrines functioned as stops on existing pilgrimage routes, such as the Church of St. Foy in Conques, France, part of a major route to Santiago de Compostela. Other pilgrimage sites existed as independent destinations in their own right. Medieval European pilgrimage attracted numerous and diverse individuals, encompassing a range of ages, genders, geographies, and social hierarchies. Some surviving records attest to the many pilgrims who visited particular sites. For example in 1392 around 40,000

pilgrims entered Munich in one day while in the late fifteenth century counts in Aachen recorded roughly 142,000 pilgrims.¹³²

Crafting a picture of medieval pilgrimage requires many sources of evidence, drawing on multiple disciplines and methodologies. Archaeological findings about pilgrimage tokens and badges provide information on the number of visitors to particular shrines and their popularity. Historical and literary records also document the many types of people who undertook pilgrimages and their experiences. The experiences and perspectives recorded vary — from *The Golden Legend's* more anonymous descriptions of pilgrims and their encounters with saints, retold from other sources, to more detailed and personalized accounts such as Margery Kempe's recollections, as well as guidebooks offering recommendations on itineraries and routes. Fictional representations of pilgrims, such as Chaucer's characters traveling to Canterbury, also contribute to the understanding of medieval pilgrimage. The study of art and architecture includes not only the physical structures visited by pilgrims and the modifications made to accommodate them but also the objects they came to view — shrines, reliquaries, statues, and the souvenirs and mementos taken and received. The connections and associated objects spread out into a complex web, involving multiple layers of depiction. Psalters and illuminated prayer books include painted depictions of saints and their martyrdoms, pilgrims, and in some

¹³² Spencer, *Pilgrim Souvenirs*, 13.

instances pilgrim badges and souvenirs.¹³³ Similar depictions also occur in the sculpture decorating church architecture and furnishings.¹³⁴

In addition to visually experiencing pilgrimage through sight and movement within religious spaces, other senses such as touch, smell, and hearing contributed to medieval perception of pilgrimage. The practices and rituals of medieval liturgy and its accompanying aesthetics informed a transformative, meaningful interaction with relics, reliquaries, and important religious sites. Materiality also worked to communicate meaning. As described by Kessler, choice of materials and the placement or opposition of particular substances and design "helped to establish the cognitive relationship between the physical world and the heavenly realm beyond."¹³⁵ As interactions with saints and their relics brought medieval pilgrims to the heavenly, momentarily lessening the divide between human and divine, so also did materials communicate a vision of the splendor of heaven.

Pilgrimage and Badges

Pilgrimage and pilgrim badges have been the subject of many recent studies. Several of these emphasize the opportunity to refocus on everyday medieval pilgrims and

¹³³ For example: *Pilgrim badges in the borders of a Nativity scene* in a book of hours from the first quarter of the 16th century (The Hague, MMW, 10 E 3, fol. 90v), *Leaf from a Flemish Book of Hours, the Martyrdom of St. Sebastian*, after 1512 (Sir John Sloan's Museum, London, MS 4, f 122), and *Impressions of 29 Pilgrim Signs formerly stitched on a blank leaf of a Flemish Book of Hours*, c. 1460-80 in Spencer, *Pilgrim Souvenirs*, 19.

¹³⁴ For example: Sculpted pilgrims from the *Last Judgment*, at Autun Cathedral, ca. 1120, and a Pilgrim Badge Merchant carved into the choir stalls at Amiens Cathedral (see *Enseignes de Pèlerinage et Enseignes Profanes* par Denis Bruna, Paris: Editions de la Réunion des musées nationaux, 1996, page 35).

¹³⁵ Kessler, *Seeing Medieval Art*, 40.

the lower classes of medieval society.¹³⁶ Online collections and databases allow not only the visualization of pilgrimage finds across Europe from various holdings and collections but also the addition of new finds by members of the public.¹³⁷ As Brian Spencer noted in his influential study of archaeological finds from London, the majority of these objects were discovered along the River Thames, resulting either from deliberate placement in the river, perhaps as a gesture of ritual or superstition, or from rubbish dumps used to expand land along the river.¹³⁸ Another large cache of pilgrimage souvenirs was also discovered in water, in the Seine River in Paris, before the collection's purchase and transfer to Prague in 1894, where it is now part of the collection of the Prague Museum of Decorative Arts.¹³⁹ The wet river environment aided the preservation of the fragile metalwork, although badges and other metalwork fragments have been excavated in other archaeological contexts.¹⁴⁰

The material record of pilgrimage tokens and badges reveals in part the spectrum of pilgrim individuals, and their levels of prosperity. The majority of pilgrim badges are made of inexpensive and easily reproducible materials, often a mixture of lead and tin. However records also note the production of badges made of gold and silver, for

¹³⁶ Sarah Blick, "Common Ground: Reliquaries and the Lower Classes in Late Medieval Europe," in *Matter of Faith: An Interdisciplinary Study of Relics and Relic Veneration in the Medieval Period*, ed. James Robinson et al. 110-115. (London: The British Museum, 2014) and Annabel Jane Wharton, *Selling Jerusalem: Relics, Replicas, Theme Parks* (Chicago: University of Chicago Press, 2006).

¹³⁷ Kunera (www.kunera.nl) is hosted by Radboud University. Other widely available online collections include the British Museum (www.britishmuseum.org) and Museum of London (www.museumoflondon.org.uk). Also of note is the British Museum's Digital Pilgrim Project (sketchfab.com/britishmuseum/collections/digital-pilgrim). Sites Accessed April 19, 2017.

¹³⁸ Spencer, *Pilgrim Souvenirs*, 24.

¹³⁹ Hartmut Kühne, Carina Brumme, and Helena Koenigsmarková. *Jungfrauen, Engel, Phallustiere: die Sammlung mittelalterlicher französischer Pilgerzeichen des Kunstgewerbemuseums in Prag und des Nationalmuseums Prag* (Berlin: Lukas Verlag, 2012), 7.

¹⁴⁰ Spencer, *Pilgrim Souvenirs*, 24.

prestigious patrons.¹⁴¹ Vendors selling badges and souvenirs of pilgrimage operated near the entrances to churches, and other places nearby.¹⁴² While badges offered a tangible reminder and souvenir of pilgrimage, the goals of pilgrims revolved around experiencing the saints, relics in their reliquaries, and the spiritual benefits received as a result of the pilgrimage and its expression of pious devotion. Badges and tokens used form to provide a connection to the site of pilgrimage and its associated saints, relics, and reliquaries, encapsulating memory and sensation within an inexpensive and portable object.

Aachen: Saints, Relics, and Badges

Aachen's history and prestigious relic connection established it as an important pilgrimage site. Evidence of its many visitors appear not only through their souvenir badges but also in the architecture of the site, and its modifications. Pilgrimage badges associated with Aachen span a range of dates and depict a variety of subjects, including its celebrated relics and reliquaries associated with the Virgin Mary and other saints as well as its famous king and emperor, Charlemagne. Pilgrim badge production in Aachen followed conventions seen at other popular European pilgrim sites. Spencer notes that as at Regensburg, another popular site producing thousands of badges, Aachen had flexible production, bypassing restrictions from guilds.¹⁴³ According to the city's guilds, only goldsmiths could produce badges of silver or silver-gilt while inexpensive badges were made by mirror makers. This restriction was lifted during the larger pilgrimage every

¹⁴¹ Spencer, *Pilgrim Souvenirs*, 12.

¹⁴² Ibid, 14.

¹⁴³ Ibid, 14.

seven years for the display of the relics of the Virgin, allowing anyone to produce badges for Aachen while guaranteeing adequate supply for pilgrims.¹⁴⁴

Beginning in 1349, under the reign of Charles IV, the pilgrimage display of relics occurred every seven years at Aachen from an exterior balcony of the cathedral tower.¹⁴⁵ Other architectural expansion and the interior arrangement of the church also demonstrate the influence and effects of pilgrims and pilgrimage. Although the relics were removed from their enclosing, impenetrable reliquary every seven years, this method of display still enforced a degree of separation and distance. Wenceslaus Hollar made two prints associated with Aachen's pilgrimage and relic collection in the seventeenth century. The prints, now in the Royal Collection Trust at Windsor show both the reliquaries collected in the treasury and the pilgrims participating in the display of relics.¹⁴⁶ Hollar's etching of *The Church of the Virgin at Aachen* (fig. 3.1) depicts crowds of pilgrims standing to the side of the church, including the original octagon of Charlemagne's Palatine Chapel and the more recent Gothic choir. From the tower at the left edge of the print, figures can be seen standing on a bridge holding a garment out for the gathered pilgrims to see (fig. 3.2).

Other records, including structural alterations to the church building, reveal the interactions of pilgrims and relics at Aachen. Gerhard Lutz observes that although the May 14, 1355 charter for the new Gothic choir pinpoints crowds of pilgrims as a primary reason for expansion, the resulting architecture does not fit the mold of a typical

¹⁴⁴ Spencer, *Pilgrim Souvenirs*, 14.

¹⁴⁵ Lepie and Minkenberg, *The Cathedral Treasury of Aachen*, 105.

¹⁴⁶ Richard Pennington, *A Descriptive Catalog of the Etched Work of Wenceslaus Hollar 1607-1677* (Cambridge: Cambridge University Press, 1982), 28, 132. Simon Turner and Giulia Bartrum, *The New Hollstein German Engravings, Etchings and Woodcuts 1400-1700: Wenceslaus Hollar Part 1* (Ouderkerk aan den IJssel: Sound & Vision Publishers, 2009), 91-94.

pilgrimage church as it creates additional space for clergy but not for pilgrims.¹⁴⁷

Pilgrims did have some access, with interior renovations accommodating their movement. Specifically Lutz calls attention to the Marienkapelle, completed in 1455 and remaining part of the structure until its demolition in 1786. Here, the *Shrine of the Virgin Mary* (fig. 2.1) sat, elevated so that pilgrims could walk underneath the shrine, which was obscured with painted panels, opened only for special occasions.¹⁴⁸ The *Shrine of Charlemagne* (fig. 2.2) located in the east end, was also elevated and covered with panels, accessible by an ambulatory to select pilgrims.¹⁴⁹ However the interior space of Aachen Cathedral (fig. 3.3) does not follow the architectural pattern of grand pilgrimage church interiors, with dedicated ambulatories, aisles, and radiating chapels.¹⁵⁰ Instead the display of relics to pilgrims waiting below continues the numerous similarities constructed between Aachen and Paris' Sainte Chapelle where the relics were visible from their elevated chasse or when processed throughout the city for special feasts and celebrations.¹⁵¹ Finally, Aachen's lack of original context and continued rearrangement of shrines, relics, and their presentation over the centuries adds another layer of difficulty in understanding medieval pilgrim interactions at Aachen.¹⁵²

The Gothic *Reliquary of Charlemagne* (fig. 2.3) and the *Three-Steepled Reliquary* (fig. 2.4) are both large structures, standing around 100 centimeters tall. Aachen's other prominent reliquaries including the *Reliquary Bust of Charlemagne* (fig. 3.4), the *Shrine*

¹⁴⁷ Gerhard Lutz. "Aachen Cathedral," in *Encyclopedia of Medieval Pilgrimage*, ed. Larissa J. Taylor et al. (Leiden: Brill, 2010), 3.

