

INTRODUCTION

IN 1995, ON THE CELIAN HILL IN ROME, A TEAM OF CONSERVATORS LED by Dottoressa Andreina Draghi made a remarkable discovery in the fortified tower attached to the basilica of Santi Quattro Coronati.¹ Concealed behind layers of whitewash in a vaulted hall were the remains of an extensive thirteenth-century fresco cycle (Figure I.1). The tower and hall originally formed part of a palace complex built for Stefano Conti, a high-ranking cardinal of the papal Curia who lived there from the early 1240s until his death in 1254.² During this time, Cardinal Conti sponsored a vast program of murals that included the newfound hall frescoes, the well-known series of narrative paintings in the small chapel dedicated to Saint Sylvester, and a painted liturgical almanac in the chapel's antechamber (Figures I.2 and I.3).³ To realize this program of fresco decorations, Conti hired the same teams of painters who had completed the large cycle of murals in the crypt of Anagni Cathedral a few years earlier.

The Santi Quattro Coronati murals were made during Conti's tenure as cardinal vicar of Rome (1244–54), a role that placed him in charge of managing papal affairs during the pope's absence.⁴ The frescoes in the great hall were designed to celebrate Conti's new political power and affection for worldly knowledge. The murals also promoted the papacy's proclaimed dominion in temporal and religious matters vis-à-vis its imperial rivals. Distributed across six large lunettes and two ribbed vaults, the frescoes display allegorical representations of various bodies of knowledge, including the liberal



1.1. Frescoed interior of great hall in residential tower, ca. 1244–54, view from north to south bay, Santi Quattro Coronati, Rome. Photograph: Reproduced under license from Ministero della Cultura – Vittoriano e Palazzo Venezia.

arts, the virtues and vices, the seasons, the signs of the zodiac, and the months of the year with their associated agricultural work. This combination of learned iconographic motifs sets Conti's hall apart from most other medieval Roman art, aligning it instead with the sweeping displays of worldly knowledge that adorned the façades of French Gothic cathedrals and the municipal halls, public fountains, and bell towers created for fourteenth-century Italian city states. In Rome, most large-scale pictorial cycles from the medieval period are found in ecclesiastical settings and, accordingly, feature biblical and hagiographical images along with iconic representations of saints and liturgically themed apse mosaics.⁵ These works have been preserved largely because they adorn church spaces whose basic architectural layouts and primary function as places of worship have remained unchanged. Conti's frescoed hall, however, belongs to an almost entirely lost corpus of palace paintings that once thrived alongside Rome's better-known ecclesiastical fresco and mosaic decorations. The decorative programs created for public buildings and the palaces of cardinals and the secular nobility have mostly been lost to history.⁶ Unlike churches, such



1.2. Frescoed interior of Sylvester Chapel, ca. 1244–54, Santi Quattro Coronati, Rome. Photograph: Stephen Bisgrove / Alamy Stock Photo.



1.3. Calendar Room, ca. 1244–54, Santi Quattro Coronati, Rome. Photograph: Courtesy of Lia Barelli and the Monache Agostiniane di Santi Quattro Coronati.

spaces were continuously requisitioned by new patrons as the political landscape shifted and as new popes and baronial families rose to power. Additionally, whereas ecclesiastical frescoes and mosaics usually evoked timeless religious ideas, the wall paintings that were created for residences and secular settings often advanced specific political messages or glorified the power and sophistication of individual families. Palace murals were thus much more likely to be replaced, updated, or whitewashed in response to shifting political demands.

The disappearance of these non-ecclesiastical decorations has given rise to narratives about medieval Rome's artistic and architectural production that now appear inaccurate. In the traditional story of late medieval Italian art, innovation occurred primarily outside of Rome and above all in the flourishing urban communities at Padua, Siena, and Florence, where artists such as Giotto, Ambrogio Lorenzetti, and Andrea Pisano developed naturalistic forms and erudite iconographies in painting and sculpture. In contrast to these sites of innovation, medieval Rome was characterized as distinctly retrospective and thus impervious to new artistic trends. Art patronage in the city and its surrounding papal territories was largely the domain of ecclesiastical elites who purportedly rejected innovation in favor of building techniques and iconographic schemes that celebrated the gilded era of early Christianity. Instead of erecting lofty Gothic cathedrals and developing new forms of painting and sculpture – so the story often went – popes and cardinals wanted nothing more than to refurbish the early Christian basilicas and to outfit these venerated structures with updated versions of their original decorations.⁷ In other words, the city's distinct Late Antique heritage and the perceived conservatism of the papacy were seen as dual impediments to artistic innovation.

