BUILDING MONASTIC CLOISTERS IN THE IBERIAN PENINSULA (8th–11th CENTURIES): REGULAR LAYOUTS AND FUNCTIONAL ORGANIZATION[1]

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As is well known, the cloisters of monasteries and cathedrals were being designed as quadrilaterals with porches and rooms arranged around the perimeter by the end of the eighth century. We know how they developed from philological (Fontanelle), documental (Sankt Gallen) and archaeological studies (Munstair, Lorsch or Fulda). The same formula was used in France throughout the 10th and 11th centuries, as is evidenced by the cloisters of Autun, Vezelay and Cluny II, which was originally made of wood until Odilo (994-1049) rebuilt it in marble. Recent findings at the Catalan monastery of Ripoll raise the possibility that full square cloisters were being built south of the Pyrenees before 1000. This cloister should be studied in relation to other Catalan enclosures such as Sant Cugat (beginning 11th c.) which had a stone portico from the outset, or the lower cloister at Sant Pere de Rodes. The morphology of these enclosures can be explained through comparison with other early Catalan examples. Nevertheless, the international literature has ignored the possibility that there were regular square or half square cloisters in the Iberian Peninsula from the Visigothic period onwards. It is possible that Carolingian proposals were not the only way of experimenting with quadrangle cloister layouts in both monasteries and cathedrals in Mediterranean Europe during the High Middle Ages.

Keywords: High Middle Age monasteries, High Middle Age cloisters, early Romanesque architecture, Iberian Peninsula, Catalonia, Ripoll, Sant Cugat.

INTRODUCTION: THE FUNCTIONAL PRAGMATISM OF MEDIEVAL CLOISTERS

Cloisters from the 10th century, those of the 11th century and those of the 14th century present important similarities in the layout of their rooms and passages. However, we continue nominally to identify some of these as pre-Romanesque, others as Romanesque, and still others as Gothic. But what do we mean when we state that a cloister is Romanesque or Gothic and how do they differ if this is the case? Given that to a large extent they share functional similarities, we need to be aware that these classifications are based more on the resources used in the walls of each gallery; namely the types of material, the organisation of spaces and the roofing system. However, the relation between a specific historical phase and certain typical forms is never incontrovertible; instead the topographic and functional differences between cloisters were determined by the particular rule observed by the inhabitants (Benedictine, Cistercian, Premonstratensian, Franciscan, Hieronymite, Carthusian, etc.), by the particular use given to a precinct (the monks' ceremonial cloister vs. the hospital cloister; the *main* cloister vs. the *minor* cloister) and by the nature of each institution (monastery, cathedral, hospital or palace). Thus, the traditional categories of style and date hinder our understanding of the phenomenon.

With little variation between them, medieval cloisters represent the maturing of a building formula first developed during the 8th century. Five conceptual and functional principals dominated their layouts: the specific purpose for which the community's *officinae* were to be used; the hierarchy of the activities that were carried out in them and, therefore, of the respective rooms; the ordered layout of these rooms; the optimum manner of channelling water; and ease of movement between the different community buildings. The parts of the complex were designed and organised orthogonally and connected by a continuous circuit that was entirely or partially covered to protect the members of the community from inclement weather during their rituals or daily circuits. Before this formula was established, different areas of Latin Christendom had monastery patios resulting from a somewhat random distribution of rooms around a central open space, which documents in the Hispanic monastic tradition refer to as an *atrium* or *circuitum*[2]. However, archaeological finds in the last two decades show that Iberian builders also created regular atria, which is of particular interest to the subject under discussion in the following pages.

Over the course of the 20th century, various studies have explained how the functional and ritual topography of 8th-century central European cloisters was conceived and formulated; by this point in history they were planned

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[2] I. G. BANGO TORVISO, *Atrio y pórtico en el Románico español: concepto y finalidad cívico-litúrgica*, in *Boletín del Seminario de Estudios de Arte y Arqueología*, 40-41, 1975, p. 175-188; C. GODOY FERNÁNDEZ, F. TUSET BERTRÁN, *El "atrium" en las "Vitas Sanctorum Patrum Emeretensium" ¿Una fórmula de la llamada arquitectura de poder?*, in *Archivo español de arqueología*, 67, 169-170, 1994, p. 209-221; A.M. MARTÍNEZ TEJERA, *El "Pórtico románico": origen y funcionalidad de un espacio arquitectónico intermedio de la edilicia medieval hispana (atrium/porticus/vestibulum)*, in *Espacios y estructuras singulares del edificio románico*, P. L. Huerta Huerta (ed.), Aguilar de Campóo, 2008, p. 191-227. For the same questions in a French context, see Ch. BONNET, *Atrium, portique et circulation en Gaule*, in *Avant-nefs et espaces d'accueil dans l'église entre le IV^e^ et le XII^e^ siècle*, Actes du colloque international du CNRS (Auxerre, 17-20 Juin 1999), Ch. Sapin (ed.), Paris, 2002, p. 24-29.

as porticoed quadrangles with rooms for community use distributed around the perimeter. Philological analyses enabled the general plan of the St Wandrille-Fontenelle monastery to be recreated[3]; documentary and material analysis of the plan of Sankt-Gallen has revealed that the specific function of the spaces determined the overall design of the monastery[4]; and archaeological excavations at Munstair, Lorsch and Fulda[5] have uncovered solid walls with galleries in front of the offices that show how these construction formulas and concepts matured over time[6]. Despite this, no standing architecture remains from these original cloisters. Consequently, although we have indirect knowledge of the ground plans for these sites, we cannot be sure how they developed vertically.

Research into the 8th-century Carolingian cloisters has tried to identify and demonstrate the extent to which the conception, functionality and topography of these monastic patios was inspired by paleo-Christian atria[7]. Different authors have established a germinal connection between the great Roman and Carolingian centres, and have pondered on the intermediate role that may have been played by the monastery cloisters of the Merovingian period[8]. It should be stated that the civil-ecclesiastic atrium of the Cathedral of Aix-la-Chapelle reproduces and updates the porticoed atria of the 4th and 5th centuries (Saint Peter in the Vatican, St. Paul's outside the Walls, Saint Clement in Roma, San Lorenzo in Milan, etc.)[9]. The atrium of the Palatine Chapel was comparable to the eastern patio at Fulda, but differed in morphology and function from monastic cloisters in Switzerland (Sankt-Gallen, Munstair), Hesse (Lorsch, Fulda) and Normandy (Saint-Wandrille-Fontenelle). In Corbie, however, it seems that the cloister patio already contained sleeping quarters, a refectory, a kitchen and a tithe barn, but we have yet to determine the architectural nature of this group of monastic buildings[10].

The iconographic formula also developed coevally in cathedrals[11], and survived in France throughout the 9th, 10th and 11th centuries. This historical and functional continuity

[3] The abbey's sources state that the library and archive were placed like a separate building in the centre of the abbey patio and surrounded by galleries. The *Gesta abbatum Fontanellensium* (ca. 820-840), the oldest monastic chronicle in the West, describes the lives of the abbots of Fontenelle, Wandrille and Ansegisus. The *Vita Sancti Ansegisi abbatis* states that Abbot Ansegis († 833) *tumulatus extra basilicam S. Petri ad aquilones plagam, in porticu, in qua fratres conventum celebrare soliti sunt ac consultis Deo dignis aures accomodare*. That the *porticus*, according to the *Vita Ansegisi*, was built by Ansegis, *propter quod in ea consilium de qualiber re perquierentes convenire fratres soliti sint, ibi namque in pulpito lectio cotidie divina recitatur, ibi quidquid regularis auctoritas agendam suadet, deliberatur*. The term *porticus* can be interpreted as the wing of the cloister. Thus, the *Gesta abbatum* shows an *Item ante dormitorium, refectorium et domum illam quam maiorem nominavimus, porticus honestas cum diuersis pogiis aedificari iussit* (in the plan of St Gall, *porticus* is not used to refer to an independent structure, but rather to a space subordinate to the church, cloister or abbot's house). P. PRADIÉ, *L'histoire sainte de Fontenelle. Une lecture des 'Gesta abbatum'*, in *Gesta. Revue de l'Abbaye Saint-Wandrille*, 31, 2004, p. 112-125. Reproduction of the topographic layout in BOUSQUET, *Problémes d'orgine des cloîtres romans*, in *Cahiers de Saint Michel de Cuxa*, 7, 1976, fig. 2.

[4] W. HORN, E. BORN, *The plan of St. Gall: a study of the architecture & economy of, & life in a paradigmatic Carolingian monastery*, Berkeley, 1979; studies by the Centre for Medieval and Renaissance Studies of the UCLA discuss the atypical plan of Saint Gall (Sankt Gallen) http://www.cmrs.ucla.edu/projects/st_gall.html; A. ZUR NIEDEN, *Der Alltag der Mönche: Studien zum Klosterplan von St. Gallen*, Diplomica, Hamburg, 2008.

[5] On the excavations at Munstair, see: H. R. COURVOISIER, H. R. SENNHAUSER, *Die Klosterbauten - eine Übersicht*, in B. Sigel (coord.), *Munstair Kloster St. Johann. 1. Zur Klosteranlage Vorklösterliche Befunde*, Zurich, 1996, p. 15-65. For the Abbey of Saint Nazarius in Lorsch, see: F. BEHN, *Die karolingische Klosterkirche von Lorsch an der Bergstraße nach den Ausgra bungen von 1927-1928 und 1932-1933*, Berlin/Leipzig, 1934; M. M. PLATZ, *Die Kirchenbauten Altenmünster und Seehof in Lorsch Neubewertung der Altgrabungen*, in *Mitteilungen der Deutschen Gesellschaft für Archäologie des Mittelalters und der Neuzeit*, 22, 2010 (*Befund und Rekonstruktion)*, M. Untermann (ed.), Paderborn, 2010, p. 93-100; D. LAMMERS, *Die aktuellen archäologischen Ausgrabungen im Kloster Lorsch*, in *Pergament und Stein: neue Forschungen zum Kloster Lorsch*, J. Wittur, C. Schreiber (eds.), Lorsch, 2013, p. 37-40. On the monastery and cloister at Fulda, see: F. Oswald (coord.), *Vorromanische Kirchenbauten, Katalog der Denkmäler bis zum Ausgang der Ottonen*, vol. 1-3. Zentralinstitut für Kunstgeschichte, Munich, 1966; K. Th. PLATZ, *Fulda und Lorsch im archäologischen Vergleich karolingischer Klosteranlagen*, in *Geschichte der Stadt Fulda* (Vols. 1-2), W. Hamberger, Th. Heiler, W. Kirchhoff, (eds.), Fulda, v. 1, 2008, p. 69-126; ID., *Die karolingischen Klosterkirchen von Fulda und Lorsch im archäologischen Vergleich*, in *Mitteilungen der Deutschen Gesellschaft für Archäologie des Mittelalters und der Neuzeit*, 22, 2010 (*Befund und Rekonstruktion*, M. Untermann (ed.), Paderborn, 2010, p. 83-92.

[6] Even the humble monastery at Landevennec (Brittany) had covered galleries by the first decades of the 9th century. A. BARDEL, *L'abbaye Saint-Gwénolé de Landevennec*, in *Archéologie médiévale*, 21, 1991, p. 51-100; Ch. SAPIN, *De la cour au cloitre carolingien*, in *Les cahiers Saint-Michel de Cuxa*, XLVI, 2015, p. 21-34, part. 28.

[7] J.-Ch. PICARD, in *Les origines du mot Paradisus-Parvis*, in *Mélanges de l' École Française de Rome. Moyen âge, temps modernes*, 83, 1971, p. 159-186, thought that the development of a covered area over the entrances of churches was the starting point for the development of the monastic or canonical cloister, which was moved from the western façade of the church to the side. M. M. ROBERTI, *L'atrium paléochrétien, ancêtre des cloîtres*, in *Les cahiers de Saint-Michel de Cuxa*, VII, 1976, p. 99-102; J.A. ADELL GISBERT, *Notes introductories a l'estudi de l'arquitectura dels claustres*, *Quaderns d'estudis medievals*, 1-4, 1981, p. 245-253; 1-5, 1981, p. 259-278; J.-P. CAILLET, *Atrium, péristyle et cloître: des réalités si diverses?*, in *Der mittelalterliche Kreuzgang. Architektur, Funktion und Programm*, Peter K. Klein, (ed.), Regensburg, 2004, p. 57-65; SAPIN, *De la cour au cloitre carolingien*, p. 21-34 questions the assumption that cloisters were directly descended from *atria*. For a critical perspective, see S. LOMARTIRE, *L'atrium comme élément architectonique privilégié dans les monastères italiens du haut moyen-âge*, in *Nomination for Inscription on the UNESCO World Cultural and Natural Heritage List. The Carolingian Westwork and the Civitas Corvey*, Annexes B, Höxter, 2012, p. 161-186; ID., *Il problema dell atrio e la dimensione urbanistica della basilica di San Pietro in Ciel d'Oro*, in *San Pietro in Ciel d'Oro a Pavia mausoleo santuario di Agostino e Boezio*, M.T. Mazzilli Savini (ed.), Pavia, 2013, p. 248-275.

[8] SAPIN, *De la cour au cloitre carolingien*, p. 22 suggest that the textual reference to the *claustra* at Jumièges may be interpreted at most to refer to a patio with porticoes, although the layout and morphology cannot be determined.

[9] P. LASKO, *Ars Sacra, 800-1200*, Yale, 1994 (ed. or. Londres, 1972), p. 11; M. FINCH, *The Cantharus and Pigna at Old St. Peter's*, in *Gesta*, 30-1, 1991, p. 16-26. On the Italian atria of the 4th and 5th centuries, see J.-CH. PICARD, *Le quadriportique de Saint-Laurent de Milan*, in *Mélanges de l'École Française de Rome. Antiquité*, 85, 1973, p. 619-712; ID., *Le quadriportique de Saint- Pierre-du-Vatican*, in *Mélanges de l'École Française de Rome. Antiquité*, 86, 1974, p. 851-890; ID., *Le quadriportique de Saint'Agata de Ravenne*, in *Felix Ravenna*, 116, 1978, p. 31-43.

[10] SAPIN, *De la cour au cloitre carolingien*, p. 22-23.

[11] Regarding the cathedral of Reims, with a cloister from the first quarter of the 9th century, and the cathedral of Rouen, see SAPIN, *De la cour au cloitre carolingien*, p. 31.

can be witnessed in the cloisters at Autun[12], Notre-Dame de Vezelay[13] and Cluny II, which was made of wood until Odilo (994-1049)[14] later rebuilt it in marble (ca. 1010-1015)[15]. But can it be said that there is a single genealogy for monastic and canonical cloisters that runs from Rome to Aachen and to the other great spiritual centres of the empire and from them to Burgundy (Cluny, Dijon, Tournus) [16]?

The dominant historical view is that the cloister had a single moment of genesis and puts forward a blinkered interpretation that ignores the many autonomous architectural and topographical forms explored at different sites. In the Mediterranean and the Iberian Peninsula in particular archaeological remains are scarce but of great historical interest because they indicate monastic and spatial architectural developments which do not fit in with the interpretation of a Roman-Holy Roman Empire, Carolingian-Burgundian-Holy Roman Empire or Ottonian tradition[17]. It has traditionally been held that in the West, regular and porticoed cloisters could not have developed before the start of the Carolingian period because there are no buildings or archaeological evidence to the contrary. It is for this reason that we need to update the history of the various cultural, liturgical and monastic areas of Mediterranean Christianity[18] to reveal the real picture of the Iberian peninsula as a dynamic field of topographical experimentation.

