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**PROFANE KNOWLEDGE, SACRED INSIGHTS: THE COSMOLOGICAL
DIAGRAMS IN THE CRYPT OF ANAGNI CATHEDRAL**
**CONOCIMIENTO PROFANO, VISIONES SAGRADAS: LOS DIAGRAMAS
COSMOLÓGICOS DE LA CRIPTA DE LA CATEDRAL DE ANAGNI**

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ABSTRACT

Even though the cosmological frescoes in the first two bays of the crypt of Anagni Cathedral have generally been understood as references to both the divine creation of the cosmos and human knowledge in the field of natural philosophy, the highly unusual decision to include diagrams in the cycle has never been sufficiently questioned. The paper argues that the diagrams were integrated in order to differentiate visually between, on the one hand, human knowledge derived from reasoning and, on the other hand, divine revelation. This differentiation, however, did not serve to establish a dichotomy between knowledge and belief. Rather, the fresco program aimed at generating insights into eschatological concerns with the aid of profane philosophy.

KEYWORDS: Anagni Cathedral, Diagrams, Cosmology, Book of Revelation, Liber Floridus.

RESUMEN

Aunque los frescos cosmológicos de las dos primeras bóvedas de la cripta de la catedral de Anagni se han interpretado tradicionalmente como referencias tanto a la creación divina del Cosmos como al conocimiento humano en el campo de la filosofía natural, la decisión inusual de incluir diagramas en el ciclo nunca ha sido suficientemente justificado. El artículo argumenta que los diagramas se integraron para discriminar visualmente entre, por un lado, el conocimiento humano derivado del razonamiento y, por otro lado, la revelación divina. Sin embargo, esta diferenciación no sirvió para establecer una dicotomía entre conocimiento y creencia. Por el contrario, el programa de los frescos tuvo como objetivo prioritario generar ideas sobre las preocupaciones escatológicas con la ayuda de la filosofía profana.

PALABRAS CLAVE: Catedral de Anagni, Diagramas, Cosmología, Libro de la Revelación, Liber Floridus.

The fresco cycle in the crypt of Anagni Cathedral is a telling and at the same time challenging example of the inclusion of the profane within the sacred in medieval art. In Anagni, the first two bays in an otherwise biblical and hagiographic cycle are devoted to cosmological themes, with diagrams figuring prominently in the vaults and on one of the walls (Figs. 2, 3, 5-8). There is no other example of such a transfer of diagrams from natural philosophy—and thus the manuscript page—to the fresco program of a sacred space.¹ However, the cosmological diagrams are only the most conspicuous elements of an extensive fresco program that, as a whole, is rich in unusual iconographies. It comprises several sub-cycles as well as paintings whose relation to adjacent parts of the program is not immediately clear.² It is not known who devised the overall cycle or exactly when the frescoes were painted. Anagni Cathedral was built at the end of the eleventh / beginning of the twelfth century under Peter of Salerno, bishop from 1072 to 1105, and consecrated by Pope Alexander III about seventy years later, in 1179. The consecration of the crypt, however, did not take place until 1255.³ It is commonly agreed that the frescoes in the crypt were executed by three distinct workshops, of which the second and third were active in the first half, probably the second quarter, of the thirteenth century. The first workshop, however, to which the cosmological frescoes are usually ascribed, has been

¹ This transfer is the main basis for speaking of the profane within the sacred. To be sure, throughout the Middle Ages, cosmological and astronomical knowledge was a field of Christian learning. However, the differences between, on the one hand, modes of reasoning in natural philosophy and, on the other hand, biblical ways of describing the cosmos posed a problem already commented on by Augustine. L. FLADERER, *Augustinus als Exeget: Zu seinen Kommentaren des Galaterbriefes und der Genesis*, (Österreichische Akademie der Wissenschaften, Philosophisch-historische Klasse, Sitzungsberichte 795; Veröffentlichungen der Kommission zur Herausgabe des Corpus der lateinischen Kirchenväter 27), Vienna, 2010, pp. 178-86; P. AGAËSSE, A. SOLIGNAC, “Notes complémentaires,” in: AUGUSTINE, *La Genèse au sens littéral en douze livres (I-VII)*, transl., introd., and notes by idem, Paris, 1972, pp. 575-717, here pp. 575-80 and 593-98.

² The best overview is provided by A. BIANCHI, “I dipinti,” in idem (ed.), *Il restauro della cripta di Anagni*, Rome, 2003, pp. 79-177; G. GIAMMARRIA (ed.), *Un universo di simboli: Gli affreschi della cripta nella cattedrale di Anagni*, Rome, 2001. For interpretations of the entire cycle see L. CAPPELLETTI, *Gli affreschi della cripta Anagnina: Iconologia*, (Miscellanea historiae pontificiae 65), Rome, 2002; M. BAGNOLI, *The Medieval Frescoes in the Crypt of the Duomo of Anagni*, Ph. D. diss. (Johns Hopkins University, Baltimore, 1998); F. W. N. HUGENHOLTZ, “The Anagni Frescoes: A Manifesto: A Historical Investigation,” *Mededelingen van het Nederlands Instituut te Rome*, 41, N. S. 6 (1979), pp. 139-72; B. ANDBERG, “Osservazioni sulle modifiche delle volte nella cripta di Anagni,” *Acta ad archaeologiam et artium historiam pertinentia*, 6 (1975), pp. 117-26; M. Q. SMITH, “An Example of Medieval Typological Decoration,” *Papers of the British School at Rome*, 33 (1965), pp. 1-47; P. TOESCA, *Gli affreschi della cattedrale di Anagni*, Anagni, 1994, pp. 10-25 [first published in *Le Gallerie nazionali italiane* 5 (1902), pp. 116-87].

³ For a summary of the dating evidence see A. KLEIN, *Funktion und Nutzung der Krypta im Mittelalter: Heiligensprechung und Heiligenverehrung am Beispiel Italien*, (Spätantike – Frühes Christentum – Byzanz, Reihe B: Studien und Perspektiven 31), Wiesbaden, 2011, cat. no. 4, pp. 94-97; A. BIANCHI, “Introduzione,” in A. Bianchi (ed.), *Il restauro della cripta*, pp. 15-19, here p. 15-16; CAPPELLETTI, *Gli affreschi*, pp. 17-41; TOESCA, *Gli affreschi*, pp. 7-10; See also G. PALANDRI (ed.), *La cattedrale di Anagni: Materiali per la ricerca, il restauro, la valorizzazione*, (Bollettino d'arte: Volume speciale), Rome, 2006; PASCAL MONTAUBIN, “Entre gloire curiale et vie commune: Le chapitre cathédral d'Anagni au XIII^e siècle,” *Mélanges de l'École française de Rome: Moyen Âge*, 109 (1997), pp. 303-91.

variously dated between 1100 and about 1255, though for both stylistic and iconographical reasons, it seems most plausible to date its activity to the beginning of the thirteenth century.⁴

Given the complexity of the crypt's overall program, it appears advisable to focus on the frescoes in the first two bays and reflect on their possible function. This, however, has been done before.⁵ What distinguishes the following analysis from earlier studies is a rather simple question: why diagrams? Why this specific kind of visual device? I will argue that, in Anagni, the diagrams were integrated in order to differentiate visually between, on the one hand, human knowledge derived from reasoning and, on the other hand, divine revelation. This differentiation, however, did not serve to establish a dichotomy between knowledge and belief. Rather, the fresco program aimed at generating insights into sacred concerns with the aid of profane philosophy.