The murals at Santi Quattro Coronati directly counter such misconceptions, demonstrating that Roman painters and their curial sponsors played a pivotal role in the development of a stylistically sophisticated and overtly scholarly art form in medieval Italy. Indeed, the frescoes' distinct thematic focus on worldly knowledge establishes them as an avant-garde example of monumental encyclopedic art on the Italian peninsula. In the Italian context, artworks with a comparable thematic outlook include some of the most celebrated monuments of Gothic art, including the Fontana Maggiore in Perugia (ca. 1278), the Florentine campanile reliefs (ca. 1340–60), the Sala dei Nove frescoes in Siena (1337–40), the sculpted capitals of the Doge's Palace in Venice (1342–8), and the frescoes in the Dominican chapterhouse at Santa Maria Novella in Florence (ca. 1369). Like Conti's frescoes, these works celebrated scholarly learning as an aspect of the cultural identity and political power of their respective communities. The newfound murals at Santi Quattro Coronati indicate that the emergence of such innovative pictorial schemes in Italy can

be traced to thirteenth-century Rome and to the cultural conditions at the papal court in this period.

This process comes into even sharper focus when we consider Cardinal Conti's frescoes in their more immediate cultural historical context. As other art historians have noted, the most relevant comparandum for the Santi Quattro Coronati frescoes is the roughly contemporaneous mural cycle in the crypt of Anagni Cathedral (Figure I.4).⁸ Located about forty miles south of Rome, Anagni was the hometown of the powerful Conti clan and remained a favored destination for the papal Curia for much of the thirteenth century.⁹ The enigmatic mural ensemble in the Anagni crypt was painted by the same anonymous artists who decorated Conti's great hall.¹⁰ The Anagni murals were likely commissioned by a close relative of Stefano Conti, perhaps Pope



1.4. Frescoed interior of Anagni crypt, ca. 1231–55, crypt, Anagni Cathedral. Photograph: Bibliotheca Hertziana – Max-Planck-Institut für Kunstgeschichte, Rome.

Gregory IX (Ugolino dei Conti di Segni; 1227–41), who is known to have sponsored the crypt's sumptuous marble floor and liturgical furnishings.¹¹ Furthermore, like Conti's great hall, the Anagni crypt was a multifunctional space that served in part as a gathering room for members of the papal court. The erudite murals found in both spaces were clearly directed at the rigorously educated members of the pope's entourage. Yet, perhaps the most important common feature of the two murals was their aim to represent the world's knowledge within the framework of a single pictorial program. As assemblages of learning rendered in large-scale fresco, the two monuments functioned as visual-spatial encyclopedias that viewers could step into.

The Anagni frescoes relate to the newfound murals at Santi Quattro Coronati in a way that is interpretively synergistic. Thus, while this book is primarily a monograph on Cardinal Conti's great hall, one of its chapters is devoted to analyzing the Anagni frescoes in relation to the papacy's politically motivated cultivation of worldly knowledge. This juxtaposition aims to show that the discovery of the Santi Quattro Coronati frescoes opens up a new way of understanding the notoriously opaque iconographic program in Anagni. It also shows that the slightly earlier Anagni frescoes are the key to understanding the conceptual underpinning of Conti's murals at Santi Quattro Coronati. Painted about a decade or so before Conti's great hall, the Anagni murals explore the philosophical notion of the material world's fundamental interconnectedness as contained in the principle of microcosmic–macrocosmic symmetry. The Santi Quattro Coronati frescoes articulate this same philosophical idea on a more ambitious scale and with greater interpretive clarity.