ATTEMPTS AT CLOISTRAL ORGANISATION IN THE IBERIAN WORLD

At the start of the 11th century the cathedral of Barcelona had a cloistral precinct enclosed by irregular stone walls held together with lime mortar[19]. Although the textual reference is extremely interesting, it does not tell us if it

[12] Ch. SAPIN, *Les premiers bâtiments claustraux en Bourgogne (avant le XII^e siècle), état de la question*, in *Wohn- und Wirtschaftsbauten frühmittelalterlicher Klöster, International Symposium, Zurzach und Müstair* (26 Sep.-1 Oct. 1995), Zürich, 1996, p. 157-172, part. 161 has identified the various areas of the cathedral cloister space (9th-10th centuries): 1. Cloister (s. IX); 2. Refectory (s. XIII); 3. Tithe barn (s. XV); 4. Cathedral of St. Nazarius, traces (13th-15th centuries); 5. Cathedral of San Lázaro (s. XII); 6. Collegiate Church of St. Mary, disappeared. SAPIN, *De la cour au cloitre carolingien*, p. 31-32.

[13] Ch. SAPIN, F. HENRION, S. BÜTTNER (col. S. AUMARD), *Les origines de l'abbaye de Vézelay et les débuts de son organisation claustrale (IX^e-XII^e siècle)*, in *Archéologie médiévale*, 45, 2015, p. 59-84; SAPIN, *De la cour au cloitre carolingien*, p. 30 dates the beginning of building work on the cloister area to the end of the 9th century.

[14] *invenisse se ligneum*. Iotsaldus, *Vita Sancti Odilonis*, MIGNE, *Patrologia Latina*, 142, 908B. We have evidence that wooden cloisters were still being constructed in 11th century Catalonia (Lluçà) and Castile (Silos), but full analysis has yet to be undertaken regarding their relation to similar cloisters in other parts of Europe, such as the cloister that Lanfranc had built at the Bec Abbey (ca. 1039), those by Abbot Theoderich de Petershausen (1086-1116) (F. X. KRAUS, *Die Kunstdenkmäler des Kreises Konstanz*, 1887 (reed. Nikosia, 2016), p. 233), in St. Peter in Au am See (today known as Mehrerau in Bregenz; same area where were developed abbeys of St. Gallen, Reichenau, Schaffhausen, Petershausen, Lindau, Kreuzlingen and Münsterlingen), the cloister at Zwiefalten or the cloister at Saint-Trond (Sint-Truiden) restored by Abbot Rudolf (1108-1138). Cfr. L. PRESSOUYRE, *Cloîtres*, in *Encyclopædia Universalis* [on line. consulted on 26 May 2015. URL : http://www.universalis.fr/encyclopedie/cloitres/].

[15] *ubi etiam in novissimis suis claustrum construxit, columnis marmoreis ex ultimis partibus illus provinciae, ac per rapidissimos Durentiae Rhodanique cursus, non sine magno labore advectis mirabilitier decoratum: de quo solitus gloriari, ut iucundi erat habitus, invenisse se ligneum et relinquere marmoreum, ad exempli Octaviani Caesaris. Vita Sancti Odilonis*. Migne ed., *Patrologia Latina*, 142, col. 908B. In addition to Odilo of Cluny, other prelates and abbots of the same generation built cloisters in marble, such as Elmer of Saint Augustine of Canterbury (1006-1022), Bescelin of Brême (1035-1045), Humbert of Subiaco (1051-1060), Bardon of Mayence († 1051) and Adhémar of Saint-Martial de Limoges (1063-1114) (*claustrum quoque marmoreum ipse fabricari fecit*). Cfr. V. MORTET, *Recueil de Textes relatifs à l'histoire de l'architecture*, Paris, 1911, p. 59. NIEDEN, *Der Alltag*, p. 150. M. GREENHALGH, *Marble Past, Monumental Present: Building With Antiquities in the Mediaeval*, Leiden, 2009, p. 39-40.

[16] Regarding canonical cloistral formulas, in particular Burgundian examples, see CH. SAPIN, *Le problème du cloître à galeries dans l'architecture canoniale*, in J.-F. Picard (ed.), *Les chanoines dans la ville*, Paris, 1994, p. 33-39. For SAPIN, *De la cour au cloitre carolingien*, p. 32-33 the cloister as a regular quadrangle surrounded by rooms and covered walkways is undoubtedly a Carolingian invention.

[17] F. MARAZZI, *San Vicenzo al Volturno. L'Impianto architettonico fra VIII e XI secolo, alla luce dei nuovi scavi della* basilica maior, in *Monasteri in Europa occidentale (secoli VIII-XI): topografía e strutture*, F. De Rubeis, F Marazzi (eds.), Roma, 2008, p. 323-390; ID., *Early Medieval Cloister Buildings: the Example of San Vincenzo al Volturno and the building of its Basilica Maior*, in *In Nomination for Inscription on the UNESCO World Cultural and Natural Heritage List. The Carolingian Westwork and the Civitas Corvey*, Annexes B, Höxter, 2012, p. 152-160, reconstructs a cloistral area completely affected by geographic irregularities, with its buildings laid out orthogonally. He situates the building of the western *paradisus* in the Ottonian period and dates the construction of the regular cloister to the 11th century.

[18] The settlements of the first Egyptian cenobites developed organically and constituted groups of cells that looked very much like the buildings of any other ordinary settlement. After this, 5th-century Syria saw the development of a regular pattern of cloistral organisation. In a manner that long foreshadowed later developments, the church of the Saints Sergius and Bacchus Umm es-Surab (489) was built with a porticoed cloister (P. GILENTO, *La chiesa dei Santi Sergio e Bacco, Umm as-Surab (Giordania). Risultati storico-costruttivi dall' analisi archeologica degli elevati*, in *Arqueología de la Arquitectura*, 11, 2014: e013. doi: http://dx.doi.org/10.3989/arq.arqt.2014.015 dates the spatial organisation of the cloister to the 6th-7th centuries). Of particular note are the multipurpose monastic cloisters in the second building phase of the western patio at Qal'at Sim'ān (or Dayr Sim'ān). Other contemporary Syrian examples suggest that this architectural and organisational formula was a reinterpretation of techniques used in civil buildings in Syria. Nevertheless, although these architectural and spatial influences can be seen in late-Roman villas, they were not evident in other areas of the Mediterranean during the 5th and 6th centuries and nor were they automatically transferred from Syria to other areas where monasticism was also beginning to emerge. Despite this, examples of residences for religious communities in the Iberian Peninsula bring into question the idea that these formulas were restricted to Syria and refute the assertion that cloistral areas did not exist in Europe before the Carolingian period.

[19] *Ipsa claustra qui est iuxta ecclesiam sede Sanctae Crucis, qui est circundata ex pariete petra et calce et est ibi domus inchoata ad refectorium. Jungit se dicta dicta claustra a parta occidentali cum ipsa prefata ecclesia et pertengit usque ad palatium episcopi, quem dicunt solarium longum, cum omnes arbores, qui infra sunt, et cum puteo et vites (...) et Guilabertus Episcopus dedit praefatae canonicae omnes voces acquisitionum de sepulturis mortorum hominum quas habebat ver habere debeat in ipsa claustra praefatae canonicae*. Year 1009, Barcelona, Arxiu Capitular Libri Antiquitatum, I, fol. 2v. Published by J. VILLANUEVA, *Viage literario a las iglesias de España*, Volume 5, Madrid, 1806, p. 45. S. PUIG I PUIG, *Episcopologio de la sede barcinonense*, Barcelona, 1939, p. 368-369. The study by F. ESPAÑOL, *El panteó comtal de la catedral de Barcelona en época romànica*, in *Miscel.lània en homenatge a Joan Ainaud de Lasarte*, I, Barcelona, 1998, p. 107-116, part. 113-115, n. 45. The formula *petra et calce* was commonly used in 11th-century Catalan documents to refer to the building system used for fortifications and strong houses: J. BALARI y JOVANY, *Orígenes históricos de Cataluña*, Barcelona, 1899, p. 309-311. J. M. FONT RIUS, *Cartas de población y franquicia de Cataluña*, Volumen 2, Madrid-Barcelona, 1983, p. 437.

was a quadrangular precinct or if the cloistral offices were arranged around the perimeter with the doors facing the square patio[20]. A single archaeological excavation would suffice to determine the morphology of this patio. However, given the new architectural culture that emerged in the Catalonia at the beginning of the 11th century, we cannot rule out the possibility that the cloister at Barcelona was a regular quadrangle.

The early chronology situates this cloistral precinct of unknown contours in the same building period as the first cloister at Sant Cugat del Vallès or the first cloister at Sant Pere de Rodes. We need to ask, therefore, if cathedrals adopted the quadrangular cloister formula (which was presumably Carolingian and post-Carolingian in origin) at the same time as the monasteries. What is true is that the distinguishing features of Barcelona cathedral cannot be observed or confirmed at the cathedrals in La Seu d'Urgell or Elne. At the cathedral of Girona, the old dormitory was built under the auspices of Ermesinde ca. 1030 and at the cathedral of Vic some parts of the cloister are connected to the cathedral consecrated by Oliba in 1038. These two projects were undertaken two or three decades after the confirmed building work at Sant Cugat and Rodes, and more than half a century after the work at Ripoll. Thus, according to our current knowledge, we have to conclude that cloisters with evenly distributed offices and functions were introduced to monasteries before they were adopted by cathedrals or chapterhouses.

Despite this, during Late Antiquity, episcopal sees such as Tarraco and Egara attempted to configure and organise community and private offices around a porticoed patio in a manner that presaged later cloistral precincts.

To date, the oldest material evidence of a primitive monastery in the province of Tarragona is the suburban basilica buried under the "Parc Central" shopping centre[21]. Its atrium has a rectangular plan in the shape of a U, with a fountain in the centre, porticoed galleries, a singular tomb on the eastern side, a room that opened onto the nave and interrupted the walkway and rooms on the northern and southern sides. The aforementioned buildings around the atrium were used as a cemetery but have also been interpreted as living quarters for male and/or female members of a religious community[22]. More recent studies, however, prefer to identify the complex as a monastery, *episcopium* and centre of pilgrimage[23]. Whatever the case, the atrium of this basilica was used during the 4th and 5th centuries for a variety of purposes including living quarters, the reception of pilgrims and as a cemetery.

At the cathedral complex of Egara (modern-day Terrassa), which was built in successive phases throughout the 5th and 6th centuries, the episcopal residence has been identified to the south-west of the main church, presumably dedicated to Saint Mary. The *episcopium* had a square *impluvium* corresponding to the first construction phase (Fig. 1). Furthermore, the *atrium* gave access to the private chapel of the bishop[24]. This patio was quadrangular with four covered walkways around an uncovered central space and connected the living quarters with the areas of worship. The formula, applied to an ecclesiastic residential complex, is descended from the manner in which Roman residences were spatially organised[25]. It is an episcopal rather than a cathedral patio, different in nature and location than the *atrium* in Tarragona, although both share certain functional principles. Both cases raise questions about the presence and functions of community *atria* in Hispanic cathedrals between the 6th and 11th centuries. It may be that during the 7th century, builders continued to experiment with the formula of the quadrilateral with covered walkways; however, there is no evidence that this solution was readopted after the Christian re-conquest of old episcopal sees that had been ruined by the Muslim expansion. When Barcelona cathedral was given a cloister in 1009, did it revive a solution that had been used centuries before or did it adopt a form of topographic organisation prevalent in contemporary monasteries?

Despite the proliferation of monasteries during the Visigothic period, we know of few examples of residential monastic architecture in the Iberian Peninsula. One of the most emblematic, the Servitano, has been related by Barroso and Morín to the structures exhumed in Vallejo del Obispo

[20] For example, in 1073 the cathedral of Leon had a cloister that in practices was an atrium with buildings arranged in an unplanned manner around the main church: *feci in circuitu baselice palatia, claustra et receptacula seruorum Dei, in quibus simul conuenirent ad prandendum, ad dormiendum, ad spiritalis uite incitamentum ut orationi uacarent et sub canonica institutione uiuerent.* ACL. J.M. RUIZ ASENCIO, *Colección documental, de la Catedral de León*, IV, doc. 1190, p. 443. G. BOTO, *La memoria perdida. La catedral de León (917-1255)*, León, 1995, p. 24.

[21] R. MAR, C. SALOM, *Basílica del Parc Central*, in *Del Romà al Romànic. Història Art i Cultura de la Tarraconense mediterrànea entre els segles IV i IX*, Barcelona, 1999, p. 176-177. A. MUÑOZ MELGAR, *El cristianisme a l'antiga Tarragona. Dels orígens a la incursió islámica*, Tarragona, 2001, p. 48-74. On the anti-Priscillian monk, Frontón, who in 419 headed a monestry *in civitate Tarraconensi, in qua mihi monasterium instruxi,* see J. M. BLÁZQUEZ, *Problemas de la iglesia hispana a finales del siglo IV, según la decretal del obispo de Roma, Siricio*, in *Antiquitas. Acta Universitatis Wratislaviensis*, 18, 1993, p. 37-43; CONSENCI, *Correspondència amb Sant Agustí*, Text revisitat, traducció i notes per J. Amengual, Fundació Bernat Metge, Barcelona, I, 1987-1991, p. 95-100. On the controversial founding of a monastery by Bishop Sergio of Tarragona in 550, see M. MIRÓ, *Epigrafía mètrica de transmissió exclusivament manuscrita: a propòsit de les inscripcions cristianes de Tarragona conservades a* l'*Anthologia hispana*, in *Annals de l'Institut d'Estudis Gironins. Hispània i Roma. Homenatge Palol*, 2, XXXVII, 1996-1997, p. 953-971.

[22] On the double monastic community, see J. LÓPEZ VILAR, *Un nuevo conjunto paleocristiano en las afueras de Tarraco*, in *Revista de Arqueología*, 197, 1997, p. 58-64.

[23] J. LÓPEZ VILAR, *Les basíliques paleocristianes del suburbi occidental de* Tarraco. *El temple septentrional i el complex martirial de Sant Fructuós*, Universitat Rovira i Virgili, Institut Català d'Arqueologia Clàssica, I, Tarragona, 2006, pp. 270-272; see also R. MAR et al., *La formación de la topografía urbana de la Tarragona medieval: nuevas aportaciones*, in *Archivo Storico del Sannio*, 1-2, 1996 ('Attività economiche e sviluppo urbano nei secoli XIV e XV', Atti dell'Incontro di Studi, Barcellona 19-21 ottobre 1995), p. 165-203; J. M. MACIAS et al., *De Topografia Urbana Cristiana de Tarragona, a propòsit de dos documents Medievals*, in *Annals de l'Institut d'Estudis Gironins*, XXXVII, 1997 ('Hispània i Roma d'August a Carlemany. Congrés d'homenatge al Dr. Pere de Palol', Girona 23, 24, 25 November 1995), p. 939-951; J. M. MACIAS et al., *Planimetria arqueològica de Tarraco*, Tarragona, 2007, fase V.

[24] G. GARCÍA, A. MORO, F. TUSET, *La seu episcopal d'Egara. Arqueologia d'un conjunt cristià del segle IV al IX,* Documenta, Tarragona, 2009, p. 170-171.