THE BEGINNING OF THE CYCLE

Every interpretation of the cosmological frescoes submitted to date is based on the assumption that they form the beginning of the program. This is highly plausible because the present stairs leading from the upper church to entrances at the southern and southeastern corners of the crypt in all likelihood date to a later period. As Saverio Urciuoli has shown, in its original state, the crypt was accessible from the outside of the church only.⁶ Accordingly, the entrance was on the western facade of the transept and led to a corridor located between the crypt and an ancient tunnel-like chamber underneath the western nave of the upper church. This chamber was frescoed at around the same time, and became the so-called Oratory of Thomas Becket.⁷ In modern art history, Pietro Toesca's numbering of the vaults from I to XXI virtually canonized the notion of the two bays featuring the cosmological frescoes as the first two bays of the crypt (Fig. 1).⁸

⁴ BAGNOLI, *The Medieval Frescoes*, pp. 6-21. See also CAPPELLETTI, *Gli affreschi*, pp. 256 and 259-60; G. MATTHIAE, *Pittura romana del Medioevo, secoli XII-XIV*, vol. 2 [first published in 1966]: *Aggiornamento scientifico e bibliografia di F. GANDOLFO*, Rome, 1988, pp. 121-34 and 291-99; M. BOSKOVITS, "Gli affreschi del duomo di Anagni: Un capitolo di pittura romana," *Paragone: Arte*, 30:357 (1979), pp. 3-41; TOESCA, *Gli affreschi*, pp. 31-83.

⁵ M. BAGNOLI, "The Syzygy at Anagni: Measuring the Gap between Concept and Execution in Medieval Wall Painting," *Zeitschrift für Kunstgeschichte*, 72 (2009), pp. 313-28; CAPPELLETTI, *Gli affreschi*, pp. 43-79; K. BERGDOLT, "Hippokrates, Galen und das medizinisch-naturwissenschaftliche Programm der Kryptafresken von Anagni," in K. Bergdolt, G. Bonsanti (eds.), *Opere e giorni: Studi su mille anni di arte europea dedicati a Max Seidel / Werke und Tage: Tausend Jahre europäischer Kunstgeschichte zu Ehren von Max Seidel*, Venice, 2001, pp. 51-58; BAGNOLI, *The Medieval Frescoes*, pp. 48-92; HUGENHOLTZ, "The Anagni Frescoes," pp. 143-44 and 157-59; L. PRESSOUYRE, "Le cosmos platonicien de la cathédrale d'Anagni," *Mélanges d'archéologie et d'histoire*, 78 (1966), pp. 551-93; B. ANDBERG, "Le paysage marin dans la crypte de la cath[é]drale d'Anagni," *Acta ad archaeologiam et artium historiam pertinentia*, 2 (1965), pp. 195-201; SMITH, "An Example," pp. 7-13; TOESCA, *Gli affreschi*, pp. 13-20.

⁶ S. URCIUOLI, "La cattedrale di Anagni: Osservazioni sulla genesi di un modello basilicale desideriano," in Palandri (ed.), *La cattedrale di Anagni*, pp. 187-225, here pp. 201-3. See also V. PIACENTINI, "La cattedrale di Anagni e il suo contesto urbano," in *Ibidem*, pp. 135-57, here p. 144.

⁷ H. L. KESSLER, "The Oratory of Thomas Becket in Anagni," in H. L. KESSLER, *Old St. Peter's and Church Decoration in Medieval Italy*, (Collectanea: Centro Italiano di Studi sull'Alto Medioevo 17), Spoleto, 2002, pp. 141-58 [first published in *La cripta della Cattedrale di Anagni*, Rome, 2001, pp. 89-95].

⁸ TOESCA, *Gli affreschi*.

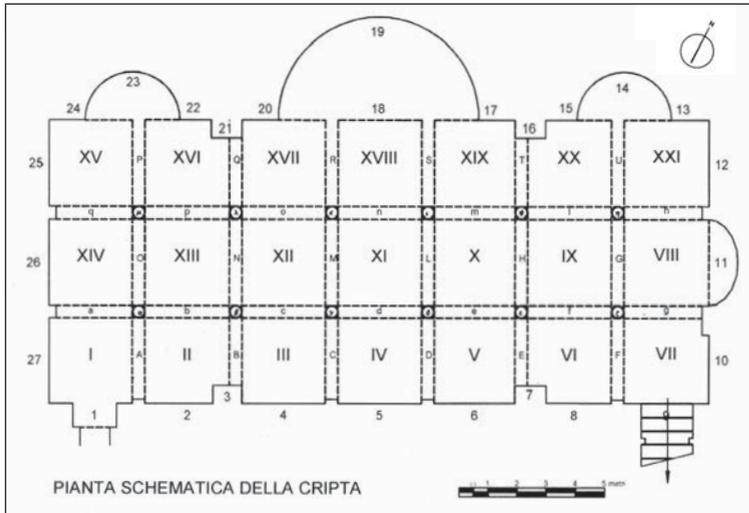


Fig. 1. Anagni, Cathedral, Crypt, Floor plan (according to Giammaria (ed.), *Un universo di simboli*, 2001)

Our understanding of the beginning of the iconographic program is hampered by the poor condition of the frescoes in the first bay (Figs. 2-3).⁹ On the one hand, the remnants in the vault (Fig. 2)—specifically, the figurative depictions of the zodiacal signs Leo and Cancer, Pisces and Aquarius in the outer ring of a concentric scheme—sufficiently indicate that, in its original state, this was a diagrammatic representation of the astronomical heaven. On the other hand, the loss of the central field makes it impossible to judge whether the diagram was purely astronomical, or was complemented by pictorial and textual references to further notions of the universe such as God’s creation of the world. Even more deplorable is the ruined state of the fresco right beneath the vault and above the southern entrance to the crypt (Fig. 3), which was surely conceived as an aid for understanding the concept of the program in the first two vaults. Of the four scholars disputing with the enthroned and nimbed figure at the center, only the two elderly men on the right are still visible. The individual letters that remain of the once extensive inscriptions on the framework of the painting and the codices held by the scholars do not give a clue as to these figures’ identities.¹⁰

The assumption that the scene assembles philosophers from pagan antiquity and subordinates them to a Christian authority was substantiated by Léon Pressouyre who drew a comparison to a detail in the roughly contemporary full-page miniature at the beginning of the book of Genesis in the Merseburg Bible (Fig. 4).¹¹ Its vertical axis, the *I*initial transformed into

⁹ For a more detailed account of the frescoes’ condition see the descriptions by BIANCHI, “I dipinti,” here pp. 82 and 84.