The juxtaposition with the Anagni crypt also allows us to see the Santi Quattro Coronati frescoes as part of a larger development in papal court culture. The courts that assembled around thirteenth-century pontiffs differed from those of previous centuries in their appraisal of higher education and worldly forms of knowledge. During the central decades of the century, a new generation of university-educated popes, cardinals, and clerics fostered translations of scholarly texts and new learning in the fields of medicine, optics, astronomy, and alchemy.¹² This cultural flowering was in part motivated by a rivalry with the courts of secular rulers, particularly that of Emperor Frederick II in Southern Italy. The Anagni and Santi Quattro Coronati frescoes demonstrate that the papacy's fascination with worldly knowledge impacted its thinking about the monumental arts. The two murals displayed the papacy's embrace of worldly learning at a time of significant epistemic change in medieval intellectual history. Yet, according to the argument advanced in this book, the two monuments did not merely display knowledge; they also implicated viewers in a dynamic process of knowledge generation. The artists who painted the two monuments appear to have been particularly interested in the spatial characteristics engendered by the interplay between painting and

architecture. The fresco artists took advantage of this interplay to produce visual anthologies of knowledge wherein narrative and allegorical images were stylistically interwoven to create visual-spatial immersion. The courtly viewers for whom the frescoes were intended were encouraged to explore the figured spaces with their eyes, intellect, and bodily movements, and to utilize the architecturally embedded paintings as vehicles for thinking. These interactions between wall paintings and cognitively engaged beholders could generate levels of significance that transcended the literal meaning of individual pictorial motifs.

This book examines the frescoes at Santi Quattro Coronati and Anagni against two overlapping historical backdrops. On the one hand, the innovative murals can be seen in the context of the papacy's political struggle with Emperor Frederick II during the second quarter of the thirteenth century. During this period, the papacy's jurisdiction in temporal affairs was forcefully challenged by the imperial court. In response to such political pressure, the two mural cycles make a case for the harmonious coexistence of worldly and sacred knowledge and – more generally – for the non-existence of any distinction between the secular and the sacred. The chapters that follow also examine the fresco cycles in relation to the period's epistemic developments. The Anagni and Santi Quattro Coronati frescoes form part of a broad cultural impulse toward systematization of knowledge that manifested itself in a variety of visual and textual media during the twelfth through fourteenth centuries.¹³ Like medieval encyclopedias in written form, the two murals conceptualized each body of knowledge as a systematic whole, even if the images they contained could be combined and spliced together in divergent ways. The distinctive bidirectional design of the two murals, wherein the production of meaning unfolded as a collaborative process between paintings and beholders, can be understood as a form of aesthetic commentary on the collaborative and aggregative nature of medieval encyclopedism. These innovative uses of large-scale fresco should be seen in relation to the increased openness toward worldly knowledge among members of the thirteenth-century papal court. As fresco cycles imbued with the potential to generate new knowledge, the two Conti monuments were integral to the unprecedented intellectual expansion in thirteenth-century court culture.

In advancing these arguments, I draw especially on the foundational work of Andreina Draghi, whose rigorously researched publications form the basis of any scholarly study of the Santi Quattro Coronati frescoes.¹⁴ I also build on significant studies by Lia Barelli, Christian Nikolaus Opitz, Serena Romano, Oliver Götze, and Dieter Blume, who have outlined some of the ways in which Cardinal Conti's murals can be placed in dialogue with the period's political, scientific, and literary developments.¹⁵ Similarly, my analysis of the Anagni crypt in Chapter 5 is indebted to numerous earlier studies, particularly

those of Bjarne Andberg, Martina Bagnoli, Lorenzo Cappelletti, Kathrin Müller, and Michael Q. Smith, who have already uncovered many of the philosophical and ideological underpinnings of the crypt's unusual pictorial program.¹⁶

CHAPTER OUTLINE

Chapter 1 provides an overview of the book's contextual and methodological frameworks. It begins with a description of the historical and thematic resonances between Cardinal Conti's frescoes and the painted crypt in Anagni Cathedral. This discussion is followed by an examination of the fragmented remains of medieval Roman palace paintings in locations such as San Clemente, San Saba, Santa Maria de Aventino, and the abbey of Tre Fontane. The chapter also includes a concise discussion of the period's political and cultural developments, which shows that Conti's murals emerged from – and responded to – a complex historical backdrop in which political turbulence was uniquely combined with significant cultural intellectual expansion. Finally, a method section describes the book's approach to the study of medieval mural painting, which integrates iconographic research with a close consideration of the artistic medium's spatial characteristics.