[25] In the 5th-century episcopal complex at *Hippo Regius*, a cloister was built on the northern side of the westernised church. E. MAREC, *Monuments Chrétiens d'Hippone. Ville épiscopale de Saint Augustin*, Paris, 1958.

(Cuenca). For those authors, this complex had all the buildings essential for a cenobitic community: a worship area, a residential area with individual cells and a storeroom. The icnography of the complex, if it really is the monastery of the abbot Donato, is laid out regularly and orthogonally, an indication of a single building project rather than the accretion of buildings over time. In this regard, Vallejo del Obispo has analogies with the archetypal topographic formula used in Carolingian monastic cloisters[26]. However, Moreno has questioned the existence of a worship room and the identity of the monastery, although he has not proposed an alternative interpretation[27]. In my view, it is a residential building with typical functions; if it was not a monastic establishment (with cloister), it may have been a rural aristocratic residence, although such as interpretation does not seem to me any less unlikely.

At Tolmo de Minateda (Hellín, Albacete) excavations in recent years have uncovered an episcopal district, dated to the 6th–7th centuries and placed against the city walls[28] (Fig. 2). This cathedral presents important differences from other Hispanic cathedrals for which there is archaeological (Valencia, Barcelona, Tarragona) or architectural evidence (Egara). At the latter, the porticoed quadrilateral was connected to the *episcopium* while the three churches in the complex were linked by an atrium used as cemetery; in contrast, at Tolmo de Minateda the community and representative buildings were laid out orthogonally around a porticoed trapezoidal patio. This patio, with its surrounding rooms (storerooms, living quarters, ceremonial room, etc.), is the forerunner of a clearly defined quadrangular cloister. In fact, as will be shown later, at the beginning of the 11th century, some of the early monastic cloisters (Sant Cugat, Rodes, etc.) had porticoes on one or two sides, but not on all four. Moreover, the perpendicular distribution of the offices at the episcopal complex in El Tolmo de Minateda has compelling similarities to that of Vallejo del Obispo, whatever the real identity of the latter. Whatever way you look at it, well before the rise of the Carolingian empire, the construction of this cathedral introduced important changes to topography and cloistral (or at least pre-cloistral) spaces. Furthermore, although Saint Isidore of Seville may have mentioned the *porticus* as a place of transit (and not necessarily a porticoed cloister) and despite understanding *claustra* as a place of reclusion rather than a building formula[29], this does not mean that regular cloistral precincts could not have been developed.

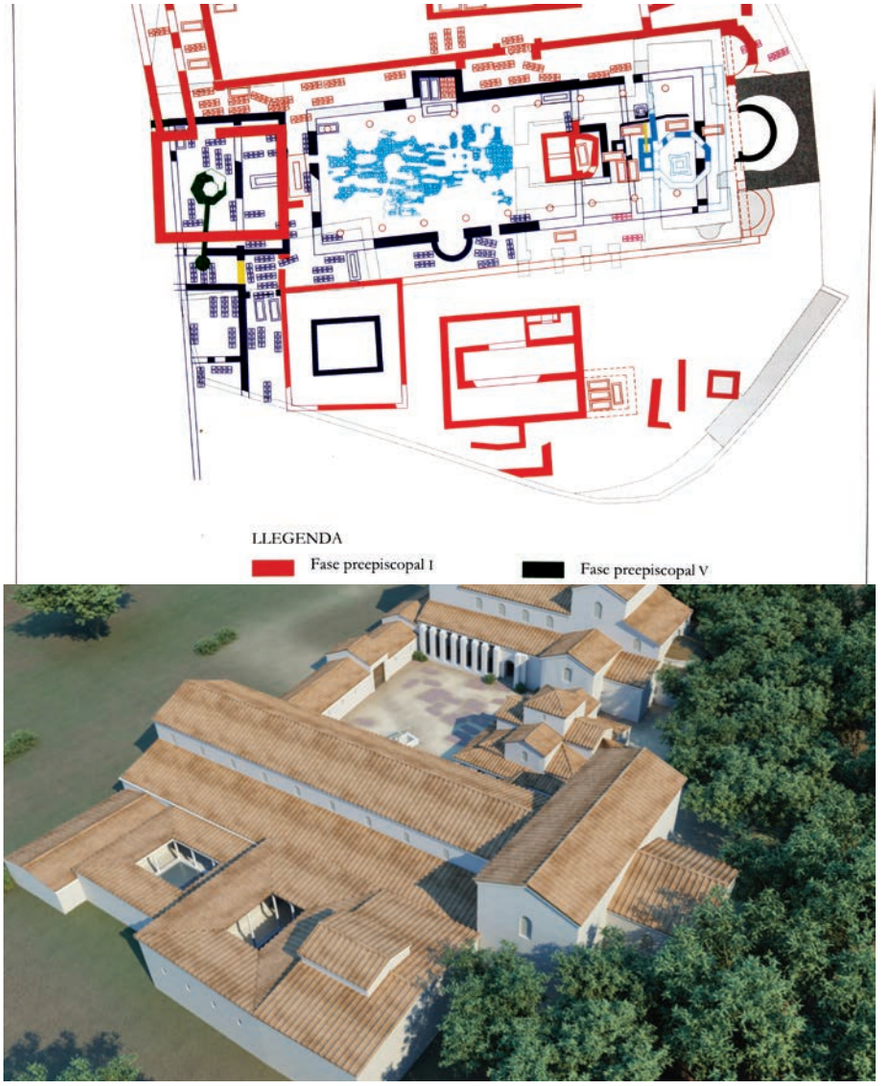

Fig. 1. Egara, former cathedral. Episcopium's patio, early 6th c. © G. García, F. Tuset, A. Moro, 2009.

Cenobitic monasticism spread much more slowly during the Visigothic period than in the 9th and 10th centuries. The number of monasteries founded during the post-Islamic period was much higher than the number documented during the Visigothic period[30]. Among the Hispanic monasteries founded in the 9th and 10th cen-

[26] R. BARROSO, J. MORÍN, *El Monasterio Servitano. Auge y caída de un cenobio visigodo*, in *Codex Aquilarensis*, 19, 2003, p. 8-25.

[27] F. J. MORENO, *La arquitectura monástica hispana entre la Tardoantigüedad y la Alta Edad Media*, Tesis, Universidad Complutense de Madrid, Madrid, 2011, p. 205-206.

[28] S. GUTIÉRREZ LLORET, J. SARABIA BAUTISTA, *The episcopal complex of Eio-El Tolmo de Minateda (Hellín, Albacete, Spain). Architecture and spatial organization. 7th to 8th centuries AD*, in *Hortus Artium Medievalium*, 19, 2013, p. 267-300. J. LÓPEZ QUIROGA, *Early Byzantine Urban Landscapes in the Southwest and Southeast Mediterranean*, in *Proceedings of the 23rd International Congress of Byzantine Studies* (Belgrade, 22–27 August 2016), *Plenary Papers*, Belgrade, 2016, p. 69-106.

[29] *Etim*. XV, 7, 3: *porticus, quod transitus sit magis quam ubi standun sit, quasi porta; et porticus, eo quod sit apertus*; *Etim*. XV, 7, 5: *claustra ab eo quod claudantur dicta*.

[30] A. LINAGE, in *Los orígenes del monacato benedictino en la Península Ibérica*, III, León, 1973, *passim*, used entirely documentary sources to compile the most comprehensive *monasticon* of early medieval Spain. He lists 31 monasteries from late Antiquity and the Visigothic period (398-711) throughout the Iberian Peninsula. He records 1828 early medieval monasteries (711-1109). Monastic developments in the *Carolingian* March of Hispania were similar to other Iberian territories such as Navarre and Leon.

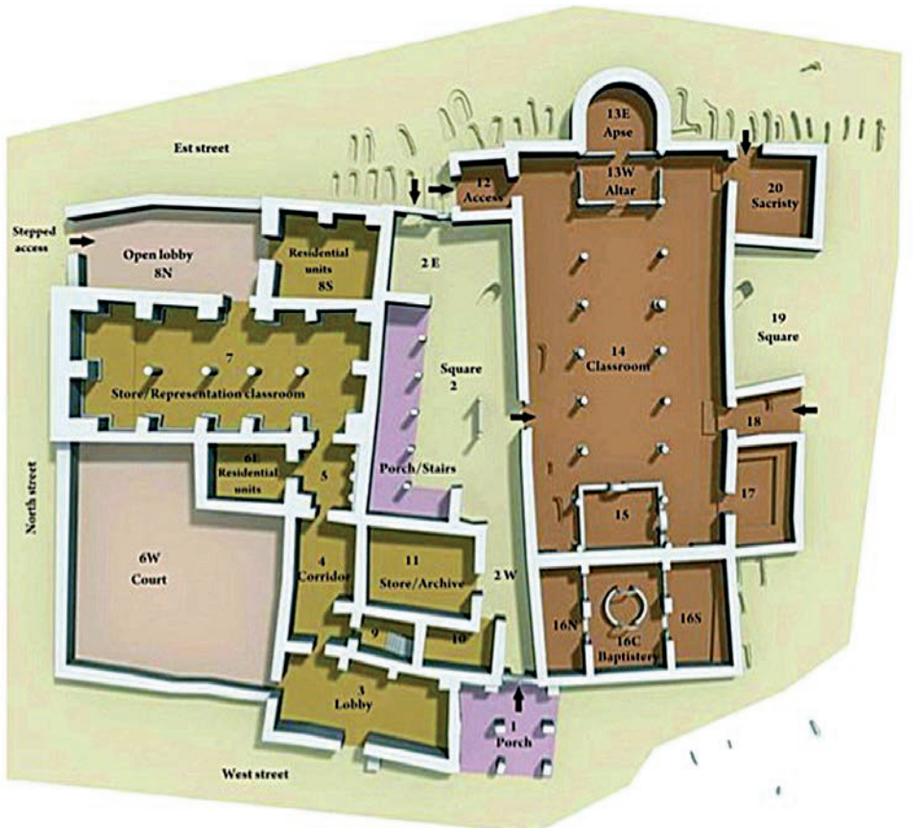

Fig. 2. Tolmo de Minateda (Hellín, Albacete), late 6th c./ early 7th c. © S. Gutiérrez Lloret, J. Sarabia Bauista, 2013.

Fig. 3. Piasca, former feminine monastery (Cantabria), outline of 8th-10th c. phase. © G. Boto.

turies, we should mention another early example of the spatial organisation of the monastic atrium that owes nothing to the Carolingian tradition: the monastery of Piasca (Cantabria). Although it is wise to exercise the utmost caution when interpreting this site, it is possible that it is an example of a regular plan with perpendicular walls in the nuns' residential area[31] (Fig. 3). Recent excavations have revealed the foundations of a monastic building (N-S) constructed in the 8th-10th centuries[32], which was expanded both in area and height during the 12th century. The common room is perpendicular to the Romanesque church and, presumably, to the preceding early medieval church, and is based on the principal of regularity without being fully orthogonal. To date it is the only known example of what seems to be the regular organisation of a cloistral area in the central northern Iberian Peninsula during the 9th-10th centuries.

Given these examples, it makes sense to ask whether we are faced with a native tradition that, with certain variations, spread throughout the Mediterranean from late Antiquity[33] or whether El Tolmo and Piasca are random and unconnected examples of regularity in Iberian monastic and cathedral patios. For the moment, we can only state that monasteries in the Hispanic tradition organised their residential areas to separate the monks from lay people in accordance with the decree issued by the 3rd Council of Saragossa (691). No non-member of the religious community, even with authorisation from the abbot, was permitted to stay or live within the walls of the monastery (*infra claustra monasteriorum*, *infra claustris monasteriis*). Access to the cloister was to be controlled to keep the monks and nuns from undesirable contacts with the outside world, according to the and Council of Seville (619)[34].

[31] The year 930 sees the first mention of two women associated with a basilica founded in Piasca, with evidence of no fewer than four bishops, and in 941 the first explicit reference appears to a "monastery". It was a monastic *pactum* between 36 women, with the abbess Ayloni at their head, and a series of men. They adhered to the real legal contract that the rule of Saint Fructuosus established between monks and nuns, and between them and their respective abbots.

[32] R. BOHÍGAS, E. CAMPUZANO, *Piasca*, in *Clavis. Boletín del Museo Diocesano de Santillana del Mar*, 4, 2003, p. 9-81, part. 32 and 80.

[33] J. LÓPEZ QUIROGA, *Early Byzantine Urban Landscapes in the Southwest and Southeast Mediterranean*, p. 77 and 98-100.

[34] J. VIVES (ed.), *Concilios visigóticos e hispano-romanos*, Barcelona-Madrid, 1963, pp. 477 and 170. See in particular article 3.

THE FIRST POST-CAROLINGIAN REGULAR CLOISTERS SOUTH OF THE PYRENEES.

From the beginning of the 9th century, cenobitic organisations in Catalonia were often referred to by the term *monasterium*. Occasionally the word *cenobium* was used and, particularly in the diocese of Urgell, the term *locus* was used as an alternative to *monasterium*[35]. As far as we know, during the 9th century no monastery south of the Pyrenees adopted the topographical organisation found in Carolingian monasteries, despite the fact that the area constituted the Hispanic March of the Carolingian kingdom and later empire.

The adoption of the Benedictine rule after the conquest by Charlemagne's troops was neither automatic or widespread[36]. In fact, monasteries in the Urgell area such as Gerri (807), Servàs (833), Oveix and Maleses were re-established in the 9th century and were governed by a pact between the monks and the abbot-owner rather than the rule of Saint Benedict. This only serves to underscore the survival of Visigothic monasticism in the Alt Urgell, Pallars, Noguera and Ribagorça regions[37]. It seems, therefore, that during the 9th century, monasteries in the Spanish March remained uninfluenced by the topographic model of Benedictine monasteries built in the 8th and 9th centuries in Bavaria, Hesse, Thuringia or Alemannia, and this would also explain why we find late surviving examples of traditional vernacular forms[38].

In the second half of the 10th century, the Catalan counts became closely involved the development of abbeys in their respective territories[39]. Such patronage in turn encouraged the spread of the Benedictine rule and Roman-Carolingian liturgy. Recent material and archaeological finds at the monastery in Ripoll confirm the construction of a well-defined quadrangular cloistral precinct before the year 1000. It was the first time on both sides of the Pyrenees that a regular cloister had been built with monastic offices arranged around it orthogonally. The cloister at Ripoll appeared a generation before the formulas adopted at other Catalan complexes such as Sant Cugat (beginning of 11th century), which had a stone portico from the outset, or the cloister below Sant Pere de Rodes. The adoption of this formula needs to be compared with other early Catalan sites such as Colera and Cornellà de Conflent.

At the same time it is particularly interesting to note a change in building technology brought about by the various generations of builders. The documentary sources record the use of new building techniques that increased the size and sturdiness of these temples. The use of lime mortar in place of mud to join the stones was a fundamental development. At Saint Germain de Cuxa in 953 *edificavit eam mirifice ex calce et lapidibus et lignis dedolatis mirifice*[40]. This indicates the introduction of walls made with dressed stone and lime mortar or rubble work with wood reinforcement. Similarly, the church of Sant Quirze de Colera *caucibus et petris utilitas reformavit*[41]. These are the same materials used for the cloister of Barcelona cathedral in 1109 (*ex pariete petra et calce*) although in this instance it should be emphasised that the result was a wall constructed from courses of stones which is clearly a radically different solution from the traditional rammed-earth wall. Furthermore, the irregular stonework used in 10th-century buildings has nothing in common with the later use of ashlar, a real and radical innovation from the *first Romanesque* developed south of the Pyrenees in the first decades of the 11th century. Consequently, although the documents indicate that lime was used, the generic term *petra* does not make it clear whether the building was constructed pre-Romanesque stonework or Romanesque ashlar.