¹⁰ *Ibidem*, p. 84.

¹¹ PRESSOUYRE, “Le cosmos platonicien,” pp. 584-93. Merseburg, Domstiftsbibliothek, MS I, 1, f. 9v. H. KROHM, H. KUNDE (eds.), *Der Naumburger Meister: Bildhauer und Architekt im Europa der Kathedralen*, exh. cat. (Naumburg, Dom, SchLOSSchen and Stadtmuseum Hohe Lilie), Petersberg, 2011, vol. 1, cat. no. VII.5, pp. 682-86 (M. GLASER); M. COTTIN (ed.), *Der Merseburger Dom und seine Schätze: Zeugnisse einer tausendjährigen Geschichte*, (Kleine Schriften der Vereinigten Domstifter zu Merseburg und Naumburg und des Kollegiatstifts Zeit 6), Petersberg,



Fig. 2. Anagni, Cathedral, Crypt, Vault I (according to Giammaria (ed.), *Un universo di simboli*, 2001, pl. 3)

a string of vibrant images showing the Divine Creator from day one to seven (reading from bottom to top), extends beyond the boundaries of the central rectangular field and connects it with the outer frame, which for its part is filled in dense but orderly fashion with figures of both sexes representing the books of the Bible. They are joined by Plato and Aristotle, Vergil and Ovid, standing next to the medallions with pairs of clerics and God's creation of light in the lower margin. The inscriptions on their scrolls reveal that they comment on the beginning of the world.¹²

The inclusion of these four figures in the biblical community indicates that, even though they were pagan poets and philosophers, their reasoning and writings nevertheless referred to

2008, cat. no. II.17, pp. 258-65 (F.-J. STEWING); D. OLTROGGE, R. FUCHS, H. KUTZKE, "Neue Befunde zur Merseburger Vulgata," in *Zwischen Kathedrale und Welt: 1000 Jahre Domkapitel Merseburg: Aufsätze*, ed. by H. KUNDE et al., Petersberg, 2005, pp. 151-60; M. GLASER, *Die Merseburger Bibel (Merseburg, Domstiftsarchiv, Ms. I, 1-3)*, phil. Diss. (Ludwig-Maximilians-Universität, München, (1997)); W. CAHN, *Romanesque Bible Illumination*, Ithaca, NY, 1982, p. 180; R. HAUSHER (ed.), *Die Zeit der Staufer: Geschichte – Kunst – Kultur*, exh. cat. (Württembergisches Landesmuseum), Stuttgart, 1977, vol. 1, cat. no. 772, pp. 604-6 (R. KROOS).

¹² Of the *tituli* written in white on the green ground, only *o/vi/di/vs* can still be read. The inscriptions on the scrolls read: (Plato) PRINCIPIU(M) OM(N)IV(M) / ADMIROR; (Aristotle) DUO S(UN)T P(R)INCIPIA; (Vergil) PRINCIPIO CELVM; (Ovid) PRINCIPIO T(ER)RAM. Quoted from GLASER, *Die Merseburger Bibel*, p. 256. See also *ibidem*, p. 28, note 126, and the author's analysis on pp. 175-77 and 181-86.

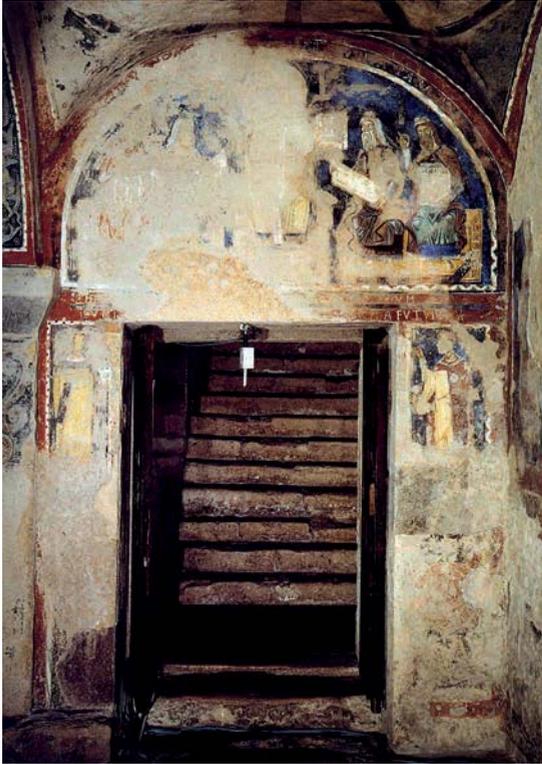


Fig. 3. Anagni, Cathedral, Crypt, Wall 1 (according to Giammaria (ed.), *Un universo di simboli*, 2001, pl. 5)

the divinely created world of Christian belief. More specifically, in its lower margin the miniature visually accounts for the idea that there was a common source and authority for all knowledge and dispute about the cosmos, namely the Mosaic description of God's creation which begins on this page. Moses was considered the first divinely inspired commentator on the origin of the cosmos, who, for the sake of comprehensibility, had given a narrative structure to God's action and thus concealed the principles underlying it.¹³ Despite this systematic flaw—or rhetoric quality—the account was seen as encompassing all aspects of cosmology. Consequently, from a medieval Christian point of view, it was only logical to postulate that even pagan natural philosophers were deeply indebted to Moses and the knowledge revealed to him. It comes as no surprise that, in the Genesis miniature of the Merseburg Bible, Moses figures prominently as a scribe and author next to his brother Aaron in the first medallion of

the upper margin. The following roundels show decisive steps in the history of the biblical text ending on the bottom right with Jerome presenting the Vulgate to Pope Damasus.¹⁴

The Mosaic derivation of cosmological insights has led Lorenzo Cappelletti to the assumption that the fresco in Anagni showed a conversation between a group of pagan philosophers and the enthroned Moses.¹⁵ Seen in combination with such a scene, the astronomical heaven in the vault would have been understandable—even without pictorial or textual references to God and the Hexameron—as a representation of the divinely created heaven.

¹³ O. RAMONAT, *Lesarten der Schöpfung: Moses als Autor der Genesis im Mittelalter*, (Wissenskultur und gesellschaftlicher Wandel), Berlin, 2010.