In Chapter 2, I examine the representations of the liberal arts in the south bay lunettes of Conti's great hall in light of the changing status of education and the broad interest in temporal knowledge at the thirteenth-century Curia. The chapter surveys the status of the *artes liberales* in medieval cultural production to focus attention on the pictorial innovations evident in the Quattro Coronati frescoes. Across the scenes of the arts cycle, particular emphasis is placed on the transmission of knowledge through representations of interpersonal dialogue and through the development of purposeful ambiguity as a platform for reflective viewing. These innovative aspects of the arts imagery, the chapter argues, were designed to spur intellectual reflection and lively debate among the frescoes' courtly beholders. Spectators could engage with the frescoes in such open-ended and reflective ways because they themselves were rigorously trained in the liberal arts.

The chapter also examines the visually striking representation of music in relation to the seemingly unique architectural design of Conti's hall, whose acoustic tubes transmitted music and other sonic events from the Sylvester Chapel on the ground floor. Along with the frescoes, these medieval “loudspeakers” created a multisensory environment for the contemplation of music's theoretical and practical dimensions. With the harmonious voices of choristers filling the hall, visual reflection on the status of music as an ancient form of knowledge with a complex medieval history was combined with the real-time experience of music as an aesthetic phenomenon.

Chapter 3 explores how Conti's murals engaged viewers in speculation about the multifaceted nature of time. The Quattro Coronati frescoes included two calendars: the labors of the months in the south bay of the great hall and the painted liturgical almanac in the Sylvester Chapel's antechamber. These frescoed images of temporal duration, the chapter suggests, invited contemplation on the ways in which time might be harnessed in the production of a politically charged worldview and on time's potential for empirical observation and visual representation in the static medium of wall painting. Citations of antique motifs and visual storytelling devices in the cycle of labors enrich and complicate the mural's principal conception of time as unidirectional and regular. The chapter places these painterly manipulations of time in conversation with the overtly anachronistic lunettes in the north bay, which offered a sophisticated commentary on the relation of the pagan past to the Christian present in ways that aligned with the broader messaging of Conti's fresco program.

Turning to the marvelously complex cycle of virtues and vices in the north bay of Conti's painted hall, Chapter 4 elucidates the cycle's use of two symbolically charged pictorial devices: the motif of trampling, to signal moral conquest or political triumph; and that of "sitting on shoulders," to express typological relationships between historically disjointed figures. The chapter also analyzes the frescoes' distinct mingling of allegorical and historical figures as a departure from traditional virtue cycles based on Prudentius's fifth-century poem *Psychomachia*. I argue that the incorporation of historical heroes and villains, along with the inscriptions on the many sheets of parchment held by virtues and vices, turned the cycle into an eschatological history of the struggles between the church and its perceived enemies. Conti's murals connected this epic to the ongoing conflict between the pope and Emperor Frederick II, who was widely perceived by the papacy and its adherents as the Antichrist.

In Chapter 5, I expand my examination to the frescoes in the Anagni crypt, demonstrating that this monument's significance resides in the particular mode of spectatorship it engenders, wherein the display of knowledge invites open-ended exploration of the philosophical possibilities of the medium of wall painting. The chapter focuses especially on the visual representations of cosmological theory near the crypt's entrance, which foreground the conception of a connected world where all things are deliberately bound. The idea of material entanglement, which lay at the heart of medieval cosmological and astro-medical thinking, resonated thematically with the visual and spatial entanglement experienced by viewers as they explored the crypt murals with their intellects and bodily movements. The monument's thematic focus and spectatorial demands thus worked together to stimulate viewers' reflection on humankind's material and temporal entanglement vis-à-vis the compensatory potential of astrology and medicine.

Finally, the book's Conclusion summarizes the key commonalities between the Santi Quattro Coronati and Anagni murals, arguing that each monument functioned not only as a monumental image of the world's knowledge but also as an interactive tool for philosophical thinking. The chapter also relates the downstream effects of these innovative fresco cycles, suggesting that they might be seen as precursors to a series of large-scale pictorial programs that appeared in public squares, communal palaces, monastic halls, ecclesiastical chapels, and episcopal palaces from the 1270s onward.