¹⁴⁸ Ibid, 3.

¹⁴⁹ Ibid, 3.

¹⁵⁰ Note characteristics seen in both Romanesque architecture, such as Santiago de Compostela and Gothic architecture, for example Chartres Cathedral.

¹⁵¹ Meredith Cohen, *The Sainte-Chapelle and the Construction of Sacral Monarchy: Royal Architecture in Thirteenth-Century Paris* (New York: Cambridge University Press, 2015), 150, 160-166.

¹⁵² Lutz. "Aachen Cathedral," 3.

of the *Virgin Mary*, and the *Shrine of Charlemagne* are also of impressive and visually commanding size. However despite their size and the increased focus on transparency in the Gothic reliquaries, the majority of pilgrims would not have had intimate, unfettered access to the reliquaries of Aachen. While large numbers of pilgrims visited Aachen, the city's four most important relics are associated with the Virgin Mary and contained since 1239 inside the thirteenth-century *Shrine of the Virgin Mary* which takes the form of a single-nave church.¹⁵³ The golden, jeweled walls of the shrine are opaque, covered by sculpted figures of the Apostles, Charlemagne, the Virgin and Child, and Pope Leo III, sheltered under pointed pediments and trefoil arches. While the structure of the reliquary prohibits viewers from seeing its contents, visibility existed through the pilgrimage display of relics, reflection, and pilgrim badges.

Although the relics of the Virgin contained within the *Shrine of the Virgin Mary* were the most prestigious relics associated with Aachen, the city's other relics and reliquaries also appear in pilgrim badge design. An early thirteenth-century cast lead-tin alloy badge from Aachen (fig. 3.5) found in Switzerland features the Crowned Virgin seated holding the infant Christ. The figures appear on a rectangular badge, the top of which curves, echoing the halo of the Virgin. Another badge (fig. 3.6) shows the crowned bust of Charlemagne, imitating details such as the fleur-de-lis pattern on the crown and the eagle pattern from the torso of the fourteenth-century *Reliquary Bust of Charlemagne*. These details not only link the symbols of France and the Holy Roman Empire to Charlemagne, but also continue to associate Charles IV, as the current Holy Roman Emperor and most likely patron of the reliquary, with this legacy.

¹⁵³ Lepie and Minkenberg, *The Cathedral Treasury of Aachen*, 104.

Charlemagne remained prominent in devotional practice at Aachen, even centuries after his reign. A fourteenth-century lead-tin alloy badge, *Charlemagne Kneeling before the Virgin* (fig. 3.7), presents a façade emulating the open, visual characteristics observed in the *Reliquary of Charlemagne* and the *Three-Steepled Reliquary*. The crowned figure of Charlemagne kneels in the lower left before the Virgin and Child. Sarah Blick notes that innovations in metal casting allowed the creation of complex and even customizable objects which she terms the "do-it-yourself reliquary." Featuring open metalwork, the object "lay flat until the purchaser pulled the soft metal apart and folded the object into shape, firmly fastening it with the built-in clips."¹⁵⁴ Blick theorizes that a Medieval worshipper could set up such an architectural badge of *Charlemagne Kneeling before the Virgin* as an individual, domestic shrine.¹⁵⁵ She connects this do-it-yourself object with a similar folding reliquary badge (fig. 3.8), discovered in the Seine River in Paris, now part of the Museum of Decorative Arts Collection in Prague. Although unlikely to be directly connected with Aachen, the style of reliquary badge emulates the Gothic transparency and openness of the Aachen reliquaries. Blick notes that once assembled, the reliquary badge forms a miniature Gothic cage allowing pilgrims, such as the one depicted on the badge kneeling before a bishop saint, to place a souvenir, imitating the revealing style of late Medieval reliquaries, and in effect creating a personal reliquary.¹⁵⁶ Carina Brumme notes the obviously Gothic details, connecting the customizable reliquary badge to late medieval reliquary shrine design.¹⁵⁷ She additionally describes several fragments of late medieval

¹⁵⁴ Blick, "Common Ground," 113.

¹⁵⁵ Ibid, 114.

¹⁵⁶ Ibid, 114.

¹⁵⁷ Kühne, Brumme, and Koenigsmarková, *Jungfrauen, Engel, Phallustiere*, 149-150.

miniature-towers (fig. 3.9), also discovered in the Seine. Unquestionably part of the Gothic aesthetic, the spires recall the pointed pinnacles atop Aachen's *Reliquary of Charlemagne* and *Three-Steepled Reliquary*. The spires are small, around 6.5 centimeters in height. According to Brumme, the fragmentary nature of the spires makes determining their function or larger context uncertain without additional evidence, although she suggests the possibility of miniature three-dimensional architecture, including miniature chapels or shrines.¹⁵⁸ Many comparisons exist between this possibility and the miniature architecture of the Aachen reliquaries, with the prominent exception of materials: gold, crystal, gems, and prestigious relics versus lead and tin.

A final type of pilgrim badge again incorporates Gothic concepts of transparency and visibility. A fifteenth-century pilgrim badge (fig. 3.10) from Aachen contains a frame to hold a mirror. The mirror would be used by pilgrims to bridge the gap between pilgrim and the relic during the display of Aachen's relics every seven years. Blick links this to the Medieval belief in the reflective power of images, especially concerning the sacred and the mirror's ability to capture and temporarily store the power of the relic.¹⁵⁹ Although the surviving badge does not retain its mirror, other depictions of the mirror badge exist. A painted representation of the Aachen mirror badge is visible pinned to the hat of St. Sebald, dressed as a pilgrim (fig. 3.11), from one of the panels of a late fifteenth century altarpiece in Nuremberg.¹⁶⁰ According to Spencer, the mirror badge relies on "age-old pagan mirror-magic" to grasp, store, and transport the powers of the displayed

¹⁵⁸ Kühne, Brumme, and Koenigsmarková, *Jungfrauen, Engel, Phallustiere*, 163.

¹⁵⁹ Blick, "Common Ground," 114.

¹⁶⁰ The Aachen mirror badge is depicted second from the left. For additional image of mirror badges and representations of mirror badges at Aachen and other sites see Denis Bruna, *Enseignes de plomb et autres menues choses du Moyen Âge* (Paris: Éditions du Léopard d'Or, 2006), Figures 130-145, pages 272-274 and 302-305.

relic.¹⁶¹ Spencer does not make any references to medieval optical theory, as it relates to reflection and image transmission, instead connecting the use of mirrors to touch relics, such as fragments of paper and fabric inserted into the grille of the *Shrine of the Three Kings* at Cologne.¹⁶² The power of the relic, reflected and stored in the mirror until required, does draw on qualities of touch relics. However the mirror reflects more than the mere image of the relic, expressing its intangible, intercessory power. The mirror also communicates medieval interests in visual perception and optical theory, by bringing pilgrims closer to the relics and by capturing, storing, and later redirecting the image of the relic. Mirror badges at Aachen contribute to the overlapping themes of transparency and visibility seen in the open metalwork of other pilgrim badges and the manufacture of reliquaries that not only used rock crystal to encase relics but also merged it with open, Gothic architectural configurations. This architectural transparency continues in other liturgical objects from Aachen.

Other Architectural Miniatures

In addition to the material references through gems and their properties, the otherworldliness of the Heavenly Jerusalem is indicated by light and transparency of the soaring architectural details of the *Reliquary of Charlemagne* and the *Three-Steepled Reliquary* and the openness subsequently revealed. The open space communicated by miniaturized Gothic architecture does not only appear in reliquaries at Aachen. Various liturgical objects, including processional crosses, a cantor's staff, and choir robe brooches, adopt Gothic details. These objects, again associated with the grandeur and luxury of Aachen's relics and status as coronation church, utilize heavenly materials:

¹⁶¹ Spencer, *Pilgrim Souvenirs*, 17.

¹⁶² Ibid, 17-18.

gold, gems, pearls, crystal, and masterful craftsmanship. The placement of these small, architectural details offers a less emphatic picture of transparency than the rock crystal chambers of the reliquaries discussed previously. Also in contrast to the openwork designs of pilgrim badges and their foldable, three-dimensional properties, the miniature architecture found in Aachen's processional and wearable liturgical treasures do not encourage the eye to pass through the item. Instead, miniaturized arches, canopies, and baldachins distinguish sculpted figures with Gothic openwork, arches, and embellishments.

The *Cross of Lothair* (fig. 3.12), an early eleventh-century object, predates Gothic architectural innovations. However, at some point in the late Medieval period, a base (fig. 3.13) was added that incorporates a hexagonal lobed base upon which sculpted saints and Christ during the Crucifixion appear underneath canopies of Gothic arches and tracery. Decoration appears on both sides of the *Cross of Lothair*. The front is studded with gems and gold filigree, with two larger carved gems taking prominence: a Roman-era cameo of Emperor Augustus at the center of the cross and a slightly smaller rock crystal carved with the image of the ninth century King Lothar¹⁶³ and the inscription XPE ADIVVA HLOTARIUM REG.¹⁶⁴ The reverse of the cross features an engraved design of Christ during the Crucifixion, unadorned by gems or gold detailing, instead relying on elegant line work. Lepie observes that the cross, most likely used in procession at coronations, includes multiple references to power and kingship, both Christian and ancient. The inclusion of the cameo portrait of Augustus, wearing a laurel crown and

¹⁶³ King Lothar II of Lorraine (855-869), see Kornbluth, *Engraved Gems*, 58-61.