¹⁴ The inscriptions read: (first roundel) + . RES . SCRIBIT . VETERV(M) . MOYSES . AB ORIGINE . RERV(M); MOYSES – BRE/SIT; AARON – ELLES/MOTH; (last roundel) + DAT . NOVA . IHERONIM(US) . HIC . V[.]LIM(US) . HAC . OPE . PRIMVS. Quoted from GLASER, *Die Merseburger Bibel*, p. 255-56. See also Ibidem, pp. 166-68 and 174-75.

¹⁵ CAPPELLETTI, *Gli affreschi*, pp. 51-54. Accordingly, the figure in the center might also be Abraham. BAGNOLI, *The Medieval Frescoes*, pp. 80-81, argues that “The nimbed figure in the center of the lunette could well be a personification of Wisdom; *Sapientia* was often figured as Philosophy. [...] the four philosophers flanking the enthroned figure could have been great figures of the *quadrivium*.”

The figure of Moses would give substantial weight to Pressouyre's notion that the frescoes in the first two bays "en guise de prologue [...] émanent d'une méditation sur la Genèse,"¹⁶ or, as Michael Smith put it in his article of 1965, that they "[...] may be considered as filling the function of a Creation cycle [...]."¹⁷ There is, however, an often-neglected detail that contradicts this identification of the central figure, namely the long vertical strip of its vestment, reminiscent of a pallium. In the cycle's iconography, a similar item distinguishes bishop saints—nowadays unidentifiable—such as the one on the lower wall of the second bay painted by the third workshop (Fig. 8).¹⁸ It might thus be possible that the enthroned authority did not represent Moses at all, but a church dignitary to whom the clerics on either side of the entrance correlated. For a bishop, on the other hand, the central figure seems to be too modestly dressed, as there are no traces of an upper garment. Yet regardless of who this figure represents, it seems obvious that the painting served to declare the knowledge displayed in the vault—and probably also the cosmological diagrams of the second bay—as part of the Christian heritage.

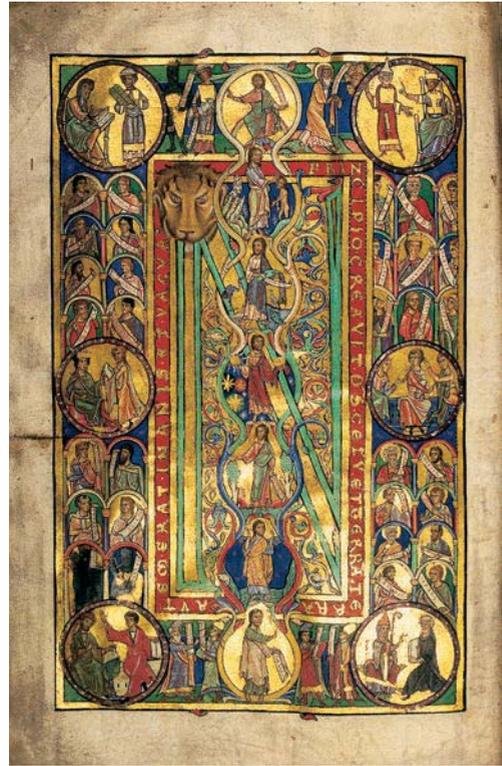


Fig. 4. Merseburg, Domstiftsbibliothek, MS I, 1, f. 9v (photo: Vereinigte Domstifter zu Merseburg und Naumburg und des Kollegiatstifts Zeitz, with permission)

THE COSMOLOGICAL FRESCOES IN THE SECOND BAY

Given the good condition of the frescoes in the second bay (Fig. 5), less speculation is required to understand them. The group of three paintings is well known: the circular diagram in the vault explaining the concordance of the macro- and microcosm (Fig. 6), a second diagram on the wall showing the interconnections between the four elements through shared qualities as well as arithmetic proportion (Fig. 7), and the scene of Galen and Hippocrates sitting at desks with open codices and engaged in conversation (Fig. 8).¹⁹ Martina Bagnoli has rightly

¹⁶ PRESSOUYRE, "Le cosmos platonicien," p. 589.

¹⁷ SMITH, "An Example," p. 13. See also BAGNOLI, "The Syzygy," p. 325; CAPPELLETTI, *Gli affreschi*, p. 256; HUGENHOLTZ, "The Anagni Frescoes," p. 157.

¹⁸ For this fresco, see BIANCHI, "I dipinti," p. 92.

¹⁹ *Ibidem*, pp. 86-92.



Fig. 5. Anagni, Cathedral, Crypt, Frescoes of the second bay (according to Veronica Sekules, *Medieval Art*, (Oxford History of Art), Oxford 2001, fig. 80)



Fig. 6. Anagni, Cathedral, Crypt, Vault II (according to Giammaria (ed.), *Un universo di simboli*, 2001, pl. 6)

stressed that the diagrams went back to a firmly established tradition and were surely familiar to many of the learned beholders.²⁰ However, it is also important to take into account the fact that, precisely because many beholders knew such diagrams from manuscripts, they must have been astonished to find them here. Not unlike us, they might have looked to the frescoes in the hope of finding clues that would prove helpful in this respect.

The diagram of the macro- and microcosm (Fig. 6) with its four medallions depicting male faces aging from childhood to old age lends visual emphasis to the human life cycle, as has been pointed out by Bagnoli.²¹ Moreover, with the blue circle devoid of inscriptions or figurative devices, the diagram on the one hand makes a clear spatial distinction between macro- and microcosm, while on the other hand emphasizing their fundamental inseparability in the inscriptions. In the two outer circles, the macrocosm is described by naming the four elements and seasons with their respective qualities. The next circular inscription declares that “In such a way the same elements form the smaller world” (*MINOREM MVNDVM SIC EADEM FORMANT ELEMENTA*). This statement made it all the more possible to dispense with repeating the elements and their qualities in the circle with the medallions, where there are written references to the ages of man and corresponding bodily humors. Allegedly redundant, the last circular inscription—*MICROCOSMVS ID EST MINOR MVNDVS*—, if read as a *titulus* of the human figure in the center, helps to understand this figure as a representation of the microcosm.²²

²⁰ BAGNOLI, “The Syzygy,” p. 325.

²¹ *Ibidem*, pp. 320-21. See also E. SEARS, *The Ages of Man: Medieval Interpretations of the Life Cycle*, Princeton, 1986, here p. 20.

²² All inscriptions quoted from BIANCHI, “I dipinti,” p. 86.

The inscription on the four arches right below the vault summarizes the diagram's content and mediates between the diagram and the frescoes on the wall (Fig. 5). It originally consisted of four verses, of which the second is almost completely lost: MATERIES RERVVM SVNT QVATVOR ELEMENTA / [...]ENTA / DE QVO PLVS ET INEST COMPLEXIO DICIT(V)R HVIVS / ETAS VLTVS HVMOR MVTANTVR TEMPOR(E) CVIVS.²³ Modern translations of the last two verses vary considerably.²⁴ My version of the first, third and fourth verses reads: "The four elements are the substance of things / [...] / From that [element or humor] which is most in there [that is, in the body] the temperament of this [body] is derived / Its age, looks, and humor change over time." Thus, like the diagram, the inscription spans an arc from general cosmology to the nature of the human body.