NOTES

- 1 Andreina Draghi, "Il ciclo di affreschi nel salone gotico del complesso dei SS. Quattro Coronati a Roma," *Studi Romani* 47 (1999): 442–4; Andreina Draghi, "Il ciclo di affreschi rinvenuto nel Convento dei SS. Quattro Coronati a Roma: un capitolo inedito della pittura romana del Duecento," *Rivista dell'Istituto Nazionale d'Archeologia e Storia dell'Arte* 3:22 (1999 [2001]): 115–66; Andreina Draghi, "Il ciclo dei mesi nell'aula gotica dei Santi Quattro Coronati a Roma: considerazioni sull'iconografia del mese di Marzo e sulla Cappella di San Silvestro," *Bollettino d'Arte* 128 (2004): 19–38; Andreina Draghi, *Gli affreschi dell'Aula gotica: una storia ritrovata* (Milan: Skira, 2006); Andreina Draghi, "L'Aula 'gotica,'" in *La pittura medievale a Roma, 312–1431: corpus e atlante. Volume 5: Il Duecento e la cultura gotica (1198–1287 ca.)*, ed. Serena Romano (Milan: Jaca Book, 2012), 137–76.
- 2 Werner Maleczek, "Stefano Conti," in *Dizionario biografico degli italiani* (Rome: Istituto della Enciclopedia Italiana, 1983), 28:475–8.
- 3 Andreina Draghi, "La decorazione della cappella di San Silvestro," in *La pittura medievale a Roma. Volume 5*, 191–208; Andreina Draghi, "Il Calendario nella sala antistante la cappella di San Silvestro," in *La pittura medievale a Roma. Volume 5*, 180–90.
- 4 In 1244, the newly elected Innocent IV (1243–54) fled the Italian peninsula for fear of imprisonment by his political rival Emperor Frederick II. The pope sought refuge in Lyons, where he remained until after Frederick's death in 1250. See J. A. Watt, "The Papacy," in *New Cambridge Medieval History*, ed. David Abulafia (Cambridge: Cambridge University Press, 2008), 5:107–63, esp. 132–43.
- 5 Fundamental studies on narrative painting in Roman basilicas are Herbert L. Kessler, *Old St. Peter's and Church Decoration in Medieval Italy* (Spoleto: Centro Italiano di Studi sull'Alto Medioevo, 2002); Herbert L. Kessler, "'Caput et speculum omnium ecclesiarum': Old St. Peter's and Church Decoration in Medieval Latium," in *Italian Church Decoration of the Middle Ages and Early Renaissance: Functions, Forms and Regional Traditions*, ed. William Tronzo (Bologna: Nuova Alfa Editoriale, 1989), 121–45; Herbert L. Kessler, "Storie sacre e spazi consacrati: la pittura narrativa nelle chiese medievali (sec. IV–XII)," in *L'arte medievale nel Contesto. Iconografia, funzioni, tecniche*, ed. P. Piva (Milan: Jaca Book, 2006), 275–302; Nino M. Zchomelidse, *Santa Maria immacolata in Ceri. La pittura Sacra al tempo della Riforma Gregoriana* (Rome: Archivio Guido Izzì, 1996), esp. 53–78; Marilyn Aronberg Lavin, *The Place of Narrative: Mural Decoration in Italian Churches, 431–1600* (Chicago: University of Chicago Press, 1994), esp. 1–42. For the striking consistency of Roman apse compositions, where a centrally placed figure of Christ is flanked by collocated apostolic and post-apostolic saints, see Erik Thunø, *The Apse Mosaic in Early Medieval Rome: Time, Network, and Repetition* (Cambridge and New York: Cambridge University Press, 2015), esp. 1–62, 197–208. Thunø argues that the repetition of this distinct compositional formula across centuries developed a meaningful and non-hierarchical relationship between Rome's early medieval basilicas, thereby establishing an expansive "community" that incorporated represented saints and beholding worshippers into a timeless and transpatial unity.