The solutions regarding spatial organisation adopted in the County of Barcelona and neighbouring counties in the 10th and 11th centuries can be interpreted as a continuation of Burgundian architectural formulas (which in turn were indebted to the aforementioned Carolingian cloisters) given that the topography of churches in this region used external forms and diverged from the native tradition. The influence of Burgundy is unquestionable at the emblematic monastery

[35] P. PUJOL, *L'acte de consagració i dotació de la catedral d'Urgell de l'any 819 o 839*, in *Estudis romànics (Llengua i literatura)*, 2, 1917, p. 92-115, part. 107; R. D'ABADAL, *El renaixement monàstic a Catalunya després de l'expulsió dels sarraïns*, in *Studia monastica*, III, 1961, p. 167. These same places are referred to as monasteries in other documents from the 9th and 10th centuries: Alaó, *monasterium*, 840; Sancta Grata, *monasterium*, 823; La Grassa, *monasterium*, 948; Taverna, *monasterium*, 840; Sanctus Andreas (Sentilias; Sant Andreu de Tresponts) *cenobium*, 944 and 976; Santus Climent (Sant Climent de Codinet), *monasterium*, 840; Sanctus Laurentis (Morunys), *monasterium*, 918 and 964; Santus Vicentius (Gerri), *monasterium*, 840. C. BARAUT, *Els documents dels segles IX i X conservats a l'Arxiu Capitular d'Urgell*, in *Urgellia*, II, 1979, p. 7-145: Santa María de Arles, 820: *monasterium et cellulas quas ipsi ad heremo construxerun*t; Saint-Genis-les-Fonts: *construxit a fundamentis quoddam monasterio.*

[36] R. D'ABADAL, *Del visigots als catalans*, Barcelona, 1969, p. 369-370. Oveix and Maleses adopt the Benedictine Rule in 868. At Sant Llorenç de Morunys in 1019 the abbot Poncio de Tavèrnoles introduced the Benedictine rule *qui necdum in eodem monasterio minime tenuevant*. The Rule of Saint Benedict had hardly been considered before then, which means that the Hispanic "common rule" must have survived during this period. Regarding private churches such as Gerri, see O. ENGELS, *Schutzgedanke und Landesherrschaft in östlichen pyrenäeurum (9.-13. Jahrhundert)*, Spanishe Forshungen der Görresgesellschaft 2/14, Münster, 1970, p. 49-58. G. BOTO VARELA, *Topografía de los monasterios de la marca de Hispania (ca. 800-ca. 1030)*, in *Monjes y monasterios en la Alta Edad Media*, J. A. García de Cortázar, R. Teja (coords.), Aguilar de Campoo, 2006, p. 147- 203, part. 160.

[37] M. RIU, *Las comunidades religiosas del antiguo obispado de Urgell, siglos VI-XVI*, Summary and conclusions of thesis, Universitat de Barcelona, Barcelona, 1961.

[38] I have interpreted the settlement at Sant Romà de Sidillà (Foixà, Girona) as a monastery with a Hispanic topography and liturgical tradition, datable to the second half of the 10th century: G. BOTO, *Topografía de los monasterios de la Marca de Hispania (ca. 800-ca. 1030)*, p. 162-164. The first information on this site is in M. OLIVA PRAT, *Noticias sobre iglesias prerrománicas gerundenses*, in *Revista de Girona*, 20, 1962, p. 65-89, part. 67-68. E. JUNYENT, *L'arquitectura religiosa a Catalunya abans del romànic*, Barcelona, 1983, p. 84.

[39] I. LORËS, *L'arquitectura monàstica preromànica i les seves relacions amb Europa: Sant Miquel de Cuixà*, in Pere de Palol (dir.), *Del romà al romànic: història, art i cultura de la Tarraconense mediterrània entre els segles IV al X,* Barcelona, 1999, p. 414-416.

[40] P de MARCA, *Marca Hispanica, sive Limes Hispanicus, hoc est, Geographica et historica ...*, Paris, 1688, c. 869; *Sant Miquel de Cuixà*, in *Catalunya Romànica*, VII, *La Cerdanya. El Conflent*, Barcelona, 1995, p. 363.

[41] J. BADIA, M. L. RAMOS, *Sant Quirc (o Sant Quirze de Colera)*, in *Catalunya Romànica*, IX, *Empordà*, II, Barcelona, 1990, p. 756.

of Cuxa and its building work by Abbot Garín, whose church was consecrated in 974[42]. In the light of this argument, it is not feasible to say that the regular layouts of these cloisters owed their existence, even generically, to preceding Hispanic solutions, such as those at El Tolmo, Vallejo del Obispo or Piasca. I will now turn my attention to each of the known examples of regular cloisters (or embryonic cloisters) in Catalonia and Aragon[44].

Sant Llorenç prop Bagà

The history of this complex has been uncovered and related by López and Caixal[43]. Originally a site consisting of individual hermit caves, in the 8th century an eremitic community was created that continued to reside in caves looking out over the Bastareny valley[45]. In the same century, this Visigothic monastic community built its first church, which was of modest dimensions and well oriented. López and Caixal interpret a small horseshoe-shaped exedra in an external wall as a church, but in the absence of any remains of liturgical furnishings it is very difficult to identify the real function of this structure. During the first half of the 10th century, a room was built for the monks along a N-S axis, which closes off the complex on the gully side (Fig. 4) in a layout and with a chronology analogous to those at Piasca, despite the geographic and cultural distance between the two sites. Of this first pavilion at Sant Llorenç, only fragments of wall remain from the ground floor (ashlar with lime mortar), but a set of steps shows that it had a second floor. The monks moved into the common building, which partly destroyed the necropolis. The external doors were remade during one of the phases in the 11th and 12th centuries. This work could not possibly have been undertaken without the support of the count of Cerdanya-Besalú.

The basilica was built during a fourth phase, presumably coinciding with the consecration in 983, the moment when the counts granted the monastery immunity[46]. Parallel to the south wall a new necropolis was built because the church was built over the old cemetery (7th-8th century). Associated with the church and the first monastic pavilion was a trapezoidal cloister with porticoed galleries to the west consisting of round segmental arches and built in ashlar with lime morter[47]. López and Caixal speculate that this cloister was built in the second quarter of the 11th century. The stylistic criteria, however, situate the cloister of Sant Llorenç in the mid or second half of the 11th century. Without doubt, the complex presents an unmistakeable degree of maturity in its overall conception. The functional layout of the galleries is in keeping with the usual principle applied in Benedictine monasteries, albeit with slight variations[48]. It seems that a series of modifications was made in the 11th century. The most important and somewhat disconcerting change is the opening up of a door between a pair of windows facing the entrance portico of the church. Given that it does not look onto the cloister, it is highly unlikely that it is a chapterhouse.

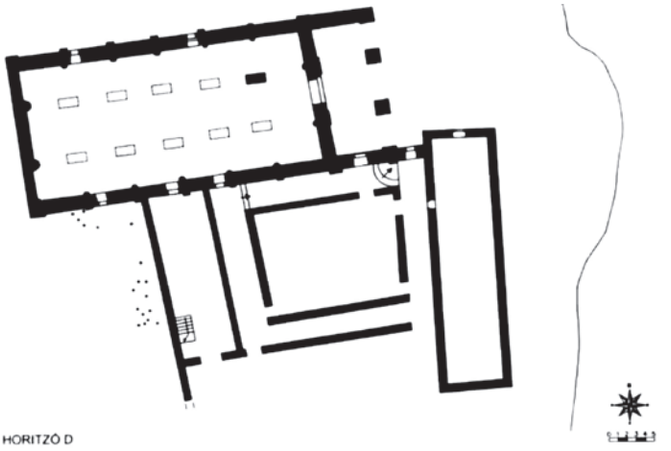

Fig. 4. Sant Llorenç prop Bagà, early 11th c. © A. López, A. Caixal, 2008.

Sant Miquel de Cuxa

The complex and exciting history of this monastery is well-known from the works of D'Abadal and Ponsich[49]. Regarding the configuration of the first monastic cloister, I will limit myself to stating that the ambitious church of San Miquel, started in 956, was supported by Count Sunifred of Cerdanya and supervised by Abbot Ponce and, after his death, by the new abbot, Garin[50], assisted by an anonymous but prized architect[51]. The church was consecrated and

[42] R. D'ABADAL I DE VINYALS, *Dels visigots als catalans*, I, *La Hispània visigòtica i la Catalunya carolingia*, Barcelona, 1969, p. 462; I. LORES, *Los promotores del arte catalán del siglo X*, in *Cataluña en la época carolingia. Arte y cultura antes del románico (siglos IX y X)*, Barcelona, 1999, pp. 191-196; G. BOTO VARELA, *Monasterios catalanes en el siglo XI. Los espacios eclesiásticos de Oliba,* in *Monasteria et Territoria. Elites, edilicia y territorio en el Mediterráneo medieval (siglos V-XI),* J. López Quiroga et al (eds.), Oxford, 2007, p. 284-289.

[43] G. BOTO, *La organización de los claustros románicos peninsulares: proyectos germinales y retos funcionales*, in G. R. Vairo y J. R. Melo (eds.), *Claustros no Mundo Mediterrânico Século X-XVIII*, Lisboa, 2016, pp. 151-178.

[44] A. LÓPEZ, A. CAIXAL, *El monestir de Sant Llorenç prop Bagà Hipòtesi general d'evolució històrica*, in *Actes de les jornades 1907: El paper de l'IEC en la història i en la restauració de monuments medievals a Catalunya i a Europa,* Barcelona, 2008, p. 169-214, with bibliography and results of successive archaeological excavations. See also A. GONZÁLEZ MORENO-NAVARRO, *La restauració de l'antic monestir de Sant Llorenç prop Bagà, a Guardiola de Berguedà*, in *Lambard*, 14, 2001/02, p. 33-45, and the monograph entitled *El nou monestir de Sant Llorenç*, in *L'Erol, revista cultural del Berguedà*, 99, 2008.

[45] J. ENRICH, *El fenòmen eremític rupestre a la Catalunya Central*, in *Temps de monestirs. Els monestirs catalans entorn l'any mil*, Barcelona, 1999, p. 41-43.

[46] Church with three naves separated by prismatic pillars without joined columns, semi-columns on the E and W walls, with a wooden roof. The basilica's apse faced west, as at Tavèrnoles, Elins and Arles-sur-Tec, although the latter had a shrine on the east side.

[47] The steps demonstrate that the cloister had a second floor, but there is no evidence that it was built at the same time as the lower floor.

[48] The functional layout of the sectors can be interpreted as follows: east pavilion: hospital and dormitory; south pavilion: refectory; west pavilion: storeroom below and abbot's room above.

[49] D'ABADAL, *Dels visigots als catalans*, I, p. 377-484. P. PONSICH, *La grande histoire de Saint-Michel de Cuxa au X siècle*, in *Cahiers Saint Michel de Cuxa*, 6, 1975, p. 7-40. A. BONNERY, *Le chevet de Saint-Michel de Cuxa. Nouvelles propositions*, in *Études Roussillonnaises*, XVIII, 2000-2001, p. 97-106, part. n. 7.

[50] Garín arrived in Cuxa in 965 and implemented a rule in accordance with the precepts followed at Cluny. Regarding his patronage, see LORÉS, *Los promotores del arte catalán del siglo X, in Cataluña en la época carolingia*, p. 192.

[51] Abadal and Ponsich imagined that the builder (*stuctorem miri laboris virum*) who accompanied Garín was responsible for the east end O. POISSON, *Sant Miquel de Cuixà. Un monasterio benedictino en los siglos X y XI,* in *Cataluña en la época carolingia*, p. 233.

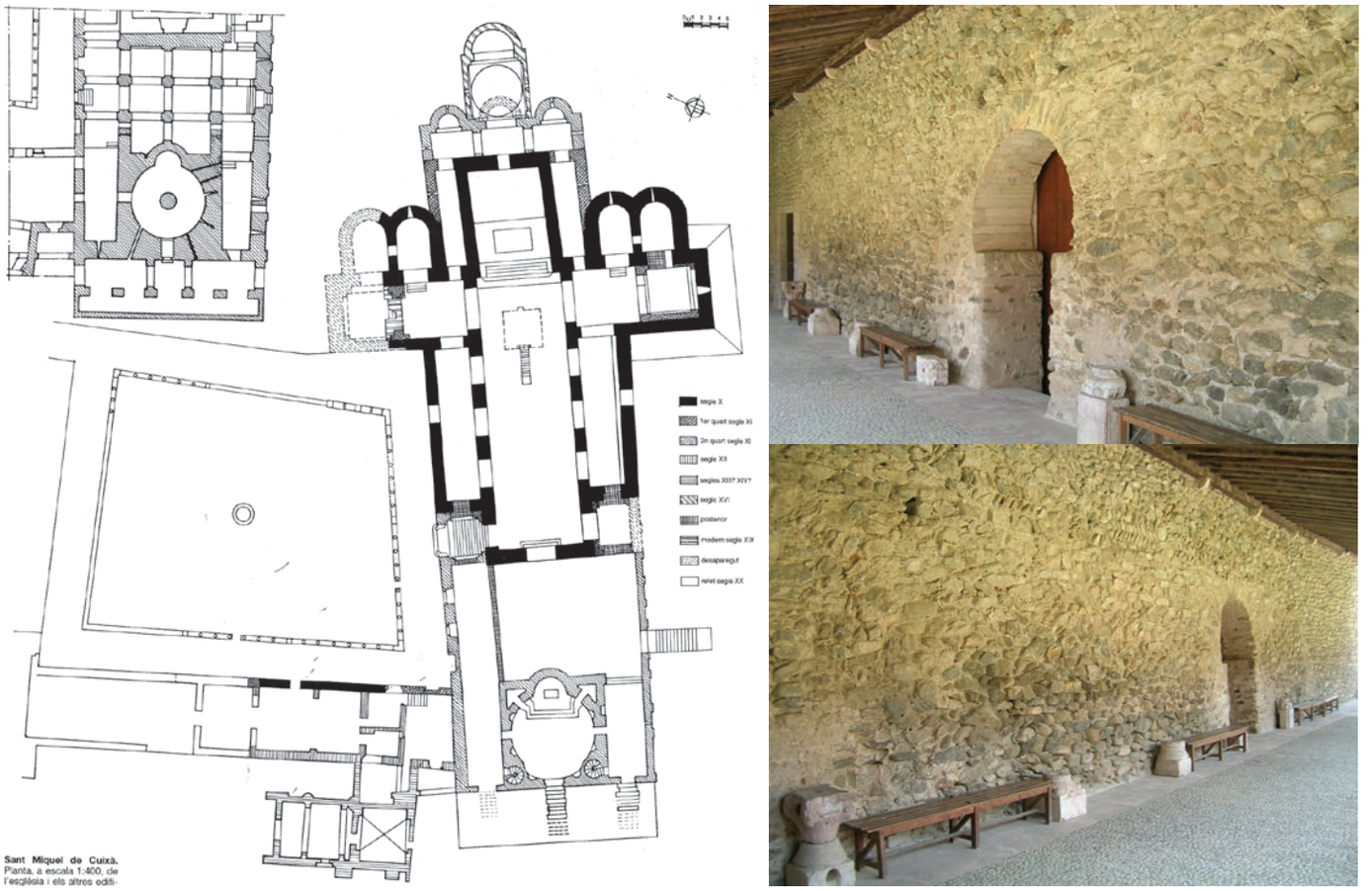

Fig. 5. Sant Miquel de Cuxa. © Servei de Patrimoni. Generalitat de Catalunya.

presumably finished in 974, with seven celebrants, among them man who recorded the event, the count-bishop Mirón Bonfill of Girona[52]. Only one section of the cloister wall remains from this building phase, built in masonry and *opus spicatum* on the west gallery of the Romanesque cloister (Fig. 5). There is general agreement that this first isolated community room delineated the western limit of the patio from the 10th century onwards[53].