Not only this inscription, but also the orientation of the human figure in the center of the vault towards the wall and, more precisely, towards the painting with Hippocrates and Galen links the diagram with the frescoes below it (Fig. 5). In other words, the beholder wondering why this type of diagram, so well known from the world of learning, had been transferred to the crypt's vault was induced to consult the scene with the two scholars. Astonishingly, in



Fig. 7. Anagni, Cathedral, Crypt, Wall 3 (according to Giammaria (ed.), *Un universo di simboli*, 2001, pl. 8)

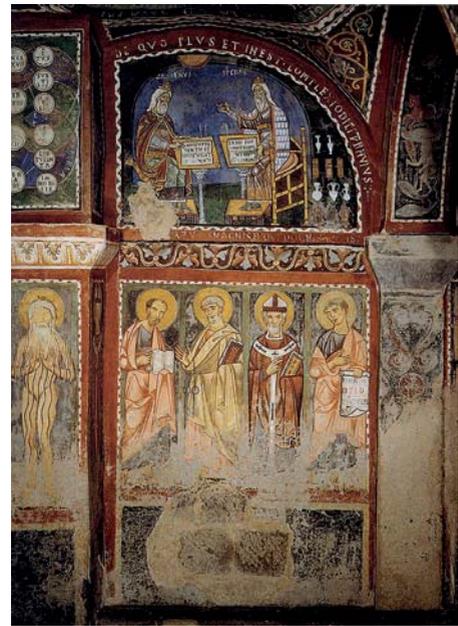


Fig. 8. Anagni, Cathedral, Crypt, Wall 2 and 3 (according to Giammaria (ed.), *Un universo di simboli*, 2001, pl. 7)

²³ Quoted from *Ibidem*.

²⁴ See, for instance, BAGNOLI, "The Syzygy," p. 322 ("for this reason people say that the sum is greater than its parts; age, aspect and humor change with time"); CAPPELLETTI, *Gli affreschi*, p. 71 ("età, aspetto e umore di colui che ha una determinata costituzione si trasformano nel tempo che è proprio di essa"); BERGDOLT, "Hippocrates, Galen," p. 56 ("Dies ist die Komplexion davon – Alter, Antlitz und Saft werden durch dessen Alterungsprozeß verändert").

modern studies the appearance of Hippocrates and Galen has not been paid due attention. Given the high esteem in which newly translated works by both of these Greek physicians were held in the study of medicine, particularly at the medical school of Salerno, from the twelfth century onward if not before, their choice seems self-evident.²⁵ Moreover, Cappelletti has argued that, in the twelfth century, Hippocrates could also represent the study of the physical world in a more general sense, outside of medical discourses.²⁶ The frescoes in the vaults of the first two bays thus complement one another in showing, on the one hand, the unchangeable world of the heavenly bodies and, on the other, the sublunary sphere composed of the four elements and subject to change.

However, the combination of frescoes in the second bay generates a specific set of meanings. First of all, the scene of Hippocrates and Galen explains the diagram's main concern with man and the human life cycle. Medical care, in the tradition of these Greek scholars, built on the assumption that the nature of the human body, both in health and in illness, was determined by cosmological laws, namely the effects caused by the dynamic conjunction and discrimination of the four elements.²⁷ What the imagery underscores, then, is the idea of anthropocentrism: just as man forms the center of the cosmos, his wellbeing is at the core of the physicians' reasoning and practice—the latter alluded to by the jars on the shelves next to Hippocrates.

Interestingly enough, the conversation between the two scholars—indicated by their attentive gazes, the vivid gestures of their hands, and the inscriptions on the open codices—does not serve to provide yet another summary of what is shown in the diagram. Rather, it elaborates on the most fundamental aspect of cosmology as well as medical theory, namely the four elements. The inscriptions are verses whose origin is unclear but is probably the same as that of the diagram's circumscription. The British science historian Vivian Nutton assumes that “[t]he source, if there is one, is a medieval cosmological poem in hexameters.”²⁸ Starting with the codex of Galen, the text reads: MVNDI PRE/SENTIS SE/RIES MANET / EX ELEMENTIS, and EX HIS FOR/MANT(V)R QVE / SVNT QVE/QVMQVE CHREANTVR.²⁹ While there are only minor variations in

²⁵ For the core texts of Salernitan medicine, see F. WALLIS, “12th Century Commentaries on the *Tegni*. Bartholomaeus of Salerno and Others,” in N. Palmieri (ed.), *L’Ars Medica (Tegni) de Galien: Lectures antiques et médiévales: Actes de la ‘Journée d’étude internationale’ (Saint-Étienne, 26 juin 2006)*, (Centre Jean Palerne: Mémoires 32), Saint-Étienne, 2008, pp. 127-68; EAD., “The *Articella* Commentaries of Bartholomaeus of Salerno,” in D. Jacquart, A. Paravicini Bagliani (eds.), *La scuola medica salernitana: Gli autori e i testi: Convegno internazionale, Università degli Studi di Salerno, 3-5 novembre 2004*, (Edizione Nazionale ‘La Scuola Medica Salernitana’ 1), Florence, 2007, pp. 125-68.

²⁶ CAPPELLETTI, *Gli affreschi*, p. 63, referring to Honorius of Autun, *De anime exilio et patria* 9, MIGNÉ (ed.), *PL* 172, 1245.

²⁷ There is a vast body of literature on this subject. I am referring to an article that starts with a short description of the fresco in Anagni: J. JOUAINA, “Hippocrates as Galen’s Teacher,” in M. Horstmannshoff (ed.), *Hippocrates and Medical Education: Selected Papers Presented at the XIIIth International Hippocrates Colloquium, Universiteit Leiden, 24-26 August 2005*, Leiden, 2010, pp. 1-21.

²⁸ V. NUTTON, “God, Galen and the Depaganization of Ancient Medicine,” in P. Biller, J. Ziegler (eds.), *Religion and Medicine in the Middle Ages*, (York Studies in Medieval Theology 3), Woodbridge, 2001, pp. 17-32, here p. 18, note 8. Bagnoli’s claim that the inscriptions on the codices are “[...] based on Hippocrates’s *De Natura Hominis* and Galen’s commentary on that text [...]” appears untenable. BAGNOLI, “The Syzygy,” p. 316. See also PRESSOUYRE, “Le cosmos platonicien,” p. 573: “Mais les diagrammes d’Anagni ne reflètent aucun emprunt direct aux écrits alors connus de Galien et d’Hippocrate.”