- 6 For the fragmented remains of medieval Roman palace paintings dating to the thirteenth and fourteenth centuries, see Romano, *La pittura medievale a Roma. Volume 5*; Serena Romano, ed., *La pittura medievale a Roma, 312–1431: corpus e atlante. Volume 6: Apogeo e fine del Medioevo (1288–1431)* (Milan: Jaca Book, 2017).
- 7 The retrospective character of medieval Roman art and architecture is a recurrent theme in Richard Krautheimer, *Rome: Profile of a City, 312–1308* (Princeton, NJ: Princeton University Press, 1980). Nuanced responses to Krautheimer's thesis include Caroline J. Goodson, *The Rome of Pope Paschal I: Papal Power, Urban Renovation, Church Rebuilding and Relic Translation, 817–824* (Cambridge: Cambridge University Press, 2010), esp. 81–159; Sible de Blaauw, "Reception and Renovation of Early Christian Churches in Rome, c. 1050–1300," in *Rome Across Time and Space: Cultural Transmission and the Exchange of Ideas c. 500–1400*, eds. Claudia Bolgia, Rosamond McKitterick, and John Osborne (Cambridge: Cambridge University Press, 2011), 151–66; Hendrik Dey, *The Making of Medieval Rome: A New Profile of the City, 400–1420* (Cambridge: Cambridge University Press, 2021).
- 8 Among the most significant studies of the Anagni frescoes are Pietro Toesca, "Gli affreschi della cattedrale di Anagni," *Le Gallerie Nazionali Italiane* 5 (1902): 116–87; Michael Q. Smith, "Anagni: An Example of Medieval Typological Decoration," *Papers of the British School at Rome* 33 (1965): 1–47; Bjarne Andberg, "Le paysage marin dans la crypte de la cathédrale d'Anagni," *Acta Ad Archaeologiam et Artium Historiam Pertinentia* 2 (1965): 195–201; Bjarne Andberg, "Osservazioni sulle modifiche delle volte nella cripta di Anagni," *Acta Ad Archaeologiam et Artium Historiam Pertinentia* 6 (1975): 117–26; Frederik W. N. Hugenholtz, "The Anagni Frescoes: A Manifesto," *Mededeelingen van het Nederlands Instituut te Rome* 41 (1979): 139–72; Miklos Boskovits, "Gli affreschi del Duomo di Anagni: Un capitolo di pittura romana," *Paragone* 30:357 (1979): 3–41; Martina Bagnoli, "The Medieval Frescoes in the Crypt of the Duomo of Anagni" (PhD diss., Johns Hopkins University, 1998); Gioacchino Giammaria, ed., *Un universo di simboli: Gli affreschi della cripta nella cattedrale di Anagni* (Rome: Viella, 2001); Lorenzo Cappelletti, *Gli affreschi della cripta anagnina, iconologia* (Rome: Editrice Pontificia Università Gregoriana, 2002); Kathrin Müller, "Profane Knowledge, Sacred Insights: The Cosmological Diagrams in the Crypt of Anagni Cathedral," *Codex Aquilarensis* 33 (2017): 55–72.
- 9 See Raffaele Ambrosi de Magistris, *Storia di Anagni* (Rome: V. Apolloni, 1889); Pietro Zappasodi, *Anagni attraverso i secoli*, 2 vols. (Veroli: Atesa, 1908); Daniela Ricci and Antonia Lauria, "Anagni papale," in *Bonifacio VIII e il suo tempo: Anno 1300 il primo giubileo*, ed. Marina Righetti Tosti-Croce (Milan: Electa, 2000), 239–44.
- 10 The paintings in the great hall have been attributed to a workshop commonly referred to as the "Third Master" of the Anagni crypt; the frescoes of the Sylvester Chapel are usually ascribed to the "Second Master" at Anagni. For these attributions, see Draghi, "Il ciclo di affreschi rinvenuto," 150–8; Alessandro Tomei, "Dagli Svevi agli Angioini: declinazioni locali tra modelli romani e arte d'Olttralpe," in *La pittura medievale nell'Abruzzo aquilano*, eds. Stefania Paone and Alessandro Tomei (Cinisello Balsamo: Silvana, 2010), 35–69, esp. 44–5.
- 11 The date of the Anagni frescoes has been subject of some controversy. The most important recorded termini are the completion of the marble floor and the consecration of the main altar in 1231, and the final consecration of the two lateral altars by Alexander IV in 1255. Scholarship is largely in agreement that the paintings were executed in the period between these two events. In recent decades art historical discourse has settled on a date range coinciding with Gregory IX's reign. For a thorough discussion of dating and the question of patronage, see Alessandro Tomei, "Gli affreschi: una lettura," in *Un universo di simboli. Gli affreschi della cripta della cattedrale di Anagni*, ed. Gioacchino Giammaria (Rome: Viella, 2001), 39–48.
- 12 Agostino Paravicini Bagliani, *Medicina e scienze della natura alla corte dei papi nel duecento* (Spoleto: Centro Italiano di Studi sull'Alto Medioevo, 1991); Steven J. Williams, *The Secret of Secrets: The Scholarly Career of a Pseudo-Aristotelian Text in the Latin Middle Ages*