¹⁶⁴ Lepie and Minkenberg, *The Cathedral Treasury of Aachen*, 40. Per Lepie the inscription translates "Christ help King Lothar."

carrying an eagle-headed staff connects to the Imperial Roman past while the inscribed crystal of King Lothair and the reverse Crucifixion scene firmly establish the Christian context and authority of the Holy Roman Emperors.¹⁶⁵ In her analysis of the rock crystal, Kornbluth notes the image's conscious use of Roman facial features as well as its deviations in hair style and crown, linking it more closely to the Carolingian period.¹⁶⁶ While observing that the crystal's transparency renders the seal "a legible jewel," Kornbluth also emphasizes its original function: "mounted for use as a functional seal, to produce imprints."¹⁶⁷ The materiality of the crystal contributes to the meaning of the seal and its functional use. Incorporated into the *Cross of Lothair*, the crystal joins the many other luxurious gems embellishing the processional cross. Although referencing Heaven, past splendor of the Roman world, and the power and riches of the Holy Roman Empire, the crystal does not utilize its transparency as a crucial element. Nor is transparency part of the core communicative message of the *Cross of Lothair*.

The Gothic base added to the *Cross of Lothair* continues the program of Christian iconography in its sculpted figures. The figures, fully realized in the round, recline against the base, elevated at an angle by pegs. This maintains the posture of the figures while allowing them to visually blend into the upwards curving base. A three-dimensional Gothic canopy protrudes from the base, sheltering the figures, and emulating large scale stone sculpture from the exterior of Gothic cathedrals. Although not utilizing windows or literally transparent rock crystal, the three-dimensional space and its interplay of light, shadow, and space incorporate ideas of transparency and visibility.

¹⁶⁵ Lepie and Minkenberg, *The Cathedral Treasury of Aachen*, 40.

¹⁶⁶ Kornbluth, *Engraved Gems*, 59, 61.

¹⁶⁷ Ibid, 60.

Another processional object, a *Cantor's Staff* (fig. 3.14) from 1420, also includes a hexagonal structure of sculpted saints beneath pointed Gothic arches. Unlike the curved base of the *Cross of Lothair*, the *Cantor's Staff* is vertical. Currently crowned by an eagle, added fifty years later in 1470, the staff head's arches point the eye upward towards a gem encircled upper finial. Although small details, these architectural inclusions become more visible because of the processional nature of the objects. Furthermore, despite their small size, whose details are best viewed closely, the Gothic structural elements recall the larger message of Gothic design and its vision of the heavenly.

Two choir robe brooches from the Aachen Cathedral Treasury, one contemporaneous with the large fourteenth century rock crystal reliquaries from the reign of Charles IV and a later one, attributed to Hans von Reutlingen before 1520, situate the Virgin underneath an elaborate canopy of various Gothic style arches. The surface of the mid-fourteenth century brooch (fig. 3.15) uses a much more elaborate program of pearls. The brooch's shape, a rectangle situated inside a quatrefoil, draws upon shapes common to Gothic design, while maintaining an easily filled rectangular composition. Its subject, the Annunciation, is reduced to key components: on the left the seated Virgin, on the right a kneeling angel holding a scroll bearing the text "Ave gracia plena," while between the two a gold and pearl branch of lilies sits inside a golden vessel. Beneath this scene, three panels minimally inscribed with Gothic tracery contain two patron saints and a kneeling donor. Although proportionally similar to the lower register, the upper canopy above the Annunciation scene depicts a much more realized and three-dimensional network of Gothic arches, situating the sculpted figures into a visible, permeable space. A

later Gothic choir robe brooch from the Aachen Cathedral Treasury (fig. 3.16) displays some of the later innovations in Gothic design especially in the graceful, fanciful airy arches of the canopy above the enthroned Virgin and Child. Unlike the pearl encrusted earlier brooch, the early sixteenth century example, attributed to Hans von Reutlingen, uses gems sparingly, although three large pearls appear by the figures of the Virgin and Child and the kneeling donor in addition to four other similarly sized gems that adorn the edges of the quatrefoil. Instead the eye focuses on the gilt silver surface, the figures, and the linear directives of the Gothic canopy, which points both below to the enthroned Virgin and above through its heavenly oriented spires.

Memory, Sensation, and the Heavenly Jerusalem

Multiple objects of varied materials reflect Medieval interests in optics and vision. The large reliquaries at Aachen use rock crystal to hold their relics, enshrined in gold and jeweled arches and towers. Rock crystal, associated with literal and theological transparency further recalls the material description of the Heavenly Jerusalem according to St. John's vision in Revelation. Micro-architecture imitates the dramatic experiences of expansive Gothic cathedrals with walls pierced by stained glass and stone tracery, creating earthly versions of the Heavenly Jerusalem. The *Reliquary of Charlemagne* and the *Three-Steepled Reliquary* replicate these aspects in precious materials, including gold, crystal, and gems, skillfully worked into architectural housings for the relics promoting visual openness. However the Gothic features of visibility and transparency continue on in inexpensive and widely available pilgrim souvenirs. They demonstrate not only the incorporation of the popular Gothic aesthetic into objects designed for the masses but also the increasing importance of sight, vision, and openness in Medieval depictions of

the heavenly. These representations, continuing on in personal badges, carry memories not only of the power of the relics but also of the Gothic design so important in fourteenth and fifteenth century Aachen. Other small, non-reliquary items that include miniaturized architecture replicate the varied sensations associated with medieval liturgy. Processional crosses and staffs continue themes of observation and watching, while choir robe brooches bring in the memory of sound, an influential part of medieval devotional experience. Combined these elements, despite differences in availability and materials, work to represent the intervening power of the saints through their relics and the more abstract promise of the Heavenly Jerusalem.

Conclusion

Sacred and liturgical objects constructed in the fourteenth century display an overt transparency in shape and materiality. Clear materials such as rock crystal enable physical sight, embracing contemporary philosophies of vision and optical theory. European philosophers and scholars, facilitated by the university system, studied and revised ideas on the methods and mechanics of optics, rooted in the theories of Aristotle and Plato, aided by new scholarship and translations of Arabic sources, especially Avicenna. According to Camille, the three most important thirteenth century philosophers of vision, Roger Bacon, John Pecham, and Thomas Aquinas, applied Avicenna's models of senses and sensation, leading to a medieval brain that was not "mysterious and vastly unknowable...but an eminently picturable map of mental processes."¹⁶⁸ The study of medieval vision brought together multiple aspects of study. As Katherine Tachau notes in her introduction to the study of medieval vision and philosophy between 1250 and 1345, "scholars perceived the whole range of optical concerns as lying not at the periphery but at the nexus of natural philosophy and epistemology (all ultimately at the service of theology)."¹⁶⁹

However the incorporation of materially transparent rock crystal into reliquaries fails to fully communicate the late medieval fascination with light and space. The merging of miniature architectural spaces with rock crystal enables the creation of open three-dimensional environments. This visible space, enclosed by the open vaults, flying buttresses, and spires of Gothic architecture, replicates the architectural innovations begun in mid-twelfth-century religious spaces. What began with Abbot Suger's

¹⁶⁸ Camille, "Before the Gaze," 200.

¹⁶⁹ Katherine Tachau, *Vision and Certitude in the Age of Ockham: Optics, Epistemology and the Foundations of Semantics 1250-1345* (Leiden: Brill, 1988), xvi.

alterations to the choir at St. Denis¹⁷⁰ resulted in the expansion of upwards architectural space through vaults, buttresses, and spires and illuminated by stained glass, in both large cathedrals such as Chartres and smaller, private royal spaces such as Louis IX's Sainte Chapelle. These components of Gothic style appear not only in religious architecture but also in prestigious reliquaries associated with Emperor Charles IV and Aachen as well as in ordinary souvenirs of pilgrimage.

Depicting heaven through earthly materials was not new to fourteenth century European Christianity. Visions of the divine and heaven occur in the visual arts and written records. The physical and structural qualities of the Heavenly Jerusalem, a constant theme, references the account of St. John from Revelation. Numerous descriptions throughout the medieval period suggest literal and abstract qualities of architecture, ranging from small, domestic houses to large, fortified cities. St. John's material descriptions of the Heavenly Jerusalem also interested medieval audiences. Marbode of Rennes' eleventh-century lapidary texts include not only the primary treatise recording physical attributes, sources, and uses of sixty stones but also three shorter, more specific texts. The *Lapidary of Twelve Stones in Verse* and the *Christian Symbolic Lapidary in Prose* directly reference the writings of St. John about the foundation stones of the Heavenly Jerusalem, while the *Medical Prose Lapidary* contains a similar, although slightly altered listing focused on medical and protective properties.¹⁷¹

Manuscript illuminations of the architecture of heaven display a rich materiality echoing the metal and gems of reliquaries. Hildegard of Bingen's visionary descriptions of heaven recorded in her first text, *Scivias* (*Scito vias Domini* or *Know the Ways of the*

¹⁷⁰ Suger, *On the Abbey Church of St.-Denis*, 45-51.

¹⁷¹ Riddle, *Marbode of Rennes*, 119-129.

Lord), written in the mid-twelfth-century, relies extensively on architectural motifs. She repeatedly refers to salvation as a building that uses both conventional and otherworldly materials. Within her vision, she sees "the building had one wall around, it but made of two materials: One was a shining light like the light of the sky, and the other was stones joined together."¹⁷² The manuscript illuminations accompanying an edition of *Scivias*, created at Rupertsberg in close conjunction with Hildegard, display this building abstractly (fig. 4.1). The viewer sees the image of the Building of Salvation as if from above; building components jut out in every direction, fitting into the circular frame inscribed into the square border of the illumination. The various building components, crenellated walls — two shown with distinct stones, one without — as well as towers and ladders, frame a central gold square, set on its point. Visions of heavenly structure and architecture appear throughout Hildegard's writings. A later visionary text, *Liber Divinorum Operum* (*The Book of Divine Works*), also describes the city of God. An early thirteenth-century manuscript illustration of the vision (fig. 4.2), completed after Hildegard's death, presents a different interpretation of architecture. A cluster of buildings, set within a central square, represent the city. The buildings, arranged in two levels, sit evenly against a flat gold background. The architecture depicts a city of buildings of multiple sizes, configurations, and towers. However all of the buildings occupy a distinct space, appearing to float against the gold backdrop without overlap. Hildegard's visions and their representations of heaven draw on previous conventions and descriptions. Yet they also serve to communicate her spiritual and moral message on proper Christian practices; not merely to depict heaven or illustrate the sequence of the Apocalypse.

¹⁷² Hildegard of Bingen, *Scivias*, 325.