²⁹ Quoted from BIANCHI, “I dipinti,” p. 90.

the translations of the second inscription—literally “From these [elements] are formed what are, whatever are created”—those of the first vary considerably, as in the case of the circumscription.³⁰ To my mind, what is specific is the emphasis on the present (MVNDI PRE/SENTIS) and its continuance (SE/RIES MANET). *Series* surely refers to the material cohesion of the cosmos brought about by the four elements and shown in the diagram on the wall next to Hippocrates and Galen (Fig. 7). The inscription could thus be translated as: “The order of the present world persists out of [i.e., as a consequence of] the elements.”

In sum, the cosmological frescoes in the second bay address at least three interrelated aspects: firstly, the anthropocentrism of the sublunary world; secondly, medicine as an anthropocentric field of study based on cosmological knowledge; and, thirdly, the elementary structure of the cosmos and its continued existence. It is now evident how closely the diagrams are related to the scholarly conversation—how, on the one hand, the circular scheme with the macro- and microcosm adds meaning to it and, on the other hand, the diagram on the wall serves as an explanatory gloss to what is said. Moreover, just like the opened codices and the jars on the shelves, the diagrams can be seen as attributes and devices of the philosopher-physicians. Even though the diagrams’ size and position renders them virtually autonomous paintings, they nevertheless belong to the world of reasoning represented by Hippocrates and Galen.

All this, however, does not yet explain the choice of motifs for the frescoes in the first two bays. Walking through the crypt and looking at the other vaults, the beholder will notice a remarkable artistic ambition to introduce a huge variety of concentric subdivisions to the surfaces. There are frieze-like compositions, quadripartite structures with vertical and diagonal, linear and figurative crosses as well as central panels with elaborate frameworks. But even within this diversity, the diagrams form a category of their own.³¹ There are no other schemes with circular subdivisions that would encourage the beholder to draw analogies between, on the one hand, vaults with biblical narratives and Christian symbols, and, on the other hand, the cosmological frescoes.

THE RESTRAINING OF THE WINDS IN THE APOCALYPSE CYCLE

An exception to this rule is vault XIX (Fig. 9), although, at least at first sight, the reference to the diagrams is less one of form than of content. Vault XIX belongs to the sub-cycle with scenes from the Revelation of John also painted by the first workshop and covering the conch of the main apse, its side walls and two of the vaults in front of it.³² In vault XIX the

³⁰ See, for instance, JOUANNA, “Hippocrates,” p. 4 („the order of the present world is formed of elements“); BAGNOLI, “The Syzygy,” pp. 316-17 (“the order of the present world arises from the elements“); CAPPELLETTI, *Gli affreschi*, p. 63 (“Cìò che è in questo mondo risulta fatto dalla concatenazione degli elementi“); D. JACQUART, “Représentations de Galien dans la peinture médiévale,” *Dossiers: Histoire et archéologie*, 123 (1988), pp. 22-30, here p. 26 (“C’est à partir des éléments que le monde présent se perpétue“).

³¹ CAPPELLETTI, *Gli affreschi*, p. 43, speaks of “una qualche autonomia di questo programma rispetto alle altre figurazioni“.

³² BIANCHI, “I dipinti,” pp. 152-67, here pp. 166-67; CAPPELLETTI, *Gli affreschi*, pp. 163-228, here pp. 197-200; BAGNOLI, *The Medieval Frescoes*, pp. 107-69, here pp. 143-48; SMITH, “An Example,” pp. 24-27. See also P. K. KLEIN, “Les cycles de l’Apocalypse du haut Moyen Age (IX-XIIIe s.),” in *L’Apocalypse de Jean: Traditions exégétiques et iconographiques, IIIe-XIIIe siècles: Actes du Colloque de la Fondation Hardt, 29 février-3 mars 1976*, (Études et documents 11), Geneva, 1979, pp. 135-86.



Fig. 9. Anagni, Cathedral, Crypt, Vault XIX (according to Giammaria (ed.), *Un universo di simboli*, 2001, pl. 49)

surface is divided by a diagonal cross whose branches intersect at a medallion depicting a *crux gemmata*. The dominant figures in the four panels are the four angels who, with swift movements, have approached the four winds and now subdue them by holding their hands over the winds' mouths (Rev. 7:1).³³ In John's vision, this cosmological intervention occurs after the opening of the sixth seal and the calamities caused by it, and immediately before the appearance of the angel with the seal of the living God (*sigillum Dei vivi*). These acts are alluded to in the small frescoes on the arches of vaults XVII and XIX, respectively.³⁴

On closer inspection, we notice that, in this sub-cycle, the scenes are differentiated spatially. Major attention is given to the adoration of the lamb by the twenty-four elders in the apse conch (Rev. 4:4; 5:5-6), combined in a vertical axis with John's initial vision of the son of man in vault XVIII (Rev. 1:10-20). The opening of the first five seals (Rev. 6:1-11; 7:1-3) is the subject of the paintings on the side walls. Then follow the aforementioned frescoes on the arches, along with the vault depicting the angels and winds.

In this rather confined cycle, the restraining of the winds holds a prominent position. Of three vaults, one is assigned to this scene. It is placed next to John's vision of the son

³³ See also Y. CHRISTE, "Un chapiteau de Mozac avec les anges des vents d'Apc 7,1," *Arte cristiana*, 77:733 (1989), pp. 297-302.

³⁴ For the identification of the scene on the arch of vault XVII, see BAGNOLI, *The Medieval Frescoes*, pp. 139-43.

of man flanked on its other side by vault XVII, showing a cross and four cherubs on little wheels.³⁵ In spatial terms, vault XVII clearly belongs to the Revelation cycle, though it is the only part that does not relate closely to John's account. Without denying the need for a more thorough interpretation³⁶, in the present context it is sufficient to see the fresco with the cherubs as a complement to the theophany scenes arranged along the main vertical axis. By means of the Chrismon at the center as well as the stigmata on the cherubs' hands and feet, these guardians and companions of the God of the Old Testament are turned into manifestations of Christ.

By contrast, the restraining of the winds is far more episodic. Its puzzling prominence refers us back to the astronomical heaven in vault I, because that is where the four winds first appear in the overall cycle (Fig. 2). Today barely recognizable, they stand in the four pendentives below the zodiac, each blowing two long trumpets. Even though their skinny shapes seem to have little in common with the muscular bodies in vault XIX (Fig. 9), iconographically speaking, these personifications are all of the same kind and origin. Wind diagrams had a long tradition in the Latin medieval world, not least because Isidor of Seville included a *rota ventorum* in his *De natura rerum*.³⁷ A famous example is the *rota* in the ninth century *De natura rerum* manuscript from Laon (Fig. 10), in which the four main winds are depicted as sturdy naked figures towering at the cardinal points of the cosmos with their arms outstretched, each grasping the heads of two smaller human-like creatures representing the minor winds.³⁸ While the dangling bodies convey the changeable and unsteady nature of the winds, the tall figures' firm stances around the center of the diagram makes clear that the winds are stable components of the cosmos. In the first vault in Anagni where the winds have been shifted to the corners, they even seem to support the astronomical heaven above them.