Sant Esteve de Banyoles

The documentation states that in 812 Abbot Bonitus, with the support of Count Odilo, founded this monastery dedicated to the protomartyr, which was built over or joined to the abandoned ruins of a pre-Islamic church[54]. The monks were committed to both physical and spiritual reconstruction, as at other monasteries[55]. The list of buildings shows that from the beginning of the construction work there were community offices segregated from the hostel for guests and the poor. In the first third of the 10th century Muslims destroyed the 9th-century building in an attack. After this, the second reconstruction of the church of Saint Stephen was undertaken. This, the most magnificent church of its day south of the Pyrenees, was rebuilt in stone and lime from the foundations to the vaults, an expensive solution but one that would eliminate the risk of destruction by fire in the future[56].

This church was substituted for another one that was consecrated in 1086 and had three apses, a transept and three naves. In 1981 excavations in the crossing and southern transept revealed two parallel and tangent apses that predated the 11th-century work. The main apse is an elongated semicircle tending towards a horseshoe shape and regular masonry work joined with lime mortar grout-lifts characteristic of the first half of the 11th century. Another apse was attached to the north flank, smaller in radius but with more robust walls made with regular courses of travertine. This apse has been interpreted as dating to the beginning

[52] J.M. SALRACH, *El comte-bisbe Miró Bonfill i l'acta de consagració de Cuixà de l'any 974*, in *Acta historica et archaeologica mediaevalia*, 10, 1989, p. 107-124.

[53] BOTO, *Topografía de los monasterios de la Marca de Hispania (ca. 800-ca. 1030)*, p. 170-175; ID., *Monasterios catalanes en el siglo XI. Los espacios eclesiásticos de Oliba*, p. 284-289.

[54] Precept awarded by Louis the Pious in 822. Ll. CONSTANS, *Diplomatari de Banyoles*, I *(De l'any 882 al 1050)*, Centre d'Estudis Comarcals de Banyoles, Secció d'Estudis Medievals, Banyoles, 1985, doc. 1. BOTO, *Topografía de los monasterios de la Marca de Hispania (ca. 800-ca. 1030)*, p. 147-203.

[55] For the monastery at Vedella see D'ABADAL, *Dels visigots als catalans*, I, p. 375. The same attitude was independently recorded by the monks at Escalada (913), Castañeda (921) and San Pedro de Montes (919). M. GÓMEZ-MORENO, *Iglesias mozárabes. Arte español de los siglos IX a XI*, Madrid, 1919, p. 141, 169 and 215.

[56] In 957 Bishop Arnulfo consecrated a new church patronised by Abbot Acfredo. The document of consecration ceremony at Sant Esteve de Banyoles in 957 expresses its pride that the roof was constructed using the of the previously unknown technique of vault roofing. See J. MONER, J. RIERA, *Sant Esteve de Banyoles*, in *Catalunya Romànica,* V, *El Gironès – La Selva – El Pla de L'Estany*, Barcelona, 1991, p. 394; A. SANZ i ALGUACIL et al., *Sant Esteve de Banyoles*, in *Catalunya Romànica,* V, p. 395.

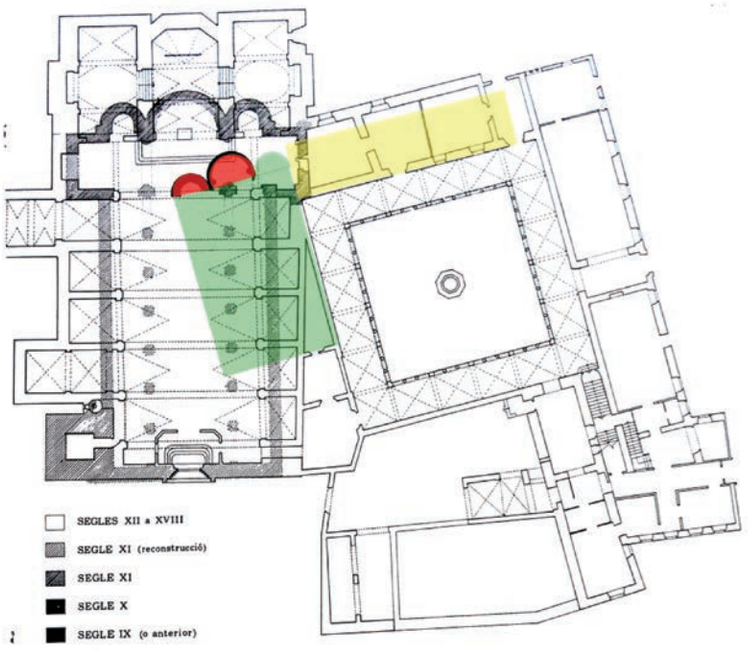

Fig. 6. Sant Esteve de Banyoles (Girona), outline of the 9th-10th c. phase. © G. Boto.

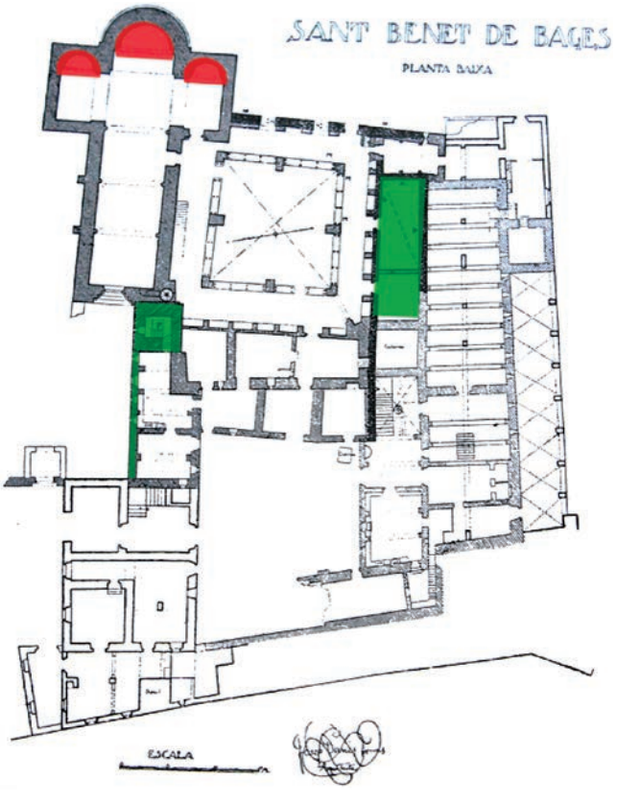

Fig. 7. Sant Benet de Bages (Barcelona), outline of the 10th-11th c. phase. © G. Boto.

of the 9th century[57]; however, other authors believe that it is the shrine from late Antiquity that was reused by Abbot Bonitus in an attempt to demonstrate historical continuity[58]. Albeit with caveats, it seems plausible that Bonitus reused a previous structure. However, the materials in the main apse and the thinnest walls correspond to the description of the church consecrated in 957.

The 7th-10th century exedras are perpendicular to gallery E of the cloister, but they do not fit in with the church's Romanesque or Renaissance phases. This deviation in the cloister was necessitated by the position of its oldest gallery to the east, and can only be explained by the existence of other structures prior to the church consecrated in 1086. The gallery was also at a right angle to the 9th-10th century east end (Fig. 6). This implies that it was built at the beginning of the Carolingian-influenced period of comital rule. The structure must have been sufficiently significant for the Romanesque builders to conserve it rather than building a new office at a right angle to the east end of the church from 1086. We do not know if the office, which contained the monks' common room and the dormitory, was built before the first half of the 10th century (as at Sant Llorenç prop Bagà) or in the last third of that century or after (as at Cuxa). Whatever the case, we may speculate that it existed by the end of the first millennium.

Sant Benet de Bages

The surviving monastic church was built at the end of the 12th century. Work on the east end and the façade was limited by two obstructions that limited the dimensions, location, development and orientation of the new construction. As a result, the transept encroached onto a sector of the monastic cloister from the 10th-11th centuries, in particular the monks' pavilion, which contained the chapterhouse (Fig. 7). The width of the cloistral walkway (ca. 1225) was also limited on its NE and NW corners.

The first chapterhouse had a door and windows mounted on advanced stanchions and shortened diaphragm arches. The shape of the windows and the installation of a pseudo-caliphal capital from the second half of the 10th century[59] suggest that the building was constructed shortly after the consecration in 972[60]. A multipurpose room was built for the monks at the end of the 10th century or in the first decades of the 11th century; the room was analogous in form and function to (although somewhat later than) the earliest cloistral buildings at Banyoles and Sant Llorenç prop Bagà. The cloister of Sant Benet de Bages does not seem to have had funerary functions during its first phase.

Santa María de Ripoll

Since Veclus' revealing archaeological finds in 2011, this quadrangular patio is now at the sharp end of research into the spatial organisation of complete monastic cloisters[61].

[57] Notes by Julia Butinyà in CONSTANS, *Diplomatari de Banyoles*, I, doc. 1 nota 3.

[58] J. MONER, J. RIERA, *Sant Esteve de Banyoles*, p. 395-397; BOTO, *Topografía de los monasterios de la Marca de Hispania (ca. 800-ca. 1030)*, p. 164-167.

[59] J. VILLANUEVA, *Viage literario por las iglesias de España*, VII, Real Academia de la Historia, Valencia, 1821, p. 204-228; ABADAL, *Dels visigots als catalans*, II, p. 12; F. ESPAÑOL, *Sant Benet de Bages*, Manresa, 2001, p. 12-13; BOTO, *Topografía de los monasterios*, p. 183-186; J. TORNER, *Elements per a l'estudi del monestir de Sant Benet de Bages,* in *Butlletí de la Reial Acadèmia Catalana de Belles Arts de Sant Jordi*, 14, 2000, p. 239-244; C. SUBIRANAS FÀBREGAS, G. VILA i FÀBREGAS, *Sant Benet de Bages. Evolució arquitectònica del monestir a partir de les dades arqueològiques*, in *Tribuna d' arqueologia*, 2009, p. 55-79.

[60] X. SITJES, *Sant Benet de Bages*, Manresa, 1973, p. 71.

[61] I would like to thank the head of the team (www.veclus.cat), Dr Reinald González, for his intellectual generosity. Despite still waiting for the scientific publication of these finds, he has allowed me to present the floor plan with a break-down of the building phases.

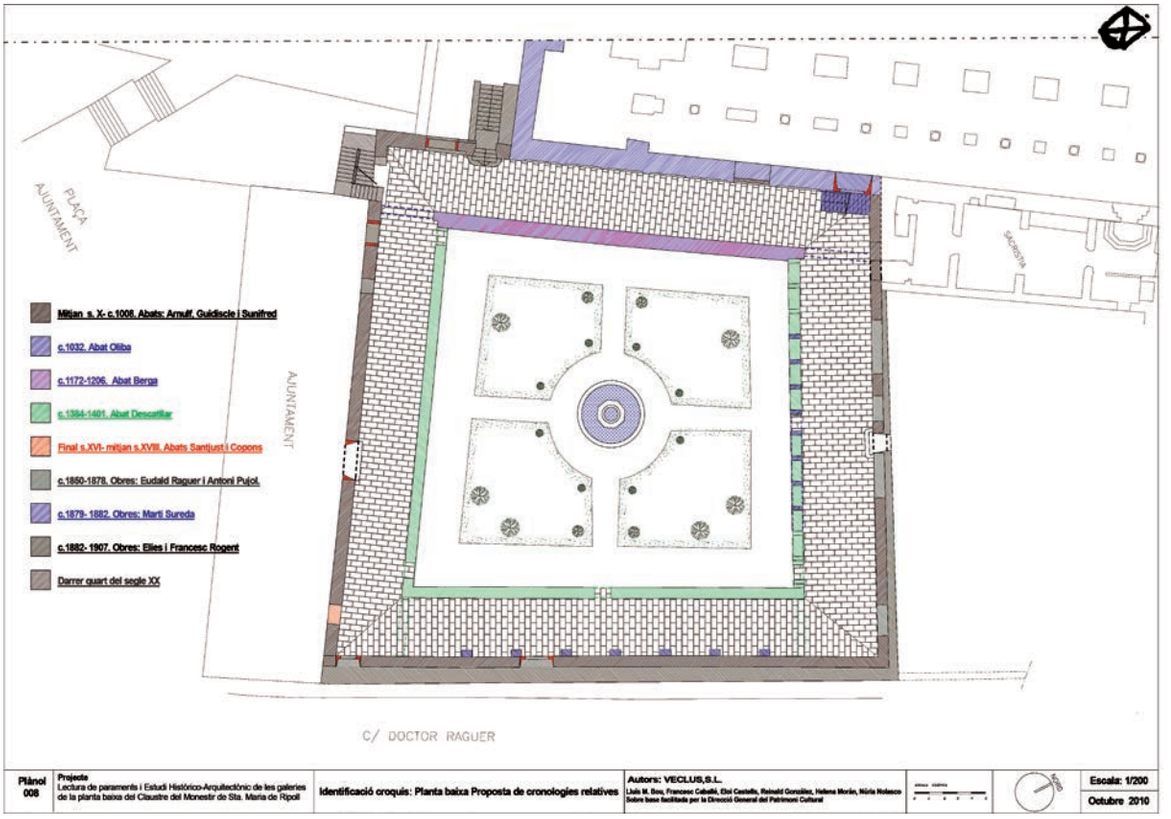

Fig. 8. Santa María de Ripoll, cloister: phase of the 10th c. and next. © Veclus, 2011.

Excavations of the cloister's perimeter walls have uncovered building phases dated to before the church consecrated by Abbot Oliba in 1032 (Fig. 8). The documents tell us that Abbot Arnulfo (948-970) built the cloister and a new church, the whole complex surrounded by a wall that was still standing in 1147. The church started by Arnulfo was completed and consecrated by Abbot Guidisclo or Widisclo in 977[62], an event presided over by Count Oliba Cabreta and witnessed by the count's brother, the bishop and chronicler Miró Bonfill (Miró III of Cerdanya). Bonfill states that the *ecclesia* of Saint Mary, administered by the head presbyter, possessed *tituli* or secondary altars for the Holy Saviour, Saint Michael Archangel, Saint Pontius and the Holy Cross, each one in a lateral apse[63]. This would mean there was an east end with five altars and five apses in a row facing a wide transept. Over this vast and magnificent church from 977[64], Bishop Oliba raised a new one *a fundamentis extruens*, which was consecrated in 1032.