The Heavenly Jerusalem appears frequently as an illustration in manuscripts describing the text of Revelation and the subject of the Apocalypse. The Heavenly Jerusalem illumination from the Trinity College Apocalypse (fig. 4.3) presents an inward focused square, each side containing three of the twelve gates from St. John's account. The gates include slight differences in decoration, primarily in details of archways, crenellations, and framing, although maintaining a visually symmetrical and cohesive image. The multicolored bands surrounding the gates reference the twelve different foundations of precious stones. The illumination's liberal use of gold fills the central square of the city, and makes up portions of the twelve gates and twelve bands of color of the surrounding walls. In addition to denoting the Heavenly Jerusalem's structure, described as being "pure gold, clear as glass," the materiality of gold also provides a richly visual and valuable decoration and background, enhanced through its intricate use of pattern.¹⁷³

The visual characteristics of materials and how they are included in an object results in different interpretations of color and transparency. As Hahn noted, the color and characteristics of jasper differ between biblical text and mineralogical observations. While St. John's descriptions appear to emphasize clarity, he associates gold and jasper multiple times with transparency and clarity, comparing it to both crystal and glass.¹⁷⁴ Marbode of Rennes' lapidary texts do not associate jasper and clarity. Instead, jasper's main entry in *De Lapidibus* describes a stone of seventeen varieties of different colors, the best of which is a translucent green.¹⁷⁵ Within the minor, symbolic lapidaries, the

¹⁷³ Revelation 21:18

¹⁷⁴ Revelation 21:11, 18, 21.

¹⁷⁵ Riddle, *Marbode of Rennes*, 41.

color green and jasper are again linked.¹⁷⁶ Marbode's poetic descriptions of the Heavenly Jerusalem and symbolic Christian gems include references to clarity and radiance, although associating it with other stones, notably beryl.¹⁷⁷ In John M. Riddle's notes on Marbode's text, he observes that it was not unusual for beryl to be misidentified as rock crystal in the medieval period, due to its hexagonal prisms. Beryl is mostly bright and fairly clear although it is frequently colored by impurities, resulting in blue, yellow, and green varieties. *De Lapidibus* compares the gem's coloration to "a softened beam like tranquil seas or olives' oily gleam."¹⁷⁸ According to Marbode's description in the *Christian Symbolic Lapidary in Prose*, beryl "shines just as water struck by the sun and it warms the hand of the holder."¹⁷⁹ This characteristic again aligns with properties of rock crystal, which according to Marbode's *De Lapidibus* could retain warmth from the sun.¹⁸⁰ According to Hahn, the conclusion of Marbode's poem praising the Heavenly Jerusalem "describes gems as representing the virtues of saints and therefore representative of the residents of the city of God."¹⁸¹ While descriptions and properties of stones received a variety of interpretations, making assigning a singular materiality and significance difficult, their value and symbolism in the medieval period remains. The frequent references by medieval writers to metaphorical and theological meanings of materials,

¹⁷⁶ Riddle, *Marbode of Rennes*, 119, 125.

¹⁷⁷ Ibid, 120, 127.

¹⁷⁸ Ibid, 49-50.

¹⁷⁹ Ibid, 127.

¹⁸⁰ Ibid, 77.

¹⁸¹ Hahn, *Strange Beauty*, 42.

even when of confusing materiality, reveals the future Heavenly Jerusalem and God's power and magnitude through symbol and abstraction.¹⁸²

Textual accounts of heaven draw on an extensive biblical tradition from both the Hebrew Bible and New Testament. Medieval Christianity's inclusion of Jewish details from the Hebrew Bible appears in a variety of instances. As Otto von Simson observes, ideas of heaven, functioning both as a future ideal and a model for earthly architecture, incorporated not only details from St. John's vision of the future Heavenly Jerusalem after the Christian Last Judgment but also lost examples from Jewish history such as the Temple of Solomon and the Temple of Ezekiel.¹⁸³ The written, biblical sources for these buildings provided guidelines for their medieval audience. However, the lack of a physical building — either through its placement in the future, or previous destruction — allowed new and different styles of architecture to cite the temples of Solomon and Ezekiel or the Heavenly Jerusalem as their inspiration. In effect, these descriptions served as a malleable template, conforming and adapting to changing conventions and visual priorities.

Material descriptions of substance also draw on references from both the Hebrew Bible and the New Testament.¹⁸⁴ The twelve precious stones that form the foundations of the Heavenly Jerusalem reconstruct the twelve jewels adorning the garments worn by priests as outlined in the book of Exodus.¹⁸⁵ Visions of heaven experienced by the Jewish prophets, such as Ezekiel, also refer to gold, crystal and other precious stones including

¹⁸² See Hahn, "Meanings of Materials" in *Strange Beauty*, 38-44 for a compilation of examples of medieval explanations for the metaphorical meanings of puzzling descriptions of the materiality of gold and gems in scripture.

¹⁸³ Von Simson, *The Gothic Cathedral*, 11.

¹⁸⁴ See Appendix A

¹⁸⁵ Exodus 28:18-20.

beryl and sapphire as shining, bright, gleaming, and transparent.¹⁸⁶ Gerevini cites Ezekiel's reference to heavenly crystal in conjunction with Gregory the Great's interpretation of the multiple metaphorical meanings of rock crystal. He argued that the "crystal firmament...could represent angelic natures," comparing rock crystal's transformation from fluid water into stone to the angel's initial "freedom to decide whether they wished to be humble and remain in the presence of God or to give in to pride and fall from their blessed state" in addition to serving as a metaphor for Christ's Incarnation and Resurrection.¹⁸⁷

Late medieval fascinations with light and space appear through architecture and stained glass. The large spaces enclosed by church architecture become visually transformed by Gothic details, creating a new stage for liturgy and worship. The material qualities of light and color, projected by expansive walls of stained glass and towering and vaulted interiors establish a new, vision of heaven which the medieval individual could enter and experience. In contrast, manuscript illuminations of the Heavenly Jerusalem offer a comparable use of color and materiality but without interactive transparency and three-dimensionality. The architecturally transparent and crystalline interiors of Aachen's fourteenth-century reliquaries continue the medieval Christian tradition of attempting to communicate heaven. Although the reliquary structures seen in the *Reliquary of Charlemagne* (fig. 2.3), the *Three-Steepled Reliquary* (fig. 2.4.), and others from the Aachen Cathedral Treasury incorporate detailed imitations of Gothic architectural details, their small scale does not allow the personal, visual experience enabled by walking through full-scale architecture. However the placement of sculpted

¹⁸⁶ Ezekiel 1:4-28; note verses 16, 22, 26-28.

¹⁸⁷ Gerevini, "Christus crystallus," 94.

individuals, both saints and donors, within the architectural structures of the *Reliquary of Charlemagne* and *Three-Steepled Reliquary* replicates this, acting as a surrogate for the viewer.

Aachen provides an example of not only prestigious commissions and gifts to the church's treasury because of its status as coronation church but also widespread evidence of popular religious devotion through pilgrimage tokens. This spectrum of objects demonstrate different levels of materials and cost, encompassing precious metals and jewels and inexpensively molded lead and tin. The reign of Charles IV, his patronage of Aachen, and the legacy of Charlemagne connect these objects. The reliquaries added to the Aachen Cathedral Treasury in the mid-fourteenth century, under the influence and perhaps direct patronage of Charles IV utilize elaborate Gothic architecture and rock crystal. Additionally the saints, relics, and subject matter of these reliquaries connect Charles IV and his court to the centuries old legacy of Charlemagne, the Holy Roman Empire, and the more recent splendor of Louis IX, Sainte Chapelle, and its relics of Christ's Passion.

According to Barbara Drake Boehm, the "devotion to saints and their relics was the most demonstrable aspect of Charles IV's spirituality."¹⁸⁸ His participation and interaction with relics and reliquaries is apparent through historical records, such as the account detailing his visit to Sainte Chapelle and his desire to view the relics of Christ's Passion. Records and inventories detailing gifts of relics, reliquaries, and other religious material also support the emperor's religious devotion. Charles IV concerned himself with the acquisition of relics of personal significance, as in the case of St. Catherine of

¹⁸⁸ Boehm, "Charles IV: The Realm of Faith," in *Prague: The Crown of Bohemia*, 25.

Alexandria, and historical legacy and legitimacy as in the case of John the Baptist, one of the patron saint of Charlemagne.¹⁸⁹ However Charles IV also sought out prestigious relics associated with Christ's Passion, linking himself and his rule with the precedent established by Louis IX at Sainte Chapelle and the status of those most important relics. In addition to relics and reliquaries, Charles IV accumulated more recent religious writings. Boehm notes that the inventory of St. Vitus's Cathedral in Prague from 1354 describes the emperor's presentation to the cathedral of a copy of Hildegard of Bingen's *Scivias*, suggesting an interest by Charles IV, who wrote of his own spiritual visions.¹⁹⁰ Finally, the formalization of the display of relics to pilgrims every seven years at Aachen during the reign of Charles IV in 1349 reveals not only a personal spirituality but also the inclusion of the broader public.¹⁹¹

The addition of the Gothic choir to Charlemagne's Palatine Chapel and its replication of Sainte Chapelle's architecture communicates not only the influence of Louis IX's building but also the Gothic aesthetic and message. The repeated Gothic details seen in the metalwork of expensive, uniquely detailed reliquaries and inexpensive, mass-produced pilgrimage badges also conveys the importance of Gothic characteristics and transparency in religious objects of fourteenth-century Aachen. The transparent materiality of Aachen's reliquaries and liturgical objects manifests itself through the clarity of rock crystal relic chambers, echoing biblical descriptions of paradise, and three-dimensional, open space created through Gothic architecture. As von Simson observes, the cathedral and its shape and structure "was the imitation of ineffable truth," describing

¹⁸⁹ Boehm, *Prague: The Crown of Bohemia*, 24-27, 153.

¹⁹⁰ Boehm, "Charles IV: The Realm of Faith," in *Prague: The Crown of Bohemia* 24.

¹⁹¹ Lepie and Minkenberg, *The Cathedral Treasury of Aachen*, 105.

the "medieval cosmos [that] was theologically transparent."¹⁹² The desire for transparency and clarity, frequent descriptors of beauty in twelfth and thirteenth century philosophy, appears in the enlargement of three-dimensional space and seemingly transparent walls of stained glass.¹⁹³ The importance of light and visibility appear in other details of late medieval liturgy. As seen previously, the elevation of the Host became increasingly prominent within the Mass by the thirteenth century, to both clergy and laity.¹⁹⁴ Von Simson also notes the trend, common by the end of the thirteenth century, to read the introductory passage of the Gospel of John at the conclusion of Mass, referencing illuminating light and the Incarnation.¹⁹⁵ These mysteries of Christian doctrine invite explanations through analogies and related examples. Gerevini emphasizes the suitability of rock crystal as an explanation, and its citation by multiple medieval authorities, including Gregory the Great, Richard of St Victor, and St. Augustine.¹⁹⁶ Rock crystal represents both complex theology and the materiality of the Heavenly Jerusalem. Its inclusion in Aachen's fourteenth-century reliquaries, especially in conjunction with the transparent structures of Gothic architecture, reveals the importance of sight and visibility in the late medieval period for the development of theological models of doctrine, devotion, and the depiction of heaven.