In vault XIX, however, the diagrammatic order is disturbed, as the angels are forcing the winds to the ground. Though, rather than showing signs of resistance, the victims retain a pose that serves to remind the beholder of a cosmological diagram, most obviously the outstretched arms—otherwise incomprehensible as there is nothing to carry—and the straight right leg still anchored in the corner while the left foot tries to prevent the body from falling. The restraining of the winds, in other words, is shown as the dissolution of a diagram. This means that the angels intervene not only on a cosmological, but also on a pictorial level: they interfere with the order of a visual device that in the first two bays of the crypt serves to represent reasoning and knowledge. The beginning of the crypt's cycle and its end—that is, the cosmological frescoes and the sub-cycle with scenes from the Revelation of John—thus relate to each other in at least two ways. They are obviously linked in a temporal sense as statements about the actual state of the cosmos and its predicted final transformation. What is more, however, the

³⁵ BIANCHI, "I dipinti," pp. 150-51.

³⁶ CAPPELLETTI, *Gli affreschi*, pp. 153-60.

³⁷ ISIDORE OF SEVILLE, *De natura rerum* 37. FONTAINE (ed.), *Traité de la nature*, (Bibliothèque de l'École des Hautes Études Hispaniques 28), Bordeaux, 1960, pp. 295-98; B. OBRIST, "Wind Diagrams and Medieval Cosmology," *Speculum*, 72 (1997), pp. 33-84.

³⁸ Laon, Bibliothèque municipale / Bibliothèque Suzanne-Martinnet, MS 422, f. 5v. B. KÜHNEL, *The End of Time in the Order of Things: Science and Eschatology in Early Medieval Art*, Regensburg, 2003, pp. 146-47; OBRIST, "Wind Diagrams," pp. 66-71 (with further literature).



Fig. 10. Laon, Bibliothèque municipale / Bibliothèque Suzanne-Martinet, MS 422, f. 5v (according to Kühnel, *The End of Time*, fig. 70)

apocalyptic scenes include a comment on the validity of ‘reasoned images’³⁹, namely diagrams. Without implying a harsh critique of the attempt to explain the world visually, vault XIX exemplifies the preliminary nature of both the existing cosmos and the knowledge gained about it. It shows the ease with which God will change the established order and thereby annul what is supposed to be fact.

But what does all this mean for the diagrams in the first two bays (Fig. 2, 3 5-8)? Was the beholder who had seen the entire cycle supposed to cast the diagrams into doubt because he now knew that eventually they would be of no avail? Were they meant to arouse suspicion? Of course, this seems unlikely. To be sure, in hindsight, the beholder might have perceived the astronomical heaven of the first bay supported by the winds differently, now having been reminded of the fact that it is not as unalterable as perhaps assumed. However, the conceptual and painterly efforts still evident in the second bay strongly indicate that the cosmological frescoes

established a complementary meaning (Fig. 5). As we have seen, they are mainly concerned with the four elements as the substance of all things created, the anthropocentric order of the world, and the persistence of the elementary order. These fundamental aspects do not seem to be endangered by the apocalyptic catastrophes depicted in the apsidal frescoes. The sun and moon change color, stars fall to earth, and the winds stop blowing, but the elementary fabric of the cosmos still seems in force. Thus, taken as a whole, the frescoes prompt the beholder to question the cosmological outcome of the Apocalypse: what of the world we live in will change or even perish, and what will persist?

LAST THINGS AND THE MICRO- AND MACROCOSM IN THE *LIBER FLORIDUS*

A similar interest in both describing and questioning the cosmos can be traced not in another fresco cycle but in a voluminous encyclopedia brought to completion in northwestern France in 1121. The *Liber Floridus* of Lambert of Saint-Omer is famous not least of all for its many astronomical and cosmological diagrams, all of them drawn and inscribed by the canon

³⁹ I am borrowing this term from L. DASTON, P. GALISON, *Objectivity*, New York, 2007, pp. 61, 98 and passim.

himself. Quite notably, the autograph of the *Liber Floridus* has been preserved; it is now manuscript 92 of the University Library of Ghent in Belgium.⁴⁰ It took Lambert several years to accomplish this work—that is, to compile textual and visual material from other codices for his encyclopedia, which was presumably intended to become part of the chapter library. Apparently he could not afford to make a working copy and instead worked on the dedication copy from the beginning, adding new quires whenever possible. As a result, topics reappear throughout the book. There are three series of chapters on astronomy and cosmology that, owing to the diagrams' prominent position in the layout of the pages, stand out within the *Liber*.⁴¹ All of these diagrams correspond to types widely known in the early twelfth century. As far as the combination of specific visual components, inscriptions, and surrounding texts are concerned, however, these folios seem to be Lambert's own creations based on material he took from other codices.

The last of these diagrams, at first glance, might be considered a typical diagram showing the unity of the micro- and macrocosm with the human being (*Homo*) at its center (Fig. 11).⁴² Four branches, each inscribed with one of the four main bodily humors or the temperaments determined by them, are terminated by circular medallions on the periphery, whose inscriptions name the four seasons, elements, ages of man, and, again, bodily humors. This X-shaped figure is circumscribed by a red circle which Lambert used for an arrangement of the four elements according to the qualities they share. On the one hand, the outer circle thus represents the binding principle of the micro- and macrocosm. On the other hand, the list of the seven planets at the top turns the diagram into a representation of the entire cosmos in spatial terms. It is complemented by the inscriptions on the sides describing the spherical order of the elements.

What ultimately renders the diagram more than just another scheme of the micro- and macrocosm is the text at the bottom: *Elementa mundi, id est celum et terram, non credamus abolenda per ignem sed in melius commutanda, figuram mundi, id est imaginem, non substantiam transituram*. "We should not believe that the elements of the world, that is heaven

⁴⁰ A. DEROLEZ, *The Making and Meaning of the Liber Floridus: A Study of the Original Manuscript, Ghent, University Library, MS 92*, (Studies in Medieval and Early Renaissance Art History), London, 2015; Id., *The Autograph Manuscript of the Liber Floridus. A Key to the Encyclopedia of Lambert of Saint-Omer*, (Corpus Christianorum: Autographa Medii Aevi 4), Turnhout, 1998. See also C. HEITZMANN, P. CARMASSI, *Der Liber Floridus in Wolfenbüttel: Eine Prachthandschrift über Himmel und Erde*, Darmstadt, 2014.