Here it seems appropriate to relate an old oral tradition that survived in Ripoll until the 18th century:

> *It is traditionally said here* [in Ripoll] *that the prelate* [Oliba] *only built the crossing or nave of the main altar, and left intact the naves that open up onto it, which were the work of his predecessors Arnulfo and Widisclo. Since the architecture of the 10th and 11th centuries is the same in the part that had no reliefs, it is not easy to discern this difference*[65].

The recently discovered enormous and fully defined cloister at Ripoll corresponds to the building phase at the end of the 10th century and clarifies a fundamental point, namely that the east end of the church from 977 must have been aligned with the eastern wall of the cloister. Thus the location and length (and perhaps the width) of the 10th-century naves were adopted by Oliba's building (1032). On the other hand, the abbot-bishop created a new east end with seven apses thirty metres to the east of the previous one. For his Comacine-schooled masons, it was clear that the foundation and spatial reference point from which Oliba's church should be executed was not an altar or a martyr's tomb, but rather the pre-existing cloister (Fig. 9).

[62] The first church was promoted by the presbyter Ariulfo and Abbot Dachino in 880 and consecrated by the second one in 888 (J. VILLANUEVA, *Viage literario a las iglesias de España*, VIII, Valencia, 1821, p. 3 and 209-210; R. D'ABADAL, *La fundació del monestir de Ripoll*, in *Analecta Montserratensia*, IX, 1962, p. 187-197). The second consecration (935) brought to a conclusion work financed by Miró II of Cerdanya. We know about the third church and consecration (977) from the record written by Miró Bonfill: J. M. SALRACH, *Miró Bonfill i la solemnitat ripollesa del 977*, in *Revista de Girona*, 24-83, 1978, p. 157-166; ID., *El comte-bisbe Miró Bonfill i l'acta de consagració de Ripoll de l'any 977*, in *Estudis universitaris catalans*, XXVI, 1984, p. 303-318. The fourth consecration (1032) was by the abbot-bishop Oliba.

[63] P. DE MARCA (Gan, Bearn 1594-París 1662), *Marca hispanica sive limes hispanicus, hoc est, geographica et historica descriptio Cataloniae, Ruscinonis, et circumjacentium populorum*, Barcelona, 1998, ap. CXXIII. There is no record in the documents as to whether the church of 977 had five naves.

[64] Cfr. J. CAMPS, C. MANCHO, *La escultura en la Cataluña de los siglos IX y X*, in *Cataluña en la época carolingia*, n. 11; J. CAMPS, C. MANCHO, I. LORÉS, *L'escultura preromànica*, in *Del romà al romànic*, p. 420; X. BARRAL, *Aspectes de l'arquitectura romànica de Santa María de Ripoll*, in *Art i cultura als monestirs del Ripollés*, Montserrat, 1995, pp. 40-41; A. ARBEITER, S. NOACK-HALEY, *Hispania Antiqua. Christliche Denkmäler des frühen Mittelalters. Von 8. bis ins 11. Jahrhundert*, Mainz am Rhein, 1999, p. 409-410.

[65] VILLANUEVA, *Viage literario,* VIII, p. 20.

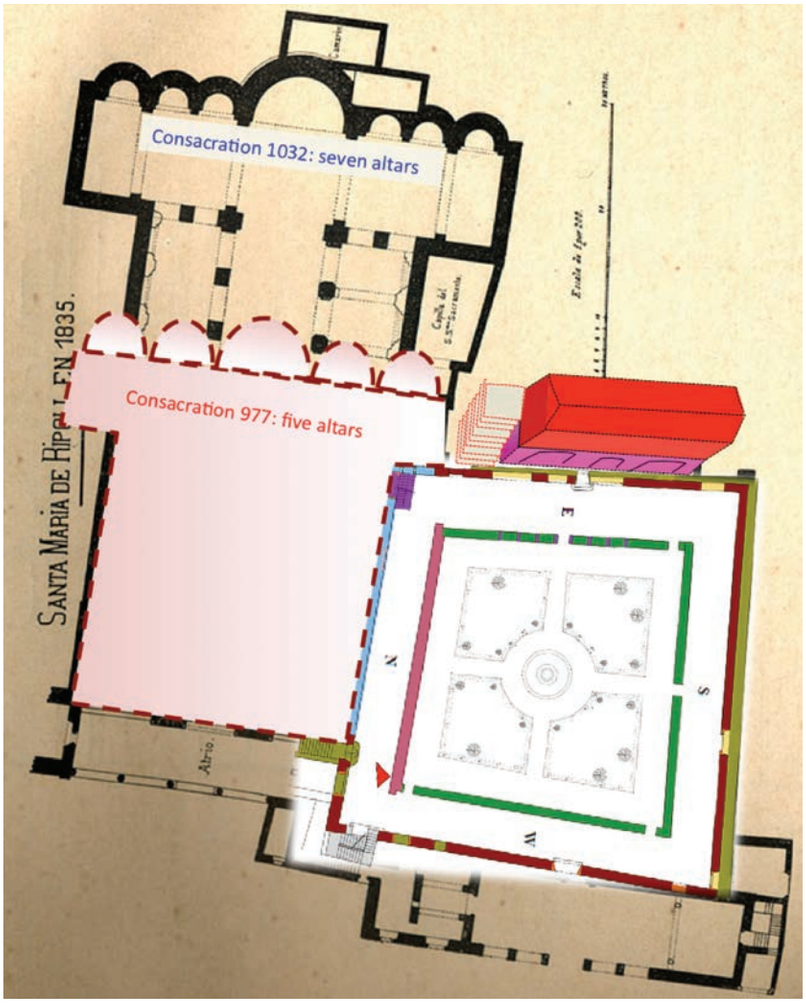

Fig. 9. Santa María de Ripoll, cloister and outline of church consecrated in 977. © G. Boto.

The cloister at Ripoll is oldest monastic quadrilateral on either side of the Pyrenees. The chapterhouse on the east side with its adjacent steps probably leading to the dormitory, the refectory illuminated with twin windows on the south side and the storeroom and parlour to the west all demonstrate that the Carolingian cloistral model was adopted in the county of Besalú before any other county in the March or Septimania. The patio at Ripoll is the first cloister of Germanic and Burgundian genealogy to be built on Catalan and Iberian soil; it is the earliest, the most singular and the most complex, despite the fact that the builders used irregular rubble walling as regularly dressed ashlar had yet to appear.

The Carolingian model spread to the Catalan counties at a time when the political influence of the king of France was beginning to wane. Furthermore, the introduction of the model cannot be attributed to the bishop of Narbonne because we know of no examples analogous to Ripoll anywhere in old Septimania. The temple at Ripoll has been understood, perhaps wishfully, as a replica of the paleo-Christian Roman basilicas, an interpretation that would convert the abbot-bishop into the patron of a new Romanesque architecture and the inspiration behind the Roman aethestics of this abbey. However, the recent discoveries at Ripoll reveal to us that in the 10th century the abbots Arnulfo and Guidisclo were aware of Franco-Germanic currents. It is my belief that these Rhenish-Burgundy currents continued to influence Oliba's architectural project, where, if truth be told, he led a radical reinterpretation of indigenous solutions already present in the monumental transept with seven parallel apses at Cuxa.

Sant Cugat del Vallès

At this site, a memorial church was built over an early Roman fortified settlement, and then over this church a monastery was constructed. The church in the settlement of Sant Cugat del Vallès has one nave and a horseshoe apse built in the 6th century and has no connection with the site where Saint Cucuphas was martyred in Barcino. In 878, around the birth of this monastic community, the king Louis the Stammerer gave the house of Octavianus to the bishop of Barcelona[66]. The institutional and economic development of the abbey enabled the construction of a new church at the start of the 11th century.

Archaeological analyses indicate that building work started on this abbey at the beginning of the 11th century and was executed over two successive phases using resources from the first Romanesque period. This interpretation is consistent with a documentary reference from 1013 in which the bishops of Barcelona, Girona, Vic and Osona authorise Abbot Guitard to sell some of the monastery's goods and use the money for *opera de ipsa claustra quod habebant inchoata* [...] *ex eorum precio edificassent ipsa claustra*[67].

The NW monastic pavilion housed the refectory and the NE pavilion, perpendicular and two floors high, was used as the chapterhouse. Both structures have were built with lightly dressed stone and lime mortar in horizontal incised lines and with large cornerstones. Later the NW pavilion was extended to the west and the SW pavilion was built to house the storeroom. These two offices (perhaps two floors high) were built at tangents, unlike the first ones[68]. At this point the open corner between the existing NW and NE galleries was closed[69]. Artigues and the other researchers

[66] P. BOSCH-GIMPERA, J. de C. SERRA RAFOLS, *Scavi a Sant Cugat del Vallès (Catalogna). Dal castrum romano al monastero attuale*, in *Rendiconti della Pontificia Academia Romana di Archeologia*, XXXVII, 1964-1965, p. 307-323; M. BLASCO, *Sant Cugat del Vallès. La configuración del monasterio y sus precedentes, in Cataluña en la época carolingia*, p. 228-231; P. ARTIGUÉS et al., *Les excavacions arqueològiques al monestir de Sant Cugat del Vallès o d'Octavià (1993-1994). La fortalesa romana, la basílica y la implantació del monestir*, in *Gausac*, 10, 1997, p. 15-75; P. ARTIGUÉS, *El monestir de Sant Cugat del Vallès. L'evolució arquitectònica a partir de l'arqueologia*, in *II congrés d'arqueologia medieval i moderna a Catalunya*, s. l., 2003, p. 18-28; G. BOTO, *Monasterios catalanes en el siglo XI. Los espacios eclesiásticos de Oliba*, p. 283-284.

[67] J. RIUS SERRA, *Cartulario de 'Sant Cugat' del Vallés*, Barcelona, 1946, II, p. 103. Ninguna otra carta alude a las obras de la *claustra*. Cfr. J. AMBRÓS, *El monestir de Sant Cugat del Vallés*, Oikos-Tau, Vilassar de Mar, 1981, p. 26; A. YEPES, *Crónica general de la Orden de San Benito*, J. Pérez de Urbel (ed.), Madrid, 1960, p. 415-416.

[68] Cfr. E. RIU-BARRERA, *San Cugat del Vallès*, in *Catalunya Romànica*, XXVII, Barcelona, 1998, p. 224-227.

[69] Cfr. G. BOTO, *Sant Pere de la Portella*, in J. Yarza, G. Boto (coords.), *Claustros románicos hispanos*, León, 2003, p. 291.

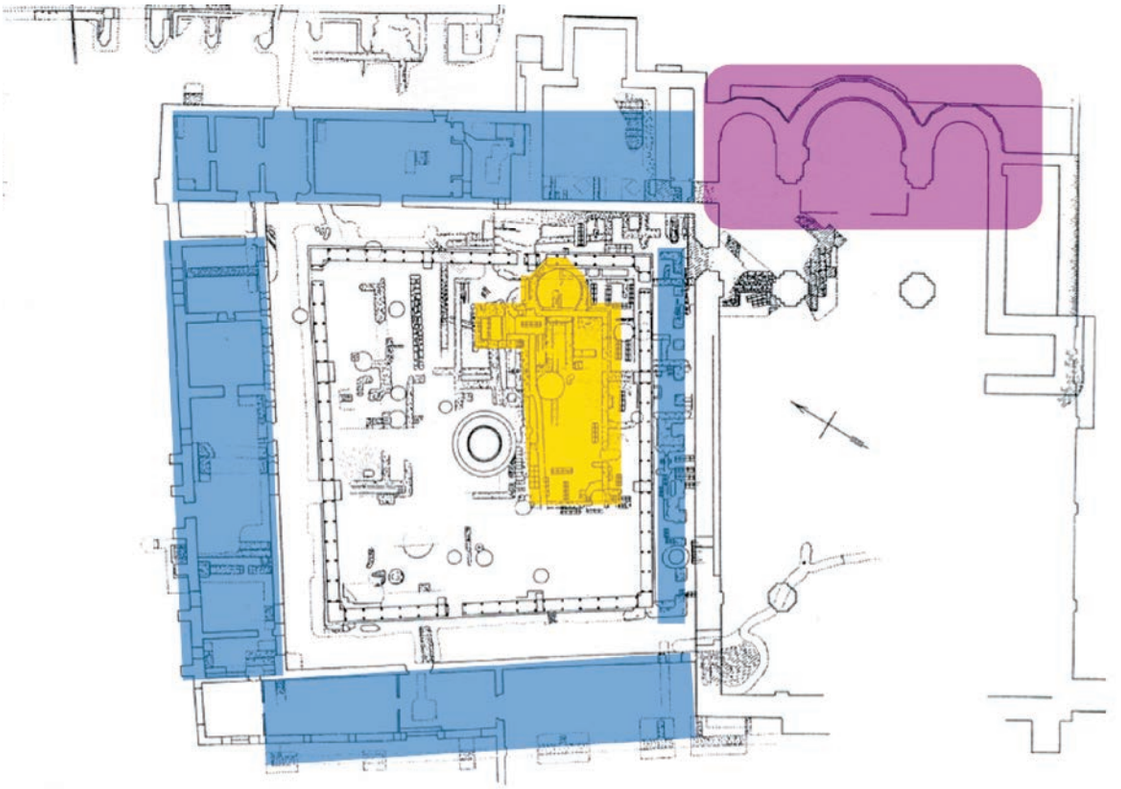

Fig. 10. Sant Cugat del Vallès, cloister: first third of the 11th c. Plan © P. Artigues, 2003.

on the investigation believe that the cloister of the abbey of Sant Cugat was completed during the first third of the 11th century and completely surrounded the venerable Visigothic church (Fig. 10). We know now that the cloistral model adopted at Sant Cugat had been used previously by the builders at Ripoll.

The construction of the cloistral pavilions around the old paleo-Christian and Visigothic church, and not at its side, necessitated the construction of new east end aligned with the NE gallery at the beginning of the 11th century. Various documents from 1006, 1010 and 1012 refer to a *Fedancio* or *Fedancius* as the *artificem petre* and *architectus et magister edorum*[70], to whom we must attribute the work on the church and the oldest parts of the cloister[71]. In contrast, my interpretation is that it was the new east end that determined the layout of the chapterhouse gallery and, orthogonally, the north and south galleries. If we were to imagine that the NE and NW pavilions were sited without considering the location of the new church, we would have to accept that they were built out of line with the other buildings and that therefore they do not form part of an overarching cloistral project. On the other hand, if the east end did play a fundamental role, we can imagine a quadrilateral patio built almost simultaneously on three sides. However, only archaeology will confirm if it was an overarching and multifaceted project.

If the paleo-Christian basilica had been a *martyrium*, the body would never have been moved to another location without very good historical reason. Quite the opposite in fact, there would have been a fierce loyalty to the *locus sanctus* of the supposed martyrdom. The topographic changes to the monastery of Sant Cugat rule out the possibility that its church was indeed the site of the saint's martyrdom in late Antiquity. Whatever the case, the new building project did not prevent the old Visigothic oratory (now fully enclosed by the cloister) from remaining in service until the mid-11th century. It may be that the abbey of Sant Cugat is another surviving example of a prestigious architectural form: the monument as reliquary. If the abbey was built for this purpose, it would have been an unusual development and we still need to find a satisfactory explanation. The requirements of liturgy and worship would have meant that the erection of the new altars, in particular the main one dedicated to Saint Cucuphas, necessarily implied the *translatio corporis* of the saint. Thus, the relics of Saint Cucuphas, or at least most of them, would no longer have remained in the patio.