¹⁹² Von Simson, *The Gothic Cathedral*, 35.

¹⁹³ Ibid, 50-51.

¹⁹⁴ Snoek, *Medieval Piety*, 56-58.

¹⁹⁵ Otto von Simson, *The Gothic Cathedral*, 55.

¹⁹⁶ Gerevini, "Christus crystallus," 94-95.

Illustrations

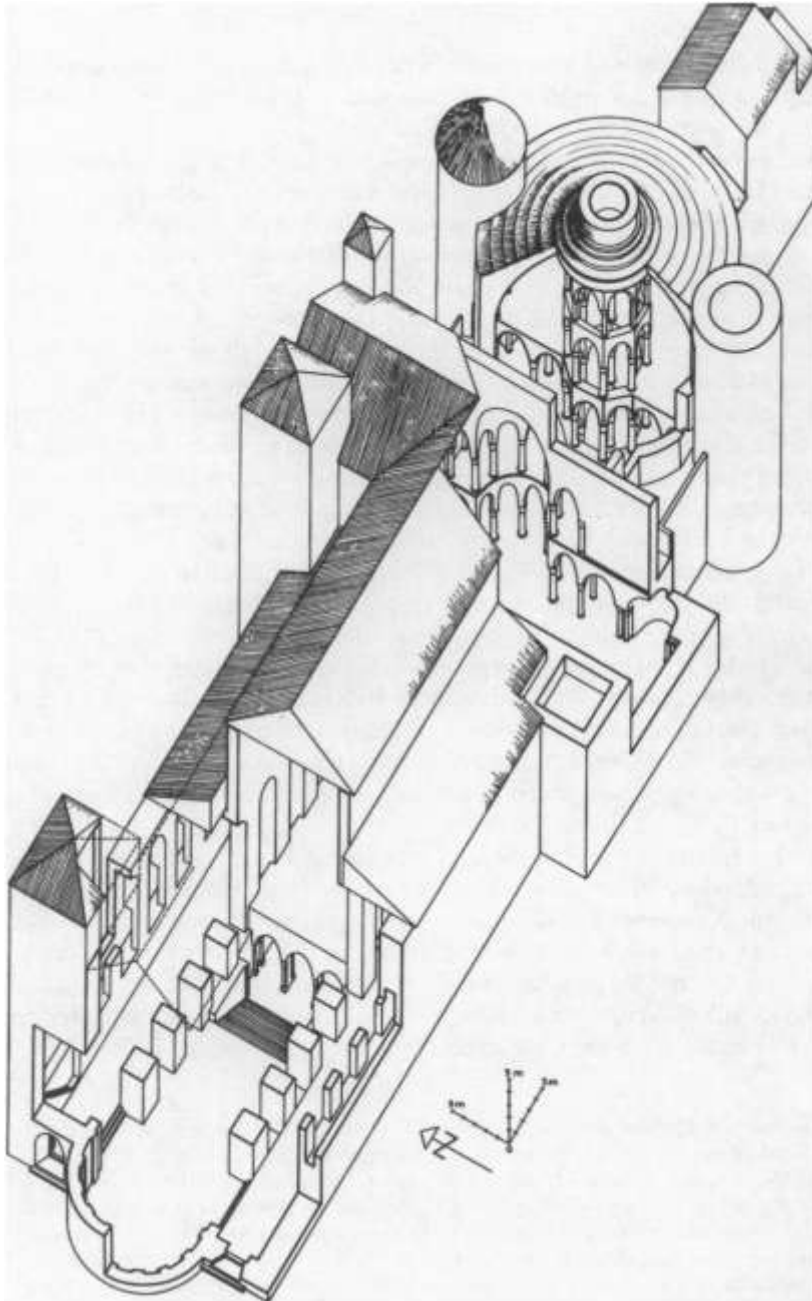


Figure 1.1

Carolyn Malone, Reconstruction of the eleventh-century Church of Saint-Bénigne, based on excavations, Dijon; Plancher's plans; and the *Chronicle of Saint-Bénigne*.

Image source: Carolyn Marino Malone, "The Rotunda of Sancta Maria in Dijon as 'Ostwerk.'" *Speculum* Vol. 75, No. 2 (Apr., 2000): 285-317. Accessed April 1, 2017. <http://www.jstor.org/stable/2887580>. Figure 1, page 288.



Figure 1.2

Reliquary of St. Anastasius the Persian (artophorion)

Antioch, moved to Aachen in the twelfth or thirteenth century

Late tenth or early eleventh century

Hammered silver, partially gilt with niello inlay

Height: 39 centimeters

Width: 19 centimeters

Depth: 20 centimeters

Aachen Cathedral Treasury, Aachen, Germany

Image source: Treasures of Heaven: Saints, Relics, and Devotion in Medieval Europe

online exhibition hosted through Columbia University,

<http://www.learn.columbia.edu/treasuresofheaven/relics/Reliquary-of-St-Anastasios-the-Persian.php> (Accessed April 1, 2017)



Figure 1.3

Attributed to Nicholas of Verdun and others

Shrine of the Three Kings

detail: front trapezoidal panel and underlying grille

Cologne, Germany

ca. 1180-1230

Wooden core with gold, gilded silver, enamel, precious and semi-precious stones, intaglios, and antique cameos

Height: 153 centimeters

Width: 110 centimeters

Length: 220 centimeters

Cologne Cathedral, Cologne, Germany

Image source: Kölner Dom,

<http://www.koelner-dom.de/> (Accessed April 10, 2017)





Figure 1.4

Ninian Reliquary

Scotland or Northern England

ca. 1200

Wood, gold, rock crystal, and pearls

Diameter: 5.2 centimeters

The British Museum, London

Object number: 1946,0407.1

Image source: <http://www.britishmuseum.org/>



Figure 1.5

Cross of St. Nikomedes of Borghurst

German

ca. 1050

Wooden core, gold and copper gilt, precious stones, rock crystal, and pearls

Height: 41.1 centimeters

Width: 28.4 centimeters

Formerly Pfarrgemeinde St-Nikomedes, Steinfurt-Borghurst, Germany; stolen in 2013 - current location unknown

Image source: Stefania Gerevini. "Christus crystallus: Rock Crystal, Theology, and Materiality in the Medieval West." In *Matter of Faith: An Interdisciplinary Study of Relics and Relic Veneration in the Medieval Period*. edited by James Robinson and Lloyd de Beer with Anna Harnden (London: The British Museum, 2014), Plate 3a-b, page 95.



Figure 1.6

Reliquary with the Tooth of Saint John the Baptist

Braunschweig , Germany

Rock crystal flask: ca. 1000, Egypt, Fatimid Dynasty (909-1171)

Metalwork: ca. 1375-1400

Silver gilt and rock crystal

Height: 45.1 centimeters

The Art Institute of Chicago, Chicago, Illinois

Image source: <http://www.artic.edu/>



Figure 1.7

Domed Reliquary

Hildesheim, Germany

ca. 1170-1180

Wooden core with rock crystal, copper, gilding, and enamel. Relic wrapped in silk with more recent velvet

Height: 22.8 centimeters

Width: 16.2 centimeters

Depth: 11.3 centimeters

Dommuseum Hildesheim, Hildesheim, Germany

Object number: DS 20

Image source: Michael Brandt, Claudia Höhl, and Gerhard Lutz, editors. *Cathedral Museum Hildesheim* (Regensburg: Verlag Schnell & Steiner GmbH, 2015), catalog entry 47, page 101.



Figure 1.8

Reliquary Monstrance

French

Thirteenth century

Rock crystal and gilt copper

Height: 18.5 centimeters

Width: 13.8 centimeters

Musée de Cluny - musée national du Moyen Âge, Paris, France

Object number: CL19965

Image source: RMN - Grand Palais (musée de Cluny - musée national du Moyen-Âge),

<http://www.photo.rmn.fr/archive/11-542905-2C6NU0OJ2MOC.html>

(Accessed February 11, 2017)



Figure 1.9

Lantern of Begon, also known as the Reliquary of St. Vincent

French

ca. 860

Wood core, silver, partially gilt, later glass windows

Height: 40 centimeters

Conques Abbey Treasury, Conques, France

Image source: Christof L. Diedrichs. *Vom Glauben zu Sehen: Die Sichtbarkeit der Reliquie im Reliquiar Ein Betrag zur Geschichte des Sehens* (Berlin: Weißensee Verlag, 2001). Abbildung 10, page 296.



Figure 2.1

Shrine of the Virgin Mary

German

1220-1239

Oak core, gilt silver, enamel, antique and medieval stones and gems

Height: 94 centimeters

Length: 184 centimeters

Width: 54 centimeters

Aachen Cathedral, Aachen, Germany

Image source: <http://sites.tufts.edu/textilerelics/> (Accessed April 14, 2017)



Figure 2.2

Shrine of Charlemagne

German

1182-1215

Oak core, gilt silver, champlevé enamel, precious stones

Height: 94 centimeters

Length: 204 centimeters

Width: 57 centimeters

Aachen Cathedral, Aachen, Germany

Image source: Herta Lepie and Georg

Minkenberg. *The Cathedral Treasury of Aachen*

(Regensburg: Verlag Schnell & Steiner GmbH, 2013), pages 14-15.





Figure 2.3

Reliquary of Charlemagne

German

Mid-fourteenth century

Gilt silver, pearls, precious stones,
translucent enamel, and rock crystal

Height: 125 centimeters

Width: 72 centimeters

Depth: 37 centimeters

Aachen Cathedral Treasury,
Aachen, Germany

Image source: Herta Lepie and
Georg Minkenberg. *The Cathedral
Treasury of Aachen* (Regensburg:
Verlag Schnell & Steiner GmbH,
2013), page 33.

Details: personal photographs by
author, June 2016.