- (Ann Arbor: University of Michigan Press, 2003), esp. 109–41; David C. Lindberg, “Lines of Influence in Thirteenth-Century Optics: Bacon, Witelo and Pecham,” *Speculum* 46 (1971): 66–83; Maria Gloria Vinci, “Il Cardinale cistercense Giovanni da Toledo e gli interessi per la medicina e l'alchimia alla corte dei papi del XIII secolo,” *Rivista Cistercense* 7 (2000): 5–32.
- 13 On medieval encyclopedism, see Peter Binkley, ed., *Pre-Modern Encyclopaedic Texts: Proceedings of the Second COMERS Congress*, Groningen, 1–4 July 1996 (Leiden: Brill, 1997); Michelangelo Picone, ed., *L'enciclopedia medievale* (Ravenna: Longo, 1994); Bernard Ribémont, “Encyclopedias,” in *Medieval Science, Technology, and Medicine: An Encyclopedia*, eds. Thomas F. Glick et al. (New York: Routledge, 2005), 159–61; Mary Franklin-Brown, *Reading the World: Encyclopedic Writing in the Scholastic Age* (Chicago: University of Chicago Press, 2012).
 - 14 Draghi, “Il ciclo di affreschi nel salone gotico”; Draghi, “Il ciclo di affreschi rinvenuto”; Draghi, *Gli affreschi*; Draghi, “L'Aula ‘gotica’.”
 - 15 Lia Barelli, *The Monumental Complex of Santi Quattro Coronati in Rome*, trans. Christopher McDowall (Rome: Viella, 2009); Serena Romano, “Geografia del potere nella Roma del Duecento,” in *Medioevo: la chiesa e il palazzo. Atti del Convegno internazionale di studi, Parma, 20–24 settembre 2005*, ed. Arturo Carlo Quintavalle (Milan: Electa, 2007), 624–35; Serena Romano, “I cantieri di Roma,” in *La pittura medievale a Roma. Volume 5*, 18–22; Christian Nikolaus Opitz, “Weltbild–Bildräume–Gedächtnisbilder: enzyklopädische Freskenzyklen in Repräsentationsräumen des 13.–15. Jahrhunderts,” in *Weltbilder im Mittelalter: Perceptions of the World in the Middle Ages*, eds. Philipp Billion et al. (Bonn: Bernstein, 2009), 29–60; Oliver Götze, *Der öffentliche Kosmos: Kunst und wissenschaftliches Ambiente in italienischen Städten des Mittelalters und der Renaissance* (Munich: Utz, 2010), 13–46; Dieter Blume, “Die Aula Gotica von Santi Quattro Coronati, Kosmos, Antike und Tugenden im Selbstverständnis der Kurie,” in *Die Päpste und Rom zwischen Spätantike und Mittelalter: Formen Papstlicher Machtentfaltung*, eds. Tanja Michalsky, Norbert Zimmermann, Stefan Weinfurter, and Alfred Wiczorek (Regensburg: Schnell und Steiner, 2017), 213–33.
 - 16 Smith, “Anagni”; Andberg, “Le paysage marin”; Bagnoli, “The Medieval Frescoes in the Crypt of the Duomo of Anagni”; Cappelletti, *Gli affreschi*; Müller, “Profane Knowledge, Sacred Insights.”