⁴¹ Ghent, Universitätsbibliothek, MS 92, ff. 24r-25v; 88r-94v; 220v-228v. The following analysis of f. 228v is based on my article K. MÜLLER, *Mutmaßungen über figura und substantia der Welt: Die Diagramme im Liber Floridus des Lambert von Saint-Omer*, in C. Kiening, K. Mertens-Fleury (eds.), *Figura. Dynamiken der Zeiten und Zeichen im Mittelalter*, (Philologie der Kultur 8), Würzburg, 2013, pp. 173-204. From the literature on the *Liber Floridus*, see in particular J. RUBINSTEIN, "Lambert of Saint-Omer and the Apocalyptic First Crusade," in N. Paul, S. Yeager (eds.), *Remembering the Crusades: Myth, Image, and Identity* (Rethinking Theory), Baltimore, 2012, pp. 69-95; A. SOMFAI, "The *Liber Floridus* in the Encyclopedic Tradition: Philosophical and Scientific Diagrams in Context," in: K. De Coene, M. De Reu, Ph. De Maeyer (eds.), *Liber Floridus 1121: The World in a Book*, Warnsveld, 2011, pp. 75-89; P. C. MAYO, "Crusaders under the Palm: Allegorical Plants and Cosmic Kingship in the *Liber Floridus*," *Dumbarton Oaks Papers*, 27 (1973), pp. 31-76.

⁴² Ghent, Universitätsbibliothek, MS 92, f. 228v. For the texts and inscriptions, see A. DEROLEZ (ed.), *Lambert S. Audomari Canonici Liber Floridus. Codex autographus Bibliothecae Universitatis Gandavensis*, Ghent, 1968, pp. [100]-[101].

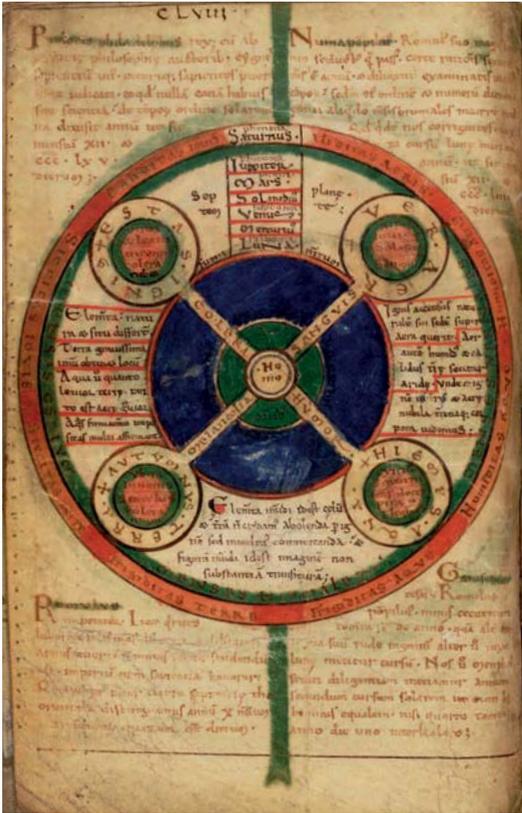


Fig. 11. Ghent, Universiteitsbibliotheek, MS 92, f. 228v (Universiteitsbibliotheek Ghent, with permission)

and earth, will be destroyed by the fire, but changed for the better, because it is the figure of the world, that is, its image, that will pass away, not its substance.⁴³ Often ascribed to Saint Augustine, but in fact going back to Gennadius, a priest in Marseille in the late fifth century, this sentence comments on a verse from Paul's first letter to the Corinthians: *praeterit enim figura huius mundi* ("for the figure of this world passes away"; 1 Cor. 7:31).⁴⁴ The text is concerned with the final transformation of the world and juxtaposes its imperishable *elementa* and *substantia* with the perishable *figura* or *imago mundi*.

Lambert had already used this eschatological statement earlier, placing it next to his spectacular fold-out map of the terrestrial zones on fol. 92v/93r.⁴⁵ Now, however, he decided to make it an integral part of the diagram itself. By consequence, the statement is more closely related to the diagram's content. In other words, the inclusion sparks the expectation that the diagram itself holds an answer to the unsettling question prompted by the text: how will the future world resemble the world we

know? In this respect, Lambert's accentuation of the X-shaped figure gains new importance. Overlying all of the inner subdivisions of the diagram and carefully framed by the red circle, it becomes discernible as the dominant feature of the entire composition. By this means, Lambert seems to suggest that the elementary or substantial structure contained in the X figure and specified on the outer circle is the *elementa* or *substantia*, which will persist, while the planets and their spheres and the spatial order of the four elements belong to the ephemeral *figura mundi*. To be sure, the most reassuring message of Lambert's scheme is the persistence of anthropocentrism into the new world.

⁴³ D. LECOQ, "La Mappemonde du *Liber Floridus* ou La Vision du Monde de Lambert de Saint-Omer," *Imago mundi*, 39 (1987), pp. 9-49, here p. 45.

⁴⁴ C. H. TURNER, "The *Liber ecclesiasticorum dogmatum* attributed to Gennadius," *The Journal of Theological Studies*, 7 (1905), pp. 78-99, here p. 96; Id., "The *Liber ecclesiasticorum dogmatum*: Supplenda," *The Journal of Theological Studies*, 8 (1906), pp. 103-14.

⁴⁵ DEROLEZ, *Lambert S. Audomari*, p. [70].

CONCLUSION

The same message seems to be contained in the fresco cycle in Anagni. It reserves an entire bay for highlighting what might be called the cosmological care of the human being (Fig. 5). Both the anthropocentrism and elementary fabric of this world are cosmological constituents that are not explicitly addressed in the Revelation cycle and thus, hopefully, will remain unaltered at the end of time. If we look back to the cosmological frescoes from the apsidal area with the Revelation cycle, there is neither a condemnation of reasoning about the cosmos nor a mistrust of its diagrammatic devices. On the contrary, the frescoes in the second bay manifest a confirmation of the explanatory potential of natural philosophy.

In Anagni, then, it is the integration into a pictorial cycle and the relationships established among the paintings that bring out the specificity of the diagrams. Lambert, in his *Liber Floridus*, on the other hand, exemplifies an analytical use of the diagram itself prompting the reader and beholder to question what he sees, distinguish between those parts that refer to the perishable and the imperishable respectively, and dissociate the encircled X figure from the rest. His diagram thus implies a judgment that concerns the diagram itself: some of its components are to be seen as superior to others.

Despite their different modes of employing diagrams, both examples, Anagni and the *Liber Floridus*, illustrate the keen awareness, so prevalent in the High Middle Ages, of the power of diagrammatic visualization. In both cases, the diagram serves as a medium of the reassuring conviction or concept that the future cosmos will be a human-friendly world, too. While Lambert generates this meaning within the diagram, in Anagni it is precisely the sacred context that enhances the potential of the diagram.