Figure 2.4

Three-Steepled Reliquary

Probably Flemish

1370-1390

Gilt silver, precious stones,
translucent enamel, and rock
crystal

Height: 93.5 centimeters

Width: 74 centimeters

Depth: 38.2 centimeters

Aachen Cathedral Treasury,
Aachen, Germany

Image source: Herta Lepie
and Georg Minkenberg. *The
Cathedral Treasury of Aachen*
(Regensburg: Verlag Schnell
& Steiner GmbH, 2013), page
35.

Details: personal photography
by author, June 2016.





Figure 2.5

Reliquary of Thomas Beckett's Blood

British

1173-1180

Gilded silver with niello, glass cabochon placed over tinted foil

Height: 5.5 centimeters

Width: 7 centimeters

Depth: 4.7 centimeters

The Metropolitan Museum of Art, New York

Object number: 17.190.520

Image source: www.metmuseum.org (Accessed April 7, 2017)



Figure 2.6

Reliquary for the Flagellation Rope of Christ

Most likely Prague

ca. 1380

Rock crystal vessel, gilt silver, antique and medieval precious stones, and pearls

Height: 54 centimeters

Base diameter: 21 centimeters

Aachen Cathedral Treasury, Aachen, Germany

Image source: Herta Lepie and Georg Minkenberg. *The Cathedral Treasury of Aachen* (Regensburg: Verlag Schnell & Steiner GmbH, 2013), page 115.

Detail of architectural spire: personal photograph by author, June 2016.



Figure 2.7

Reliquary for the Belt of the Virgin Mary

Most likely Prague

ca. 1360

Rock crystal vessel with added glass lid, gilt silver, translucent enamel, pearls, Gothic carved stones, and French agate cameo

Height: 62.5 centimeters

Base diameter: 21 centimeters

Aachen Cathedral Treasury, Aachen, Germany

Image source: Herta Lepie and Georg Minkenberg. *The Cathedral Treasury of Aachen* (Regensburg: Verlag Schnell & Steiner GmbH, 2013), page 116.

Detail of architectural spire: personal photograph by author, June 2016.



Figure 2.8

Attributed to Jean de Touyl (French, died 1349/1350)

Reliquary of Elizabeth of Hungary

French

ca. 1325-1350

Gilt silver, translucent enamel, and paint

Height: 25.4 centimeters

Width: 40.6 centimeters (open), 16.7 centimeters (closed)

Depth: 9.2 centimeters

The Cloisters, The Metropolitan Museum of Art, New York

Object number: 62.96

Image source: www.metmuseum.org (Accessed March 29, 2017)





Figure 2.9

Reliquary Bust for the Arm of Saint John the Baptist

German, probably Aachen

After 1355

Gilded silver, silver, precious stones, cameos, intaglios, pearls, and rock crystal

Height: 77 centimeters

Width: 50 centimeters

Cistercian Convent of the Virgin Mary and Saint John the Baptist, Aachen-Burtscheid

Parish Church of Saint John the Baptist, formerly Abbey, Aachen, Germany

Image source: Barbara Drake Boehm and Jiří Fajt, editors. *Prague: The Crown of Bohemia 1347-1437* (New York: The Metropolitan Museum of Art, 2005), catalog entry 24, page 152.

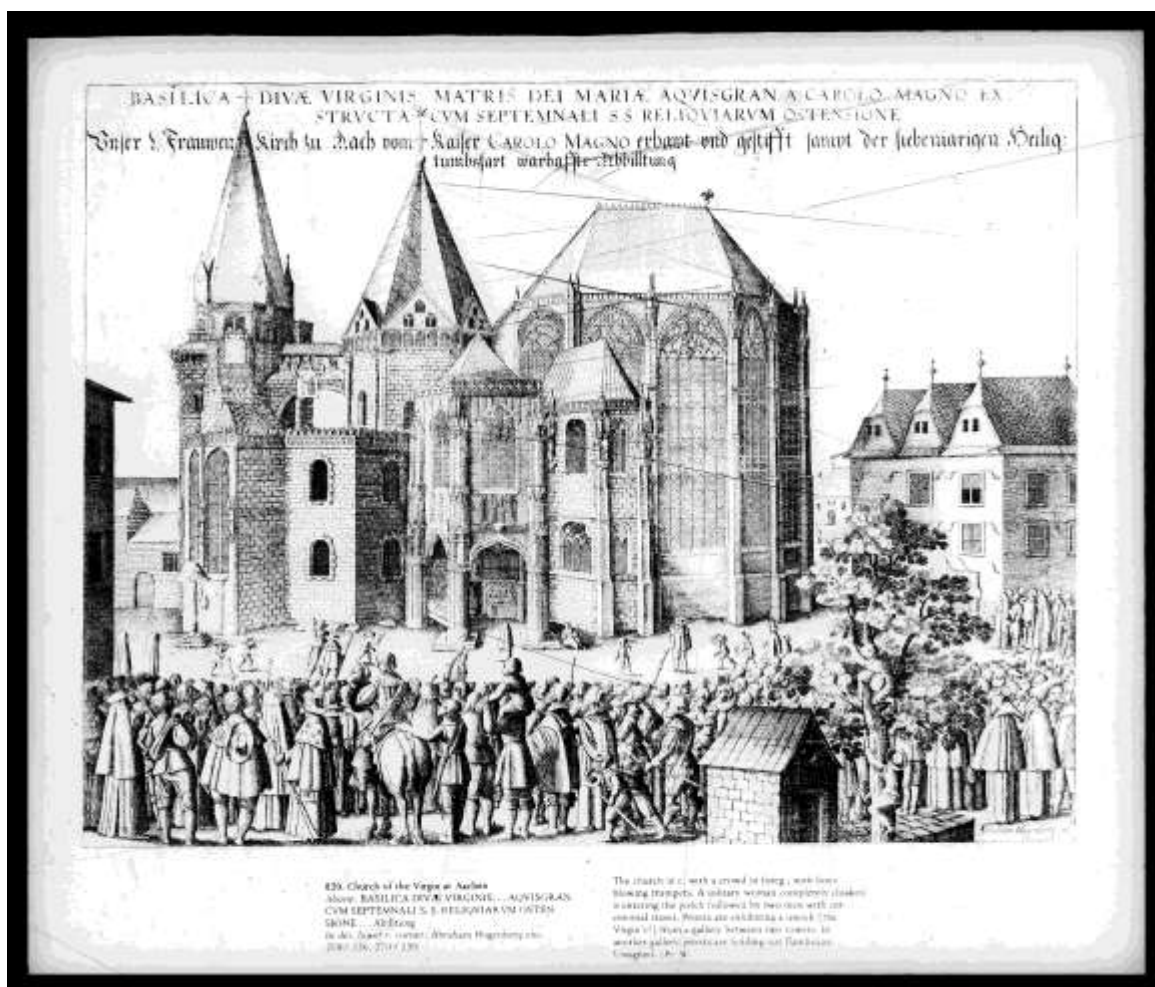


Figure 3.1

Wenceslaus Hollar, etcher (1607-1677), Abraham Hogenberg, publisher (Cologne)

Church of the Virgin at Aachen

ca. 1664

Etching

Paper: 25.8 x 33.8 cm

The Royal Collection Trust, Windsor, United Kingdom

Royal Collection Trust / © Her Majesty Queen Elizabeth II 2017

Object number: RCIN 802653

Image source: www.royalcollection.org.uk (Accessed March 10, 2017)

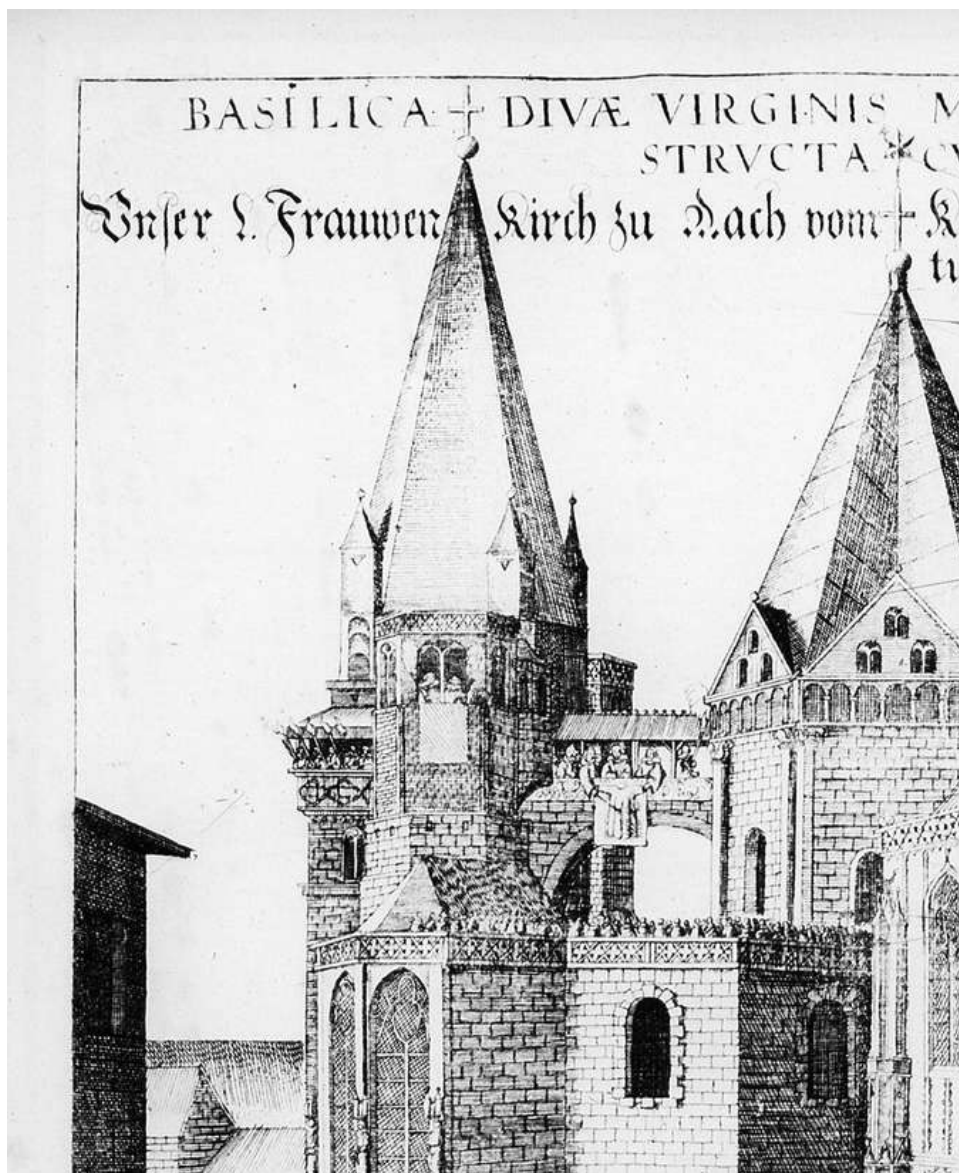


Figure 3.2

Wenceslaus Hollar, etcher (1607-1677), Abraham Hogenberg, publisher (Cologne)