For reasons that are still not clear, for decades the monks did not use the old church dedicated to Saint Cucuphas, which remained as a true monumental reliquary. It is clear that there was a singular relationship between the monks at Sant Cugat and the venerable shrine containing the saint's relics.

The archaeological excavations by Bosch Gimpera and Serra Rafols uncovered the foundations of a row of pillars a metre and a half from the outer wall of the south gallery of the cloister that survives to this day. These pillars supported arches that sprang directly from the ground like those in the first cloister of Sant Pere de Rodes or that of La Portella, and remains found at the corners suggest that there were

[70] I. LORÉS, *Sant Cugat del Vallès*, in *Enciclopedia del románico en Barcelona*, vol. 3, Barcelona, 2014, p. 1321-1335, part. 1322.

[71] Only the bell tower, built in 1063, has survived from this period.

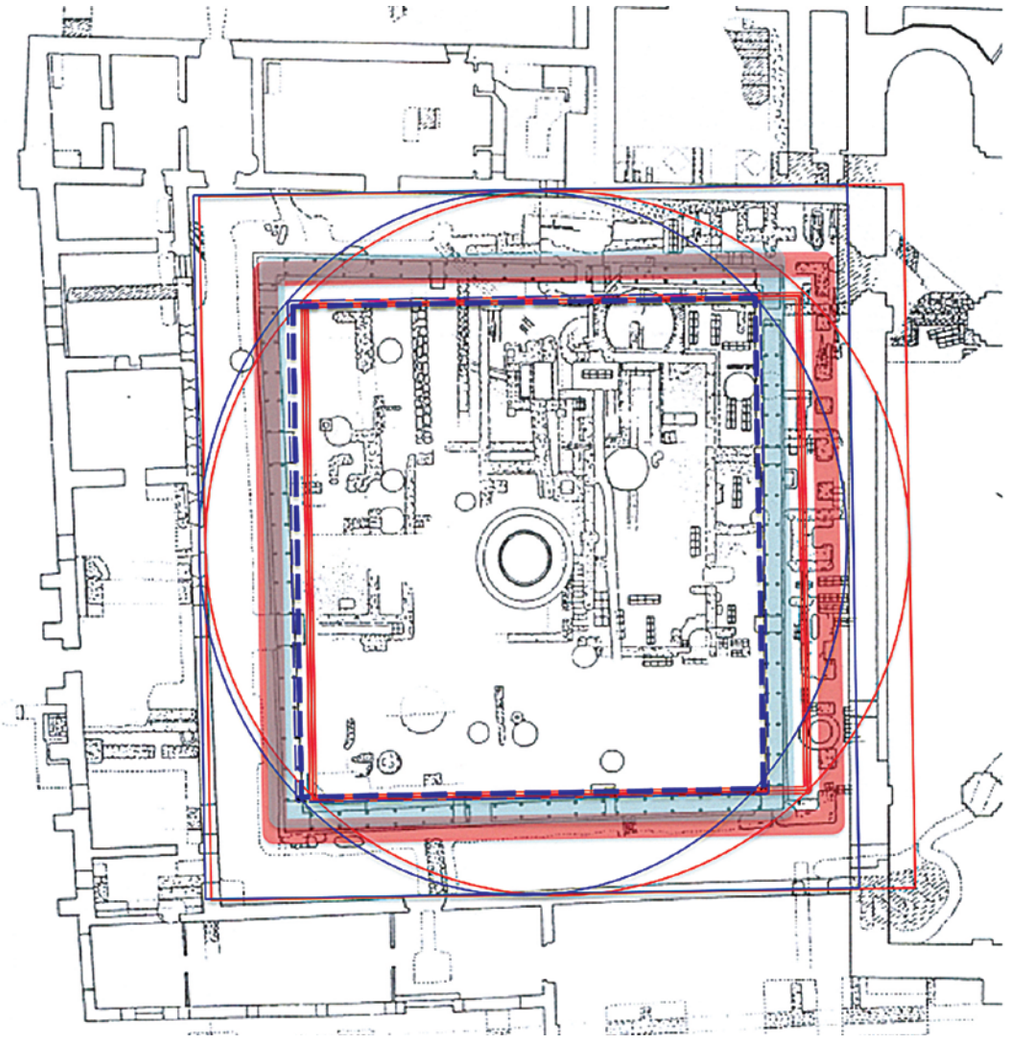

Fig. 11. Sant Cugat del Vallès, cloister: first third of the 11th c. and late 12th c. phases. Plan © P. Artigues, 2003. Layout © G. Boto.

porticos on more than one side. The proximity of the row of pillars to the current wall of the church led Ambrós to deduce that the northern limit of the original Romanesque church was further south than the one that we can see today. Furthermore, Bosch Gimpera revealed a great arch with a span of more than four metres in the central point of the porticoed south-west gallery. There is no evidence of an intermediate support so we must assume that this did not exist, despite Artigues and the other researchers' initial arguments to the contrary. The span of more than four metres would have been the entrance to the early shrine. I suspect that the 11th-century monks engaged in liturgical processions around and into the first shrine and ancient church-reliquary[72]. However, the absence of such a walkway at the end of the 12th century shows that the *visitatio veteri sanctuarii* was no longer undertaken. Moreover, the late-Romanesque gallery to the south-east is built over the east end of the 6th-century shrine. Therefore, the shrine was disdained and destroyed before the sculpture Arnau Catell began work there around 1200-1210[73], by which point the Benedictines no longer needed to rely on their monastery's status as an age-old shrine or on its original topographical features, given the promising financial position recorded in the documents of the time. The long-standing shrine room was erased from memory until its rediscovery by Bosch-Gimpera and Serra Rafols.

The 11th-century cloister was bigger than the 12th-century one (Fig. 11). The diagram shows red lines that mark the dimensions of the 11th-century patio; a triple red line marks the theoretical location of the gallery if the builders applied the theoretical principle of devoting half the surface to covered galleries and half to a central garden[73], and a faint red stripe indicates the 11th-century galleries, which have a greater length than that suggested by the aforementioned 50% theory. It is clear that the former cloister's walkways were narrower. When the naves of the later-Romanesque church were executed, the surface of the patio was reduced. The blue line marks the new limits, the triple line of blue dashes indicates the hypothetical location of the new late-Romanesque galleries and a faint blue stripe shows the actual location of the galleries made by Catell. In the 12th century, the real position of three galleries almost completely

[72] G. BOTO, *Monasterios catalanes en el siglo XI. Los espacios eclesiásticos de Oliba*, p. 283-284.

[73] I. LORÉS i OTZET, *L'escultura del claustre de la catedral de Girona i del monestir de Sant Cugat del Vallès*, (Tesis doctoral), Universidad de Barcelona 1991; EAD., *Le travail et l'image du sculpteur dans l'art roman catalán*, in *Les Cahiers de Saint-Michel de Cuxa*, XXXVI, 1995, p. 27-33; EAD., *La vida en el claustre: iconografia monàstica als capitells de Sant Cugat del Vallès i el Costumari del monestir*, in *Butlletí del Museu Nacional d'Art de Catalunya*, 6 (2002) p. 35-46; G. BOTO, *Sant Cugat del Vallés*, in *Claustros monásticos hispanos*, J. Yarza, G. Boto (eds.), León, 2003, p. 300-301.

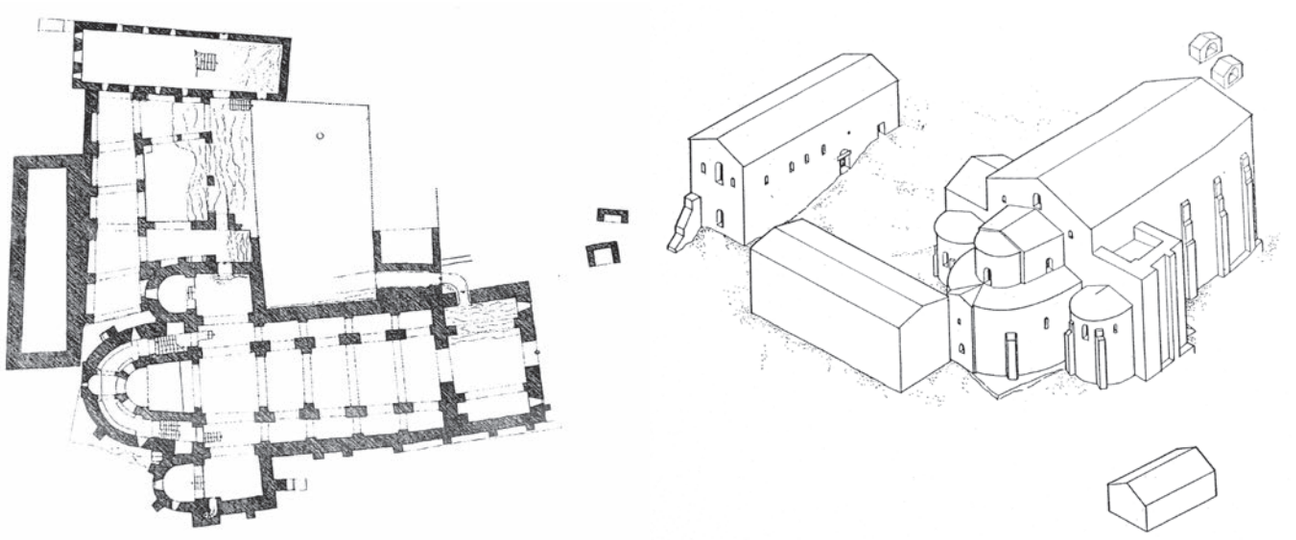

Fig. 12. Sant Pere de Rodes, first half of the 11th c. phase. © J. A. Adell, E. Riu-Barrera, 2001-2002.

corresponded to their where they should have been located according to the 50% theory.

Sant Pere de Rodes

This monastery was built on the same site as an existing solid building executed in ashlar that extended N-S in the 4th-5th centuries[75]. Beyond this, it has been impossible to determine if the original building was ever used for worship or what kind of functional relationship existed between it and the monastery[76]. Between the 7th and 10th centuries, an initial and miniscule church and two small rooms were built from masonry, dry stone walling and *opus spicatum*. They were laid out independently but in an organised manner, with the respective entrances facing each other and the church in the centre, and they may well represent an eremitic settlement during the Visigothic period[77], although there is no way of confirming the extent to which the buildings were innovative or remained faithful to preceding formulas. In Rodes, as at Sant Llorenç and other monasteries, building styles in the 9th and first half of the 10th centuries under the magnate Tasi (+955) prolonged the architectural legacy of late-Antiquity and the Hispano-Gothic periods, of course in their local variants. By the 9th century, the Rule of Benedict would have been introduced alongside the Roman Rite, as at Banyoles.

The exterior of the single-apse church with a simple nave provides the western wall of the ambulatory in the crypt of the Romanesque church[78], which was consecrated in 1022. Lorés believes that the east end would have been made around the year 1000, although work would not have finished before the arrival of the Lombard Romanesque in the first half of the 11th century[79].

The building on the southern flank, perpendicular to the great late-Antiquity construction, was brought into service when the large multipurpose residential building was constructed around the year 1000 (Fig. 12). This monks' pavilion, together with the late-Roman structure and the church, enclosed an irregular intermediate space with an uneven surface that was used for funerary purposes. This formed the basis of the monastic cloister at the beginning of the 11th century. In a second phase, three porticoes with broad arches were installed to connect the three buildings and organise the space. Therefore, the cloister at Rodes was not in the initial plan for the site, but rather emerged subsequently[80]. Certain other monastic cloisters from the turn of the 11th century may also have emerged in a similarly unscripted manner.

San Quirçe de Colera

Among all the attempts at creating vaulted cloisters, San Quirze de Colera is a particularly interesting example. The

[74] This Romanesque tradition was recorded by Villard de Honnecourt in his celebrated sketchbook: f. 20r: *[P]ar chu fait om on clostre autretant es voies com el prael* ("This is how a cloister is made. The galleries have the same surface area as the garden"). VILLARD DE HONNECOURT, *Cuaderno*, A. Erlande-Brandenburg et al. (ed.), Madrid, 1991, p. 134.

[75] I. LORÉS, *El monestir de Sant Pere de Rodes*, Barcelona-Bellaterra-Girona-Lleida, 2002, p. 20 states that it is a late Roman construction and provides a complete bibliography.

[76] M. MATARÓ, E. RIU-BARRERA, *Sant Pere de Rodes. Un monasterio condal en la periferia del extinguido imperio carolingio (siglos X y XI)*, in *Cataluña en la época carolingia*, p. 236.

[77] M. MATARÓ (dir.), *Memòria d'excavació de Sant Pere de Rodes*, 1992, Generalitat de Catalunya, inédita, p. 23-26; LORÉS, *El monestir de Sant Pere de Rodes*, p. 25.

[78] J. LLINÀS, Ll. PALAHÍ, *Sant Pere de Rodes (Port de la Selva, Alt Empordà), Campanya d'excavació, 24.V.94-27.VI.94*, Generalitat de Catalunya, Memoria arqueológica inédita, 1994; J. SAGRERA, (dir.), *Memòria d'Excavació de Sant Pere de Rodes de la campanya de 1994*, Generalitat de Catalunya, Memoria arqueológica inédita, 1994, p. 60-62; J. LLINÀS et al., *Monestir de Sant Pere de Rodes (Port de la Selva, Alt Empordà)*, in *Quartes Jornades d'Arqueologia de les Comarques de Girona*, Consell Comarcal de l'Alt Empordà, Figueres, 1998, pp. 259-265; LORÉS, *El monestir de Sant Pere de Rodes*, p. 30-31: the first patron must have been Count Gofredo de Empuries-Rosellón-Perelada (931-991).

[79] J. A. ADELL, E. RIU-BARRERA, *L'antic monestir de Sant Pere de Rodes. Arqueologia i restauració*, in *Lambart*, XIV, 2001-2002, p. 109-137. LORÉS, *El monestir de Sant Pere de Rodes*, *passim*; P. PALOL, I. LORÉS, *L'arquitectura abans del romànic*, in *Del Romà al Romànic*, p. 409-413.

[80] Cfr. LORÉS, *El monestir de Sant Pere de Rodes*, p. 85. The chronology of the parts was correctly described by MATARÓ, *Memòria d'excavació de Sant Pere de Rodes*, p. 44 and subsequent.

outer wall of the northern gallery has two double-bayed arches in dressed stone sitting on simple pillars made of well cut segments and was brought back into service when it was decided to cover the gallery with a barrel vault after the construction of the still-surviving church in the 12th century. One can observe a change to larger building materials and the elimination of *opus spicatum* above the main arches. This vertical addition was needed for the installation of the arch, which cannot date to before the second half of the 12th century[81]. It is important to stress that the 12th-century builders checked that the pre-existing wall (built in the 11 century and designed in theory to support a wooden ceiling) was able to support the weight of the vault[82] (Fig. 13). Where does this solution come from? Was there an intermediate stage between Rodes and Colera? Was it tested in a dynamic centre of the arts before being used in a rural monastery like Colera?[83]. For the moment I have no convincing answers to these questions.

Fig. 13. San Quirçe de Colera. Photo A. Moreno.