Display of Relics detail from *Church of the Virgin at Aachen*

ca. 1664

Etching

Full sheet of paper: 25.8 x 33.8 cm

The Royal Collection Trust, Windsor, United Kingdom

Royal Collection Trust / © Her Majesty Queen Elizabeth II 2017

Object number: RCIN 802653

Image source: www.royalcollection.org.uk (Accessed March 10, 2017)

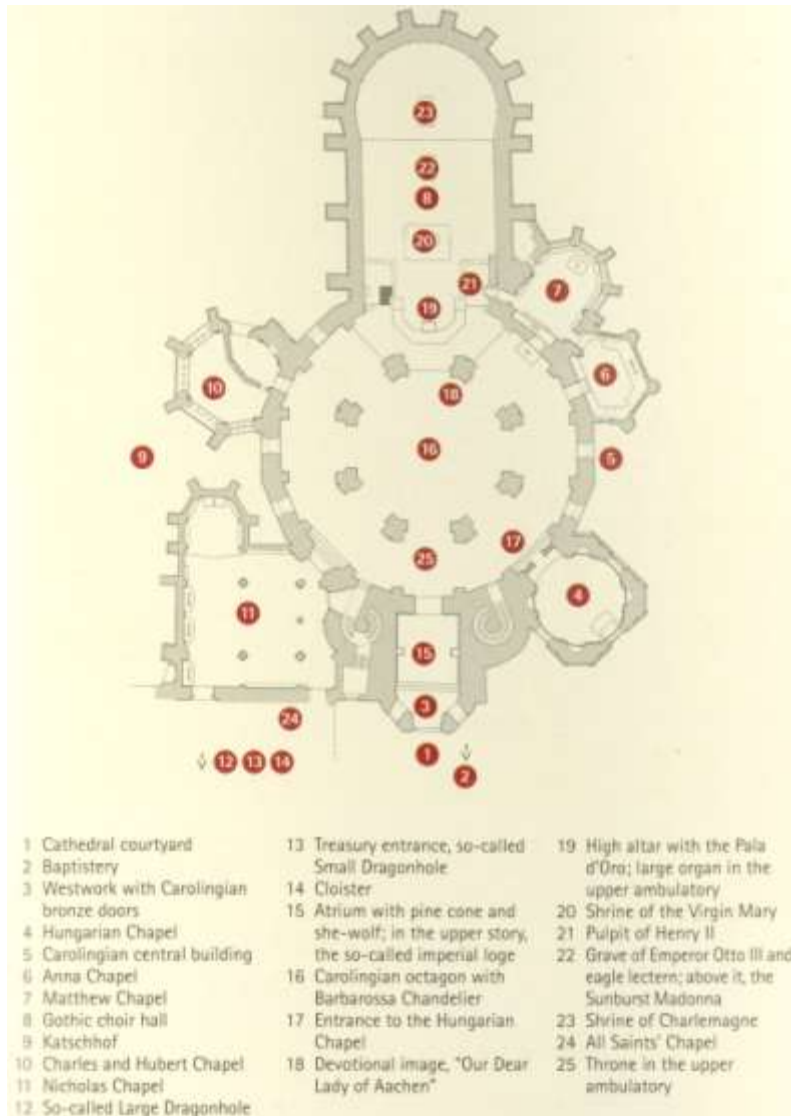


Figure 3.3

Floor plan: Aachen Cathedral
 Aachen, Germany

Image source: Dambauleitung Aachen. Published in Georg Minkenberg. *The Cathedral Aachen* (Regensburg: Verlag Schnell & Steiner GmbH, 2014), page 52.



Figure 3.4

Reliquary Bust of Charlemagne

German, Aachen; Crown most likely produced in Prague before 1349

After 1349

Wood, partially gilt silver, silver eagle appliques, borders of precious stones incorporating antique gems

Height: 86.3 centimeters

Base width: 57.2 centimeters

Aachen Cathedral Treasury, Aachen, Germany

Image source: www.aachenerdom.de (Accessed March 17, 2017)



Figure 3.5

Pilgrim Badge of the Crowned Virgin and Child

German, Aachen; Found in Switzerland

ca. 1200-1224

Cast lead-tin alloy

Height: 4.4 centimeters

Width: 2.8 centimeters

Depth: 0.1 centimeters

Rätisches Museum, Chur, Switzerland

Object number: H 1970.4167

Kunera number: 06129

Image source: www.kunera.nl (Accessed November 1, 2016)



Figure 3.6

Pilgrim Badge of Charlemagne

German, Aachen; Found in Dordrecht

ca. 1350-1400

Cast lead-tin alloy

Height: 5.7 centimeters

Width: 4.5 centimeters

Collection of H.J.E. van Beuningen,

Cothen, Netherlands

Inventory number: 0530

Kunera number: 00264

Image source: Marike de Kroon. "Medieval Pilgrim Badges and the Iconographic Aspect." In *Art and Architecture of Late Medieval Pilgrimage in Northern Europe and the British Isles: Plates*, edited by Sarah Blick and Rita Tekippe (Leiden: Brill, 2005), Figure 184.



Figure 3.7

Charlemagne Kneeling Before the Virgin

German, Aachen; Found in Korte Geere, Middelburg, Netherlands

Fourteenth century

Lead-tin alloy

Height: 9.5 centimeters

Width: 4.3 centimeters

Depth: 2.1 centimeters

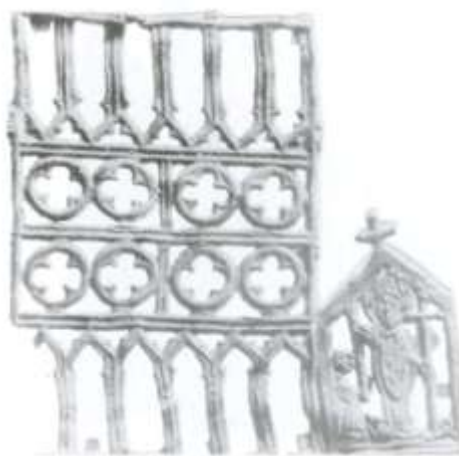
Collection of B. de Bree, Groot Abeele, Netherlands

Image source: Sarah Blick. "Common Ground:

Reliquaries and the Lower Classes in Late Medieval

Europe." In *Matter of Faith: An Interdisciplinary Study of Relics and Relic Veneration in the Medieval Period*.

edited by James Robinson and Lloyd de Beer with Anna Harnden (London: The British Museum, 2014), Plate 7, page 113.



114



Figure 3.8

Folding Reliquary Badge

Found in Seine River, Paris, France

Fourteenth or fifteenth century

Cast lead-tin alloy

Height: 2.3-5 centimeters

Width: 3.2-4.4 centimeters

Museum of Decorative Arts, Prague, Czech Republic

Object number: UPM 5641

Image source: Denis Bruna, *Enseignes de plomb et autres menues choses du Moyen Âge* (Paris: Éditions du Léopard d'Or, 2006), Figure 114, pages 271 and 298.

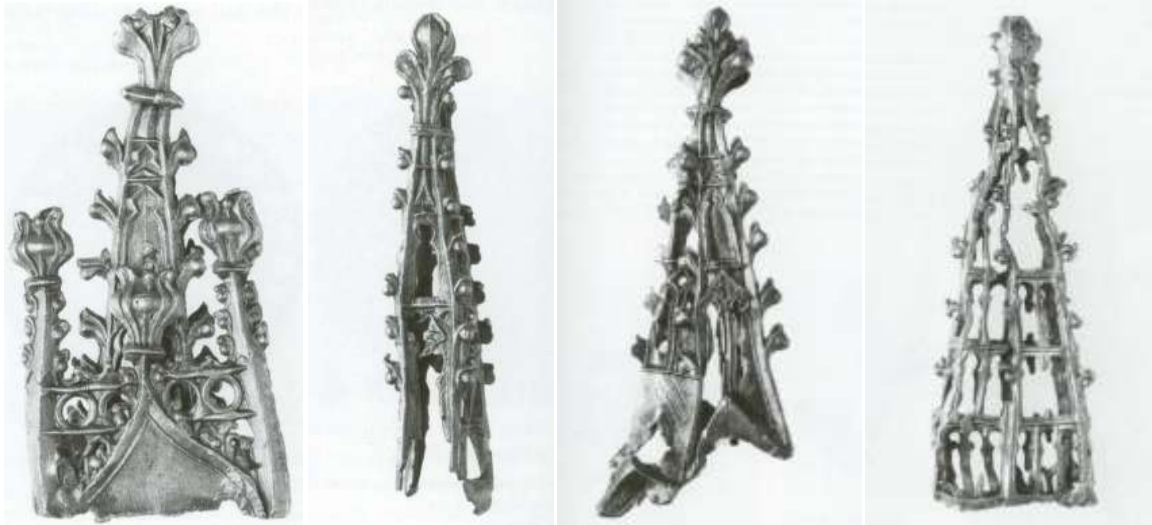


Figure 3.9

Miniature Three-Dimensional Tower Fragments

Found in Seine River, Paris, France

Fifteenth century

Lead-tin alloy

Height: ranging between 5.1 and 6.5 centimeters

Width: ranging between 2 and 2.5 centimeters

Museum of Decorative Arts, Prague, Czech Republic

Object numbers: UPM 5647, UPM 98.985, UPM 5646, UPM 98.984

Image source: Hartmut Kühne, Carina Brumme, and Helena Koenigsmarková.

Jungfrauen, Engel, Phallustiere: die Sammlung mittelalterlicher französischer Pilgerzeichen des Kunstgewerbemuseums in Prag und des Nationalmuseums Prag. (Berlin: Lukas Verlag, 2012) Figures 305-308, page 162-163.



Figure 3.10

Pilgrim Badge with Frame for Mirror

Germany, Aachen

Fifteenth century

Lead-tin alloy

Collection of H.J.E. Van Beuningen, Cothen, Netherlands

Image source: Sarah Blick. "Common Ground: Reliquaries and the Lower Classes in Late Medieval Europe." In *Matter of Faith: An Interdisciplinary Study of Relics and Relic Veneration in the Medieval Period*, edited by James Robinson and Lloyd de Beer with Anna Harnden (London: The British Museum, 2014), Plate 8, page 113.



Figure 3.11

Master of the St. Augustine Altarpiece (Nuremberg)
Detail of *St. Sebald as Pilgrim Wearing Aachen Mirror Badge*

Polyptych panel depicting St. George and St. Sebald
from the high altar of the former Augustine Church in
Nuremberg

ca. 1487

Painted wood panel

Height (full panel): 275 centimeters

Width (full panel): 94 centimeters



Germanisches NationalMuseum, Nuremberg, Germany

Object number: Gm 143

Image sources:

Detail: Brian Spencer. *Pilgrim Souvenirs and Secular Badges*. (Woodbridge: The Boydell Press, 2010), Figure 9, page 17.

Full panel: <http://objektkatalog.gnm.de/objekt/Gm143> (Accessed April 10, 2017)



Figure 3.12

Cross of Lothair

West German (Cologne)

ca. 1000, base fourteenth century (Late Gothic)

Wood core, gold, gilt silver, precious stones, ancient stones, rock crystal intaglio, and pearls

Height (without base): 50 centimeters

Width: 38.5 centimeters

Depth: 2.3 centimeters

Aachen Cathedral Treasury, Aachen, Germany

Image source: Front (crux gemmata) and detail of rock crystal with image of King

Lothar: personal photographs by author, June 2016. Back (engraved): Herta Lepie and Georg Minkenberg. *The Cathedral Treasury of Aachen* (Regensburg: Verlag Schnell & Steiner GmbH, 2013), page 39.



Figure 3.13
Base, Cross of Lothair
Late Gothic, fourteenth century

Aachen Cathedral Treasury, Aachen, Germany
Image source: personal photograph by author, June 2016.



Figure 3.14

Cantor's Staff, Crown

German, Aachen

Eagle around 1470

Hexagonal knob with cap around 1420

Silver gilt, set with precious stones

Aachen Cathedral Treasury, Aachen,
Germany

Image source: personal photographs by
author, June 2016.





Figure 3.15

Choir Robe Brooch

German, Aachen or Cologne
1340-1350

Hammered, cast, and
engraved gilt silver with
pearls and enamel

Height: 20 centimeters

Width: 18.6 centimeters

Aachen Cathedral Treasury,
Aachen, Germany

Image source: personal
photograph by author, June
2016.



Figure 3.16

Attributed to Hans von
Reutlingen

Choir Robe Brooch

German, Aachen

Before 1520

Hammered and cast silver
gilt with pearls and precious
stones

Diameter: 16 centimeters

Aachen Cathedral Treasury,
Aachen, Germany

Image source: Herta Lepie
and Georg Minkenber. *The
Cathedral Treasury of
Aachen* (Regensburg:
Verlag Schnell & Steiner
GmbH, 2013), page 60.



Figure 4.1

The Building of Salvation

From Hildegard of Bingen's *Scivias* III, 2

Rupertsberg MS, fol. 130v

Original manuscript ca. 1165, Rupertsberg, Germany

Original manuscript now lost, formerly Wiesbaden, Landesbibliothek

Image source: <http://www.abtei-st-hildegard.de/> (Accessed April 14, 2017)



Figure 4.2

The City of God and the Mirror of the Angels

From Hildegard of Bingen's *Liber Divinorum Operum* III.1

Early thirteenth century

Biblioteca Statale di Lucca, MS 1942, fol. 118r

Image source: www.hildegard-society.org (Accessed April 14, 2014)

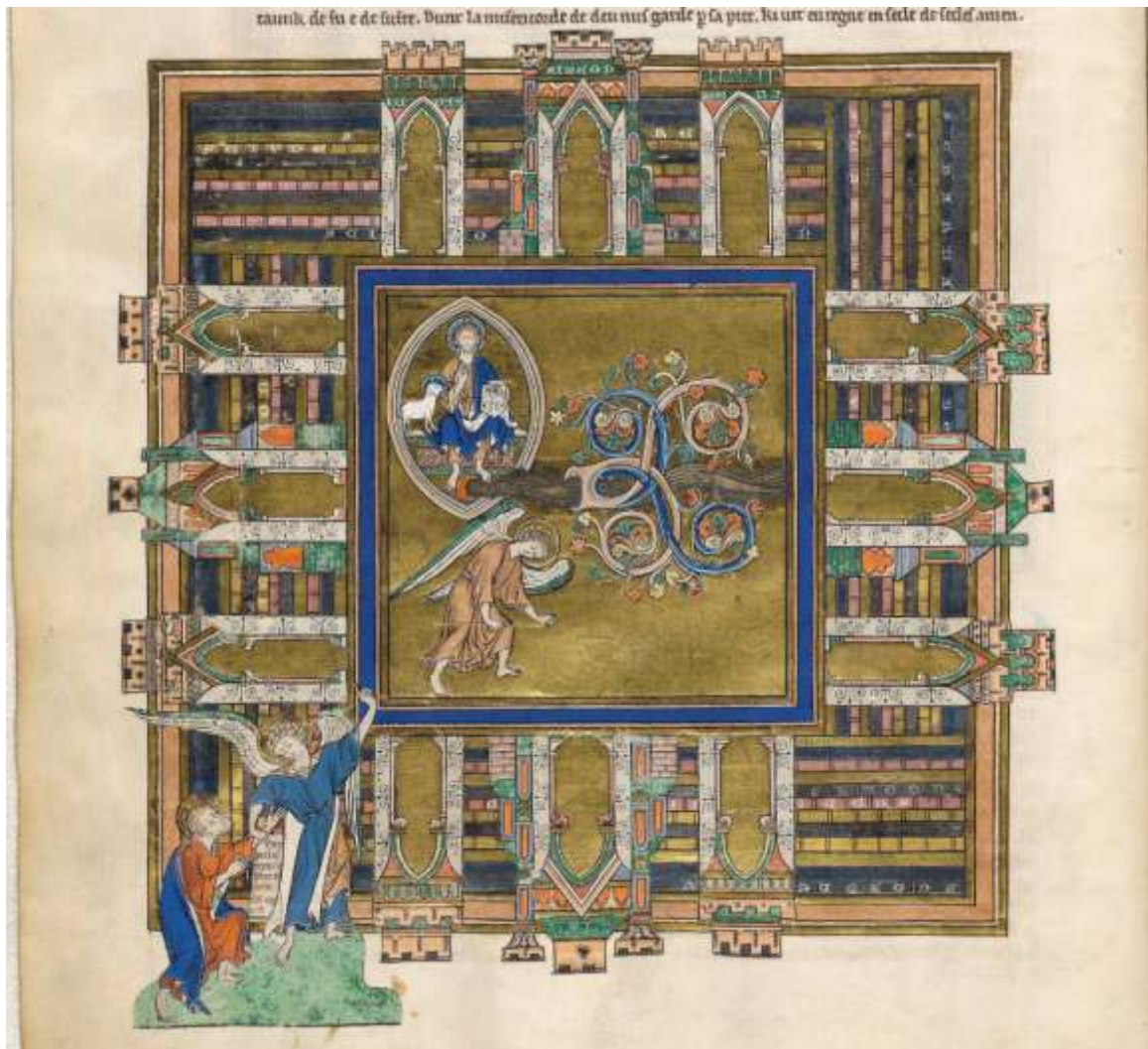


Figure 4.3

The Heavenly Jerusalem

From the *Trinity College Apocalypse*

ca. 1255

Illumination on Parchment

Full page length: 43.5 centimeters

Full page width: 32 centimeters

Trinity College, Cambridge, United Kingdom MS R.16.2

Image source: Trinity College Library, The James

Catalogue of Western Manuscripts

<http://trin-sites->

pub.trin.cam.ac.uk/james/viewpage.php?index=1199

(Accessed April 14, 2017)



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Appendix A: Table of Gems Listed in the texts of Exodus, Revelation, and Marbode of Rennes Lapidaries ¹								
Exodus 28:17-21 The Priest's Breastplate	Exodus 28:17-21 The Priest's Breastplate	Exodus 28:17-21 The Priest's Breastplate	Revelation 21:19-21 Foundations of the Heavenly Jerusalem	Revelation 21:19-21 Foundations of the Heavenly Jerusalem	Revelation 21:19-21 Foundations of the Heavenly Jerusalem	Marbode of Rennes Lapidary of 12 Stones in Verse	Marbode of Rennes Christian Symbolic Lapidary in Prose	Marbode of Rennes Medical Prose Lapidary
English Standard Version	Douay- Rheims	Latin Vulgate	English Standard Version	Douay- Rheims	Latin Vulgate	Riddle, 119- 122	Riddle, 125- 129	Riddle, 122- 125
Sardius	Sardius	Sardius	Jasper	Jasper	Jaspis	Jasper	Jasper	Jasper
Topaz	Topaz	Topazius	Sapphire	Sapphire	Sapphirus	Sapphire	Sapphire	Chalcedony
Carbuncle	Emerald	Smaragdus	Agate	Chalcedony	Calcedonius	Chalcedony	Chalcedony	Emerald (smaragdus)
Emerald	Carbuncle	Carbunculus	Emerald	Emerald	Smaragdus	Emerald	Emerald (smaragdus)	Sard
Sapphire	Sapphire	Sapphirus	Onyx	Sardonyx	Sardonyx	Sardonyx	Sardonyx	Chrysolite
Diamond	Jasper	Jaspis	Carnelian	Sardius	Sardius	Sard	Sard	Beryl
Jacinth	Ligurius	Ligurius	Chrysolite	Chrysolite	Chrysolithus	Chrysolite	Chrysolite	Topaz
Agate	Agate	Achates	Beryl	Beryl	Beryllus	Beryl	Beryl	Jacinth
Amethyst	Amethyst	Amethystus	Topaz	Topaz	Topazius	Topaz	Topaz	Amethyst
Beryl	Chrysolite	Chrysolithus	Chrysoprase	Chrysoprasus	Chrysoprasus	Chrysophras	Chrysoprasus	Achate
Onyx	Onyx	Onychinus	Jacinth	Jacinth	Hyacinthus	Jacinth	Jacinth	Sard
Jasper	Beryl	Beryllus	Amethyst	Amethyst	Amethystus	Amethyst	Amethyst	Onychinus
								Corneolus
								Jasper
								Sapphire
								Chrysoprase

¹ See Latin Vulgate, Challoner (1899), English Standard Version (2001), and Riddle (1977).