San Vicente de Roda de Isábena

The cathedral of Roda de Isábena was initially patronised by the counts of Ribagorza-Pallars and then by Ribagorza alone out of a desire to demonstrate their political independence from Toulouse and their ecclesiastic independence from Urgell. Although the presence of a Bishop Adolf is documented in 888, the see was not permanently consolidated until about 960 when Count Ramon II agreed with Archbishop Aimery of Narbonne to create a new and small diocese from territory belonging to the large, traditional diocese of Urgell. The son of Count Ramon II of Ribagorza, Odesind, was recognised as the first legitimate prelate (955-976) and presided over the consecration of the cathedral in 957, although we do not know when he started work on this initial building[84]. Galtier thinks that, apart from the church, the only other construction mentioned must have been used by Odesind as the first episcopal residence. In 1006, under the government of Aimery of Narbona, the church suffered a devastating attack by Abd al-Malik which led to a radical reconstruction in the first half of the 11th century. Until a full archaeological excavation is carried out, the only evidence of that pre-Romanesque construction are the foundations of a rough semicircular under the chapel of Saint Augustine (which Bancel has interpreted as the first cathedral baptistery) and a fragment of a sculptured springer[85].

The surviving church was built using formulas characteristic of a mature Lombard style. It has a basilica floor plan, with three apses rising very high over three unevenly distributed crypts. Access for the general public was always located to the south and that of the canons was in the first part of the northern nave. Archaeological analysis of the lower parts of the apses, corresponding to the crypts, leads

[81] In the north-east corner of the cloister, the wall is supported on an arch that springs from the western office of the cloister. This construction was not undertaken before the last third of the 12th century. The arch and vault are built into the wall. Therefore, the vault cannot date to before this period.

[82] The other galleries in the cloister were executed in the 12 century, judging by the carved capitals that were retrieved and analysed during the restoration work. Lores states that both the capitals found during the archaeological work and those privately owned may date from 1170-1180, a moment when the complex was renovated/expanded. On the capitals Lorés detects the influences of Rousillon and Toulousan sculpture from "LA DAURADE", as well as parallels with certain capitals in the triforium at Sant Feliu in Girona. ADELL GISBERT, *Notes introductories a l'estudi de l'arquitectura dels claustres*, 1-5 (1981), p. 272-273; B. AGUSTÍ, D. CODINA, D. DELHOUME, I. LORÉS, M. TEIXIDOR, *Sant Quirze de Colera entre els segles XII i XIV. D'edifici religiós a fortificació militar*, in *Annals de l'Institut d'Estudis Empordanesos*, 31, 1998, p. 111-131; D. CODINA, *Sant Quirze de Colera. Un jaciment arqueològic excepcional*, in *Dossier: Els Monestirs de l'Alt Empordà*, *Annals de l'Institut d'Estudis Empordanesos*, 43, 2012, p. 39-63.

[83] Although for very different reasons, both the cloister at Colera and the one at Sant Llorenç de Sous have a barrel in the gallery adjoining the church. The other galleries had a wooden roof resting on simple arches that were supported by columns and capitals. The execution of both cloisters may correspond to the same chronological period.

[84] F. GALTIER MARTIN, *Las primeras fases constructivas de la catedral de San Vicente de Roda de Isábena (Huesca)*, in R. Benedicto Salas, *La arquitectura románica de los maestros lombardos en Aragón*, Zaragoza, 2012, p. 157-198, part. 165. Also, the basic references: R. D'ABADAL i DE VINYALS, *Origen y proceso de consolidación de la sede ribagorzana de Roda*, in *Estudios de Edad media de la Corona de Aragón*, V (1952), p. 7-82, part. 34-36; ID., *Els Comtats de Pallars i Ribagorça*, Barcelona, 1955, p. 170-183; R. ORDEIG i MATA, *Inventari de les actes de consagració i donació de les esglésies catalanas*, II. *Anys 952-998*, in *Revista catalana de Teologia*, 5-1 (1980), p. 153-180, part. 156-157; F. GALTIER MARTÍ, *Ribagorza, condado independiente. Desde los orígenes hasta 1025*, Zaragoza, 1981; N. GRAU QUIROGA, *Roda de Isábena en los siglos X-XIII: la documentación episcopal y el cabildo catedralicio*, Zaragoza, 2010; I. LORÉS OTZET, *La réforme grégorienne et les églises du diocèse de Roda dans la Ribagorce*, in B. Franzé (ed.), *Art et réforme grégorienne en France et dans la Péninsule Ibérique*, Paris, 2015, p. 91-107.

[85] GALTIER MARTIN, *Las primeras fases constructivas*, p. 168-169 and 176 refer to S. BANCEL, *L'Evêché de Roda en Ribagorza. Étude Historico-Archéologique*, Pau, 1973, p. 66.

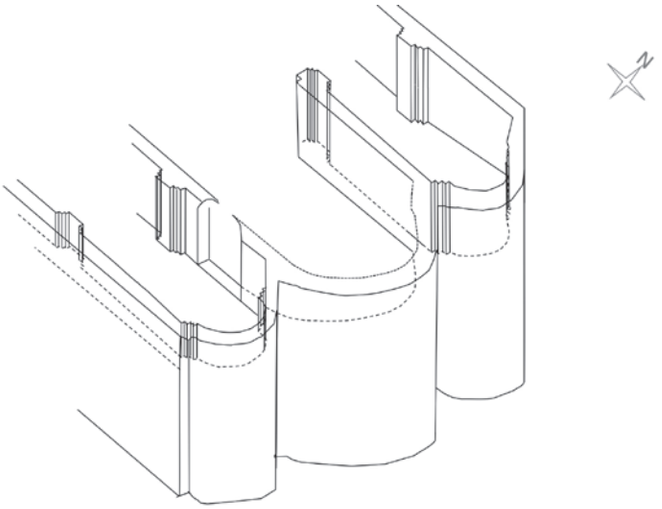

Fig. 14. San Vicente de Roda de Isábena, first third of the 11th c. phase. © G. Boto.

Galtier to speculate that the Lombard structure was designed to have groin vaults resting over double arches, at least in the lateral naves. A solution involving double arches sitting on three-cornered pilasters was ruled out during the construction process. I agree with Galtier that crypts did not form part of the initial project, and that the roof of the lateral naves consisted of the aforementioned groin vaults on double arches, whereas the main nave was perhaps roofed with wood[86]. However, a material analysis of the building shows an asymmetrical layout in the original apses, which were not originally intended to support a second level and therefore were not crypts (Fig. 14). The unfinished church was consecrated around 1030 and dedicated to Saint Vicent and Saint Valerius, at a moment in history when the territory was no longer controlled by counts of Urgell, but rather the king of Pamplona[87].

We do not know which community buildings were needed and started in this building phase during the first half of the 11th century. The Romanesque cloister has a chapterhouse to the east, behind which stands the oratory of Saint Augustine[88], a refectory/dormitory to the north and a section of old wall in the centre of the eastern perimeter of the canonical patio. This eastern wall features three types of stonework: the most regular is above the arches of the chapterhouse façade, to the left of this is a section of wall made with *opus spicatum* and a door put in at a later date, and to the left of the *opus spicatum* a section of wall consisting of irregular gravel infill (Fig. 15). This type of stonework is similar to that which was used to reduce the arch that separated the central apse from the southern apse of the crypt and the wall that runs inside the south wall of the north crypt. Therefore we may interpret that the oldest

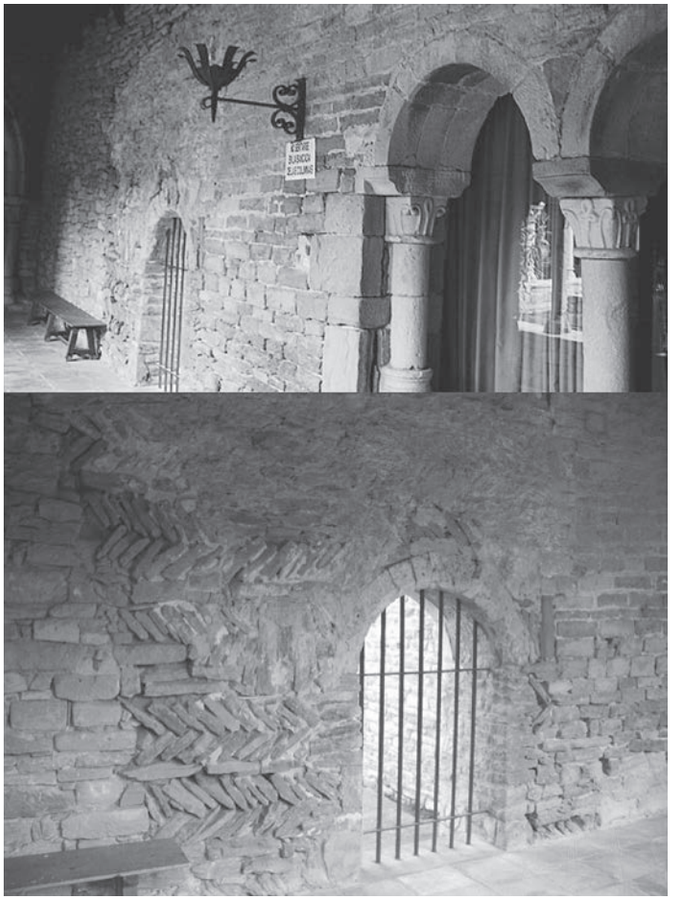

Fig. 15. San Vicente de Roda de Isábena. Photos G. Boto.

part of the cloister's east wall is contemporary with phase 2 of the church (ca. 1030); after this point the section of *opus spicatum* was built, followed by the regular stonework corresponding to the façade of the chapterhouse. Thus, at least on one side we can state that the community patio was built after 1030; that is, not too far from other examples in the counties of Besalú or Osona.

CONCLUSIONS

The regular, porticoed and quadrilateral cloister of the great Franco-German centres did not become widespread until the 11th century. Their adoption and enlargement was not in the strictest sense due to the spread of the Benedictine rule, but rather to a reinterpretation of the function of cloisters and the rooms and walkways that featured in Carolingian imperial abbeys and to Chrodegang's proposals governing community life. Furthermore, we cannot rule out the possibility that the orthogonal layout of monastic rooms was influenced by examples from late Antiquity such

[86] *Ibidem*, p. 182-184 thus speculate that the project must have led to a church like the one at Obarra.

[87] *Ibid.*, n. 44; R. ORDEIG, *Inventari d'actes de consagració i dotació de les esglésies catalanes*, III. *1000-1050*, in *Revista catalana de Teologia*, 8, 2, 1983, p. 403-456, doc. 146.
The historiography of this see and its cultural and artistic manifestations has emphasised different protagonists, event and circumstances. The debate sets those who believe that the see had institutional and cultural relations with other Catalan counties, particularly Urgell, against those who maintain that the see paid scant attention to its immediate neighbours and looked to Narbonne, Bordeaux or Pamplona for its own legitimacy, but never to Urgell. Ecclesiastic considerations (Roda transferred its see to Lleida) and political developments (the county of Ribagorza was incorporated into Aragon) have influenced the interpretations of some researchers.

[88] M. GUARDIA, *El Oratorio de la Catedral de Roda de Isábena y su decoración pictórica*, in R. Martorelli (ed.), *Itinerando: senza confini dalla preistoria ad oggi: studi in ricordo di Roberto Coroneo*, Perugia, 2015. p. 917-938.

as those that have been investigated in Syria or the Iberian Peninsula. The layouts of the patios at Umm es-Surab, Egara, Vallejo del Obispo, among others, are overlaid on a Roman substrate. However, the atria in the monasteries at Melque, El Trampal, Peñalba, etc. also demonstrate that other solutions were sought in the kingdoms and counties of Hispania.

In the Catalan territories of the 10th and 11th centuries, the great monasteries proclaimed the power of the counts and bishops, who were engaged in the "Benedictinization" of the region and in asserting their own independent political freedom. Some Catalan monasteries organised their cloisters in accordance with the Carolingian tradition, which will have arrived from Burgundy by the 10th century. In 970, the early cloister at Ripoll was planned and executed in its entirety from the outset, although we still do not know if it had porticoes made of wood or stone pillars. No such question marks hang over Sant Cugat thanks to archaeological excavations which confirm that the pillars of the cloistral porticoes cannot have been too different from those that have survived in the lower cloister at Rodes. Apart from the unusual case of the first cloister built at Barcelona during the period 1009-1017, Catalan cathedrals did not adopt regular cloisters until the third or fourth decade of the 11th century during the reigns of the bishops Oliba (Vic) and Pere Roger (Girona).

Although the functional layout of the buildings had been formalised by the 10th century, many abbeys had isolated multipurpose pavilions that were used for community life and for rest. At places such as Cuxa, Rodes, Bages, Bagà or Sous, the outer limit of the cloister was only fixed *a posteriori* by the successive erection of perpendicular and unconnected buildings[89].

During the 10th and 11th centuries no single unified cloistral layout can be observed. In terms of the functional organisation of their buildings, the only difference between the regular and porticoed cloisters of the 10th and 11th centuries and their Carolingian and Burgundian predecessors (Lorsch, Sant Wadrille-Fontenelle, Jumieges, Sankt-Gallen, Corbie, Auxerre, etc.) was the location of the chapterhouse[90]. The only innovation that can be unequivocally attributed to the Romanesque period was to substitute galleries of arches springing from the ground (e.g. at Sant Cugat, Rodes, Canigó and La Portella, although from a later period) for series of simple columns (Colera and Casserres) and, above all, capitals carved with plant or historical motifs. Cloisters featuring historical depictions arrived late in the Catalan counties despite the fact that in architectural terms by the beginning of the 11th century they were in the international vanguard.

Finally, in structural terms, most of the vaulted Romanesque cloister in the entire Iberian peninsula were constructed in the Girona area between roughly 1165 and 1220[91]. It is clear that the walls of these cloisters (Sant Pere de Galligans, Girona cathedral, San Benet de Bages, Sant Pere de les Puel·les, Santa María de Vilabertran, Sant Llorenç de Sous, Sant Daniel de Girona) were deliberately built to withstand the weight of the vaults that they subsequently supported. Nevertheless, some of these cloisters (Sant Quirze de Colera, Sant Cugat del Vallès) adopted barrel vaults mounted on walls built around 1010-1050. These early walls, however, did not require reinforcement or additional buttressing. In reality, the lower cloister at Sant Pere de Rodes proves that walls built in keeping with the Lombard tradition were perfectly capable of supporting the weight of vaults that would not appear in the Catalan Romanesque (and which are unusual in the western Romanesque, except in Provence) for another century and a half.

[89] Certain Romanesque cloisters are also the result of the successive construction of community buildings, parallel or transversally to the church. J. M. VILA, *Sant Llorenç de Sous (o del Mont)*, in *Catalunya Romànica*, XXVII, p. 194-196. The practice of connecting initially isolated buildings with porticoes is documented by the second half of the 8th century at Herreninsel im Chiemsee, according to SAPIN, *De la cour au cloitre carolingien*, p. 23.

[90] Ch. SAPIN, *Les premiers bâtiments claustraux en Bourgogne (avant le XIIe siècle)*, p. 157-172.

[91] A. MORENO, G. BOTO, *Expèriences de construction et de voûtement des cloîtres romans au nord de la Catalogne*, in *Les Cahiers de Saint-Michel de Cuxa*, XLVI, 2015, p. 95-106.